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**Proposal for Site Development and Landscaping for the National Headquarters
and Educational Center of Wild Ones Natural Landscapers Ltd.**

Abstract

Wild Ones Natural Landscapers Ltd. has recently purchased a house on a 3.5 acre parcel of land on 2285 Butte des Morts Beach Road in the Town of Menasha, WI, that will serve as its educational center and national headquarters. The property, located adjacent to Stroebe Marsh on the west shore of Little Lake Buttes de Morts, is comprised largely of wet-mesic woodland. The building occupies the center of an upland area approximately $\frac{3}{4}$ of an acre in size that is currently managed as a conventional residential landscape with extensive mown lawn and non-native plantings. Long-range plans include the purchase of an adjacent 12½ acres (south of the building) to allow for expanded visitor parking and the creation of a prairie and oak savanna. Immediate concerns regarding the landscape of the 3.5 acre parcel is to control invasive species, reintroduce native trees and wildflowers in the existing woodland, improve the areas immediately around the building, and construct a boardwalk to the marsh. Wild Ones will realize their vision for the landscape of the new national headquarters when they achieve the following goals:

- Provide better vehicular and pedestrian access to the building and the grounds.
- Create outdoor venues for organized educational activities.
- Develop gardens and make site improvements, which demonstrate the Wild Ones mission to promote environmentally sound landscaping practices that preserve biodiversity through the preservation, restoration and establishment of native plant communities.

This proposal for the upland portion of the 3.5 acre lot addresses the functional, educational, and aesthetic aspects of these goals. The key challenges of the plan were to:

- Provide safe, off-street parking (staff and visitor, including one ADA-conforming stall) and drop-off access without overly compromising areas for other functions and desired features.
- Provide adequate, handicapped-accessible pathways, over the moderately steep slopes of the site.
- Develop strategies to handle and conserve stormwater that serve as educational resources and that inspire visitors to adopt similar conservation strategies.
- Develop natural landscaping concepts that acknowledge Wild Ones conservation concerns, as well as the urban, industrial context of the site.

- Develop garden themes that support Wild Ones mission to preserve and restore native plant communities, and promote environmental education.

Existing Site Conditions/Recommendations

A. Parking and Pedestrian Access

Three to four cars currently can park on the existing driveway and on the lawn immediately to the south. Drivers must back out onto the street, where traffic, although light to moderate, moves at fairly high speeds. Safety concerns, as well as narrow road shoulders, prevent on-street parking to be a practical long-term planning option. Wild Ones hopes to purchase the adjacent property to the south to better accommodate the parking needs of visitors and staff, but it is not certain this will be financially possible, and if so, when these improvements can be made. Even in the event this happens, vehicular access close to the building will continue to be necessary for deliveries and parking for visitors and staff with disabilities. Furthermore, parked cars currently occupy or dominate important pedestrian routes into and out of the building, and around the grounds. This conflict will be greater if Wild Ones develops parking and trails on the property next door.

This plan, which includes off-street parking for the same number of cars currently accommodated on site, proposes relocating and reconfiguring the parking area to allow for the following improvements:

- A defined drop-off /information point better serves visitors.
- A school bus can park off the street, although a dedicated stall is not provided.
- A turn-out eliminates the need for drivers to back out onto the street.
- A parking stall, conforming to design standards established by the Americans with Disabilities Act (ADA), serves those who need to park near the front door.
- An entry garden, created in the areas currently dominated by parked vehicles, introduces visitors to the Wild Ones mission and programs.

The existing front door and porch will remain the primary staff and visitor entrance to the building and the garage will be converted to staff and meeting areas. This plan includes two improvements to the porch to make the building universally accessible: wider steps allowing two people to walk side by side and a handicap ramp. Proposed pathways from the new parking area to the front door and rear basement entrance conform to design standards established by the ADA. Design and layout of the path along the south side of the building to the lower level and wetland boardwalk follow guidelines for recreational trails recommended by the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and Uniform Federal Accessibility Standards (UFAS).

References:

Harris, Charles W. and Nicholas T. Dines. *Time-Saver Standards for Landscape Architecture: Design and Construction Data*. New York: McGraw-Hill Publishing Company, 1998 (2nd ed.). See Section 240, Outdoor Accessibility.

U.S. Department of Justice. *ADA Standards for Accessible Design* (revised July 1, 1994). Available on line: <http://www.ada.gov/stdspdf.htm>.

B. Stormwater

The location of the new Wild Ones property within a landscape of waterways and wetlands transformed by modern urban and industrial development, affords a special opportunity to educate the public about managing and conserving stormwater. Because the percolation rates of the soils on site are slow to very slow (soil in the upland portions of the property are classified as Winneconne clay loam), soil in infiltration areas (rain gardens) should be amended with liberal amounts of compost or replaced with engineered soil. This plan includes several additional conservation measures to create a more robust system to filter sediment, process pollutants, disperse and slow surface flows, and infiltrate stormwater than relying on vegetated infiltration basins alone. These additional features include rain barrels, filter strips (vegetated slopes) and level spreaders (shallow, stone-filled trenches, which spread out sheet flows). This variety of conservation devices also allows for a more comprehensive demonstration of managing the stormwater chain, as rain runs off the building's roof and other impervious surfaces, and flows across the site to the marsh and lake.

