Clifton Park Town Center Park Property

Biological Survey Report

July 31, 2019

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Section I. Land Cover Types

None of these cover types are completely uniform, and the boundaries are not hard and fast. Rather, they grade into one another and have quite a bit of variation within them. In particular, the white-pine-mixed deciduous grades with the deciduous oak forest. In the western part, the red pine plantation grades with the white pine-mixed deciduous and the successional forest/shrubland. All the acreages below are approximate. The wetland boundary is based on a mixture of aerial photography interpretation, topography and field work. It was not delineated using U.S. Army Corps methodology.

Deciduous (Oak) Forest (9 acres - Figure 1): This type consists primarily of scarlet oak (*Quercus coccinea*), red oak (*Quercus rubra*) and white oak (*Quercus alba*) with some red maple (*Acer rubrum*), beech (*Fagus grandifolia*), black cherry (*Prunus serotina*), eastern cottonwood (*Populus deltoidea),* quaking aspen (*P. tremuloides*), white pine (*Pinus strobus*) and hornbeam (*Carpinus caroliniana*). There are also scattered pitch pine (*Pinus rigida*) south of the wetland in the eastern portion of the forest as well as a patch of sugar maple (*Acer saccharum*) in that area. The shrub layer is limited and primarily witch hazel (*Hamamelis virginiana*), though I found lowbush blueberry (*Vaccinium angustifolium*) and maple-leave viburnum (*Viburnum acerifolium*) scattered about. There are scattered seedlings, with white pine and oak (likely scarlet oak) seedlings generally being the most abundant. There are also scattered seedlings of witch hazel and very widely scattered oriental bittersweet (*Celastrus orbiculatus*). There are few saplings (trees greater than 1-2 m) though oak saplings can be found along portions of the trails. There is extensive cover of Canada-mayflower (*Maianthemum canadense*), starflower (*Lysimachia borealis*), patches of Pennsylvania sedge (*Carex pensylvanica*), patches of partidge berry (*Mitchella repens*), dense patches of hay-scented fern (*Dennstaedtia punctilobula*) and scattered wintergreen (*Gaultheria procumbens*), goldthread (*Coptis trifolia*), fringed milkwort (*Polygala paucifolia*), New York fern (*Thelypteris noveboracensis*) whorled wood aster (*Oclemena acuminata*), northern ground-cedar (*Diphasiastrum complanatum*). The closest type using the New York Natural Heritage Program community classification would be Appalachian oak-hickory forest, which is a broad type with a lot of variation, though hickories are absent here.

White Pine-Mixed Deciduous Forest (20.7 acres - Figure 2): This type is very similar to the deciduous forest except that white pin is also dominant in the canopy and there are numerous white pine seedlings and saplings. Wild grape (*Vitis* sp.), a vine, was also in this type. The herbaceous layer is like that of the deciduous forest. The closest New York Natural Heritage program type would be Appalachian Oak-Pine forest, which is also a broad type with a lot of variation.

Red Pine Plantation (2.6 acres – Figures 3 and 4): This type is an obvious plantation of red pine (*Pinus resinosa*) as the trees are clearly in rows. White pine seedlings and saplings are coming in, but the ground layer is depauperate. However, there seems to be a difference between the plantation north of the east-west road and south of that road. South of the road, the plantation is dominated by red pine. The southern patch is almost totally red pine with very little growing underneath (Figure 3). That said, there is a small patch of pink lady's-slipper (*Cypripedium acaule,* Figure 4) in the approximate location I marked on Map 1. The New York Natural Heritage Program would describe this as a Pine Plantation.

The northern part is more diverse with white pine mixed in the red pine, red oak, eastern cottonwood and red maple. Some of the oaks and white pines appear open grown so the plantation may have been planted around them. There were also some other species such as scrub oak (*Quercus ilicifolia*), gray dogwood (*Cornus racemosa*), and Virginia creeper (*Parthenocissus quinquefolia*), which is a vine on the ground. The Natural Heritage Program type the best fits is a mixture of pine plantation and successional northern hardwood forest.

Successional forest/shrubland (1.7 acres (Figure 5): This type contains white pine, several species of poplar (*Populus deltoides, P. tremuloides*), black cherry, beech, apple (*Malus* sp.); hazelnut (*Corylus* sp.) and scattered blackberry (*Rubus* sp.), are in the shrub layer and goldenrod (*Solidago* spp), butterfly weed (*Asclepias tuberosa*) and strawberry (*Fragaria*, sp.) in the herbaceous layer. Oriental bittersweet (*Celastrus orbiculatus*), bush honeysuckle (*Lonicera morrowii*), autumn olive (*Elaeagnus umbellata)*, privet (*Ligustrum* sp.) are all invasive species. Oriental bittersweet was sometimes found in other cover types, but those cover types were largely free of the other invasives I listed in the successional type. Some disturbance created this successional gap in what is otherwise a small, but intact forest remnant. This would be characterized by the Natural Heritage Program as a successional northern hardwood forest.

White Pine Successional (1.5 acres): This area is transitional between the successional forest/shrubland and the red pine plantation and has characteristics of both. The main distinction is a dominance of white pine, which appear, due to the branching pattern, to have been grown in the open rather than a dense stand as in other parts of the pine dominated forest. There is some wisteria (Wisteria sp.) in the northern edge near the Genius Plaza). These may be off the property. This would also be characterized by the Natural Heritage Program as a successional northern hardwood forest.

Wetland (2.1 acres – Figure 6): This is a forested wetland that flows west and south toward Stony Creek and the Colonie Reservoir. Tree species are the same as adjacent forest types, though red maple is more dominant and there are occasional elm trees (*Ulmus americana*) and at least two swamp white oaks (*Quercus bicolor*). Otherwise, the wetland is relatively open with scattered highbush blueberry (*Vaccinium corymbosum*), elderberry (*Sambucus canadensis*), grey dogwood (*Cornus racemosa*), and silky dogwood (*Cornus amomum*) in the shrub layer. Skunk cabbage (*Symplocarpus foetidus*)

is the dominant herb, but there is also (touch-me-not *(Impatiens* sp.), blue-flag Iris (*Iris versicolor*), beggar ticks (*Bidens* sp.), false nettle (*Boehmeria cylindrica*), clearweed (*Pilea pumila*), fringed loosestrife (*Lysimachia ciliata*), tussock sedge, (*Carex stricta*),[1] pointed broom sedge (*Carex scoparia*), fowl manna grass (*Glyceria striata*), dark green bulrush (*Scirpus atrovirens*), cinnamon fern (*Osmundastrum cinnamomeum*), interrupted fern (*Osmunda claytoniana*) and royal fern (*Osmunda regalis*). The area directly adjacent to the wetland was diverse with windflower (*Anemone quinquefolia*), jack-in-the-pulpit (*Arisaema triphyllum*), and May-Apple (*Podophyllum peltatum*), all three of which are generally upland species. The wetland is a relatively narrow channel, but widens to the west, especially offsite. On the west side of the existing crossing is a small stand of eastern hemlock (*Tsuga canadensis*) which could be part of the wetland. I believe this would best be characterized using the New York Natural Heritage Program classification as a shallow emergent marsh and/or red maple hardwood swamp.

