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Pgs. 14
Filed: 08-30-16

Sponsored by: Fulnecky

First Reading: _____

Second Reading: _____

COUNCIL BILL NO. 2016- 217

RESOLUTION NO. _____

RESOLUTION

1 AUTHORIZING the City Manager, or his designee, to apply for a grant in the amount
2 of \$9,960.00 from the Missouri Department of Conservation to support
3 native plant establishment and enhancement on the traffic islands at
4 Sunset Street and Grant Avenue, and Sunset Street and Fort Avenue.
5 _____
6

7 WHEREAS, the Public Works department desires to apply for a grant in the
8 amount of \$9,960.00 from the Missouri Department of Conservation to fund native plant
9 establishment and enhancement on two traffic islands; and
10

11 WHEREAS, if awarded, this grant will require a match from the City in the form of
12 in-kind services valued at \$15,373.
13

14 NOW THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF
15 SPRINGFIELD, MISSOURI, as follows, that:
16

17 Section 1 - The City Manager, or his designee, is hereby authorized to apply for a
18 grant from the Missouri Department of Conservation in the amount of \$9,960.00 to
19 support native plant establishment and enhancement on the traffic islands at Sunset
20 Street and Grant Avenue, and Sunset Street and Fort Avenue.
21

22 Section 2 - This resolution shall be effective immediately upon adoption.
23
24

25 Passed at meeting: _____
26

27 _____
28 Mayor

29 Attest: _____, City Clerk
30
31

32 Filed as Ordinance: _____
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36 Approved as to form: Amanda R. Callaway, Assistant City Attorney

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38

39 Approved for Council action: Greg Burt, City Manager

EXPLANATION TO COUNCIL BILL NO. 2016- 217

FILED: 08-30-16

ORIGINATING DEPARTMENT: Public Works

PURPOSE: To authorize the City Manager, or his designee, to apply for a grant from the Missouri Department of Conservation to support native plant establishment and enhancement on the traffic islands at Sunset Street and Grant Avenue, and Sunset Street and Fort Avenue.

BACKGROUND INFORMATION: Public Works desires to apply for a grant described in detail in "Exhibit A," in the amount of \$9,960 from the Missouri Department of Conservation (MDC) to fund native plant establishment and enhancement. The project will focus on the traffic islands at Sunset Street and Grant Avenue, and Sunset Street and Fort Avenue. The project includes installing native plants that provide habitat for monarch butterflies and food sources for pollinators, as well as informational signs to help educate the public.

REMARKS: This grant requires a match from the City in the form of in-kind services valued at \$15,373.

Supports the following Field Guide 2030 goal(s): Chapter 8, Natural Environment; Major Goal 11, Foster the utilization of native plants within our community; Objective 11a, Require native plants in all public projects and stormwater.

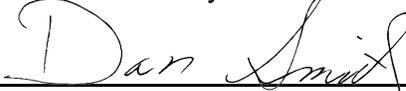
REMARKS: Public Works recommends approval of this Council bill.

Submitted by:



Martin Gugel, Assistant Director of Public Works

Recommended by:



Dan Smith, Director of Public Works

Approved by:



Greg Burris, City Manager

2016 MDC Community Conservation Grant

Sunset Avenue Traffic Islands Glade Planting and Establishment

Project Basics

- **Title:** Turf Conversion to Glade Planting in Traffic Islands
- **Lead Organization:** City of Springfield Public Works, Grounds Division
- **Project Manager:** Contract Horticulturist, Ambur Gossen
- **Funding Request:** \$9,960
- **Total Project Funding:** \$25,333
- Partial funding would be acceptable for our proposed project

Project Description

Overview:

In January of 2015, the City of Springfield began the South Creek Restoration Project along Sunset street, which involved removing over 5,000 linear feet of existing concrete channel, restoring a meandering creek bed with rock & log dams, overseeding with a native plant seed mix, and planting over 100 trees in the riparian corridor. In September of 2015, the City of Springfield's Environmental Services applied for, and was awarded, a Community Conservation Grant from MDC for the maintenance of the native area for the first year.

The two traffic islands in the parameter of this proposal are along Sunset street, partially over the box culverts for the waterway. The habitat in the medians is similar to that of a glade, in full sun, with a hot, dry environment, and relatively shallow soil depth over the concrete. As part of our overall goal to reduce landscape maintenance costs and requirements, while providing tie-in to the traffic islands to the South Creek Project, Public Grounds is proposing to kill off the turf in the two islands and install glade plantings through the dead turf material, along with planting three trees on the islands.

