

## Public Works Committee

5. 1.

**Meeting Date:** 04/19/2016

**By:** Mark Riverblood, Engineering/Public Works

---

### **Title:**

Consider Rain Garden Demonstration Project, and Trail Connection - Brookfield Subdivision

### **Purpose/Background:**

This proposed project joins various city realms and goals; including 'a connected community', increasing recreational opportunity, encouraging sustainable water use, prudent storm water treatment, minimizing maintenance costs, creating attractive landscapes, as well as elements of the Environmental Policy Board's Statement of Purpose—staying abreast of 'Emerging Topics', in this instance, creating habitat for pollinators and Monarch Butterflies. The following is a *summary* of the events and discussion leading to the Public Works Committee's consideration of this case.

During the review of one of the more recent additions in the Brookfield subdivision (west of CSAH 5, adjacent to Trott Brook), the City agreed to various commitments in exchange for fee title to a small, narrow parcel that connected to the Trott Brook Trail. The primary commitment agreed to by the City was the construction of a trail link from the neighborhood street (170th Trail NW) to the existing trail that runs parallel to the brook. This 'mid block' trail would provide another, more convenient, access point to the existing 9/10's of a mile trail for a majority of the Brookfield neighborhood. After grade changes and paving of the trail segment, the site will require a landscape component, which provides for a layering of benefits discussed below.

### **Timeframe:**

Staff will highlight the primary components of these proposed improvements (estimated 5-10 minutes), and then available to respond in detail to any of the Committee's inquiries.

### **Observations/Alternatives:**

Staff is recommending three (3) interrelated projects at this site. First, based on the proximity to Trott Brook and the wooded wetland fringe adjacent to the Brook, staff believes that a landscape of wildflowers and native grasses is most appropriate. This will require much less maintenance over time than standard turf grass and/or ornamental plantings would (no regular mowing or irrigation). Secondly, staff is recommending the installation of a small rain garden in the boulevard area adjacent to this site. This happens to be at a low point in the road and thus, with a slight modification to the curb (installing a curb cut), a certain amount of storm water runoff can be diverted from the storm sewer system into this area for infiltration and recharge. The quantity of captured storm water is calculated/modeled in the attachment entitled 'rain garden plans and specs' and thus, this demonstration project could potentially provide useful information for future street reconstruction projects if, for example, property owner(s) were interested.

The third component includes the planting of several oaks on the trail parcel and possibly one in the rain garden as well. This could serve as the City's Arbor Day activity for 2016, something that the Environmental Policy Board (EPB) has expressed a desire in revisiting (now that the Environmental Expo and Tree Sale events are no longer programmed).

These three complimentary projects would result in multiple benefits to the neighborhood and the environment. The trail connection creates a link to an existing trail from within the development, something that is lacking at the moment along this nearly mile long portion of the Trott Brook Trail. In addition, the projects would promote groundwater recharge and infiltration and to a small degree, reduce sediment/nutrient loading of the stormwater pond south of 170th Trail NW. Both the prairie establishment and the rain garden would result in new pollinator

habitat, which is being rapidly depleted across the state and nation. Both also generally promote sustainable landscapes and, once fully established, will reduce necessary maintenance inputs compared to more traditional landscapes (turfgrass). Finally, as mentioned, the tree planting event could be an Arbor Day event—conceivably with an invite for the neighbors to participate in with the EPB, and the Park and Recreation Commission in May of 2016 (also an element of public engagement).

**Funding Source:**

The Park and Recreation Commission and Environmental Policy Board are recommending this project as presented.

| Activity/Practice           | Funding Source             | Entity             | Est. Cost       |
|-----------------------------|----------------------------|--------------------|-----------------|
| Grading and Erosion Control | PW Staff—General Fund      | In-house           | < 24 hours      |
| Pave 8’ foot trail          | Park Trust Fund            | Contractor         | \$6,400         |
| Prairie & Rain garden       | Park Trust Fund            | Prairie Resto Inc. | \$6,583         |
| Rain garden Construction    | Storm water Utility        | Contractor         | \$5,865         |
| Oak Trees/Arbor Event       | ComDev—General Fund        | In-house           | \$870           |
| Annual Management           | Parks—General Fund         | Prairie Resto Inc. | \$300           |
| Contingency                 | (20% of the above sources) | (Varies)           | < (\$3,697)     |
| <b>Total</b>                |                            |                    | <b>\$19,985</b> |

**Recommendation:**

Staff recommends proceeding with these three (3) interrelated project elements (native landscape, rain garden, and tree planting), upon City Council's ratification of the Public Works Committee's recommendation at the April 26th regular meeting.

**Action:**

Motion to recommend City Council authorize staff to proceed with the Brookfield Rain garden and trail connection based upon the work plan and budget presented herein.

**Attachments**

- [Brookfield location map](#)
- [street view](#)
- [planting plan and spec](#)
- [rain garden plans and specs](#)
- [typical prairie](#)
- [example planting](#)
- [EPB minutes](#)

**Form Review**

| Inbox                            | Reviewed By  | Date                            |
|----------------------------------|--------------|---------------------------------|
| Grant Riemer                     | Grant Riemer | 04/07/2016 09:25 AM             |
| Bruce Westby                     | Bruce Westby | 04/07/2016 03:11 PM             |
| Kurt Ulrich                      | Kurt Ulrich  | 04/07/2016 03:34 PM             |
| Tim Gladhill                     | Tim Gladhill | 04/14/2016 10:20 AM             |
| Kurt Ulrich                      | Kurt Ulrich  | 04/14/2016 01:05 PM             |
| Form Started By: Mark Riverblood |              | Started On: 04/04/2016 03:30 PM |
| Final Approval Date: 04/14/2016  |              |                                 |