

Agenda Item: 12.f.

Memorandum

To: Program Projects and Operations Subcommittee

From: Lori Laster, Stormwater Management Engineer

Date: April 5, 2012

Re: Stormwater Best Management Practices Program FY 2013 Applications

The District received 7 eligible applications for Fiscal Year 2013 for the Stormwater Best Management Practices Program.

SID #245 – Summit Ridge – The Summit Ridge SID is requesting \$6,250 to install a rain garden at Summit Ridge Park to address erosion issues due to runoff from a nearby parking lot.

Sarpy County Courthouse – Sarpy County is requesting \$10,000 to install a rain garden in an area that accumulates and holds runoff from the parking lot.

Douglas County Health Center – Douglas County is requesting \$10,000 to install bioretention gardens at the Douglas County Health Center as part of their continuing effort to reduce the amount of stormwater that is discharged to the CSO system

Scenic Park Campground 1 – The City of South Sioux City is requesting \$10,000 to install a rain garden at the Scenic Park Campground in a low-lying area near the campsites where water currently accumulates without infiltrating.
Scenic Park Campground 2 – The City of South Sioux City is requesting \$3,183 to install a rain garden at the entrance to the Scenic Park Campground to infiltrate water that currently runs off Riverview Drive and floods the campground entrance.

Scenic Park Pool Rain Garden – The City of South Sioux City is requesting \$3,183 to install a rain garden near the pool at Scenic Park to treat runoff before it enters the Missouri River.

17th Street Rain Garden – The City South Sioux City is requesting \$10,000 to install a rain garden adjacent to 17th Street in order to filter runoff from snow removed from city streets rather than discharge directly to the Missouri River.

The FY 2012 budget for this program was \$77,500.

Project Sponsor	Project Name	Total Project Cost	Cost Share Requested
SID 245	Summit Ridge	\$12,500	\$6,250
Sarpy County	Sarpy County Courthouse	\$20,000	\$10,000
Douglas County	Douglas County Health Center	\$28,740	\$10,000
South Sioux City	Scenic Park Campground 1	\$24,678	\$10,000
South Sioux City	Scenic Park Campground 2	\$6,365	\$3,183
South Sioux City	Scenic Park Pool	\$6,366	\$3,183
South Sioux City	17 th Street Rain Garden	\$24,785	\$10,000
Total		\$123,434	\$52,616

Staff recommends that the Subcommittee recommend to the Board of Directors that the District approve the Summit Ridge application for \$6,250, the Sarpy County Courthouse application for \$10,000, the Douglas County Health Center application for \$10,000, the Scenic Park Campground 1 application for \$10,000, the Scenic Park Campground 2 application for \$3,183, the Scenic Park Pool application for \$3,183, and the 17th Street Rain Garden application for \$10,000, a total of \$52,616 for District Program 17.41, Stormwater BMP Program, subject to funding the in Fiscal Year 2013 budget.

17.41 Stormwater Best Management Practices Program Special Project Request Application



Project Information

Date	03/15/2012
Project Name	Summit Ridge Stormwater Best Management Practices Program
Project Sponsor	Sarpy County SID 245
City ST ZIP Code	Papillion, NE 68046
Contact Person/Title	Bob Czerwinski
E-Mail/Phone	bczerwinski@eacg.com

Project Location

Southeast corner of 96th and Schram Road in Summit Ridge Park at the South end of the playground located at the intersection of Stony Point Drive and Lakewood Drive.

Project Description

Summit Ridge Park Playground located at Stony Point Drive and Lakewood Drive is approximately 4,500 square feet. The surrounding area drains at an infiltration rate of 1 inch every 4 hours or 6 inches per day. The proposed rain garden would be 750 square feet, the dimensions being 15' X 50'. There have been some erosion issues on the South part of Summit Ridge Park. The location of the rain garden would be great to make the park more aesthetically pleasing, while also providing a functional BMP.

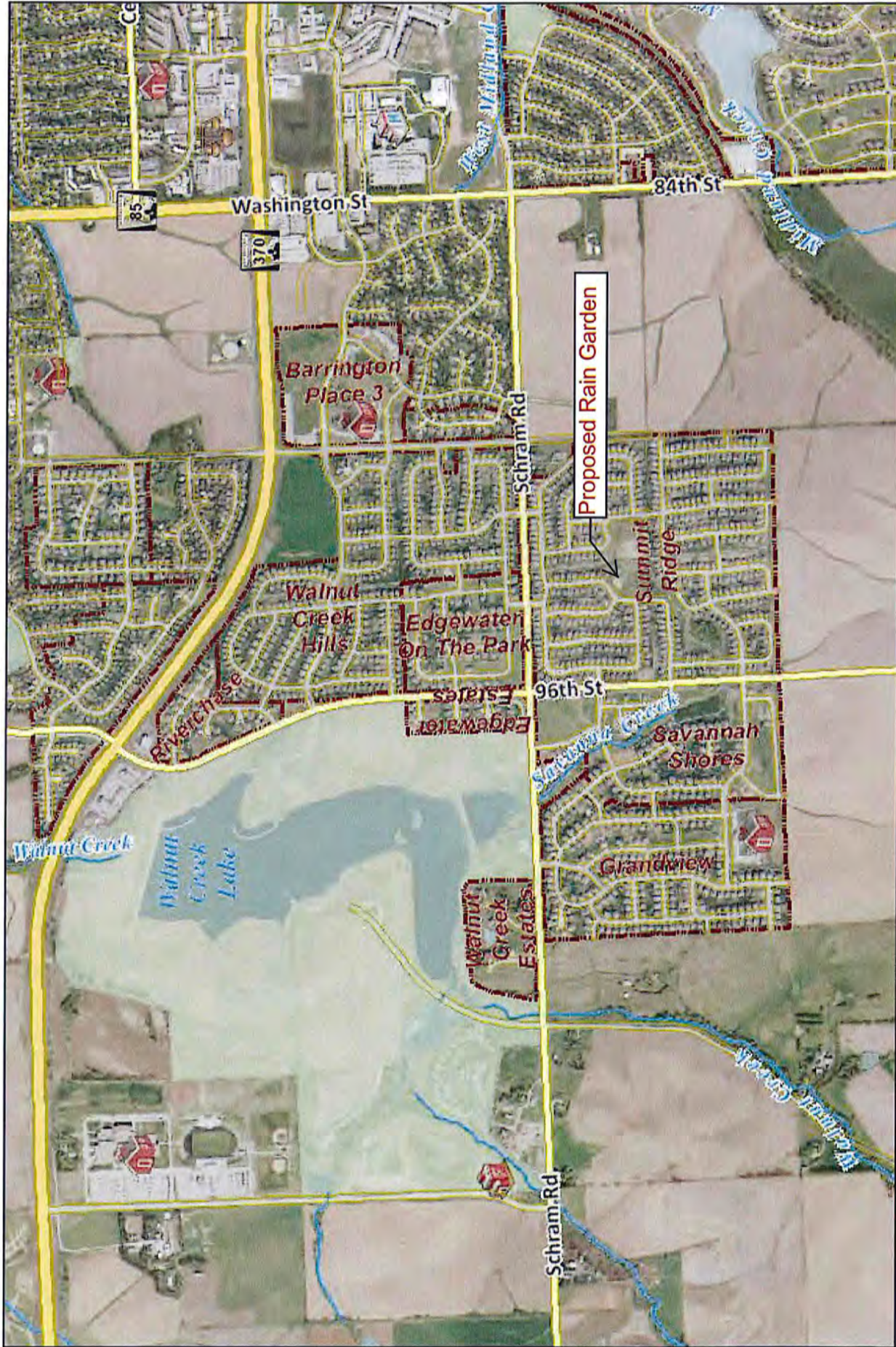
Cost Estimate

Total Estimated Cost	\$12,500
Cost Share Requested	\$6,250

Agreement and Signature

Name (printed)	Bob Czerwinski
Signature	
Date	03/15/2012

Sarpy County, Nebraska



Disclaimer: This data is for informational purposes only, and should not be substituted for a true titles search, property appraisal, survey, or for zoning district verification. Sarpy County and the Sarpy County GIS Coalition assume no legal responsibility for the information contained in this data.

Map Scale
1 inch = 1424 feet

4/2/2012

Summit Ridge Stormwater Best Management Practice Project
BioRetention Garden Concept

This letter and the attached application is a submittal for the Stormwater Best Management Practices Program Special Project Request.

Summit Ridge Park Playground located at Stony Point Drive and Lakewood Drive is approximately 4,500 square feet. The surrounding area drains at an infiltration rate of 1 inch every four hours or 6 inches per day. The proposed rain garden would be 750 square feet, the dimensions being 15' X 50'. There have been some erosion issues on the South part of Summit Ridge Park. The location for the rain garden would be great to make the park more aesthetically pleasing, while also providing a functional BMP.

A bioretention garden is one cost effective way to help reduce damaging stormwater runoff and improve water quality in this area. It also adds value to the property with distinctive landscaping options improving the overall aesthetics of the site. The area that we are looking at is in need of improvement and by doing this we can implement a more efficient way to manage stormwater runoff in the park. This area of the SID could yield many benefits:

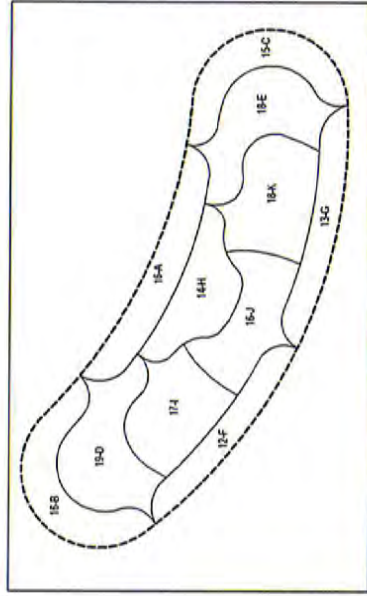
- Increased aesthetics for the neighborhood
- Deep rooting native plants & amended soils help increase the infiltration rate; thus it is able to decrease the overall amount of runoff.
- Increase pollutant filtering

There is an opportunity to design a bioretention garden to aid in the management of stormwater runoff in this neighborhood. It is great that the NRD for our area recognizes the need for people to learn about these types of projects and what they can provide to the citizens of our area. With everyone's efforts combined, a bioretention garden can be built to create a functional, but also beautiful addition to this neighborhood.

RAIN GARDEN PLANT SCHEDULE

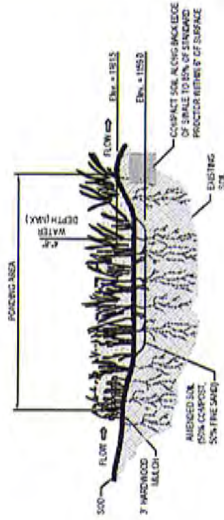
SYMI	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE
A	16	Asplenium platyneuron	Big Blue Stem Grass	1 Gal	Cont
B	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
C	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
D	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
E	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
F	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
G	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
H	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
I	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
J	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
K	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
L	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
M	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
N	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
O	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
P	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
Q	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
R	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
S	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
T	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
U	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
V	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
W	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
X	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
Y	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont
Z	16	Asplenium platyneuron	Asplenium platyneuron	1 Gal	Cont

NOTE: ALL RAIN GARDEN PLANTS SHALL BE INSTALLED 2'-0" O.C.



RAINGARDEN AREA DETAIL

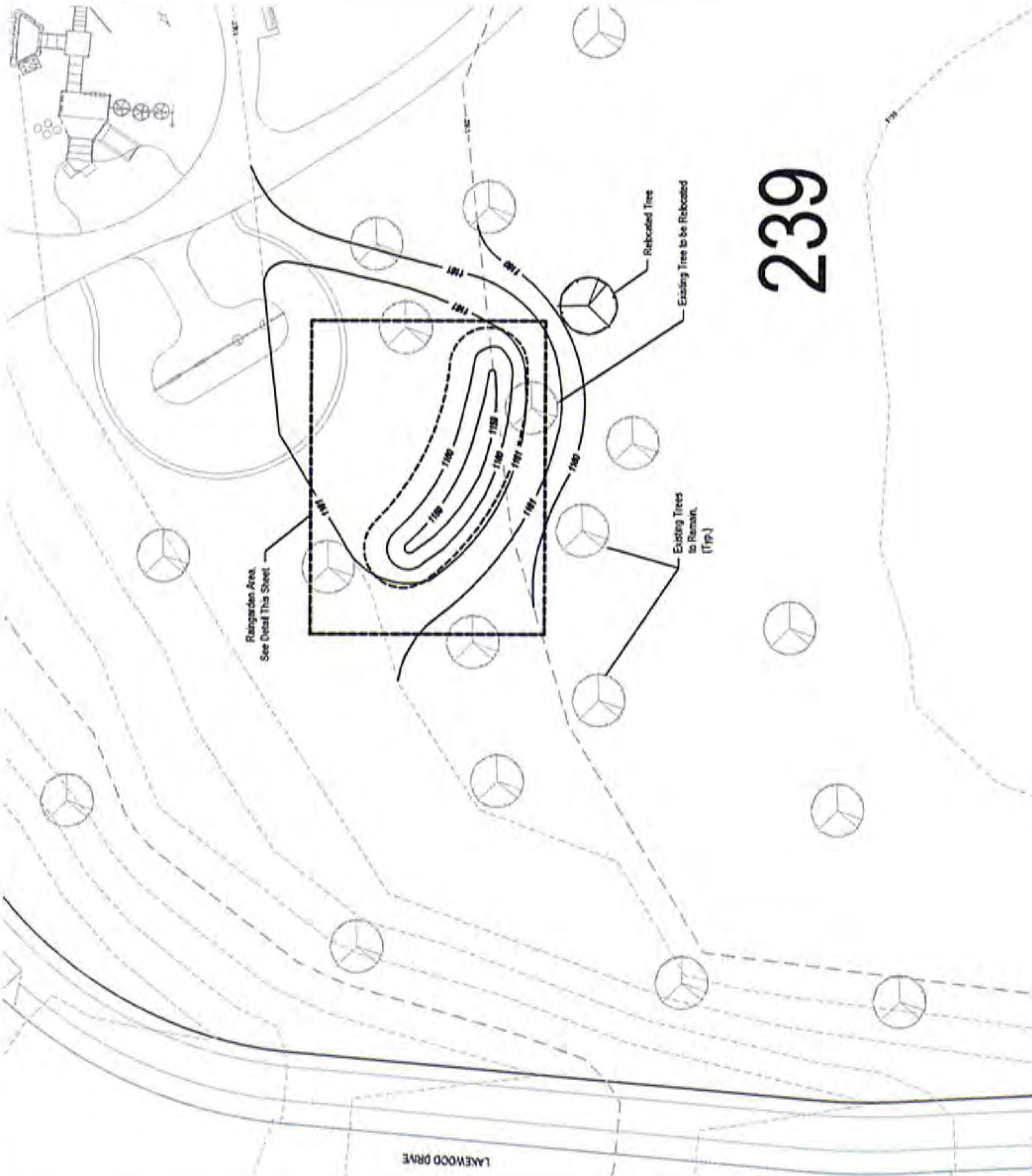
SCALE: 1" = 5'



