

Minnesota Landscape Arboretum Master Plan

Executive Summary



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MINNESOTA LANDSCAPE ARBORETUM
UNIVERSITY OF MINNESOTA

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Executive Summary

A. Introduction

In June of 1995 the Minnesota Landscape Arboretum Foundation Board of Trustees issued its five year strategic plan, *Arboretum 2000*. This plan reiterated the Minnesota Landscape Arboretum's (MLA) mission and put forth a vision and a strategy for its future. Part of this long term strategy was an action item directing the development of a new conceptual physical master plan which would incorporate all existing and proposed land acquisitions, allocate space to meet all programmatic needs, circulation and parking, preserve natural areas and reflect the vision and spirit of the Arboretum while giving visitors the best possible experience.

The recommendations included in this document are a result of the planning process for this physical Master Plan.



B. Master Plan Vision and Mission, Goals and Objectives

Vision and Mission

The Vision of the MLA, and this Master Plan, is to strengthen the MLA as a world-class facility that is truly visitor oriented and provides a broad range of educational and research initiatives.

The Mission of the Minnesota Landscape Arboretum, as part of the University of Minnesota, is to provide a community and a national resource for horticultural and environmental information, research and public education; to develop and evaluate plants and horticultural practices for cold climates; and to delight its visitors with quality plants in well designed and maintained displays, collections, model landscapes and conservation areas.

Master Plan Mission

The Mission of the Master Plan is to develop a conceptual master plan which includes existing and proposed land acquisitions, allocates space to meet current and future programmatic needs within the next 5-10 years, preserves natural areas, reflects the vision and spirit of the MLA and provides the visitor the best possible experience.

Goals and Objectives

The MLA Task Force defined the following goals and objectives for this master plan

- **Visitor Services**

Determine the best possible experience for visitors and develop programs and facilities to carry it out. Improve existing or develop new space for enhancement of all aspects of the visitor experience.

- **Land Acquisition**

Identify land needed for short term and long term growth and for the preservation of land and water quality through management of the MLA perimeter, buffer zones and watersheds and the preservation of remnant natural areas.

- **Circulation**

Create an improved visitor access and orientation to the MLA and a workable traffic flow that serves all staff and visitors.

- **Research**

Enhance the visitor's awareness of MLA/HRC research accomplishments and ensure availability of land committed for research.

- **Gardens and Collections**

Provide the necessary space and organization to allow future growth and development of quality gardens and collections, enhancing both the visitor experience and the reputation of the MLA as a leading arboretum.

C. Arboretum Development Program

Research

Identify land that can be dedicated to research with long term availability, good soils, air and water drainage, and even topography. Identify land/sub watershed dedication opportunities for water resources related research.

Collections and Display Gardens

Identify land for expansion of viable existing collections and gardens and for new garden programs such as science based recreation for children, MLA/HRC introductions garden, maze, bird food garden etc..

Land Use and Amenities

Develop a land use plan to provide the best use for existing and proposed land acquisitions. Key land uses include research, entry and display gardens, model landscapes, conservation areas, collections, facilities and maintenance, and a science based school.

Provide visitor services and orientation areas throughout the MLA including parking, rest rooms, water, seating, information kiosks, and picnic areas .

Circulation and Infrastructure

Develop a plan with improved circulation systems that addresses the image/identity of MLA, an improved main entrance, improved vehicular and pedestrian circulation throughout the grounds of the MLA, and continuous pedestrian and vehicular connections between facilities and collections.



D. Recommendations

Land Acquisition

Acquisition of all land bounded by Highways 5, 41, West 82nd Street and Bavaria Road is critical. This land roughly corresponds to the major watersheds which comprise the majority of MLA collections, display gardens and research areas. This acquisition will help assure continuity of a high quality environment for the MLA as well as provide the necessary land for expansion of key programs and operations of the MLA to meet its vision and mission, and its goals and objectives.

Land Use

The proposed land use plan for the MLA is defined by the following categories: Research, Entry Gardens, Model Landscapes/Maintained, Conservation Areas/Unmaintained, Display Gardens and Collections.

Additional land use opportunities for the MLA include a Science Based School and a Sustainable Development/Demonstration program.

Capitalizing on the value of existing facilities and land use, refinement and expansion of these patterns is recommended.

- **Research**

HRC facilities, maintenance and apple sales should remain at its current location on Farm 1. As additional land, including Tschimperle, Hartman, and Russell properties is acquired along the east side of Bavaria Road between Highway 5 and W. 82nd Street, research should expand

based on the quality of the land for such use. Central maintenance for the MLA should move to this western location as well. Research should continue to exist on Farm 2 and the southwest corner of Highways 5 and 41, with refinements in land use based on long term dedication of research lands and the inclusion of model landscape research and the entry gardens.

- **Entry Gardens**

Development of entry gardens is recommended to support the concept of gateways to the MLA and to reinforce the sense of place and identity for the MLA. The entry gardens should be imagable, simple and easily maintained, scaled for highway visibility and work in concert with the orchards and research plantings which have become icons for the MLA.

- **Model Landscapes**

Establishment of dedicated model landscapes representing research, restoration or re-establishment of natural ecosystems as part of the arboretum's research and education programs is recommended. These areas should include the upland forest in the area of the Spring Peeper Meadow, an oak savannah in the plateau near the prairie and the sub-watersheds or kettles near the Wood Duck Pond. Property acquisition west of the MLA including portions of the Tschimperle and Russell properties is necessary to this development.

- **Conservation Areas**

The core wetlands of the MLA should be preserved as natural areas. These areas should become accessible via walking trails or viewed from a distance via the Collections Drive. The areas should be essentially unmaintained as a demonstration of natural evolution of ecosystems. The Big Woods' or Maple Basswood forest that includes the primary ridge of the MLA and extends onto the Tschimperle property should be preserved. Acquisition of the Tschimperle property will help conserve this rapidly diminishing ecosystem.

Conservation of existing MLA ecosystems is highly dependent upon acquisition of land within the MLA watershed. This includes much of the land between the MLA property and the roads surrounding the MLA.

- **Display Gardens**

The display gardens should remain at the core of the MLA and expand contiguously as fingers outward into the collections based on the specific characteristics of the new gardens.

- **Collections**

The primary collections should also expand outwardly from their existing locations. The removal or relocation of diminishing collections to new locations should provide the additional space for such growth. The eastern area of the MLA will provide adequate space for long term growth of the collections.

- **Science Based Resource Center**

The western portion of the MLA, pending acquisition of additional Tschimperle land at the northeast corner of Bavaria Road and 82nd Street., provides the recommended location for a science based Resource Center. This location provides good community access and ties into the long term plans of both the local community education program for a new elementary school and the Catholic Archdiocese, which has purchased land for a high school west of Bavaria Road.



- **Sustainable Development/Demonstration** - As an extension of its mission, the MLA could consider a sustainable demonstration development on land south of W. 82nd Street. This model site could demonstrate how to build and maintain development respectful of its ecosystem.

See Land Use Zones Plan

Circulation

The MLA should develop and reinforce a circulation system that provides for the best possible experience for the MLA visitor and staff.

- **Gateways**

Strengthen the image and identity of the MLA for visitors by improving the gateways to the MLA. Add entry gardens, identification signage and expand the display of orchards and other planting at Highways 5 and 41, at Highway 5 and Bavaria Road and at Highway 41 and W. 82nd Street. Extend this identifiable MLA image from the gateways to the main entrances of the MLA.

- **Entry Drive**

Upgrade access to Arboretum Drive from Highway 5 in concert with MNDOT as improvements to Highway 5 come on line. Create a new secondary entrance at the intersection of Highway 5 and Minnewashta Parkway. Urge MNDOT to signalize the entrances to improve accessibility and public safety. Remove the existing Gate House and rebuild a new gateway at the relocated entrance to the display gardens and Collections Drive (Three Mile Drive). Provide visitor information and orientation and collect gate fees in the new Visitor Center or Glass House.

- **Gardens and Collections Drive**

A new gateway and entry route for the Collections Drive (Three Mile Drive) should be constructed west of the new Visitor Center near the path to Wood Duck Pond. This will allow all public vehicular circulation to be removed from the core display gardens. The new route should connect with the existing drive west of the exotic bog .

As collections and model landscapes expand toward the east, the Collections Drive should also be extended. The drive could eventually be routed near the Red Barn, around the wetlands adjacent to Spring Peeper and returning to Arboretum Drive near the main entry. This would add approximately 2 miles of new roadway.

A new western education loop drive should also be added. Gated access points from peripheral roads would provide for external access, however once inside the MLA nearly all areas of the property would be accessible without crossing or returning to the public roads.

- **Pedestrian Circulation**

A significant portion of the visitor experience of the MLA should be as a pedestrian. Improving visitor choices should significantly increase the quality of their experience. It is recommended that pedestrian walkways be extended to each of the major collections, model areas, displays etc. These walkways should be interconnected to provide walking loops, with parking and visitors services, restrooms, and drinking water at key locations. Public vehicular traffic should be removed from the core display gardens to create an essentially pedestrian environment to experience the gardens. Accessibility for the disabled should be provided by easily accessible garden trams.

See Circulation Plan



Core Gardens and Collections

- **Display Gardens**

The display gardens should remain as the core of the MLA. They should expand contiguously as fingers extending outward into the collections based on the specifics of the garden and the compatibility of the adjacent land. The display gardens should become a pedestrian environment, with vehicular accessibility only for maintenance or for visitors in MLA vehicles.

- **Collections**

The primary established collections should expand outwardly from their existing locations. Relocation of diminishing collections to new locations or onto acquired lands will provide the additional space for such growth. For example, the Maple collection can expand into the bowl of land near the existing maintenance area. Additional space will become available when maintenance is relocated to the western part of the MLA. The Linden collection could expand eastward toward the wetland, and the elm collection could be relocated to the Red Barn area. The eastern area of the MLA could provide for long term growth of the MLA collections.

See Land Use Zones Plan

Facilities

- **Visitor Center**

A new Visitor Center should become the hub of visitor activities providing visitor information and orientation, gift shop, tea room/restaurant, auditorium, classrooms and outdoor terraces. The center should be located west of the Snyder Building between the McKnight Overlook and the main parking lot. The building would act as a gateway to the display gardens as visitors move from parking through the building. A sheltered or enclosed walkway would link it to the Snyder Building.

The Visitor Center should be open and spacious and respect the character of the Snyder Building and the Edwin Lundie style.

- **Snyder Building**

The Snyder Building should return to its originally designed and intended use as an administrative and educational resource center for the MLA. The Library should recapture space overtaken by other activities, the Tea Room should become more of a tea room or Fireplace Room, classrooms should revert to offices and the auditorium should remain as an adult education space. The building should be totally air conditioned.

- **Glass House / Conservatory**

The Glass House or Conservatory should be a temperate house, sheltering and tempering the microclimate within, bringing early spring to the cold climate of Minnesota. A variety of spaces should be provided: special plantings in naturalistic settings, an interactive garden room, house plant rooms for new directions in indoor gardening, a children's garden, etc.. This building should be located north of the new Visitor Center and west of the parking lot, where it will also become a gateway to the MLA. A covered/sheltered walkway should connect the Glass House to the Visitor Center.

- **Arboretum Auxiliary Building**

A new building to house the MLA Auxiliary should be located between the Glass House and the Learning Center. This building would continue to build the connection between the Snyder Building and the Learning Center and would house the scattered Auxiliary functions in one facility.

- **Learning Center**

An addition to the Learning Center would include laboratory rooms, offices, the plant mobile trading area and a central multipurpose hall, nearly doubling the size of the current facility.

- **Maintenance Facilities**

As new land is acquired on the west edge of the MLA, a new central Maintenance Center should be created. This would place maintenance in better proximity to the MLA as a whole and reduce continuous crossings of Highway 5. Some maintenance would remain at the HRC, serving the property north of Highway 5 and east and west of Rolling Acres Road. Additional smaller maintenance pockets should be located in the new Visitor Center, at the Red Barn and possibly near the field parking area north of Wood Duck Pond.

- **HRC**

The HRC should remain essentially as it exists, with improved and consolidated research offices and facilities in place. A significant investment has been made and is continuing to be made in these facilities that will logically keep it intact.

- **Red Barn**

The Red Barn has become an icon for the MLA much like the Snyder Building. This building should be maintained and refurbished to serve as a large picnic and activity center. Some maintenance and storage space and restrooms should be provided either in the barn or in the other small refurbished buildings. In the future access could be provided via W. 82nd Street for large group activities.

- **Science Based School**

The MLA has embraced the concept of a science based school that would be located on the western edge of the MLA as new land is acquired. The specific program for the school should be developed in concert with the local community schools and District 112.

Phasing

Consistent with the concept of framework planning, the implementation or phasing of the master plan recommendations will be dependent upon the priorities established by the MLA and the available funding for development. There should be a continual implementation of recommendations throughout the MLA with acquisition of land, updating of gardens and collections, establishment of entry gardens, etc..

For the core area facilities of the MLA, there are three broad phases of development recommended:

Phase One

Phase One is the largest phase and would have the most immediate and positive impact on the visitors experience of the MLA. It would also provide significant improvements for the MLA staff and operations. This phase includes property acquisition, planning, design and construction of the Visitor Center, remodeling of the Snyder Building and construction of the walkway between the two. It would also include revisions to the entry drive, removal of the Gate House, new drop off areas and revisions to the parking lots. Serious early consideration should be given to the planning and logistics for implementation for this facility due to its overall impact on the MLA.

Acquisition of land between the MLA and Bavaria Road is a critical first step in the short and long term success of the MLA Master Plan. The MLA should make this a top priority.

Dependent on MLA priorities and funding, the expansion of the Learning Center could be independently phased.

Phase Two

Phase Two includes the planning design and construction of the Glass House or Conservatory. Also included would be further refinements of the entry drive, drop off and parking associated with the Glass House.

Phase Three

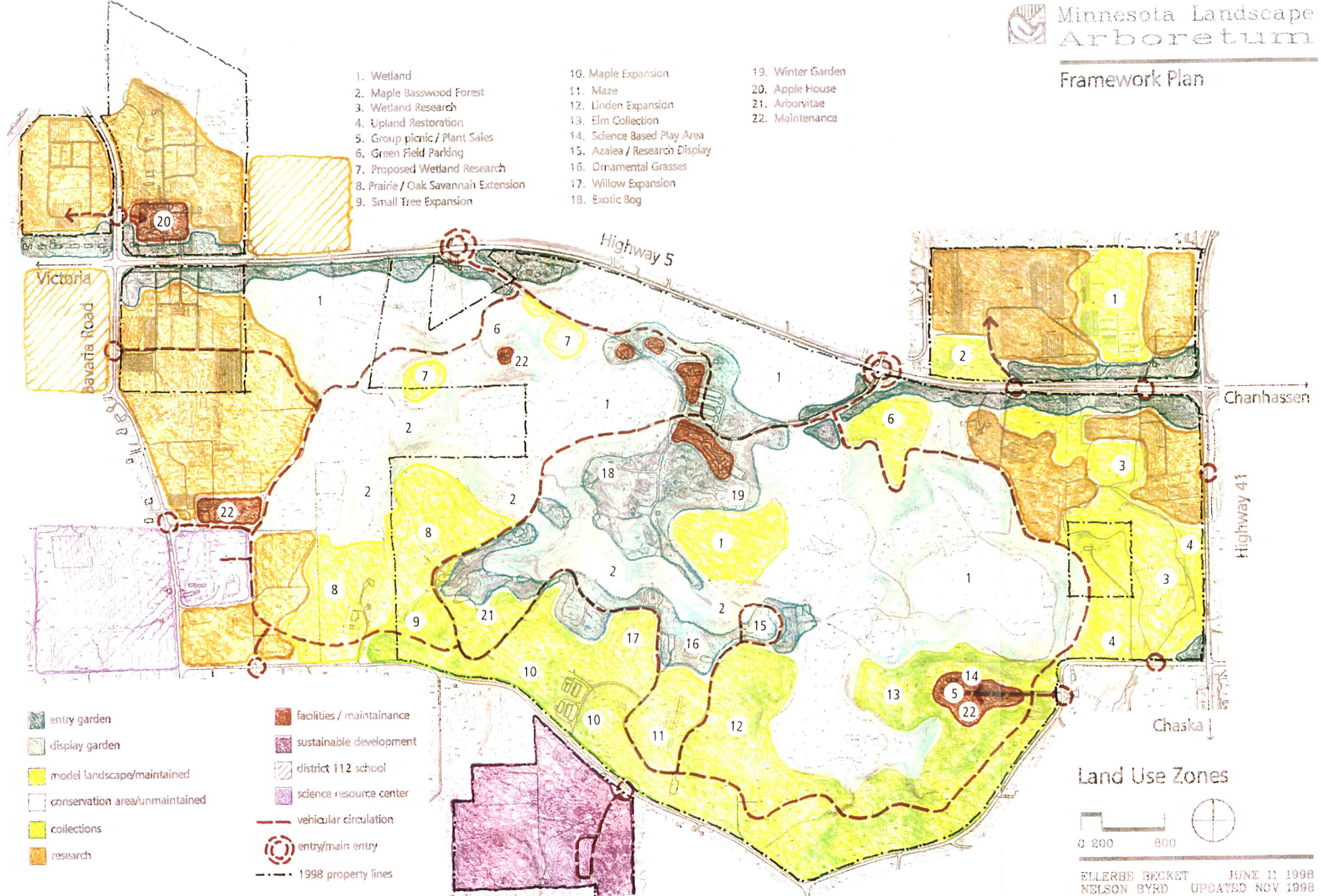
Phase three includes the Wetland Garden and covered walkway between the Visitor Center and the Glass House, the Auxiliary Building and the new Collections Drive.

Dependent on the acquisition of new land, the development of the second entrance west of the Learning Center could take place during any phase of the core development. It would be ideal to stage this with any improvements on Minnewashta Parkway and Highway 5.



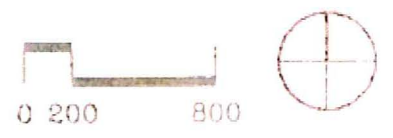
Framework Plan

- 1. Wetland
- 2. Maple Basswood Forest
- 3. Wetland Research
- 4. Upland Restoration
- 5. Group picnic / Plant Sales
- 6. Green Field Parking
- 7. Proposed Wetland Research
- 8. Prairie / Oak Savannah Extension
- 9. Small Tree Expansion
- 10. Maple Expansion
- 11. Maze
- 12. Linden Expansion
- 13. Elm Collection
- 14. Science Based Play Area
- 15. Azalea / Research Display
- 16. Ornamental Grasses
- 17. Willow Expansion
- 18. Exotic Bog
- 19. Winter Garden
- 20. Apple House
- 21. Arborvitae
- 22. Maintenance



- entry garden
- display garden
- model landscape/maintained
- conservation area/unmaintained
- collections
- research
- facilities / maintenance
- sustainable development
- district 112 school
- science resource center
- vehicular circulation
- entry/main entry
- 1998 property lines

Land Use Zones



NEW GATEHOUSE/
3 MILE DRIVE
ENTRANCE

TERRACE

RAMP

REALIGNED EXISTING PARKING

TURNAROUND GARDEN

LILAC GARDEN

DROP-OFF

ROOF GARDEN

PRAIRIE GARDEN

VISITOR CENTER

SNYDER BUILDING

MCKNIGHT OVERLOOK







