

12-10-2014

A Master Plan for Riverside Park, New London, Connecticut: A Case Study of the Project and an Evaluation of Its Service Learning Component

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Recommended Citation

Schad, Madeline Rose, "A Master Plan for Riverside Park, New London, Connecticut: A Case Study of the Project and an Evaluation of Its Service Learning Component" (2014). *Master's Theses*. 692.
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**A Master Plan for Riverside Park, New London, Connecticut:
A Case Study of the Project and an Evaluation of Its Service
Learning Component**

Madeline Rose Schad

B.S., University of Connecticut, 2010

A Thesis

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Science

at the

University of Connecticut

2014

APPROVAL PAGE

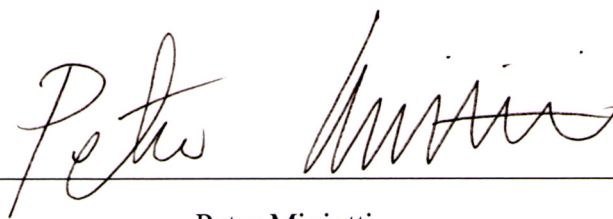
Master of Science Thesis

A Master Plan for Riverside Park, New London, Connecticut: A Case Study of the Project and an Evaluation of Its Service Learning Component

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2014

ACKNOWLEDGEMENTS

I would first like to thank my major advisor, Peter Miniutti, for his time and guidance throughout both my undergraduate and graduate careers. I also thank my committee members, Mike Dietz and Julia Kuzovkina, for their time, patience, and assistance while I completed this thesis.

Many thanks to the following:

- Julissa Mendez, who has listened and provided support to me through the ups and downs over the years
- Sandy Chalk, former director of New London Landmarks, who dedicated a great deal of time and effort toward this project
- Residents of New London who attended and contributed to the workshops, as well as the City of New London for providing documents and input
- The UConn Department of Plant Science and Landscape Architecture
- The National Needs Fellowship Program for funding my time as a graduate student

Finally, I would like to thank my friends and family for their encouragement.

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Introduction

The University of Connecticut's Landscape Architecture Program houses an outreach organization called the Community Research and Design Collaborative (CRDC). CRDC provides planning and design services to its clients. Through CRDC, I worked on a project in Riverside Park located in New London, Connecticut. The project consists of a master plan for the park. It also includes a stormwater study which takes place in Riverside Park and the Winthrop Elementary School site, which is adjacent to the park. The master plan and stormwater study included a series of workshops held in New London which allowed the public to be involved in the process.

CRDC worked with New London Landmarks, a non-profit historic preservation organization that obtained funding for the project. The mission of New London Landmarks is “to promote the preservation and development of the urban environment of New London, Connecticut, including significant individual structures, streetscapes, neighborhoods, and open spaces” (New London Landmarks, 2013). New London Landmarks was involved in scheduling, organizing, and advertising events throughout the course of the project. Funding for the project was through two grants. The first was a small water grant through the New London Water Authority. Second was a creative placemaking grant through the Connecticut Department of Economic and Community Development and the Office of the Arts.

This project, which will be referred to as “The Riverside Park Project,” is classified as a design project with a service learning component. Service learning will be discussed in the first chapter. It was expected that the service learning facet of the Riverside Park Project would be

successful. This thesis provides a case study of the project and evaluates the effectiveness of its service learning component.

Chapter 1 provides an overview of what service learning is, its role in landscape architecture education, the public participation aspect, reflection methods, and its benefits and challenges. The chapter includes a section about a methodology for evaluating service learning projects. It ends with an overview of the public workshops that took place in New London.

Chapter 2 consists of a background on Riverside Park and the master plan developed by CRDC.

Chapter 3 details the stormwater study conducted by CRDC, which ties into the master plan.

Chapter 4 evaluates the effectiveness of the Riverside Park Project's service learning component, with student and community feedback, and by comparing it to the service learning methodology discussed in the first chapter.

CHAPTER 1 Service Learning

What is Service Learning?

Service learning is a form of outreach. In landscape architecture, outreach work involves a university providing design services for local communities, organizations, or individuals. As its name implies, service learning has a service component and a learning component. One of the frequently cited definitions of service learning is that of Bringle and Hatcher (1995):

... a credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility.
(p. 112)

Service learning is a form of experiential learning. It is a way of tying theory to practice. Service learning differs from earlier types of community service courses in that “The earlier form emphasized meeting the needs of the community, while the latter form stresses that learning is part of the service and incorporates structured reflection from the students and faculty” (Forsyth, Lu, & McGirr, 1999, p. 169). Service learning should be mutually beneficial to the student and the community. Bringle and Hatcher explain that while other types of community service such as volunteering can have educational benefits, service learning intentionally integrates the service activities with the learning objectives of the course or field of study (1999, p. 111).

Service Learning in Landscape Architecture

In landscape architecture education and other design fields, studio courses are a fundamental component. In these courses, students work on design projects which culminate in a presentation of the completed products to the class, professor, and often times critics that are invited to provide feedback. In these projects, students are tasked with creating a design that fulfills a client's needs. In the earlier stages of education, these clients are usually hypothetical. Service learning provides the opportunity for students to experience working with real clients on real projects. Examples of "real clients" can include individuals, communities, or organizations.