- NOTES:**
1. SCAREY BOTTOM AND SIDES OF RAIN GARDEN TO A DEPTH OF 6" PRIOR TO PLACEMENT OF AUTUMN SOIL.
 2. CONTRACTOR SHALL WORK TO MINIMIZE COMPACTION BY LIMITING TRAFFIC AND EQUIPMENT SIZE WITHIN THE LIMITS OF THE RAIN GARDEN.
 3. PLANTS SHALL BE CAPABLE OF WITHSTANDING 20-40 HOURS OF ILLUSION.

RAINGARDEN DETAIL

NOT TO SCALE



239

LEGEND

-



17.41 STORMWATER BEST MANAGEMENT PRACTICES PROGRAM

SPECIAL PROJECT REQUEST APPLICATION

1. DATE: March 13, 2012

2. PROJECT NAME: Sarpy County Rain Garden Project

3. PROJECT SPONSOR: Sarpy County

ADDRESS: 1210 Golden Gate Drive
Papillion, NE 68046

4. CONTACT PERSON: Lisa A. Haire

TITLE: Sarpy County Grant Coordinator

5. EMAIL AND PHONE: 402-593-1565 lhaire@sarpy.com

6. PROJECT LOCATION:

The Sarpy County Rain Garden Project will be located on the corner of Golden Gate Drive and East Gold Coast Road in Papillion, Nebraska on Sarpy County property. The project will be situated on the northeast corner of the Sarpy County Courthouse and the Administration overflow parking lot (attachment 1, proposed Rain Garden #1). This particular area accumulates stormwater and stormwater runoff from impervious surfaces following rainfall events and drains through a nearby outlet into the Municipal Separate Storm Sewer System (MS4).

7. DESCRIPTION OF STORMWATER BEST MANAGEMENT PRACTICE AND HOW IT WILL BE INCORPORATED IN THE PROJECT:

Sarpy County will incorporate Low Impact Development (LID) water quality measures through the implementation of a rain garden located on the corner of Golden Gate Drive and East Gold Coast Road in Papillion, Nebraska.

Rain gardens are an example of a low impact development (LID) approach to storm water management. The LID approach retains and infiltrates rainfall on-site, emphasizing site designing and planning techniques that mimic the natural infiltration-based, groundwater-driven hydrology of our historic landscape (www.papionrd.org/downloads/howtohelp/NRD_RainGardens_NRCS.pdf).

Traditionally, pollutants accumulate on paved surfaces and are washed into the MS4 at concentrated levels during a rainfall event. The primary purpose of a rain garden is to store the first few inches of rain helping water infiltrate into the ground and limiting runoff pollutants which normally run through an outlet, draining into the MS4 and continuing downstream into creeks, ponds, lakes, and rivers. Rain gardens help to reduce this pollution by holding and

filtering the water. Loose, absorbent soil collects the rainwater running off streets and parking lots. Native plants help absorb water, sand and soil filter out pollutants helping to naturally manage stormwater runoff.

According to the National Pollutant Discharge Elimination System's (NPDES) menu of Best Management Practices (BMP's), "bio-retention (rain gardens) can be used in parking areas to collect and treat stormwater" (www.epa.gov/npdes/stormwater/menuofbmps/index). The Environmental Protection Agency (EPA) lists rain gardens as a Low Impact Development (LID) BMP strategy because "they restore the natural, pre-developed ability of an urban site to absorb stormwater, mimicking the natural hydrology of the area by capturing and managing storm water on-site" (www.epa.gov/npdes/stormwater/menuofbmps/index). Additionally, rain gardens recharge groundwater, keep rainwater on the property, remove standing water naturally, reduce mosquito breeding, and beautify the landscape.

Sarpy County will work with a contractor to construct a rain garden on the northeast corner of the County Courthouse and Administration overflow parking lot. This area accumulates and holds stormwater runoff following rainfall events eventually draining into the MS4 through a nearby outlet (attachments 2-5). Constructing a rain garden in this area will assist in capturing the rainfall and runoff from nearby impervious surfaces limiting pollutants from draining into the MS4.

The Sarpy County rain garden will be landscaped with perennial flowers and native vegetation which will absorb rainfall, filtering pollutants that currently run across the parking lot. The rain garden will be a natural way to capture, filter, and hold rainfall on site helping protect fragile water resources downstream (attachments 6 and 7).

9. TOTAL ESTIMATED COST:

\$ 20,000 (see attachment 8 for cost breakdown and 9 for schedule)

10. COST SHARE REQUESTED:

\$ 10,000

11. SIGNATURE/TITLE:

Russell H. L., Chairman, Board of Commissioners

FORM 17.41

Sarpy County, Nebraska



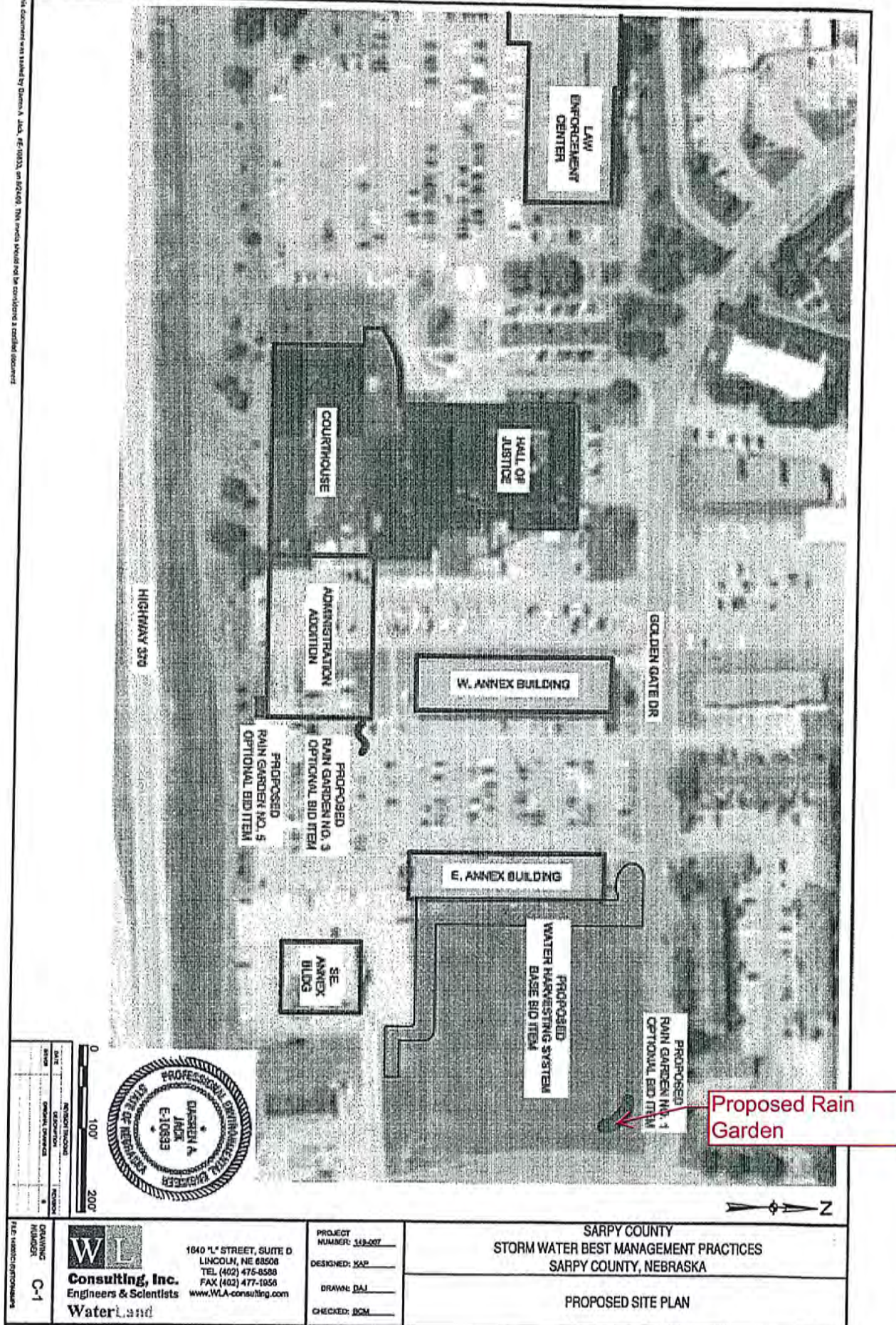
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Map Scale
1 inch = 1424 feet
4/2/2012

ATTACHMENT 1

R:\Drawings\118-007\Sarpy\Stormwater\118-007\DWG\SWMP\Prop_C-1_8/24/2007 12:14:11 AM

This document was created by Dennis A. Jack, PE, 10/23, on 8/24/07. This project should not be considered a certified document.





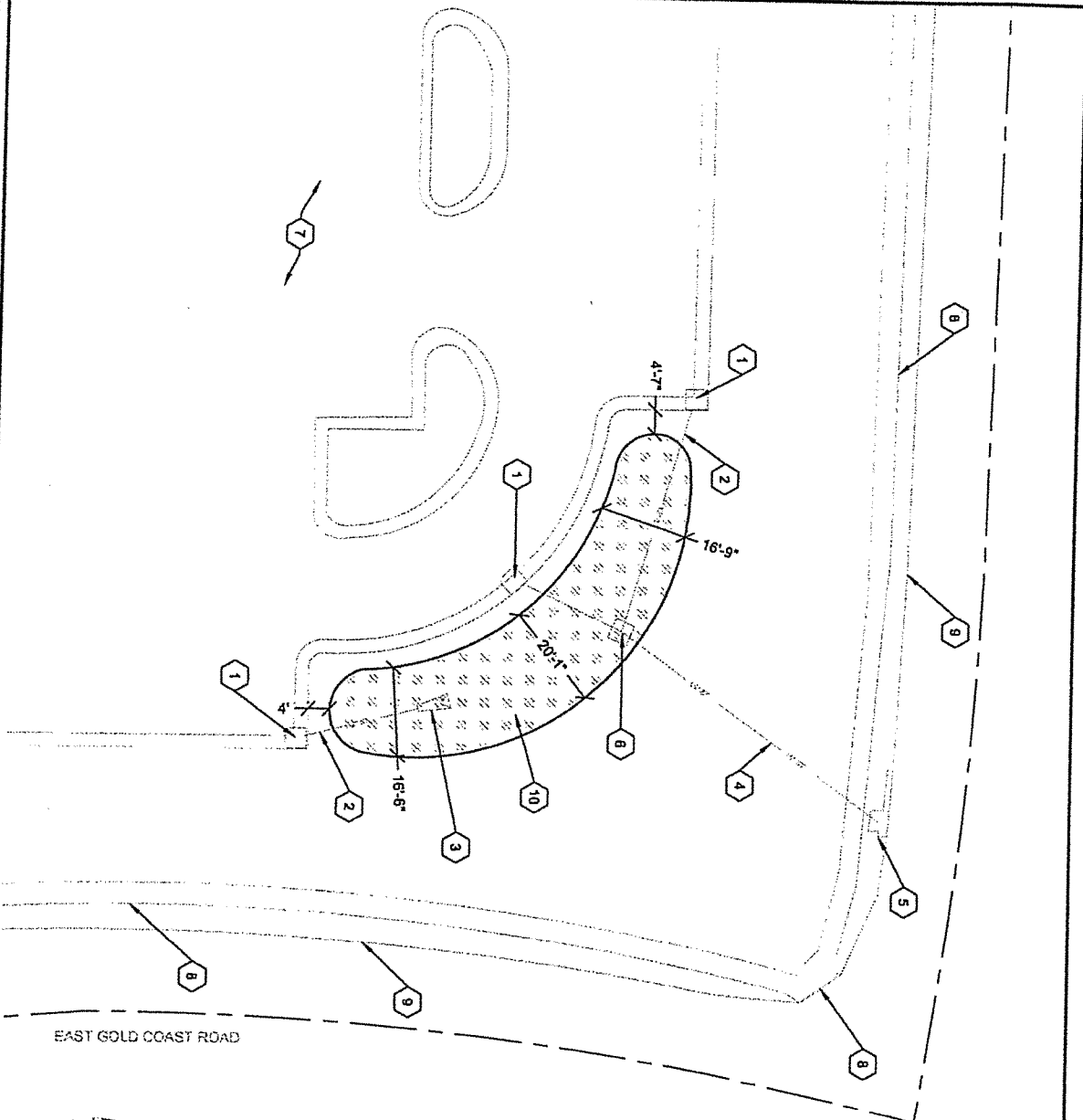






R:\Drawings\149-007 Sarpy SW\Project\149007C\0220m\DWG\149-007C-4-05-2020 R50-49.dwg

This document was sealed by Darren A. Jack, P.E. (10833), on 02/10/23. This media product is not a certified document.