Objectives:

The overall goal of Public Grounds is to reduce maintenance on all medians, traffic islands, parkways, facilities, and City owned lots. With the implementation of the South Creek Project, Public Grounds recognizes an opportunity to:

- Remove turf in the traffic islands that currently must be mowed once a week
- Replace turf with low maintenance, drought tolerant perennials that will compliment the creek below

- Engage local elementary school students and people who utilize the greenway trail along the traffic islands leading to the creek
- Work with the local Greater Ozarks Audobon Society and Missouri Master Naturalists, who volunteer to maintain a section of the riparian corridor further upstream
- Work with Missouri State University's Darr Agriculture Center to use this location as a research project for a college student
- Educate the public about pollinators, urban wildlife, and necessary food sources and habitats, through signage installed along the sidewalk at each traffic island

Management Description and Timeline:

Starting in the summer of 2016, and continuing into the fall of 2016, turf will be mowed to reduce vegetation height and root depth, treatments of glyphosate will be applied to kill off cool season turf and weeds, and pre-emergent will be applied to prevent germination of weed seeds.

In the spring of 2017, treatments of glyphosate will be applied to continue to kill off cool season turf and weeds, and pre-emergent will be applied to prevent germination of weed seeds. Any dead trees will be removed and new trees will be planted in areas not directly over box culverts. Signage built by the City's sign department will be installed at this time as well.

In May-June of 2017, another treatment of glyphosate will be applied as needed. If bermuda grass is an issue, a fifth treatment will be applied in July before installing plugs.

In July-August of 2017, native plugs purchased from growers on the Grow Native! member list will be installed by City employees, as well as Master Naturalists or Gardeners, depending on availability and desire to help. Plants will be installed in zones, according to the landscape design provided by the City's Horticulturist. See detailed lists below.

Supplemental watering will take place by the Public Grounds department the first growing season, at least once a week, or as needed, until plants enter dormancy, using our water trailer.

In fall of 2017, spot spraying and manual removal of weeds will continue as needed.

Trees will be monitored monthly by the City tree establishment contractor, and cared for as needed, for the first three years after planting.

Annual maintenance will consist of cleaning up beds in late February, weed removal as needed, and evaluated for a prescribed burn every 4-5 years, depending on weather and political climate at the time. Maintenance responsibilities will rest primarily with Public Grounds, until a partnership with a community volunteer group can be formed.

10' Buffer Plants

Purple Poppy Mallow	<i>Callirhoe involucrata</i>
Prairie Pussytoes	<i>Antennaria neglecta</i>
Rose Verbena	<i>Glandularia canadensis</i>
Wild Petunia	<i>Ruellia humilis</i>
Missouri Primrose	<i>Oenothera missouriensis</i>
Shooting Star	<i>Dodecatheon meadia</i>
Alum Root	<i>Heuchera richardsonii</i>

Shorter Mid-range Plants

Southern Prairie Aster	<i>Aster paludosus</i>
Silky Aster	<i>Aster sericeus</i>
Lanceleaf Coreopsis	<i>Coreopsis lanceolata</i>
White Prairie Clover	<i>Dalea candida</i>
Purple Prairie Clover	<i>Dalea purpurea</i>
Savanna Bergamot	<i>Monarda bradburniana</i>
Purple Beardtongue	<i>Penstemon cobaea</i>
Butterfly Milkweed	<i>Asclepias tuberosa</i>
Goat's Rue	<i>Tephrosia virginiana</i>
Prairie Dropseed	<i>Sporobolus heterolepis</i>

Mid-range Plants

Green Milkweed	<i>Asclepias viridiflora</i>
Spider Milkweed	<i>Asclepias viridis</i>
Aromatic Aster	<i>Aster oblongifolius</i>
Cream Wild Indigo	<i>Baptisia bracteata</i>
Yellow Wild Indigo	<i>Baptisia sphaerocarpa</i>
Indian Paintbrush	<i>Castilleja coccinea</i>
Prairie Coreopsis	<i>Coreopsis palmata</i>
Western Sunflower	<i>Helianthus occidentalis</i>
Prairie Coneflower	<i>Ratibida columnifera</i>
Gray Goldenrod	<i>Solidago nemoralis</i>
Golden Alexander	<i>Zizia aurea(aptera?)</i>
Rough Blazing Star	<i>Liatris aspera</i>
Glade Blazing star	<i>Liatris mucronata</i>
Squarrosa Blazing Star	<i>Liatris squarrulosa</i>
Slender Mountain Mint	<i>Pycnanthemum tenuifolium</i>
New Jersey Tea	<i>Ceanothus americanus</i>
Leadplant	<i>Amorpha canescens</i>