II. Animals Observed

Below are lists of birds and mammals I observed during fieldwork:

Birds:

Table 1. Likely breeding birds on the site	
American Crow	Blue Jay
American Robin	Great-crested Flycatcher
Black-capped Chickadee	Tufted Titmouse
Northern Cardinal	Pileated woodpecker
Red-bellied Woodpecker	Red-eyed Vireo
Red-tailed Hawk	White-breasted Nuthatch
Wood Peewee (possible)	Yellow-bellied Sapsucker
Wood Thrush	

All the above are possible breeders including the hawk, which I have encountered on every visit to the site.

Mammals:

Eastern Chipmunk White-tailed Deer
Grey Squirrel

I also found what could have been weasel scat but have no idea of the species. I found three holes that could be groundhog or fox, but there was no indication of which might be using them.

[1] There was another species of sedge for which the achenes were not far enough along for identification.

Reptiles and Amphibians

I found no salamanders or egg masses as I would have expected within or near the wetland. I did hear both spring peepers (*Pseudacris crucifer*) and grey treefrog (*Hyla versicolor*) in the wetland and vicinity. I also found larvae of treefrogs as well as American Toad (*Bufo americanus*) in a pool in the wetland.

Section III Rare Plants Observed

In an email dated May 29, 2019, David Behm said he had observed the following species listed as protected in New York on the site:

Common Winterberry (*Ilex verticillata*)
Pipsissewa (*Chimaphila umbellata*)
Red Baneberry (Actaea rubra)
Turtlehead (*Chelone glabra*)
Wake Robin (*Trillium erectum*)

Winterberry and turtlehead would most likely be in the wetland, but I did not observe either. I did see what could have been baneberry, but it was not identifiable during that visit. I indicated the location for Pipsissewa on Map 1.

IV. Recommendations

1. Overall Impressions

This site is a remnant of what was likely a much larger forest complex that has since become developed. Historically these areas were subject to logging, agriculture and grazing and likely periodic wildfire, a typical process in oak forests. The site retains some nice forested areas and the wetland is relatively intact. Invasive species are concentrated within the successional forest/shrubland and along the edges of the site, though Oriental bittersweet is invading the interior. The forested patches north and south of the wetland east of the successional area and red pine plantation are the most intact from an ecological perspective.

2. Invasive Species Management

Invasive species can harm natural communities and systems (plants and animals found in particular physical environments) by out-competing native species, reducing biological diversity, altering community structure and, altering nutrient cycling. New York State regulates two types: prohibited and regulated.

Prohibited invasive species cannot be knowingly possessed with the intent to sell, import, purchase, transport or introduce. Regulated invasive species cannot be knowingly introduced into a free-living state, though they are legal to possess, sell, buy, propagate and transport.

Table 2. Invasive species observed on the site. Species with an * are listed as prohibited in New York.

Common Name	Species Name	Notes
Autumn olive *	Elaegnus umbellata	Primarily in successional area an on edges
Bush honeysuckle *	*Lonicera morrowii*	Primarily in successional area
Privet *	*Ligustrum sp.*	In the successional cover type
Common reed *	*Phragmites australis*	Observed off site in the stormwater detention area
Oriental bittersweet *	*Celastrus orbiculatus*	Priority species, on edges and in successional area but invading the interior forest
Wisteria	*Wisteria* sp.	On edge on northern boundary with Genius Plaza.

Management recommendations for these species could be developed. It would largely depend on the level of commitment of the town and their willingness to use various control methods including the use of herbicides. I would strongly recommend the town prevent these species from invading the interior forest or wetland.

3. Forest Management

This site has a small, remnant forest, that is largely intact. There is some regeneration, likely affected negatively by white-tailed deer. To encourage native species regeneration, it may be feasible to fence off small portions on a temporary basis until shrubs and seedlings become large enough to survive deer brows. Controlling the deer population, which is wide-ranging, is not likely to be effective. It would be interesting to create an enclosure to see what comes up and to use to educate the public on deer impacts. Controlling invasives is very important.

There is a lot of downed woody debris in the forest, which is natural. There may be an urge to “clean up” the forest floor, but the woody material should be left as it provides nutrients as well as habitat for numerous organisms. If the urge to clean up is overpowering, there is an inordinate amount of trash scattered about; some old; some windblown; some dragged in (e.g. shopping carts), and that should be removed.

4. Stormwater Management

The stormwater detention area on the east end feeds the wetland. On every visit the detention area has been dry. It is primarily open with goldenrod (*Solidago* sp.), black willow (*Salix nigra*), scattered Phragmites (*Phragmites australis*) and various shrub species. I did not spend much time surveying it as it is off the property.

5. Developing the Site

I would suggest focusing conservation on the intact forest on either side of the wetland and including the wetland, east of the pine plantation and successional types. If development in the east is needed, perhaps keeping it close to the edge and leaving the interiors intact could be accomplished.

