



University of Massachusetts Amherst
Landscape Architecture 497D: April and May, 2006
Senior Studio Project, Professor Annaliese Bischoff, Learning by
the Yard: A Master Plan and Construction of a Butterfly Garden
for Two Elementary Schools in Turners Falls, MA

Introduction: Community Service Learning

Spring Semester

- Conduct case studies of successful designs
- Study developmental needs of children
- Participate in Earth Day
- Visit site and work with children
- Analyze site and program
- Create master plans
- Begin butterfly garden

Summer

- Organize gifting of “Miss Rumphius” books
- Finish planting butterfly garden





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Objectives

- To support joyful learning and play through the development of concepts celebrating the site and region.
- To demonstrate an understanding of design sensitive to children's developmental needs while promoting environmental stewardship.
- To apply knowledge and understanding to site design for elementary school-aged children, their teachers, and other users of the schoolyard.



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Location of Turners Falls



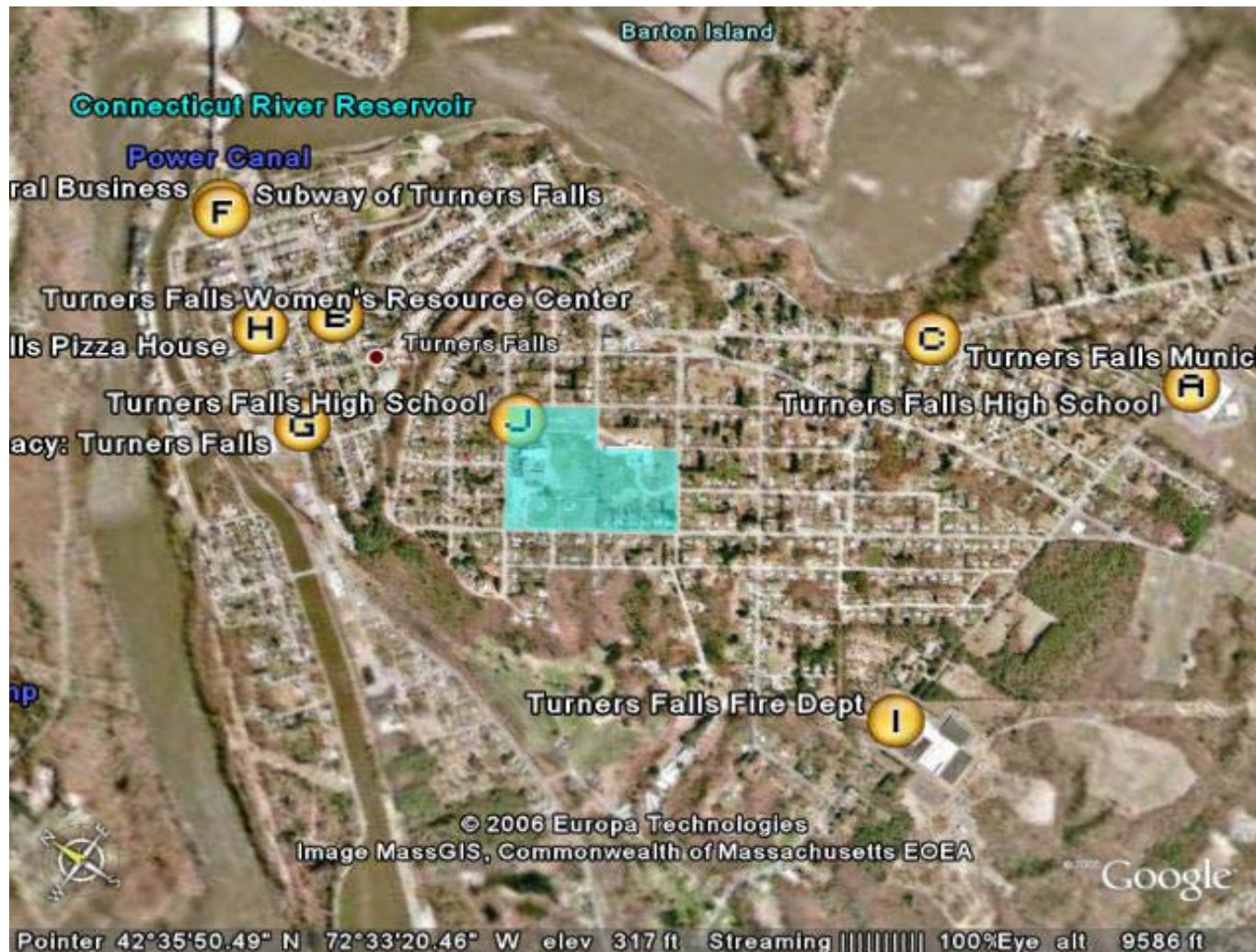


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Location of Hillcrest and Sheffield Schools





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Sheffield School

- Grades 3-6
- Approximately 300 students.