GENERAL NOTES:

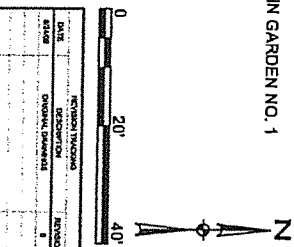
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL NOTIFY THE NEBRASKA ONE-CALL SYSTEM BEFORE CONSTRUCTION ACTIVITIES BEGIN. NEBRASKA DIGGERS HOTLINE: 1-800-331-5866 OR 811.
3. CONTRACTOR SHALL PROTECT ALL EXISTING STORM SEWER INLETS, MANHOLES AND PIPING DURING CONSTRUCTION OF RAIN GARDEN.

KEYNOTES:

1. EXISTING 24" GRATE INLET, RIM ELEV = 1093.0.
2. EXISTING 12" STORM SEWER PIPE.
3. EXISTING 12" RCP FLARED END SECTION, RIM ELEV = 1092.5.
4. EXISTING 15" STORM SEWER PIPE.
5. EXISTING STORM SEWER CURB INLET.
6. EXISTING DRAW DOWN STRUCTURE, RIM ELEV = 1092.20.
7. PARKING LOT.
8. EXISTING CONCRETE SIDEWALK.
9. EDGE OF ROADWAY.
10. PROPOSED RAIN GARDEN NO. 1, APPROXIMATE DIMENSIONS: 85' BY 18', 1602 SF. SEE SHEET C-5 FOR VEGETATION PLAN.

LEGEND

- EXISTING 15" STORM SEWER
- EXISTING 12" STORM SEWER
- ROADWAY CENTERLINE
- RAIN GARDEN NO. 1



DRAWING NUMBER
C-4



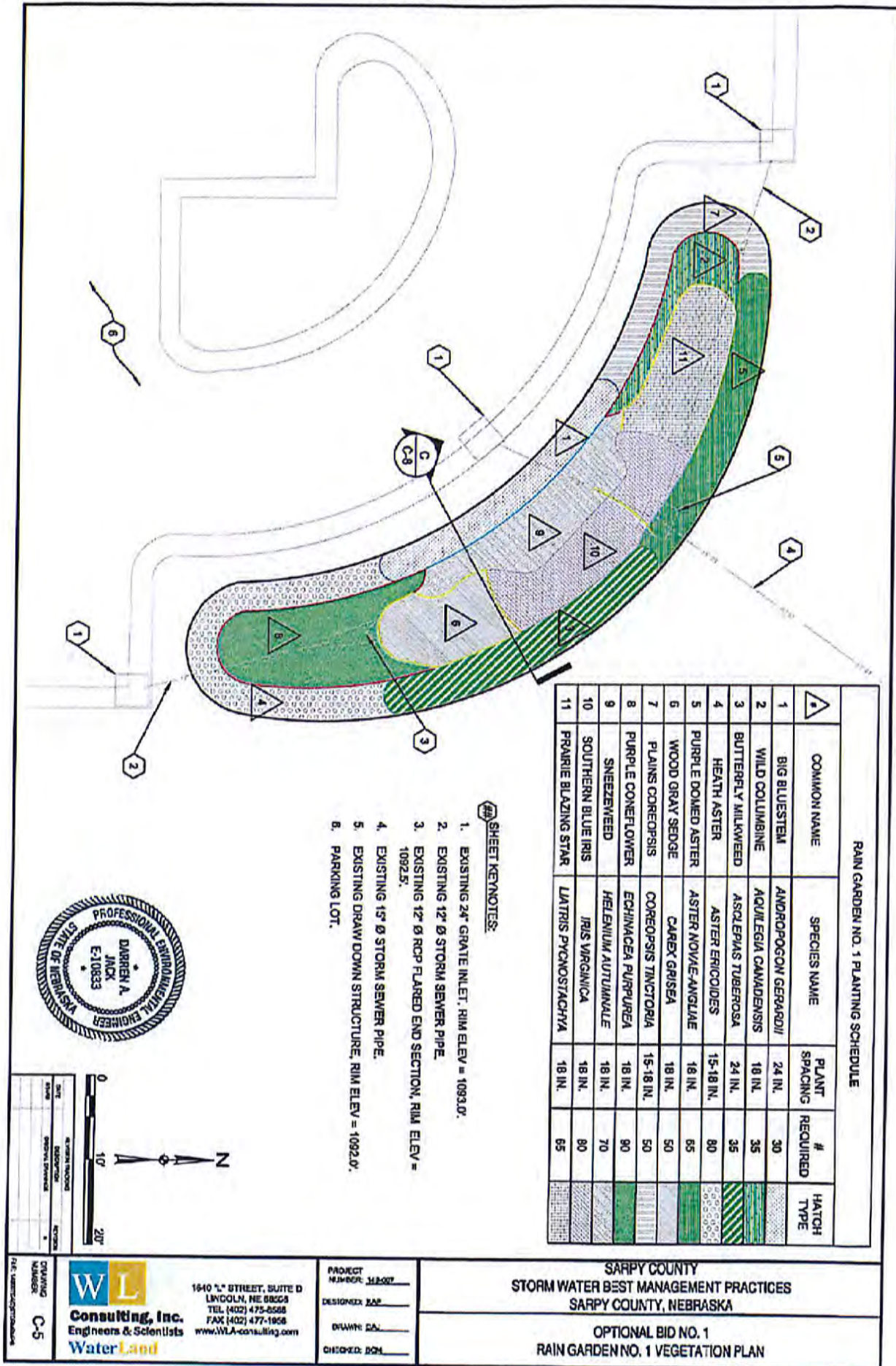
WaterLand Consulting, Inc.
Engineers & Scientists

1640 "L" STREET, SUITE D
LINCOLN, NE 68508
TEL (402) 475-8588
FAX (402) 477-1056
www.WLA-consulting.com

PROJECT NUMBER: 149-007
DESIGNED BY: KAP
DRAWN BY: DAJ
CHECKED BY: BCM

SARPY COUNTY
STORM WATER BEST MANAGEMENT PRACTICES
SARPY COUNTY, NEBRASKA

OPTIONAL BID NO. 1
RAIN GARDEN NO. 1 PARTIAL SITE PLAN



Attachment 8

Sarpy County Rain Garden Proposed Project

Estimated Costs for Component Parts

ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	EXTENDED COST
1	Excavation	300	CY	\$11.98	\$3,594.00
2	Import Sandy Loam Fill	240	CY	\$35.86	\$8,606.40
3	Import Grave (No. 2 Stone)	30	CY	\$65.75	\$1,972.50
4	Under-Drain Piping (6" Slotted HDPE)	130	LF	\$1.79	\$232.70
5	Fittings (3-45degree elbows and 2-90 degree elbows)	6	Each	\$95.83	574.98
6	Vegetation	1600	SF	\$2.39	\$3,824.00
7	Connection to Existing Area Drain	1	Each	\$1,195.42	\$1,195.42
	TOTAL				\$20,000

ATTACHMENT 9
IMPLEMENTATION SCHEDULE
SARPY COUNTY RAIN GARDEN PROJECT

Sarpy County notified of award from Papio-Missouri NRD:	June 2012
Sarpy County Purchasing Department releases RFP:	July 9, 2012
Advertisement:	July 18-July 25, 2012
Prebid Meeting:	July 31, 2012
Open Bids:	August 9, 2012
Award Bid:	August 14, 2012
Contract Documents Completed:	August 24, 2012
Project Start:	September 3, 2012
Project Completion:	September 21, 2012

17.41 STORMWATER BEST MANAGEMENT PRACTICES PROGRAM

SPECIAL PROJECT REQUEST APPLICATION



1. DATE: March 12, 2012

2. PROJECT NAME: Douglas County Health Center-Parking Lot 12/Pacific Street Bioretention

3. PROJECT SPONSOR: Douglas County Environmental Services

ADDRESS: 3015 Menke Circle
Omaha, NE 68134

4. CONTACT PERSON: Kent E. Holm, CSM

TITLE: Environmental Services Director

5. EMAIL AND PHONE: kent.holm@douglascounty-ne.gov

6. PROJECT LOCATION:
40th and Pacific Street, Omaha, NE 68105

7. DESCRIPTION OF STORMWATER BEST MANAGEMENT PRACTICE AND HOW IT WILL BE INCORPORATED IN THE PROJECT:

Background: Parking lot #12 at the Douglas County Health Center was renovated in 2011. The redesign of the parking lot included bioretention gardens to the east of this lot that met the City of Omaha's stormwater requirements. The County wishes to capture additional runoff from this parking lot and adjacent areas and keep that runoff from entering the combined sewer system.

Description: For this grant application, additional bioretention gardens are proposed for the area immediately north of the parking lot and adjacent to Pacific Street (see attached maps). These bioretention gardens will provide water quality and quantity benefits by retaining and detaining stormwater runoff from the northern portion of parking lot #12 which has a drainage area of approximately 0.4A. The proposed bioretention gardens will also seek to incorporate some stormwater runoff from Pacific Street if the design parameters permit. The intent is to provide as much stormwater volume control as possible to reduce the amount of stormwater runoff flowing into the combined sewer. This is consistent with the stormwater volume reduction goals for the entire Health Center campus. Final design of the proposed bioretention gardens is anticipated to be similar to the design for the Eastern Nebraska on Aging (ENOA) bioretention project in terms of soil mix, underdrains, and plant selection. However, the County does wish to use the latest and best technology available for these new proposed bioretention gardens and will continue to evaluate the design and function of the ENOA and other bioretention gardens. Lessons learned from those projects will be incorporated into the design for this project. It is anticipated that the final design will account for at least the first 1/2 inch of runoff from the northern part of the parking lot #12 with the goal being retention of the maximum amount feasible. A conceptual design drawing is attached and indicates a series of bioretention cells with stormwater runoff from parking lot #12 conveyed to the cells via stormsewer pipes. Final design will most likely include level spreaders to dissipate some of the concentrated flow from the parking lot before it enters the bioretention. Some of the existing trees will most likely be removed prior to installation of the bioretention cells.

Costs: The preliminary cost estimate for this bioretention project is based off the recent ENOA project costs. Final design will be by a licensed, professional engineer in the State of Nebraska. Estimated construction (bioretention and associated level spreaders, etc.) \$21,704.00. Final design and construction observation \$7,000.00. Total estimated project costs = \$28,740.00

Timeline: Final design on this project will commence upon notification of the award. Bidding and contractor selection will follow completion of the final design. Installation would follow in the fall of 2012 or Spring 2013, depending primarily on the weather and site conditions. Anticipated completion will be no later than June 30, 2013, with the exception of plant maintenance requirements of the contractor which would typically conclude on year from the date of substantial completion of the bioretention gardens.

9. TOTAL ESTIMATED COST: \$28,740.00

10. COST SHARE REQUESTED: \$10,000.00

11. SIGNATURE/TITLE:

Kent E. Holm 3/14/12.



DOUGLAS COUNTY
ENVIRONMENTAL SERVICES

3015 MENKE CIRCLE, OMAHA, NE 68134

Kent E. Holm, Director

March 14, 2012

Gerry Bowen
Natural Resources Planner
Papio-Missouri River NRD
8901 S. 154th Street
Omaha, NE 68138-3621

RE: Douglas County Health Center-Parking Lot 12/Pacific Street Bioretention – Application for the Stormwater Best Management Practices Program.

Dear Gerry:

I've enclosed the completed grant application for the Douglas County Health Center – Parking Lot 12/Pacific Street Bioretention project. An electronic copy of this application was also emailed to you today.

I'm requesting a cost share from the NRD in the amount of \$10,000 for this estimated \$28,740 project. This project represents another step in Douglas County's effort to retrofit stormwater best management practices on the Health Center campus and reduce the amount of stormwater runoff into the combined sewer system. To date the County has installed several rain gardens, bioretention gardens, a stormwater harvesting and drip irrigation system and green roof on the campus and all of these best management practices are eliminating stormwater runoff that would normally enter the combined sewer and contribute to combined sewer overflow events.

Thank you for making this funding opportunity available and please do not hesitate to contact me if you have questions about this application or need further information. I thank you and the NRD for your past support of the County's stormwater management efforts and look forward to your favorable review of this new bioretention project.

