

**Staff Responses to Council Questions**  
**May 14, 2019**

**6. Consent Agenda, C. MOT 2019-8164 - 2019 Native Landscape and Natural Areas Maintenance and Monitoring**

*Please explain the scope of work for this contract. What activities will take place at each location?  
How many times will work be performed at each location?*

The scope of work for this contract is comprised of a regime of maintenance techniques that are prescribed for each of the ten sites that include a combination of the removal of undesirable plants, prescribed burning and plantings. Each site will be inspected up to eight times throughout the season to assess the plantings, remove trash and invasive plants, apply herbicides if warranted, and then plant native plants. At some locations where it has been identified that existing native plants are not a good match for their environment they will be replaced with more desirable plants. A detailed scope of work for each of the ten sites can be found in Section IV of the proposal that was included as an attachment to this Council item. Section IV begins on page 27 of the Council item and has been attached for reference below.

**Attachments**

Section IV of HLR Proposal

There are no rEmarks this week

## SECTION IV: PROJECT LOCATIONS

### 2<sup>nd</sup> and Cumnor Storm Water Facility (#2)

This 1.5 acre Stormwater Facility is located around multiple residences and adjacent to a community playground. It is densely vegetated with native prairie species along all slopes.

2<sup>nd</sup> and Cumnor is located along 2<sup>nd</sup> Street, adjacent to 2<sup>nd</sup> and Cumnor Park. This area consists of an open water wetland with a wide prairie buffer. A walking trail is located on the south and east portions of the site. In the northwest corner, a small landscaped area is managed beneath a redbud tree (*Cercis canadensis*). The wetland ecosystem is dominated by pickerelweed, American white water-lily, blueflag iris, blue vervain (*Verbena hastata*), and swamp rose mallow (*Hibiscus palustris*). The upland ecosystem is dominated by stiff goldenrod (*Solidago ptarmicoides*), big bluestem, pale coneflower, yellow coneflower (*Ratibida pinnata*), purple coneflower, sweet coneflower, wild bergamot (*Monarda fistulosa*), and black-eyed Susan (*Rudbeckia hirta*). Woody resprouts are treated each year but will require continuous management.

#### Management History and Recommendations

We performed herbicide treatments throughout the growing season to target various invasive species. These focused on biennials, such as purple loosestrife, thistle, and garlic mustard, which were present throughout the growing season. Various saplings, including Siberian Elm (*Ulmus pumila*), box elder (*Acer negundo*), and common buckthorn (*Rhamnus cathartica*), were also treated. In more established areas, hand weeding of invasive species such as garlic mustard (*Alliaria petiolata*) and crown vetch (*Securigera varia*) was used to minimize disturbance of native species. Future herbicide treatments will be necessary to continue managing problematic species. Certain areas of the path that became overgrown were trimmed back this year and will likely need to be cleared or pushed back to keep encroachment on the walking path to a minimum.

Overall, the site shows strong and diverse native character with many high quality species in both wetlands and prairies. With continued efforts to manage and suppress invasive species, these will continue to become less prominent. HLR recommends removal of woody saplings to prevent shade-out of herbaceous prairie plants. The saplings should be treated with herbicide and then cut. Bare areas where large patches of crown vetch (*Securigera varia*) were treated should be overseeded with a mesic to dry seed mix. General management of herbaceous non-natives should continue via herbicide application. Hand pulling of non-plugged species in the landscaped area should continue to ensure that little bluestem (*Schizachyrium scoparium*) is the only plant that populates the space. Native plants should be installed to increase coverage and choke out weeds in this area.



#### Fee Schedule

2 <sup>nd</sup> and Cumnor Storm Water Facility	
Task	Recommended Cost
Spot Seeding	\$560.00
Site Management	\$4,200.00
<b>2<sup>nd</sup> and Cumnor Stormwater Facility</b>	<b>\$4,760.00</b>

## SECTION IV: PROJECT LOCATIONS

### Grand and Hill

Grand and Hill is located at the southeast corner of Grand Avenue and Hill Street. It consists of a small prairie/woodland area with a creek channel extending along the east side of the site. This natural area was cleared of invasive tree species (i.e. buckthorn) in February 2016 and is now dominated by stands of medium-sized trees that allow more sunlight in the understory. The site is dominated by native rye grasses and Virginia creeper, with some showy woodland species including King Solomon's seal (*Polygonatum canaliculatum*). Woody saplings along with pokeweed, giant ragweed, and wild lettuce are the most common undesirables.