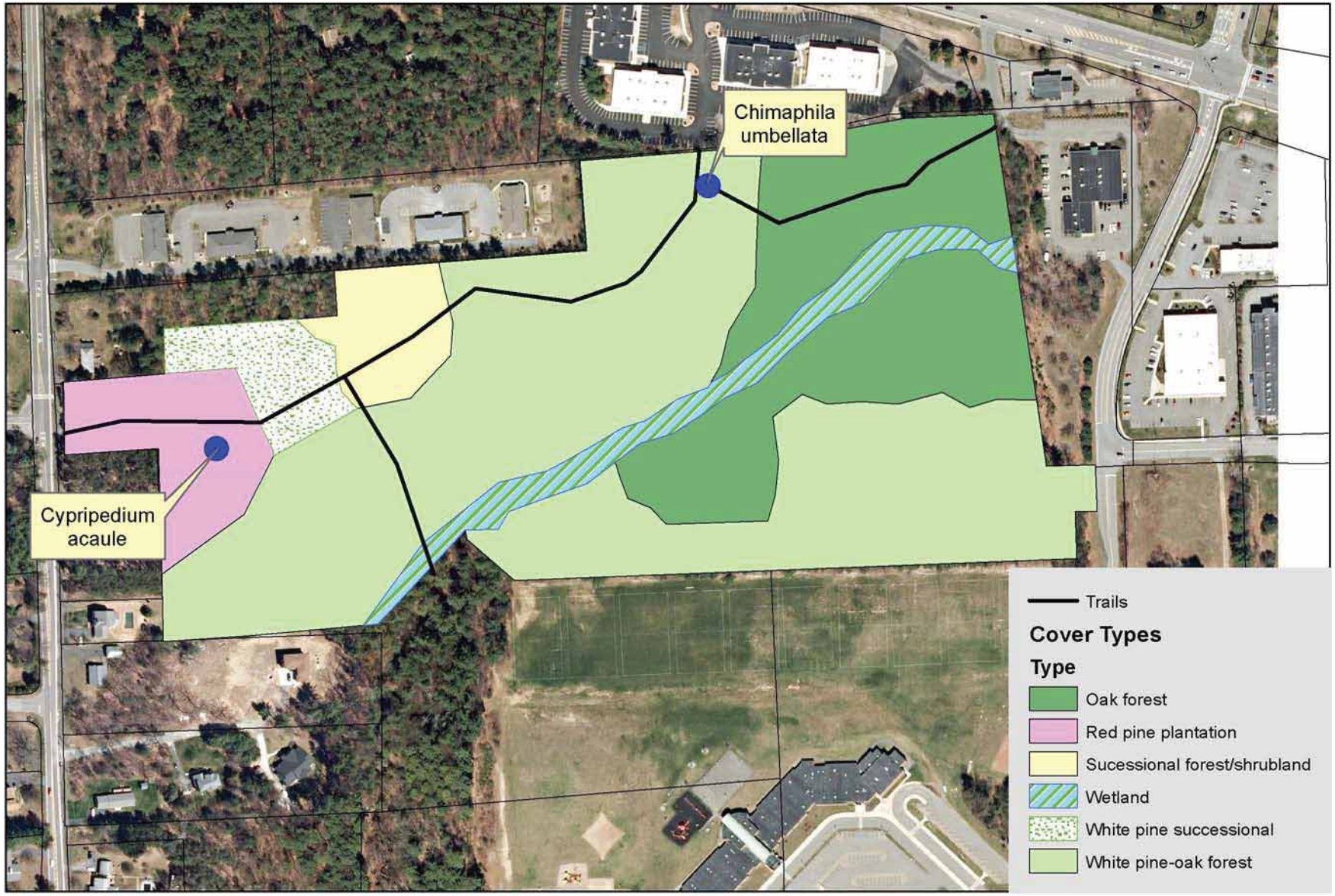
6. Wetland Crossings

As you know, there is one wetland crossing that I believe is off the property (see Figures 7 and 8). To improve that crossing would require some work on the road to prevent the soil from eroding into the wetland as you can see in the photographs below. Replacing the culvert would likely entail raising the road. The sizing would need to be such that the current hydrology of the wetland remained intact. It appears the wetland becomes relatively full in the late winter and spring and dries in the summer, depending on storm events. There was little open water during July. The crossing would need to be designed to avoid significantly increasing or decreasing these seasonal water levels, though some increase would be better than any decrease.

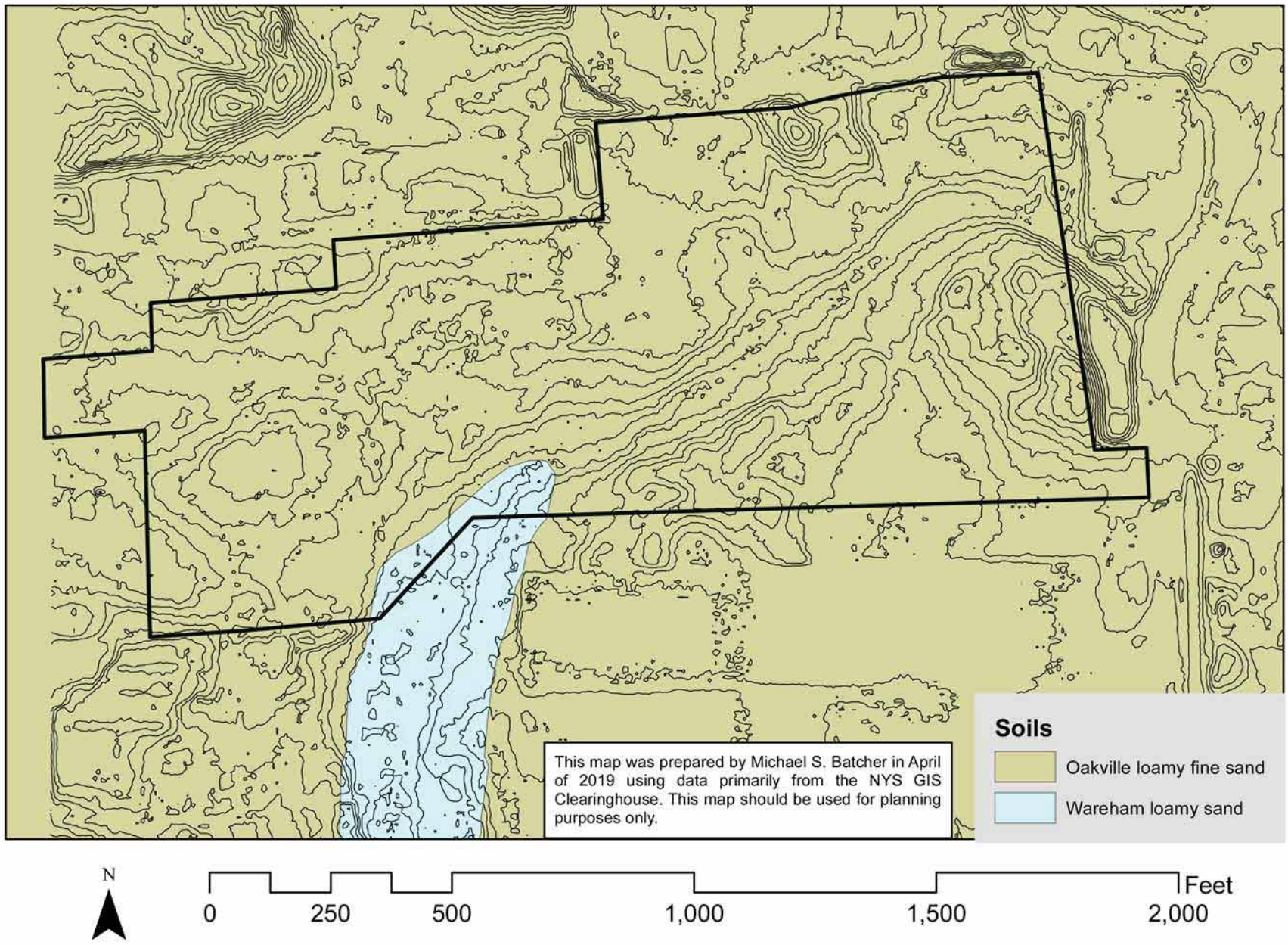
Another option would be a low water crossing, eliminating the culvert. That would depend on what kinds of vehicles use the crossing and how people would cross the wetland when the water level is high.

