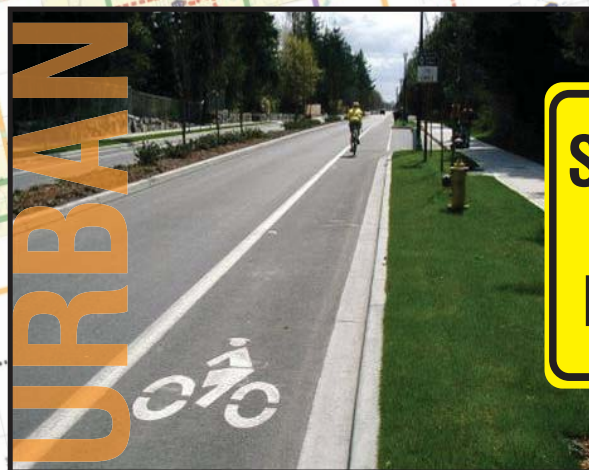


Sioux Falls MPO Bicycle Plan



RURAL

URBAN

***County Roads and Connections to Sioux Falls Metro Area Cities:
Brandon, Crooks, Harrisburg, Hartford, Sioux Falls, and Tea***

Acknowledgements

Metropolitan Planning Organization (MPO) Bicycle Committee

Marilyn Zimmerman	Sioux Falls
Greg Boris	Sioux Falls
Mike Christensen	Sioux Falls
Sean Gallup.....	Sioux Falls
Bill Draeger	Sioux Falls
Darren Weisz.....	Sioux Falls
Jeff Barth	Minnehaha County
Phil Kappen.....	Minnehaha County
Angie Hilton	SECOG
Sam Trebilcock.....	City of Sioux Falls
Buck Sternberg	Brandon
Pat Hammond	Brandon
Dave Swier.....	City of Brandon
Albert Schmidt.....	City of Harrisburg
Kevin Nissen	City of Tea
Jon Peters.....	Lincoln County
Jack Mallek	Sioux Falls
Mark Emry	Sioux Falls
Warren Decou	Hartford
Troy Larson	Hartford
Chad McKenzie	Harrisburg
Gregg Johnson.....	Sioux Falls
Mark Hoines	FHWA
Brad Remmich	SDDOT

I. INTRODUCTION

Bicycling has long been an important mode of transportation in Sioux Falls as promoted and encouraged through the Sioux Falls Bicycle Plan. However, bicycle riding is just as important a mode of transportation in the rural metro area and within the surrounding communities. This plan's goal is to improve the state of bicycling in the whole Sioux Falls metro area.

The Sioux Falls Metropolitan Planning Organization (MPO) Bicycle Plan will refine the recommendations of the 2005 Sioux Falls Metropolitan Planning Area's Long-Range Transportation Plan. The MPO Bicycle Plan will also provide goals, objectives, and guidelines including the identification of facility improvements, programs, and actions.

II. CURRENT SITUATION

A. *Facilities*

Trails and Supporting Facilities

Sioux Falls has approximately 20 miles of recreational bicycle trails which generally follow the Big Sioux River and Skunk Creek Greenway.

Routes and On-Street Facilities

Within the city of Sioux Falls a system of bicycle routes has been identified. For more information on the City of Sioux Falls route system see the 2007 Sioux Falls Bicycle Plan (go to www.siouxfalls.org/planning/transportation/bicycle_planning). In addition, striping of bicycle lanes, shared bicycle/parking lanes, and sharrows have been tested for their effectiveness. Within the rural area and surrounding metro communities no routes or other on-street bicycle facilities have been identified.

Commuter Support Facilities

Commuting by bicycle is hampered by the lack of storage and parking facilities for bicycles. Bicycle parking racks and other storage facilities are essential for bicyclists to commute to work or travel to businesses throughout the metro area. Also, there are a lack of on-site showering and changing facilities to help those bicyclists commuting to work.

2005 Sioux Falls Area Long-Range Transportation Study

- 25 percent of residents think that a bicycle should never be ridden in the street.
- 56 percent of residents think that a bicycle should sometimes be ridden in the street.

This survey finding indicates that citizens are not informed about the rights of bicyclists to ride on the streets of the metro area. Also, it indicates that citizens feel unsafe riding their bicycles on the roadway.

B. Issues

As a part of the construction of the Metropolitan Planning Organization (MPO) Bicycle Plan, the MPO Bicycle Committee identified issues that were important to improve or address in some way. The following issues were identified:

Bike Trail Issues

- Recreational trail money—DOT maintenance/preservation mode means less money for trails.
- Enhancement money.
- Planning MPO study funds should be utilized for master plans.
- “Rails to Trails” or “Rails with Trails” should be explored and identified for future trail corridors.
- Add Brandon, Harrisburg, and Hartford updated trail plans to an MPO trail plan.
- Need to have advocacy for trails.
- Identify trails early and ahead of development (also build section before development).
- Trail money is an obstacle.
- Paved shoulder (extra width) cost versus new trail (what is difference of cost?).
- Constraint of landowners, NIMBY, ROW issues, and developers.
- Interim trails need to be considered.
- Need to educate adjacent homeowners of the possible benefits of trails.
- Crooks railroad line could be a good candidate for a “Rails with Trails” corridor.
- Liability of “Rails with Trails” may need to be investigated .
- How do we prioritize trail projects?.
 - Trails for each community.
 - Connections to existing trail system.
 - On-street options and connections.

On-Street/Highway Facilities

- Sweeping options.
- Chip seal—good, bad, options/other options? (find out about contractor on state-line road a few years ago).
- Rumble strips.
- Develop links to bike trip generators.
- Recreational/leisure trips.
- Work, school, shopping trips (plan for new Iowa casino/resort).
- “Complete Streets” concept incorporated into design.
- Identify which routes should be protected and then which types of bike facilities and/or signage should be incorporated along those routes.
- Which routes have good shoulders vs. bad shoulders and what improvements would help.
- Educate citizens about “Sharing the Road” (this includes rules for cars and bicycles).

- Include bicycle rules in drivers test.
- Consider a “three-foot separation between car and bike while passing” law.
- Look at bicycle compatibility ratings for all paved roads in the counties and major routes in the towns.
- If there are no bike sensors at signals, bicycles should be able to go on red.
- Need to foster advocacy for on-street routes.
- Add section on where future road projects will occur and how bike facilities should be incorporated.
- Identify bike-friendly rumble strips.
- Cost not much of an issue for rumble strips.
- Need to identify corridors for rumble strips.
- Intersection rumble strips are a problem on county highways.
- The county, S.D. Department of Transportation, and the Federal Highway Administration should consider a bicycle-friendly standard for rumble strips.
- Debris is a problem and sweeping could help, but would county/state budgets allow this?
- Chip seal needs to be done appropriately—smaller rocks, sweeping afterwards (especially on the shoulder).
- Type of rock on chip seal can make a big difference. River rock is good compared to quartzite (which is too sharp).

III. GUIDELINES

Short-Term Priorities

On-Road Routes

1. Identify primary and secondary on-road bicycle routes. These routes should be identified with “share the road” signage, and shoulders should be swept at least twice a year (spring and mid-summer).
2. Keep the on-road bicycle compatibility route map current and distribute through an MPO Bicycle Route Map and city websites (see **Map 2** on page 13).
3. When a roadway is reconstructed, any rumble strips included on the roadway should be completed with a bicycle-friendly design as shown in “Section V. On-Road Bicycle Facility Design Guidance.”
4. Incorporate a sidepath and connection to bicycle trail with 60th Street North reconstruction project.
5. Incorporate a sidepath or trail with 69th Street overpass project to help in linking with future trail to Tea and the Solberg Overpass.
6. Improve on-road connections on Cliff Avenue and/or SD 115 for a safer connection from Harrisburg to Sioux Falls.
7. Chip seal should be swept off shoulders soon after installation. An effort should be made to reduce the size of the chip seal rock.
8. Develop a “complete streets” policy by ensuring all development and street projects integrate all types of travel (bicycle, pedestrian, transit) into site and design plans. This policy should be interpreted to go above and beyond “consideration” as required by federal law (23 U.S.C. § 217).
9. Urban on-street bicycle routes should be planned to provide connectivity with the rural on-road MPO routes.

Trails

1. Initiate a bicycle trail master plan for a bicycle trail connection from Great Bear to Big Sioux Recreation Area and from the Arboretum and Big Sioux Recreation Area, effectively linking Sioux Falls with Brandon from two locations.
2. Sioux Falls, Harrisburg, Tea, Hartford, and Brandon’s bicycle trail plans as included on **Map 1** (on page 9) should continue to develop in phases and in a manner that creates a seamless network of bicycle trails throughout the MPO area.
3. Sioux Falls, Harrisburg, Tea, Hartford, and Brandon’s future bicycle trail corridors should be a part of the subdivision process and developed as unpaved interim trails to help ensure that prospective homebuyers know that a bicycle trail is located nearby.
4. Look at interim trail options to help build out future trail corridors, including unpaved surface options.

Long-Term Priorities

1. Master plan to link Tea, Hartford, and Harrisburg bike trail system to Sioux Falls.
2. Educate citizens about “Sharing the Road” through PSAs, websites, and signage.
3. Incorporate bicycle route systems for all Sioux Falls metro communities.

4. Include bicycle rules in driver's test manual.
5. Develop a law for a "three-foot separation when passing" for cars and bicycles.
6. "Rails to Trails" and "Rails with Trails" options should be explored along lightly used corridors or already abandoned rail corridors.
7. Find ways to educate adjacent homeowners and developers of future trail corridors about the benefit of bicycle trails.
8. Develop and encourage bicycle advocacy for trails and on-road facilities.
9. Explore a bicycle trail connection from Hartford to the edge of Sioux Falls at either the west corridor sidepath, a trail along Skunk Creek, or along another similar corridor.
10. MPO staff shall review subdivision plans and encourage collector street connectivity consistent with the Complete Streets policy.
11. It is encouraged to widen shoulders when a roadway is being resurfaced or reconstructed especially on primary and secondary bicycle routes and state highways.

IV. TRAIL GUIDANCE

Location Considerations

Bicycle trails should be located in areas where very little interaction with the vehicles will take place including locations along rivers, lakes, abandoned or operational railroad lines, drainageways, or other parks and opens space areas. *Map 1* shows all current trails and future planned trails including recommended trail connections throughout the MPO area. The City of Hartford's bicycle trail plan was in progress during the printing of this plan.

Sidepaths

A wide sidewalk along a street is considered as a type of trail but should be specifically identified separately, as the intersection conflicts create a potentially dangerous situation for the bicyclist and pedestrian. Sidepaths are typically 8- to 10- foot wide sidewalks that will provide accommodations for bicyclists on the sidewalk. This facility can be safe when the roadway has significant volumes and speed, very little additional outside lane width, and very few intersection cross streets and driveways. Because drivers have difficulty seeing bicyclists on the sidewalk, this option is considered a last resort. *Map 1* shows all current and future recommended sidepaths.



Design Considerations

Trails should comply with American Association of Street and Highway Transportation Officials (AASHTO) standards, the Uniform Federal Accessibility Standards, and the Americans with Disabilities Act Accessibility Guidelines.

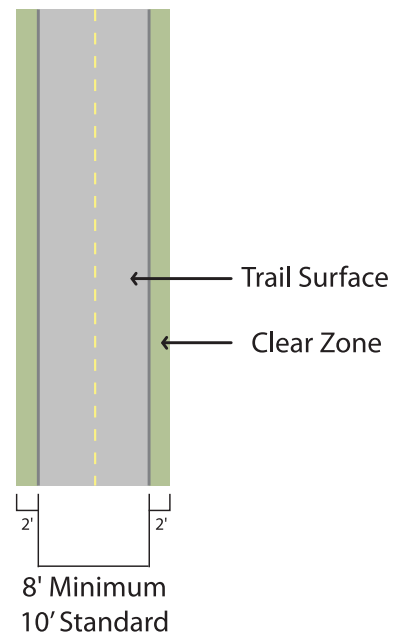
Surface:

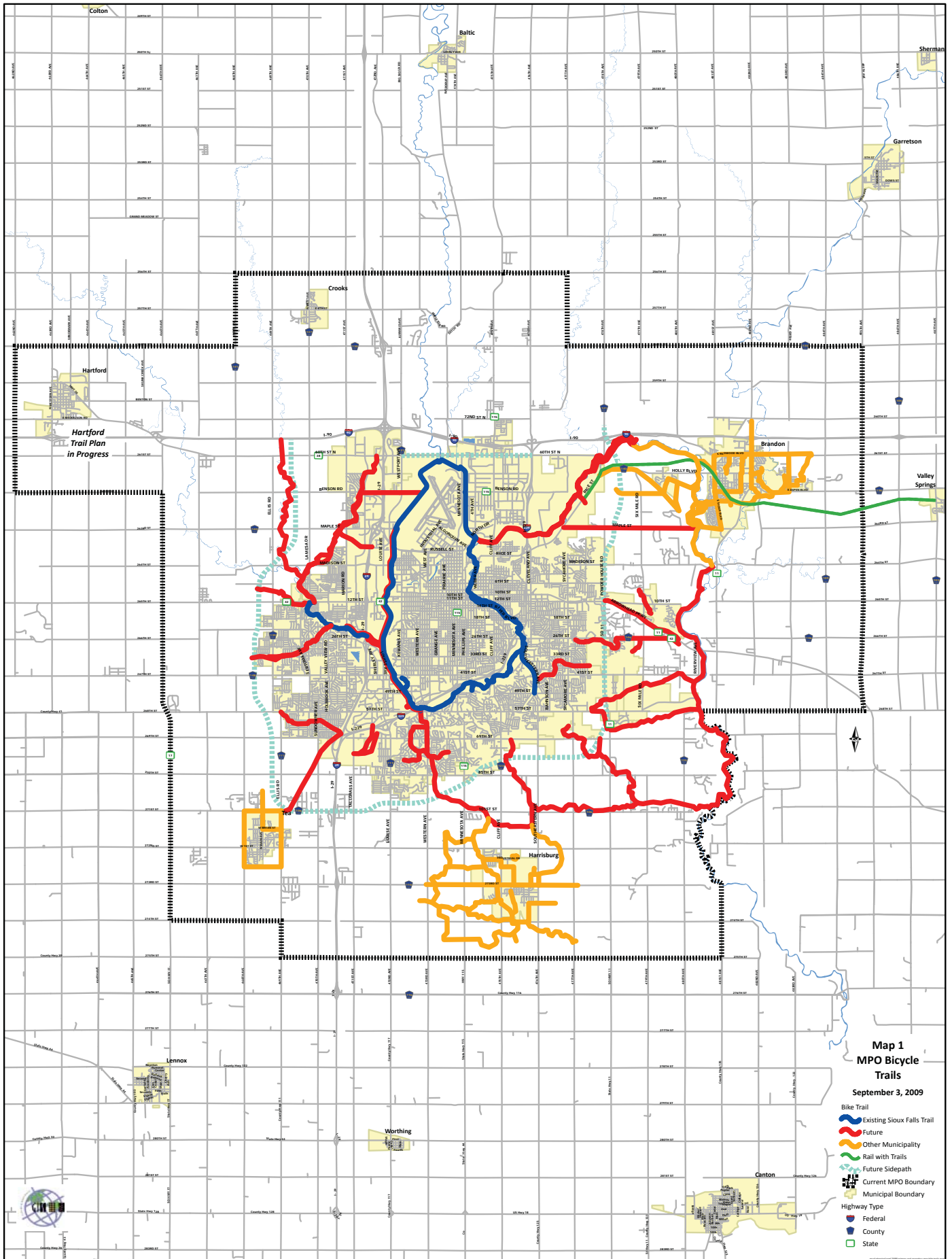
- Asphalt provides an excellent surface when new and is somewhat less expensive than concrete.
- Concrete provides a more durable, longer-lived surface, particularly in climates with freeze-thaw cycles, and can be replaced panel by panel if necessary.
- A stable subbase is critical to the durability of both materials. This is especially important around drainageways, where stream banks tend to slough off and produce serious cracking and deterioration.

Trail Width:

- The standard width for trails proposed in this plan is 10 feet. An 8-foot width on secondary segments may be adequate in areas with severe right-of-way limits. While generally adequate for the narrow profile of road bicycles, 8 feet does not safely accommodate passing movements by types of users who require greater width, including in-line skaters, bicyclists with child trailers, and recumbent tricycles.

Paved Multiple-Use Trails





- Where possible, a soft-surfaced, 2-foot extension to the paved trail may also be advisable for walkers and runners because of their resilience and lower impact.
- Maintain a 2-foot minimum shoulder as a recovery zone adjacent to trails with bicycle uses.

Grades and Grade Changes:

- Establish a 5 percent overall maximum grade.
- Individual segments may include grades up to a maximum of 8.33 percent. Design grades between 5 percent and 8.33 percent are considered ramps for accessibility purposes. For ramps, a level rest area must be provided for every 30 inches of rise. Ramps, bridges, and landings adjacent to abrupt grade changes must include 32-inch high handrails, designed to meet AASHTO recommendations. Two-inch curbs on both sides of a ramp are advisable. Ramp surfaces should be slip-resistant.
- In areas with slopes over 5 percent, consider an alternate accessible route with reduced grades if possible, even if this route requires a grade crossing.
- Warning signs for trail users should be used on grades approaching 5 percent and greater.

Subsurface and Drainage:

- Typically 4- to 8-inch compacted, smooth, and level. Individual conditions may require special design.
- Trail cross-sections should provide adequate cross-drainage and minimize debris deposited by runoff. Typically, this involves a maximum cross slope of 2 percent.
- When trails are adjacent to or cut into a bank, design should catch drainage on the uphill side of the trail to prevent slope erosion and deposits of mud or dirt across the trail.



Sight Distance and Intersection Design:

- Provide 150-foot sight distance standard. Provide 20 mph minimum design speed (highest safe speed recommended) for bicycle use.
- Align or widen trail at railroad intersections to permit perpendicular crossing of tracks.
- Avoid the use of bollards or obstacles at grade-level intersections unless operations prove they are needed. If necessary, use entrances with a median separating directional movements in place of bollards.
- When bollards or gateway barriers are used, provide a minimum opening of 5 feet, adequate to permit adequate clearance for all bicycles. Avoid poorly marked cross barriers that can create hazards for entering bicyclists, particularly in conditions of darkness.



Interim Trail Development

Development of an integrated system over time raises issues of interim use and reservation of trail right-of-way. In several locations in the master planned system, trails are proposed on common space that borders the rear lot lines of future houses. If these corridors are not secured in advance, homeowners may eventually and informally incorporate these corridors into their yards, greatly complicating eventual trail construction.

One way to address this problem in certain places is through lower-cost, interim trail development. Here, a less expensive, usually unpaved surface provides for immediate use of the corridor at considerably lower development costs. A portion of the Big Sioux Recreational Trail has been unpaved for some time, and only recently has been programmed for hard surfacing.

This is a viable technique for short- and medium-term reservation and use of right-of-way provided that:

- The trail surface is serviceable and free of hazards. We suggest a granulated stone or fine crushed rock surface that allows pedestrians and some bicyclists with reasonable use of the facility.
- Unsafe surfaces such as gravel should be avoided.
- While granulated stone is far less expensive than hard surfacing, it still has a substantial cost—in the range of \$40,000 per mile.
- Unpaved trails require maintenance, particularly after heavy rains and at the beginning of the season. Paving should be considered at specific locations where the trail is subject to damage.

V. ON-ROAD BICYCLE FACILITY

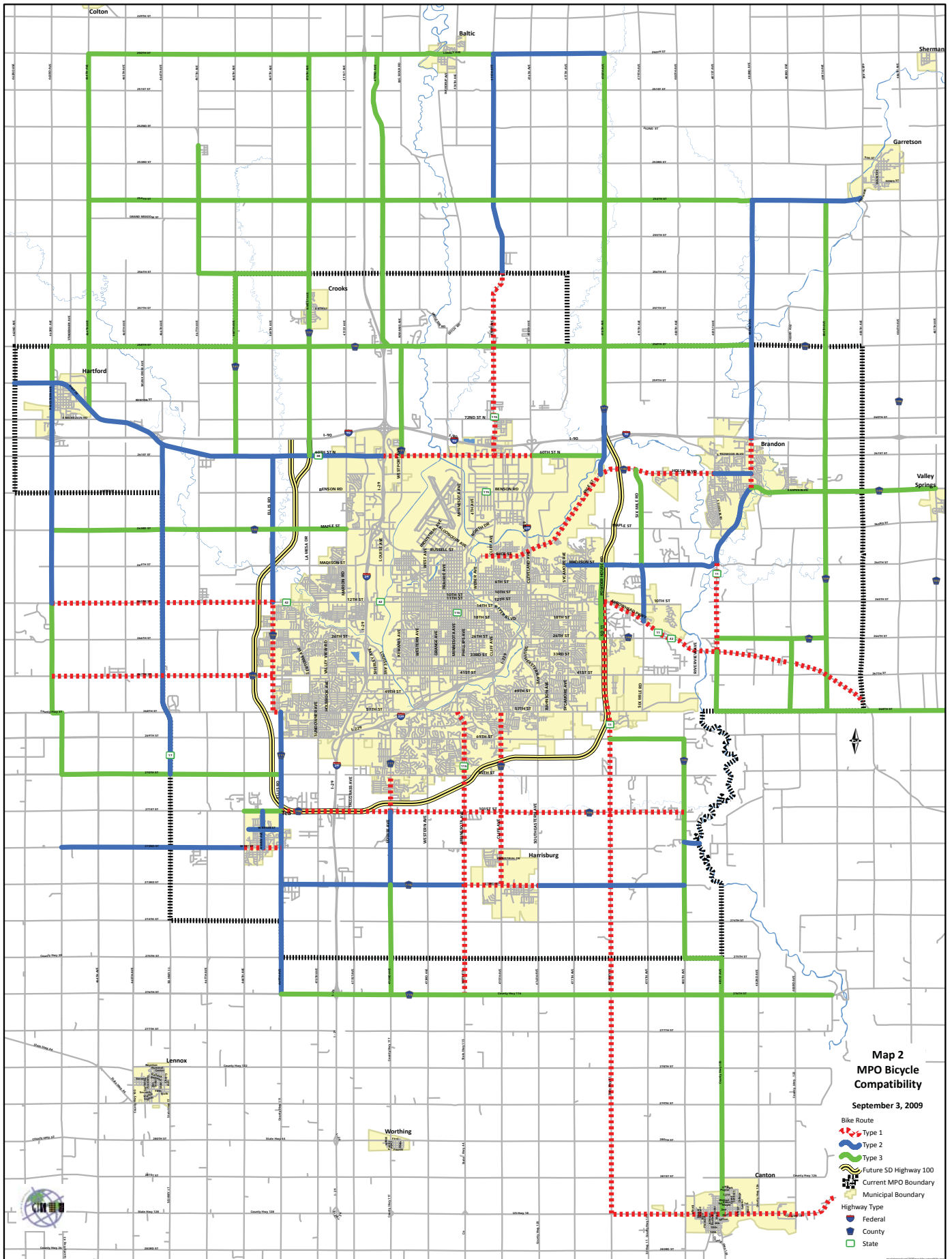
Rural Settings

Along rural roadways (except interstate highways), most paved roads are used from time to time by bicyclists. Therefore, the MPO Bicycle Committee set up a method to rate all paved rural roadways based upon the roadway’s perceived comfort level. This On-Road Compatibility Rating combines the following ranking system:

	Green	Blue	Red
Connectivity	Low	Medium	High
Comfort	High	Medium	Low
	Good	Moderate	Poor
Useable Space	Up 1	Same	Same
Condition	Up 1	Same	Same

- Start by rating road by connectivity versus comfort.
- If useable space or condition is good, may move rating up.
- If useable space or condition is poor, may move rating down.

Map 2 on page 13 illustrates all compatibility ratings for all rural roadways. A matrix with information compiled for each roadway is included in **Appendix A**. The compatibility map is recommended to be the base information for the MPO’s first Bicycle Route map.



On-Road Bicycle Routes

Purpose

The MPO Bicycle Routes as shown on *Map 3* (on page 15) have been designated as vital bicycle transportation corridors that link the various MPO communities.

Primary Routes

Primary routes are the best transportation bicycle route from one community to another. Each primary route does have a usable shoulder and is typically the most direct route from one community to the other. Primary routes shall be maintained in such a way that provides a safe bicycle experience including shoulder sweeping, shoulder patching, and “share the road” signage.

Future Primary Routes

Some current primary routes that lack connectivity to communities because of no shoulders, poor pavement condition, and high traffic volumes and speeds may require significant work to be considered as a primary route. When these conditions exist, a future primary route has been established to place transportation officials on notice that bicycle facilities should be incorporated in future road improvement projects. See the route map and the list of suggested improvements below for specific future primary routes.



W11-1 / W16-1
Share the Road with Bicyclists assembly

Sign images from the Manual of Traffic Signs <<http://www.traffic-sign.us/>>
These sign images copyright Richard C. Moeur. All rights reserved.

Secondary Routes

Secondary routes have also been designated (although not as high a priority) and may also work to provide a bicycle connection with very few improvements necessary. The secondary routes (if there is a shoulder) should be considered for sweeping when maintenance funds are available. For routes that do not have shoulders, adding a shoulder that is at least 4 feet wide should be encouraged when the roadway is reconstructed.

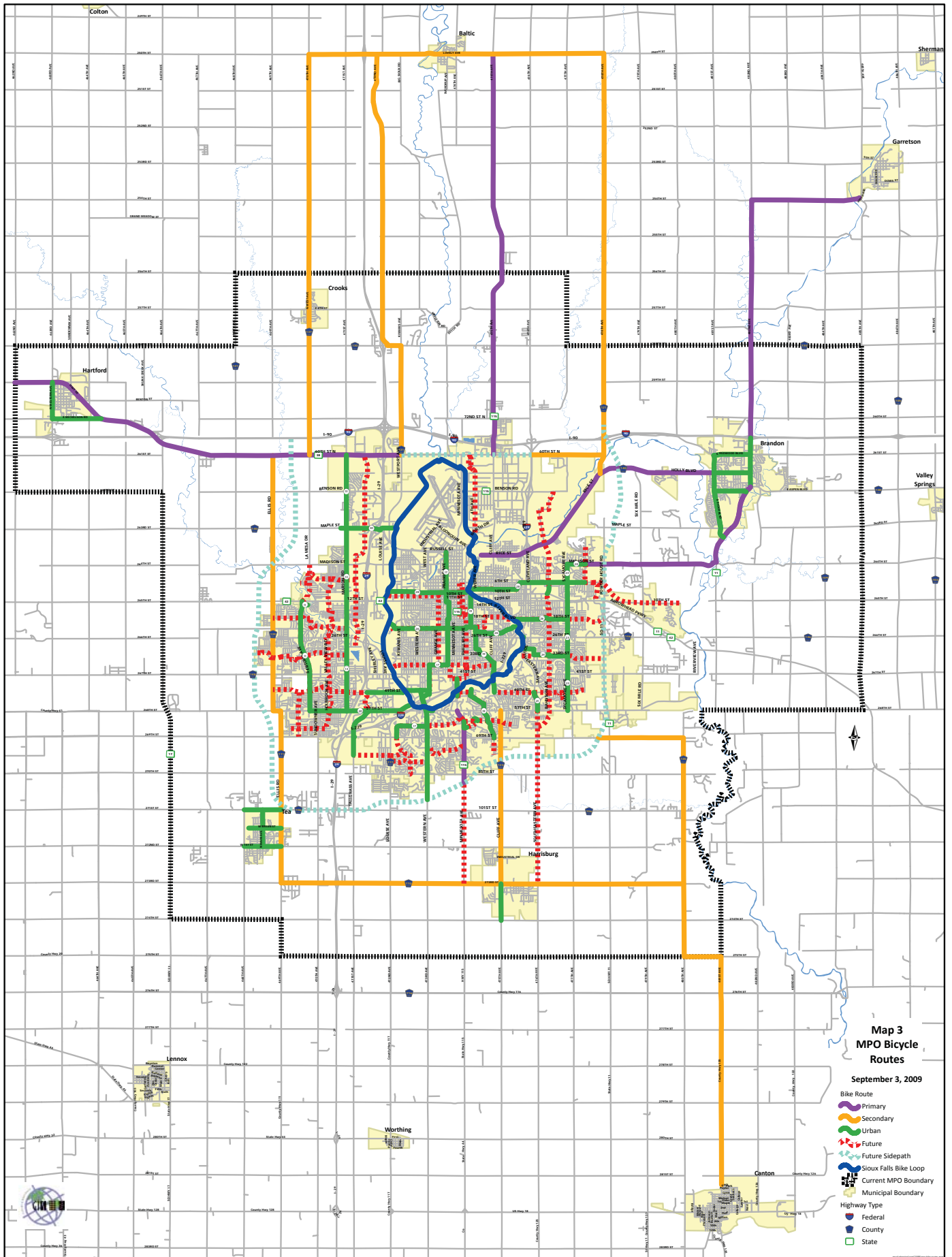
Urban Routes

On *Map 3* (page 15) each community has included a set of urban routes to be implemented with urban on-street bicycle facilities as explained beginning on page 15.

Suggested Improvements

Each bicycle route requires improvements of some type to improve the situation for bicyclists. The following suggested improvements should be considered as a high priority as indicated in the policy section of this document. In all cases, the suggested improvement may be found after engineering design to not be feasible. In those cases, all other on-street or trail design options should be investigated to provide the highest level of bicycle accommodation possible.

“Share the Road” signs (*MUTCD—Manual of Uniform Traffic Control Devices*) should be installed to help designate the route and also to help remind motorists to share the road. These signs should be placed every 1 to 2 miles depending on roadway access density.



The shoulders should be swept periodically (when shoulder is available). The debris that collects (especially after the winter snow season) creates a significant problem for bicyclists, forcing them to sometimes move to the travel lane rather than on the shoulder. Primary routes should be swept at least twice per year (once in the spring and again in the summer).

- Future Bicycle Route Suggested Improvement.
 - SD 115 from Harrisburg to Sioux Falls—ensure there are 8-foot shoulders incorporated with project.
- Future Urban Bicycle Routes connecting to MPO Bicycle Routes.
 - 60th Street North from Westport to Minnesota Avenue—10-foot sidepath on south side of roadway.
 - 60th Street North from Minnesota to I-229—dedicated bike lanes.
 - 60th Street North from I-229 to the proposed SD 100 alignment—dedicated bike lanes.
 - Minnesota Avenue from the proposed SD 100 alignment to Ralph Rogers Road—dedicated bike lanes.
 - Cliff Avenue from Harrisburg to SD 100—sidepath? Wide shoulders? Bike lanes?
 - 60th Street North from Marion Road to Westport Avenue—10-foot sidepath on south side (how to cross I-29?).
 - Rice Street—complete bicycle trail and incorporate dedicated bicycle lanes.
 - Redwood Boulevard from SD 100 to Sioux Boulevard—sidepath on south side of roadway (this could become part of the bicycle trail system).
 - Benson Road (I-229 to Rice Street)—dedicated bicycle lanes or wide curb lane.
 - Madison Street (Dubuque to Six-Mile Road)—dedicated bicycle lanes.

Shoulder Design Suggestions

The AASHTO *Guide for the Development of Bicycle Facilities* notes that in rural areas “adding or improving paved shoulders often can be the best way to accommodate bicyclists” and they have the additional attraction of providing a variety of benefits to motorists and other road users as well.

- A shoulder below 4 feet should not be designated or marked as a primary bicycle facility.
- 4 feet (1.2 m): minimum width to accommodate bicycle travel. This measurement should be the useable width and should **not** include the gutter pan or any area treated with rumble strips.
- Shoulders should be on both sides and not encourage head-to-head travel.
- Bridges should have shoulder wherever possible with a high priority to clean off debris.
- Consider widening shoulders on all secondary bicycle routes when reconstructing the roadway.
- Shoulders should be level without abrupt drop-offs.

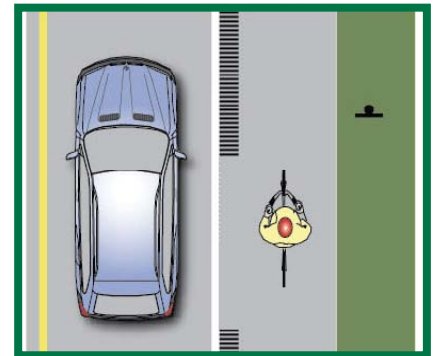




Rumble Strip Design Suggestions

Rumble strips can provide safety to the motorist and bicyclist by alerting drivers when their vehicles stray onto the shoulder. However, many times in the past rumble strips have been installed in a manner that leaves no room for the bicyclist to ride on the shoulder, forcing the bicyclist into the highway travel lane. In addition, small stones, sand, and other debris often collect on roadway shoulders. For this reason, most bicyclists prefer to ride on that portion of the shoulder nearest to traffic to avoid debris. When installed properly, rumble strips can be designed with consideration for safe bicycling with the following design recommendations:

- Rumble strips are not recommended unless there is a minimum clear path of 4 feet from the rumble strip to the outside edge of the paved shoulder.
- On-road bicycle routes should consider installing reduced-depth, milled rumble strips.
- All roadways should include a gap of at least 10 feet for every 40 feet of milled area.
- On bicycle routes it is crucial for safety to frequently sweep the shoulders of any debris when rumble strips are installed.
- Rumble strips should be as close to the white outside travel lane line as possible.



Transverse (Intersection) Rumble Strips

Transverse rumble strips consist of intermittent narrow, transverse areas of rough-textured or slightly raised or depressed road surface that extend across the travel lanes to alert drivers to unusual vehicular traffic conditions. Through noise and vibration they attract the driver's attention to such features as unexpected changes in alignment and to conditions requiring a stop.

Transverse rumble strips should not be placed on roadways used by bicyclists unless a minimum clear



Bicycle-friendly rumble strip.

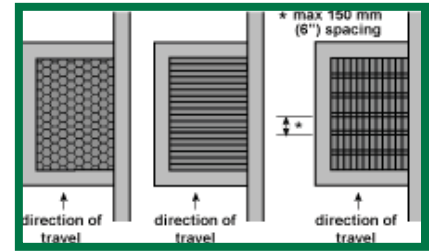
path of 4 feet (1.2 m) is provided at each edge of the roadway or on each paved shoulder as described in AASHTO's *Guide to the Development of Bicycle Facilities* (see Section 1A.11). Wheel path rumble strips are preferred.



Not a bicycle-friendly rumble strip.

Bicycle-Friendly Drainage Grates

Poorly placed or designed drainage grates can often be hazardous to bicyclists. Drainage grates with large slits can catch bicycle tires. Poorly placed drainage grates may also be hazardous and can cause bicyclists to veer into the auto travel lane.



Chip Seal

Chip seal is a process to prolong the pavement life of a roadway and seal cracks in the roadway. It is typically installed during the summer and can cause significant problems for bicyclists especially soon after the chip seal application. Some of the installation recommendations that create more bicycle-friendly chip seal surface include the following:

- Cleanup of the loose chip seal rock by sweepers or vacuum sweepers should take place 24 to 36 hours after installation.
- For urban streets with higher volumes, microsurfacing or double chip seal (cape seal) should be considered. Although slightly higher in cost, both options will last longer and are smoother surfaces for bicyclists.
- When applied with rock that is an average of 3/8-inch, the rock will not protrude after working into the surface. Larger rock such as the 3/4-inch application will protrude much more severely above the asphalt, creating a rougher surface.
- Communicate with MPO staff and bicycle clubs of impending chip seal projects.



Urban Facilities

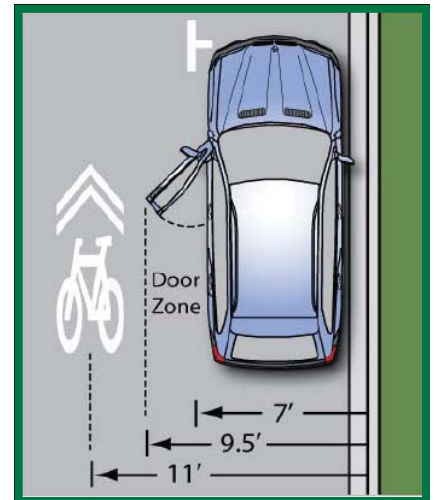
Sioux Falls Bicycle Plan

For the Sioux Falls urban area the Sioux Falls Bicycle Plan has routes and suggested bicycle facilities for on-street situations. Please rely on this plan for all Sioux Falls on-street facilities and suggested routes.

Urban On-Street Facility Options

- Signed Bicycle Route—includes signs that designate the route to help motorists understand to share the road. Routes that are uncomfortable to a majority of cyclists should not be designated as bicycle routes.
- Wide Curb Lanes—includes a wider outside driving lane. For instance, striping a 13-foot outside lane and an 11-foot inside lane instead of two 12-foot lanes.

- Sharrows—sharrow pavement markings are typically used where a bike lane is desired but cannot be implemented due to insufficient roadway width or other constraints. The pavement markings warn motorists of the presence of bicycles while helping the bicyclist determine which part of the road they may use to be most visible to drivers, and to help avoid conflicts with parked cars.
- Shared Bicycle/Parking Lanes—striping a 7- to 8-foot area where on-street parking occurs. This will typically be most possible on 38-foot or wider collector or other wide local streets.
- Dedicated Bicycle Lanes—striping a 5-foot area for the dedicated purpose of the bicycle. These on-street facilities will usually occur on roads without parking although some wide street with parking is possible.



Bicycle Route Map

- Each community has included their suggested bicycle route system as a part of the On-Road Bicycle Route system map. These connections will be important to specific destinations such as trails, parks, employment areas, schools, and shopping areas.



VI. PUBLIC INVOLVEMENT

The Public Participation Plan for the Sioux Falls MPO Bicycle Plan lists the goal of public involvement as resolution of issues and policies. The MPO adopted the Public Involvement Plan which details all public involvement activities (see page 22). In this case, the issues and policies were resolved by the designated MPO Bicycle Committee. Five meetings were held by the MPO Bicycle Committee:

Meeting 1: October 22, 2008

Meeting 2: November 19, 2008

Meeting 3: January 21, 2009

Meeting 4: March 18, 2009

Meeting 5: May 21, 2009

At the end of the process a draft plan was developed. The committee determined that an open house should be held to introduce the plan to the entire public and gain feedback. Forty people attended the open house held on June 22, 2009, at the Washington High School Commons.

A flyer providing a summary of the plan (see on page 21) was handed out to all who attended and posted on the city's website. Eleven written comments were received by the public during and after the open house. The comments are included on the following pages. Presentations were made to the Lincoln County, Tea, Harrisburg, Hartford, and Brandon city councils. Also, meetings were held with the SDDOT Regional Manager and the Minnehaha and Lincoln County Highway Superintendents.

Many of the comments were incorporated into the plan. The changes included clarifications on acronyms and definitions, clarification on the issues, change to the Hartford Bicycle Trail plan (which was still in progress at time of printing), and minor changes to the bicycle routes to develop connections to destinations or add routes within communities. Also, changes were made to encourage shoulders to be widened when resurfacing a road and to maintain 4 foot or wider shoulders without an abrupt drop-off.

Many of the comments were supportive of the plan and no comments indicated any opposition to the plan in general. Several of the comments were specific to urban bicycle issues within the city of Sioux Falls. These comments would be better suited for the next update of the Sioux Falls Bicycle Plan. Specific written comments are included on pages 22–25.

DRAFT SIOUX FALLS MPO BICYCLE PLAN

County Roads and Connections to Sioux Falls Metro Area Cities:
Brandon, Crooks, Harrisburg, Hartford, Sioux Falls, and Tea

Bicyclists — we need your comments!

Why a Metro-Area Bicycle Plan?

The plan recommends rural and urban on-road bicycle routes and future bicycle trails. The plan also recommends methods to improve bicyclist safety and the bicycling experience.

Who formed the draft MPO Bicycle Plan?

An MPO Bicycle Committee includes bicycle advocates from throughout the metro area and also city, county, MPO, and federal agency staff.

Plan Highlights

1. Identifies primary and secondary on-road bicycle routes. These routes should be identified with share-the-road signage, and shoulders should be swept at least twice a year (spring and mid-summer).
2. Initiate a bicycle trail master plan for trail connection between Brandon and Sioux Falls.
3. Develop bicycle trail connections in Harrisburg, Hartford, Tea, and Sioux Falls, and develop links among all communities.
4. Develop an on-street bicycle compatibility map and distribute an MPO Bicycle trail and route map.
5. Bicycle-friendly rumble strips should be included on all roadways.
6. Improve the 60th Street North area bicycle route.
7. Improve the route from South Cliff Avenue to Harrisburg for bicycles.
8. Develop a bicycle route across I-29 and South 69th street and a connection to Tea.
9. Chip seal should be swept off shoulders soon after installation.
10. Develop a "complete streets" policy.
11. Urban bicycle routes should connect with rural bicycle routes..



To view entire plan, go to:
http://www.siouxfalls.org/Planning/transportation/bicycle_planning
Direct Comments to Sam Trebilcock, Transportation Planner, City of Sioux Falls.
Email: strebilcock@siouxfalls.org



Project: MPO Bicycle Plan UDC Meeting Date: _____

Project Specific Public Participation Plan **The Sioux Falls MPO “Seven Step Process”**

Public involvement should not merely be conducting public meetings to meet federal regulations, but rather public involvement should be considered as access to information and influence over the outcome of decisions. Therefore, prior to development of any transportation product, staff should consider the following seven-step process, read through each step’s section in the PPP, and design a specific public participation plan.

- Step 1 Goals:** What is the public participation goal?
Resolution of Issues and Policies (see pages 5-6 of PPP)

- Step 2 Stakeholders:** Who are the stakeholders?
Bicyclist advocates in MPO region and all citizens of MPO

- Step 3 Methods:** What public participation method(s) for interacting with the public will be utilized?
Special study committee formed of volunteers of entire MPO region
Open house will be held to all MPO citizens to review draft plan

- Step 4 Notification:** What notification techniques will be used to inform the public?
Local MPO media press releases for open house, Channel 16 and MPO/City of Sioux Falls websites for draft plan review and e-mail to bicycle advocates in the area, open house media news stories

- Step 5 Implementation:** Where, when and how will the public participation techniques be implemented?
Open house will be held at a time that is determined is best for attendance. The MPO Bicycle Committee will provide input to staff to help determine time/place and format of open house. (see page 17 of PPP for more information)

- Step 6 Evaluation:** What documentation will the plan or product include to fulfill the identified participation goals and objectives?
A public participation section will be included in the plan detailing how Steps 1-5 were completed including Documentation of specific public participation techniques that have been completed.

- Step 7 Incorporate:** How will the documented participation be reviewed for changes to the plan or product?
Staff and MPO Bicycle Committee will analyze all public participation comments and detail how comments have changed the plan.

- Outcome (or The Decision):** Who recommends and approves? What does the approval of this plan or product determine? (Link this back to the participation plan goals – Step 1)
Recommendations shall be provided by the MPO Bicycle Committee, CAC, and TAC.
Approval by the UDC of the MPO Bicycle Plan will require all MPO entities to follow plan policies.

Comments received during or after the open house:

The light at 60th Street and Westport Avenue is activated by traffic but does not react to bicycles. This type of light needs an option of a “crosswalk” button when on a rural metro route.

If a 60th Street sidepath is developed, it would be nice if it could connect to bike trail—perhaps at the bridge north of the airport.

When a road is resurfaced, please include the shoulder. If it is missed, a ledge builds up to a 2- to 3-inch drop, very dangerous.

Dedicated bike lanes (as on East 41st Street) are the gold standard and the only option that is safe, as they establish a dedicated space for bikes that is clearly marked and not open to other uses by cars.

Painted lines for shared parking/bike lanes (as on Ralph Rogers Road and Bahnson Avenue) are okay, but only if parking is rarely utilized on that particular street. For instance, a shared bike/parking lane makes sense on Ralph Rogers Road where almost no one parks on the street, but not on 22nd Street where street parking is more common (in certain areas).

Sharrows are worthless and a waste of paint and money. They do nothing to establish a space for bikers. If you’re going to paint sharrows, you might as well paint them on every single street in the city, as bikes can legally share the roadway on every street.

Ideally, the City will create a system of bike lanes on minor arterial routes to facilitate the movement of bikes within the city. Streets such as 22nd, 37th, Grange Avenue, and Phillips Avenue should have parking eliminated and bike lanes painted. No doubt this would elicit howls of indignation from all the nonbikers out there, as they would be forced to walk an extra 50 feet to park around the corner. As these streets are all emergency snow routes, eliminating parking would also help with snow removal in the winter.

Please keep in mind that many of us frequently cycle to destinations out of town (i.e. Canton) from starting points within the city. It is important that space is provided on arterial routes out of the city as well. For instance, North Marion Road has excellent shoulders, which makes it easy to connect from the bike trail via Madison Street and then north toward Hartford/Crooks, etc. Please consider wide paved shoulders on new road construction in the future (Cliff Avenue South, 69th Street, etc.).

Please **do not** run the trail through flood-prone areas. I commute year-round, and it is a safety issue when the trail is flooded.

Please use sharrows when possible. The shared bike/parking lane causes safety issues when moving in and out of traffic.

Ninety-nine percent of my riding is in Sioux Falls City limits—these comments pertain mainly to that area.

I travel frequently to Denver and Colorado Springs and I am impressed with their designated bicycle lanes. These cities not only paint and sign the designated lanes, but if a vehicle has to make a right-hand turn across a bike lane, there are distinctive signs that inform drivers that they must yield to bicycles. These signs clearly send a message to drivers that bicycles not only belong on the city streets, but also sometimes have right-of-way.

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I hope you've read an article in a recent bicycling magazine in which a group of cyclists in Los Angeles took it upon themselves to designate their own bike lane over a bridge going into downtown LA. Even after the city painted over the markings, black lines stayed visible on the streets and the drivers respected it as a bike lane. I wouldn't advocate the do-it-yourself approach to designating bike lanes, but I do appreciate that certain streets have the sharrows, and I try to ride those streets as much as possible, even if it's out of my way. I believe that the message that drivers receive is simply that bikes may be present and please be aware, and this makes it safer for us.

Most of the difficulties regarding on-street bicycling involves driver awareness on the part of motor vehicle operators. Last Saturday, June 20, was the date of the Dakota-Man triathlon. My 12-year-old son and I rode parts of the bike route and it seemed that signage remaining from the race served to calm the vehicular traffic on that route (Klondike Road).

Does the City have plans for lighting on the City trails?

I have read the initiatives for the future bicycle plan in Sioux Falls and think you are taking the proper steps to making Sioux Falls more bike-friendly. I ride my bike to work and for recreation and have a couple of suggestions. The biggest problem I have is making it from my house on the west side of Sioux Falls to my job in central Sioux Falls. If the trail, which runs by Skunk Creek, crossed the Sioux River dike, it would make for a much easier and safer commute. Also, a lot of the roads within town have huge crevices where the cement slabs bisect each other. In a car, they are really not much of an issue, but on a road bike it is rather troublesome. I have ridden on almost all of the highways listed on the MPO map having little problem with any of them. I would say the biggest problem with those is Highway 11. There is a high volume of traffic, little shoulder, and the road is in very poor condition. I think Highway 11 has the potential to be a very good route if these problems are addressed. I recently graduated from the University of Nebraska, where the town of Lincoln is fairly bicycle-friendly. They have bicycle lanes all throughout town which work well and are well-respected by motorists. I believe that from an urban platform, these lanes could help overcome the issue of motorist disrespect for bicyclists. If you would like any more input from me, I would be more than glad to help you out so feel free to contact me.

Why can't the City crews make it a priority to at least patch the roads that are considered bike trails? For example, the concrete streets on 22nd Street from Minnesota Avenue to Kiwanis Avenue. This is a pothole "land mine" area for bikers to dodge. This area does not lend itself well for bike safety, since when you try to avoid a pothole, you might be going into traffic coming up behind yourself. I asked Galynn Huber earlier this year to fill them in but I do not know if it has been completed or not.

Why can't the City fill in the major potholes along 21st Street? If you hit the right one with a road bike, your chances of falling are high. It is my understanding that the street project to replace 21st Street is over a three-year period, from Phillips Avenue to Seventh Avenue. This seems a little silly to chop up a project into so many segments for such a short stretch for one of the worst roads in town. Do it all in one year.

Please discuss the positive points of the Central Main project in 2010, 2012, and 2013. HDR estimates that approximately 2.5 miles of bike trail will be replaced along with these projects. We will also work to make certain bike trail areas safer by adding additional standard width, better site distance, etc. and try to keep the manholes off the trail.

APPENDIX A

MPO On-Street Bike Routes Inventory and Analysis

ROAD	SEGMENT	CONNECTIVITY	COMFORT	SPACE	CONDITION	SYSTEM TYPE
Lincoln County 135	69th St. to Canton incl. 69th St. from SD 11	Sioux Falls to Canton	Low Volumes	No Shoulder	Pavement Decent	Green
SD 11	SD 42 to 69th Street	Sioux Falls to 69th St.	High Volumes and Speed	3 ft shoulder	Debris in Shoulder Good Pavement	Red
Lincoln County 111 Minnehaha Co 139/148 aka Tea-Ellis Road	SD 38 to Lincoln Co 116	Sioux Falls to Tea	High Volumes Moderate Speeds	1 ft Shoulder	Decent Pavement	Blue and Red
Lincoln County 116 aka Klondike Road	Lincoln County 111 to Lincoln County 135	Ride Route	Low Volumes	No Shoulder	Decent Pavement	Green
Lincoln County 110	Lincoln County 135 to Lincoln County 111	Harrisburg to Tea	Moderate Volumes	1 ft Shoulder	Decent Pavement	Blue
SD Highway 38	Hartford to SD 115	Hartford to Sioux Falls	Moderate Volumes	6 ft shoulder	Decent Pavement	Blue
Minnehaha Co 140 aka Maple Street	Ellis Road (Co Hwy 139) to 463rd Avenue	Ride Route	Low Volumes	No Shoulder	Decent Pavement	Green
Madison Street	Sycamore Avenue to SD 11 North	Sioux Falls to Brandon	Moderate Volumes Moderate Speed	6-8 ft Shoulders	Debris in Shoulder Good Pavement	Blue
Rice Street	Falls Park to Brandon	Sioux Falls to Brandon	High Volumes Moderate Speed	Wide Shoulder	Poor RR Track Xing Debris in Shoulder	Red
Minnehaha Co 146	SD 11 to Minnehaha County 109	Ride Route	Low Volumes	No Shoulder	Decent Pavement	Green
SD 42	SD 11 S. to Minnehaha County 109	Sioux Falls to Rowena/Iowa	High Volumes & Speeds	6 ft shoulder?	Decent Pavement	Red
Minnehaha County 109	SD 42 to Minnehaha Co. 138	Ride Route	Low Volumes	No Shoulder	Decent Pavement	Green
Minnehaha Co. 138	Brandon to Valley Springs	Brandon to Valley Springs	Low Volumes	No Shoulder	Decent Pavement	Green
SD 42	Tea-Ellis Rd to West boundary	Sioux Falls to Wall Lake	High Volumes & Speed	6 ft Shoulder	Good Pavement	Red
464th Avenue	Hartford to Minnehaha Co. 114	Ride Route	Low Volumes	No Shoulder	Decent Pavement	Green
470th Avenue	Minnehaha Co 130 to Minnehaha Co 114	Ride Route	Low Volumes	No Shoulder	Decent Pavement	Green
468th Avenue	Minnehaha County 130 to SD 38	Ride Route	Low Volumes	No Shoulder	Decent Pavement	Green
463rd Avenue	Hartford to Minnehaha Co. 140 (Maple St)	Ride Route	Low Volumes	No Shoulder	Decent Pavement	Green
Cliff Avenue	57th Street to Harrisburg	Sioux Falls to Harrisburg	High Volumes and Speed	No Shoulder	Decent Pavement	Blue

ROAD	SEGMENT	CONNECTIVITY	COMFORT	SPACE	CONDITION	SYSTEM TYPE
Minnehaha Co 121 EROS Road	Rice Street to Minnehaha Co 130	Ride Route	Low Volumes Hilly Route	4 ft shoulder except & Interstate	Decent Pavement	Green/Blue
SD 115 (Cliff Avenue)	60th Street North to Dell Rapids	Sioux Falls to Dells and Baltic	High Volumes and Speed	6 ft shoulder	Good Pavement	Red
SD 11 North	SD 42 to Garretson	Iowa to Brandon to Garretson	High Volumes South Moderate to North	8 ft shoulder	Decent Pavement (S) Good Pavement (N)	Red (South) Blue (North)
County 131 & 133	N. Kiwanis/Westport to County 114	Ride Route	Low Volume Winding Road	No Shoulder	Decent Pavement	Green
Minnehaha Co. 130 258th Street	Hartford to SD 11	Ride Route	Low Volume	No Shoulder	Decent Pavement	Green
Minnehaha Co. 114	464th Avenue to SD Hwy 115	Ride Route	Low Volume	No Shoulder	Decent Pavement	Green