Grand and Hill is similar to Grand and 55<sup>th</sup> in composition, vegetative communities, and riparian channel. However, the area is rated high for community value due to its highly visible location.

HLR recommends that the woody saplings be herbicided and cut and for the herbaceous non-natives to receive herbicide treatments. Overseeding with a shade-tolerant prairie/woodland mix could help minimize bare spots, increase diversity, and enhance aesthetic appeal.



### Fee Schedule

Village Owned Parcels at Grand and Hill	
Task	Recommended Cost
Site Management	\$775.00
Seed	\$775.00
<b>Grand and Hill Total</b>	<b>\$1,550.00</b>

## SECTION IV: PROJECT LOCATIONS

### Grand and 55<sup>th</sup>

Grand and 55<sup>th</sup> is located on the northeast corner of Grand Avenue and 55<sup>th</sup> Street. It consists of a depressional woodland with a creek channel extending diagonally through the site. This natural area was cleared of invasive tree species (i.e. buckthorn) in February 2016 and is now dominated by stands of medium-sized trees with lower shade potential. The majority of the site is composed of sparse herbaceous cover and a fair amount of buckthorn saplings. Virginia creeper (*Parthenocissus quinquefolia*), wild ginger (*Asarum canadense*), orange jewelweed (*Impatiens capensis*), and common blue violet (*Viola sororia*) are among the most common species present. Giant ragweed (*Ambrosia trifida*), great burdock (*Arctium lappa*), American pokeweed (*Phytolacca americana*), and wild lettuce (*Lactuca canadensis*) are among the most common weeds and non-native species found on site. The west side of the site is comprised of a tall prairie grass buffer.



### Management History and Recommendations

We performed significant woody removal in December 2015 and February 2016. Invasive buckthorn and honeysuckle (*Lonicera spp.*) were targeted, along with box elder, maple (*Acer spp.*) and mulberry (*Morus alba*). Stumps were treated to prevent re-sprouting. The site was also treated with herbicide this season. Continued maintenance of re-sprouts will need to be conducted until native understory plants can establish.

HLR recommends continued general maintenance of invasive herbaceous species and woody saplings. A woodland seed mix could be installed to increase vegetative cover and compete with noxious weeds and non-natives that can take advantage of the exposed forest floor. To improve aesthetics, the upland buffer along the west side could be seeded with a diverse, shade-tolerant, prairie seed mix.

### Fee Schedule

Village Owned Parcels at Grand and 55 <sup>th</sup>	
Task	Recommended Cost
Site Management	\$775.00
Seed	\$775.00
<b>Grand and 55<sup>th</sup> Total</b>	<b>\$1,550.00</b>

## SECTION IV: PROJECT LOCATIONS

### Sterling Road North of 40<sup>th</sup> Street

Sterling is located at 3944 Sterling Avenue as a vacant lot. This area consists of a mixed woodland-prairie ecosystem and includes a diverse vegetative community. The southern boundary consists of a thick, shady tree line. The northern boundary is more typical of an open prairie and is adjacent to a residence. The east side of the area is also shaded and consists of common buckthorn (*Rhamnus cathartica*) and amur honeysuckle (*Lonicera maackii*) saplings. A plethora of high quality species can be found at Sterling, including side-oats grama (*Bouteloua curtipendula*), pale coneflower, sweet coneflower (*Rudbeckia subtomentosa*), and golden Alexander (*Zizia aurea*). Common non-native and undesirable species also exist here, including garlic mustard (*Alliaria petiolata*) and Canada thistle.



### Management History and Recommendations

This site is a turf grass conversion area completed by HLR. In summer 2015, it received herbicide treatments to eradicate broadleaf woody species and turf grass. A custom seed mix was installed in late fall. Native management of the site began in 2016. The site received two herbicide treatments during the summer targeting weedy invasive species such as thistle and garlic mustard. In the fall, two visits were devoted to buckthorn removal and stump treatments. Continued removal efforts and management of these invasive species will be necessary to complete the conversion to a naturalized area. Additional removal of woody species will allow more woodland natives to establish along the south and west sides of the property. HLR recommends routine herbicide application to weedy and invasive species, including both herbaceous plants and woody saplings. The shaded areas that have lower herbaceous cover (south and east boundaries) should be overseeded with a shade-tolerant mix.