In terms of a trail and crossing of the wetland, the wetland is narrow, so a crossing as far east as possible would be best, especially if it could be a bridge or boardwalk. I think a viewing platform would be good as well. Erosion control and replanting with native species following construction would be important to implement.

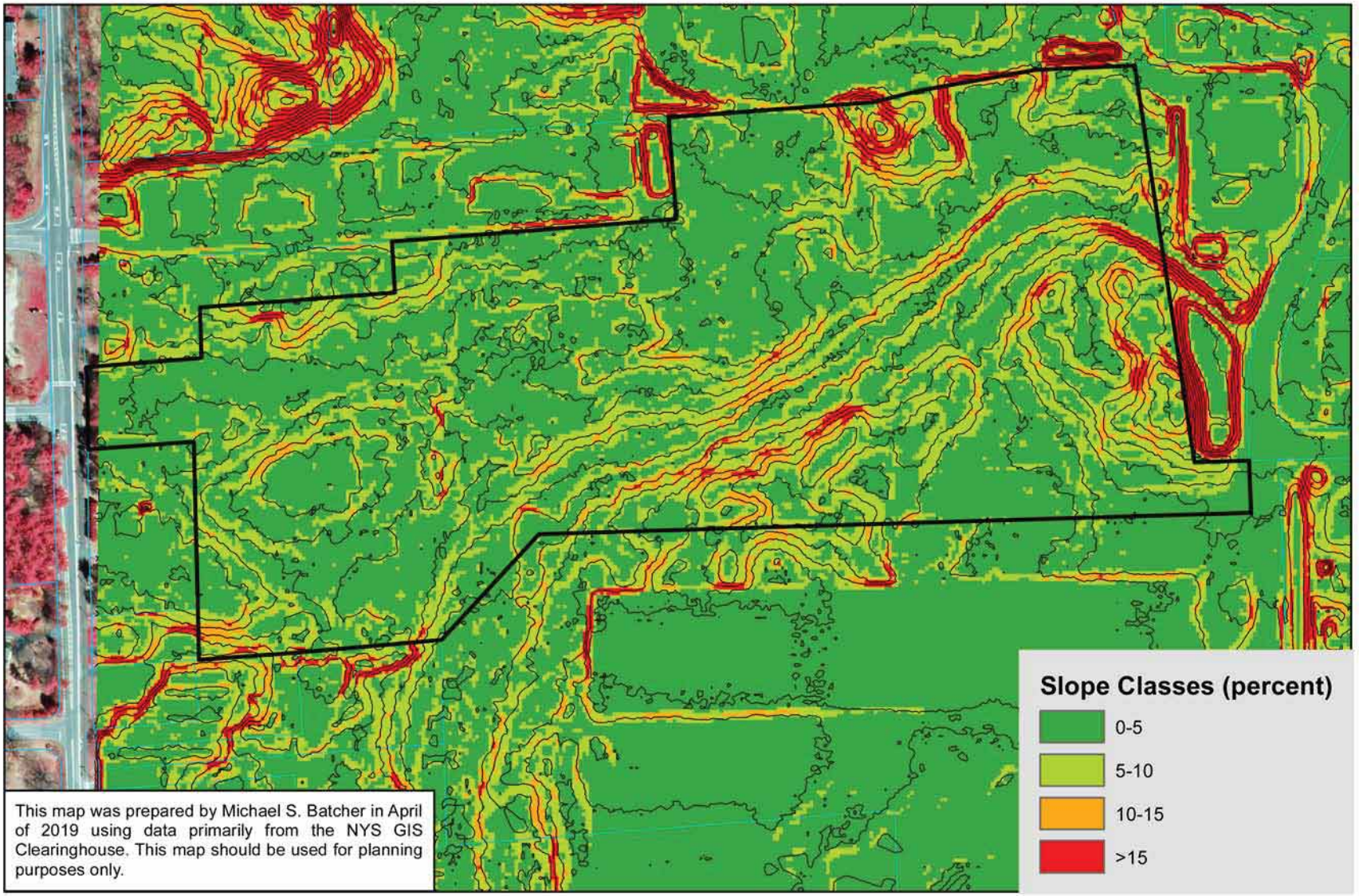
Map 1. Cover Types and Other Features



Map 2. Town Center Property Soils



Map 1. Town Center Property Slope



Photographs

Figure 1. Deciduous (oak) forest

Figure 2 White pine-mixed deciduous forest

Figure 3. Southern patch pf red pine plantation

Figure 4. Northern portion of red pine plantation.