Taller Mid-range Plants

White Wild Indigo	<i>Baptisia alba</i>
Blue Wild Indigo	<i>Baptisia australis</i>
Sideoats Gramma	<i>Bouteloua curtipendula</i>
Pale Purple Coneflower	<i>Echinacea pallida</i>
Yellow Coneflower	<i>Echinacea paradoxa</i>
Purple Coneflower	<i>Echinacea purpurea</i>
Ozark Glade Coneflower	<i>Echinacea simulata</i>
Prairie Cinquefoil	<i>Potentilla arguta</i>
Prairie Dock	<i>Silphium terebinthinaceum</i>
Little Bluestem	<i>Schizachyrium scoparium</i>
Wild Quinine	<i>Parthenium integrifolium</i>
Virginia Wildrye	<i>Elymus virginicus</i>
Ox-eye Sunflower	<i>Heliopsis helianthoides</i>
Rattlesnake Master	<i>Eryngium yuccifolium</i>
Showy Tick Trefoil	<i>Desmodium canadense</i>
Rosinweed	<i>Silphium integrifolium</i>
Beardtongue	<i>Penstemon digitalis</i>
Switchgrass	<i>Panicum virgatum</i>
Bergamot	<i>Monarda fistulosa</i>
American Beautyberry	<i>Calliarpa americana</i>
Missouri Maidenbush	<i>Phyllanthopsis phyllanthoides</i>

Project Timeline:

- August 2016: Apply first treatments of glyphosate to kill existing bermuda grass
- September 2016: Submit grant application for consideration
- October-November 2016: Mow turf low, apply second treatment of glyphosate, apply pre-emergent
- December 2016: Upon grant award, place plug order with growers
- Early spring 2017: Apply third treatment of glyphosate, apply pre-emergent, remove dead trees, install signs, have new trees planted by contractor, tree maintenance contract begins and goes for three years, hold an invasive weed I.D. class
- May-June 2017: Apply fourth treatment of glyphosate to warm season turf
- July 2017: Apply fifth glyphosate treatment if necessary, install plants, start supplemental watering as needed, hold a native plant I.D. and maintenance class
- Late Summer 2017: Continue watering, control weeds as necessary
- Fall 2017: Apply pre-emergent, control weeds as necessary

- Spring 2018: Apply pre-emergent if needed, continue weed control
- Summer 2018: Take inventory of plants, replace/fill-in plants as needed, continue weed control if natives haven't completely filled in
- Future Management: Monitor and control invasive species, burn after year 4 and every 5 years as possible, replant in blank spaces as needed

Outreach:

The City will work with different partners to provide training for Public Grounds employees. Some of those would be: Patrick Byers of MU Extension for weed I.D. and control, Mervin Wallace at Missouri Wildflowers for native plant I.D. and proper maintenance; MDC staff for burn classes and training.

The City will reach out to Mark Twain elementary school to see if there is an interest in using the traffic islands as an outdoor classroom to study pollinators. The City will also work with MSU's Darr Agriculture Center students to do occasional perennial maintenance and weed control.

The Greater Ozarks Audobon Society and Missouri Master Naturalists help maintain parts of South Creek east of the restoration project. The City will reach out to those groups to see if they would be interested in volunteering to help plant the natives. In return, any unused plugs would be donated for them to use at other locations along the creek.

Project Partners:

City of Springfield Public Grounds Department: All herbicide applications and non-volunteered work

Missouri Master Naturalists- Possible volunteers for planting, possible partner for bed maintenance

Greater Ozarks Audobon Society: Possible volunteers for planting, possible partner for bed maintenance

Missouri State University Agriculture Students/Clubs: Possible volunteers for planting, possible partner for bed maintenance

Missouri Department of Conservation: Mostly advisory

Fiscal Responsibility:

The fiscal responsibility will fall upon the Public Works Department of the City of Springfield

Lead Contact: Ambur Gossen (417) 864-1450, agossen@springfieldmo.gov

Federal Tax ID#: 44-6000268

Missouri Tax ID #: 12493651

Project Budget

ITEM	COST	FUNDING SOURCE
2016 Fall Spraying*	\$ 10	CoS PW
2016 Pre-Emergent Application**	\$ 290	CoS PW
2017 Early Spring Spraying*	\$ 10	CoS PW
2017 Pre-Emergent Application**	\$ 290	CoS PW
2017 Early Summer Spraying*	\$ 10	CoS PW
2017 Mid Summer Spraying* (If Needed)	\$ 10	CoS PW
Mid-Summer Plug Planting (List)		
- 10' Edge Buffer Zone Traffic Island #1	\$ 2,663	CCGP
- Center Island Zone Traffic Island #1	\$ 4,838	CCGP
- 10' Edge Buffer Zone Traffic Island #2	\$ 2,459	CCGP
- Center Island Zone Traffic Island #2	\$ 3,553	CoS PW
2-Swamp White Oak w/ 3 year maintenance	\$ 2,600	CoS PW
1-Crabapple Tree w/ 3 year maintenance	\$ 1,300	Cos PW
2016/17 Staff Labor^ (approx. 250 hrs)	\$ 5,000	CoS PW
2016/17 Volunteer Hours***		Volunteers
Supplemental Watering (approx. 40 hrs)	\$ 800	CoS PW
Educational Signage	\$ 1,500	CoS PW
CoS PW Cost	\$ 15,373	
Total Cost:	\$ 25,333	
Grant Request:	\$ 9,960	

*Glyphosate Herbicide (\$32.51 per 2.5 gal)

**Snapshot Pre-Emergent (\$96.13/50 lb)

***Labor based on current Missouri minimum wage (\$7.65 per hr)

^Average burden rate for City employees (\$20 per hr)

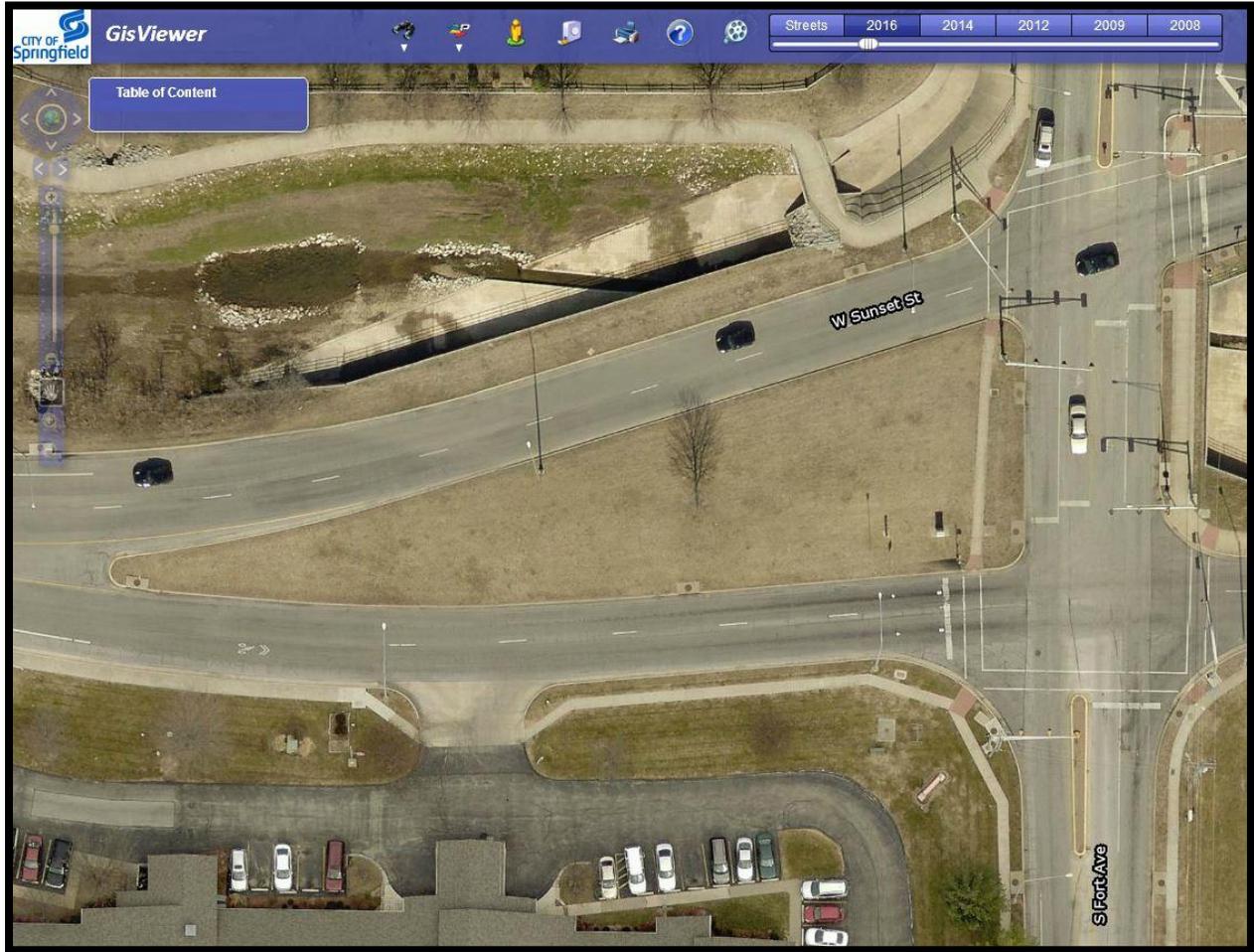
Proposed Project Sites Outlined in Blue:

Fort Ave at top of photo, Grant Ave at bottom of photo. **North ->**



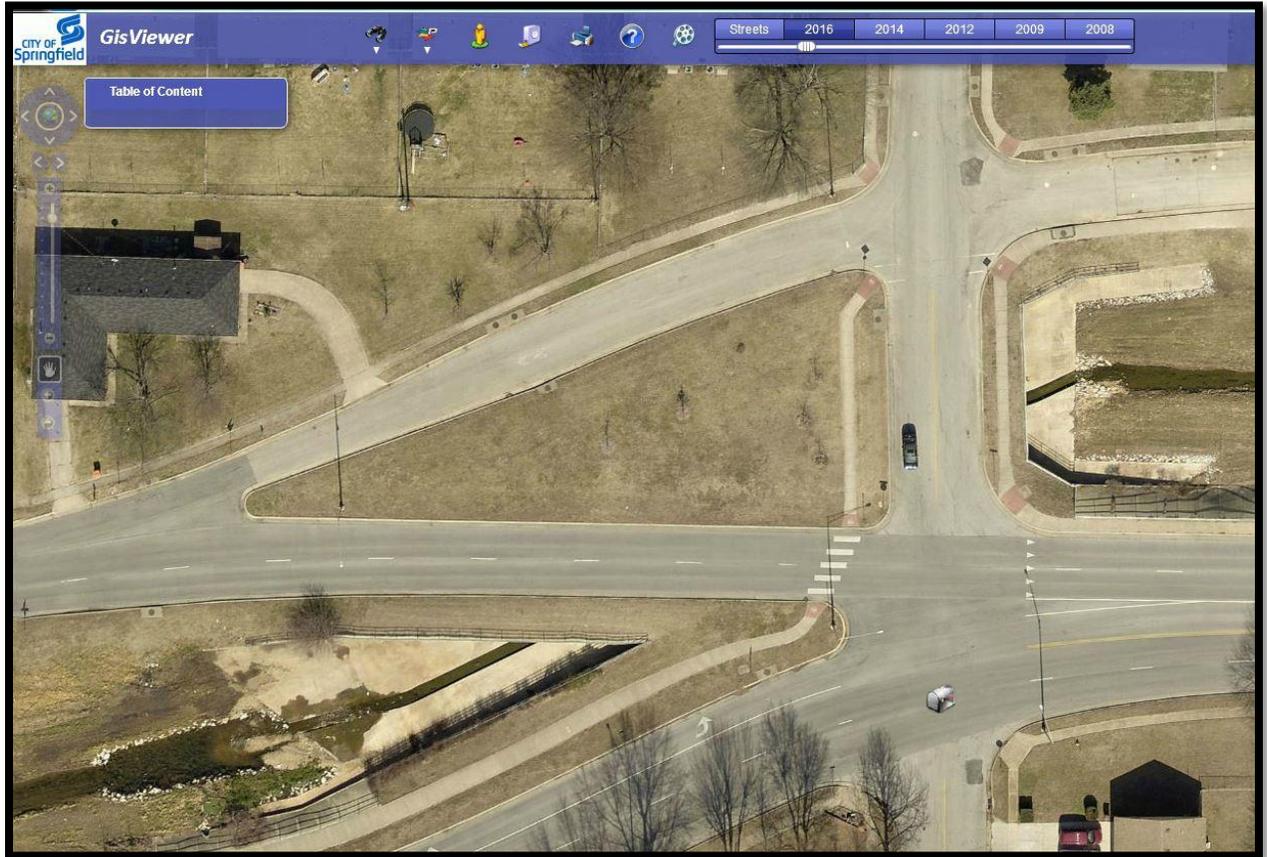
Traffic Island #1:

Fort Ave and Sunset Ave, on the southwest side of South Creek. 16,179 sq. ft. total



Traffic Island #2:

Grant Ave and Sunset Ave, on the northwest side of South Creek. 13,216 sq. ft. total



Planting Plan, Traffic Island #1:



