Dear friends, faculty, staff, and supporters,

The 2012 Minnesota Landscape Arboretum Circulation and Development Master Plan is the culmination of a year and a half of critical examination, discourse, and insightful explorations. Our master planning process sought the involvement of the Arboretum community within and beyond our borders through a combination of committee discussions, staff interviews and board input.

As you will see, the plan creates a flexible framework to guide future physical development of the Arboretum as needs prescribe and funding allows. This document describes the objectives of the University of Minnesota Landscape Arboretum and juxtaposes the Arboretum of today with what we hope it will become in the future. It articulates major planning opportunities for all areas of the property. Major gateways, improved circulation and access, additional development opportunities, and the relationship with the surrounding community are addressed.

The plan anticipates open space development, facilities growth and replacement, parking upgrades, and landscape improvements that will unify and beautify the Arboretum. Immediate Impact Projects that could reasonably be achieved in the near future are proposed as a starting point as funding becomes available. The document highlights the University of Minnesota Landscape Arboretum’s commitment to sustainability and planned growth.

Implementation of this plan will help the Minnesota Landscape Arboretum to express, through its physical presence, our unique mission.

We would like to thank the members, volunteers, and visitors, The Minnesota Landscape Arboretum Foundation and Arboretum staff for their participation, vision, and hard work.

Sincerely,

Ed Schneider, Director, Minnesota Landscape Arboretum

Dave Maiser, President, Minnesota Landscape Arboretum Foundation
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**University of Minnesota Landscape Arboretum**

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Intent and Goals

1. Maintain the Arboretum’s character and beauty while addressing future program needs and revenue generation.
2. Provide greater physical access to the Arboretum.
3. Ensure the safety of Arboretum guests, volunteers, and staff.
4. Create a clear pedestrian, bicycle, and vehicular circulation system with a hierarchy of trails, roads, and walks.

Objectives

The objective of this study is to enhance circulation and development opportunities at the Arboretum.

1. Improve access from Highway 5. The new entry drive will connect all the core facilities and visitor lots by enhancing the relationship among services, visitor access & egress, and new exhibits, gardens, and research venues.
2. Update and expand parking to meet growing visitor needs and new circulation patterns associated with displays and facilities for an expanded Arboretum.
3. Develop a new eastern drive to access additions and to connect research areas, model landscapes, new developments, and collections/exhibits.
4. Enhance the pedestrian and bicycle experience by connecting to surrounding communities, regional trail and bikeway systems.
Existing Conditions
University of Minnesota Landscape Arboretum
Parking and accessibility is a significant challenge for the Arboretum and the true impetus for this study. This section diagrams information gathered through field observation, surveys, current studies and previous site mapping. Both natural and man made aspects were located and studied including roadways, parking, structures, exhibits and gardens, pathways and trails, topography, hydrology and storm water, view and vistas, micro climate, soils, sustainability and resource management practices.

Future development opportunities include consideration of expanded parking, an expanded pedestrian and bicycle experience, realignment of Three Mile Drive to reduce congestion, the strategic relocation and/or addition of a number of new display gardens and exhibit areas, consideration of revenue generating venues, concessions and rest rooms, new exhibits, research expansion.

**Parking Inventory**

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>Future</th>
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<tbody>
<tr>
<td>main parking lot</td>
<td>195 spaces visitor</td>
<td>288 spaces</td>
</tr>
<tr>
<td>rain garden lot</td>
<td>126 spaces visitor</td>
<td>332 spaces</td>
</tr>
<tr>
<td>learning center lot</td>
<td>33 visitor</td>
<td>33 visitor</td>
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<tr>
<td>staff lot</td>
<td>67 spaces</td>
<td>67 spaces</td>
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<tr>
<td>three mile drive</td>
<td>204 spaces visitor</td>
<td>204 spaces</td>
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<tr>
<td>overflow parking</td>
<td>132 spaces</td>
<td>460 spaces</td>
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<tr>
<td>red barn</td>
<td>10</td>
<td>100</td>
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<tr>
<td>maintenance facility</td>
<td>25</td>
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<tr>
<td>new connector</td>
<td></td>
<td>23</td>
</tr>
<tr>
<td>bypass road</td>
<td></td>
<td>228</td>
</tr>
<tr>
<td>new west performance center lots</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>new spring peeper parking</td>
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</tbody>
</table>