#### Fee Schedule:

Sterling Road North of 40th Street	
Task	Recommended Cost
Woody cutting	\$560.00
Site Management	\$2,200.00
Spot seeding	\$775.00
<b>3944 Sterling Total</b>	<b>\$3,535.00</b>

## SECTION IV: PROJECT LOCATIONS

### Fire Station Bioswale

Fire Station is located along the west side of the Downers Grove Fire Station #3 parking lot, at the intersection of Main Street and 39<sup>th</sup> Street. The site consists of a rain garden style strip that is composed of species ranging in wetland indicator statuses. Purple coneflower (*Echinacea purpurea*) and pale coneflower (*Echinacea pallida*) can be seen in the upland areas while blueflag iris (*Iris virginica shrevei*) can be found in the north lower elevation corner where a drainage way exists. In mid-September, New England aster (*Aster novae-angliae*) and prairie cord grass (*Spartina pectinata*) plugs were installed to enhance bare areas. Regrowth of woody saplings including green ash (*Fraxinus pennsylvanica*), white mulberry (*Morus alba*), and box elder (*Acer negundo*) have been treated but will require continuous management.



### Management History and Recommendations

Following the construction and previous management of the bioswale by others, we assumed management in 2016. The site was managed with three herbicide treatments and one hand weeding. Many of the native species are forming thick stands which will suppress invasive growth. Continued management of weedy species, particularly reed canary grass (*Phalaris arundinacea*) and thistle, will be necessary to ensure successful establishment of the naturalized bioswale. Some of the more aggressive native species may need to be managed to maintain diversity. HLR recommends woody sapling removal and continued herbicide treatment of herbaceous invasives. Low coverage areas should be over seeded with custom native seed mixes for the upland and wetland areas as needed.

#### Fee Schedule:

Fire Station Bioswale	
Task	Recommended Cost
Spot Seeding	\$420.00
Live Plant Install	\$980.00
Site Management	\$960.00
<b>Fire Station Bioswale Total</b>	<b>\$2,360.00</b>

## SECTION IV: PROJECT LOCATIONS

### 59<sup>th</sup> and Washington Street Bio-Retention Facility

This site is an under-drained bio-retention facility, currently dominated by native forbs and grasses, located between two residential lots.

While the need to maintain the site's functionality is high priority because of its location, it is important that the aesthetic appeal is maintained throughout the seasons to provide value to the neighborhood, especially adjacent homes. Showy forbs and grasses are encouraged to provide color and texture variety.

Several quality species are present, including iris, wild bergamot and goldenrod; however, vegetation is still fairly sparse in some locations. An over-seed mix will be formulated to encourage more diverse growth while filling in these sparse areas. Cutting back dead vegetation during the off season will allow additional sunlight to reach the soil surface, giving new seed a chance at establishment. Though the apparent count was already low, the treatment and removal of weedy invasive species such as foxtail (*Bromus madritensis*), wild carrot (*Daucus carota*), and penny cress (*Thlaspi arvense*) will provide additional support for this system.

This area is subject to accumulate an abundance of leaf litter and debris from neighboring lots. The collection of debris will require monitoring and frequent clearing to maintain aesthetics while keeping unnecessary elements out of water flowing out of the system during heavy rain events.

### Management History and Recommendations

Minimal treatment was necessary at this site. A mix of quality natives are established, including ironweed (*Vernonia fasciculata*), Ohio spiderwort (*Tradescantia ohioensis*), common boneset (*Eupatorium perfoliatum*), and switchgrass (*Panicum virgatum*). Hand pulling invasive species such as garlic mustard, thistle (*Cirsium spp.*), wild carrot (*Daucus carota*), and ragweed (*Ambrosia artemisiifolia*) over the growing season minimized the potential for these species to set seed and proliferate. Small woody saplings were also removed. Continued efforts at hand removal will limit their appearance in the basin.

The previous year's vegetative litter was cut and removed to present a neater appearance. Following this, the site was hand weeded three times, including all invasive species and cultivars. The site has maintained high levels of species quality and diversity through the season. Invasive species were minimal and easily managed. The basin may require seasonal clearing as necessary to maintain aesthetics. We also installed mulch around the rain garden to provide a visual border.



