
Gooseberry Mound Park Children's Sensory Gardens

Location : Moorhead, Minnesota

GOOSEBERRY MOUND PARK - CHILDREN'S SENSORY GARDEN

A Design Thesis Submitted to the
Department of Architecture and Landscape Architecture
of North Dakota State University

By

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In Partial Fulfillment of the Requirements
for the Degrees of
Bachelor of Landscape Architecture

James Clark, Assistant Professor
Primary Thesis Critic

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Thesis Committee Chair

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Statement of Intent

Abstract

A Children's Sensory Garden aimed to become a unique learning experience for the public's enjoyment. Located in Moorhead, Minnesota, with the intention of becoming a place to learn as well as play, emphasis will be on learning about the immediate as well as the distant environments of the Sensory Garden and the Solar System at large.

Project Typology

A Children's Sensory Garden for the Fargo/ Moorhead Communities.

Theoretical Premise

The Thesis will examine the place that Sensory Gardens for children have in the public's mind and how it helps express the civic culture. Design metaphors will be developed from this examination.

Project Justification

Fargo/Moorhead is chronically short of public garden space targeted to the needs of children and this project will participate in the dialogue about the importance of sensory gardens.

Proposal

Narrative

A thriving community gathering place full of exploration, beauty, and education, the Gooseberry Mound Park - Children's Sensory Gardens supersedes all expectations of this big city's small town charm.

It is a place to relax, to absorb the beauty of nature, and learn new and exciting things along the way. Centrally located in the community, the Gooseberry Children's Sensory Gardens provide a unique and specifically designed park setting, aimed at attracting and educating local and visiting children and families. The location of a children's sensory garden at a popular local playground will help to teach children, as well as parents and other visiting adults, about the plant world around them.

In the Midwest, it is a rare occasion when one actually sees an abundant amount of colorful, unique plants in one place. Even unlikely is the observance of a large scale manicured landscape seen. There are few places in the area that you can go to see such things, those that are around attract a multitude of people to their site to examine and explore.

Fargo / Moorhead is a booming community in a collection of Upper Midwest farm and ranch lands. It is important to

have a place to help locals have a better array of plants to help beautify their own landscapes. In doing this, an appealing pallet is developed in our everyday life on the Plains.

User/ Client Description

Beautiful outdoor gardens with robust foliage and innovative designs, create a place for all ages to come and enjoy. Spaces will be designed for all types of activity. Areas to stroll, to play, and areas to explore will all be designed. Each area will have enough room for many people to enjoy at the same time. Intended to hold many people during the summer months, the Sensory Garden's along with the playground area, will have many areas to go explore and get away from the busy town atmosphere in the area.

The goal of the Gooseberry Sensory Garden's is to be both educational and enlightening. Within the garden's borders, there is a unique opportunity for local groups, from the three neighboring colleges, to local schools, or even town and community groups, to participate in the design and implementation of various sections of the Sensory Gardens. This is also a way to raise money for the annual cost of replacement of features from annual flooding from the Red River of the North, as well as new built features.

With only one major vehicle entrance into the site, there is the opportunity to make an improved parking area, as well as a centralized focal point into the site. Located across the Red River from Fargo's Lindenwood Park, a very recreationally orientated park, Gooseberry Mound Park, in Moorhead, is an excellent area for a more relaxed and family learning geared park and gardens. With this opportunity also comes the responsibility to make the entire site ADA accessible, which in turn, makes the site very appealing to all of the people who wish to enjoy the site.

The local community's view of the Red River, and its past history of violent flooding, will be a major design challenge. The way residents view the river today is very different from how it was viewed at the beginning of the 1900's. This is also a concern, and will be looked at very closely. Located on one of the many meanders along the Red River, this area is a prime space to bring people, once again back to the River. With easy access from the interstate, and close proximity the neighborhoods in Fargo-Moorhead, this area provides continual visitation from its users throughout the year.

Project Elements

The design of the site will emphasize on engaging the

interest of local children ready to play and learn about their environment. Key emphasis will be educating site visitors about the local, the sensory garden and it's built landscape, as well as the distant environment, the universe around us.

There are no local places in the Fargo / Moorhead area that teach about the universe, solar systems, planets, stars and constellations.

The utilization of site features such as benches, pergolas, and picnic areas will create the setting for the individual areas of the Sensory Gardens, bringing those unique places to Fargo/ Moorhead.

Site Information

Gooseberry Mound Park is located in the Upper Midwest, and situated on the Red River of the North, just north of Interstate 94, on 22nd Avenue South in Moorhead, MN. Due to its close proximity to the interstate and the even closer relationship to the Red River, this area brings with it immense opportunity of the site and an overlapping concern of the danger of the Red River's flooding every year. This creates a singularly unique area in which to design.

Research will be conducted on other aspects needed to conduct a thorough site analysis as the process proceeds, and will be instigated into the thesis program. Aspects include such things as site topography, researching the history of the area and the people that use the site currently, as well as physical features like prevailing wind analysis, vegetation, flood levels, geology, and a soil survey.

Project Emphasis

The Thesis will examine the role of a Children's Sensory Garden in the public's mind and how it helps express civic culture in the Fargo / Moorhead communities. There are many areas which will be emphasized within the site. The way local residents view the Red River will be addressed, as well as the role a common green space within the city and the influence it has on the community. Through research these issues will be made apparent within the thesis program, as well as through design of the site.

The area that will be the major area of interest will be the roll of a community green space, and its influence on local residents. Research and case studies will focus on the role of green spaces, sensory garden's in particular, in the community.

Schedule

OCTOBER 2005

13 Oct Thesis Proposal Draft Due to AR 561 Instructor (1 copy)

27 Oct Last Day of ALA 561 Class / Proposal due to Primary Critic

NOVEMBER 2005

11 Nov Veteran's Day - Holiday

14-18 Nov Final Week of AR 571 Design Studio / Presentations

23 Nov Draft Thesis Program due to Primary Critic (1 copy)

24-25 Nov Thanksgiving - Holiday

DECEMBER 2005

8 Dec Final Thesis Program due to Primary Critic (1 copy)

9 Dec Last Day of Classes

JANUARY 2006

10 Jan Classes Begin

10 Jan-31 Jan Research and Site Analysis

16 Jan Martin Luther King, Jr. - Holiday

FEBRUARY 2006

31 Jan-14 Feb Case Studies & Concept

14 Feb-7 Mar Master Plan Development

20 Feb President's Day – Holiday

MARCH 2006

06-10 Mar Mid-Semester Thesis Reviews

7 Mar-3 Apr Design Work (perspectives, sections, elevations, details, 3-D Modeling)

13-17 Mar Spring Break

APRIL 2006

3 Apr-24 Apr Board Layout & Design

14-17 Apr Easter Holiday

24 Apr Thesis Projects Due at 430 pm, Fifth Floor Downtown

25-26 Apr Annual Thesis Exhibit, Fifth Floor Downtown

28 Apr Draft of Thesis Document Due to Primary Critic

MAY 2006

27 Apr-04 May Final Thesis Review

05 May Final Day of Classes

08-12 May Final Examinations

11 May Final Thesis Document due at 430 pm in the Department Office

12 May Commencement at 500pm Fargo Dome

Previous Studio Experience

Fall Semester 2002 – Professor Tim Kennedy

Ideal Landscape
World Trade Center Peace Garden Memorial Competition
Viz Sculpture Garden

Spring Semester 2003 – Professor Dennis Colliton

Miniature Golf Course
Downtown Plaza Design
NDSU Arbor Walk
NDSU Tech Park Addition

Fall Semester 2003 – Mathew Chambers

Annual Car Park Design
Oriska Arboretum
Chicago Waterfront
Fargo Corridor Enhancement

Spring Semester 2004 – Professor Tim Kennedy

3-Point Perspective
Rocking Horse Community Development
Stone & Masonry Competition

Fall Semester 2004 – Professor Tim Kennedy

Urban Renewal-Minneapolis

Spring Semester 2005 – Catherine Wiley

Trucker's Inn Brownfield Reclamation
Sand & Quarry Reclamation

Fall Semester 2005 – Professor Josh Walters, ASLA

Conservation Corridor- Restoring an Urban Waterway

16 credits in Emphasis Area: Technology and Construction

Theoretical Premise Research

In order to have a better understanding of what design means, and what it takes to do actual design work. It is necessary to conduct research on categories that are related to our overall design goal, our Thesis Design Type. Within these five different categories; hard sciences, Social Sciences, Philosophy, Architectural Theory, and Literary Theory, there are listings of different sub-categories to choose from.

In determining the ultimate goal, the Thesis Design and Project Solution, it was determined which sub-categories would best help with the overall design. Since I have chosen to conduct research, and create a solution regarding a children's sensory garden within the Fargo / Moorhead area, research topics were determined to be:

- Memory and Expectations
- Designing for Play
- Semiotics
- Urbanism
- Humans and Scale
- Rainwater Harvesting
- City of Trees

Memory and Expectations

According to *The Senses Considered as Perceptual Systems* by James J. Gibson, "There are two levels of sensitivity...the so-called sense organs are of at least two different sorts: the passive receptors that respond each to its appropriate form of energy, and the active perceptual organs, better called systems, that can search out the information in stimulus energy." (Gibson)

Similarly, there are different levels of stimulation. The stimulus energy of optics, mechanics, and chemistry is coordinate with receptors, but the stimulus information to be described is coordinate with perceptual systems. When the senses are considered as channels of sensation, one is thinking of the passive receptors and the energies that stimulate them, the sensitive elements in the eyes, ears, nose, mouth, and skin.