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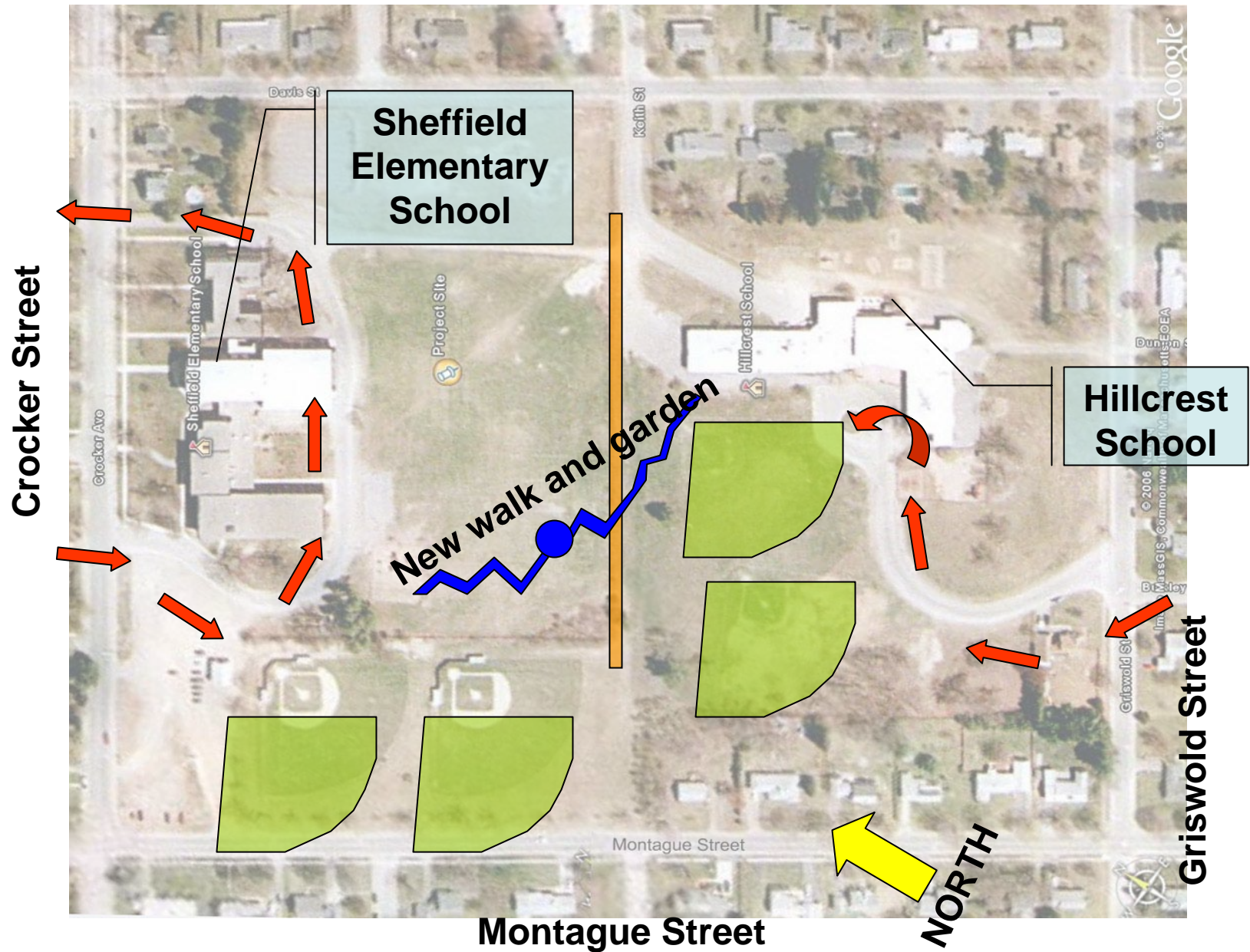


Hillcrest School

- Grades K-2
- Approximately 200 students.




Site Analysis





Case Studies: Learning about schoolyard design and children's needs

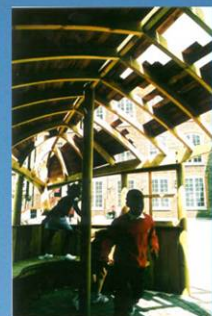






THE CHARLES DICKENS PRIMARY SCHOOL IN SOUTHWARK LONDON WAS DESIGNED OVER TWO PHASES BY THEORIES LANDSCAPES. MUCH LIKE THE SCHOOLS IN TURNERS FALLS, THE DESIGN INCLUDES MANY ART WORKS DONE BY THE STUDENTS THEMSELVES.

THE DESIGN CALLED FOR A SERIES OF SEMI-SHELTERED AND SHELTERED AREAS OR TOWERS. THE STUDENTS WORKS WERE INCORPORATED INTO THE MOSAIC TILING IN WALL PANELS AND SEATING. THESE MOSAIC PATTERNS ARE PAIRED WITH COLORFUL DECORATIVE METAL GATES AND FENCES.


A NICE PART OF THIS PLAYGROUND IS THAT THE CONTRACTOR WAS ESSENTIALLY THE STUDENTS. MUCH OF THE WORK AND PATTERN DESIGN WAS DONE BY THE CHILDREN, AND THEORIES LANDSCAPES WAS RESPONSIBLE FOR ASSEMBLING THESE COMPONENTS. THIS IS A GREAT EXAMPLE OF ALLOWING THE CHILDRENS WORK DOMINATE THE DESIGN.

THE TOTAL COST OF THE PROJECT WAS £ 133,000 WHICH IS RELATIVELY INEXPENSIVE CONSIDERING THIS PLAYGROUND IS NOW A LIFE-LONG EXPRESSION OF THE CHILDREN OF THE CHARLES DICKENS PRIMARY SCHOOL.



LOVE IS IN ALL THINGS A MOST WONDERFUL
TEACHER . . .
-CHARLES DICKENS

Charles
Dickens
Primary
School





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Case Studies



THE EDIBLE SCHOOLYARD

MARTIN LUTHER KING, JR. MIDDLE SCHOOL • BERKELEY, CA

THE EDIBLE SCHOOLYARD IS A NON-PROFIT PROGRAM LOCATED ON THE CAMPUS OF MARTIN LUTHER KING JUNIOR MIDDLE SCHOOL IN BERKELEY, CALIFORNIA. THE COOKING AND GARDENING PROGRAM GREW OUT OF A CONVERSATION BETWEEN CHEF AND AUTHOR ALICE WATERS, AND FORMER KING MIDDLE SCHOOL PRINCIPAL NEIL SMITH. PLANNING COMMENCED IN 1995 AND TWO YEARS LATER, MORE THAN AN ACRE OF ASPHALT PARKING LOT HAD BEEN CLEARED. A COVER CROP WAS PLANTED TO ENRICH THE SOIL, AND IN 1997, THE SCHOOL'S UNUSED 1930S CAFETERIA KITCHEN WAS REFURBISHED TO HOUSE THE KITCHEN CLASSROOM.



MISSION

THE MISSION OF THE EDIBLE SCHOOLYARD AT MARTIN LUTHER KING, JR. MIDDLE SCHOOL IS TO CREATE AND SUSTAIN AN ORGANIC GARDEN AND LANDSCAPE THAT IS WHOLLY INTEGRATED INTO THE SCHOOL'S CURRICULUM AND LUNCH PROGRAM. IT INVOLVES THE STUDENTS IN ALL ASPECTS OF FARMING THE GARDEN - ALONG WITH PREPARING, SERVING AND EATING THE FOOD - AS A MEANS OF AWAKENING THEIR SENSES AND ENCOURAGING AWARENESS AND APPRECIATION OF THE TRANSFORMATIVE VALUES OF NOURISHMENT, COMMUNITY, AND STEWARDSHIP OF THE LAND.



GARDEN

THE EDIBLE SCHOOLYARD GARDEN IS LOCATED ON THE EASTERN SIDE OF THE SCHOOL, LOOKING OVER THE CAMPUS, THE SAN FRANCISCO BAY, AND THE GOLDEN GATE BRIDGE. AN ACRE OF BEDS IS PLANTED WITH SEASONAL PRODUCE, HERBS, VINES, BERRIES AND FLOWERS AND SURROUNDED BY FRUIT TREES. PATHWAYS WIND THROUGH THE BEDS TO THE RAMADA, SEED PROPAGATION TABLE, TOOL SHED, CHICKEN COOP, AND PIZZA OVEN. STUDENTS AND ADULTS WORK TOGETHER TO PREPARE THE BEDS, SOW THE SEEDS, TRANSPLANT, COMPOST, WATER, WEED, AND HARVEST.

KITCHEN

THE EDIBLE SCHOOLYARD KITCHEN IS HOUSED IN A COLORFUL BUNGALOW THAT SITS AT THE GARDEN'S SOUTHERN BORDER. WARM, BRIGHT AND CHEERFUL, THE KITCHEN IS A BACKDROP FOR ENTHUSIASTIC STUDENTS WHO VIEW THE GARDEN THROUGH THE NORTH-FACING WINDOWS - MAKING THE TACIT CONNECTION BETWEEN SEASONALITY, PLANTS, AND FOOD.

CLASSROOM

THE CLASSROOM, KITCHEN, AND GARDEN FORM A TRIAD OF EDUCATIONAL EXPERIENCE. LESSONS TAUGHT IN THE CLASSROOM ARE ENRICHED BY HANDS-ON GARDEN AND KITCHEN ACTIVITIES, WHILE CONCEPTS THAT ARISE IN THE KITCHEN AND GARDEN ARE MEANINGFULLY DISCUSSED IN THE CLASSROOM. THE SETTINGS ARE MOST PRODUCTIVE WHEN LINKED, AND FOSTER STUDENTS' MULTILEVELED UNDERSTANDING OF THE NATURAL WORLD. TEACHERS PROVIDE STUDENTS WITH DIRECT INSTRUCTION IN SUPPORT OF KITCHEN AND GARDEN ACTIVITIES, SUCH AS PLANT STRUCTURE AND FUNCTION, COMPOSTING, VERMICULTURE, AND VOCABULARY. BECAUSE ALL STUDENTS PARTICIPATE IN THE EDIBLE SCHOOLYARD, TEACHERS REFERENCE GARDEN AND KITCHEN EXPERIENCES TO ACTIVATE PRIOR KNOWLEDGE AND SUPPORT THE TEACHING OF KEY CONCEPTS.



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SECONDARY CASE STUDIES BY JESSE HARRIS



SOUTHSIDE PARK, SACRAMENTO, CA.



HIGHLANDS PARK, SAN CARLOS, CA.



LEFT: USE OF
PLAYFUL SHAPES
AND CHARACTERS.

RIGHT: VIBRANT
COLORS USED
FOR THE PLAYGROUND
STRUCTURES.



USE OF MOSAIC TILE WORK





Landscape Architecture 497D: Capstone Senior Studio Project

Learning by the Yard: A Master Plan for the Sheffield and Hillcrest Elementary Schools in Turners Falls, MA

Case Studies

Camden Children's Garden

Location: Camden New Jersey

Project Purpose: to create a place for young people to explore and discover the natural world as well as provide horticultural experiences for creative and imaginative play.

Context: The Camden Children's Garden is set on the Southern New Jersey waterfront along the Delaware River which separates New Jersey from Delaware. Amenities and recreation near the site include the Aquarium, Tweeter Center, Battleship N.J., the Riversharks Minor League Baseball Team, and the historic section of Camden.

Although the garden is located in the thriving waterfront district, the whole of the city is in a state of industrial decline and has been listed as the most dangerous city in the United States as of 2004. This allows the Camden Children's Garden to act as a beacon of light for parents to bring their children to a fun and safe place



Project Design Intent: to educate children as well as adults about their environment in an imaginative and interactive way. The easy interaction with gardens is achieved by the use of small and large scale installations to create a sense of fantasy in the spaces as well as excite those entering the park from a distance. The use of different media and everchanging themes as you move through the park help to keep the visitor engaged and excited to see what is up ahead. The use of bright colors and textures thoroughly appeals to the tactile senses of children and adults alike.



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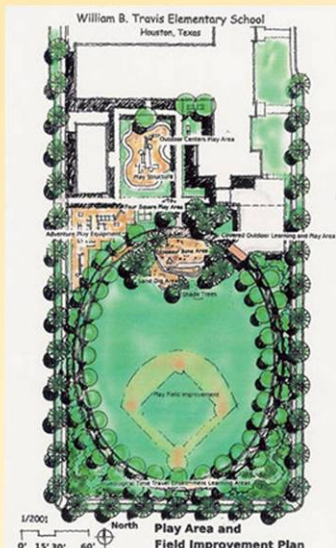
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Case Studies

Travis Elementary School: Dinosaur Park

Houston, Texas



Travis SPARK Park Master Plan by Landscape Architect and Travis parent, Scott Slaney with updates by Landscape Architect, Keji Asakura.



The school was selected by SPARK (School Park Program), a non-profit organization that attempts to make school playgrounds accessible to the community by using federal grant money, school district funds, and private donations to fix up playgrounds.

The "Dinosaur" park is successful because it works as both an urban public school playground and as a neighborhood park. The park is located 2.5 miles from Houston's central business district. The "Friends of Travis" formed in 1989 pulled together community residents to support the neighborhood school.



The dinosaur concept originated from students in grades K-5, who were asked to design their "ultimate playground." Their ideas and input are reflected in the unique design of the park, involving artistic, botanical, archeological, and geological themes. The park was started in 1989 and major improvements occurred in 1992, 1998, 2002, and 2003.



In addition to planting many trees, installing a jogging track, and patining playground equipment, local sculptor, Paul Kittleson created the huge dinosaur skeleton and faux archeological dig out of concrete. the phony bones can be climbed on, climbed under, or whatever else.





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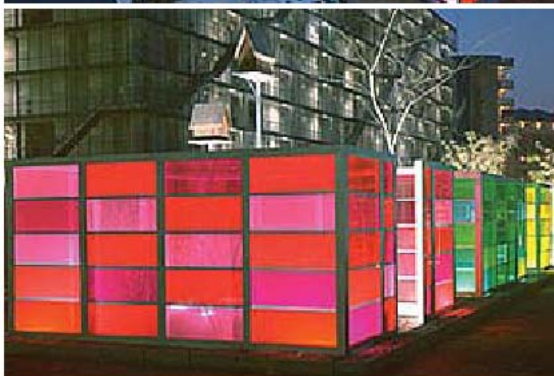
Case Studies



KITAGATA GARDENS

Location: Kitagata, Japan
Designer: Martha Schwartz
Built 2000

- Before being made into a housing project, the site existed as raised dykes creating rice patties
- Metaphorically representing the strict geometry of the once existing raised dykes and sunken rice patties, the park is divided into a series of sunken spaces that create areas for all ages
- The Gardens provide a "fifth building" on the housing project site that is an integral part of the development and social structure
- This is a good model for our schoolyard study because of the strong connection that it made with the buildings and because of the range of ages and interests the design provides for
- The park was designed to provide a variety of opportunities for passive enjoyment or active play by including water features, children's play opportunities, and public art
- As a landscape architect, Martha Schwartz has played off of the surrounding architecture and created a "fifth building" through the strict geometry of the garden spaces making a strong connection between indoor and outdoor space in the housing project



- The design was innovative in that it relied heavily on hardscape materials and public art. The hardscape was used not only to keep with the architectural connection to the surrounding buildings but also to keep the site very low maintenance
- The park had an impact on the public perception of what a park should look like compared to traditional parks
- The housing project overall was a test of how social space can be implemented into a sustainable environment in Japan
- This project is interesting because it was a test in "feminism in housing design" as all four buildings and the gardens were designed by women
- The project aimed toward an educational goal of providing the children of the housing complex with interactive play areas that would spark their imagination by using abstract forms and colors to represent seasons, landscapes, and objects
- Areas such as the 4 Seasons Garden use four sunken colored glass cubed-shaped rooms that exemplify colors and feelings that are associated with each season incorporating abstract educational values to the garden
- Other areas such as the Willow Court, has a flooded plain planted with willows and other wetland plants and is surrounded by a boardwalk. This provides an abstract representation of a wetland landscape native to this part of Japan
- Kitagata Gardens is an excellent example of a non-traditional park and the values it can still hold for recreational and educational purposes for all ages





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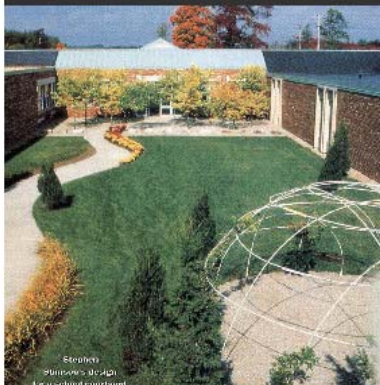
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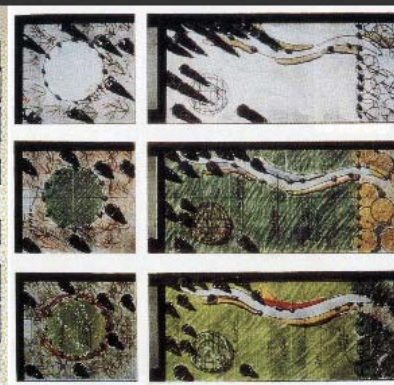
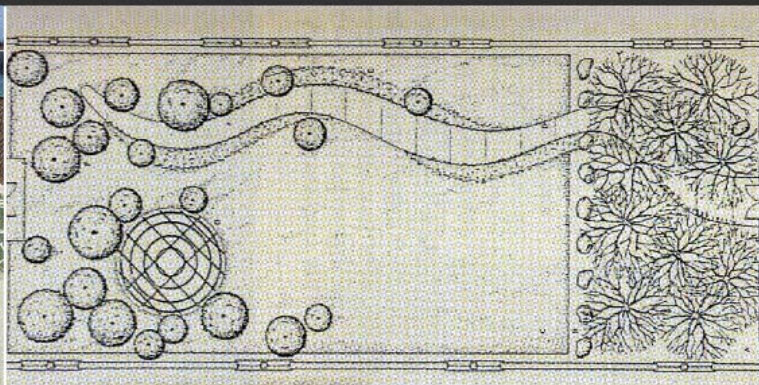
THOMAS PRINCE ELEMENTARY SCHOOL

DESIGN BY: STEVEN STIMPSON ASSOCIATES

SITE PHOTOS



Stephen Stimpson design
for the school courtyard



SIGNIFICANCE

The design of the Thomas Prince Elementary School in Princeton, Massachusetts by Stephen Stimpson, is the perfect model for a school yard study. The minimalist approach aims to transform the quality of the schools courtyard with simple gestures, which provide for a unique design. Using many of the principles for creating space and desire lines, an area where landscape architects excel, Stimpson is able to compose a landscape that adheres to the needs of the children attending the elementary school, while also providing for the functional needs of the school.

DESIGN PHILOSOPHY

The minimalist design philosophy used by Stimpson creates a garden for the school that shows "how space can be organized to create an experience". With this as a defining feature, Stimpson conceived of a garden using simple colors and simple gestures to define space, frame views, and allure people into the garden. Broken down into two shaded sides, the design intends to make the courtyard feel longer because of its, "undulating qualities". Moreover, the shaded area at the entrance to the garden help to give a "sneak peak" view out from the building into the new garden landscape. Coupled with this, a dome sculpted from re-used rebar was strategically placed in the corner on the far end of the area to act as a focal point and draw people into the landscape. This dome carries historical significance because it is modeled after a Native American Quonset hut. Besides being the primary focal point visually, the dome is also a play area for children, showing the careful interaction between detailed design and intended user. Stimpson recognizes the different needs of the garden and developed a design language that, "would speak to children without descending into cliché".

SPECIAL FEATURES

A major element of the design, as well as, a special feature was the use of light and shade to create different experiences. As stated by Stimpson, "The views penetrate through the paces from one into the next, from shade to sunlight, to shade". Keeping with the theme of simple gestures that have powerful results. The two shaded side do more for the landscape than simple provide areas for reprieve from the hot sun. Shade is used as a key element adding to the spatial qualities of the garden and providing for a range of experiences. Similarly, the dome is covered with vegetation creating different spatial qualities given the time of year.



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Earth Day Parade: UMass students joining
elementary school children in a parade





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Earth Day Parade Destination: Program at Great Falls Discovery Center





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Elementary student-designed mural gateway





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The new walk and garden site



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UMass students
demonstrate how to
plant donated forsythia
shrubs





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Butterfly garden planting at the new garden site





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Students fly kites to celebrate planting success.





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Beginning Design Program Requirements

- Create places for children to gather, garden, or other interactive plantings
- Create places for children to feel sheltered
- Use a native planting palette. No toxic plants!



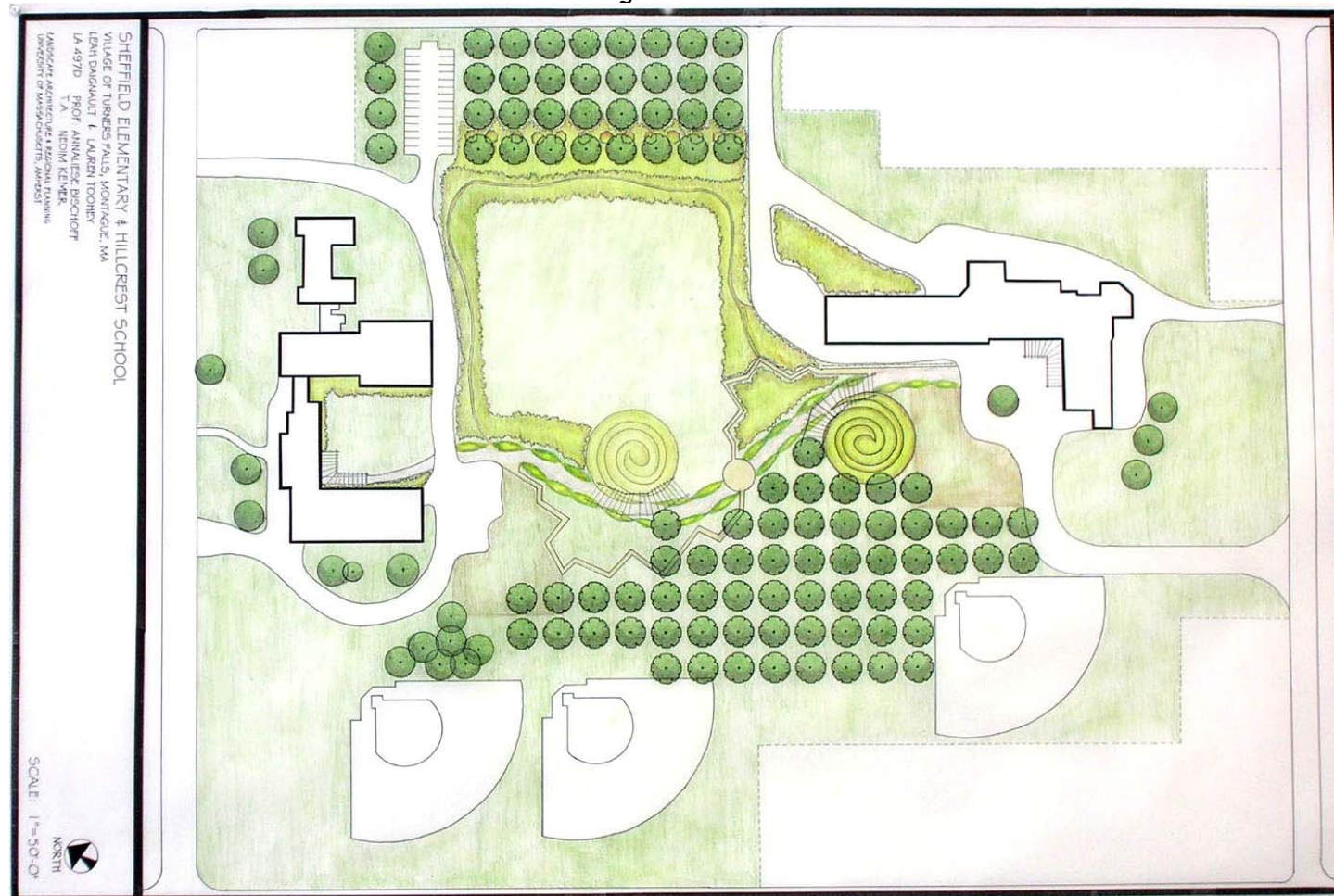


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UMass Student Design Proposals for the Schoolyard



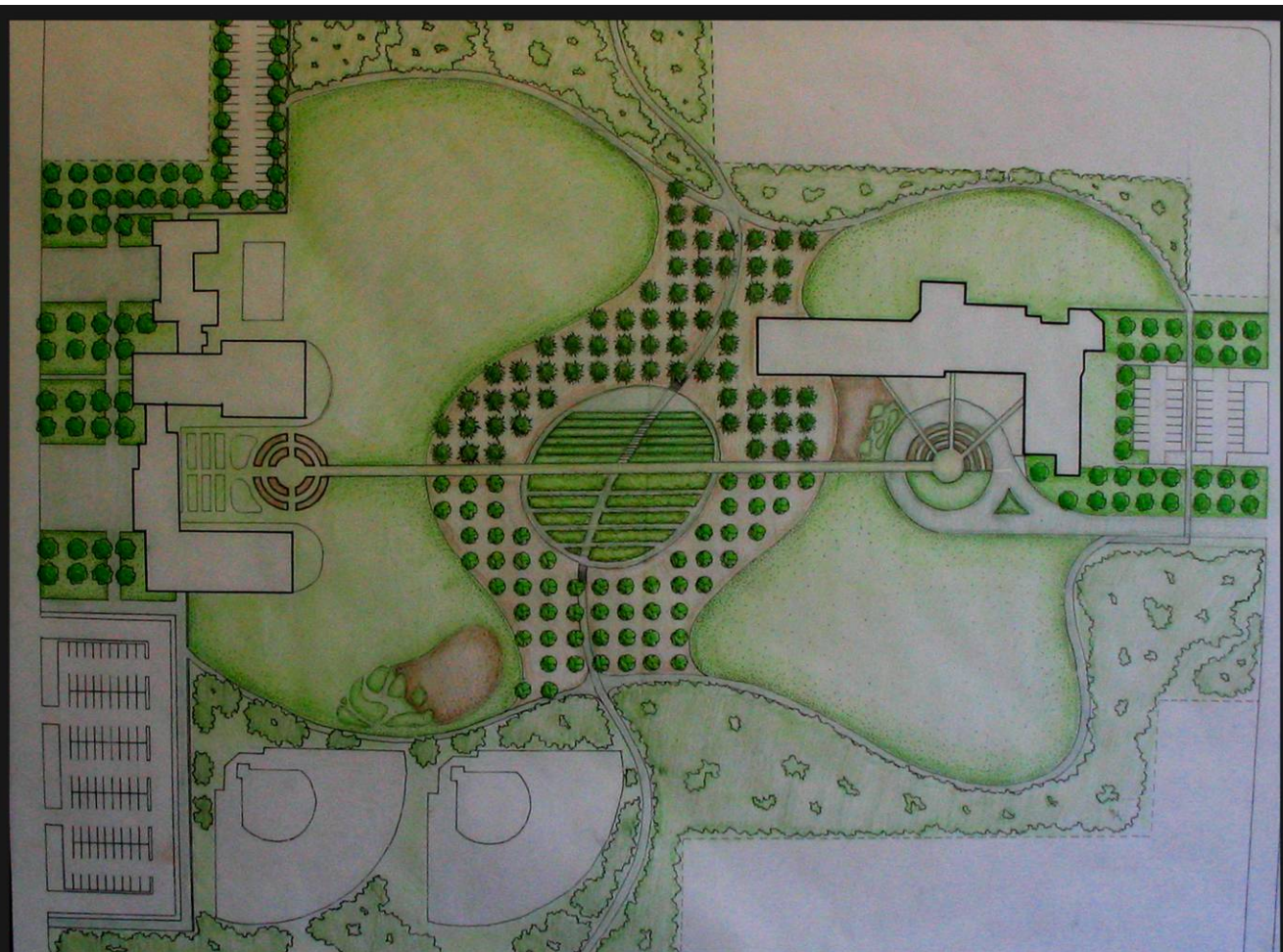
“The Spiral and
the Grid”

Leah Daignault and
Lauren Toohey



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Design Proposals for the Schoolyard



“The Giving Tree”

Danielle Mellett and
Matt Benzie



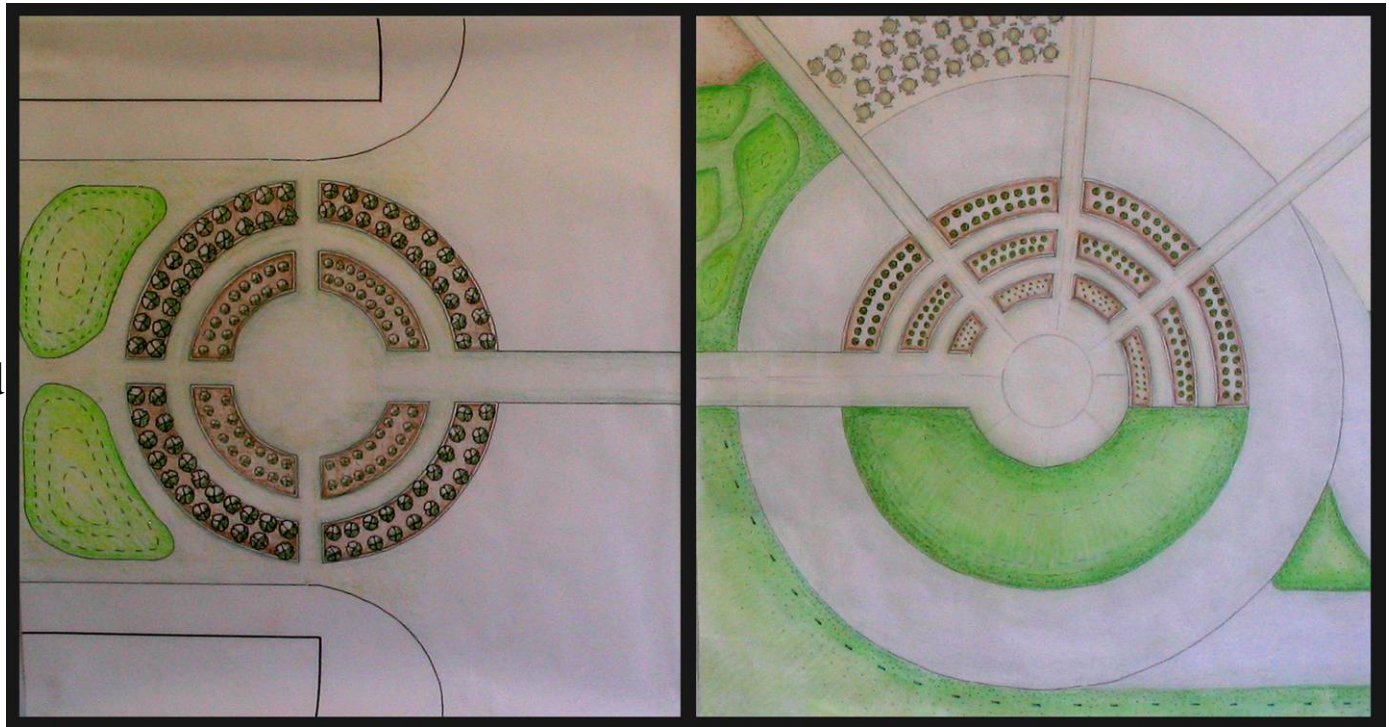
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“The Giving Tree”

Upon graduation from Hillcrest students bring their tree over to Sheffield.

Danielle Mellett and
Matt Benzie





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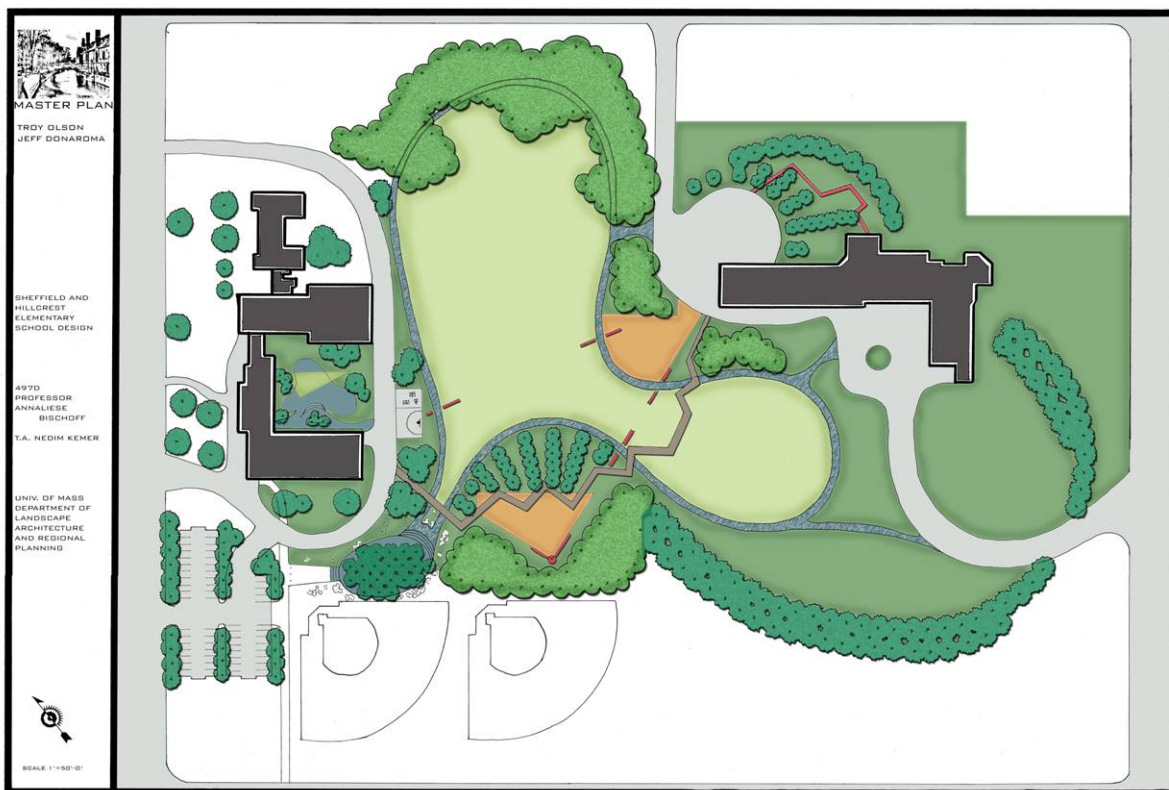
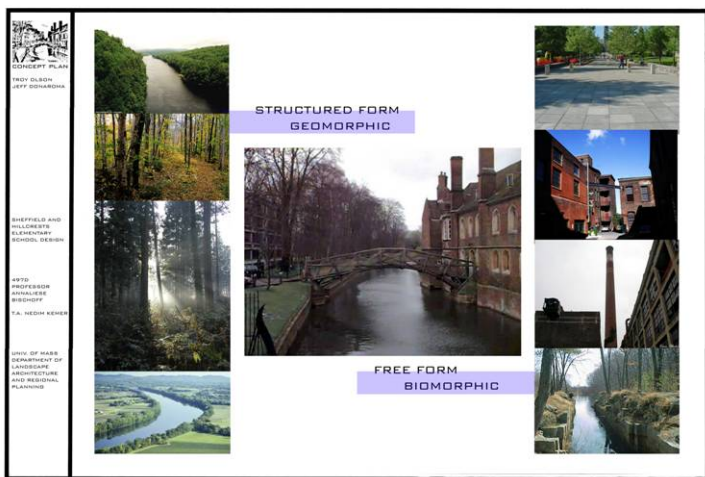
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Design Proposals for the Schoolyard

“Structured Forms, Free Forms”

Troy Olson
Jeff Donorama





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Design Proposals for the Schoolyard

“Puzzle Pieces”

Jon Allard and
Jesse Harris





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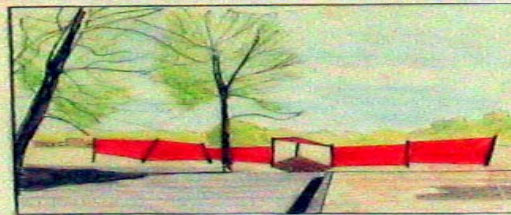
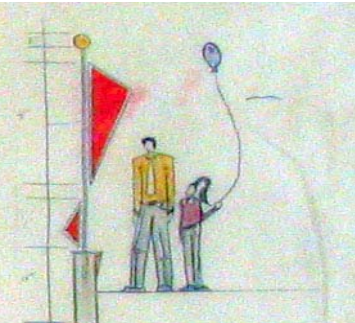
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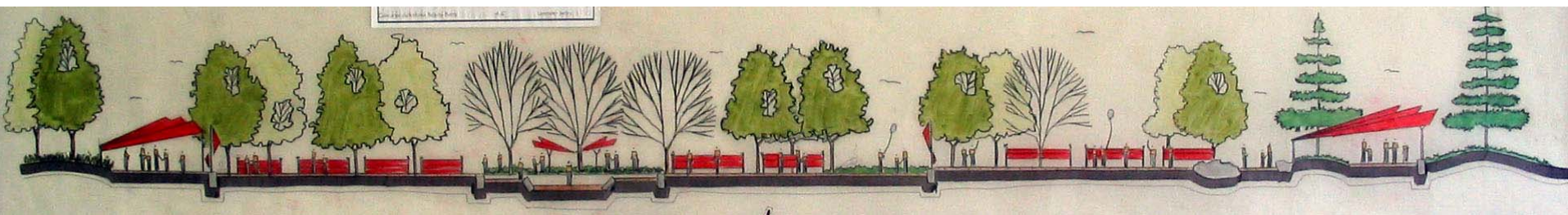
EXISTING



PROPOSED



“Transformations with
Banners”
Chris Scheufler, Jaron
Lyons, and Joe Coan





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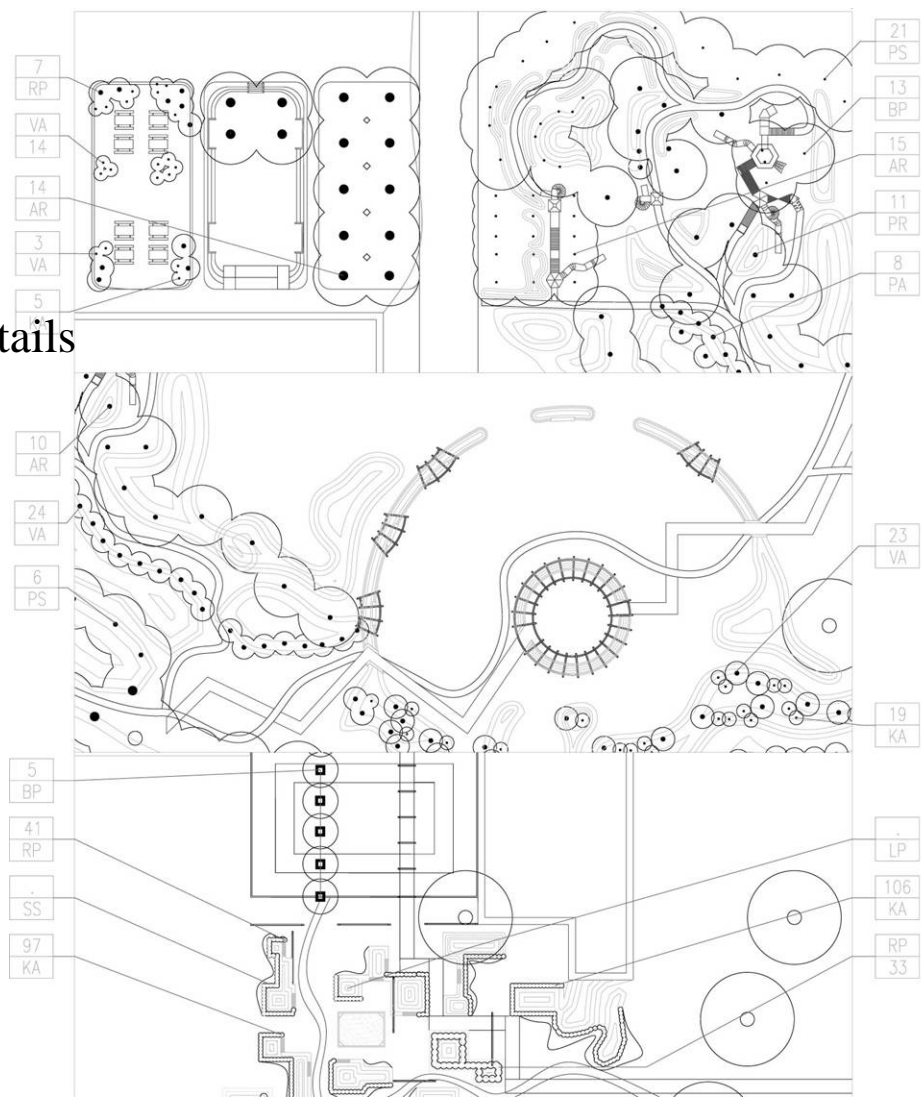
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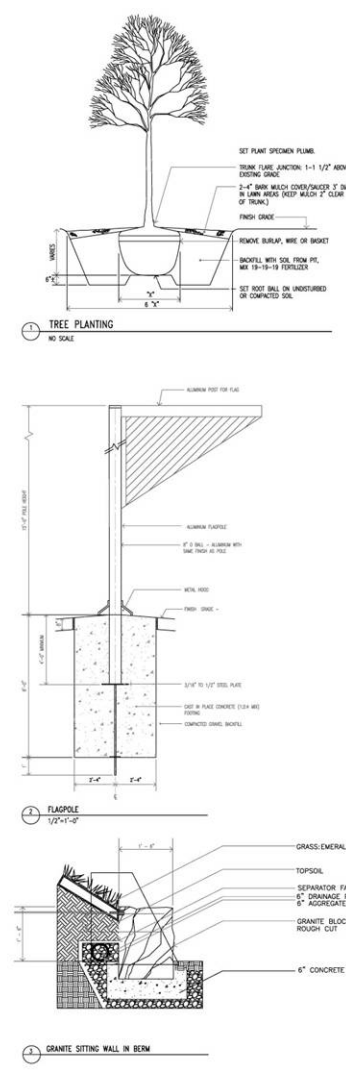
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Some design details

Michael Lazar



TREES	
	Acer rubrum Red Maple
	Betula papyrifera Paper Birch
	Pinus strobus Eastern White Pine
	Pinus rigida Pitch Pine
SHRUBS	
	Kalmia angustifolia Lambkill Kalmia
	Vaccinium angustifolium Low-bush Blueberry
	Rhododendron periclymenoides Pinxterbloom Azalea
	Kalmia latifolia Mountain Laurel
GRASSES	
	Danthonia spicata Oatgrass
	Schizachyrium scoparium Little Bluestem
	Lupinus perennis Lupine





**University of Massachusetts Amherst
Subsequent Community Service Activities, Summer '06
at the Sheffield and Hillcrest Elementary Schools
Professor Annaliese Bischoff**

**Completing the Butterfly Garden Planting
Making the Schoolyard More Beautiful: Inspired by “Miss Rumphius”**



- Ken Schoen of Schoen Books donates copies of “Miss Rumphius” to children at the school.
- Children read this story about making the world a more beautiful place.
- Chip Wood, the principal, gives students seeds to plant.
- Students plant seeds of native delphiniums to make the schoolyard a more beautiful place.