Yours Truly,

Kent E. Holm, CSM
Attachments

MAR 15 2012

Noxious
Weed Control
444-4583

OFFICE
402-444-6181

FAX
402-444-4963

Landfill
444-6181

Rural Planning
Permits & Inspection
444-7189

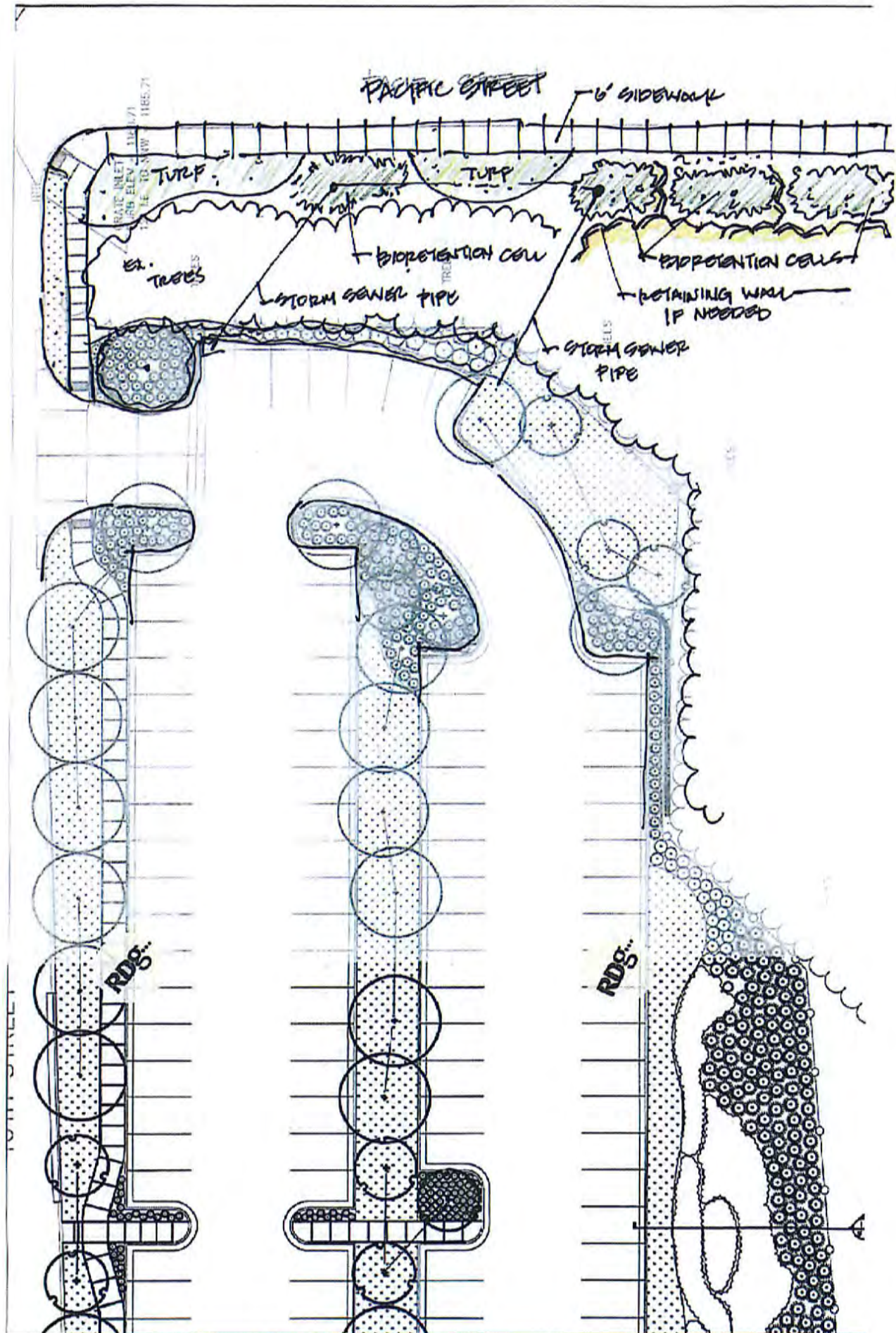


DCHC Parking lot #12

Printed: Mar 17, 2011



www.dcgis.org/dogis





17.41 STORMWATER BEST MANAGEMENT PRACTICES PROGRAM

SPECIAL PROJECT REQUEST APPLICATION

1. DATE: 3/13/12

2. PROJECT NAME: Scenic Park Campground Rain Garden

3. PROJECT SPONSOR: City of South Sioux City

ADDRESS: 1615 1st Avenue
South Sioux City, NE 68776

4. CONTACT PERSON: Lance Hedquist

TITLE: City Administrator

5. EMAIL AND PHONE: lhedquist@southsiouxcity.org 402-494-7517

MAF 19 2012

6. PROJECT LOCATION:

South Sioux City Scenic Park Campground -- See Attached Location Map

7. DESCRIPTION OF STORMWATER BEST MANAGEMENT PRACTICE AND HOW IT WILL BE INCORPORATED IN THE PROJECT:

The City of South Sioux City's campground is located in Scenic Park and is a popular destination for over 100,000 visitors per year. During major rainfall events, a low-lying area near the heart of the campground is often flooded and ponding of stormwater occurs as a result of run-off from the camp sites and roads in the campground. Debris and sediment are washed into this low lying area and are eventually absorbed into the ground or carried to the storm-sewer outfalls that lead to the adjacent Missouri River. Utilizing best management practices for improving water quality, a 5,616 SF rain garden will be constructed in the project location located on the attached map marked campground rain garden.

9. TOTAL ESTIMATED COST: \$ 24,678

10. COST SHARE REQUESTED: \$ 10,000

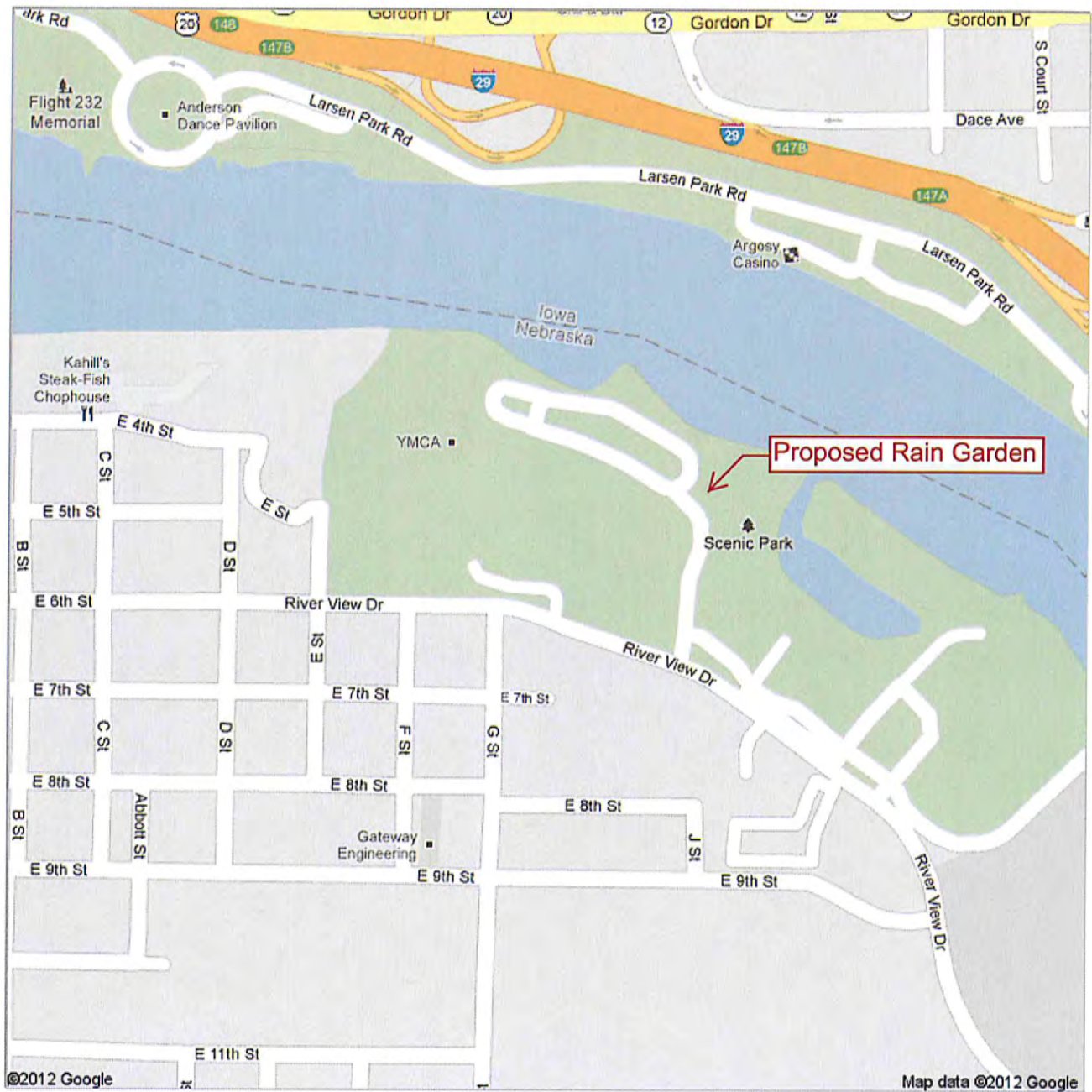
11. SIGNATURE/TITLE:

William D. McLeary Mayor

Address **South Sioux City, NE**

Get Google Maps on your phone

Text the word "GMAPS" to 466453



EXECUTIVE LAWNS & POOLS

2302 West 29th Street

*Knight and Dave Inc.
DBA*

*Bloomers / Executive Lawns & Pools
PO BOX 1067 SOUTH SIOUX CITY NEBRASKA 68776
402-412-2700 712-223-5296*

**Bid
Scenic Park Rain Garden – Campground**

Item	Description	Quantity	Price	Total
1	Build new rain garden 78ft East and West by 18ft North and South with rounded corners at a depth of 4ft. Form an inlet of SE corner and an outlet for over flow on NW corner.	5616 SF	.70	3931.20
2	Place 12" depth of pea gravel in bottom of rain garden.	52 CY	52.00	2704.00
3	Place 1450 sq feet of filter fabric over top of pea gravel.	1450 SF	1.00	1450.00
4	Mix and place in lifts, engineered soil mix at a ratio of 30:30:40 of sand, compost, and top soil. Place soil mix in a shallow bowl design.	130 CY	54.00	7020.00
5	Furnish and install plants: A mix of Shrubs, Perennial Grasses and Flowers	485	17.20	8342.00
6	Furnish and install mulch 3" depth over top of rain garden.	13 CY	90.00	1170.00
7	Finish grade, seed, and install starter fertilizer on disturbed area around rain garden and in new drainage ditch area.	400 SF	.15	60.00
	Total Cost of Project			\$24677.20

Planning and Design

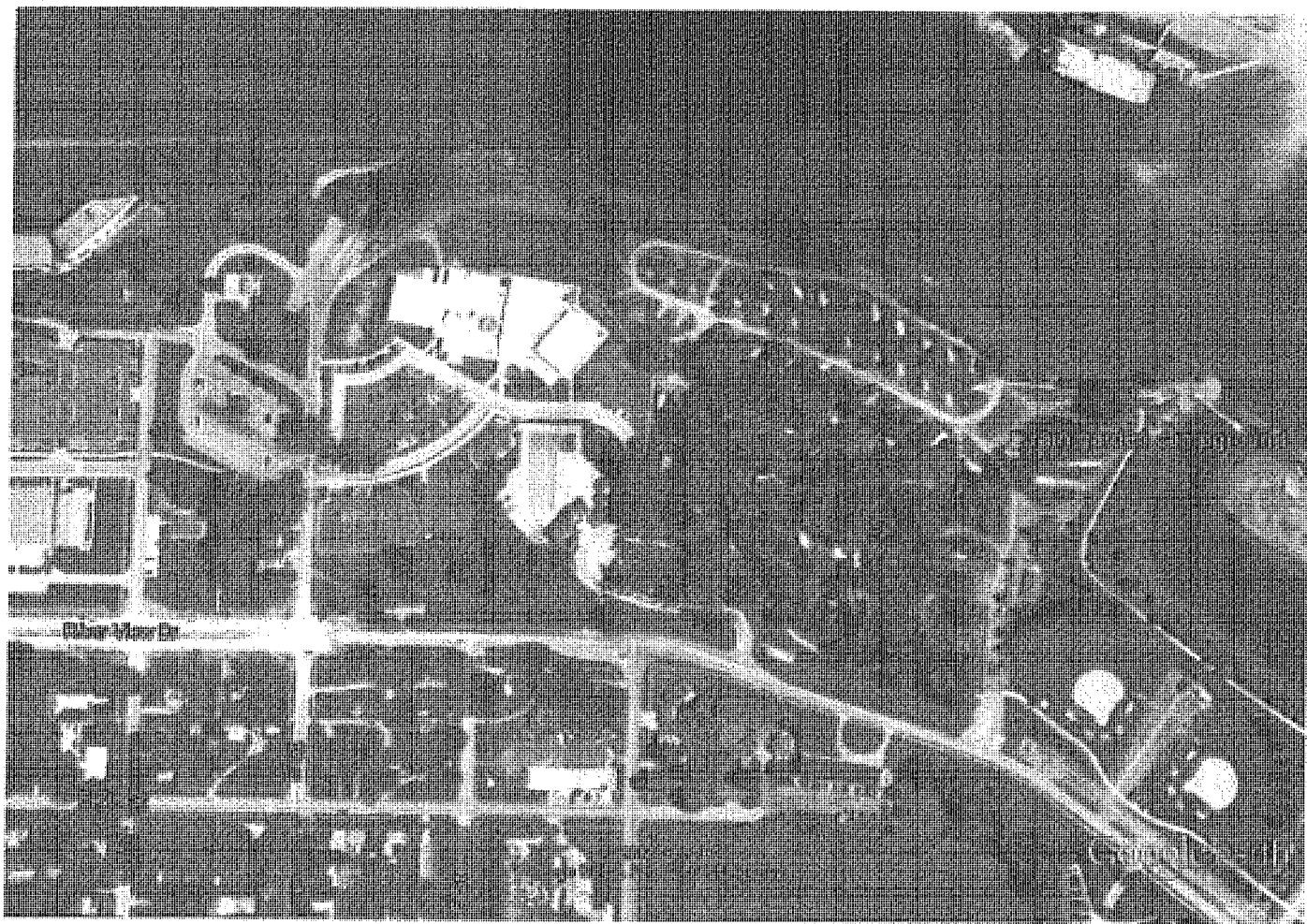
Renee Palmersheim from Executive Lawns & Pools / Bloomers has been in the landscape business since 1996. She has helped in the design and development of four other rain gardens in South Sioux City, Nebraska.

Installation and Management

Executive Lawns & Pools / Bloomers will be required to maintain the project for a one year period. They will ensure that the plant material is thriving and will replace any non living or troubled plant if needed at no charge to the city for the first twelve months. Weeding will be done on a weekly basis at a minimum charge of \$25.00 per hour our normal hourly rate. Executive Lawns & Pools will also be responsible to maintain the mulch at the desired thickness and will do so at no charge for the first growing season any new mulch needed to maintain a 3" depth and proper appearance will be done and charged to the City of South Sioux City according to above specs.

Submitted by: Renee Palmersheim
Executive Lawns & Pools
Bloomers
2302 W 29th Street
South Sioux City, NE 68776
402-412-2700 or 712-223-5296
On: March 12, 2012

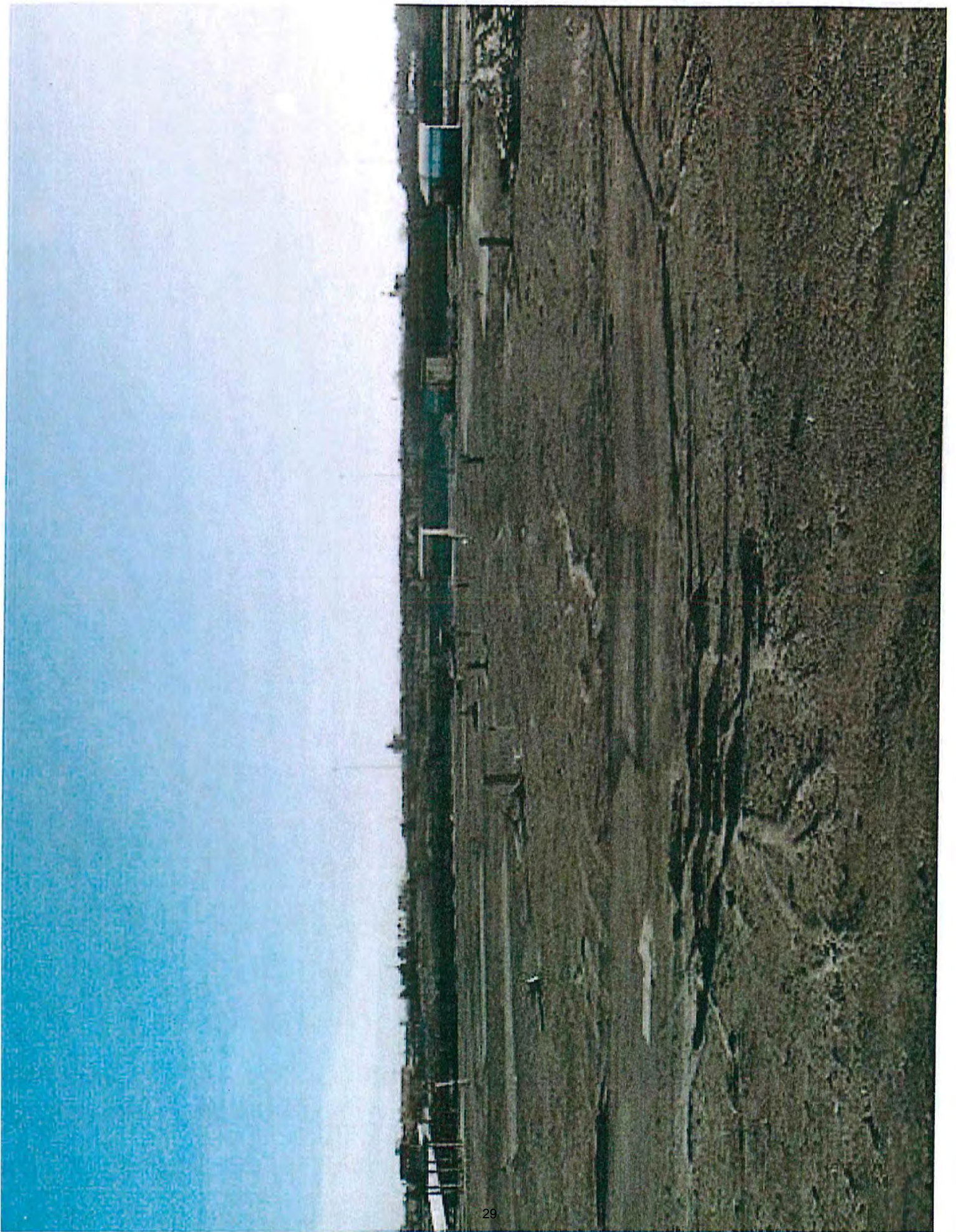
Above referenced work will begin as soon as contract has been signed.

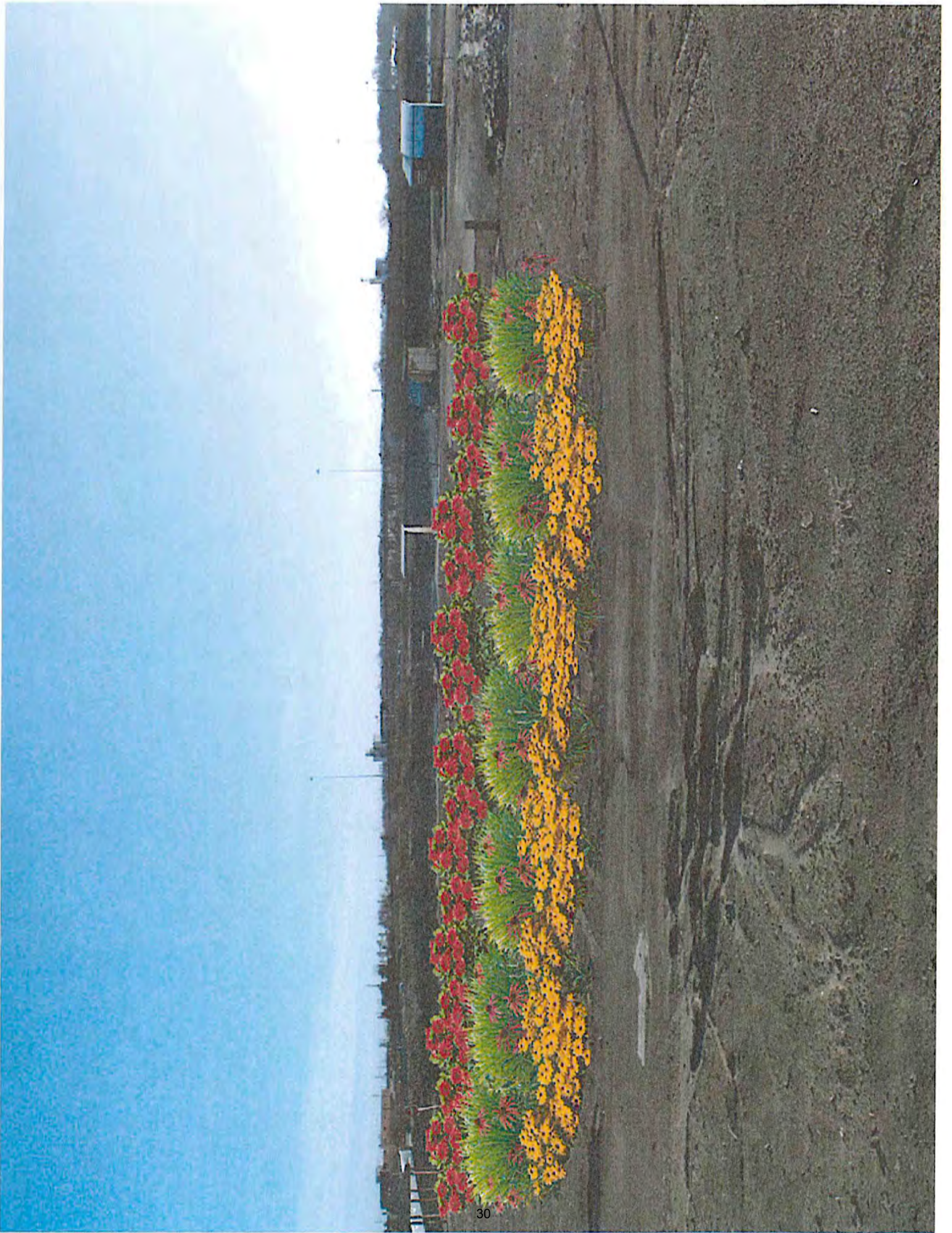


Google earth

feet
meters



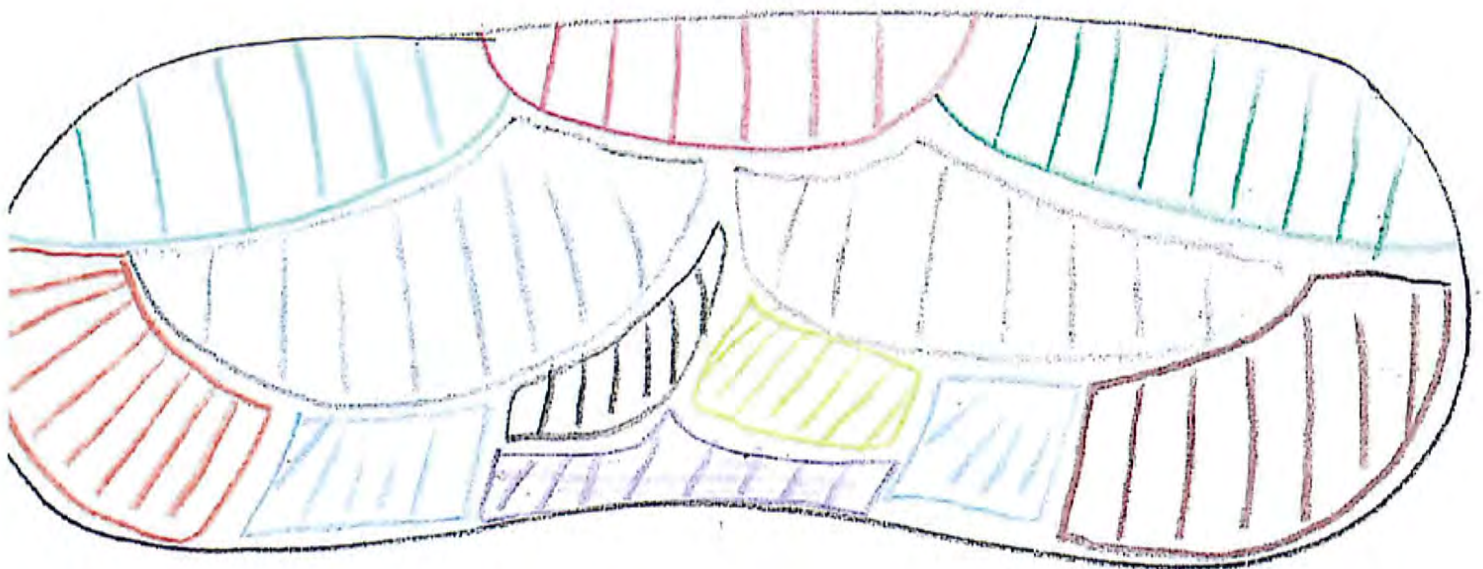






Scenic Park Campground Park Rain Garden

- 30 – Wild Hydrangea 
- 30 – Hibiscus 
- 30 – Golden Rod 
- 45 – Little Blue Stem 
- 45 – Prairie Drop Seed 
- 45 – Cardinal Flower 
- 45 – Lobelia 
- 45 – Milk Weed 
- 45 – Purple Cone Flowers 
- 45 – Black Eyed Susan 
- 40 – Iris 
- 40 – Blue Flag 



Schedule for Construction of Scenic Campground Rain Garden

After announcement of being funded.

- Notify media of grant from Papio Missouri River Natural Resource District.
- We will order the plants and materials.
- We will do the site grading and excavating.
- We will work with the contractor to schedule construction.
- In the fall of 2012 or the spring of 2013, weather permitting.



17.41 STORMWATER BEST MANAGEMENT PRACTICES PROGRAM

SPECIAL PROJECT REQUEST APPLICATION

1. DATE: 3/14/12

2. PROJECT NAME: Scenic Park Campground Entrance Rain Garden

3. PROJECT SPONSOR: City of South Sioux City

ADDRESS: 1615 1st Avenue
South Sioux City, NE 68776

4. CONTACT PERSON: Lance Hedquist MAR 19 2012

TITLE: City Administrator

5. EMAIL AND PHONE: lhedquist@southsiouxcity.org

6. PROJECT LOCATION:

South Sioux City Scenic Park Campground

See attached location map

7. DESCRIPTION OF STORMWATER BEST MANAGEMENT PRACTICE AND HOW IT WILL BE INCORPORATED IN THE PROJECT:

The City of South Sioux City's campground is located in Scenic Park and is a popular destination for over 100,000 visitors per year. During major rainfall events, a low-lying area near the entrance of the campground is often flooded and ponding of stormwater occurs as a result of run-off from Riverview Drive and the camp entrance. This often results in flooding of the campground entrance and Riverview Drive creating road hazards. Additionally, debris and sediment are washed into this low lying area and are eventually absorbed in the ground or carried to the storm-sewer outfalls that lead to the adjacent Missouri River. Utilizing best management practices for improving water quality, a 1,440 SF rain garden will be constructed in the project location on the attached map marked campground entrance rain garden.