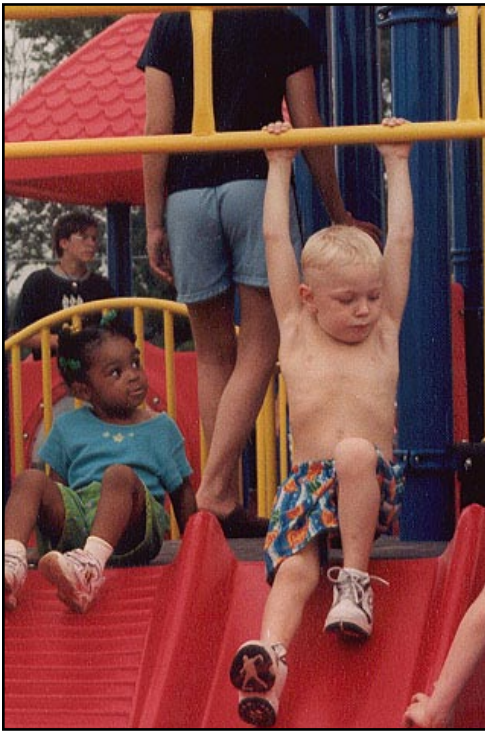
The unanswered question of sense perception is how an observer, animal or human, can obtain constant perceptions in everyday life on the basis of these continually changing sensations. For the fact is that animals and men do perceive and respond to the permanent properties of the environment as well as to the changes in it. The ways in which animals and men pick up information with the five senses, looking, listening, sniffing, tasting, and touching are



the subject of this book.

The eyes, ears, nose, mouth and skin can orient, explore, and investigate. When thus active they are neither passive senses nor channels of sensory quality, but ways of paying attention to whatever is constant in the changing stimulation.

We are not born with inherent perceptive qualities. Immediately after birth we begin to observe and learn from our world around us. At first it is imprecise, (looking, touching, and mouthing), but as we grow so does the use of our perceptual systems become skillful, and our attention becomes educated to the subtleties of the stimulus around us. We learn to perceive, but not to learn to convert sense data into perception. That is inherent.



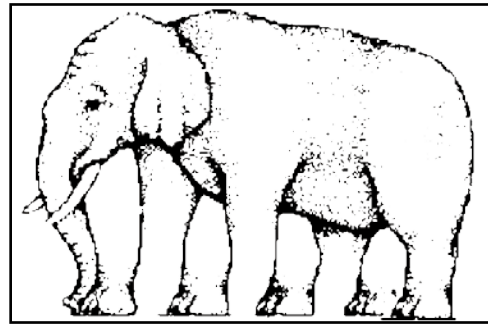
Designing for Play

Children do not want to be driven past things within their own worlds, they want to interact, to touch, and feel and learn what things are good and which are bad on their own ways. Cities are organized to keep children safe, and to hinder them from learning about their environments by playing and exploring. Every animal on earth learns by watching those that are older and by playing with their surroundings. From pouncing kittens to flopping monkeys playing in both the air and the ground, every young animal must learn in their own way.

“Many city children do not ever see the stars in the sky and have no idea of how to determine North from South, they are cut off from the planet and its rhythms” (Hendricks). There are places designed for learning things such as these, museums, planetariums, schools. This type of teaching might not reach every child. Public places are needed to teach common things to local children on a mass scale.

Semiotics

Through studying all cultural phenomena as if they were systems of signs, called semiotics (Bryan), Architecture is undoubtedly one of the more challenging of phenomena, as most architectural objects do not communicate but function. This can be obvious in such things as false windows vs. actual windows in the general sense. Most windows are used for light or viewing of the outdoors. False windows on a façade, used for many purposes (that the architect may only know), such as to continue a repetition created or to establish the illusion of more going on than actually is. There may not be anything behind these false windows. Just illusionary hopes that if one goes into a particular space the chances are one gets a view and some extra ambient lighting.



One other important factor of semiotics is the implied connection between certain words and their meanings, or certain pictures and their meanings. Most people (in the US) know what a stop sign means, but to drivers in other countries the sign is different. Worldly travelers might infer meanings from varieties of signage throughout the world, as the idea of "stop" is uniform, even though each country throughout the world may have a different idea of what that "stop" looks like.



This idea can also be brought into landscape architecture just as easily. One path may be for public use by visitors another for maintenance only. By simply varying the material each path is made with (Polypavement for visitor traffic to allow for handicapped access vs. low gravel for maintenance), can alter the appearance enough to detour unwanted traffic.



Urbanism

Uncontrolled growth of existing suburbs and towns lead to sprawl, traffic and loss of the identity for what historically may have been distinct neighborhoods, villages and towns. According to Peter Katz, author of *The New Urbanism*, "People argue heatedly about growth: where, how much, what type, what density, and if it is really necessary at all. Sprawl is bad, infill is good, new towns destroy open space, master planned communities are sterile and urban redevelopment is fine for "other people"" (referring to how people think about urbanization) (Katz). He also goes to say that infill and redevelopment is the best utilization of existing infrastructure and the best opportunity to preserve our open space.

The best way to preserve the open areas from infill is to better establish them in the community as public open spaces. Spaces designed and maintained to preserve the character and image of these spaces.

Another way would be to develop them into public spaces with well-defined meaning, with activities and a personality of their own. Formal parks, zoos, courtyard gardens for neighborhoods, city botanical gardens, and playgrounds are just a few ways to give these spaces character of their own.

Humans and Scale

How we perceive the world around us, especially in terms of being aware of how big this world around us really is, can ultimately make or break a design. Some designers feel the need to over emphasize this difference, some chose not to. There are examples of both kinds of design in every major city around the world. A huge, multi-story high-rise building next to a human scaled urban park, the differences are extreme. A few blocks away a more subtle example can be observed. Single family homes, surrounding a lake and with a park, are good examples of subtle differences. With the high-rise and park, when standing equidistant between the two, the high-rise and its bountiful floors, looming unhindered into the sky, forces you to crane your neck to look to the top. By comparison, to look to the top of trees planted within the urban park, it is not necessary to hurt yourself.

This is an important thing to consider. How people feel within a site, can come from how scale is used to make them feel. Close, high quarters can make a person feel small, claustrophobic, and nervous. Whereas, open spaces with small, even sparse plantings, can make someone feel exposed, even larger than life.

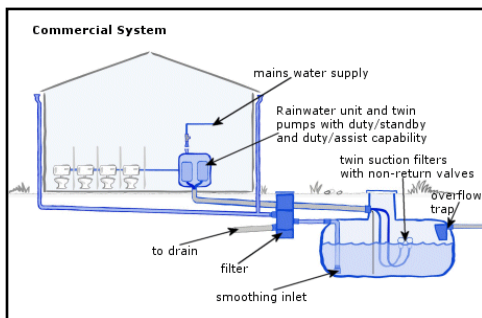




Rainwater Harvesting

According to Pete Melby and Tom Cathcart, authors of *Regenerative Design Techniques*, by controlling the storm water runoff from impermeable surfaces (sidewalks, parking lots, and roofs) the increase in recharge that the aquifers undergo will be kept in check. The volume of runoff from storms and the maximum flow rate of the runoff are increased by the flow from such impermeable surfaces. "The increased runoff volume can contribute to flooding and erosion in receiving streams" (Melby). This is not something that should be encouraged near water bodies such as lakes, rivers, and streams. Permeable surfaces do not provide opportunities for entrapment and filtration that occur in vegetated permeable surfaces.

Rainwater harvesting to help the process of entrapment and filtration throughout built sites will help the overall health of nearby water bodies.

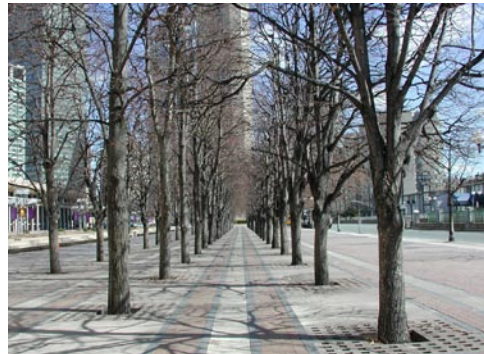


There are two main types of use for the collected and retained rainwater runoff. Outdoor-Use Systems (watering of gardens, filling of ponds and fountains), and Indoor-/Outdoor-Use Systems (including potable water, and can be used to meet all domestic water requirements with proper filtration). Both types require some filtration, though in outdoor-use systems it is not necessarily used depending on the use. With the indoor/outdoor-use, through extensive filtration and the use of storage cisterns, this water can potentially be used for the main water source.

City of Trees

Trees are often planted near houses to give shade in summer, unfortunately, this also entails less radiation onto the hose in winter, when the heat would be welcome. Even deciduous trees in winter cut out about a third of the radiation aimed at the individual house. Trees can improve daytime conditions significantly in hot climates, comparisons have been made on the net effect of the surface temperatures on a clear summer day. A typical forest can be anywhere between 5-10 degrees cooler than within city limits. Reduction of heating can also reduce the 'country breeze' which blows sometimes in the evening from the rural environments towards the warmer city center. Apart from the modest effects of trees on topoclimates within city regions, the vegetation can considerably modify winds around individual buildings. There one can differentiate between vertical winds down the face of an isolated tall building, and the cyclone generated within an almost enclosed courtyard, and the accelerated horizontal winds caused by funneling down a city canyon or round the sides of a tall building.

Trees within a city not only can create a cooler environment all around, but also can make a person perceive their being to be cooler. Sitting under the shade of a large tree listening to the slight breeze whisper through the leaves, can make one feel cooler. The perceived coolness, also creates a place that is calmer than the city around you.





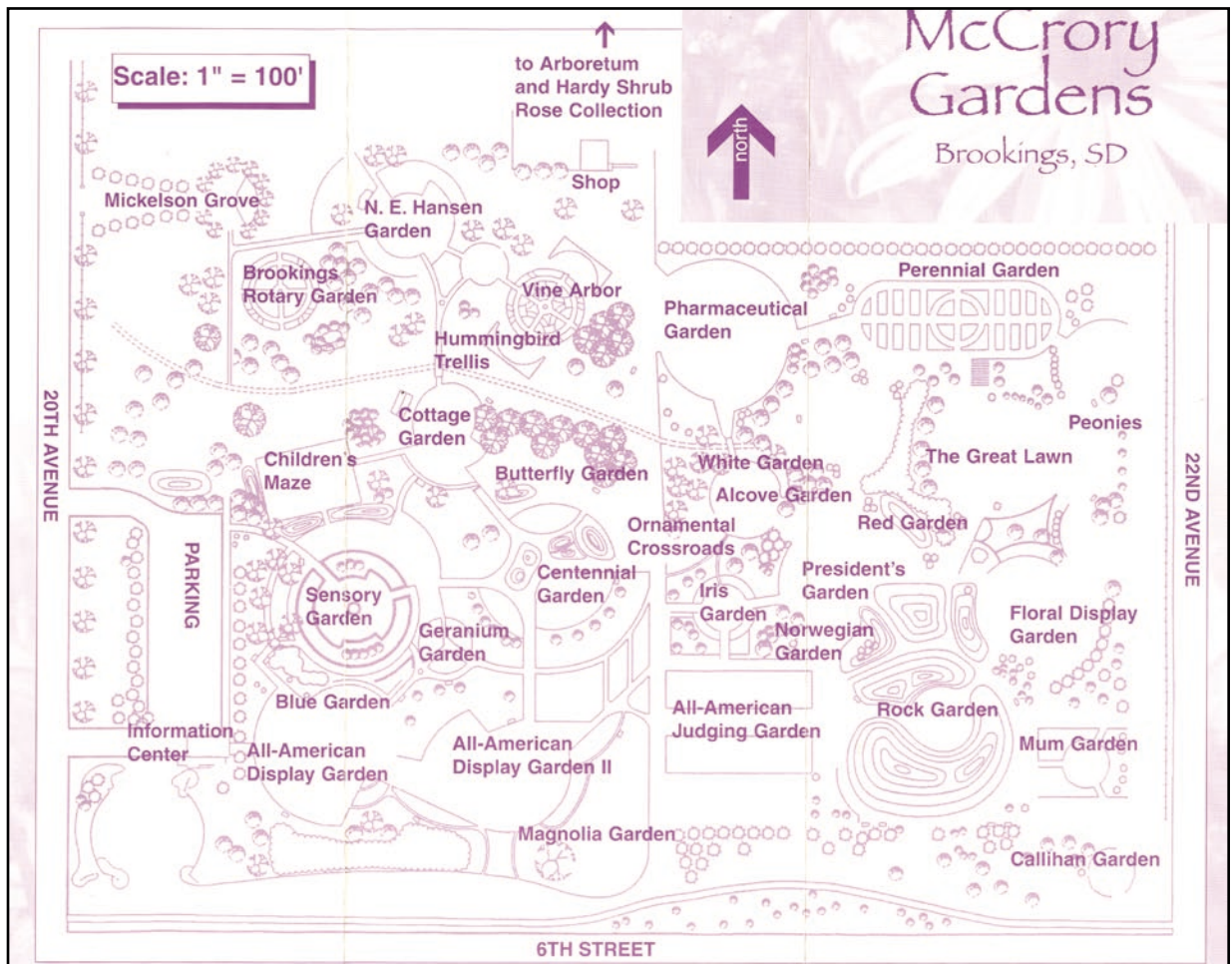
Case Studies

McCrorry Gardens Brookings, South Dakota

Located in the middle of the city of Brookings, South Dakota, McCrorry Gardens is a unique garden setting for a city surrounded by rural South Dakota. Not only is it a botanical garden but McCrorry Gardens also features an arboretum. There are many interesting and exciting gardens associated with McCrorry that are unique to the area in which it is set. There is a theme to the gardens, that isn't usually seen in this area. Color gardens of every kind; blue, white, red. It also consists of gardens such as a Children's maze, Pharmaceutical Garden, Hummingbird Trellis, and some All-American Display Gardens, to name a few.

Choosing this garden wasn't difficult. It is one of the few botanical-type gardens in the area. There are gardens of every type that can be models for the thesis design. Including an area called the Cottage Garden, which is a special place for children to go and enjoy the outdoors.





McCrory Gardens Site Map

Chicago Botanic Garden Chicago, Illinois

With features such as romantic English walled garden, a Japanese garden, a wild Midwestern prairie, wetlands and waterfalls, there is a surprise around ever corner of the Chicago Botanic Garden.

Over 23 gardens plus 81 total acres of waterways, 9 islands, 6 miles of shoreline, 15 acres of prairie and 100 acres of woods, the CBG offers a place to take a break from the busy city of Chicago.

This garden complex is a wonderful case study because it offers many unique spaces for every type of person that visits. Whether you like woods, prairie, extensive lawn areas or



even just a place to sit and watch birds and other creatures, the Chicago Botanic Garden has it. Food eateries, shopping for gifts, and special events and flower shows throughout the year.

The Chicago Botanic Garden also has Tours and Activities,



Discovery Frontier Grove City, Ohio

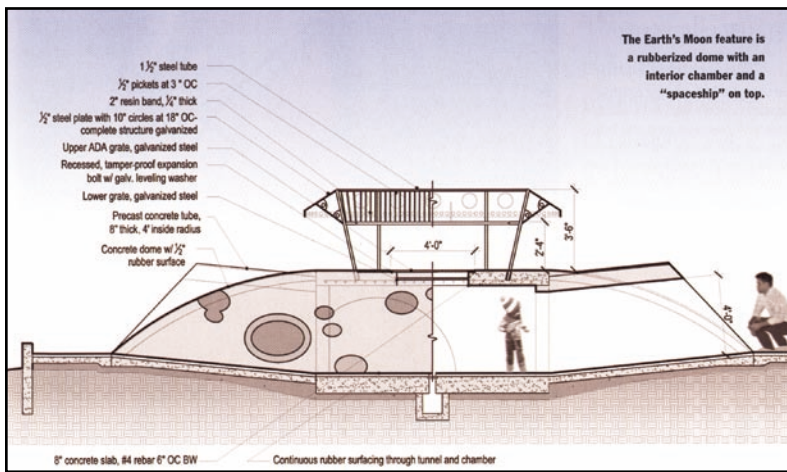
Discovery Frontier, in Grove City, Iowa, is a solar-system-themed playground that allows children of all abilities to experience a multitude of activities. Every planet area provides children with a different play experience. From a 16-foot-high sun sculpture, to the Venus Music Garden, Earth's



Moon is a rubberized dome, Mars is perched on a ridge and is represented by a spiraling red climbing wall. The designers goal was to create different and separate spaces within one design, where children can run and explore not only the garden setting, but also learn about the inner solar system, and what the nearest planets visually look like.

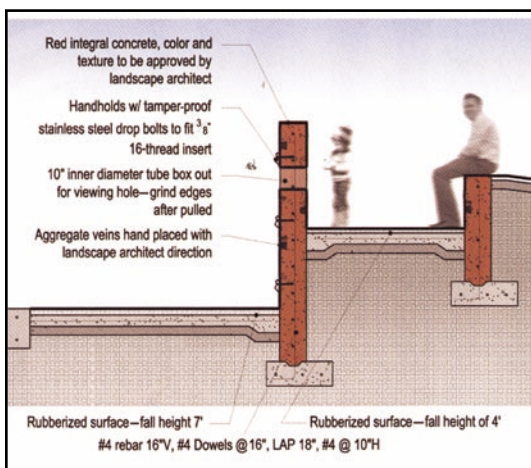


(Top) Aerial of the Discovery Frontier. (Bottom) Multicolored swirls of resin capture the afternoon sunlight.



Attention to details such as a section detail of the Earth's Moon and the way it will look and feel to a small child, as well as the parent, and the transition between the climbing wall and where parents can sit and watch the children enjoy and explore, are something that makes this design very well designed and implemented.

The 16-foot-high sun sculpture casts shade over the children and creates a very unique visual as well as sensory aspect to the design.



(Top) Earth's Moon Section Detail. (Left) Climbing Wall Detail.

Site Analysis



Gooseberry Mound Park

Entry Directions

One Way Street

Red River of the North

8th Street S

Interstate I-94

Located on the East side of the Red River of the North, in Moorhead, Minnesota, Gooseberry Mound Park has many natural and man-made elements that attract different kinds of residents in the area. Within a close proximity to Moorhead's Concordia College, as well as across the Red River from Fargo's Lindenwood Park, Gooseberry Mound Park is in pristine location for the entire community to enjoy.

Since this area is in extreme risk each spring, from the flooding of the Red River of the North, the design has been made to be able to be rebuilt within a short amount of time after each flooding. There is little to be done that can prevent such a flooding, but minimalist thinking may prevent such a flooding to be costly to the Moorhead Parks system.

Existing Site Photos

Through design each child can learn to identify and recall constellations, and explore their sense in a unified play site. The site is also used by more than just children on the play areas. Couples walk, and bikers bike. There is also an extensive green lawn area near the river, in which there is plenty of room for pick-up games of all kinds.

The Existing playground is mostly in excellent condition. Tailored to children with additional needs, Gooseberry Playland has handicap accessible play structures, as well as an agility course. All of these are excellent, but lack an overlying themed design.