### Fee Schedule:

59 <sup>th</sup> Street Bio-Retention Facility	
Task	Recommended
Site Management	\$1,680.00
Mulch	\$320.00
<b>59<sup>th</sup> Street Bio-Retention Facility</b>	<b>\$2,000.00</b>

## SECTION IV: PROJECT LOCATIONS

### Grove Street Rain Gardens

This site consists of two planted and mulched rain gardens on the north side of Grove Street. They are located directly adjacent to the egress drive of the neighboring parking lot.

These areas are subject to extensive debris collection from the surrounding streets and sidewalks and show signs of heavy disturbance from car and foot traffic exiting the lot. This poses multiple obstacles in the successful establishment of a healthy community in such a small area. Despite this, a variety of healthy natives appear present onsite, still requiring a little help through additional plantings, weeding, and debris pickup. Our team would like to use the Village’s mulch stockpile for this site. Mulch will be picked up and spread by HLR.

Within the central portions of these two planted areas lies the greatest concentration of healthy natives, fulfilling their role as a stabilizing filtration mechanism within the rain garden. However, the perimeter of these rain gardens are primarily old mulch with little to no present vegetation, with the exception of the eastern most edge of the eastern rain garden. Increasing the presence of planting material strengthens the effect of these designated areas, utilizing the entire section to collect and filter rain water while providing as much aesthetic appeal as possible.

Damage by vehicle traffic was evident during our site inspection. The edges of these gardens, directly butting up against the drive, would benefit from the planting of short native grasses, such as Little Bluestem, complimentary to those already in place, to sway traffic away from the planted area. During the winter season when snowfall is abundant, fiberglass reflector rods may be necessary to direct traffic away from the otherwise hidden rain gardens.

Using these methods along with additional mulching and hand removal of weeds and debris, the rain garden set up within this downtown district will continue to prosper and provide an attractive example for future rain garden projects within the Village.

### Management History and Recommendations

HLR has managed the Grove Street Rain Gardens since 2014. Hand-weeding has been a successful management tool and was completed six times throughout the season. The planted areas exhibit significant native character. Early in the season, the dead vegetation was cut, raked, and taken off-site to maintain aesthetics. This will be necessary in the future to maintain a neat appearance for the naturalized area. Several of the taller species, such as wild golden glow (*Rudbeckia lacinata*), were removed to improve vision lines for parking lot and street traffic. Installation of a split rail fence would prevent snow plow damage and may provide a more organized appearance to community stakeholders. Per the RFP, we will remove plants greater than 30” in height and replace them with shorter plants to be approved by the Village prior to installation.



### Fee Schedule:

Grove Street Rain Garden	
Task	Recommended Cost
Site Management	\$1,560.00
Mulch	\$520.00
Plant Replacement	\$1,200.00
<b>Grove Street Rain Garden Total</b>	<b>\$3,280.00</b>

## SECTION IV: PROJECT LOCATIONS

### Valley View Pond

Valley View Pond is located behind Valley View Drive, from Foster Place to Waterfall Place. This area consists of a large open water pond with a gradual shoreline and wide prairie buffer. Plant communities include emergent, shoreline, wet mesic prairie, and mesic prairie. A drainage channel extends along the north section of the site. A berm is located between the channel and the pond. Emergent vegetation, including blueflag iris, common arrowhead (*Sagittaria latifolia*), and broad-fruit bur-reed (*Sparganium eurycarpum*), can be found in both the channel and the pond. A small group of yellow pond-lily (*Nuphar advena*) and American white water-lily (*Nymphaea odorata*) can be found at the west side of the pond. Vegetation within the shoreline zone includes dark green bulrush (*Scirpus atrovirens*), river bulrush (*Schoenoplectus fluviatilis*), and prairie cordgrass. The prairie buffer and berm support a diverse group of native species, including big bluestem (*Andropogon gerardii*), red columbine (*Aquilegia canadensis*), tall boneset (*Eupatorium altissimum*), saw-tooth sunflower (*Helianthus grosseserratus*), and foxglove beardtongue (*Penstemon digitalis*). A turf grass path was seeded along the southern site boundary and was poorly established. It is especially susceptible to common weedy species such as Canada thistle. Purple loosestrife (*Lythrum salicaria*), a particularly aggressive wetland invasive species, can be found throughout the site.