9. TOTAL ESTIMATED COST: \$ 6,365.20

10. COST SHARE REQUESTED: \$ 3,183.00

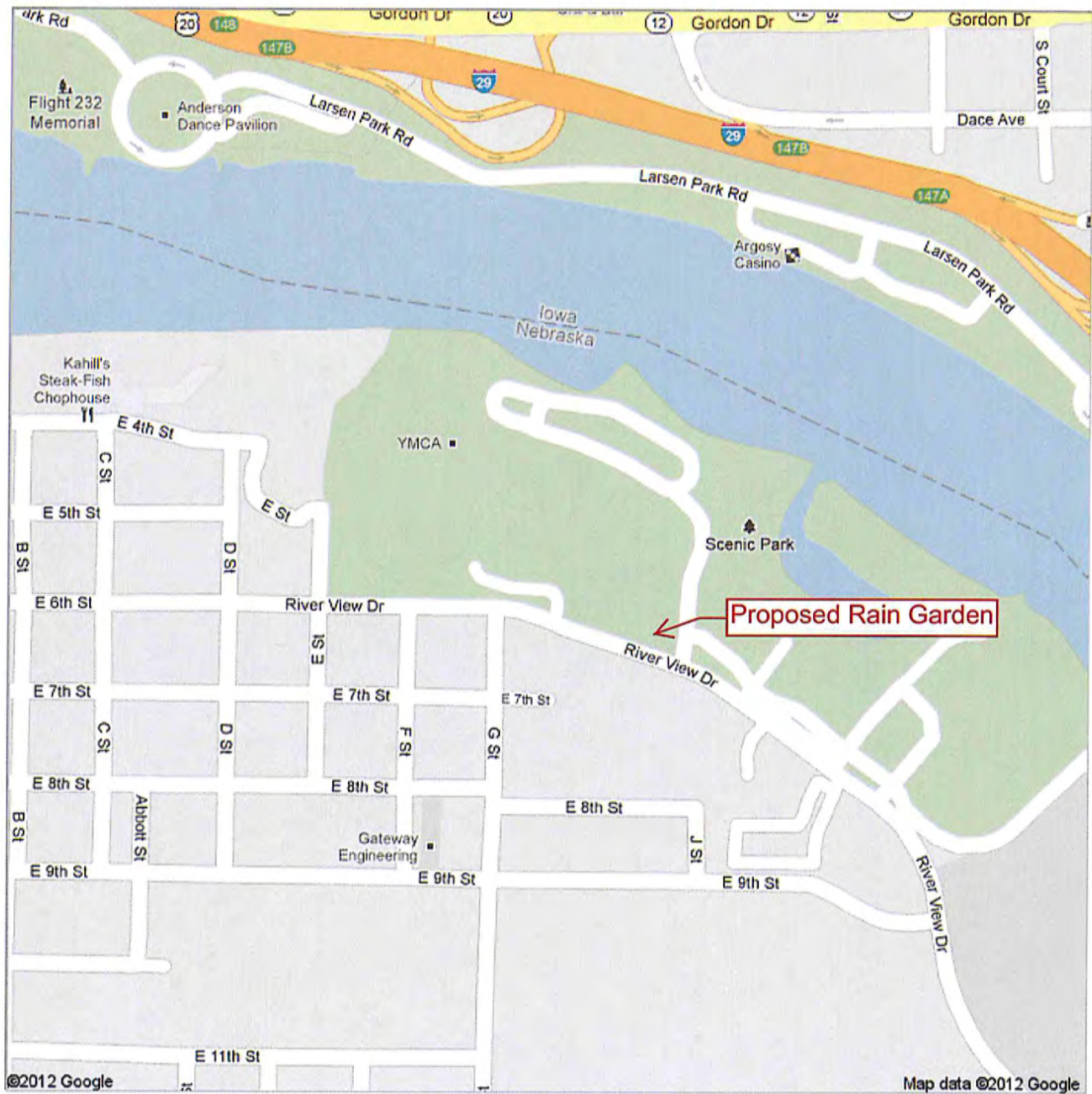
11. SIGNATURE/TITLE:

William J. Luty Mayor

Address **South Sioux City, NE**

Get Google Maps on your phone

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EXECUTIVE LAWNS & POOLS

2302 West 29th Street

Knight and Dave Inc.

DBA

Bloomers / Executive Lawns & Pools

PO BOX 1067 SOUTH SIOUX CITY NEBRASKA 68776

402-412-2700 712-223-5296

Bid

Scenic Park Rain Garden – Main Entrance

Item	Description	Quantity	Price	Total
1	Build new rain garden 20ft East and West by 17ft North and South with rounded corners at a depth of 4ft. Form an inlet of SE corner and an outlet for over flow on NW corner.	1440 SF	.70	1008.00
2	Place 12" depth of pea gravel in bottom of rain garden.	13 CY	52.00	676.00
3	Place 400 sq feet of filter fabric over top of pea gravel.	400 SF	1.00	400.00
4	Mix and place in lifts, engineered soil mix at a ratio of 30:30:40 of sand, compost, and top soil. Place soil mix in a shallow bowl design.	34 CY	54.00	1836.00
5	Furnish and install plants: A mix of Shrubs, Perennial Grasses and Flowers	125	17.20	2150.00
6	Furnish and install mulch 3" depth over top of rain garden.	3 CY	90.00	270.00
7	Finish grade, seed, and install starter fertilizer on disturbed area around rain garden and in new drainage ditch area.	168 SF	.15	25.20
	Total Cost of Project			\$6365.20

Planning and Design

Renee Palmersheim from Executive Lawns & Pools / Bloomers has been in the landscape business since 1996. She has helped in the design and development of four other rain gardens in South Sioux City, Nebraska.

Installation and Management

Executive Lawns & Pools / Bloomers will be required to maintain the project for a one year period. They will ensure that the plant material is thriving and will replace any non living or troubled plant if needed at no charge to the city for the first twelve months. Weeding will be done on a weekly basis at a minimum charge of \$25.00 per hour our normal hourly rate. Executive Lawns & Pools will also be responsible to maintain the mulch at the desired thickness and will do so at no charge for the first growing season any new mulch needed to maintain a 3" depth and proper appearance will be done and charged to the City of South Sioux City according to above specs.

Submitted by: Renee Palmersheim
Executive Lawns & Pools
Bloomers
2302 W 29th Street
South Sioux City, NE 68776
402-412-2700 or 712-223-5296
On: March 12, 2012

Above referenced work will begin as soon as contract has been signed.







Google earth

feet 700
meters 200



Scenic Park Rain Garden Main Entrance

15 – Hibiscus



25 – Little Blue Stem



25 – Bee Balm



30 – Purple Cone Flowers



30 – Black Eyed Susan





Schedule for Construction of Scenic Campground Entrance Raingarden

After announcement of being funded.

- Notify media of grant from Papio Missouri River Natural Resource District.
- We will order the plants and materials.
- We will do the site grading and excavating.
- We will work with the contractor to schedule construction.
- In the fall of 2012 or the spring of 2013, weather permitting.



17.41 STORMWATER BEST MANAGEMENT PRACTICES PROGRAM

SPECIAL PROJECT REQUEST APPLICATION

1. DATE: 3/13/12

2. PROJECT NAME Scenic Park Pool Rain Garden

3. PROJECT SPONSOR: City of South Sioux City

ADDRESS: 1615 1st Avenue
South Sioux City, NE 68776

MAR 19 2012

4. CONTACT PERSON: Lance Hedquist

TITLE: City Administrator

5. EMAIL AND PHONE: lhedquist@southsiouxcity.org 402-494-7517

6. PROJECT LOCATION:

South Sioux City Scenic Park Outdoor Pool - See Attached Location Map

7. DESCRIPTION OF STORMWATER BEST MANAGEMENT PRACTICE AND HOW IT WILL BE INCORPORATED IN THE PROJECT:

The City of South Sioux City's Municipal Pool is located in Scenic Park. The area surrounding the pool is flat and during major rain events, flooding and ponding of stormwater occurs as a result of storm water run-off from adjacent parking lots, tennis courts and the pool area. Debris and sediment are washed into this low-lying area and eventually absorbed into the ground or carried to the storm-sewer outfalls that lead to the adjacent Missouri River. Utilizing best management practices for improving water quality, a 1,440 SF rain garden will be constructed in the project location located on the attached map marked pool rain garden.

9. TOTAL ESTIMATED COST: \$ \$6,366

10. COST SHARE REQUESTED: \$ 3,183

11. SIGNATURE/TITLE:

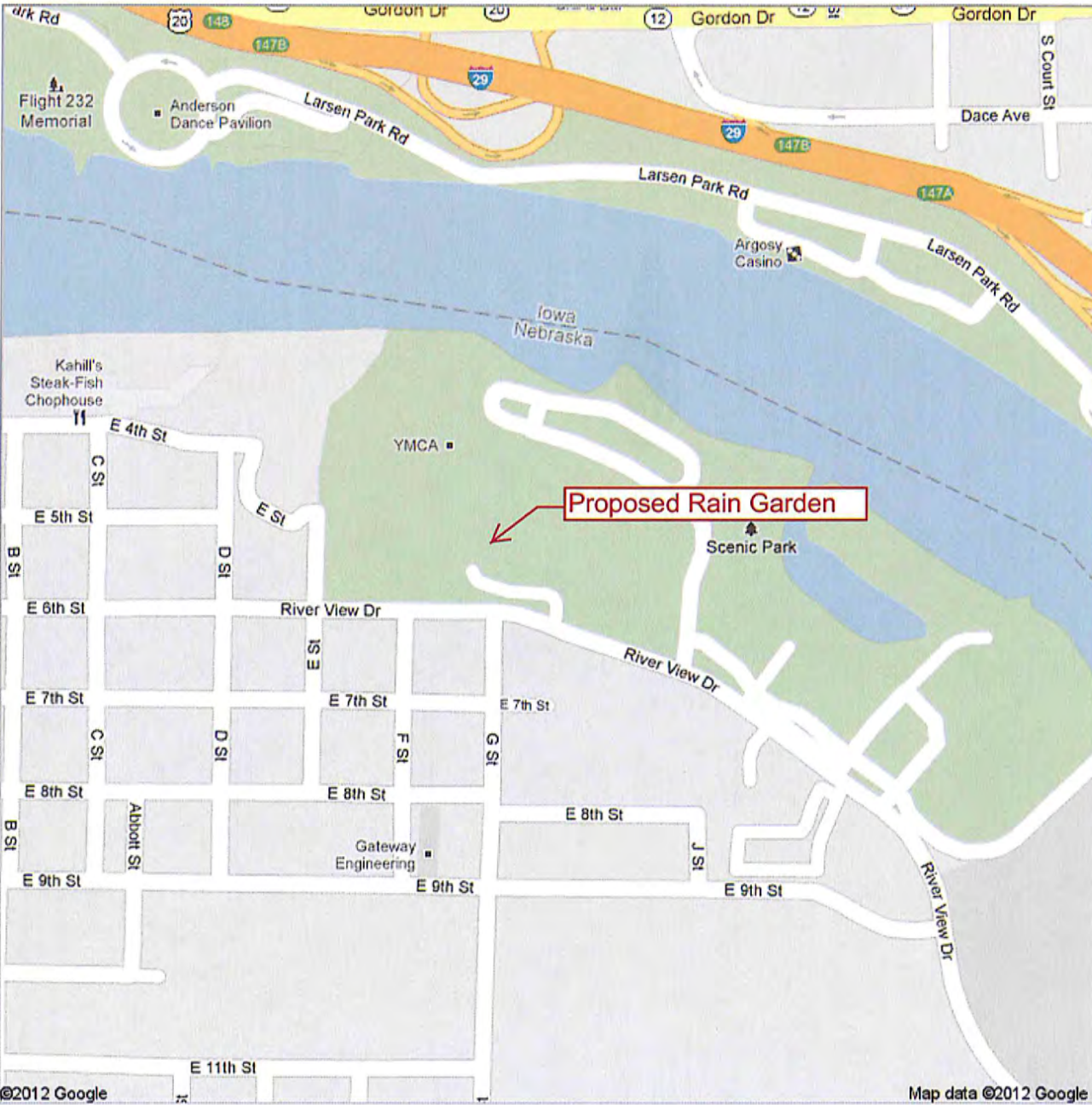
William D. Larty Mayor



Address **South Sioux City, NE**

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Text the word "GMAPS" to 466453



EXECUTIVE LAWNS & POOLS

2302 West 29th Street

Knight and Dave Inc.

DBA

Bloomers / Executive Lawns & Pools

PO BOX 1067 SOUTH SIOUX CITY NEBRASKA 68776

402-412-2700 712-223-5296

Bid

Scenic Park Rain Garden – Outdoor Pool

Item	Description	Quantity	Price	Total
1	Build new rain garden 20ft East and West by 17ft North and South with rounded corners at a depth of 4ft. Form an inlet of SE corner and an outlet for over flow on NW corner.	1440 SF	.70	1008.00
2	Place 12" depth of pea gravel in bottom of rain garden.	13 CY	52.00	676.00
3	Place 400 sq feet of filter fabric over top of pea gravel.	400 SF	1.00	400.00
4	Mix and place in lifts, engineered soil mix at a ratio of 30:30:40 of sand, compost, and top soil. Place soil mix in a shallow bowl design.	34 CY	54.00	1836.00
5	Furnish and install plants: A mix of Shrubs, Perennial Grasses and Flowers	125	17.20	2150.00
6	Furnish and install mulch 3" depth over top of rain garden.	3 CY	90.00	270.00
7	Finish grade, seed, and install starter fertilizer on disturbed area around rain garden and in new drainage ditch area.	168 SF	.15	25.20
	Total Cost of Project			\$6365.20

Planning and Design

Renee Palmersheim from Executive Lawns & Pools / Bloomers has been in the landscape business since 1996. She has helped in the design and development of four other rain gardens in South Sioux City, Nebraska.

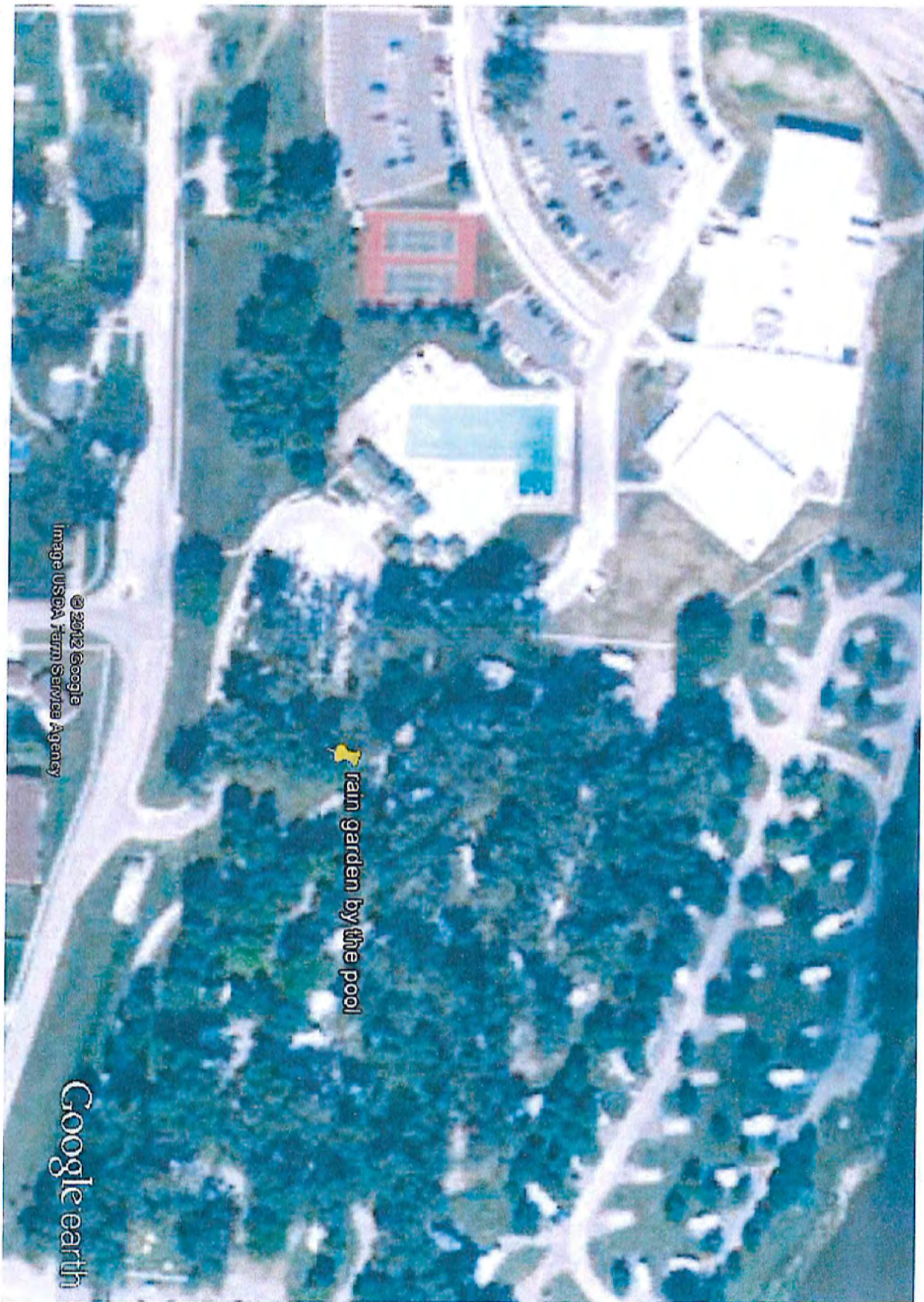
Installation and Management

Executive Lawns & Pools / Bloomers will be required to maintain the project for a one year period. They will ensure that the plant material is thriving and will replace any non living or troubled plant if needed at no charge to the city for the first twelve months. Weeding will be done on a weekly basis at a minimum charge of \$25.00 per hour our normal hourly rate. Executive Lawns & Pools will also be responsible to maintain the mulch at the desired thickness and will do so at no charge for the first growing season any new mulch needed to maintain a 3" depth and proper appearance will be done and charged to the City of South Sioux City according to above specs.

Submitted by: Renee Palmersheim
Executive Lawns & Pools
Bloomers
2302 W 29th Street
South Sioux City, NE 68776
402-412-2700 or 712-223-5296
On: March 12, 2012

Above referenced work will begin as soon as contract has been signed.





© 2012 Google
Image USA Farm Service Agency

Google earth

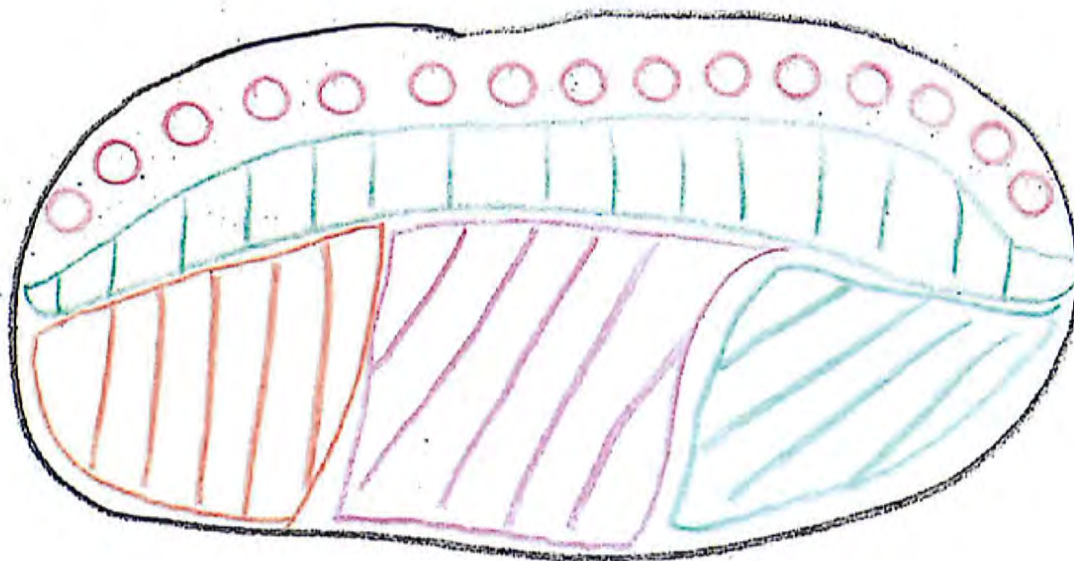
feet
meters



Google earth

Outdoor Pool Park Rain Garden

- 15 – Wild Hydrangea 
- 25 – Prairie Drop Seed 
- 25 – Milk Weed 
- 30 – Purple Cone Flowers 
- 30 – Black Eyed Susan 





Schedule for Construction of Scenic Campground Pool Raingarden

After announcement of being funded.

- Notify media of grant from Papio Missouri River Natural Resource District.
- We will order the plants and materials.
- We will do the site grading and excavating.
- We will work with the contractor to schedule construction.
- In the fall of 2012 or the spring of 2013, weather permitting.

PAPIO-MISSOURI RIVER
NATURAL
RESOURCES
DISTRICT



8901 S. 1 54th ST.
OMAHA, NE 68138-3621
(402) 444-6222
FAX (402) 895-6543

Form 17.0.B

URBAN CONSERVATION ASSISTANCE PROGRAM

SPECIAL PROJECT REQUEST

1. DATE: 3/13/12
2. PROJECT NAME: 17th Street Rain Garden MAR 13 2012
3. PROJECT SPONSOR: City of South Sioux City

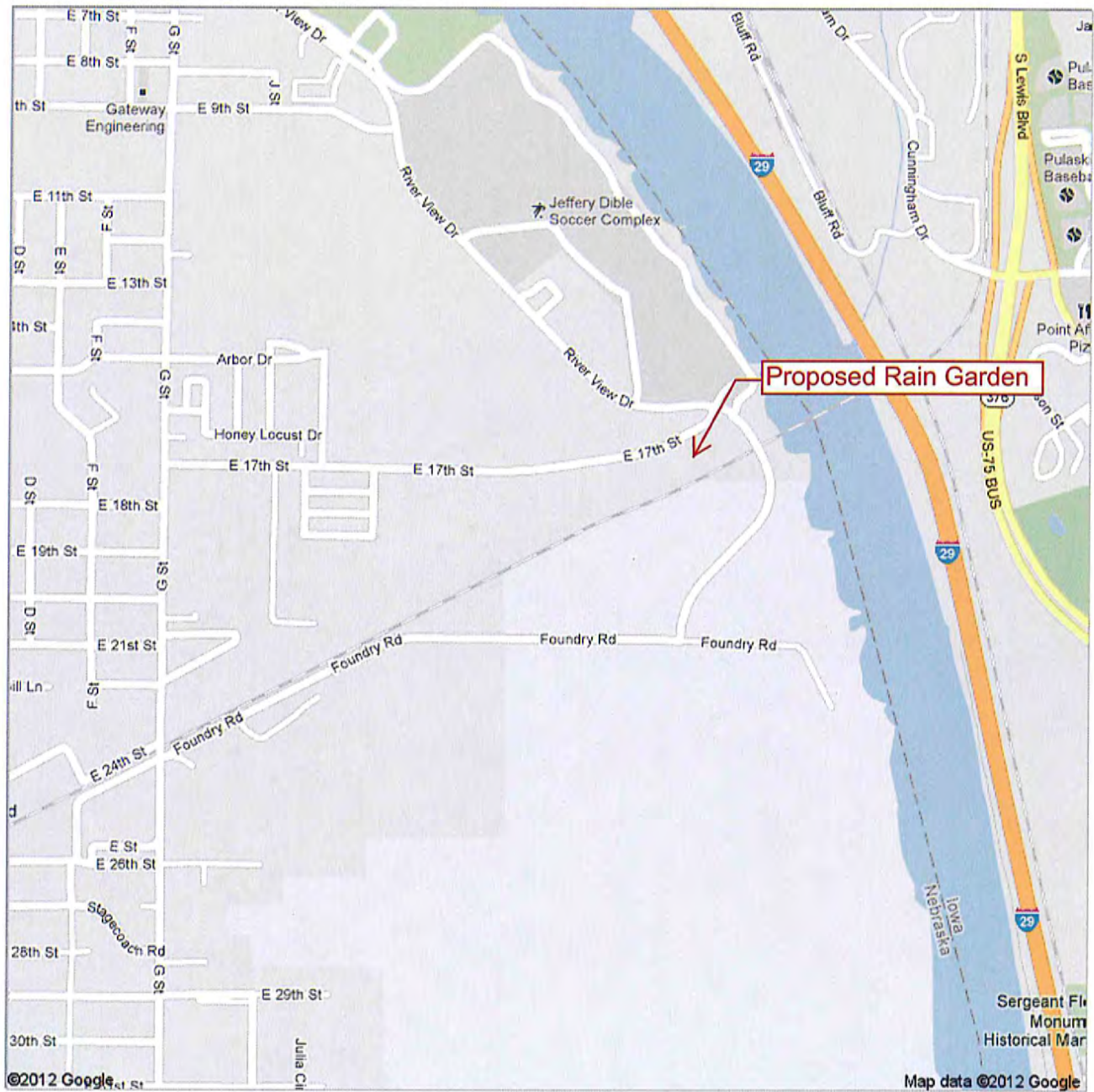
(ADDRESS) 1615 1st Avenue
South Sioux City, NE 68776
4. CONTACT PERSON: Lance Hedquist TITLE: City Administrator
5. TELEPHONE: 402-494-7517
6. PROJECT LOCATION **: City property located adjacent to 17th Street (see attached map for
detailed project location)
7. DESCRIPTION OF PROBLEM **: Potential Contamination of the Missouri River - See
Attached Documentation for Further Details
8. PROPOSED IMPROVEMENTS**: Installation of a Rain Garden with Overflow - See Attached
Documentation for Further Details
9. TOTAL ESTIMATED COST: \$24,785
10. COST SHARE REQUEST: \$14,871
11. SIGNATURE/TITLE: William D. McLeary Mayor

** Attach additional sheets as necessary.

Address **South Sioux City, NE**

Get Google Maps on your phone

Text the word "GMAPS" to 466453



17.0 Urban Conservation Assistance Program

Description of the Problem:

Annually, the City is responsible for the removal of snow from city streets following major snow events. Excess snow removed from city streets is transferred to the property outlined in the attached project map. Snow removed often contains sediment, debris and road salt that are harmful pollutants and as the snow melts, are at great risk for entering the storm sewer systems where they are carried to the Outfall waters of the Missouri River.