Figure 5. Successional forest/shrubland

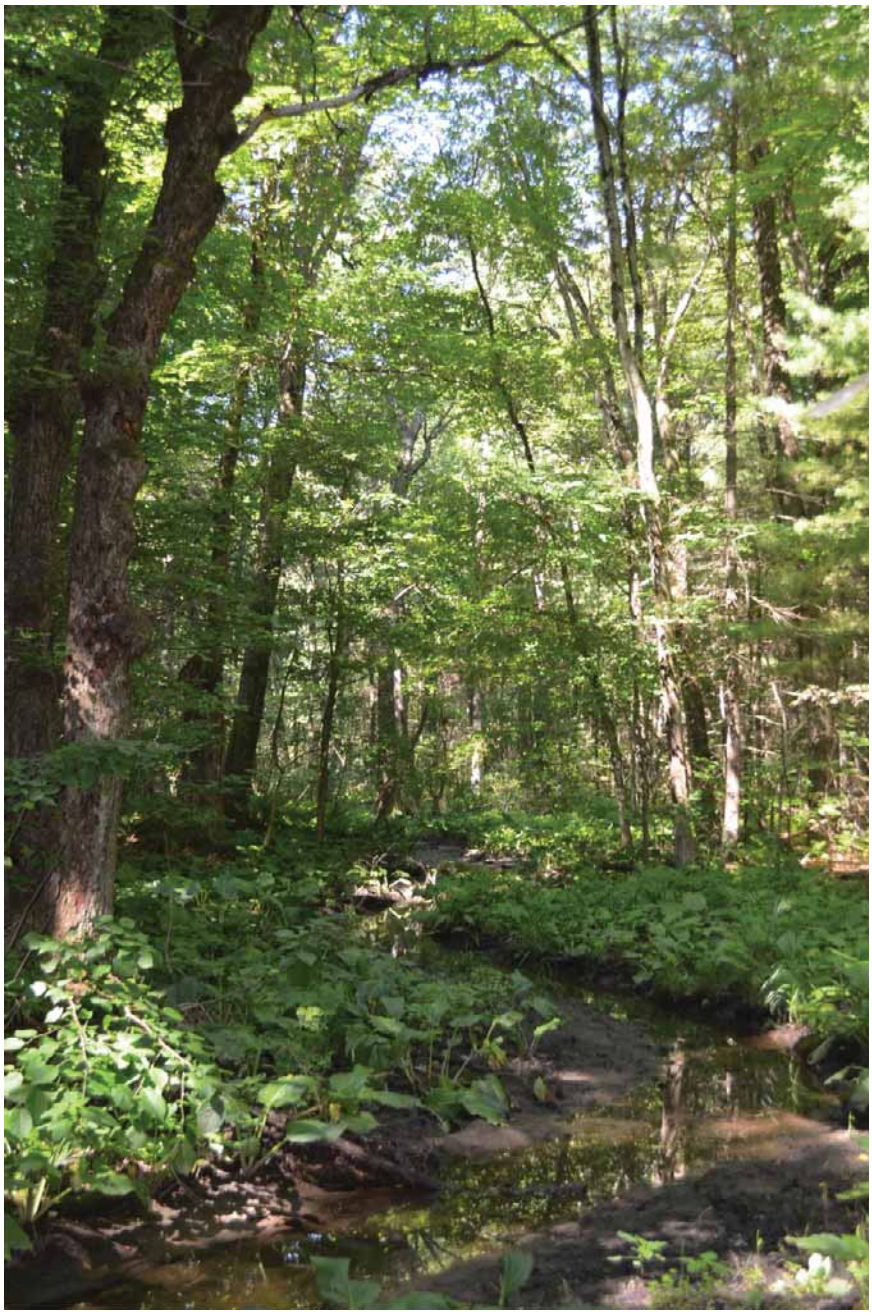


Figure 6. Wetland

Figure 7. Wetland crossing photograph #1

Figure 8. Wetland crossing photograph #2

OVERALL CHARACTER OF PARK

MAJORITY RESPONSES

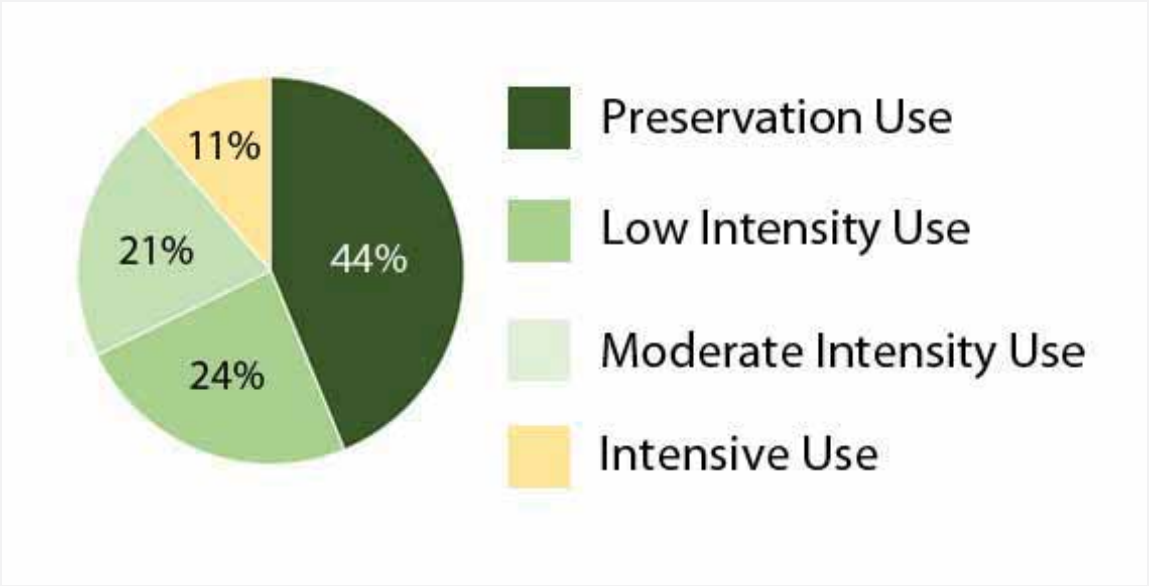
OVERALL CHARACTER OF PARK

	1 (Natural)	2	3	4	5 (Designed)
ONLINE SURVEY	27%	26%	15%	6%	22%

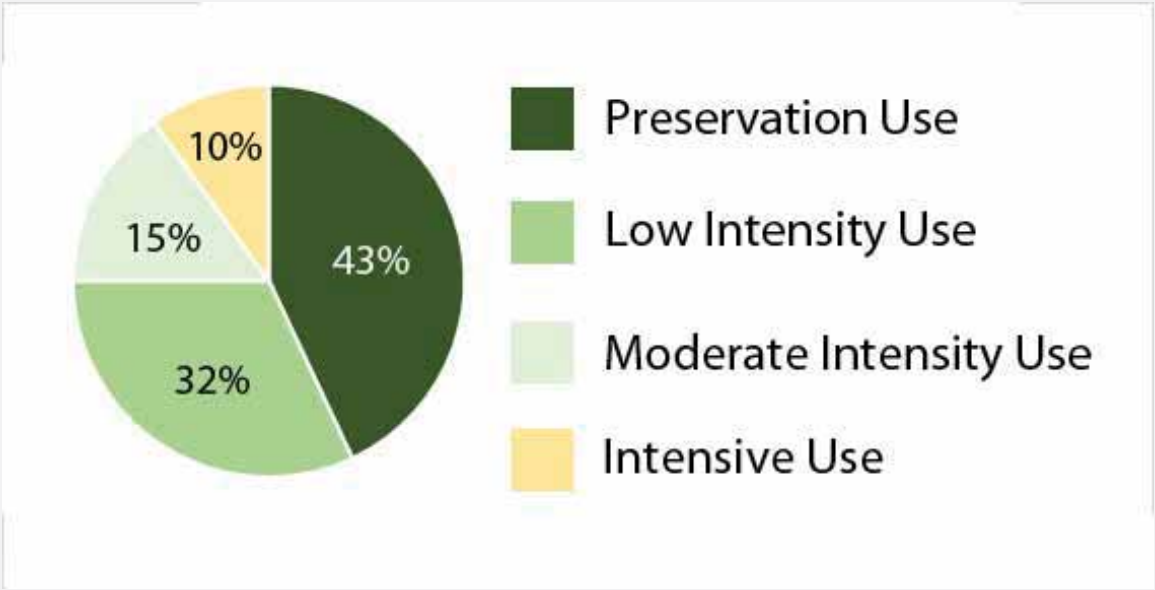
RESPONSES: 245

PERCENTAGES OF PARK - CHARACTER AREAS

Online Survey



Workshop



SAMPLE PROGRAM
VISUAL PREFERENCE SURVEY

< More Natural.... ....More Designed >

ONSITE PARKING

	1	2	3	NONE
WORKSHOP	46%	41%	8%	5%
ONLINE SURVEY	34%	49%	9%	4%

95% - 96% Support

PICNIC AREA

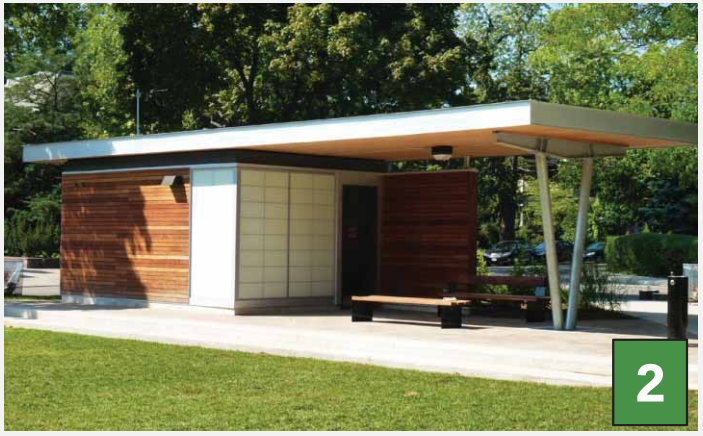
	1	2	3	NONE
WORKSHOP	42%	42%	9%	7%
ONLINE SURVEY	36%	32%	16%	12%

88% - 93% Support

RESTROOM FACILITIES

	1	2	3	NONE
WORKSHOP	62%	2%	29%	7%
ONLINE SURVEY	54%	19%	12%	11%

89% - 93% Support



OUTDOOR CLASSROOM

	1	2	3	NONE
WORKSHOP	30%	5%	44%	21%
ONLINE SURVEY	33%	18%	26%	18%

79% - 82% Support

OPEN RECREATION AREA

	1	2	3	NONE
WORKSHOP	71%	6%	0%	23%
ONLINE SURVEY	34%	36%	6%	21%

77% - 79% Support

CENTRAL DESIGN FEATURE

	1	2	3	NONE
WORKSHOP	44%	16%	14%	26%
ONLINE SURVEY	43%	8%	20%	21%

74% - 79% Support

GARDEN

	1	2	3	NONE
WORKSHOP	32%	18%	18%	32%
ONLINE SURVEY	33%	35%	7%	21%

68% - 79% Support

PLAYGROUND

	1	2	3	NONE
WORKSHOP	14%	5%	16%	65%
ONLINE SURVEY	11%	26%	28%	30%

35% - 70% Support

HEALTH AND FITNESS AREA

	1	2	3	NONE
WORKSHOP	36%	15%	10%	38%
ONLINE SURVEY	31%	18%	14%	34%