(Left) Entry drive

(Right) Existing Play Structure



(Left) Gooseberry Playland Sign

(Right) Playground looking towards rest of site



(Left) Existing Structures, Picnic Area, Restrooms / Maintenance building

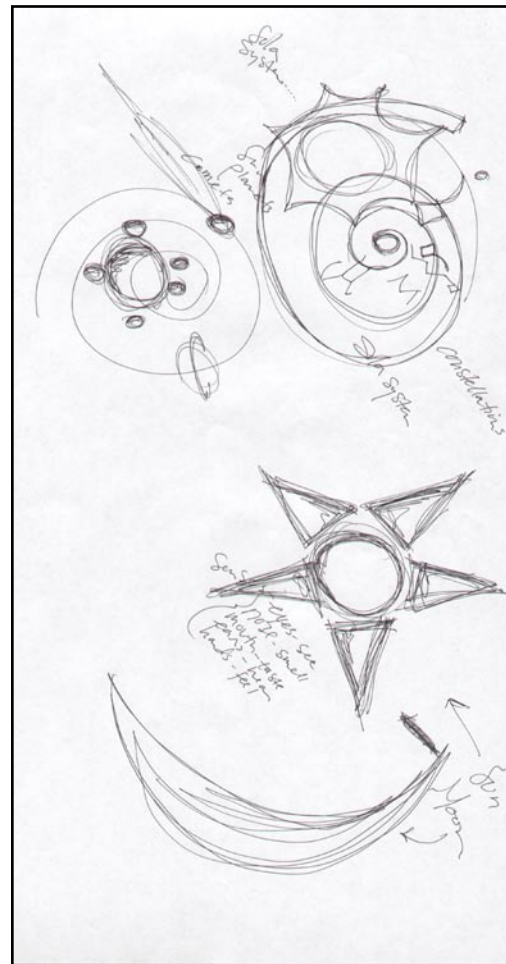
(Right) Existing Handicap accessible play equipment

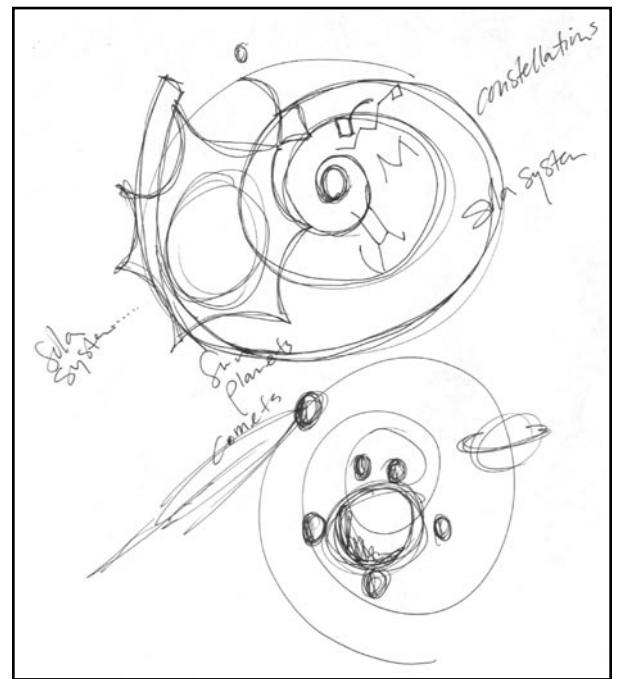
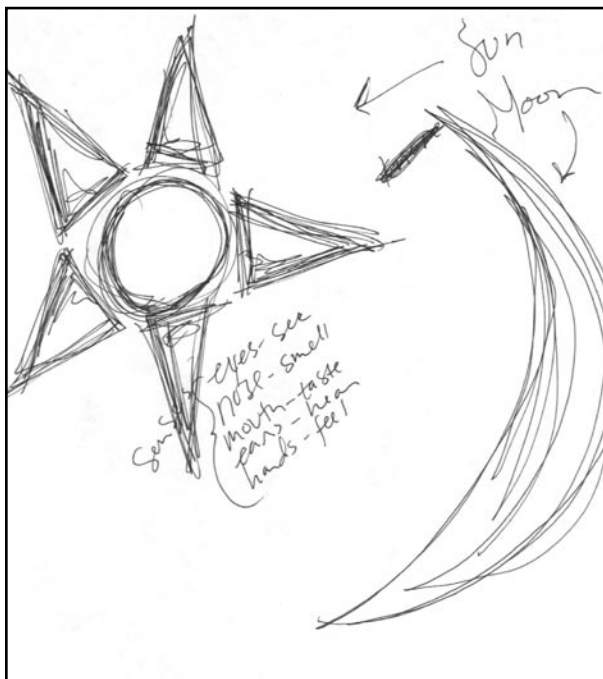
Process Documentation

Working out ideas is one of the best tools that a designer can employ. While doing this stage in the development of Gooseberry Mound Park, - Children's Sensory Gardens, it was decided to help city kids learn more about their environment in two ways. The First, by the Sensory Gardens themselves. Through having the variety of plant life in the area where they play, the children will become interested in the growing environment. In this, they will take with them the joy and beauty of knowing and recalling many types of trees, shrubs, and flowers.

The Second way the park encourages discovery is through the Celestial Lookout Tower. The Tower is a space where children can learn about the placement of stars in our area of sky. To help with some of the easiest to find, a simple ground plane has been created of five of the better known constellations. Included are the Big Dipper, Little Dipper, Orion, Cassiopea, and Draco. Using different pavement materials, each constellation is easily distinguished from the Lookout Tower. Relating what is learned in the dome to something a little closer to each child will further the learning process.

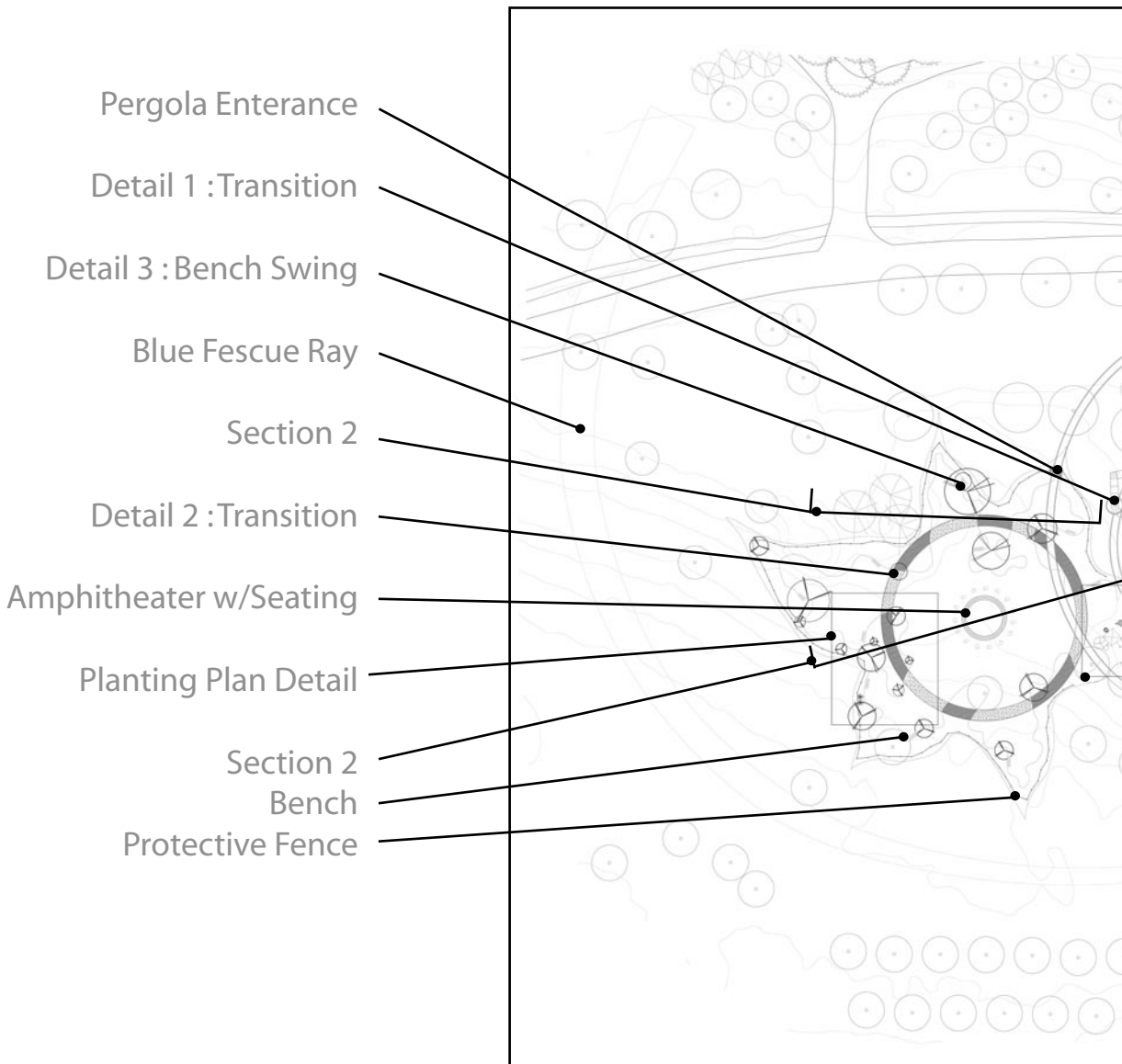
There is also the added area of an amphitheater in the center of the design. This can be used for anything

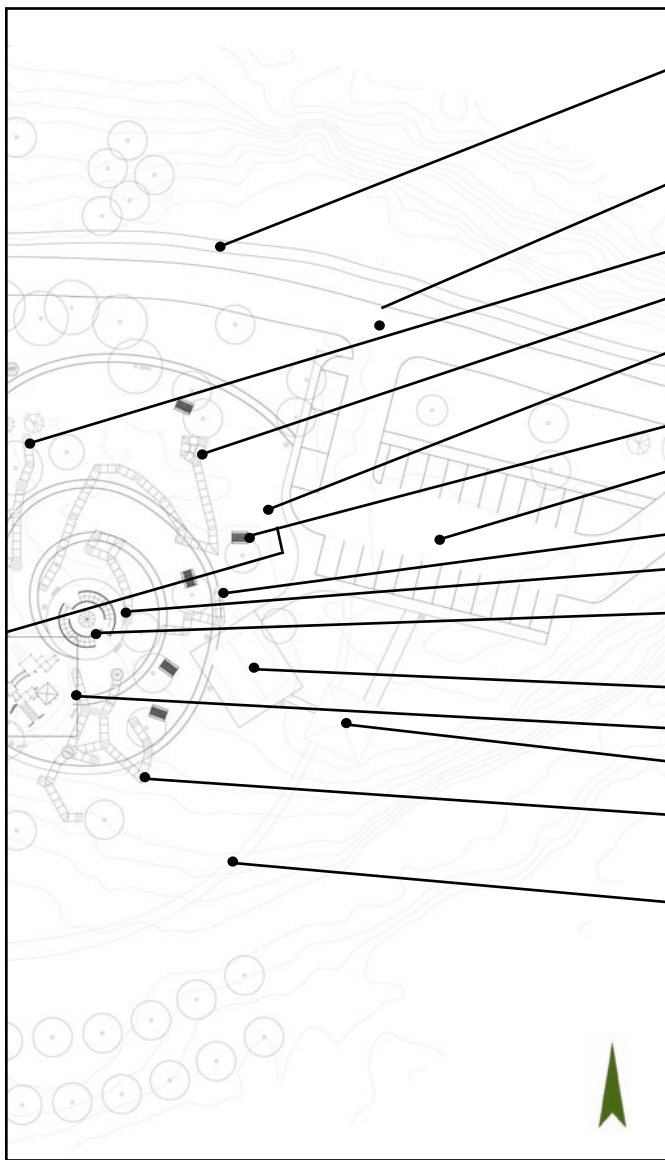




from school functions to educational seminars. This is a great area to just relax and enjoy the park as well. Many people who visit the Sensory Garden will find their own special place. Each individual garden is designed to be unique and employ different aspects of its particular calling.

Master Plan





Bike Trail

Access Road

Big Dipper

Draco

Entry Sign

Picnic Table

Parking Lot

Cassiopeia

Little Dipper

Celestial Lookout Tower

Picnic Shelter

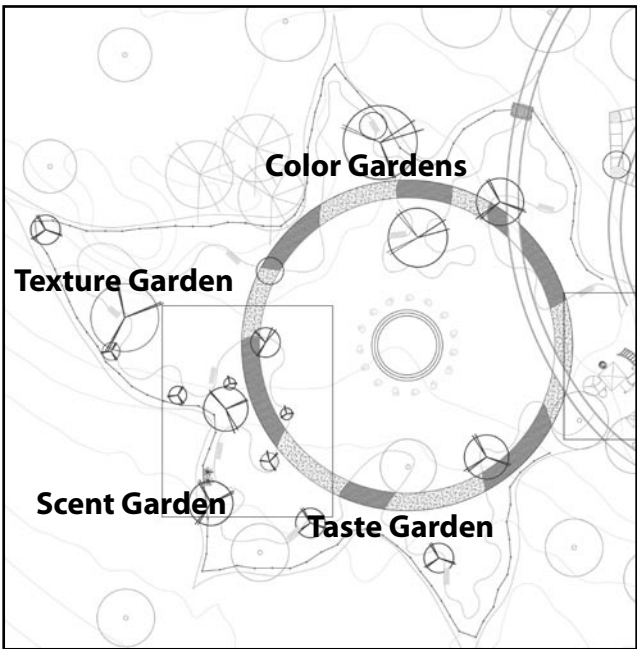
Playground Plan Detail

Rest Rooms / Maintenance

Orion

Blue Fescue Ray

The Five Senses

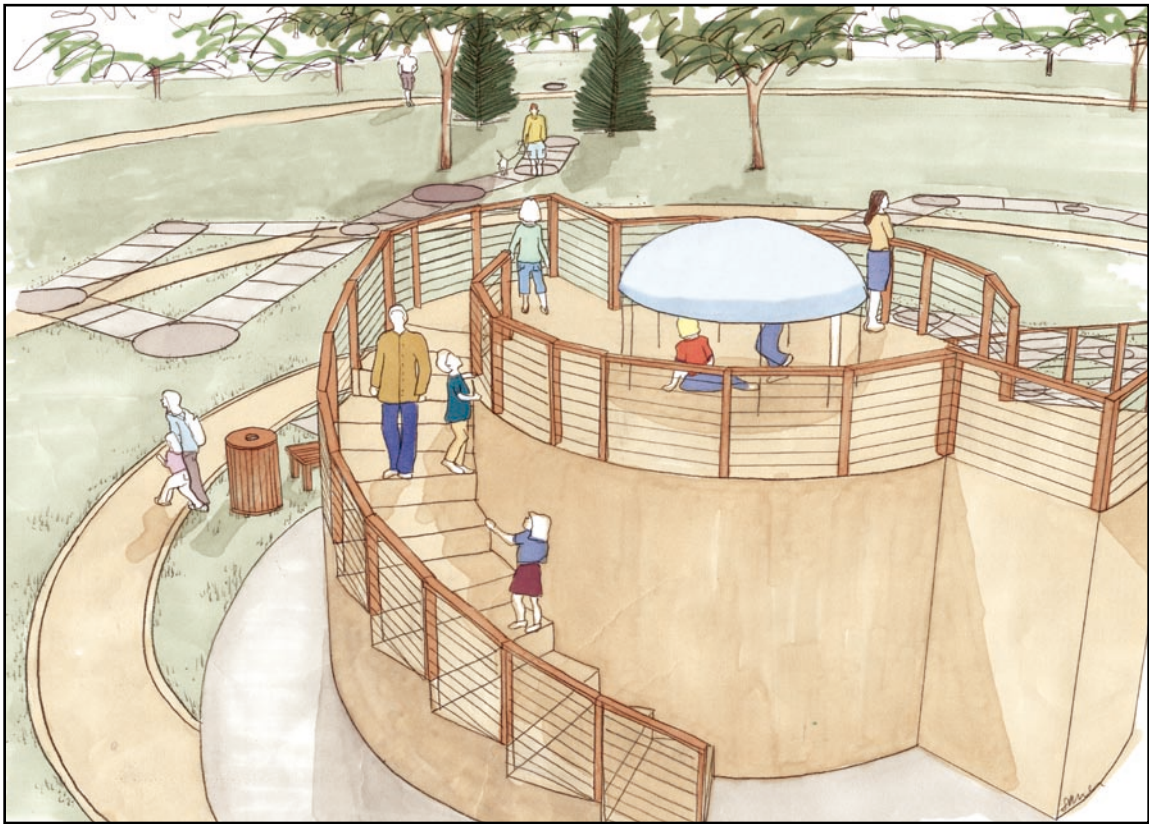


Your five senses play an important role in your daily life. Every moment in your life, you use at least one of your five senses. You touch, hear, see, taste, and smell in order to adapt to a new environment. The five senses are important for everyone. For those who are blind or deaf, they still use the other three senses.

The five senses work together all the time in order to allow your body to function properly and let your life

be easier. Your brain is the general CPU for your body. The nerves in your nose, skin, tongue, eye, and ear will take in all of the different things around your environment. It brings all the different sights, smells, feelings, sounds, and tastes together and sends messages to tell your brain what they are like. There, your brain processes the information and lets you know what you are smelling, seeing, feeling, hearing, or tasting.

Perspectives



Celestial Lookout Tower Perspective



Bench Swing Perspective



Pergola Perspective

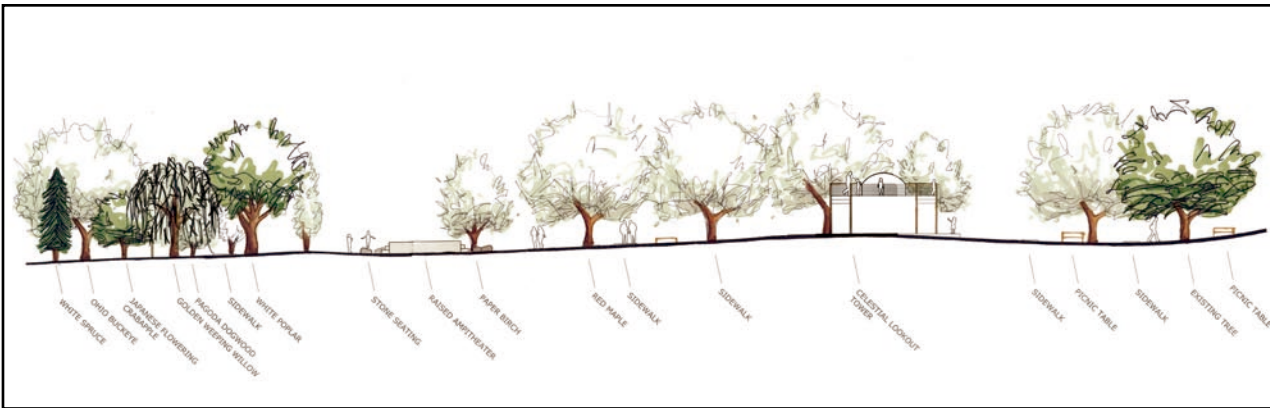


Garden Perspective

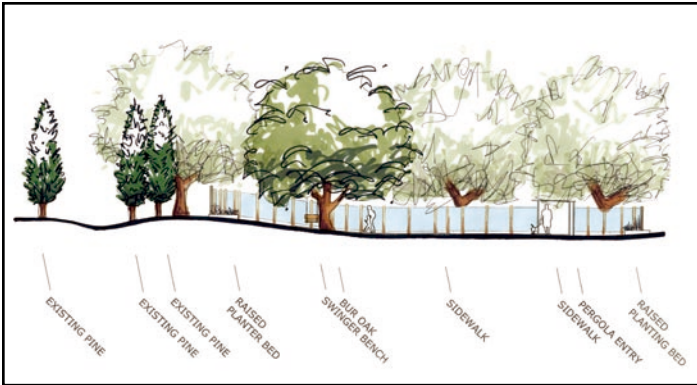


Amphitheater Perspective

Plan Section Elevations

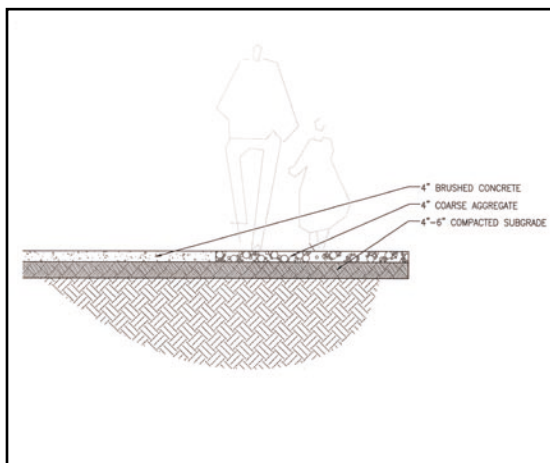


Section 1

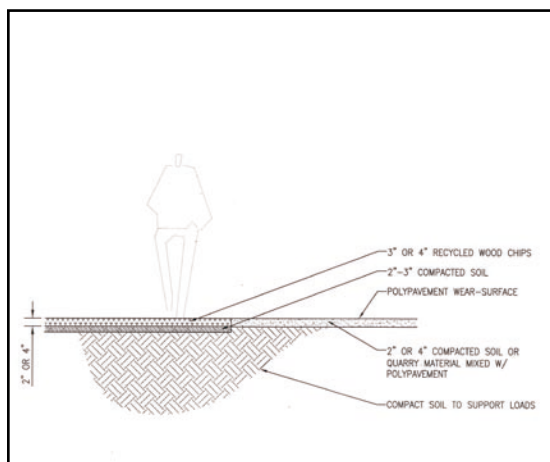


Section 2

Plan Details

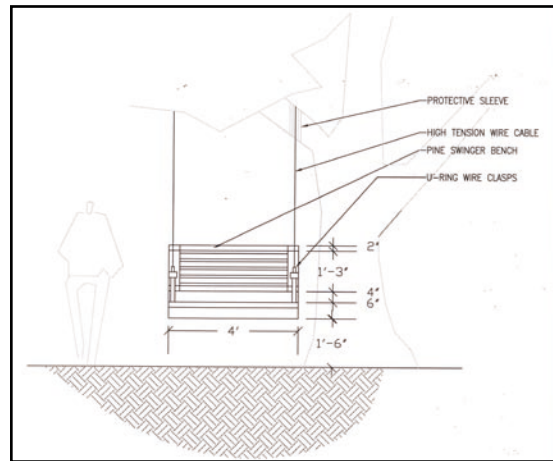


Within the Constellation demonstration area, it is important to delineate between two different areas. The Stars, and the connectors between the stars. In order to do this, coarse Poured Aggregate is used for the Stars, and traditional smooth concrete is used as the connector portion. Both are made in a similar way, though the particle differentiation is enough to create another texture within the design.

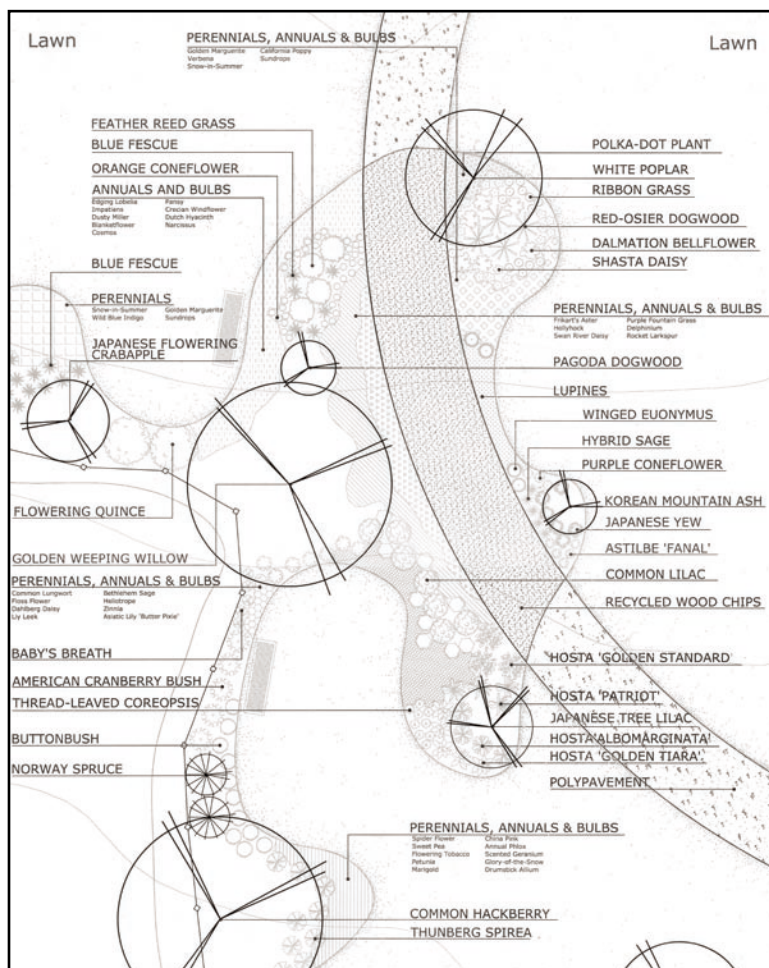


A unique opportunity arose while designing and implementing the unique layout of the planting beds. While this creates a very interesting and important visual separation of the individual planting beds, it also creates the opportunity to use very different surfaces for pedestrian travel. Because this is a Sensory Garden, it is important to engage the senses, therefore the use of PolyPavement with easy, and affordable recycled wood chips, the user is afforded the chance to hear, as well as feel the differences in the surfaces.

Within each Garden, are nooks and crannies that each have a unique and individual feeling in them. To emphasize this uniqueness, bench swings have been added. This enables users to envision themselves somewhere besides in the middle of the growing metropolis world of Fargo / Moorhead.



Planting Plan Detail



A planting plan was created for a section of the Sensory Garden that is in a transitional phase. Between the Textural Garden to the North and the Scent Garden to the South.

It is important to establish a standard of the plants used to create a textural and sense of smell difference within the gardens themselves.

This is a great area to pick to do a planting plan, since it is a transitional area, it is also a place that can give the visitor a good sense of the way that the entire garden is put together.

Plant List

Gooseberry Children's Sensory Garden - Plant List

Common Name:	Scientific Name:		Notes:	Zone:	Location:
COLOR:					
Trees					
Red Maple	<i>Acer rubrum</i> 'Autumn Flame'	tall tree	red flowers cover this silver-barked tree, fall color from yellow to red and all in between	3 to 9	Full sun
Ohio Buckeye	<i>Aesculus glabra</i>	tall tree	bright green, five-fingered leaves, fall color develops early and varies from yellow to golden orange.	3 to 8	Full sun to light shade
Red-Osier Dogwood	<i>Cornus sericea</i>	med to large shrub	Red-osier dogwood likes wet areas, and grows as a shrub to 10'. Red to purplish outstanding fall color on branches	3 to 8	Full sun
Winged Euonymus	<i>Euonymus alatus</i>	large shrub	bright red or rose-pink fall color, bright green leaves in early spring, catches and holds snow with its corky wings extended along horizontal branches	4 to 8	Full sun to shade
Border Forsythia	<i>Forsythia x intermedia</i>	large shrub	yellow show in springtime	4 to 8	Full sun
Thunberg Spirea	<i>Spiraea thunbergii</i>	med shrub	snow white flowers on dark bark	4 to 9	Full sun
Littleleaf Box	<i>Buxus microphylla</i>	med shrub	leaves shorter and narrower, rounded shrub, 4 ft tall and wide, yellow-green in winter	4	full sun to part or light shade
Western Red Cedar/ Juniper	<i>Juniperus scopulorum</i>	tall tree	holds color in winter/ triangle wedge shape	3 to 9	Full sun
Japanese Flowering Crabapple	<i>Malus floribunda</i> 'Snowdrift'	med tree	pink tinged white flowers, fragrant and remain showy for two weeks in cool weather, 15-25 ft tall and wide	3 to 7	Full sun
Perennials					
Hollyhock	<i>Alcea rosea</i>	perennial	2-8 feet tall verticle effect for informal gardens	3 to 8	Full sun
Golden Marguerite	<i>Anthemis tinctoria</i>	perennial	2-3 ft tall and 2 ft wide yellow-centered daisy like, tall, cut gardens	3 to 9	Full sun
Wall Rockcress	<i>Arabis caucasica</i> 'Snowcap'	perennial	10" tall and 8" wide, plant to creep from crevices in a rock garden or dry wall	4 to 7	Full sun
Western Mugwort	<i>Artemisia ludoviciana</i> var. <i>albula</i>	perennial	3' tall and wide, silver ribbons good contrast to white, pink, blue and lavender flowers in informal gardens	4 to 9	Full sun
Frikart's Aster	<i>Aster x frikartii</i>	perennial	3' tall, 3' wide, purple w/ yellow centers.	4 to 8	Full sun
Astilbe	<i>Astilbe x arendsii</i> 'Glow'	perennial	foot-long, leathery plumes stand about the foliage and come in a range of colors. 'Glow' -ruby red in color, tall, 36"	4 to 8	light to part shade
	<i>Astilbe x arendsii</i> 'Deutschland'	perennial	bright white, 20"	4 to 8	light to part shade
	<i>Astilbe x arendsii</i> 'Rheinland'	perennial	bright pink flowers, 30"	4 to 8	light to part shade
	<i>Astilbe x arendsii</i> 'Fanal'	perennial	dark crimson flowers w/ bronze leaf, 30"	4 to 8	light to part shade
Wild Blue Indigo	<i>Baptisia australis</i>	perennial	native wildflower, attracts butterflies, 3 to 6' tall	3 to 9	Full sun
Dalmation Bellflower	<i>Campanula portenschlagiana</i>	perennial	mat-forming, blue-flowered spreads beneath shrubs and taller perennials.	4 to 8	full sun to part shade
Snow-in-Summer	<i>Cerastium tomentosum</i>	perennial	6" x 24" wide spans	2 to 7	Full sun
Thread-leaved coreopsis	<i>Coreopsis verticillata</i>	perennial	found in grasslands and roadsides popular garden flower because of prolonged season cut-flower	3 to 9	full sun to part shade

Delphinium	<i>Delphinium elatum</i> 'Royal Aspirations'	perennial	3-7' tall, back of gardens. Combine well with iris, peonies, daylilies, shasta daisies, and lilies	2 to 7	Full sun
Delphinium	<i>Delphinium belladonna</i> 'Bellamosum'	perennial	Dark cerise blue flowers, 3-4' spikes	3 to 7	Full sun
Purple Coneflower	<i>Echinacea purpurea</i> 'Magnus'	perennial	deep rose-mauve flowers, 3 ft tall	3 to 8	Full sun
Blanketflower	<i>Gaillardia x grandiflora</i>	perennial	long growing season, but short lived, w/ other HOT colored flowers or pastel versions	2 to 10	Full sun
Daylily	<i> Hemerocallis hybrids</i>	perennial	huge, trumpet-shaped flowers in every color	3 to 9	Full sun to half shade
Siberian Iris	<i>Iris sibirica</i>	perennial	2-4' tall, graceful, beardless, yellow-crested blossoms in succession for several weeks	3 to 9	Full sun to light shade
Shasta Daisy	<i>Leucanthemum x superbum</i> 'Marconi'	perennial	6"-3" tall, cut flower	4 to 9	Full sun
Lupine	<i>Lupinus Hybrids</i>	perennial	3' tall, starry clumps of silky-haired, matte green leaves, dense spikes of pealike flowers rise above the foliage.	4 to 9	Full sun
Forget-me-nots	<i>Myosotis scorpioides</i>	perennial	light to part shade, 6-8" tall	3 to 8	Light to part shade
Sundrops	<i>Denothera tetragona</i>	perennial	grow 18-36" tall, forming large stands	4 to 8	Full sun
Orange Coneflower	<i>Rudbeckia fulgida</i>	perennial	like black-eyed susans, 2-3' tall and spreads rapidly	3 to 9	Full sun to part shade
TEXTURE:					
Trees					
Paper Birch	<i>Betula papyrifera</i>	tall tree	gleaming, creamy white, peeling bark, marked with black as ages	2 to 5	Full sun
Pagoda Dogwood	<i>Cornus alternifolia</i>	med tree	Fruit, 1/2-inch-long sickle-shaped and spiral around the stem dark green on top, yellow-green beneath	4 to 7	Full sun to part shade
Russian Olive	<i>Elaeagnus angustifolia</i>	med tree	lance shaped silver leaves, sweetly fragrant pale yellow flowers in spring, attracts birds	3 to 7	Full sun
Golden Weeping Willow	<i>Salix alba</i>	tall tree	eight gold branches that weep gracefully from massive scabrid branches, bright yellow-green early in spring, mature to dark green with silver undersides	3 to 9	Full sun
Korean Mountain Ash	<i>Sorbus alnifolia</i>	tall tree	disease resistance and showy white flowers blooming late in spring, berries persist well after leaves turn	4 to 7	Full sun
American Cranberry Bush	<i>Viburnum trilobum</i>	med shrub	red berries throughout winter	2 to 8	Full sun
Norway Spruce	<i>Picea abies</i>	tall tree	stiffly pyramidal turning graceful with age dark green needles, with purple-red cones turning to brown	3 to 7	Full sun
White Spruce	<i>Picea glauca</i>	tall tree	pale green	2 to 8	Full sun to part shade
Perennials					
Japanese Barberry	<i>Berberis thunbergii</i>	small shrub	dense shrub with shiny, spoon-shaped bright green leaves, turn scarlet in fall, have thorny, zigzagged, arching stems.	4 to 9	Full sun to half shade
Baby's-Breath	<i>Gypsophila paniculata</i>	perennial	cloud-like filler effect in garden	3 to 9	Full sun
Hosta	<i>Hosta 'Albomarginata'</i>			3 to 9	Full sun
	<i>Hosta 'Patriot'</i>	perennial	leaves arise from the ground forming lush clumps that vary in size. 'Patriot' =green and white leaves with lavender flowers	3 to 9	Light to full shade
	<i>Hosta 'Golden Tiara'</i>	perennial	Golden Tiara' = variegated foliage, with lavender purple flowers	3 to 9	Light to full shade
	<i>Hosta 'Golden Standard'</i>			3 to 9	Light to full shade

Bluebeard	<i>Caryopteris x clandonensis</i>	small shrub	bright blue flowers and fine-textured silvery leaves in late summer and fall, fragrant, fringed flowers attract bees, butterflies, and hummingbirds. Rounded to 3' tall and wide	4 to 8	Full sun to part shade
Buttonbush	<i>Cephalanthus occidentalis</i>	med shrub	round white flower heads bloom in midsummer, fragrant flowers attract bees, glossy green oval leaves, rounded 5-7 ft.	4 to 10	Full sun to part shade
Flowering Quince	<i>Chaenomeles speciosa</i>	large shrub	showy early to mid-spring blooms craggy outline in winter, plant with plants that are attractive all year.glossy dark green leaves when mature, 6-10' tall and wide	4 to 9	Full sun
Common Lungwort	<i>Pulmonaria officinalis</i>	perennial	long -shaped leaves with white spots, one of the earliest lungworts to bloom, 1 ft tall by 1.5 ft wide	3 to 8	light to full shade
Bethlehem Sage	<i>Pulmonaria saccharata 'Mrs. Moon'</i>	perennial	most ornamental lungwort, has rough-haired, elliptical evergreen leaves with variable spotting, 1-1.5' tall by 2 ft wide	3 to 8	light to full shade
Hybrid Sage	<i>Salvia x superba</i>	perennial	purple-violet flowers with pungent foliage	3 to 7	Full sun
Japanese Yew	<i>Taxus cuspidata</i>	large shrub	flat, 1/2-inch-long sickle-shaped and spiral around the stem dark green on top, yellow-green beneath	4 to 7	Full sun to full shade
Hungarian Speedwell	<i>Veronica austriaca subsp.teucrium</i>	perennial	6-20" tall, 3-4" wide mounds, pure blue flowers	3 to 8	Full sun
Ornamental Grasses					
Quaking Grass	<i>Briza media</i>	ornamental grass	resembles rattle-snake tails, 12-18" tall flowers, 1' tall	4 to 8	full sun to part shade
Feather Reed Grass	<i>Clamagrostis acutiflora 'Karl Foerster'</i>	ornamental grass	5-7 ft tall, 18-24" wide, forms in upright clumps, reddish-bronze flower color in green foliage.	4 to 9	Partial sun
Blue Fescue	<i>Festuca glauca</i>	ornamental grass	pale silvery blue leaves, small mounds, 6-12" tall & wide	4 to 9	Full sun
Japanese Blood Grass	<i>Imperata cylindrica 'Red Baron'</i>	ornamental grass	narrow, upright, grassy leaves with red tips, two tone effect by summer, flaming scarlet until frost turns it bronze and winter bleaches it to straw color, 12"to 24" tall and wide	4 with winter protection	best color in Full Sun
Purple Fountain Grass	<i>Pennisetum setaceum 'Atropurpureum'</i>	ornamental grass	burgandy-bronze leaved, arching warm-season grass' tall and 2-2 1/2' wide	annual	Full sun
Ribbon Grass	<i>Phalaris arundinacea 'Picta'</i>	ornamental grass	longitudinally striped green-and-white leaves that produce a flash of white in the garden, 3'tall and wide spreading, invasive nature	3 with snow cover	part to full shade
Prairie Dropseed	<i>Sporobolus heterolepis</i>	ornamental grass	2-3' tall by 18-24" wide, forms in arching clumps, green foliage, with golden yellow fall color	3 to 9	Full sun
Ferns					
Japanese Painted Fern	<i>Athyrium nipponicum 'Pictum'</i>	Fern	maroon-splashed, silvery gray leaves, 12-18" long w/ maroon midribs, plant w/ blue leaved hasas & blue flowers	3 to 9	part to full sun
Christmas Fern	<i>Polystichum acrostichoides</i>	Fern	1-2' tall, 2 1/2' wide, plant on slopes in open shade where soil drains to fast for others	3 to 9	part to full sun
SMELL:					
Trees					
Common Lilac	<i>Syringa vulgaris</i>	large shrub	tall straggly plant with blossoms only at top of bush, sucker prolifically, requires constant pruning, 20-30 ft tall	3 to 7	Full sun
Japanese Tree Lilac	<i>Syringa reticulata</i>	med tree	huge clusters of creamy white flowers for two weeks in early summer, bark is shiny red, 20-30 ft tall and 25 ft wide	3 to 7	Full sun

Perennials					
Chives	<i>Allium schoenoprasum</i>	Herb	tubular green leaves white stems	3 to 9	Full sun
Lavender	<i>Lavandula angustifolia</i>	Herb	clad in narrow, gray green to gray aromatic evergreen leaves. Tight spikes of small, fragrant flowers, bloom at the stem tips for a month in early spring.	5 to 8	Full sun
Blue Phlox	<i>Phlox divaricata</i>	perennial	Wildflower, light fragrance, light blue color	3 to 9	light shade
Creeping Phlox	<i>Phlox stolonifera</i>	perennial	woodland wildflower, most fragrant of phloxes, white with yellow eyes	2 to 8	light to full shade
TASTE:					
Flowers and Herbs					
Chives	<i>Allium schoenoprasum</i>	Herb	Honey-scented chive blossoms have oniony flavor, stalks onion-like also. showy lavender blossoms, tightly packed globes rise above dense clumps of tubular green leaves	3 to 9	Full sun
Calendula / Pot Marigold	<i>Calendula officinalis</i>	flower	use petals to add bite to soups and salads, well-chopped flowers add color and flavor to rice dishes (like saffron)	2 to 11	Full sun
Chrysanthemum	<i>Chrysanthemum coramurium</i>	flower	eat leaves raw or cooked	4 to 9	Full sun
Squash Blossom	<i>Cucurbita species</i>	Vegetable	new tips of young shoots taste slightly salty and crunchy. Toss flowers into stew or fry in fritters or stuff with herbed goat cheese.	warm, dry, & sunny	Full sun to part shade
Daylily	<i>Heimerocallis species</i>	flower	too bitter to eat raw, but they open, and taste like green beans. Open, they last mildly sweet. huge, trumpet-shaped flowers in every	3 to 9	Full sun to half Shade
Honeysuckle	<i>Lonicera spp.</i>	flower	eat flowers whole		
Mint	<i>Mentha species</i>	Herb	decorative and tasty		
Runner bean	<i>Phaseolus coccineus</i>	Vegetable	eat flowers whole	annual	
Rose	<i>Rosa species</i>	flower	used to garnish game hens or fish. Almost any fragrant rose will taste sweet, use in summery salads, also garnish dessert with.	3 to 9	Full sun
Sage	<i>Salvia officinalis</i>	herb	use to season chicken or turkey along with rosemary, sage flowers have a warm, herby flavor with a hint of heat.	3 to 7	Full sun
Signet / Threadleaf Marigold	<i>Tagetes signata / Tagetes tenuifolia</i>	flower	spicy, lemon-scented signet marigolds are tastier than most others, somewhat like tarragon.	2 to 11	Full sun
Nasturtium	<i>Tropaeolum majus</i>	flower	garnish salmon or chicken dishes, slightly astringent and peppery, flowers work best in savory dishes.	2 to 11	Full sun to Part Shade
Violet	<i>Viola spp.</i>	flower	eat flowers whole	6 to 9	Light to part shade
Johnny-Jump-Up	<i>Viola tricolor</i>	flower	eat flowers whole		
Pansy	<i>Viola x wittrockiana</i>	flower	petals have a soft, minty flavor that lends to sweet or savory dishes.	2 to 11	Full sun to Part Shade
Fruits, Vegetables					
Hazelnut	<i>Corylus avellana</i>	Nut	15-20 ft tall, round lacy, reddish brown nuts have closed husks, and grow in clusters	4 to 8	Full sun
Cucumber	<i>Cucumis sativus</i>	Vegetable	fresh eating and pickling, grow picklers, semi-inning or bush types	annual	Full sun to part shade
Carrot	<i>Daucus carota var. sativus</i>	Vegetable		consistent moisture	Full sun
June-Bearing Strawberry	<i>Fragaria x ananassa</i>	Fruit		3 to 10	Full sun
String Bean	<i>Phaseolus vulgaris</i>	Vegetable	thick, crunchy, blue-green pods	warm climates	Full sun
Pea	<i>Pisum sativum</i>	Vegetable	require cool weather, grow green (shelling) peas for the round seeds in the pod		Full sun to part shade

Radish	<i>Raphanus sativus</i>	Vegetable	round, red vegetable with green leaves. Eat raw or cooked	cool moist weather	Full sun to part shade
Rhubarb	<i>Rhubarb x cultorum</i>	Vegetable	tart, reddish leaf stalks are delicious in sauces and pies, tart when ate fresh		Full sun to part shade
Raspberry	<i>Rubus idaeus</i>	Fruit	most popular for fresh eating, jewel like colored fruit.	3 to 9	FULL SUN for at least 6 hrs a day
Blueberries	<i>Vaccinium corymbosum</i>	Fruit	green, turning red in fall. 8-15 ft tall	4 to 9	FULL SUN for at least 6 hrs a day
Annuals					
Flossflower	<i>Ageratum houstonianum</i>	annual	one of the purest blues in the garden, furry-looking flowers, grow 6-8" tall, and wide cushions.	2 to 11	Full sun
Swan River Daisy	<i>Brachycome iberidifolia</i>	annual	abundant, delicately fragrant, 1" daisy-like flowers in blue, pink, violet, or white with dark or yellow centers. Grow 8-16" tall and wide. Rock or cottage gardens, cascades.	2 to 11	Full sun
Sapphire Flower	<i>Browallia speciosa</i>	annual	12-18" tall and wide, edging and foreground plant, amethyst flower frons from bright green leaves	2 to 11	Light to part shade
China Aster	<i>Callistephus chinensis</i>	annual	single, daisylike purple flowers, from spidery to pompon. 6-36" tall by 1' or more wide	2 to 11	Full sun or light shade
Dusty-Miller	<i>Centaurea cineraria</i>	annual	silvery gray, felt-covered leaves, bluntly lobed. 6-18" tall and wide. Enhance other flowers' colors when tucked between	2 to 4	Full Sun
Spider Flower	<i>Cleome hasslerana</i>	annual	tall sturdy stems are topped with 3" wide rounded clusters of pink, violet, or white blossoms. Large leaves with seven lobes. 3-4' tall by 1 ft wide.	2 to 11	Full sun or Partial shade
Coleus	<i>Coleus x hybridus</i>	annual	multicolored foliage, favorite shade plant, with tooth-edged leaves, either broad or narrow	2 to 11	Partial to full shade
Rocket Larkspur	<i>Consolida ambigua</i>	annual		2 to 11	Full sun or light shade
Cosmos	<i>Cosmos spp</i>	annual	salicy, 3-4" wide yellow centered daisy-type blossoms in bright magenta, pinks, roses, whites, or bicolored. 3-6 ft tall or newer strains 2-3 ft tall. Good cut flower, which prolongs its bloom period.	3 to 10	Full sun
Annual Dahlia	<i>Dahlia x hybrida</i>	annual			
China Pink	<i>Dianthus chinensis</i>	annual			
Dahlberg Daisy	<i>Dyssodia tenuiloba</i>	annual			
California Poppy	<i>Eschschotzia californica</i>	annual			
Globe Amaranth	<i>Gomphrena globosa</i>	annual			
Heliotrope	<i>Heliotropium arborescens</i>	annual			
Polka-Dot-Plant	<i>Hypoestes phytostachya</i>	annual			
Impatiens	<i>Impatiens wallerana 'Deco Orange'</i>	annual			
Sweet Pea	<i>Lathyrus odoratus</i>	annual			
Edging Lobelia	<i>Lobelia erinus</i>	annual			
Sweet Alyssum	<i>Lobularia maritima</i>	annual			
Flowering Tobacco	<i>Nicotiana glauca</i>	annual			
Geranium	<i>Pelargonium x domesticum</i>	annual			
Petunia	<i>Petunia x hybrida</i>	annual			
Annual Phlox	<i>Phlox drummondii</i>	annual			
Marigold	<i>Tagetes patula 'Disco Flame'</i>	annual			
	<i>Tagetes tenuifolia 'Golden Gem'</i>	annual			

Verbena	<i>Verbena x hybrida 'Peaches and Cream'</i>	annual		
Pansy	<i>Viola x wittrockiana</i>	annual		
Zinnia	<i>Zinnia elegans</i>	annual		
	<i>Zinnia angustifolia</i>	annual		
Bulbs				
Lily Leek	<i>Allium moly</i>	bulb		
Drumstick Allium	<i>Allium sphaerocephalum</i>	bulb		
Crecean Windflower	<i>Anemone blanda</i>	bulb		
Glory-of-the-Snow	<i>Chionodoxa luciliae</i>	bulb		
Snow crocus	<i>Crocus chrysanthus</i>	bulb		
Spanish Bluebell	<i>Hyacinthoides hispanica</i>	bulb		
Dutch Hyacinth	<i>Hyacinthus orientalis</i>	bulb		
Asiatic Lily	<i>Lilium 'Butter Pixie'</i>	bulb	v	
	<i>Lilium 'Red Pixie'</i>	bulb		
	<i>Lilium 'Sorbet'</i>	bulb		
	<i>Lilium 'Yellow Pixie'</i>	bulb		
Grape Hyacinth	<i>Muscari botryoides</i>	bulb		
Narcissus	<i>Narcissus cyclamineus 'Tete-A-Tete'</i>	bulb		

Personal Identification



Erin M Sauer

Digital Presentation

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