### Management History and Recommendations

Since 2014, HLR has monitored this area. Native plant communities around the pond are well established, but will require routine maintenance to prevent encroachment of invasive and woody species and maintain existing floristic diversity. The narrow bentgrass transition zone around the native plantings will also need routine management to maintain vegetation at the desired height and to prevent establishment of undesired species. We offer the following recommendations for long-term maintenance activities. Site conditions will dictate frequency and intensity.

- Continue periodic herbicide treatments targeting non-native and invasive species including cattail (*Typha* spp.), purple loosestrife (*Lythrum salicaria*), sandbar willow (*Salix interior*), thistle (*Cirsium* spp.), teasel (*Dipsacus* spp.), common reed (*Phragmites australis*), curly dock (*Rumex crispus*), tall boneset (*Eupatorium altissimum*) and woody species.
- Perform a winter mowing to promote native species and hinder non-native species, as needed.

#### Fee Schedule:

Valley View	
Task	Recommended
Spot Seed	\$560.00
Winter Mow	\$2,600.00
Site Management	\$6,400.00
<b>Valley View Total</b>	<b>\$9,560.00</b>

## SECTION IV: PROJECT LOCATIONS

### Forest Avenue Rain Gardens

Forest Avenue Rain Gardens are located along Forest Avenue between Herbert Street and 41<sup>st</sup> Street. The site consists of three small rain gardens, two on the west side of the street and one on the east side. All three have similar vegetative composition; obedient plant (*Physostegia virginiana*) appears to be the most dominant followed by eastern woodland sedge (*Carex blanda*) and common fox sedge (*Carex stipata*). Field sow thistle (*Sonchus arvensis*) and Canada thistle (*Cirsium arvense*) have been removed from the sites. However, it appears the soil has invasive seeds in the seed bank and will require continual management.



### Management History and Recommendations

The site was managed in 2016 with two hand weeding treatments and one herbicide application. Minimal invasive species are present within the site. Continued management of prevalent weedy species will be necessary to maintain the existing species quality and diversity which are present. The site may benefit from seasonal clearing to present a neat appearance. Resident mowing has been an issue for two of the rain gardens. Per the RFP, the scope will include coordination with the existing homeowners in conjunction with Village staff to re-establish the two southern locations. HLR recommends continued hand-pulling of invasive and weedy species. Native plugs with showy and deep-rooted species would enhance aesthetics and improve rainwater infiltration. Signage is recommended to educate residents about the flood reduction feature of the rain gardens.

#### Fee Schedule:

Forest Rain Gardens	
Task	Recommended
Live Plant Install	\$1,680.00
Site Management	\$1,680.00
Mulch	\$520.00
<b>Forest Rain Gardens Total</b>	<b>\$3,880.00</b>

## SECTION IV: PROJECT LOCATIONS

### Deer Creek

Deer Creek is located on the north slope of Saint Joseph Creek between Fairview Avenue and Deerpath Lane, to the roadside of 56<sup>th</sup> Street. The dominant herbaceous species along the slope include common ragweed (*Ambrosia artemisiifolia*), reed canary grass, and pokeweed. Large amounts of buckthorn, white mulberry, box elder, and honeysuckle are also present along the slope. The area between the slope and the curb of 56<sup>th</sup> street consists of turf grass that should be converted to a low growing prairie mix as to not restrict visibility from the adjacent road.



### Management Recommendations

1. Removal of woody species including mulberry, box elder, honeysuckle, and buckthorn. Removal of these invasive species will allow more light to penetrate to the slope, allowing herbaceous species to stabilize the slope.
2. Herbicide the existing turf grass and heavy overseeding of the area is recommended.
3. Continued maintenance of the area would consist of herbicide treatments for any woody regrowth and herbicide and mechanical removal of invasive species within the prairie.
4. We recommend installing shrubs within the slope, such as common buttonbush (*Cephalanthus occidentalis*) or elderberry (*Sambucus canadensis*).

### Fee Schedule:

Deer Creek	
Task	Recommended
General Maintenance	\$3,200.00
Woody Removal	\$4,000.00
Herbicide Turf- Between Deerpath and Fairview	\$850.00
Seeding	\$900.00
<b>Deer Creek Total</b>	<b>\$5,750.00</b>