



**Energy and Environment Committee  
Regular Agenda  
November 20, 2017  
5:30 PM  
Administrative Conference Room  
Government Center  
300 N New Ballas Rd**

- 1. Call to Order**
- 2. Roll Call**
- 3. Approval of Minutes**
  - 1. Approval of October 16, 2017 Energy and Environment Committee Meeting Minutes**
- 4. Unfinished Business**
  - A. City Engineer - Bike Safty Pilot Project**
    - 1. Recommendations Regarding Bicycle-Related Signs and Markings**
  - B. Updates on Energy Bench-Marking Efforts**
  - C. Update on Green Business Award**
  - D. Update on Sustainability Legislation/ordinance**
- 5. New Business**
- 6. Business from Members**
- 7. Business from Council Liaison**
- 8. Business from Staff Liaison**
- 9. Adjourn**



**Energy and Environment Committee  
Regular Minutes  
October 16, 2017  
5:30 PM  
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Government Center  
300 N New Ballas Rd**

**1. Call to Order**

**2. Roll Call**

Ben Lefton	Committee Member	(Absent)
Hal Harris	Vice Chair	
Joseph Martinich	Committee Member	
Sheerie Green	Committee Member	
Jason Muchow	Board Member	
Greg Campbell	Committee Member	
Alexis Travers	Council Liaison	
George Seifried	Staff Liaison	

**3. Approval of Minutes**

**1. Approval of September 18, 2017 Energy and Environment Committee Meeting Minutes**

<b>RESULT:</b>	<b>ACCEPTED [UNANIMOUS]</b>
<b>MOVER:</b>	Hal Harris, Vice Chair
<b>SECONDER:</b>	Jason Muchow, Board Member
<b>AYES:</b>	Harris, Martinich, Green, Muchow, Campbell
<b>ABSENT:</b>	Lefton

**4. Unfinished Business**

**A. Solar Production / Energy Use Data**

Mr. Martinich suggested to the committee, look at the information about solar panels and electric usage for the two City buildings. Mr. Martinich stated that the City has a 5 year contract with Microgrid for solar panels on top of the ice rink, we pay them \$2,000 a year for the panels and over the last 3 years we have made the payment for the panels, plus an additional \$3,200 net. Mr. Martinich stated he feels like this is a good investment and we the City should consider adding more solar panels to City buildings.

Ms. Travers asked what the decision was for putting them on the new police building.

Mr. Martinich stated the feedback he received is solar panels will not fit in the police station budget.

The Committee had a general discussion about solar panels and getting more of them installed on City-owned buildings.

**1. Energy Report P.W. Garage**



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**RESULT: ANNOUNCED**

**2. Energy Report - Government Center**

**RESULT: ANNOUNCED**

**3. Solor Panel Memo**

**RESULT: ANNOUNCED**

**5. New Business**

**A. Energy Star**

Mr. Martinich stated that we had a list of religious organizations that had facilities in Creve Coeur.

Mr. Campbell stated the list could be divided up after the meeting between the members, who could then contact the organizations about their use of energy benchmarking.

The Committee agreed to divide the list up after the meeting.

**1. Religious / Education List**

**RESULT: ANNOUNCED**

**6. Business from Members**

Mr. Martinich stated he contacted four other Cities to see what they are doing about adopting new ordinances to promote sustainability. Mr. Martinich stated he heard from University City, Clayton and is waiting to hear from St. Peters and Maplewood.

Mr. Martinich stated University City has a detailed ordinance for all new City owned buildings and major renovations are supposed to be evaluated for energy efficiency, renewable energy and green house gas reduction; all bidding requirements are laid out in detail.

Mr. Martinich continued to review and summarize the sustainability ordinances for University City and Clayton.

The Committee had a general discussion.

Mr. Muchow stated he was asked to go through the meeting minutes and pull information related to the green business award.

**Minutes Acceptance: Minutes of Oct 16, 2017 5:30 PM (Approval of Minutes)**



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Mr. Muchow gave an overview of the information discussed in previous meetings for the green business award.

The Committee had a general discussion about the green business award.

Mr. Muchow stated the committee needs to gather more details, then the time commitment can be evaluated to administer and oversee a program.

The Committee had a general discussion.

Mr. Martinich asked Mr. Muchow to put together a proposal to bring to Mark Perkins for the green business award.

