

Final Report, KSU Center for Community Engagement & Development Grant

Northview Elementary School Learning Garden

Funding level: \$7200

Grant Collaborators:

Katie Kingery-Page, Assistant Professor of Landscape Architecture

Jon D. Hunt, Assistant Professor of Landscape Architecture

Linda Teener, director, UFM Learning Center

Rhonda Janke, Associate Professor of Horticulture (advisory role)

Dear Dr. Procter:

Please review the following account of the Northview Elementary School Learning Garden project, awarded a CECD grant in the 2009 funding cycle.

Background

In December, 2008, CECD announced its decision to fund a grant proposal to help Northview Elementary School, Manhattan, Kansas construct a learning Garden in a courtyard on the school grounds. The garden effort dates back to 2007, when Principal Shelley Aistrup and community leader Linda Teener (UFM) worked with the KSU Department of Horticulture to develop a program for a courtyard garden. Since May 2008, I have assisted the Northview Garden design committee with plans for the garden. Since January 2009, Assistant Professor Jon Hunt and I have worked with the school, UFM, and more than 150 volunteers to see the garden to completion and to hold educational workshops with 4th grade students.

Process

At the request of Northview parent Jackie Toburen and Principal Aistrup, I joined the Northview Garden Design Committee in May 2008. The committee members were:

- Principal Shelley Aistrup
- 3rd grade teacher Ron Donoho
- UFM director and student parent Linda Teener
- Jon Hunt and Katie Kingery-Page of KSU
- parent and PTO member Dan McGee
- maintenance supervisor for USD 383, John Mayberry

I served the committee by developing a series of conceptual garden plans based upon the committee's design program. With committee feedback, the design slowly evolved into a plan allowing for many educational uses.

Following the schematic design process, a “Timeline of Tasks” was used to organize the work of the Northview Garden Design Committee. The timeline (*Appendix A*) gives an overview of the garden installation process. Please note that all tasks in the timeline have been completed, though some later than expected due to very heavy rains last spring, with the exception of a few tasks that were the purview of Mr. Donoho and the school, and were omitted at their discretion (keyed in blue text in the timeline).

Following schematic design, I developed a series of working drawings to guide volunteers in building the garden (see *Appendix B*, a general plan for the garden). I obtained material estimates, rounded up material donations, placed orders and coordinated delivery of materials to the garden site.

Jon Hunt initiated contact with Northview’s art teacher, Anna Wiehe, and organized several drawing and sculpture sessions with the students, who worked on designs for a shade structure, proposed for Phase Two of the garden.

Jon Hunt, Linda Teener, Dan McGee, and I scheduled and led workdays to get the garden done. The installation process was intense, involving approximately fifteen workdays with volunteers from the Casement neighborhood, various university and community groups, and a strong turnout of teachers, parents, grandparents, and kids affiliated with the school. In particular, Dan McGee, a member of the Northview PTO landscape committee, committed a great deal of time to installing the garden.

In May, 2009, Dr. Janke of Horticulture assisted the committee in advertising for a garden intern. We hired KSU graduate student Jeremy Merrill to assist in installation and maintenance of the garden over the summer. I worked closely with Jeremy to assist him with work amounting to between 5 and 15 hours per week. Jeremy helped complete many tasks, such as installation of the planters and watering plantings during the hot months. In late July, Jeremy informed us that his schedule was changing, and so we began looking for a new garden intern.

In early August, we hired Courtney Markle through an arrangement with UFM. Eight hundred dollars of the CECD grant was transferred to UFM; they were able to quickly make the hire and pay Courtney at a time when garden watering was critical to plant survival. Courtney is a parent and resident of Manhattan with a background in environmental science and organic farming. Through October, Courtney continued the work of planting, watering, weeding, and mulching the garden’s perennial beds. A self-motivated worker, Courtney spent 5 to 10 hours per week in the garden and completed several projects which made the garden feel truly ‘finished.’ Courtney shared with me that Northview students would frequently join her in the garden during recess hours, asking to help her and genuinely having fun in the garden.

Appendix C is an account of how grant funds were spent, in accordance with the budget.

Appendix D is a copy of Linda Teener’s report to the Peine Foundation, which includes a photo essay on the garden.

In October, 2009 Jon Hunt made contact with Lance Klein, a recent graduate of KSU's Master of Science in Architecture and an accomplished carpenter, to begin final designs for a shade structure. Although Lance was willing to donate his time to the project, this work was put on hold due to recent developments in the garden's future.

Unexpected Developments

In December, Principal Shelley Aistrup informed us that the USD 383 and their consulting architect were meeting to discuss the Northview building expansion. At that time, Shelley believed that the garden was to remain intact through the construction process. Soon thereafter, Shelley informed Linda Teener and I that the consulting architect (Ebert Mayo Group) and consulting construction manager (Universal Construction Company) wanted to remove the garden. The reasons the architect (Rob Westburg) and construction representative (Trisha Brooke) gave were as follows:

- 1) Keeping the garden might increase the cost of staging construction. *This was not substantiated by any estimates of increased cost.*
- 2) Minor work to be done to the building facades around the courtyard would require removal of the garden. *This was contradicted by Ms. Brooke when she noted that the renovation work would at most require twelve feet of clear space away from the walls. This amount of clearance would impact only some planted areas and require only temporary removal of a few raised planters in the garden.*
- 3) After construction of the building addition, the newly enclosed courtyard would be required to handle drainage of stormwater amounts equal to the typical 100 year storm event (approximately 7 inches of rainfall within a 24 hour period). *The design ramifications of this requirement were Mr. Westburg. A site engineer had not yet been consulted, so meaningful discussion of this requirement was difficult.*

In mid-December, I met with Principal Aistrup, the consulting architect and construction manager, Assistant Superintendent Roberts, and Linda Teener. I voiced the possibility of increasing perennial planting areas to absorb stormwater, articulated the need for a site engineer to join the conversation, and pointed out inconsistencies in the 'staging argument' for removing the garden. My role was as an advocate for the garden and support person to Principal Aistrup. Ultimately, decisions regarding the garden are up to the USD 383. Assistant Superintendent Roberts expressed a clear intent to consider the principal's feedback in his decision.

The result of the meeting was that Principal Aistrup requested the district view the garden as classroom space, albeit outdoors. If the garden could not be kept as is (her first preference), she asked that the cost for removing and reinstalling the garden be part of the base-bid on the building expansion project (until then, the construction team was considering this cost as an 'alternate' which can easily be cut in the course of a project). She also requested that the construction team obtain an estimate for removing/reinstalling the garden. Both terms were agreed to by the Assistant Superintendent.

I met with the school district again regarding the garden in late December. This was an outdoor meeting with the construction manager representative Trisha Brooke, the USD 383 construction supervisor Don

Yeager, Principal Aistrup, and Master Landscape foreman Jeff Chaffee and cost estimator Jill Dupler. The intent of the meeting was to obtain an estimate from Master Landscape for the removal and reinstallation of the garden to the east side of the school. This estimate is only for purposes of base bid costing, as the actual contract for relocating the garden will be part of the public bid process.

Again, my role was to advocate for the garden in accordance with Principal Aistrup's wishes. I brought to the meeting a sketched plan of expanded native perennial beds in the existing garden including an estimate of their capacity to store and infiltrate stormwater. I noted on this plan the amount of room needed to stage façade renovations. However, it was clear from Mr. Yeager and Ms. Brooke's lack of responses that they considered removing the garden 'a done deal.'

The removal of this recently completed garden is obviously disappointing. However, thanks to Principal Aistrup, USD 383 has committed to rebuilding the garden after the building expansion is complete. The removal and re-installation of the garden will be bid by professional landscape contractors in summer, 2010. The projected timeline for completing re-installation of the garden is fall, 2011.

The process of design, installation, and now removal of the Northview garden indicates a need for better communication with the school district on all school projects initiated by the community. Jon Hunt and I plan to explore what could have been done differently by all parties in a paper we are due to present at the International Making Cities Livable Conference in October 2010. We will share our completed paper with CECD.

Scholarly Products of the Grant Funding

As a result of our involvement with the Learning Garden, several partners have produced or are producing scholarly papers and presentations.

Anna Wiehe (USD 383 art teacher at Northview School) led a panel discussion on Nature Deficit Disorder at the National Ceramic Education Conference in Philadelphia, March, 2010. Anna showed slides of the garden and discussed her use of the garden in the elementary art curriculum.

Jon Hunt and Katie Kingery-Page submitted an abstract, "A New Role for Art Class: The Northview Elementary School Shade Structure Design Project" to the Hawaii International Conference on Arts and Humanities, 2009. The abstract was accepted, but we did not attend for financial reasons.

Katie Kingery-Page and Jon Hunt will present "A Grassroots Effort to Renew the Schoolyard: The Learning Garden" at the Making Cities Livable Congress to be held in Savannah, Georgia in October, 2010. The Congress theme for 2010 is 'children in the city.' The paper will be published in the conference proceedings. Linda Teener (UFM) will review and be a third author of the paper. A brief summary of the paper is included on the following page.

A Grassroots Effort to Renew the Schoolyard: the Learning Garden

Katie Kingery-Page, Jon D. Hunt, and Linda Teener

Paper Summary

In the United States, the percentage of people living in urban settings has increased eightfold over the last century.¹ In many cities, children have very limited exposure to 'wild' places or food production landscapes. They spend their days in school buildings and their meals are frequently composed of processed foods.

Like thousands of schools across the United States², Northview Elementary School in Manhattan, Kansas hopes to infuse kids' lives with nature. Educators, community advocates, and parents gathered funds, drew plans, and constructed a learning garden because they saw its potential to affect students. The setting is the largest public elementary school in the community. Fifty-five percent of the students are from low income families. The school serves a neighborhood that is geographically isolated by a major highway; students are not able to walk to most parks, the zoo, or many natural areas.

However, just months after a team of volunteers and professionals completed the garden construction, the school district decided to remove the garden. A school building expansion, promised not to affect the garden site, resulted in demolition of the garden and plans to reconstruct it elsewhere on school grounds. This frustrating chain of events was disappointing to teachers who hoped to use the garden immediately, as well as to the more than 100 people who volunteered during garden construction.

In order to better understand challenges like the removal of the Northview Learning Garden, and to provide practical guidelines for other schools hoping to establish gardens, this paper documents the case of Northview and reviews research relevant to the establishment and success of schoolyard gardens. The literature review compiles documented barriers to the success of schoolyard gardens and also provides recommendations for establishing and using schoolyard gardens.

¹ Burdett, Ricky and Philipp Rode 2007. The urban age project. In Burdett, Ricky and Deyan Sudjic eds. *The Endless City*. London: Phaedon Press Ltd.: 8-31.

² This figure cited by Carlsson and Williams 2008. New Approaches to the Health Promoting School: Participation in Sustainable Food Systems. *Journal of Hunger & Environmental Nutrition*, Vol. 3(4) :400-417.

Additional Funding for the Northview Learning Garden

Many sponsors have financially supported the Northview Learning Garden. Prior to receiving the CECD award, the garden committee received a Caroline Peine Foundation Grant (\$11,600). After receiving the CECD award, the garden committee applied for and received several grants:

- American garden Association (\$100)
- Manhattan YES! Fund (\$700)
- Youth as Resources Grant (\$500)

The committee also applied for a shade structure grant (\$7,000) through the American Dermatology Association. We did not receive this grant.

Many local businesses and a public agency donated materials outright, or gave price breaks on materials, for the garden. Approaching and talking with these donors was a gratifying experience. Their support indicates Manhattan's interest in establishing schoolyard gardens. These donors include:

- Riley County Parks
- US Stone Industries
- Master Landscape
- Home Depot
- Lee Creek Gardens
- Eastside/Westside Markets
- Blueville Nursery

Conclusion

Without the support of CECD, the Northview Learning Garden would not have become a reality. Despite the 'bumps in the road', it appears the garden will be re-established in fall, 2011. On behalf of myself and my collaborators, please accept my sincere thanks helping faculty at KSU engage with the larger community.

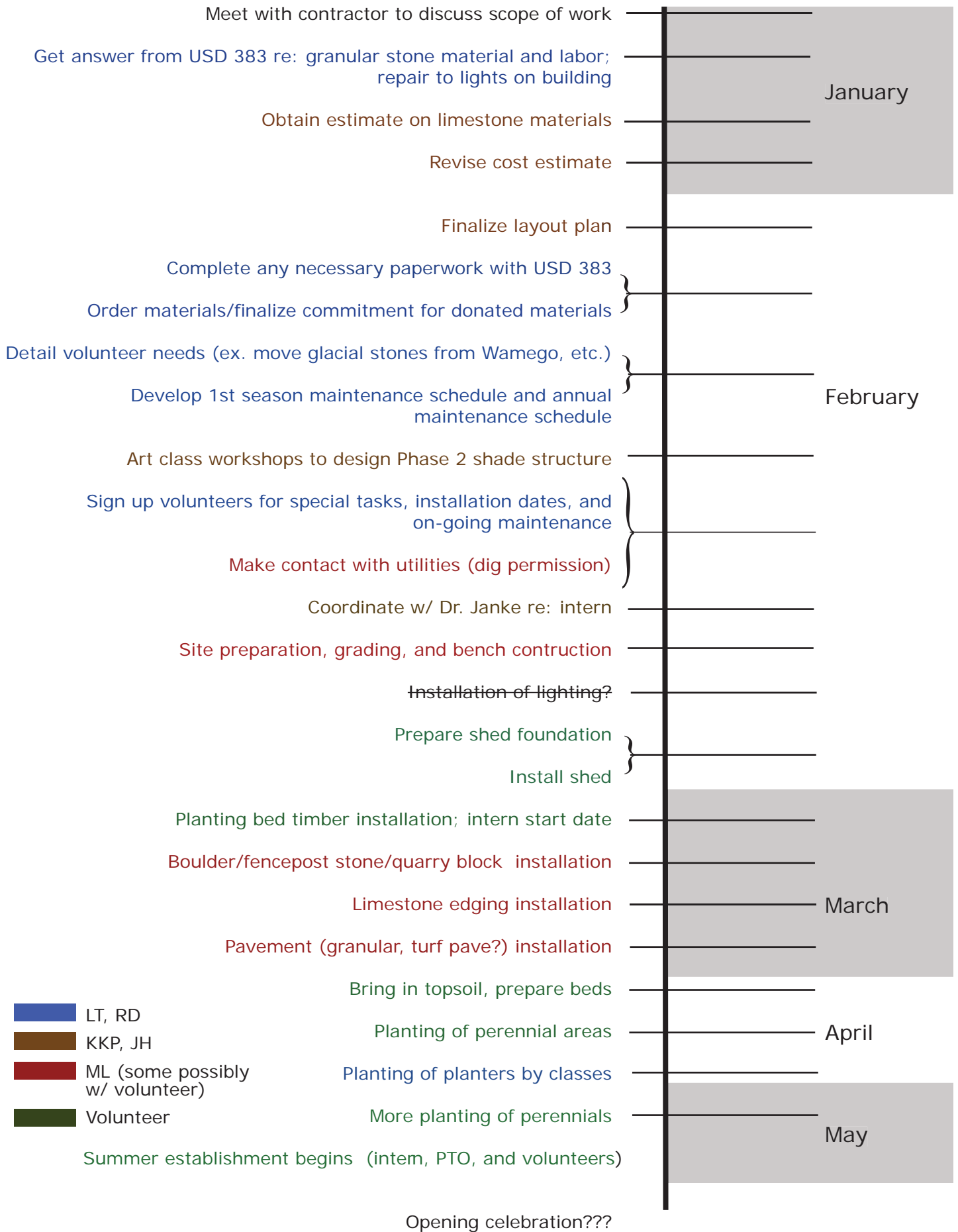
Please contact me with any questions regarding this report, or for further information on the Northview Learning Garden.

Sincerely,



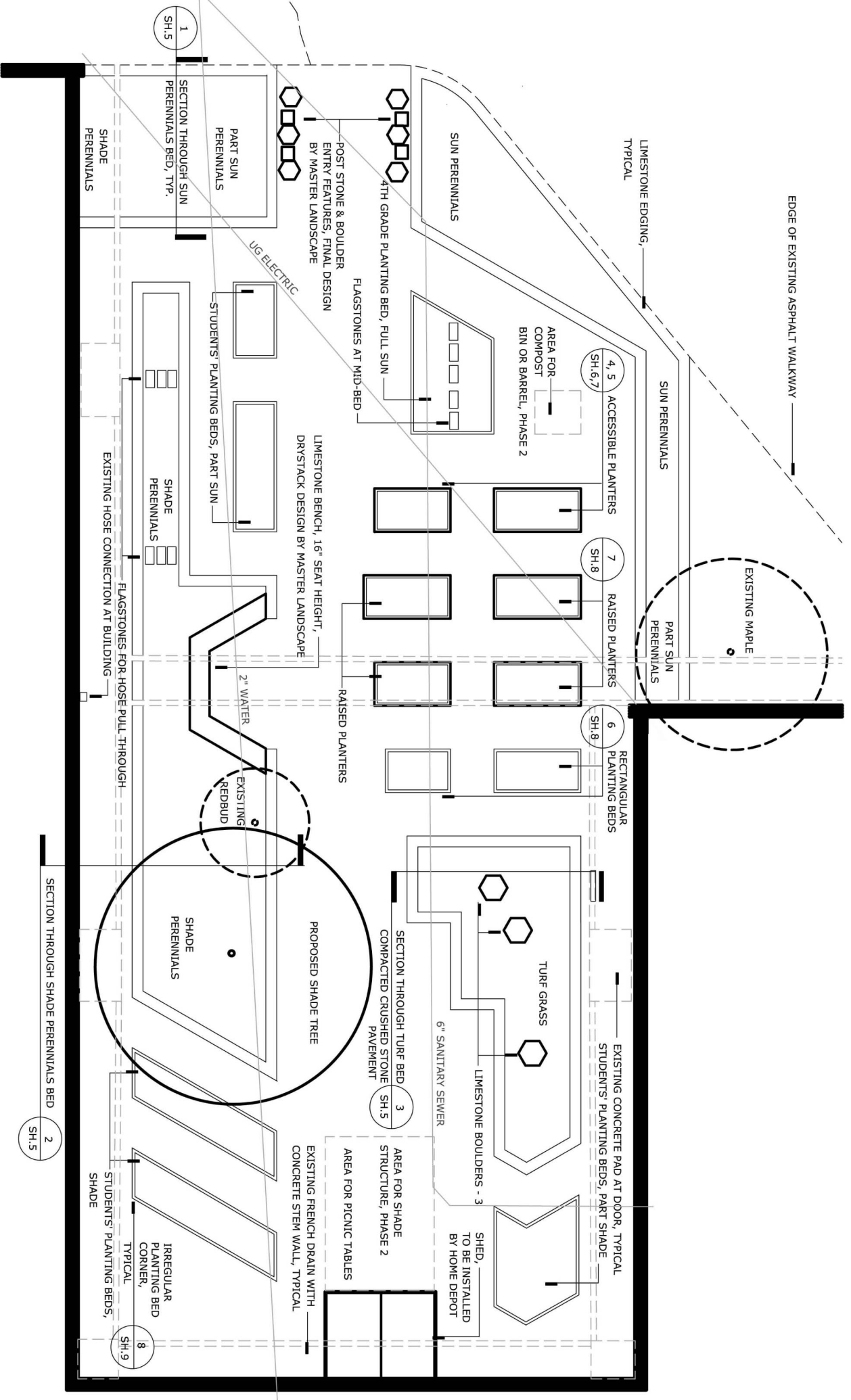
Katie Kingery-Page
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Regional & Community Planning
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kkp@ksu.edu 785.341.5650

Appendix A : Timeline



Timeline of Tasks Spring 2009 Northview Elementary Learning Garden

Appendix B : Learning Garden General Plan



1 SCALE = 1/8"=1' 0 1 2 4 8

Appendix C : Accounting of Grant Funds

KATIE KINGERY-PAGE CECD GRANT

		DEPOSITS	PAYMENTS	BALANCE
1/21/2009 Deposit from CECD	574386	\$7,200.00		\$7,200.00
3/6/2009 UFM Community Learning Center-limestone	APV 76601		\$1,000.00	\$6,200.00
3/18/2009 Master Landscape-for Northview School	APV 76602		\$2,784.81	\$3,415.19
8/28/2009 UFM Community Learning Center-CECD	APV 76650		\$800.00	\$2,615.19
3/20/2009 Payroll-Jeremy Merrill			\$103.39	\$2,511.80
6/12/2009 Payroll-Jeremy Merrill			\$163.78	\$2,348.02
6/12/2009 Payroll-Katie Kingery-Page			\$900.00	\$1,448.02
6/26/2009 Payroll-Jeremy Merrill			\$109.18	\$1,338.84
7/10/2009 Payroll-Jon Hunt			\$900.00	\$438.84
7/24/2009 Payroll-Jeremy Merrill			\$76.57	\$362.27
9/4/2009 Payroll-Jeremy Merrill			\$182.81	\$179.46

Appendix D : Photo Essay

Grant Progress Report: Caroline F. Peine Foundation
December, 2009

Overview of the Project:

A grant in the amount of \$11,600 was given to UFM Community Learning Center in a collaborative effort with Northview Elementary School to create a children's learning garden on school property.

This has been a rewarding and evolving project that ultimately involved over 80 volunteers and five grant sources to create the garden. Several months were taken in locating a design team and settling on a garden layout. Work began in the Spring of 2009 and the final structures were completed in September, 2009. The children's garden is ready for Spring, 2010, use by the children of Northview School.

The Story of the Northview Garden:

In 2007, a group of Manhattan community residents, K-State faculty, UFM staff and Northview faculty was assembled to assess the possibility of creating a children's garden at Northview Elementary School.

The initial group included volunteers from K-State, UFM, and USD 383. Dr. Richard Mattson, a professor of Horticultural Therapy at Kansas State University, who has conducted and published research on the values of school and public gardens for children, including his participation in a children's garden at the Manhattan Community Garden, and classes at various Manhattan elementary and middle schools. Dr. Rhonda Janke, a K-State professor and Extension Specialist in Sustainable Cropping Systems, who teaches classes in organic farming, fruit production and vegetable productions assisted with layout and planting ideas. Other participants involved were Linda Teener, Director of UFM Community Learning Center; Shelley Aistrup, Principal of Northview Elementary School; Sue Mountford, Coordinator of Northview School's After School Program; Paula Cooper, Riley County Master Gardener and a Title 1 Aide at Northview Elementary; Patty Zehl, K-State Horticultural Therapy graduate student, Riley County Master Gardener and President of the Manhattan Community Garden; and Jillian Thien a K-State student who has worked with the Americorps Program on a garden project and part of the UFM Teen Mentoring Program. This group created the original concept for the garden and applied for the Peine Grant which was funded.

Funding was received in the Spring of 2008. Several persons from the initial planning team were no longer available, so the remaining members met regularly to begin planning the actual construction of the garden. A K-State Landscape Architecture professor, Katie Kingery-Page, was recruited as a volunteer to help translate the abstract concept into a real layout and construction plan. Katie's expertise and assistance really turned this dream into a reality.

"

The final development team included Katie Kingery-Page, Linda Teener, Shelley Aistrup, Ron Donoho, the Northview Lead teacher for the project, Dan McGee, PTA representative, Jon Hunt, a Landscape Architecture professor working on a shade structure, and John Mayberry, representing USD #383 Facilities.

Linda Teener and Katie Kingery-Page collaborated on several grant requests to supplement the funding from the Caroline F. Peine Foundation. In all, grants were received from the National Garden Association in the form of a Home Depot gift card, the Manhattan YES! Fund designated for USD#383 projects, the K-State Center for Engagement, and Youth As Resources.

The design team met during the Spring and Summer, 2008. With a plan and detailed drawings, the actual work began. First, the PTA provided the volunteer effort to get the old raised beds out of the space. Perennials in the area were transplanted to alternate sites around the school. In Fall, 2008, the Northview After School Clubs and sixth grade art classes designed seasonal scenes and painted them on the exterior doors facing the garden.

Beginning in Spring, 2009, the firm, Master Landscapes, was hired to clear the site and get it ready for the new garden. A garden shed for storing tools and equipment was purchased and built prior to the first work day. The four third grade classes participated in the ground breaking for the garden.

The first work day was held in March, 2009. Over 40 volunteers helped that day. Volunteers from the College of Architecture and K-State Horticulture Club worked with school faculty, PTA volunteers and students to layout the basic garden plan. Limestone edging was placed, outlining perennial borders and a stacked limestone bench was created by Landscape Architecture students. This work day provided the foundation and frame for constructing the rest of the garden.

In following weeks, raised beds at various heights were constructed. Two wheelchair accessible beds were built as well as shorter beds to accommodate all ages and gardening needs; for example, the fourth grade participates in the Junior Master Gardener program that grows at ground level. Every grade will have their own designated growing space. The beds were constructed from a recycled product, called Trex, that will not deteriorate as wood products do.

The Spring construction schedule was hampered by rain for several weeks. The ground was too muddy for volunteers to work. However, work days continued through the summer. The raised beds were finally installed in July. Perennial plantings of native grasses, bee balm and purple cone flower added color and helped bring the garden to reality.

The final large work day was August 28. Over 40 volunteers filled the beds with soil, planted additional perennials, weeded and added compost to the existing beds. Fall crops were planted so the children could watch their garden come to life. Squash, peas and lettuce produced well and the school was able to harvest produce for classroom use during October and early November. Volunteers came from the United Way Day of Caring, the K-State Volunteer Center, Northview faculty, PTA and students.

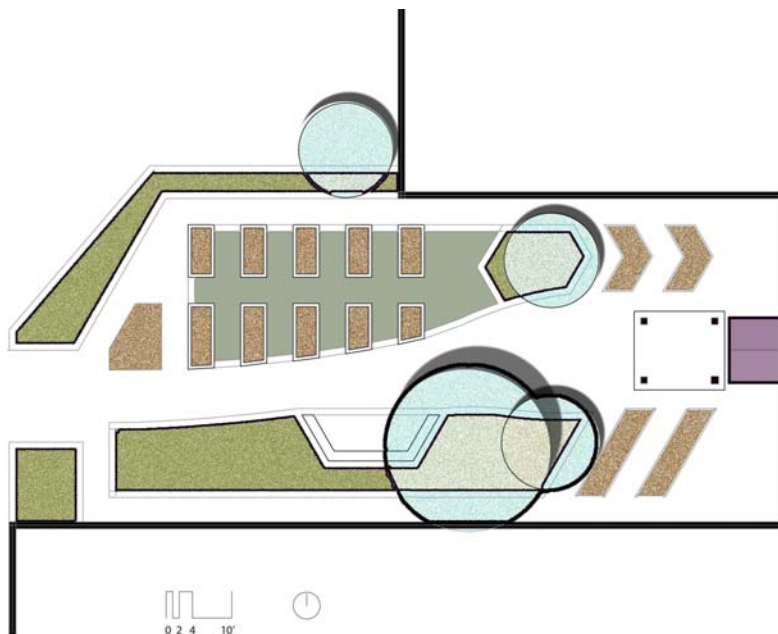
The last jobs in completing the Northview garden for Fall, 2009 were handled by the UFM Teen Mentoring Program. Through a Youth As Resources grant, they purchased and planted a tree for the garden, painted the shed and assembled three picnic tables to complete the outdoor classroom.

Northview Elementary School Learning Garden: A Photo Essay

Spring 2008 - The space to be used for the Northview Learning Garden is cleared of old raised beds, weeds and some perennials that could be moved to other places around the school. The Northview PTA coordinated the clean up and rented equipment to dig out the raised beds.



The Summer of 2008 was spent assessing curriculum needs are they related to the Garden and locating a volunteer Landscape Architect to help the group convert their abstract ideas into a realistic use of space and materials. By Fall, a plan was developed and the garden layout was presented to the school at their 50th Anniversary Open House. Construction materials were located and priced, and a landscape company was located to help prepare the area for the garden.



The Northview After School Clubs and 6th grade Art classes designed and painted the exterior doors facing the new garden space.



Beginning in Spring, 2009, the firm, Master Landscapes, was hired to clear the site and get it ready for the new garden. A garden shed for storing tools and equipment was purchased and built prior to the first work day. The four third grade classes participated in the ground breaking for the garden.



The landscape crew cleaned out the sand drains surrounding the space and replaced the landscape fabric and sand. Then the Home Depot crew assembled the garden shed.



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The Spring construction schedule was hampered by heavy rain for several weeks. The ground was too muddy for volunteers to work. We learned that drainage was always bad at that site, so we developed a plan for improvement. Dry wells were dug throughout the area and grading was done to help water drain away from the walkways. The use of native grasses is a natural drainage aid. The roots run much deeper than lawn grasses and absorb a large volume of water.



Drainage following installation of dry wells, gravel paths, and plantings.

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Northview School Garden and Outdoor Classroom:

Where we started:



Where we ended 2009:

