

When providing feed, there are several important rules to follow. Make sure feeders have proper drainage holes and are covered to keep seed dry, so mildew won't develop. Do not place feed directly on the ground, for mold, mildew, animal droppings, lawn fertilizers, pesticides, and bacteria can contaminate the seed and harm birds. Also, keep in mind that bird droppings may accumulate under the feeder, so avoid areas where the mess will cause problems. Follow these steps, and children will enjoy hours of watching and listening to birds of all kinds.

Water: All animals need water throughout the year for drinking and bathing. Adding a water feature to the garden is the best way to ensure that birds will be attracted to the site. Water is helpful to the health and happiness of birds because clean feathers insulate the bird, and bathing helps prevent parasites. Bird-baths provide for this necessity, but a few basic rules apply to ensure that they are safe and beneficial to birds. Basins should be no more than 1.5 to 3 inches (38 mm to 76 mm) deep, with small pebbles in the basin to provide areas for perching and preening. They must be placed in an open area safe from predators, but with cover available nearby, and should be 15 feet (4.6 meters) from feeding areas. Fresh water should be added every 2–3 days.

Shelter: To provide shelter for wildlife, it is again advisable to look to the natural state of the area. The same plants that feed wildlife often provide natural sanctuary. Brush piles, fallen logs, rock piles, and other natural elements can give animals safety and shelter. A variety of sizes, heights, and densities of material is preferable. Evergreen and deciduous plant material should be combined to provide for animals' needs throughout the year. Often, the same spaces can also be used for courting, nesting, and raising young.

Man-made cover is also helpful in many cases, such as birdhouses, bat boxes, and other protected homes. Be sure that the construction of these houses suits the needs of the animal. For example, different types of birds require different locations for their homes, as well as different shapes and sizes of boxes and their entrances. Even the color of the box can be a factor in its safe use by wildlife. The box should not be attractive or accessible to predators. Height, hole size, and location are key factors in birdhouse safety.

Place to raise the young: Spaces to raise young are often identical to those of cover, but certain additions can ensure a variety of wildlife in the garden. Again, native plants play a key role in provision of these spaces, for many types of native wildlife, such as butterflies, require these plants for laying of eggs.

The key factors in spaces to raise young are safety and proximity to reliable sources of food and water. It is easy and educational to provide such spaces for

animals. Wildlife habitats have many benefits, not just for animals, but for children and adults as well. Children can learn about their native environments through observation of wildlife, and feel gratified when their work in the garden calls to animal visitors and inhabitants. There are many solutions to the four requirements for a wildlife habitat, and no matter what the size of a school or home garden may be, it is possible to provide habitat.

All these elements are basic tools from which to construct a landscape. When combining and applying them, it is important to use creativity, and to give the child or children for whom the space is provided a strong voice in its construction. Often, as adults, it is hard to not straighten and enhance the creations of children, but it is important that children feel a sense of ownership for their landscapes. It is also important to be sure that while learning and growing, children develop a lasting love for the act of nurturing life and watching nature give birth to the landscape.

BASE MAP AND SITE INVENTORY

Where Are the Property Lines and What Already Exists on the Site?

Base Map. The next step is obtaining a base map. A base map or property boundary survey map usually comes with the purchase of a land parcel. Typically prepared by a licensed land surveyor, a survey map is drawn to scale, and often shows the relationship between the property boundary lines, topographic contour lines, the location of structures, large trees, easements, and other substantial features (Figure 2-17). A topographic survey locates the

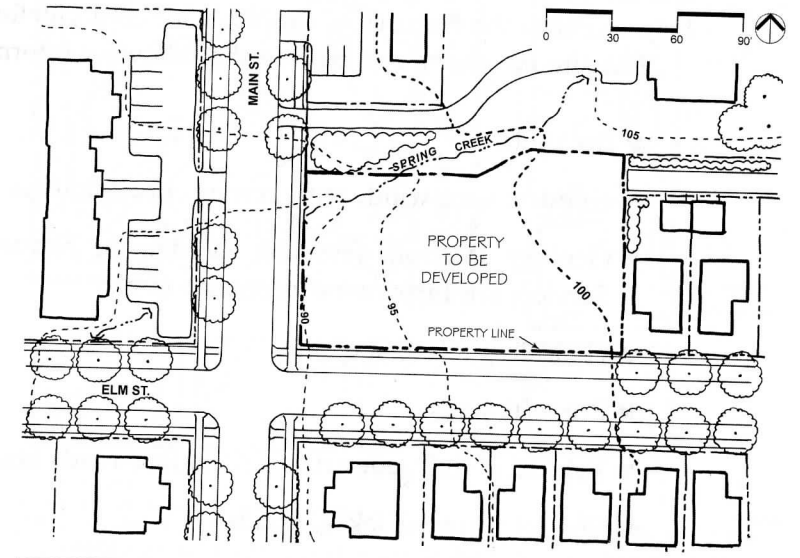


FIG 2-17. Base map. (COURTESY OF BARBARA SIEGEL RYAN.)

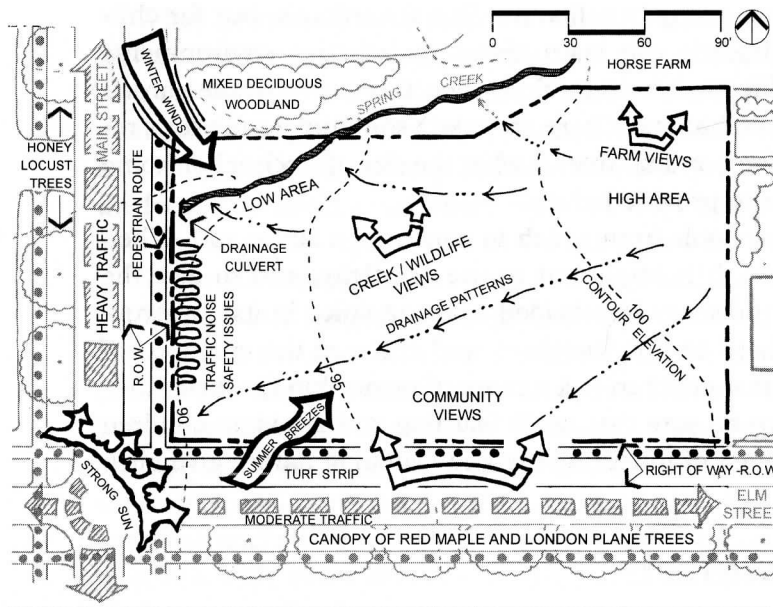


FIG 2-18. Site inventory. (COURTESY OF BARBARA SIEGEL RYAN.)

site's elevations. A tree survey inventories the existing trees including type, size, and location. Both can be commissioned through a land surveyor.

Site Inventory. Once a base map has been completed, the existing conditions of the site, referred to as the site inventory, can be documented on the map using text as well as graphics (Figure 2-18). For example, arrows can indicate direction of noise, views, sun orientation, and prevailing winds; large circles or outlines can show the location of a single mature tree or a woodland edge; and outlined areas can delineate flat, low, and high points. The site inventory should note all of the existing conditions of the site. The final graphic plan will help visualize the features of the site with clarity before any work has begun.

The site inventory can include the following information:

- ♥ Buildings
- ♥ Climate: sun, wind, temperature, precipitation
- ♥ Geology and soils (available through the Natural Resources Conservation Service; see <http://www.nrcs.usda.gov>)
- ♥ Hydrology: drainage
- ♥ Property lines
- ♥ Vehicular and pedestrian circulation: roads and sidewalks
- ♥ Special features: lakes, ponds
- ♥ Topography (see www.usgs.gov/research/gis/title.html)

- ♥ Utilities
- ♥ Vegetation: trees, shrubs
- ♥ Views
- ♥ Off-site or adjacent land-use and conditions: noise, views

It is also important to be aware of the laws and regulations affecting the project, such as local zoning regulations and Americans with Disabilities Act (ADA) Design Standards for accessible design (Figure 2-19) (<http://www.ada.gov>, accessed 2005). Additionally, safety considerations should be addressed.



FIG 2-19. Accessible design should be considered by following American with Disabilities Act (ADA) Design Standards for accessible design (Figure 2-19) (<http://www.ada.gov>, accessed 2005). Additionally, safety considerations should be addressed.

SITE ANALYSIS

How Do Existing Features of the Site Affect the Design?

Different from the site inventory, the site analysis evaluates and assesses the site conditions for potentials and constraints that may affect the design (Figures 2-20 and 2-21). Ideally, the site analysis can be thought of as a series of keyed map layers. Each layer can be studied individually or layers can be superimposed on one another to show the overall picture. For example, a vegetation analysis map will show the location, type, size, quality, and condition of the trees as

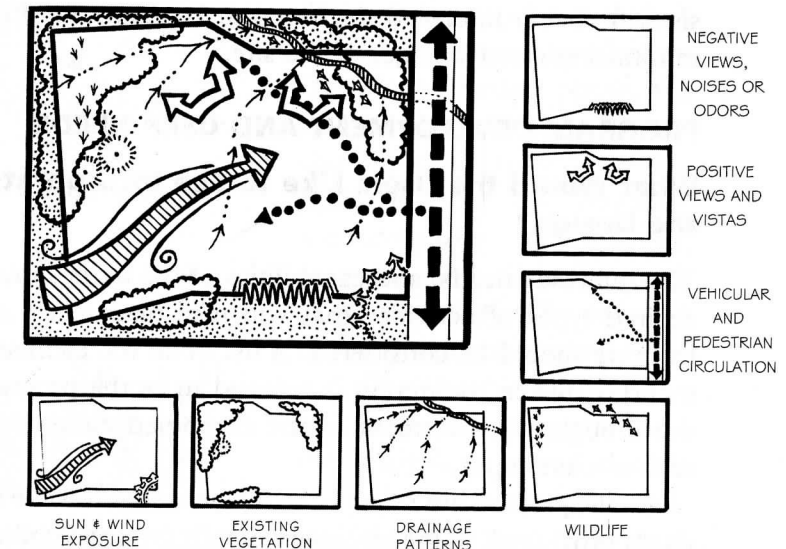


FIG 2-20. The site analysis process is enhanced by making notes about the site conditions using text and graphics. Major trees, elevation changes, drainage patterns, sun and wind orientations are delineated by arrows and outlines. (COURTESY OF BARBARA SIEGEL RYAN.)

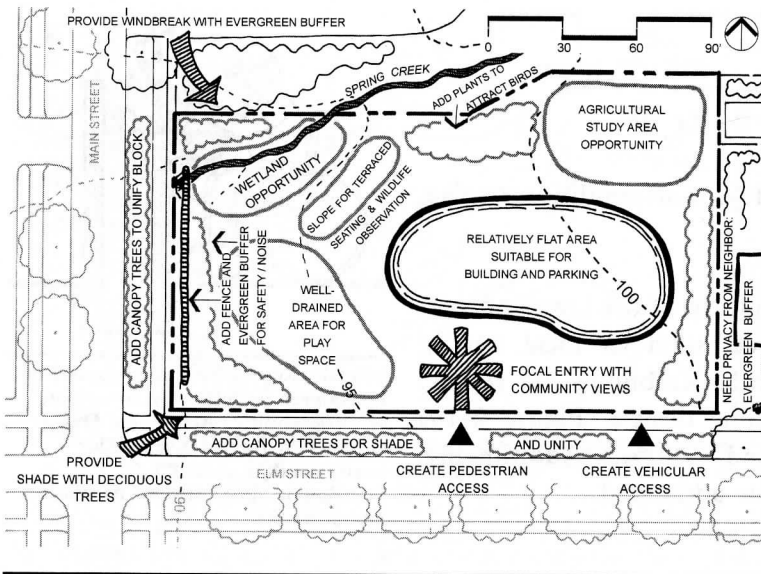


FIG 2-21. Site analysis. (COURTESY OF BARBARA SIEGEL RYAN.)

well as highlight those that need to be protected, saved, or removed. A slope analysis map will show flat, rolling, and steep areas of the site as well as indicate areas that are too low or steep to build without considerable grading either in cut and/or fill (Figure 2-22). The composite layers will clearly show the potential of the site. The analysis may be simple or complex, but it is still helpful to think about the way different kinds of features

combine to shape the site design (Haque et al., 2001). Ultimately, the site analysis will enable informed decisions to be made for maximizing advantages and minimizing disadvantages of the site.

PROGRAM DEVELOPMENT AND USER NEEDS

What Would the Users Like to See Incorporated in the Design?

The interests, needs, and capabilities of the users should be determined, and the desired types of activities that will take place such as gardening, playing, and learning should be considered. A list of all the elements and requirements to be incorporated in the design is referred to as the program. This is determined by the thoughtful assessment of the combined composite site analysis and clients and/or users input.

Public projects are required to include an accessible landscape. The ADA Standards provide all of the necessary details for accessibility (<http://www.ada.gov>, accessed 2005). For example, a walkway that is a minimum of 48 inches (1.2 meters) affords a person in a wheelchair ample space for gardening tools and easy maneuvering while allowing others to pass by. A 6-foot (1.8 meters) walkway

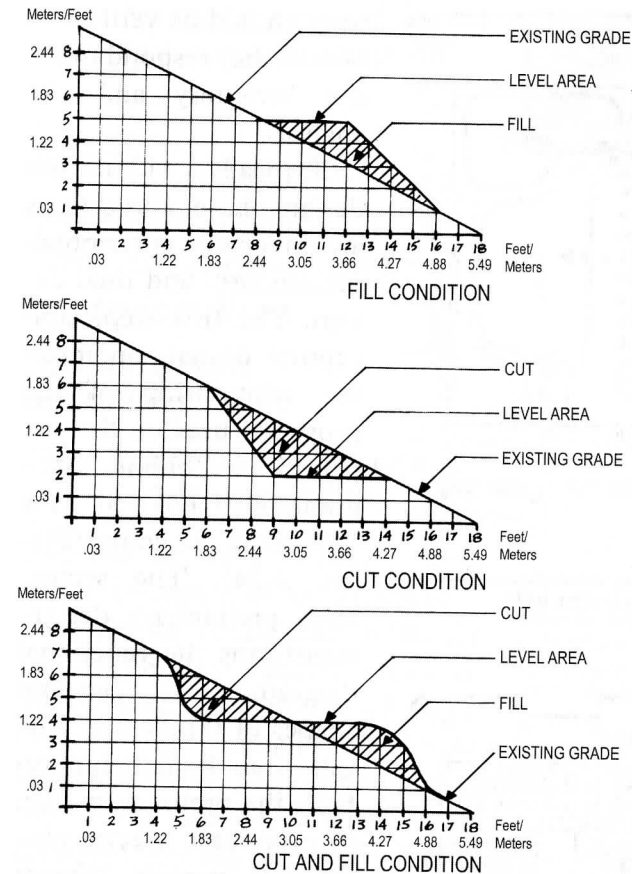


FIG 2-22. Various ways to grade a site. (COURTESY OF LOLLY TAI AND BARBARA SIEGEL RYAN.)

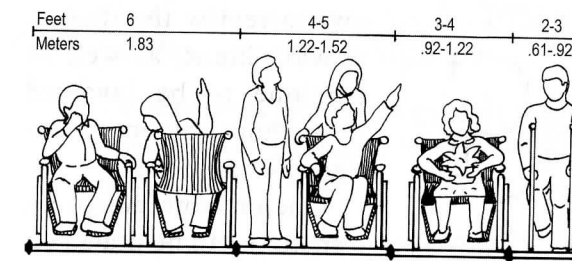


FIG 2-23. Dimensions for walkways according to ADA Design Standards. Left to right. (1) path for two wheelchairs, (2) path for a person next to wheelchair, (3) a wheelchair, and (4) a person with crutches. (COURTESY OF BARBARA SIEGEL RYAN.)

accommodates sufficient space for two wheelchairs to pass by each other. Accessible ramps are required to be 8% slope or 1 foot:12 feet (0.3 meter: 3.7 meters) or less (Figure 2-23).

Step 2: Design

How Is the Design Created?

When designing and building a new project, the optimum time to initiate the site design is at the very beginning before any site work has started. Changes can readily be made when the design is on paper rather than after construction has begun. During the design phase, the designer, often a landscape architect, will study the data gathered from the research, site inventory and analysis, program, and client input to shape the design. The design is typically created on trace paper over the “layers” of the base map, site inventory, and site analysis. Colored pencils or markers are applied for visual clarity. Proposed design areas such as buildings, plant beds, play areas, vegetable gardens, walkways, and water fea-

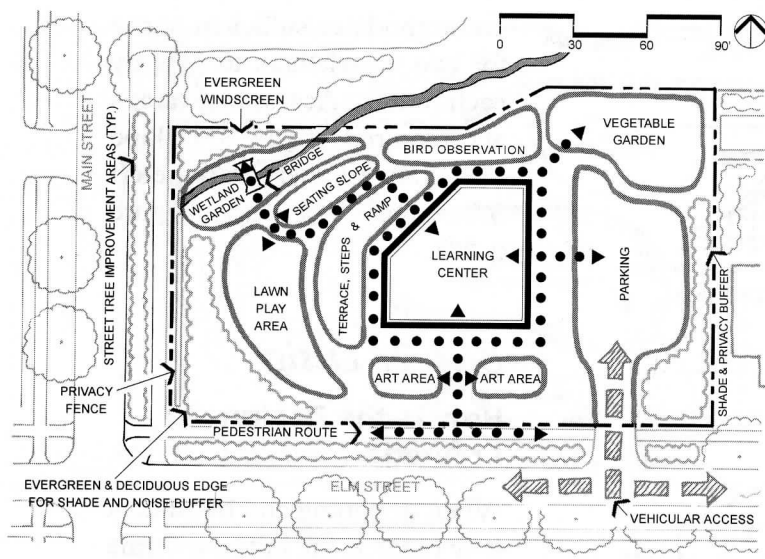


FIG 2-24. Functional diagram. (COURTESY OF BARBARA SIEGEL RYAN.)

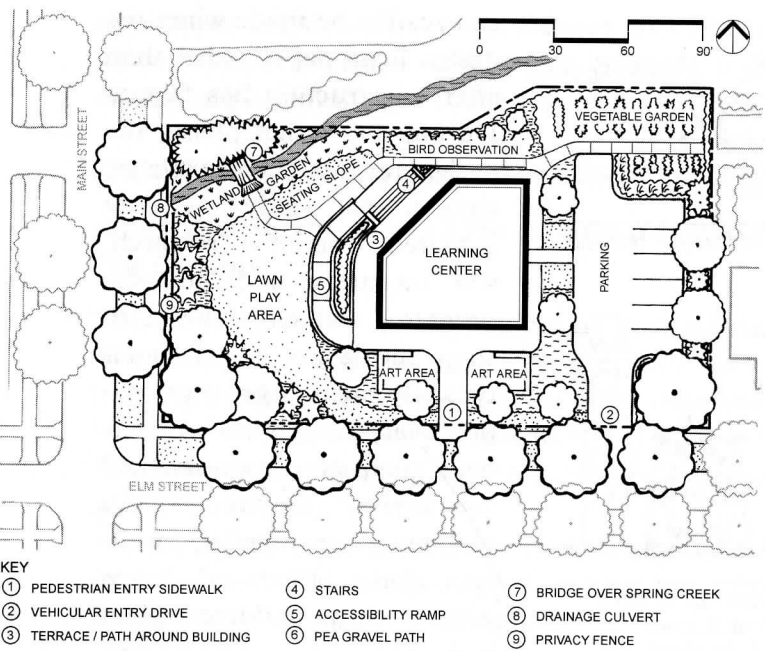


FIG 2-25. Final design. (COURTESY OF BARBARA SIEGEL RYAN.)

tures should be verified to be sure they respond to the site inventory and site analysis.

Typically within the design phase, three steps are involved: conceptual, preliminary, and final design. The first step, conceptual design, organizes the relationship of the proposed uses on the site plan in a “bubble” diagram, also referred as a functional diagram (Figure 2-24). The second step, preliminary design, transforms the functional diagram into general shapes of the design. The third step, final design, refines the preliminary plan to produce a precise plan for the project (Figure 2-25). During each stage, the client has the opportunity to review the design, provide input, as well as continue to be involved throughout the entire design process.

One or more design alternatives can be drawn on tracing paper and superimposed to evaluate each alternative. Frequently, the best ideas from each of the

alternatives can be combined to make up the final design (Figure 2-26).

Step 3: Construction Documentation, Cost Estimating, and Implementation

CONSTRUCTION DOCUMENTATION

What Construction Drawings Are Needed to Build the Job?

The final step of the design process is the construction documentation necessary for contractors to bid the project. The owner may select a contractor directly or through a bidding process. The bidding process involves invitation of selected firms to submit fees for constructing the project. Once the bids are received, the owner can select the contracting firm based on price quotation and interview. This technical set of drawings typically prepared by a landscape architect comprises the following set of coordinated plans and details:

- A. *Layout plan:* denotes the location and dimensions of all existing and proposed site improvements. It is tied to a fixed element on the site such as a building or property line.
- B. *Grading plan:* illustrates existing contours and proposed contours manipulated to accommodate appropriate drainage and contouring of the project site.
- C. *Planting plan:* shows the individual plant location, name (genus and species), size, height, quantity, spacing, and other notes (i.e., multi-stemmed, single straight trunk, container, balled and burlapped, etc.). In many instances, a project will also call for an irrigation and lighting plan which is typically coordinated with the planting plan (Figure 2-27).

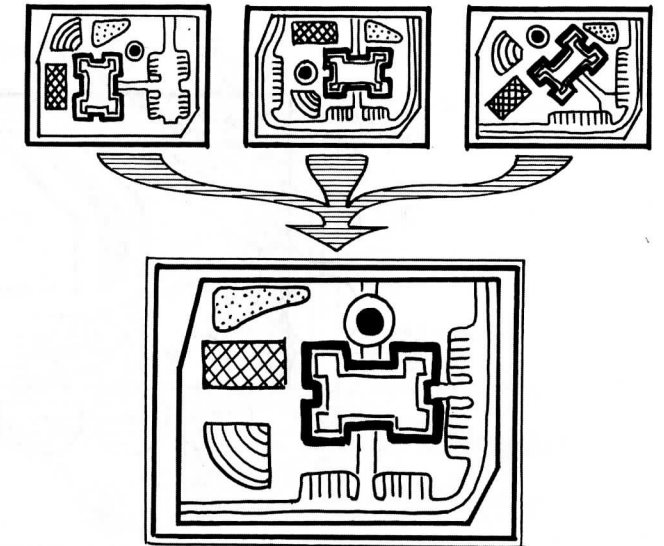


FIG 2-26. Maximum potentials of the site can be determined when multiple layers of the site have been carefully analyzed. Using the strengths of several design alternatives to create the final design solution is the most ideal. (COURTESY OF BARBARA SIEGEL RYAN.)

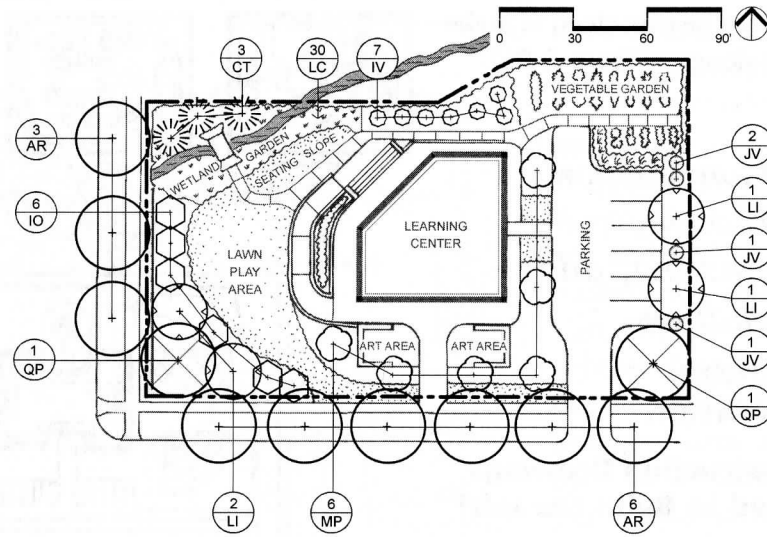


FIG 2-27. Planting plan. (COURTESY OF BARBARA SIEGEL RYAN.)

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
TREES					
AR	<i>Acer rubrum</i>	Red Maple	9	8-10' HT (2.4-3.0 m)	B&B
CT	<i>Chamaecyparis thyoides</i> 'Rubicon'	Rubicon Atlantic White Cedar	3	8' HT (2.4 m)	B&B
IO	<i>Ilex opaca</i> 'Nellie R. Stevens'	Nellie R. Stevens Holly	6	5-6' HT (1.5-1.8 m)	B&B 4 female/2 male
LI	<i>Lagerstroemia indica</i> 'Natchez'	Natchez Crapemyrtle	4	3" Caliper (76 mm)	B&B Tree Form
MP	<i>Malus</i> spp. 'Prairiefire'	Prairiefire Crabapple	6	2.5-3" (64-76 mm) Caliper	B&B
QP	<i>Quercus phellos</i>	Willow Oak	2	8-10' HT (2.4-3.0 m)	B&B
SHRUBS					
IV	<i>Ilex verticillata</i>	Winterberry Holly	7	5-6' HT (1.5 m)	B&B
JV	<i>Juniperus virginiana</i> 'Emerald Sentinel'	Emerald Sentinel Eastern Red Cedar	4	5-6' HT (1.5 m)	B&B
PERENNIALS					
LC	<i>Lobelia cardinalis</i>	Cardinal Flower	30	QT pot (.95 L)	15" O.C. (38 cm)

D. *Planting details*: delineates proper planting methods for trees, shrubs, ground-covers, etc. (Figure 2-28). Plant materials come in different types and sizes, and proper planting details should be followed to ensure successful growth. Instructions regarding soil mixture, mulching, and pruning, should also be followed.

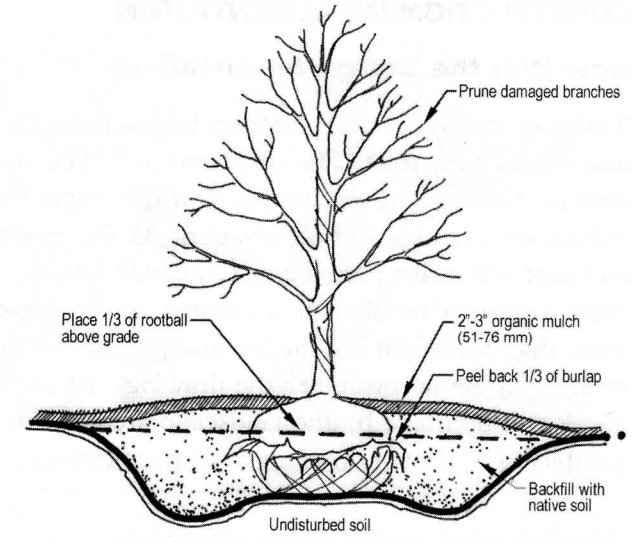


FIG 2-28. Tree planting detail. (COURTESY OF ELLIOT BUFF AND ALBERT LYNN.)

E. *Site details*: delineates proper construction and installation of landscape details such as decks, fences, fountains, paving, patios, rubber surfacing, railings, steps, trellises, walls, and site furnishings (i.e., benches, garden ornaments, planters, signs, etc.).

In addition to the construction plans and details, landscape architects also prepare a technical set of written construction specifications, a legal document specifying building or landscape standards and methods of construction. The construction specifications cover quality and testing of materials, installation methods, guarantees, and other factors.

COST ESTIMATE

How Much Will It Cost to Install the Design?

During the design phase, preliminary cost estimates should be generated. A cost estimating firm can be retained for this service. It is ideal to obtain an itemized cost estimate for the project as well as an estimate for each phase of the project if applicable. A cost estimate will not only determine whether the project is on the budget, but will also help identify areas where costs need to be cut or adjusted.

CONSTRUCTION IMPLEMENTATION

How Will the Design be Installed?

The construction implementation begins once the owner has selected a contractor and signed a contract. The contractor will then coordinate, schedule, and build the project. During construction, it is in the owner's interest to retain a landscape architect for construction observation. As the owner's representative, the landscape architect will make periodic or scheduled job site visits to answer questions and to make necessary revisions to accommodate unforeseen circumstances, write field reports that document the quality and progress of the project, and to ensure that the project is built according to the drawings. At the completion of the project, a final check will be made by the landscape architect to ensure that everything has been completed as shown on plans and specifications.

Maintenance and Evaluation

How can the project continue to look good and function efficiently? Once the design is completed, the landscape must be properly maintained for it to live, grow, mature, and acquire the desired appearance and function consistent with the design intent over time. This is sometimes the hardest task. A design may look and function wonderfully when complete, but will quickly deteriorate if not properly maintained. The owner or a landscape contractor should regularly maintain the landscape through mowing, watering/irrigating, fertilizing, weeding, pest and disease control, mulching, as well as plant replacement. The construction items in the design should also follow regularly scheduled maintenance inspections to sustain good condition (i.e., safety repair of loose bolts, etc.) and upkeep (i.e., painting, staining, pressure washing, etc.).

Ideally, the owner or the landscape architect should inspect the project periodically to ensure that it is being properly maintained, is in good working order, is sustaining its original design intent, and/or is in need of improvements. Observations and evaluations of the way children interact and use the space have a great impact on determining the short and long-term improvements needed to enhance and ensure the success of the project for years to come.

CONCLUSION

The key to developing a creative, healthy outdoor space for children is using all the resources available, understanding the needs of the child, and providing nat-

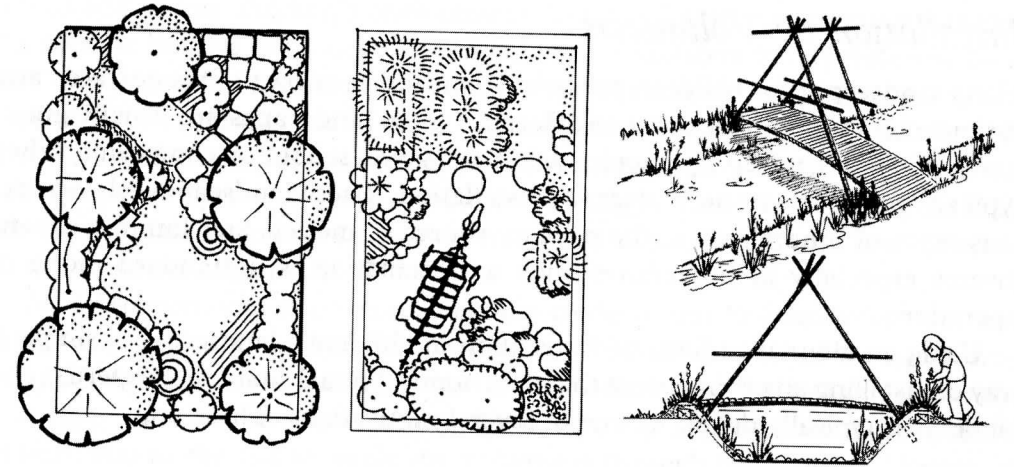


FIG 2-29 (left). A service provided by the American Horticulture Society is a series of 12 demonstration gardens designed for the George Washington River Farm Gardens in Virginia (AHS, 2001). A Grove Garden was designed and installed by DLM Design. Design team: Emily Davidson, Andrea Lybecker, and Emilie McBride. FIG 2-30 (middle). An Imagination Garden incorporates many elements children enjoy with varied plant materials. FIG 2-31 (right). A Ditch Garden is great for small lots and spaces. Designed and installed by Alastair Bolton of Lynn Edward Studio.

ural or naturalized spaces that allow children to engage in play that is not predetermined. It is through the design process that such goals are achieved. The design process is not a simple process. It is ideal to involve professionals throughout the various steps of the project. There are also various national resources such as the National Wildlife Federation (NWF) and the American Horticulture Society (AHS) to call upon for assistance (Figures 2-29 through 2-31). When the project is built, it is never quite finished because on-going evaluation and maintenance are important to sustaining its vibrant life.

The design process cannot be completed without consideration of child safety. In Chapter 4, safety issues are explored. Yet, it is important to consider design principles alongside safety precautions to create successful children's spaces. A design cannot be masterful without meeting the safety needs of children, yet issues of safety and liability cannot overshadow the various desires and needs of the child. The two are not exclusive, and when used successfully in cooperation with one another, provide the best spaces children can have to further their development, happiness, and health.

Installation by Volunteers

Many landscapes for children are being built today as part of schoolyards and various community environments. Because these landscapes are usually grassroots efforts organized by people within the given school or community, they typically have little or no budget for installation. These landscapes rely on various types of fundraising as the primary source of money, and limiting expenditures especially in procedures such as installation is a standard mode of operation.

Using an alternative form of installation in children's landscapes is simply a way of installing an environment that uses nontraditional sources of expertise and labor. It is typically driven by one of several motivations. These are:

1. A need to save money by not incurring conventional types of expenses.
2. The availability of "free" labor in the form of parents, service clubs, or others desiring to perform community service.
3. An opportunity to link the installation with a service learning effort.

The volunteers who make up an installation team consist primarily of parents



FIG 2-32. A representative of the playground equipment company guides these volunteers through construction, a process that ensures the correct installation while providing savings of about one-third of the total costs. (COURTESY OF GINA K. MCLELLAN.)

when a schoolyard is the focus. Parents have a vested interest in developing playgrounds and gardens that will be used by their own children. Civic organizations such as Rotary and Sertoma often seek volunteer roles related to children and their environments. Another excellent source of volunteers is college students who are garnered through classes or clubs (Figure 2-32).

Volunteers have numerous talents and abili-

ties to add to any children's environment, but it is important to remember that the process leading to successful installation by volunteers is very different from traditional installations. A three-person leadership team is recommended, which consists of a representative of the recipient school or organization and two volunteers to lead the installation effort. Constant communication between the school or organization representative and the lead volunteers must be maintained. The open communication saves time and assures compliance with requirements of the school or organization.

Many schools and organizations choose to do volunteer installations of such things as playground equipment because it can reduce the cost of the equipment by approximately one-third. When choosing volunteer installation as an approach, it is important to consider bringing the equipment manufacturer's installation professional to the site to guide the volunteers through the process. Usually, it costs a reasonable amount for the professional's time and having this person on site will ensure that the equipment is installed correctly. This can provide legal protection later, and will ensure that the manufacturer's warranty on the equipment is in effect (Figure 2-33).

The two lead volunteers from the leadership team should split the responsibilities into two parts, with each overseeing one part. One school with a highly successful alternative installation involving multiple environments in its schoolyard referred to this team as "The Brain and the Brawn." The "Brain" establishes a plan for the installation and identifies specific needs for the process including such things as number of people, equipment, supplies, and materials. The "Brawn" contacts potential volunteers, organizes them into work groups, and is onsite during installation to oversee everything. Usually the two lead volunteers are



FIG 2-33. These parent volunteers consider dozens of nuts, bolts, and pieces to be a giant erector set and enjoy the process of assembling this piece of playground equipment. (COURTESY OF GINA K. MCLELLAN.)

people who were involved in the original ideation phase of the overall project. Most important, they must be able to work well together.

VOLUNTEER INSTALLATION PROCESS

Based on numerous installation projects at schools and communities, a process was developed to help assure the successful installation of projects using nonconventional techniques. These are the most important steps to help assure that volunteers can get the job done (Figure 2-34).



FIG 2-34. This child helps roll out fabric in preparation for the playground safety surfacing material. (COURTESY OF GINA K. MCLELLAN.)

1. *Communication is the tie that binds.* Imbed yourself in this concept because literally nothing will get done without it. Communication between volunteer leaders and organizational leaders must begin at the outset and continue throughout the project. With a school project, for example, the principal and the lead parent volunteers would be an excellent communication link. In a government

setting, it might be the director of the parks and recreation department and lead members of the citizen's advisory committee. In a church or private garden, the link may be the facility director and the landscape committee chairperson. The important thing is to identify the appropriate person in the organization and the capable volunteer leaders to assure that everything starts and ends with this group.

2. *Follow the yellow brick road.* The master plan is the yellow brick road, and it was developed to provide a roadmap to the finished product. The mas-

ter plan was most likely developed with significant input and ideas from the community that will ultimately use the product and was put together under the direction of someone with expertise in planning and design. If questions arise during installation or an idea surfaces that could simplify or improve installation, they should be brought to the designated volunteer leaders and organization designee. These people can go back to the master planner to determine if changes should be made during installation.

3. *Establish a time line.* Make a list of everything that needs to be done and how long it takes to do each item on the list. Couple this with any built-in limitations such as seasonal weather patterns, recommended planting dates, and construction that must be completed before your project can begin. All of these become considerations in setting the project's time line. Make the time line realistic, and stick to it. When volunteers see that their individual effort is part of the bigger picture, they tend to eagerly work within the established timeline.
4. *Set a work schedule.* This schedule fits hand in hand with the overall time line but provides a specific schedule of days and times for each component to be accomplished. Each member of the leadership trio should have a copy of the schedule in hand throughout the project. The schedule must be realistic, and the person setting the schedule must remember that it usually takes volunteers longer to complete a specific task than if done by professionals. The schedule should also build in additional time between tasks in case of delays.
5. *Identify potential volunteers.* The leadership team can plan for months to do a volunteer built project, but without volunteers, the project just won't happen. Volunteer recruitment is a necessity, and there are many approaches from which to choose. When the first solicitation for volunteers begins, it is important to have a work schedule lined out so the volunteers may choose dates and times to fit their individual schedules. A variety of means of contacting volunteers may be used including e-mails, memorandums sent home from school, phone calls, and media-based requests. The leadership team should decide which methods will work best in their case and then begin the recruitment process. Remember to set aside tasks that can easily be accomplished by the children who will eventually benefit from the environment being constructed. Children take ownership of places they help build



FIG 2-35. Children should be included as volunteers when their safety can be assured, and their tasks should suit their ages. (COURTESY OF GINA K. MCLELLAN.)

and in turn take better care of those places (Figure 2-35).

6. *Protect your volunteers.* Any organization planning to use volunteers to build children's landscapes should check with its own supervisory unit (i.e., school district, city government, association) to determine if and how volunteers are covered in case of accidents. It is always best to seek answers regarding legal liability issues before the installation is underway (Figure 2-36).

7. *Patience is a virtue.* It is important to remember throughout the installation process that volunteers are just that—volunteers. They are not required to help. They may show up when scheduled to—or not. They may be experienced—or not. They may be team players—or not. They may work hard—or not. The “or nots” tend to be few and far between, but the leadership team must be prepared to deal with the situations if they do arise, and a little



FIG 2-36. This child is learning at an early age the importance of helping out. (COURTESY OF GINA K. MCLELLAN.)

patience goes a long way. When you have a leadership team familiar with the variety of personalities in the volunteer corps, it is easier to schedule and place them within groups where conflicts can be kept to a minimum.

8. *Be prepared.* The leadership team with the help of any designees must have on hand all materials and supplies before installation begins. It is easy to overlook or forget something, and it only takes one important item to throw off the entire day's schedule. Have plenty for the volunteers to do. Volunteers are typically busy people, and they will not appreciate waiting around while someone decides what they should be doing. There are two basic approaches to actively engaging volunteers to the fullest. One way is to assign a group of volunteers to a team with a group leader who can provide instructional guidance for that group. Another approach that works well in some circumstances is to give the volunteers a written description of the tasks to be accomplished. They can then team up in their own groups and immediately be underway.
9. *Provide food and drink whenever possible.* This accomplishes two things. One, it eliminates an excuse for your volunteers to slip away and possibly not return. Two, it is one small way to say thank you and let the volunteers know they are truly appreciated. Food and drinks can even be provided by a local restaurant or other sponsor.
10. *Volunteers are like fine wine.* They may be slower to reach their full potential, but they provide so many benefits to the project. Sometimes they seem to take an exceptionally long time to complete a task; sometimes they work at the speed of long-time professionals. Whether they are slower than a herd of turtles in a pond of peanut butter or as fast as a Triple Crown contender on Derby Day, they will do an outstanding job on any project handed to them.

Maintenance by Volunteers

The maintenance aspects of children's gardens, playgrounds, and other environments should be an integral part of the overall planning process. Maintenance is encompassed in the master plan, in specific designs, in grading and engineering,

in selection of building materials, and in plant material choices. From this point, three concepts must be kept in mind when deciding who will perform maintenance and how it will be approached. These concepts are:

1. A well-designed project leads to an environment that is easy to maintain.
2. No matter how maintenance free an environment is supposed to be, it will still need to be maintained.
3. If the environment was built by volunteers, chances are it will be maintained by volunteers.

With the above concepts in mind, this section will focus on how to provide maintenance of children's environments by volunteers. The hope is that the environment was well designed with maintenance in mind. The successful maintenance will then depend on organizing the volunteers and assigning duties in a way that leads to success.

MAINTENANCE OF CHILDREN'S ENVIRONMENTS BY VOLUNTEERS

Regardless of the organizational format selected, there are five basic things to keep in mind that will help your volunteer force.

1. *In nearly all situations, volunteers need direction.* This means they need to be assigned to specific locations with specific maintenance tasks identified.
2. *The organization or agency in charge needs to set a base schedule.* A base schedule lists all the tasks that need to be accomplished and a time frame within which the task must be done. This approach gives the volunteers some personal flexibility in the schedule, and can actually increase the volunteer participation because of this flexibility.
3. *If you are serious about using volunteers, they need to be contacted personally.* This gives the volunteer a chance to ask questions and select a time slot. From the organizer's perspective, the personal contact provides greater assurance that the volunteer will actually participate.
4. *Volunteers with a vested interest in the environment to be maintained will be more receptive to donating their time.* Remember there are also service organizations and retirees, for example, with both interest and skills.

5. *It is important for the lead organization or agency to provide equipment and supplies needed by the volunteers.* Most volunteers are amenable to bringing along a few garden tools, but expendable supplies such as fertilizer or weed eradicator should be provided by the organization or agency in charge. Equipment such as mowers and tillers should be provided by the lead organization or agency also.

With the above concepts in mind, the organization or agency that oversees the environment can operate from its predetermined plan for maintenance. One of the most successful formats for maintenance by volunteers is a modification of the way many professionals perform maintenance. This approach entails subdividing the entire environment into subunits that are further divided into either smaller units or into specific maintenance needs. A children's garden in a neighborhood that is overseen by the neighborhood association may break down maintenance tasks by activities such as mowing, planting, weeding, mulching, and so on (Figure 2-37). A school with multiple outdoor environments is better served by subdividing the whole area into separate environments and then tasks within the smaller area. Some tasks such as mowing may exist across the board and may need to

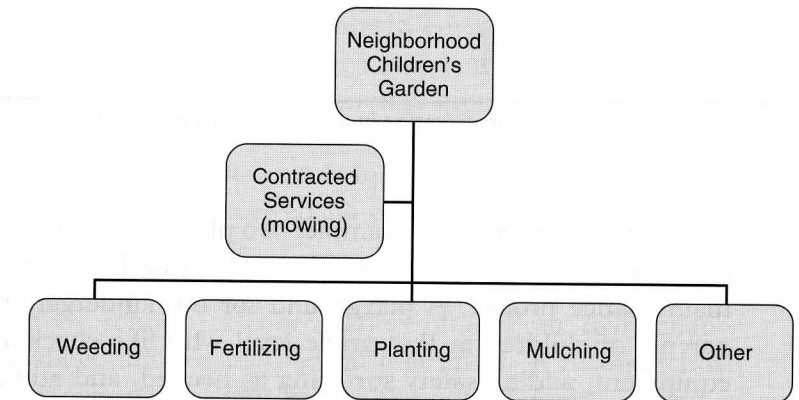


FIG 2-37. Maintenance organization in a small children's environment. (COURTESY OF GINA K. MCLELLAN.)

be managed through contracted services. The rest will fall to the volunteers (Figure 2-38).

Although the application of tasks across the entire environment works well in a neighborhood or community garden, larger children's environments such as a schoolyard generally require a slightly different approach. When multiple environments exist at a single location, it is more efficient and effective to divide the maintenance plan into environmental units first and then into tasks.

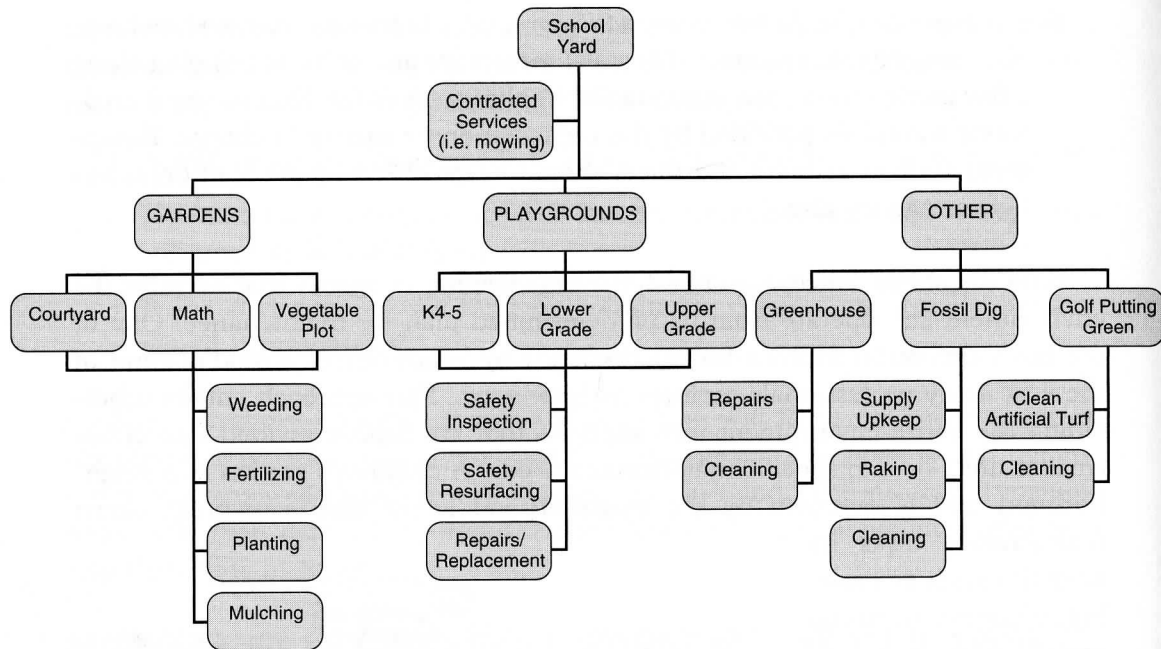


FIG 2-38. Maintenance organization in a large schoolyard. (COURTESY OF GINA K. MCLELLAN.)

A schoolyard with, for example, two playgrounds, several gardens, and a greenhouse will be efficiently served by making each of the individual areas its own maintenance project. A playground for the kindergarteners can be adopted by parents of children at that grade level who like checking and maintaining play equipment, adding safety surfacing as needed, and adding plantings in the area to provide shade or a place where the children can experiment with growing things. Each task such as weeding and planting can be handled by a small group of parents and students. A different group can oversee the playground for the older children, while yet another group maintains a courtyard garden. Any tasks better accomplished by one provider can be arranged as a contract service, which is often the case with mowing. When the latter option is chosen, it is important to communicate directly with the provider to establish any off-limits areas or to discuss special needs in a given area. What you want to avoid is the accidental cutting or removal of special plantings such as native grasses or the herb garden planted by the students.

“We had worked so hard to establish the Serengeti at my child’s school. It was a large sand play area with a huge lion in the middle and tall grasses planted in various places to give it the feel of the Serengeti. I was visiting the play area about a month after its opening when the contracted mowing crew arrived. When one worker began cutting the ‘weeds’ in the sand play area, I bolted to stop him but not before he had cut three beautiful ornamental grasses to the ground with his weed whacker.”

—A parent volunteer

GETTING THE MAINTENANCE ORGANIZED WITH VOLUNTEERS

Many schools are at a loss as to how to organize the maintenance of their outdoor areas. In the many schools visited and interviewed during the research for this book, the most effective and most common technique was guidance through an active and involved PTA. The reality of schoolyard environments is that very few are well funded by school districts, and the individual schools are usually fighting to make it through the school year with enough money for materials and supplies. The outdoor environments are not a priority despite their tremendous potential as learning environments. Most schools indicated that beyond mowing and playground safety surfacing, they received no other help or support for the outdoor environments.

When the school or school district does not provide the needed maintenance, the best option reported by schools is coordination of outdoor maintenance through the PTA and a subcommittee focused on that effort. A recommended tool is an overall maintenance manual that breaks the outdoors into individual areas with identifiable tasks for each. There must be a volunteer to oversee the maintenance manual assignments or nothing will ever get done. This could be a parent with particular interest in the outdoors or perhaps the PTA chair of an outdoors committee. Volunteers can then select a task in a specific part of the schoolyard that they want to work on and feel comfortable doing. These tasks are adopted by the volunteer for a year. The chairperson for each environment can encourage the individual volunteers to do the designated job within general time lines, or can opt to have designated work days that can draw additional volunteers to help the designees. When working with volunteers who have families and jobs, it is important to allow as much flexibility as possible within their schedules.

One very important key to maintaining schoolyard environments is involving the students at the school in both the construction of the environments and the maintenance of them. This approach gives the students ownership in the environments, and ownership translates directly into taking care of those environments. The ultimate benefit in involving the students is an educational one. When the students are involved in the planning, building, and maintenance of their schoolyard environments, they are applying concepts learned in the classroom.

CASE STUDIES

The Enchanted Woods™ at Winterthur, Winterthur, DE

Opening date: Father's Day, June 2001

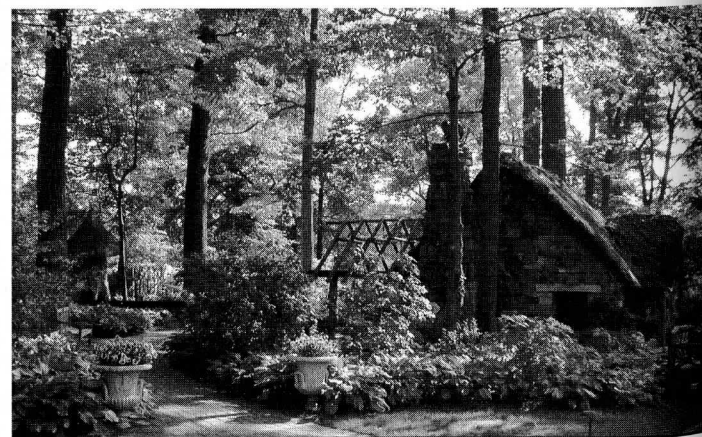
Acres: 3 (1.21 hectares)

Cost: \$2 million

Funding: Individuals and foundations

Enchanted Woods™ is a special fairytale children's garden at Winterthur Museum & Country Estate in Delaware. Created to be unique, to fit with the style or "sense of place" of the Winterthur Garden, and to attract families, it includes a charming collection of magical outdoor spaces (Eirhart, Magnani, Smith, personal communication, 2005).

Enchanted Woods™ was designed to be in complete harmony with the Winterthur estate and its mission (Figure 2a-1). It is a unique creation, built under an existing woodland canopy in a style appropriate to the historic Winterthur Garden, with subtle colors in the hardscape and plantings with sweeps of color (Figure 2a-2). The theme developed for the garden was based on the history of Winterthur as well as the



The Faerie Cottage at the Enchanted Woods™ at Winterthur Museum & Country Estate, Winterthur, Delaware. (COURTESY OF LOLLY TAI.)

design team's plans to recycle materials from all areas of the estate (Eirhart, 2003).

THE DESIGN TEAM

The project manager was Denise Magnani, former Curator/Director of the Landscape Division at Winterthur. She assembled a team of horticulturists, arborists, curators, and designers to begin the design process. Preliminary work commenced during the fall of 1998. W. Gary Smith was the landscape architect for the project. A complete list of team members may be found at the end of this case study (Magnani, 2001).

RESEARCH

In preparation for the planning of a children's garden, the design team researched how children learn and play. They visited other children's gardens such as the Children's Garden Project at George Washington's River Farm and interviewed institutions that were planning gardens or play spaces. The team found that most of those gardens featured large play structures and bright primary colors, with spaces arranged as a series of science exhibits. Although the concepts worked well for those gardens and were visited by many children, they did not fit the Winterthur vocabulary (Magania, 2001).

The design team believed that their new garden needed to complement the existing Winterthur estate, functioning as a unified work of art with a naturalis-



FIG 2a-1. The Enchanted Woods™ was created to fit with the style or "sense of place" of the Winterthur Garden, one of the world's great cultural landscapes. (COURTESY OF W. GARY SMITH.)



FIG 2a-2. The Enchanted Woods™ was built under an existing woodland canopy of plantings with sweeps of color. (COURTESY OF W. GARY SMITH.)