62% - 66% Support

DOG PARK

	1	2	3	NONE
WORKSHOP	15%	0%	0%	85%
ONLINE SURVEY	21%	18%	7%	52%

15% - 48% Support

OTHER PROGRAM IDEAS

- Bocci
- Outdoor concerts
- Firepit
- Splash pad
- Farmers market
- Adult chess
- Disc golf
- Pickle ball
- Mountain bike area
- Pool
- Outdoor theatre
- Sprinkler park
- Community arts center
- Music shed
- Gazebo
- Plant identification tour (learning stations – but not with signs, using smartphone)

ELAN
Planning / Design / Landscape Architecture PLLC
18 Division St, Saratoga Springs, NY 12866 - P (518) 306-3702

BEHAN PLANNING AND DESIGN
112 Spring Street, Suite 305 Saratoga Springs, New York 12866

CONCEPT PHASE: PROJECT CONSTRUCTION COST ASSESSMENT PHASE 1 | Document Date: 12.09.2019

TOWN OF CLIFTON PARK - PARK CENTER | Reference Drawing: Master Plan

499 MOE ROAD - CLIFTON PARK, NY 12065

Project Description: The phase 1 design concept at Clifton Park Town Park is to create a connection from Moe Road to Maxwell Drive via permeable pedestrian promenade and to create a naturalistic space for the community to enjoy. These improvements include but not limited to; entrance gateway features, new vehicle lanes with porous asphalt parking, restroom facilities, picnic pavilion, counsel circle, a great lawn, an exhibit lawn, a pedestrian bridge, site lighting, landscape material, and a stormwater management plan.
Note: 1. Costs contained herein are conceptual estimates for discussion and planning purposes. 2. Costs stated in this assessment represent 2019 construction prices.

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	LINE ITEM COST
A. Site Preparation					
1	Construction Stakeout	1	UNIT	$8,000.00	$8,000
2	Temporary Traffic Control	1	UNIT	$4,000.00	$4,000
	SUBTOTAL A				***$12,000***
B. Erosion Control Measures					
1	Silt Fence	7,125	LF	3.00	$21,375
2	Inlet Protection	2	EA	150.00	$300
3	Stabilized Construction Entrances *(1 @ west entry, 2 @ east entry)*	630	SF	10.00	$6,300
4	Temporary Erosion Control Maintenance	1	UNIT	6,000.00	$6,000
	SUBTOTAL B				***$33,975***
C. Removals					
1	Asphalt Pavement Full Depth Removal @ West Entry	70	CY	18.00	$1,260
2	Gravel Full Depth Removal @ West Entry	410	CY	18.00	$7,380
3	Saw cut @ West Entry	24	LF	4.00	$96
4	**Clearing & Grubbing**				
4A	Clearing & Grubbing Within Site Boundaries	3.7	AC	$12,000	$44,400
4B	Clearing & Grubbing @ Eastern Gateway	0.7	AC	$12,000	$8,400
	SUBTOTAL C				***$61,536***
D. Earthwork					
1	Establish Subgrades - *(Assumes No Soil Import or Export)*				
	SUBTOTAL D				
E. Stormwater Management					
1A	Underground Infiltration System - Replaces existing detention Basin	1	UNIT	$130,000.00	$130,000
	Includes: Excavation, chamber system, installing & back filling				
1B	Pipe / Trench Connections - 24" DIA HDPE	300	LF	$40.00	$12,000
1C	Catch Basin	6	EA	$3,300.00	$19,800
1D	Outfall Structure	1	EA	$2,200.00	$2,200
1E	Flared End Attachment To Outfall Structure	1	EA	$1,200.00	$1,200
2	Soil Stabilization	1	UNIT	$10,000.00	$10,000
3	Miscellaneous	1	UNIT	$10,000.00	$10,000
	SUBTOTAL E				***$185,200***
F. Utilities					
1	**Electrical**				
1.1	Multi-Use Trail Area Lighting @ +/- 100' Apart	32	EA	$5,000.00	$160,000
1.2	Parking & Road-Way Area Lighting @ +/- 100' Apart	12	EA	$5,000.00	$60,000
1.3	Electrical Service Distribution W/ Panel & Transformer	4,500	LF	$25.00	$112,500
1.4	Connection to Existing System	1	UNIT	$4,000.00	$4,000
1.5	Miscellaneous	1	UNIT	$25,000.00	$25,000
2	**Sanitary System**				
	N/A	N/A	N/A	N/A	N/A
3	**Potable Water System**				
	N/A	N/A	N/A	N/A	N/A
	SUBTOTAL F				***$361,500***
G. Entry Drive & Parking Area					
1	**West Entrance (Moe Road)**				
1A	17" Depth of Excavation For Type "A" Heavy Duty Pavement *(On site spoil)*	1,150	CY	$10.00	$11,500
1B	Asphalt w/ Aggregate base	2,430	SY	$30.00	$72,900
	Includes: 12" Subbase course, 3" binder course, 2" top course, & installing				

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	LINE ITEM COST
2	**West Entrance - Eastern Parking Lot (24 Stalls)**				
2A	20" Depth of Excavation *(On site spoil)*	280	CY	$11.00	$3,080
2B	Porous Asphalt Pavement	510	SY	$60.00	$30,600
	Includes: 12" Subbase course, 4" crushed stone, 4" top course,				
3	**Eastern Entrance - Parking Lot (50 Stalls)**				
3A	20" Depth of Excavation *(On site disposal)*	1,470	CY	$11.00	$16,170
3B	Porous Asphalt Pavement - Eastern Parking	2,350	SY	$60.00	$141,000
	Includes: 12" Subbase course, 4" crushed stone, 4" top course				
4	**Eastern Entrance - Concrete Paved Walkways**				
4A	14" Depth of Excavation	342	CY	$12.00	$4,104
4B	Concrete Paved Walkways	7,915	SF	$11.00	$87,065
	Includes: 8" Subbase Course, 6" Cast-In-Place-Concrete				
5	Detectable Warning Strip for Pedestrians	20	EA	$250.00	$5,000
6	Crosswalk Pavement markings	9	EA	$150.00	$1,350
	SUBTOTAL G				***$372,769***
H. Promenade Walkway, 6' Wide Woodland Trail & Pedestrian Bridge					
1	**Promenade Walkway**				
1A	20" Depth of Excavation	3,580	CY	$11.00	$39,380
1B	15' Wide Permeable Pavement	6,470	SY	$60.00	$388,200
	Includes: 12" Subbase course, 4" crushed stone, 4" top course,				
2	**6' Wide woodland Trail #1**				
2A	11" Depth of Excavation	140	CY	$11.00	$1,540
2B	Compacted Aggregate (8" Crusher run, 3" Stone Dust)	460	SY	$16.00	$7,360
3	Pedestrian Bridge @ Creek Crossing	1	UNIT	$20,000.00	$20,000
	SUBTOTAL H				***$456,480***
I. Site Restoration					
1	**Shoulder Restoration - 4" Depth Topsoil, Seed & Mulch**				
1A	Promenade Shoulder - 5' Offset On Each Side	3234	SY	$30.00	$97,020
1B	Western Roadway Shoulder - 5' Offset On Each Side	500	SY	$30.00	$15,000
1C	Eastern Roadway Shoulder - 5' Offset On Each Side	562	SY	$30.00	$16,860
2	**6" Top Soil & Seed** (Includes Soil Distribution & Hydroseeding Distribution)				
2A	Great Lawn	9472	SY	$3.00	$28,416
2B	Exhibit Lawn	1353	SY	$3.00	$4,059
2C	Eastern Park Entrance Lawns	2480	SY	$3.00	$7,440
2D	Western Park Entrance Lawns	1300	SY	$3.00	$3,900
3	Landscape - *(Trees & shrubs)*	1	UNIT	$80,000.00	$80,000
	SUBTOTAL I				***$252,695***
J. Site Amenities					
1	Traffic pedestrian Signage	7	EA	$300.00	$2,100
2	Bike Rack	6	EA	$500.00	$3,000
3	Benches	20	EA	$900.00	$18,000
4	Picnic Tables	15	EA	$600.00	$9,000
5	Trash Receptacles	4	EA	$300.00	$1,200
6	Western Entrance Gateway Features	1	UNIT	$30,000.00	$30,000
7	Eastern Entrance Gateway Features	1	UNIT	$30,000.00	$30,000
8	Park Signage	1	EA	$10,000.00	$10,000
	SUBTOTAL J				***$103,300***
K.	**SUBTOTAL - COST SUMMARY A-J**				**$1,839,455**
L. Buildings					
	N/A	N/A	N/A	N/A	N/A
	SUBTOTAL L				
M.	**SUBTOTAL - COST SUMMARY K & L**				**$1,839,455**
N. Contractor Mobilization and General Requirements					
1	Mobilization (4% of M)				$73,578
2	General Requirements (5% of M)				$91,973
3	Site Survey, Site Design & Engineering (10% of M)				$183,946
4	Construction Observation With SWPP Inspections (2% of K)				$36,789
5	Permits & Approvals	1	EA	$25,000.00	$25,000
	SUBTOTAL N				***$411,286***

ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	LINE ITEM COST
O. Project Development Contingency					
1	Project Development Contingency (18% of M)				*$331,102*
	SUBTOTAL O				***$331,102***
P.	**TOTAL SITE COST WITH BUILDINGS**				**$2,581,842**

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CONCEPT PHASE: PROJECT CONSTRUCTION COST ASSESSMENT PHASE 2 | Document Date: 12.09.2019

TOWN OF CLIFTON PARK - PARK CENTER | Reference Drawing: Master Plan

499 MOE ROAD - CLIFTON PARK, NY 12065

Project Description: The phase 2 design concept at Clifton Park Town Park is to add additional site features, these site features include but are not limited to; a woodland trail, a pedestrian bridge, site lighting, a picnic pavilion and vehicle parking.

Note: 1. Costs contained herein are conceptual estimates for discussion and planning purposes. 2. Costs stated in this assessment represent 2019 construction prices.

ITEM NO.	ITEM DESCRIPTION	Quantity	UNIT	UNIT PRICE	LINE ITEM COST
PHASE 2					
A. Site Preparation					
1	Construction Stakeout	1	UNIT	$5,000.00	$5,000
2	Temporary Traffic Control	1	UNIT	$2,000.00	$2,000
	SUBTOTAL A				***$7,000***
B. Erosion Control Measures					
1	Silt Fence	1,850	LF	$3.00	$5,550
2	Temporary Erosion Control Maintenance	1	UNIT	$2,500.00	$2,500
	SUBTOTAL B				***$8,050***
C. Removals					
1	Clearing & Grubbing Within Site Boundaries	0.9	AC	$12,000.00	$10,800
	SUBTOTAL C				***$10,800***
D. Earthwork					
1	Establish Subgrades - *Assumes No Soil Import or Export)*				
	SUBTOTAL D				
E. Stormwater Management					
	N/A	N/A	N/A	N/A	N/A
	SUBTOTAL E				***N/A***
F. Utilities					
1	**Electrical**				
1.2	Parking & Road-Way Area Lighting @ +/- 100' Apart	2	EA	$5,000.00	$10,000
1.3	Electrical Service Distribution W/ Panel & Transformer	20	LF	$25.00	$500
1.4	Connection to Existing System	1	UNIT	$2,000.00	$2,000
1.5	Miscellaneous	1	UNIT	$10,000.00	$10,000
2	**Sanitary System**				
2.1	Sanitary Sewer Main 6" Dia. & Sanitary Laterals 6" DIA.	1,320	LF	$40.00	$52,800
2.2	Forced Main Pump @ Eastern Restroom	1	UNIT	$8,000.00	$8,000
2.3	Connection to Existing System	1	UNIT	$4,000.00	$4,000
2.4	Manholes	2	EA	$5,000.00	$10,000
3	**Water System**				
3.1	Water Main *(Includes: Trenching & pipe)*	750	LF	$65.00	$48,750
3.2	Connection to Existing System	2	UNIT	$10,000.00	$20,000
3.3	Water Main (Includes: Trenching & pipe)	2	UNIT	$2,000.00	$4,000
3.4	Gate Valves	1	UNIT	$2,000.00	$2,000
4	Fire Hydrants *(Includes: Item & installation)*	2	EA	$4,000.00	$8,000
	SUBTOTAL F				***$180,050***
G. Entry Drive & Parking Area					
2	**West Entrance - Western Parking Lot (24 Stalls)**				
2A	20" Depth of Excavation *(On site spoil)*	280	CY	$11.00	$3,080
2B	Porous Asphalt Pavement	510	SY	$60.00	$30,600
	Includes: 12" Subbase course, 4" crushed stone, 4" top course,				
	SUBTOTAL G				***$33,680***
H. Woodland Trail & Pedestrian Bridge					
1	**Woodland Trail #1**				
1A	11" Depth of Excavation	715	CY	$11.00	$7,865
1B	Compacted Aggregate (8" Crusher run, 3" Stone Dust)	2,342	SY	$16.00	$37,472
2	**Woodland Trail #2**				

ITEM NO.	ITEM DESCRIPTION	Quantity	UNIT	UNIT PRICE	LINE ITEM COST
2A	12" Depth of Excavation	103	CY	$11.00	$1,133
2B	12" of Woodchips	375	CY	$30.00	$11,250
2	Pedestrian Bridge @ Creek Crossing	1	UNIT	$20,000.00	$20,000
	SUBTOTAL H				***$77,720***
I. Site Restoration					
1	**Shoulder Restoration - 4" Depth Topsoil & Seed**				
1A	Western Entrance - North Parking Lot Shoulder - 5' Offset	800	SY	$3.00	$2,400
1B	Woodland Trail #1 Shoulder - 2' Offset on Each Side	1580	SY	$3.00	$4,740
2	**6" Top Soil & Seed** (Includes Soil Distribution & Hydroseeding Distribution)				
2A	Area Around Picnic Pavilion "A", "B", "C"	1200	SY	$3.00	$3,600
2B	Woodland Trail #1 Shoulder - 2' Offset on Each Side	1555	SY	$3.00	$4,665
3	Landscape - (Trees & shrubs)	1	UNIT	$20,000.00	$20,000
	SUBTOTAL I				***$35,405***
J. Site Amenities					
1	Benches	10	EA	$900.00	$9,000
2	Picnic Tables	10	EA	$600.00	$6,000
3	Park Signage	1	EA	$5,000.00	$5,000
4	Council Circle - Stone Laid Seating Wall	1	UNIT	$25,000.00	$25,000
	SUBTOTAL J				***$45,000***
K.	**SUBTOTAL - COST SUMMARY A-J**				**$397,705**
L. Buildings					
1	Picnic Pavilion "A" On a Concrete Floor (24X40)	960	SQ	$75.00	$72,000
2	Picnic Pavilion "B" On a Concrete Floor (24X40)	960	SQ	$75.00	$72,000
3	Picnic Pavilion "C" On a Concrete Floor (24X40)	960	SQ	$75.00	$72,000
4	Gazebo 25x40 "C"	1,000	SQ	$80.00	$80,000
5	Bathroom "A"	300	SQ	$250.00	$75,000
6	Bathroom "B"	300	SQ	$250.00	$75,000
	SUBTOTAL L				***$446,000***
M.	**SUBTOTAL - COST SUMMARY K & L**				**$843,705**
N. Contractor Mobilization and General Requirements					
1	Mobilization (4% of M)				$33,748
2	General Requirements (5% of M)				$42,185
3	Site Survey, Site Design & Engineering (10% of M)				$84,371
4	Construction Observation With SWPP Inspections (2% of K)				$16,874
5	Permits & Approvals	1	EA	$25,000.00	$25,000
	SUBTOTAL N				***$202,178***
O. Project Development Contingency					
1	Project Development Contingency (18% of M)				*$151,867*
	SUBTOTAL O				***$151,867***
P.	**TOTAL SITE COST WITH BUILDINGS**				**$1,197,750**