Veterans' Memorial Park Master Plan Report

Prepared for the Village of Wappingers Falls, New York
June 25, 2009

prepared by

pouder design group
landscape architecture + environmental planning
4 CHARLES COLMAN BLVD., PAWLING, NY 12654
WWW.POUDER.COM 845.855.8255

ELAN
PLANNING & DESIGN, INC

Park Master Plan
Veterans' Memorial Park
Wappingers Falls New York

I. Introduction

In 2001, the Village of Wappingers Falls, NY prepared a Parks and Recreation Master Plan. A recommendation of the plan was to prepare a "Comprehensive design of current Veterans' Park and the adjacent Village property as a Family Park". In response to this recommendation, in February 2009, the Village of Wappingers Falls retained a consulting team of Landscape Architects, Planners and Architects to prepare this Master Plan for the park. The stated program to be included in the design consists of the following elements:

- Day camp for approximately100 children, aged 5 to 13
- Multi-purpose, non-regulation field(s) for play
- Goose control
- Walking paths and benches
- Graffiti control
- Family-focused park amenities – benches, picnic areas etc
- Lodge style architecture
- Waterfront Pier, including a dock close to the water surface for kayakers
- Bus parking and drop off
- Locate an area for a new Community Center/Camp building to accommodate approximately 100 to 125 people
- Locate an open sided pavilion
- Play area with spray fountain
- Basketball court
- Storage facility
- On-site parking for at least 35 cars
- Sculpture throughout park

II. Existing Conditions

Location

Veterans' Park is located in the Village of Wappingers Falls, Dutchess County, New York. The 5.74 +/- acre open space parcel is operated by the Village of Wappingers Falls and is used primarily for passive recreational activities and is home to a summer day camp program. It is bounded on the east side by North Mesier Avenue, on the north by Wappinger Lake, on the west by Spring Street and on the south by a residential neighborhood. The park contains an informal field for play, and open air asphalt basketball court, playground equipment, a small building, extensive lawn areas, small forest patches, and an informal boat launch and dock.

Topography and Landform

The site is characterized as gently sloping with a northwest aspect slope. Topography varies from about one-percent on the play areas to more than 40 percent on the steep bank adjacent to Mesier Avenue. Typical slopes in the core of the site range from six to approximately 10 percent. The slope on Spring Street is approximately 10 percent, which is considered steep for a public road. The nearly level slope of the playfield impedes the natural drainage of water.

There is an approximate elevation change of 48 feet from a high point at an approximate elevation of 136 at the northeast corner of the site adjacent to Mesier Avenue to a low point of 88 feet at the shoreline of Wappinger Lake.

It has been reported that, in the past, ravines and gullies in portions of the site were filled with soils dredged from the lake.

Soils

The soils within the site are classified as Dutchess-Cardigan-Urban land complex, rolling rocky (DxC) according to the United States Department of Agriculture Soil Survey data. The parent material is loamy till or colluvium derived from phyllite, slate, shale, and schist. A typical soil profile consists of Channery silt loam, Channery loam, Silt loam, and Unweathered bedrock. The soil has a slope of between 5 to 16 percent, is well drained, has a depth to water table of 80 inches or more and shows infrequent ponding or flooding.

Structures

Two buildings and a boat dock/launch exist on the park site. The primary structure is a single story concrete block building located on the southeast portion of the site.

A 96 square foot storage shed is also located on the west side of Spring Street near the boat launch. It is in good condition and is used to store materials and supplies for an aquatic weed harvesting machine that is used on the lake.

An informal boat launch is located at the northern terminus of Spring Street. The launch consists of several floating docks. The launch area and docks do not appear to be ADA compliant. Pavement appears to terminate at the water's edge and no subsurface ramp was visible; rather the ramp seems to extend onto the natural bottom of the Lake. One of the floating docks requires some maintenance to fix a broken joist, however, they appear to be in very good condition.

Circulation

Spring Street is a steep, partially-paved public roadway forming the western edge of the park and for all intents and purposes is a component of the park itself. Pavement is in poor condition and there are no provisions for stormwater control along the section of the road near the park. The portion of Spring Street from Pelham Place to the edge of the lake drains down the hill to Wappinger Lake and is causing extensive erosion and deep gullies. There is no turnaround area for cars with boat trailers nor does any formal parking exist.

A small gravel parking area is located on the eastern portion of the site and is accessible via Mesier Avenue. The parking surface is not ADA compliant.

There are no formal or paved pedestrian paths in the park, however, many pedestrians and bicyclists were observed crossing the site, particularly between Spring Street and Mesier Avenue.

Hydrology and Wetlands

No State regulated wetlands are known to exist on the site. Wappinger Lake itself is a Class B waterbody. Numerous reports from Village officials indicate that the Lake is subject to pollution and the New York State Department of Environmental Conservation notes problems with phosphorous and silt/sediment due to urban and stormwater runoff.

The site is within a designated Significant Natural Community. Two plants located in this community (though not necessarily on-site) are the endangered Arrowhead Rattlebox (*Crotalaria sagittalis*) and the threatened Violet Wood-sorrel (*Oxalis violacea*).

A portion of the park adjoining the lake is within the 100-year floodplain. (Federal Emergency Management Agency. (2009). "MSC Viewer" form Map Service Center. Retrieved April 21, 2009)

Infrastructure

A 48 inch diameter stormwater pipe beneath the site connects a stream on the east side of Mesier Avenue with the Lake. The Village Engineer reports that the pipe is approximately 50 to 60 years old and is nearing the end of its useful life. (Jay Baggi, telephone conversation, March 20, 2009).

An 8 or 10-inch clay tile sanitary sewer pipe also crosses the site from east to west. The Village Engineer reports that this pipe is also between 50-60 years of age and is also at the end of its useful life.

Public water service is available in Spring Street and along Mesier Avenue. Electrical service is provided to the concrete block building from Mesier Avenue.

Athletic Facilities and Recreational Amenities

Existing recreational amenities include a playground area, swing sets and sandbox, dispersed benches, an asphalt basketball court, a decommissioned ball field, boat launch/dock and the veterans' monument.

Flora and Fauna

The majority of the site is vegetated with turf grass. The park's northern edge is heavily forested with large deciduous trees typical of the region. A knoll on the site's southern side is also forested. Two majestic large Oak trees are situated in the center of the site. Several other deciduous trees of smaller stature are located throughout the park.

Observed wildlife at the park consists primarily of avian species, in particular the Canada Goose (*Branta canadensis*). The geese are a nuisance species at the park. Much of the parklands are covered with goose feces, the geese are over-browsing the turf grass and at times have shown aggressive behavior toward humans.

Other waterfowl were observed in the Lake itself including Common Merganser and various puddle ducks. A fairly rich warmwater fishery is reported as are other common freshwater pond species, including snapping turtles.

III. Proposed Action

The design concept for the park is firmly rooted in a desire to create a low maintenance, ecologically benign, community focused passive use park for a broad range of user groups. Improvements employ green technologies where possible and seek to incorporate features to improve the ecological and social functioning of the site. Thirteen key elements of the plan are described below and are depicted on the attached Master Plan drawing.

1. Boat Launch

A new concrete boat launch ramp is proposed to replace the existing unimproved ramp structure at the base of Spring Street. The boat ramp is intended to provide a more stable and safe underwater surface for launching of small, trailered boats, kayaks and canoes. The ramp should be installed when the lake level is low to minimize ecological impacts and could be constructed of precast concrete panels which are lowered into position, or cast in place concrete panels.

2. Fishing Pier and Shoreline Stabilization

Shoreline stabilization to reduce erosion, discourage herbivory by geese and improve water quality might consist of the use of dense wetland and riparian plantings, bio-logs and the installation of a raised fishing pier. Goose exclusion fencing should be incorporated while the young plants take hold. The pier should afford

fishing access to the disabled. The plantings and stabilization techniques could serve as a model for cost-effective bio-engineering on other lakefront properties. Plantings should be at least 30 inches in height and the width of the plant bed should be a minimum of 25 to 30 feet to discourage geese.

3. Pedestrian Path System

A formalized pedestrian path system is intended to allow improved pedestrian access along the waterfront and throughout the entire site while providing enhanced connections between the many features of the Park. The path would include a small footbridge that crosses over an inlet stream and would weave through both open fields and the forests. An allee of flowering trees with benches beneath is located adjacent to the sport court. Pathway intersections would be embellished with small seating areas and sculptures. The path could be constructed of porous asphalt or porous concrete to enhance infiltration of stormwater runoff and improve water quality.

4. Spring Street Drainage Improvements

Drainage improvements are proposed to stem erosion and washout of the Spring Street roadway and more efficiently convey roadway runoff down the steepest section of the hill. The plan calls for roadway runoff to be pitched to the west side of the road and collected in a rip-rap swale. Culverts would be provided beneath existing driveway and walkway crossings. Following these improvements the roadway should be repaved.

5. Boater Parking

Improved parking for boaters is also proposed and consists of ADA compliant parking spaces next to the boat ramp and three over-sized parking spaces designed to accommodate vehicles with boat trailers. A "Hammerhead" style turnaround space is also proposed closer to the water's edge to reduce the need for boaters to back all the way down the steep hill from the Spring Street/Pelham Place intersection.

6. Open-sided Pavilion and Performance Area

A multi-purpose, open sided pavilion is proposed as a centerpiece of the park design. The pavilion is situated to provide panoramic views of Wappinger Lake. It could be used by summer camp groups and might serve as a venue for cultural events such as an open-air concert series or a summer "Theater at the Lake" program. Long stone slabs set into the hill could be used as casual seating.

7. Goose Control

Goose population management is warranted at the site to reduce the nuisance created by excessive goose feces on lawn areas. No single strategy is entirely effective for this purpose, rather a series of measures are suggested including the modification of habitat, hazing of the geese and control of reproduction. The addition of large trees may help to break up the flight paths of geese into and out of lawn areas though this technique alone will not solve the problem. Plantings along the shoreline may also deter geese from using the site and can help stabilize the shoreline. Where possible, plants should be native species which, are generally better acclimated to the local environment and require lower levels of irrigation and maintenance. Proposed techniques consist of:

- Planting of the shoreline with vegetative barriers and/or the installation of fences along the shoreline
- Signs to discourage feeding of geese
- Placement of a walking path near the shoreline
- Fragmentation of large lawn areas with tree plantings so geese can not easily fly into, or out of them.
- Use of a less palletable lawn grass species such as Tall Fescue *(Festuca arundinaceae)*
- Reduced frequency of mowing
- Reduced use of fertilizers
- Hazing techniques such as the use of dogs to chase/scare geese and/or the use of noisemakers (airhorns, sirens, bangers, whistle bombs etc.)

8. Play Field Repair

The former ball field, which is often wet due to its low slope will be re-graded to enhance natural sheet-flow drainage. The field should be replanted with a turf species which is less desirable to geese.

9. Spray Fountain and Playground Enhancement

Renovations to the playground area include the addition of a spray fountain, improved seating for parents and caregivers, and planting of a sensory garden for children that contains plants of varying colors, fragrances, and textures. A unifying safety surface of colorful graphic elements could also be included when the existing surfacing requires replacement.

10. Stormwater Management

As part of an effort to improve the quality of water entering into the lake, an integrated system of stomwater management is proposed for the park. Components of this might include a green, or vegetated roof, for new buildings, creation of rain gardens to filter and purify stormwater runoff from paved surfaces, a bio-swale in parking areas, reduced use of pesticides and fertilizers, or it might be used to water plants in the nearby Children's Garden. The rain garden can be used as a didactic tool to educate citizens and children about the water cycle and the importance of water conservation and protection.

11. Community Center Building

A new facility for community use is proposed. The precise size and program of this facility has not yet been determined, however, a general location and shape is noted on the Master Plan.

12. Sport Court Relocation

Relocation of the sport court is proposed in order to accommodate a new community center and an improved parking area (see Items 10 and 11, below). The court will be shifted to the north and will be located at the base of a grass slope, which spectators can use for impromtu seating.

13. Parking Improvements

Upgrades to the parking area consist of the relocation and reorientation of the parking lot and the incorporation of green design technologies for the treatment and infiltration of stormwater runoff. The parking area will be expanded to 36 cars and will include spaces for the handicapped. A bus drop-off area is provided as well. Pavement could be porous to allow the direct infiltration and purification of runoff or the median might be designed as a bio-swale to collect runoff and cleanse it prior to discharge to the lake. Two new curb-cuts onto Mesier Ave are required for this new parking area.

References

New York State Department of Environmental Conservation. (2009). "Environmental Resource Mapper". Retrieved April 21, 2009, from www.dec.ny.gov/64.html

United States Department of Agriculture Natural Resources Conservation Services. (2009)." Area of Interest (AOI)" from Web Soil Survey. Retrieved April 21, 2009, from http://websoilsurvey.nrcs.usda.org/app/WebSoilSurvey.aspx

Federal Emergency Management Agency. (2009). "MSC Viewer" form Map Service Center. Retrieved April 21, 2009, http://msc.fema.gov/webapp/wcs/stores/servlet/MapSearchResult?storeId=10001&catalogId=10001&langId=-1&userType=G&panelIDs=360223000 1C&Type=pbp&nonprinted=&unmapped=-1

City of San Diego Graffiti Control Program. (2009). "Graffiti Control Program". Retrieved May 5, 2009, from www.sandiego.gov/graffiti/

Smith, A. E., S. R. Craven, and P. D. Curtis. 1999. "Managing Canada Geese in Urban Environments." Jack Berryman Institute Publication 16, and Cornell University Cooperative Extension, Ithaca, N.Y.

Paggi, Jay; Village Engineer, personal communication March 20, 2009

pouder design group
landscape architecture + environmental planning
4 CHARLES COLMAN BLVD., PAWLING, NY 12564
WWW.POUDER.COM 845.855.8255

Prediction of Probable Costs

Village of Wappinger's Falls
Veteran's Park

25-Jun-09

Removals	**$20,000.00**
Pavements	
Sports/ Play Equipment	
Site Furnishings	
Clear & Grub	
Utility Poles, Wires and Fixtures	
***Drainage & Underground Utilities**	**$400,000.00**
Sanitary Sewer Line	
Storm Line	
Shoreline Stabilization	**$9,500.00**
Lighting	**$24,000.00**
Path & Drive	
Security	
Spray Shower & Plumbed Amenities	**$65,000.00**
Water Play	
Drinking Fountain	
Asphalt Pavement	**$85,000.00**
Pathways	
Sport Court	
Parking Area	
Decorative Pavements	**$80,000.00**
Pedestrian Nodes	
Entrances	
Curbs and Miscellaneous Concrete	**$12,000.00**
Amphitheater Walls/ Seating	**$16,000.00**
Site Furnishings	**$40,000.00**
Benches	
Trash Receptacles	
Bicycle Racks	
Flag Pole	
Steel Fence	**$12,000.00**
Play Equipment & Safety Surface	**$48,000.00**
Landscape	**$170,000.00**
Trees	
Shrubs	
Turf	
Perennials	
Precast Boat Ramp	**$25,000.00**
Pavilion	**$40,000.00**
TOTAL	**$1,046,500.00**
MOBILIZATION 4%	**$41,860.00**
CONTINGENCY 10%	**$108,836.00**
GRAND TOTAL	**$1,197,196.00**

* Drainage costs provided by Paggi, Martin & Del Bene LLP
Engineers & Surveyors