Proposed Improvements:

In an effort to utilize best management practices to protect the stormwater run-off that results from the complied snow melt and prevent the sediment, debris and road salt from entering the storm sewer systems, the City is proposing to install a 6000SF rain garden. An inlet will be formed at the Southeast corner of the property with an outlet for overflow on the Northwest Corner of the property.

EXECUTIVE LAWNS & POOLS

Knight and Dave Inc.

DBA

Bloomers / Executive Lawns & Pools

PO BOX 1067 SOUTH SIOUX CITY NEBRASKA 68776

402-412-2700 712-223-5296

Bid

Rain Garden – 17th Street

Item	Description	Quantity	Price	Total
1	Build new rain garden 150ft East and West by 10ft North and South with rounded corners at a depth of 4ft. Form an inlet of SE corner and an outlet for over flow on NW corner.	6000 SF	.70	4200.00
2	Place 12" depth of pea gravel in bottom of rain garden.	56 CY	52.00	2912.00
3	Place 1500 sq feet of filter fabric over top of pea gravel.	1500 SF	1.00	1500.00
4	Mix and place in lifts, engineered soil mix at a ratio of 30:30:40 of sand, compost, and top soil. Place soil mix in a shallow bowl design.	138 CY	54.00	7452.00
5	Furnish and install plants: A mix of Shrubs, Perennial Grasses - Select Areas Only	100	25.00	2500.00
6	Furnish and install mulch 3" around Shrubs and Grasses Only	5 CY	90.00	450.00
7	Seed the remaining 1 acre site in low maintenance perennial grass mix of Big Blue, Switch, and Indian Grasses.	43560 SF	.09	3920.40
8	Spread Straw on seeded area slopes only.	15000 SF	.10	1500.00
	Total Cost of Project			\$24434.40

8" pvc pipe for overflow

84 ft

1.00

350.00

\$24784.40

This price does not include any removal of top soil or grading of the ground except in the 10 by 150 ft basin in bottom of rain garden. Additional grading can be done at .06 per sf.

Planning and Design

Renee Palmersheim from Executive Lawns & Pools / Bloomers has been in the landscape business since 1996. She has helped in the design and development of four other rain gardens in South Sioux City, Nebraska.

Installation and Management

Executive Lawns & Pools / Bloomers will be required to maintain the project for a one year period. They will ensure that the plant material is thriving and will replace any non living or troubled plant if needed at no charge to the city for the first twelve months. Weeding will be done on a weekly basis at a minimum charge of \$25.00 per hour our normal hourly rate. Executive Lawns & Pools will also be responsible to maintain the mulch at the desired thickness and will do so at no charge for the first growing season any new mulch needed to maintain a 3" depth and proper appearance will be done and charged to the City of South Sioux City according to above specs.

Submitted by: Renee Palmersheim
Executive Lawns & Pools
Bloomers
2302 W 29th Street
South Sioux City, NE 68776
402-412-2700 or 712-223-5296
On: March 12, 2012

Above referenced work will begin as soon as contract has been signed.

17th Street Rain Garden overflow pipe

84 ft of 8" pvc drain runs \$350.00 this is for pipe only

Schedule for Construction of 17th Street Rain Garden

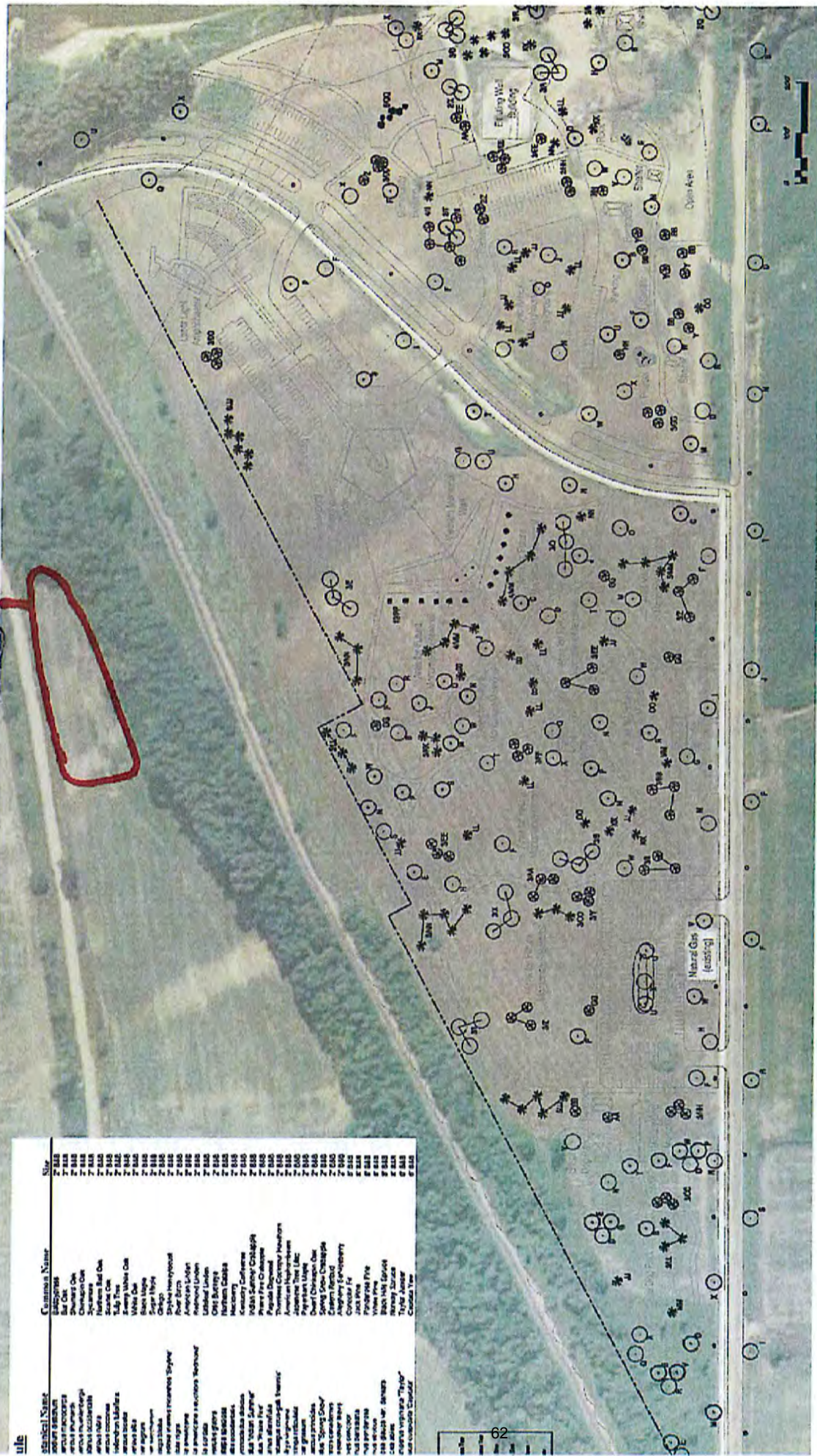
After announcement of being funded.

- Notify media of grant from Papio Missouri River Natural Resource District.
- We will order plants, grasses and materials.
- We will do the site grading and excavating.
- City crew's will install overflow pipe under 17th Street.
- We will work with the contractor to schedule construction.
- In the fall of 2012 or the spring of 2013, weather permitting.





Rain Garden



Siouxland Freedom Park & Arbor

South Side
Concept Drawing: Nov



Architecture | Engineering | Planning | S


www.jeo.com | p: 402.435.3080 | f: 402.435.4110


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REE AND LIGHTING CONCEPT PLAN

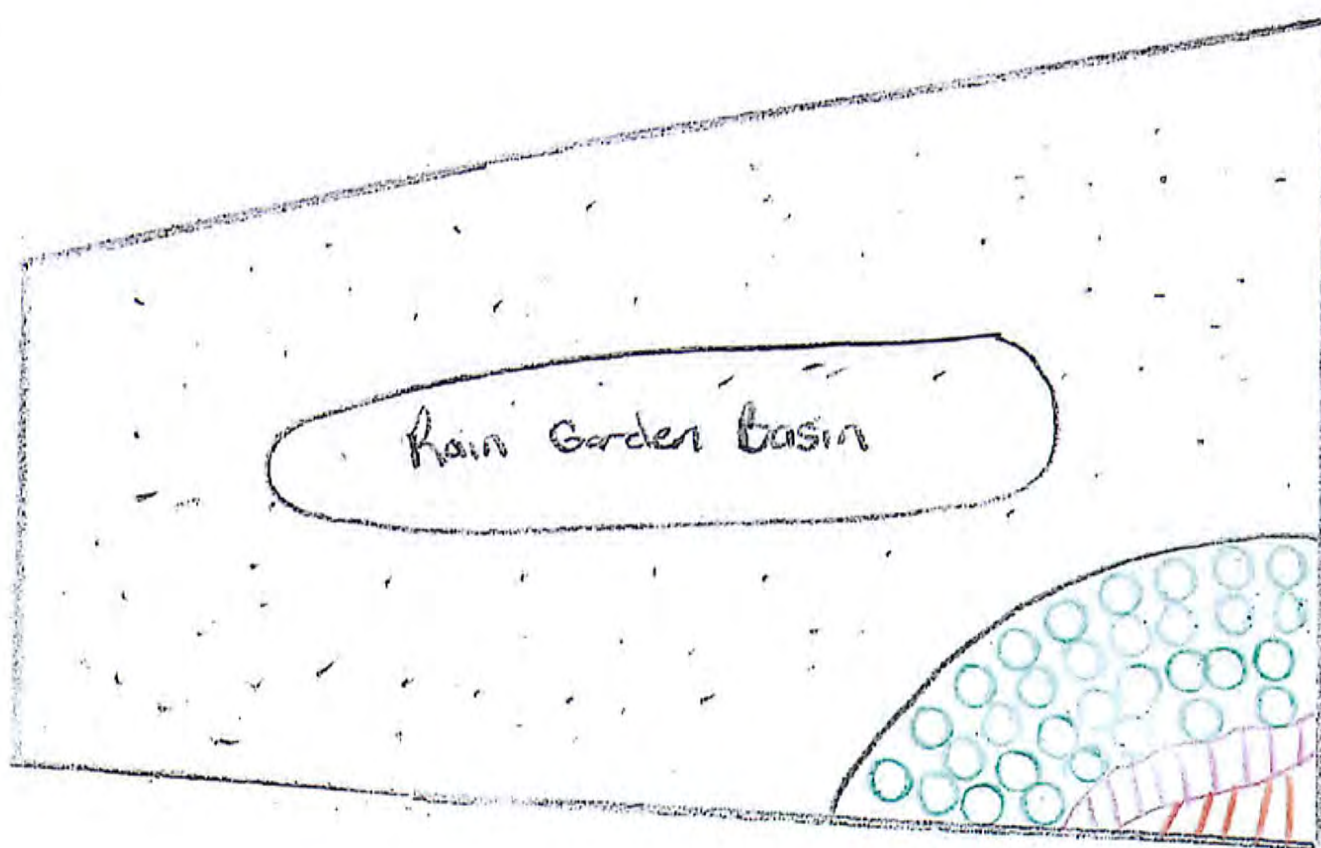
Rain Garden 17th Street

30 – Grow Low Sumac 

35 – Purple Cone Flower 

35 – Black-eyed Susan 

18# - Prairie Grass Seed Mix 



filtering the water. Loose, absorbent soil collects the rainwater running off streets and parking lots. Native plants help absorb water, sand and soil filter out pollutants helping to naturally manage stormwater runoff.

According to the National Pollutant Discharge Elimination System's (NPDES) menu of Best Management Practices (BMP's), "bio-retention (rain gardens) can be used in parking areas to collect and treat stormwater" (www.epa.gov/npdes/stormwater/menuofbmps/index). The Environmental Protection Agency (EPA) lists rain gardens as a Low Impact Development (LID) BMP strategy because "they restore the natural, pre-developed ability of an urban site to absorb stormwater, mimicking the natural hydrology of the area by capturing and managing storm water on-site" (www.epa.gov/npdes/stormwater/menuofbmps/index). Additionally, rain gardens recharge groundwater, keep rainwater on the property, remove standing water naturally, reduce mosquito breeding, and beautify the landscape.

Sarpy County will work with a contractor to construct a rain garden on the northeast corner of the County Courthouse and Administration overflow parking lot. This area accumulates and holds stormwater runoff following rainfall events eventually draining into the MS4 through a nearby outlet (attachments 2-5). Constructing a rain garden in this area will assist in capturing the rainfall and runoff from nearby impervious surfaces limiting pollutants from draining into the MS4.

The Sarpy County rain garden will be landscaped with perennial flowers and native vegetation which will absorb rainfall, filtering pollutants that currently run across the parking lot. The rain garden will be a natural way to capture, filter, and hold rainfall on site helping protect fragile water resources downstream (attachments 6 and 7).

9. TOTAL ESTIMATED COST:

\$ 20,000 (see attachment 8 for cost breakdown and 9 for schedule)

10. COST SHARE REQUESTED:

\$ 10,000

11. SIGNATURE/TITLE:

Russell H. L., Chairman, Board of
Commissioners

FORM 17.41