### 1. Other Cities' Ordinances Related to Sustainability

<b>RESULT:</b>	<b>ANNOUNCED</b>
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### 7. Business from Council Liaison

Ms. Travers spoke with the council and told them the EEC is working toward having a pilot program for bicycle safety on New Ballas and Spoede Rd. Ms. Travers stated the EEC is working on trying to find out if businesses are using Energy Star Portfolio Manager. Ms. Travers stated no one on the council had any comments.

### 8. Business from Staff Liaison

Mr. Seifried stated the committee had a question about composting from the previous meeting. Mr. Seifried stated Public Works changes over the trucks from picking up compost to snow plowing closer to winter, when this happens the city has a service pickup the yard waste. The charge for picking up additional yard waste is more than likely why there was an increase in yard waste volume last year.

### 9. Adjourn



## DEPARTMENT OF PUBLIC WORKS STAFF MEMORANDUM

**DATE:** November 16, 2017

**TO:** Energy and Environment Committee

**CC:** George Seifried, Staff Liaison to the Energy and Environment Committee

**FROM:** Matt Wohlberg, P.E., City Engineer

**SUBJECT:** Recommendations Regarding Bicycle-Related Signs and Markings

City staff has reviewed the suggestion from the Energy and Environment Committee that the City install “Bicycles May Use Full Lane” signs along many of the principal roadways in Creve Coeur. After reviewing the suggestion and the regulations related to the signs and to cyclists using roadways, staff recommends that the City continue using the “Share the Road” signs and possibly “Shared Lane Markings” on the pavement, where applicable.

Staff requests the support of the Energy and Environment Committee to implement this recommendation.

### **Calls to Action**

Improvements to the City’s bicycle facilities and accommodations are included among the priorities of the Strategic Plan and the vision of the Comprehensive Plan.

Goal #4 of the Strategic Plan identifies a review of both the comprehensive plan with respect to bicycle goals and the existing bicycle infrastructure as a first-priority goal for the current fiscal year.

The Comprehensive Plan lists several streets where various bicycle-related accommodations are recommended. Among these recommendations are shared lanes on Conway Road, New Ballas Road, and Warson Road.

This staff recommendation aims to be consistent with these planning documents.

### **Current Regulations**

The regulations concerning cyclists’ use of public roadways of the City of Creve Coeur are consistent with those of the State of Missouri, namely:

1. Cyclists have the same rights and responsibilities as motorists when it comes to use of the traffic lane and obedience to traffic signals and laws [RSMo 307.188; City Chapter 370.040], but
2. Cyclists must move to the right when riding slower than the posted speed limit or the prevailing speed of vehicular traffic on the road [RSMo 307.190; City Chapter 370.050].

The cited and paraphrased sections of the State of Missouri and City of Creve Coeur regulations are attached for reference.

In addition to state and local regulations, the Manual for Uniform Traffic Control Devices (MUTCD), the recognized national – and City’s – standard for roadway signage, addresses the use of the different signs and pavement markings available regarding cyclists’ use of the roadway. The most pertinent of those features include:



#### Bicycles May Use Full Lane Sign

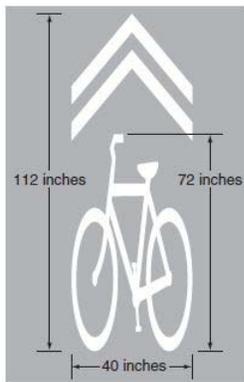
This is an optional, regulatory sign that can be used where no bicycle lanes or shoulders exist and where the existing lanes are not wide enough to allow a vehicle to pass a cyclist. This sign can also be used where it is particularly important to inform motorists that cyclists may be in the lane.



#### Share the Road Sign

The Share the Road sign is a supplemental warning “plaque” that can be added to other warning signs to inform motorists that slower forms of traffic (like bicycles) are likely to be present along the roadway. In this case, the Share the Road plaque is added below the Bicycle Warning Sign.

This sign arrangement is currently in place along many of the City’s major roadways.



#### Shared Lane Marking

The Shared Lane Marking is a painted combination of a cyclist symbol and arrows, and is commonly referred to as a “sharrow.” These pavement markings can be used when there is not a designated bike lane, and they are intended to:

1. Help cyclists align their travel to avoid doors opening from parked vehicles
2. Help cyclists align their travel to the right side of the lane
3. Warn motorists that cyclists are likely to be using the roadway and where they are likely to be
4. Promote safe passage of cyclists by motorists,
5. Help keep cyclists driving the correct direction in the lane.

The MUTCD provides guidance that the Bicycles Can Use Full Lane Sign and Shared Lane Marking may be used together or interchangeably.

#### **Staff Recommendation for Signage and Markings**

Signs and pavement markings are intended to promote safe use of the roadway through conveying traffic laws, warning users about what to expect, and guiding users to where they need to go. The Shared Lane Marking achieves all of these goals. Of the three features considered above, the shared lane marking best relays the state and local laws related to bicycle use of the roadway.

The Bicycles Can Use Full Lane Sign is correct, but it is misleading. It tells only part of the law regarding the lane use. Its intent is to point out to motorists that a cyclist may be in the lane ahead of them, but the sign has been interpreted by cyclists to mean that they are entitled to use the full lane at any time. This second interpretation is not consistent with the state and local laws, and staff feels that it has the potential to encourage novice cyclists to ride out into the City's busiest streets.

Staff recommends continued use of the Bicycle Warning Sign and the Share the Road plaque as a supplement to the Shared Lane Markings. These signs are currently in place, and these only help to warn motorists of the potential for cyclists on the road.

Recommendations and cost estimates for installing the Shared Lane Markings are included later in this report.

### **Applicability**

The Energy and Environment Committee stated that eleven roadways were "problematic" with regard to signage and pavement markings related to bicycle use. It does not appear that the City can implement the recommended improvements on several of these streets, for two primary reasons:

1. Several of the streets that concern the Committee are either partially or fully outside of the City's jurisdiction.
2. The MUTCD states that the Shared Lane Markings should be used only on streets with a speed limit of 35 miles per hour or less.

All eleven of the streets mentioned by the Committee are discussed below.

The following roadways are not applicable to a City project to add signage and/or pavement markings, due to jurisdiction:

- × Mason Road is a St. Louis County roadway.
- × Coeur de Ville Drive (Olive Boulevard to Parc Provence) is a state roadway.
- × Coeur de Ville Drive (Royal Valley Drive to Ladue Road) is a state roadway.
- × Spoede Road (Villa Coublay Drive to Conway Road). This portion of Spoede Road is in the City of Frontenac.
- × Lindbergh Boulevard (Baur Boulevard to Chaminade loop) is a state highway.
- × Warson Road (Schuetz Road to Olive Boulevard) is a St. Louis County roadway.
- × Warson Road (Countryshire Place to Ladue Road). This portion of Warson Road is in the City of Ladue.
- × Olive Boulevard (Mason Road to Warson Road) is a state roadway.
- × Ladue Road (Mason Road to Emerson Road) is a state roadway.

Shared Lane Markings could not be installed along the following roadways due to the speed limit being above 35 mph:

- × Coeur de Ville Drive (Royal Valley Drive to Ladue Road): 40 mph speed limit.
- × Lindbergh Boulevard: 40 mph speed limit.
- × Olive Boulevard (Mason Road to Interstate 270): 40 mph speed limit
- × Olive Boulevard (Spoede Road to Lindbergh Boulevard): 40 mph speed limit.
- × Ladue Road: 40 mph speed limit.

Shared Lane Markings would be fitting for the following arterial and collector roadways that are maintained by the City and have speed limits that are 35 mph or less:

- ✓ Coeur de Ville Drive (Parc Provence to Royal Valley Drive)
- ✓ Conway Road (New Ballas Road to Mason Road)
- ✓ New Ballas Road (Craig Road to Conway Road)
- ✓ Mosley Road (Olive Boulevard to Ladue Road)
- ✓ Graeser Road (Olive Boulevard to Ladue Road)
- ✓ Spoede Road (Olive Boulevard to Chaminade Drive)
- ✓ Warson Road (Olive Boulevard to Countryshire Place)

Staff recommends that the City focus its efforts on the seven roadways listed above, and that Fernview Drive (designated as a minor collector roadway) be added to this list.

**Project Implementation and Estimated Costs**

Adding the Shared Lane Markings to the applicable roadways should be coordinated to be completed as part of the City’s annual roadway striping program or through a rehabilitation of that roadway. This will ensure that the cost of installing the markings remains relatively low and that these markings will be applied to pavement that will be in place for several years.

The City typically invests about \$50,000 to \$60,000 into maintaining its roadway striping each year, and this level of investment allows the maintenance to keep pace with the expected life of the paint.

*Scope of Work.* According to the MUTCD, Shared Lane Markings are required to be installed on both sides of the road, at least every 250 feet, and after each intersection. New Ballas Road is approximately 2.5 miles from Conway Road to Craig Road, leading to the need for just over 100 Shared Lane Markings.

*Cost Estimate.* Staff reviewed MoDOT bid prices from 2015 and 2016 projects, and found that found that the average cost for a Shared Lane Marking was \$133 per marking. This cost is consistent with the cost to paint an arrow in a turn lane.

For the sake of the estimate below, each Shared Lane Marking was estimated to cost \$125, and the cost of the project was inflated by 20% to account for mobilization, traffic control, and other project costs.

Street Name	Length (feet)	Number of Markings	Estimated Cost
Coeur de Ville Drive	1,850	16	\$ 2,400
Conway Road	10,800	88	\$ 13,200
Fernview Drive	2,300	20	\$ 3,000
Graeser Road	6,500	52	\$ 7,800
Mosley Road	5,900	48	\$ 7,200
New Ballas Road	13,200	106	\$ 15,900
Spoede Road	9,300	76	\$ 11,400
Warson Road	4,200	34	\$ 5,100

The estimates above are approximate and are assumed to be part of larger striping or paving projects. A stand-alone project to add the Shared Lane Markings would likely cost more.

The City’s current pavement striping plan aims to repaint each of the major roadways every 4-5 years, meaning that two of these streets would be included in a typical year’s program. On average,

that would mean that the Shared Lane Markings would cost \$10,000 - \$15,000 per year to paint and maintain, or an increase of about 20%-30% in annual costs related to pavement markings.

*Implementation.* The City plans to construct the Warson Road Improvement Project in the spring of 2018. This project will involve resurfacing and restriping Warson Road, and staff feels that this project would be the best opportunity to add Shared Lane Markings to Warson Road, if that is what is desired.

In addition, Fernview Drive is planned to get its pavement markings repainted in the spring of 2018. The next opportunity to add Shared Lane Markings to Fernview Drive would be in 2021 or 2022, when Fernview is scheduled to be repaved.

*Funding.* Unfortunately, these pavement markings are not currently funded in the City's roadway maintenance and improvement budgets. Additional appropriations or reductions elsewhere would need to be made to accommodate this extra work.

### **Additional Projects**

The City is involved with several projects that include improvements to the bicycle network in the City, which might be of interest to the Committee:

Warson Road Improvements. The improvements to Warson Road will include an extension of the multi-use trail from Olivette's Stacy Park to the north entrance of the Monsanto campus. A pedestrian beacon will be added to the new crosswalk across Warson Road.

39 North Plans and Designs. Much of the 39 North planning effort has involved pedestrian and bicycle connectivity. The St. Louis Economic Development Partnership is leading an effort to extend a multi-use trail from where the Warson Road Improvement project ends, through part of Monsanto's campus, north across Olive Boulevard, and to Corporate Square Drive. The design for this project is expected to begin in the next year.

Mason Road sidewalk and multi-use trail concept. The City worked with the City of Town and Country to develop a concept plan to add a multi-use trail along Mason Road, from Clayton Road to Ladue Road, and then to complete the sidewalk connections from Ladue Road to Mason Manor Drive. This project would be completed in phases and appears to be several years from implementation.

### **Recommendation**

Staff recommends to add the Shared Lane Markings to the applicable, City-maintained roadways over the next five to ten years as those roads come into the rotation for pavement resurfacing or repainting. With these markings every 250 feet along the road, the Shared Lane Markings will be a constant reminder to motorists that they are driving along a bike route. Further, staff feels that the markings provide a better message to cyclists regarding their rights and responsibilities on the roadway than the Bicycles May Use Full Lane Sign would.

If this approach and additional funding for it are approved, then staff recommends adding the Shared Lane Markings with Warson Road and Fernview Drive in the spring of 2018 to coincide with the projects planned for those streets.

Attachments: Energy and Environment Committee discussion notes from 09/18/2017

Excerpts from the Creve Coeur Municipal Code (Sections 370.040 and 370.050)

Excerpts from the Missouri Revised Statutes (RSMo 307.188 and 307.190)

## For discussion at the 9/18/2017 meeting of the Energy and Environment Committee

Here are some of the areas in Creve Coeur that I suggest we should consider improvements for. None of these require building anything, other than the placement or replacement of signs, and painting on the road.

Problematic street sections in Creve Coeur:

### North-South

1. Mason Road from Olive to Ladue (near Millennium Park)
2. Coeur de Ville from Olive to Ladue (near Lake School Park)
3. New Ballas from Olive to Conway (past Creve Coeur Government Center, DeSmet High School, and Mercy Hospital)
4. Mosely Road from Olive to Malcomb Terrace Park
5. Graeser Road from Olive to Ladue
6. Spoede Road from Olive to Conway (past Spoede Elementary School, and Villa Deschene and Oak Hill Schools, near Beirne Park)
7. Lindbergh Blvd from Donaho [by Kreis' Restaurant] to Baur Blvd [north of Schuetz]
8. Warson Road from Schuetz to Ladue Road (past Danforth Plant Science Center, Stacy Park in Olivette, MICDS)

### East-West

1. Olive Blvd from Warson to Mason (past Monsanto and the Danforth Plant Science Center, the main business district, near the ice rink and golf course)
2. Ladue Road from Lindbergh to Mason (past Ladue Early Childhood Center, near Malcomb Terrace Park, DeSmet High School, Bellerive Country Club)
3. Conway Road from Ballas to Mason (very popular with recreational bicyclists)

Some of these roads currently have "Share the Road" signs. No street or road that I have found in Creve Coeur has painted bicycle designations (Sharroad) on the street. The photo I took of Olive Street by the Bagel Factory illustrates the problem. "Share the Road" is posted, but very few drivers realize that this means that bicyclists are entitled to use a full traffic lane. The same situation obtains on Lindbergh Boulevard. It is ironic that Monsanto provides a bicycle lane from the entrances to their property on Lindbergh and on Olive, but Creve Coeur does provide guidance of any kind after the bicycle leaves Monsanto. The photograph of a street in nearby Clayton shows the designation that should be on most of our streets. I also strongly favor the replacement of yellow "Share the Road" signs with white "Bicycles May Use Full Lane" signs. Yellow signs are informational – white signs indicate a city regulation.

Signs for "Bicycles May Use Full Lane" sell for 20 to 50 dollars apiece, and a stencil for painting "Sharrows" on the street cost about \$240 and can be used over and over. They would need to be

painted with a paint that will stand up to traffic for at a least a year, preferably two. Most north/south streets in the city would need two or four signs, and paint every 400 meters or so.

City of Creve Coeur, MO  
Monday, November 13, 2017

## Chapter 370. Bicycles and Motorized Bicycles

### Section 370.040. Rights and Duties of Bicycle and Motorized Bicycle Riders.

Every person riding a bicycle or motorized bicycle upon a street or highway shall be granted all of the rights and shall be subject to all of the duties applicable to the driver of a vehicle as provided by Chapter 304, RSMo., and this Title, except as to special regulations in this Chapter, and except as to those provisions of Chapter 304, RSMo., and this Title, which by their nature can have no application.

### Section 370.050. Riding To Right — Required For Bicycles and Motorized Bicycles — Mandatory Use of Bicycle Path By Bicycles.

- A. Every person operating a bicycle or motorized bicycle at less than the posted speed or slower than the flow of traffic upon a street or highway shall ride as near to the right side of the roadway as safe, exercising due care when passing a standing vehicle or one proceeding in the same direction, except when making a left turn, when avoiding hazardous conditions, when the lane is too narrow to share with another vehicle, or when on a one-way street. Bicyclists may ride abreast when not impeding other vehicles.
- B. Whenever a usable path for bicycles practical for sustained riding for transportation purposes has been provided adjacent to a roadway, riders shall use such path and shall not use the roadway.

**Rights and duties of bicycle and motorized bicycle riders.**

[307.188](#). Every person riding a bicycle or motorized bicycle upon a street or highway shall be granted all of the rights and shall be subject to all of the duties applicable to the driver of a vehicle as provided by chapter 304, except as to special regulations in sections [307.180](#) to [307.193](#) and except as to those provisions of chapter 304 which by their nature can have no application.

(L. 1977 H.B. 79 § 4, A.L. 1980 H.B. 995 & 1051)

Effective 6-20-80

**Riding to right, required for bicycles and motorized bicycles.**

[307.190](#). Every person operating a bicycle or motorized bicycle at less than the posted speed or slower than the flow of traffic upon a street or highway shall ride as near to the right side of the roadway as safe, exercising due care when passing a standing vehicle or one proceeding in the same direction, except when making a left turn, when avoiding hazardous conditions, when the lane is too narrow to share with another vehicle, or when on a one-way street. Bicyclists may ride abreast when not impeding other vehicles.

(L. 1977 H.B. 79 § 5, A.L. 1980 H.B. 995 & 1051, A.L. 1995 S.B. 471)