**Total Existing Parking** 792 spaces  
**Total New Visitor** 1861 spaces
Constraints and Opportunities

University of Minnesota Landscape Arboretum

- a current east entrance to Arboretum; heavy congestion and traffic conflict with Hwy 5
- b lack of pedestrian or bicycle access from surrounding community or regional trails
- c limited parking for large events
- d pedestrian/vehicular conflicts along parkway
- e conflicts/safety issues between roadways and display garden circulation; lacks definition of user type
- f limited road width, conflict between pedestrians, bicycles and cars
- g limited shoulder parking along Three Mile Drive
- h unclear secondary entrance to Three Mile Drive
- i potential ingress/egress to arboretum property and Hwy 5
- j no visitor access to east or west arboretum property
- k main gate: future issues with pedestrian and bicycle traffic
- l property circulation restricted by wildlife fence
- m barn entrance/access separate from rest of circulation system
- n service access to study areas & wetland
- o private residence access roads
- p limited access to service yard and research area
- q overflow parking opportunities
- r future trail underpass connections to regional trail
- s maintenance facility is inadequate
Parking Improvements and Expanded Roadway System
University of Minnesota Landscape Arboretum

Future Improvements & New Added Parking Space

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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<tr>
<td>a</td>
<td>east gate</td>
<td>93 spaces</td>
</tr>
<tr>
<td>b</td>
<td>main parking lot expansion</td>
<td>206 spaces</td>
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<tr>
<td>c</td>
<td>rain garden lot expansion</td>
<td>23 spaces</td>
</tr>
<tr>
<td>d</td>
<td>new connector bypass road</td>
<td>228 spaces</td>
</tr>
<tr>
<td>e</td>
<td>east-west linkage road</td>
<td></td>
</tr>
<tr>
<td>f</td>
<td>west performance center lots</td>
<td></td>
</tr>
<tr>
<td>g</td>
<td>bike/pedestrian trail</td>
<td></td>
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</tbody>
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Total New Visitor Parking: 550 spaces
Total Existing Parking: 625 spaces
Potential overflow Parking: 460 spaces

East Gateway | East Entry Gatehouse
Section see page 13

East-West Linkage Roadway | Typical Trail Section see page 15
The current east entry will be upgraded from Hwy 5 to the East Gate house. This will facilitate a safer vehicular access to the Arboretum with two entry lanes and one exit lane. There will be a designated members only lane with card reader and a new gate house located in the center landscaped island.

There will be a new access road to the parking lots located north of the existing Lilac collection which will remain as a point of focus for visitors. This new road will alleviate traffic congestion, connect visitors to the north side of the parking area and connect the east entry road to the Learning Center and new western entry. It will also allow direct access to the visitor parking lots while still maintaining the current entry drive to accommodate existing drop off at the Visitor Center and Snyder Building as it currently exists.

A new seasonal entry sign and display will be located just to the west of the new eastern entry gate at the intersection created by the new north parking access road and the existing entry drive.

The main parking lot will be expanded to reflect the character of the existing lot. It will be reconfigured to allow guests to walk through the middle of it for easier pedestrian access to the Visitor Center and the exhibits.

Expansion of the rain garden parking will remove the knoll and provide additional parking that is environmentally sensitive. The parking will connect directly with the north parking entry road and the main entry circulation drive.
East Gateway
University of Minnesota Landscape Arboretum

East entry gatehouse section

- New bypass road to parking
- Signage and display
- Member card lane
- New gatehouse
- To visitor center

East entry gatehouse plan
The new regional bike trail which enters the Arboretum at the corner of Hwy 5 and Hwy 41 will meander through the property to the east entry gate. From there, the trail will continue west along the new access road and rain garden parking area following the east-west connector road to the west entry, Hwy 5 and the proposed MnDOT bike trail underpass.

Entry will be controlled for events with a gate house and gate structure. The West gate is intended primarily as an exit unless there are major events such as an outdoor performance or wedding or fair at the proposed Woodlands Performance Center.