References:

City of Portland [OR] Bureau of Environmental Services. *Stormwater Management Manual* (July 1, 1999; revised 2004). Available on line: <http://www.portlandonline.com>.

Dunnett, Nigel and Andy Clayden. *Rain Gardens, Managing water sustainably in the garden and designed landscape*, Portland, OR: Timber Press, 2007.

Minnesota Pollution Control Agency. *State of Minnesota Stormwater Manual* (November 2005). Available on line: <http://www.pca.state.mn.us/water/stormwater/stormwater-manual.html>.

C. Historical Vegetation, Environmental Factors and the Proposed Planting Scheme

Original township surveys of the area, conducted in January 1839, describe a varied landscape of marsh, upland and lowland forests, and savanna (bur oak openings). Tree species typical of Wisconsin's Tension Zone, the transitional area between the state's southern and northern biomes, were noted. Included were white and black ash, bur and white oaks, hickory, elm, sugar maple, basswood, ironwood, white pine, and aspen. The original upland forest on the Wild Ones property has been destroyed, but much of the lowland forest remains. Native trees and forbs inventoried in the surrounding riparian woodland and marsh in 2003 include swamp white oak, northern red oak, slippery elm, box elder, red maple, black and white ash, cottonwood, red mulberry, hawthorn, serviceberry, large-flowering trillium, nodding trillium, Jack-in-the-pulpit, bloodroot, wood fern, wide- and narrow-leaved cattail, water arum,

arrowhead, soft-stem bulrush, spike rush, bluejoint grass, burreed, marsh boltonia, blue flag iris, and New England aster.

A plant community approach was taken in creating the planting scheme in this proposal. Although a number of factors informed choices—availability in the trade, wildlife value, suitability to site conditions, and aesthetic factors (plant structure, texture and color)—the predominate species, which characterized the forests and savannas originally prevalent in the area, constitute the basis of the plan. This proposal represents an attempt to balance restoration with garden making—a synthesis of art and ecology. Intended management of the property will promote natural development and regeneration of plants and building of soil. Pruning, removal of plants and other interventions are limited to practical considerations (such as clearance of pathways) and preservation of species diversity during the process of succession.

Planting layouts also mitigate several unfavorable environmental conditions. A thick hedgerow of evergreen and deciduous trees, shrubs and grasses along the west property line buffers the front entrance from cold winter winds, hot late-afternoon summer sun, traffic noise from nearby U.S. Highway 41, and unattractive views. A grove of trees near the southeast corner of the house shades the sunroom and deck.

References:

Wisconsin Public Land Survey Records: Original Field Notes and Plat Map. Compiled by the U.S. General Land Office, 1832-1866, and transferred to the Wisconsin Board of Commissioners of Public Lands. Made available on line by the Wisconsin Board of Commissioners of Public Lands in cooperation with the University of Wisconsin-Madison General Library System:
<http://digicoll.library.wisc.edu/SurveyNotes>.

State Herbaria:

Robert W. Freckmann Herbarium, University of Wisconsin-Stevens Point: <http://wisplants.uwsp.edu>.
Wisflora: Wisconsin Vascular Plant Species, Wisconsin State Herbarium, University of Wisconsin-Madison: <http://botany.wisc.edu/wisflora>. Information on plant characteristics, habitats and natural distribution. Freckmann Herbarium also provides information on ethno-botanical uses

Features of the Plan

A. Parking Area and Orientation Garden

A parking area for four vehicles, including one stall dedicated to handicapped use, provides a drop-off area for people arriving by car or bus, as well as limited, off-street parking for staff and visitors. An entrance garden serves as an orientation area for organized activities and introduces visitors to the education center's grounds, mission and programs.

Landscape Features:

- The layout and design of the handicapped parking stall and the pedestrian route to the building's front door conform to the standards established by the Americans with Disabilities Act.

- The parking area is composed of permeable crushed stone (Gravelpave2 geotextile filled with 3/16” clear, crushed stone over a 12” clear base [20% void space]). An adjacent rain garden and vegetated filter strip processes excess stormwater runoff.
- Paving and benches are inscribed with inspirational quotations by leaders in the modern conservation movement and the Wild Ones organization, including:
 - “If suburbia were landscaped with meadows, prairies, thickets or forests, or a combination of these, then the water would sparkle, fish would be good to eat again, birds would sing and human spirits would soar.” Lorrie Otto
- Massed plantings mitigate winter winds, traffic noise, and views of commercial buildings. Selective, framed views of the surrounding industrial landscape provide an important context for the Wild Ones educational mission of promoting ecologically informed site development and management of natural resources.
- An information kiosk, text panels and labeled plantings introduce visitors to the ecology of the site and the human history of the use and management of natural resources in the region.

Educational Themes:

- 1) Uses of indigenous Wisconsin plants by Native Americans, 19th century Euro-American settlers, and modern-day residents, 2) conversion of timberland and grassland to agriculture and urban development, 3) changes in water quality and local hydrology due to the destruction of wetlands and riparian habitats, and 4) modern demands on local water supplies for drinking, manufacturing and recreation.
- Rain barrels, rain gardens, habitat plantings, and green landscaping methods conserve water, soils, native vegetation and wildlife.
- Creating gardens that engage the senses, celebrate ecological processes, and connect people to the natural world.

B. Habitat Garden

This meadow and hedgerow landscape is attractive to wildlife, as well as people. The garden demonstrates ways to create healthy habitats for birds, mammals, insects and reptiles around our homes and work places. This area will serve as an entry point from a future parking area in the event that the Wild Ones acquires the property next door.

Landscape Features:

- Trees, shrubs, grasses, and wildflowers—as well as structural elements, such as boulders, rock and brush piles, rotting logs and feeding stations—provide wildlife with food and shelter. A diversity of food sources are provided, including nectar, seed, fruit, leaves, twigs, and insects. Plants with dense, evergreen foliage and twiggy or thorny branches offer nesting habitats and

protection from predators. Bird baths or shallow pools, and damp, sandy patches of ground provide drinking places.

- A garden structure with a green roof provides shaded seating, includes a text panel discussing the features of the garden, and serves as an entry point from a planned parking area on the adjacent property.
- Rain barrels capture stormwater from the roof of the house for use in the garden. Overflows are directed into the meadow.
- The layout and design of the trail to the woodland/ marsh boardwalk and Discovery Garden in the lower rear areas of the property follows recommendations for handicapped-accessible recreational trails as outlined in the Americans with Disabilities Act Accessibility Guidelines and the Uniform Federal Accessibility Standards (see discussion in *Time-Saver Standards for Landscape Architecture* (2nd ed.), Charles W. Hines and Nicholas T. Dines, ed.). Path specifications: 1) the maximum steepness of slope and cross slope shall be a drop of 1 vertical foot in every 20 horizontal feet (5%), 2) the path shall have a minimum clear width of 4-5 feet, 3) the surface the path shall be compacted fine, crushed stone, and 4) hand rails shall be installed to allow visitors to rest along the length of the sloping portion of the trail.

C. Discovery Garden

This garden, located on the lower level adjacent to the basement laboratory, serves as an outdoor venue for organized activities and includes features intended to engage children's curiosity and imagination through outdoor play. Included are 1) a reading circle, 2) a rainwater-fed pool harboring frogs and insects, 3) a vine-covered teepee made of tree branches, 4) a garden plot, and 5) a sand pit where children can release water from rain barrels for a diversity of dry and wet play options. The adjacent woodland, marsh and Habitat Garden provide additional places for discovery and learning.

Landscape Features:

- Rainwater-fed pool: Storm water from the roof of the house flows down a rain chain to a garden pool planted with aquatic and wetland species. A gravel "beach" permits children to explore the pool without trampling surrounding plantings. Over flows are directed away from pathways and activity areas through a drain and underground tile to a vegetated filter strip adjacent to the edge of the woods.
- A garden plot, raised to a convenient 12"-18" height, provides a place for a variety of horticultural projects. Adjacent rain barrels and compost bins support these activities.
- Sand pit: Children are encouraged to use their imagination and creativity in this dry and wet play area. Water released from a bank of rain barrels runs through a series of channels into the sand pit.

- A teepee, logs and boulders provide places to play hide and sit. Children are encouraged to use tree branches and other natural elements on the site to construct play structures and animal shelters.
- Simple, light-weight benches can be easily moved around to accommodate reading and a variety of other activities.
- Paving, on-grade wood decking, and fine fescue turf (organically managed “No-Mow” lawn) provide practical surfaces for a variety of outdoor activities. The lawn may mown in pathway and activity areas, but is left unmown where a closely cropped surface is not needed for functional reasons.

D. Woodland Garden

This restored woodland edge features trees, shrubs and wildflowers characteristic of upland hardwood forests located in Wisconsin’s biologically rich Tension Zone. These plantings complement the wet-mesic species in the existing, adjacent riparian woodland.

Landscape Features:

- A rain garden processes runoff from the parking area, as well as storm and sump water from the building. A level spreader—a shallow cobble-filled trench—evenly disperses overflows from the rain garden into the wet woodland. A check dam slows surges of sump water pumped from the building’s basement to the rain garden. A decorative dry stream bed directs rain water from the roof of the house to the rain garden. The stream bed minimizes erosion of the steep slope and serves as an interesting visual element that draws attention to the flow of storm water across the site.
- A board walk provides handicapped access from the parking lot across the rain garden to the Discovery Garden and boardwalk to Stroebe Marsh on the lower level. A text panel on the boardwalk discusses the design, layout and planting of the rain garden, its relationship to the hydrology of the area, and measures visitors can take to conserve stormwater at home and work.