Resurfacing of the currently deteriorating west connector road to a new west entry gate will provide a means of access/egress from either the east or west, depending upon what activities are programmed by the Arboretum. A raised curb will separate vehicular traffic on the roadway from bike/pedestrian traffic on the bike path.

Overflow parking can be provided in the new west parking areas as well as in unpaved overflow lots when the primary lots are filled and for special program events.
East-West Linkage Roadway
University of Minnesota Landscape Arboretum

Typical drive/bike/pedestrian trail section

East-west linkage road plan
Most of the Arboretum’s facilities, exhibits and activities are concentrated around the visitor center and along the three mile drive. The objective of this vision is to suggest opportunities for reducing pedestrian / automobile conflict and to promote a decentralization of visitor activities.

Recommended improvements are organized into site specific projects for the purposes of identifying design and construction opportunities. The expansion of accessibility by auto, bicycle and pedestrians, in conjunction with the decentralization of venues, allows for flexibility of implementation as funds become available.

A new entrance drive with two points of entry / egress will move more people through the Arboretum in a safer and less confusing manner.

A new 1.9 mile Eastern drive will be added with an adjacent combined walk and bike path will provide access to the Arboretum’s Eastern property, the Red Barn and Spring Peeper Meadow.
A new Eastern Drive will connect existing crab apple and shade tree plots, the red barn and spring peeper uplands to the main entry drive. Each of these areas could serve as locations for expanding collections and amenities.

This new Eastern Drive will connect existing exhibits from the current core of the Arboretum’s collections with research areas, model landscapes, new gardens and a number of possible development opportunities.

By placing functions away from the current organization of gardens, displays and exhibits, visitors will be able to enjoy a greater variety of experiences, views and activities. The Red Barn, with its separate entrance, may take on a significantly greater function including concessions, rest rooms and programmed activities. There will be additional parking at the Red Barn.

There is a Carver County proposal to upgrade 82nd Street to a Parkway character along the southern periphery of the Arboretum. This may reduce congestion on Hwy 5 and allow for greater access from Hwy 41 to the west.

Construction Cost $850,000
Existing Facilities, Exhibits, Displays & Collections
University of Minnesota Landscape Arboretum

Facilities
Oswald Visitor Center
Dahlberg Welcoming Terrace
Keating Terrace
Newton Dining Terrace
Sweatt Entry Terrace
Wall Teaching Garden and Classrooms
Wright Terrace Gardens
Garden for Wildlife
Restaurant
Gift Shop
Restrooms
Reception Desk and Information Center
Special Exhibits
375 Seat MacMillan Auditorium
Wall Education Wing
Reedy Gallery Art Exhibit
Snyder Building
Meeting, Reception & Conference
Anderson Horticultural Library
Meyers – Deats Conservatory
Office and Administration Building
Marion Andrus Learning Center
Sally Pegues Oswald - A Growing Place For Kids
Berens Cabin
Red Barn
Frog Hollow
Syrup Evaporator House
Margot Picnic Shelters and Ordway Picnic Shelter
Horticultural Research Center
Apple House / Summer House
Greenhouse
Lath Structure

Display & Specialty Gardens
Annual Garden
Dahlia Trial Garden
Daylily and Chrysanthemum Walk
Dwarf Conifer Collection and Waterfall Garden
Entrance Garden
Fern Walk
Green Roof
Hedge Collection
Home Demonstration Gardens
Hosta Glade
Iris Garden
Japanese Garden
Lilac Collection and Garden
Lily and Dahlia Collection
Maze Garden
Ornamental Grass Collection
Peony Walk
Perennial Garden
Rain Gardens
Rose Gardens
Sensory Garden
Shade Tree Exhibit
Terrace Garden
Woodland Azalea Garden
Bruinink Viewing Area
Edible Pathway (Jaffray)
Pine Walk
Brockson Walk

Native Areas
The Prairie
Spring Peeper Meadow
The Bog Area
Wildflower Garden

Shrubs
Azalea Collection
Shrub Walk
Hydrangea Collection
Lilac Collection
Miscellaneous Shrub Collection
Pea Shrub Collection
Potentilla Collection
Rhododendron Garden
Spirea Collection
Viburnum Collection
Weigela Collection

Trees
Arborvitae Collection
Ash Collection
Birch Collection
Buckeye Collection
Corktree Collection
Crabapple Collection
Elm Collection
Hawthorn Collection
Larch Collection
Linden Collection
Locust Collection
Maackia
Magnolia Collection
Maple Collection
Nut Collection
Oak Collection
Pine Collection
Poplar Collection
Spruce Collection
Weeping Tree Collection
Willow Collection

Programs & Activities
Bog Walk at Green Heron Trail
Guided Walks and Tours
Sculptural Exhibits
Yoga in the Garden
Bud Break 5K
Gala Dinner
Toast and Taste
Orienteering
School Programs

Education Programs
Reading
Photography
Weddings and Receptions
Group Gatherings
Education for Adults
Arts and Crafts
Cooking
Gardening
Photography
Public Policy Conferences
Walks and Fitness
Horticultural Therapy
Children’s Programs
Summer Children’s Garden
Day Camp
School Field Trips
Plantmobile
Urban Children's Garden

Research and Development
Fruit Breeding
Woody Landscape Plant Breeding and Genetics
Wetland Restoration
Prairie Restoration
Bee and Native Pollinator Research
Native Plant Conservation
Cold Storage Seed Bank
This beautiful public garden and research facility is a statewide resource and national attraction designed to inspire ideas for visitors. With 32 display and specialty gardens, 48 plant collections and more than 5,000 plant species and varieties, the Arboretum has become one of the premier horticultural field laboratories and public display areas in the country. From its interactive displays of Minnesota’s natural environment to the scores of plant labels designed to allow visitors to replicate favorite gardens at home, the Arboretum is a kinetic wellspring of education, research, and inspiration.

This study identifies a number of new experiential development opportunities within the Arboretum that have the potential to increase visitation and generate new revenue. They are intended to create new and exciting outdoor spaces that build upon the Arboretum’s vision to decentralize its venues and to be a world class destination.

There are nine primary development opportunities identified as priorities for implementation and expansion which have the potential to be constructed within the relatively near future. These are illustrated through conceptual diagrams, precedent imagery and preliminary programmatic lists. A number of additional exhibits and displays are identified for future consideration.

The primary development opportunities include Circulation and Parking Expansion, Woodland Performance Center and Gardens, Tree Top Canopy Walk, Chinese Garden, Red Barn Farm and Gardens, Bee Outreach and Pollinator Center, Sculpture Garden, Meyers – Deats Conservatory Expansion and Maintenance Facility.

Additional development opportunities include the Snyder Building update, Garden Structures Rebuild, Learning Center Landscape, Sorbus Trail Steps and Landscaping, Circulation Rest Stops along Three Mile Drive, Safety and Security Fencing and Technology Improvements.

The Arboretum features 1,137 acres of magnificent gardens, model landscapes and natural areas from woodlands and wetlands to prairie with extensive collections of northern-hardy plants.
This plan illustrates possible locations within the Arboretum for the development opportunities that are listed above. A number of these opportunities have multiple locations identified. Since a master plan, by definition, is a flexible and evolving document, the final locations will be decided as part of on-going discussions with staff, sponsors and volunteers.
The Woodland Performance Center and Gardens is a flexible outdoor venue within the Arboretum on the edge of Wood Duck Pond. It is designed to host events such as music, theater, education, and ceremonies. The facility would also contain gardens and planted terraces. The Center is slated to accommodate seating for 500 people with approximately 270 parking spaces. Future improvements may include a band shell, additional seating, parking, concessions and rest rooms. The performance center will be ADA accessible.

The intent is that the gardens and seating bowl will be nestled into the landscape such that significant, existing trees are saved and storm water management techniques are employed to incorporate sustainable design tenets.

Primary access to the performance center will be from the proposed West Entry. The term entry is used in conjunction with the venue, but access at this controlled intersection is intended to occur only when performance events are planned. Otherwise, it acts primarily as an exit from the east district parking. This new exit for the Arboretum will reduce congestion at the core of the campus.

Site lines, noise reduction, acoustical priorities and sun orientation have been considered in the siting of both public and internal aspects the facility. Pedestrian connections and service to existing roads, walkways and support buildings have been identified that will link the stage area with facilities to the east.