Service learning can be considered a "natural fit" in landscape architecture education. This is based on the studio environment, multi-disciplinary nature, and collaboration that is inherent in landscape architecture. Loon explains the collaboration that occurs in a studio class:

The studio environment provides students with the ability to interact with professors and classmates in a collaborative setting. As opposed to the traditional classroom teaching in which a professor lectures to a group of students and the information is flowing in one direction, a studio setting allows for transfer of knowledge throughout the studio participants; students and faculty. (2010, p. 24)

Service learning involves collaboration with the community, listening to input, and learning from what the residents have to say.

Public Participation

Working with the public is a key component to service learning. This can consist of activities such as neighborhood meetings, workshops, surveys, and interviews. According to Forsyth et al., “The resulting student-neighborhood-resident interaction contributes to an environment of mutual learning whereby the residents see themselves as experts on their own neighborhoods. Consequently, the residents become ‘teachers’ ” (1999, p. 169). Baugher and Frantz further express the importance of involving the public, “Collaborative work recognizes that community members are assets and that they make important contributions to a project” (2013, p. 116).

Reflection

Reflection is what sets service learning apart from simply community service or outreach. It helps to gauge what has been learned and how effective the project was. Reflection methods can vary. Reflection can be done individually or among a group of students, in written or oral forms, and some courses may ask students to reflect more often than others (Clayton & Felton, 2011, p. 77). In some service learning projects students have been given survey questions, both open and closed-ended, as part of the reflective process. In others students have been asked to write journal entries or essays about the experience. The community should also be asked to provide input to evaluate whether or not the project was beneficial to the city or town in which the project took place. For example, at the end of a service learning project at the University of Oklahoma, a survey was given to a selected representative of the City of Miami “to ascertain the level of significance that this project had for the city and to decipher if the studio design team was successful in accomplishing the goals and objectives for the project” (Loon, 2010, p. 28).

Benefits & Challenges

There are several benefits to service learning projects. Depending on the project, students may gain experience in working with people of different ethnic, educational, and economic backgrounds than themselves (Forsyth et al., 1999, p. 169). Clayton and Felton state that “Service-learning often exposes students to people and experiences that are new to them (2011, p. 81). Through these experiences and practicing their skills in a real-world setting, students are able to gain professional experience. In landscape architecture, a profession requiring collaboration with others and working with multiple publics, service learning provides a means of building these skills. Service learning projects can result in a memorable experience for students. Kronick, Cunningham, and Gorley recall how a professor ran into a former student while shopping at a store: “The student did not remember the professor’s name, the class, or other students in her group, but she remembered her service-learning experience eleven years earlier in vivid detail” (2011, p. 147).

While there are benefits to service learning, there are also challenges in implementing these types of projects. There is an extra time commitment involved for faculty and students. There can also be difficulty in coordinating the project with the fixed time period of a semester-long course. According to Kronick et al. (2011), “The school term is short and may not match the needs schedule of the client community” (p. 136). Some professors have had service learning projects which span multiple semesters. This of course requires even more planning. Reflection, which is an important aspect of service learning, can also be a challenge. Reflection is not something that occurs naturally: “Students are trained to absorb information; less emphasis is placed on synthesis and integration... Great effort is required to ensure that each student is able to link field experience to class concepts” (Kronick et al., 2011, p. 137).

Evaluating Service Learning Projects

In order to plan and conduct a service learning project, it is useful to know what makes a service learning project successful or unsuccessful. At the University of Southern California (USC) two urban planning professors, Susan Harris and Clara Irazábal, developed a methodology for evaluating service learning projects (2011, p. 112). The methodology consists of four categories to classify service learning projects in regards to the benefits to both the students and the communities/organizations served. This methodology was selected because it is applicable to landscape architecture education and is a detailed in nature. Each of the categories and a brief description are as follows:

- ***High Service-High Learning:*** benefits the community and the student
- ***High Service-Low Learning:*** benefits the community, but little benefit to the student
- ***Low Service-High Learning:*** little benefit to community, but beneficial to the student
- ***Low Service-Low Learning:*** little benefit to either the community or the student

High Service-High Learning

According to Harris and Irazábal, projects in this category are ones that are mutually beneficial to the community and the student. They consist of the following characteristics:

1) they are clearly-defined, significant projects, 2) have a high-level of support from on-site staff, 3) a close connection between service and course assignments, and 4) transform the subjectivities of the students (Harris & Irazábal, 2011, pp. 112-115).

1. Clearly-defined, significant projects:

These projects have clear, well-defined tasks and produce concrete results. Students will have a good understanding of the project at hand, tasks that are achievable, and a schedule to follow in order to complete the tasks.

2. High-level of support from on-site staff:

Harris and Irazábal describe a supportive staff as providing students with a “high level of mentoring, supervision, and training...They took the time to meet individually with students, answer their questions, and provide training and guidance” (2011, p. 114).

3. Close connection between service and course assignments:

The project relates closely to the course or field of study. Students’ skills are utilized and they have the opportunity make a tangible contribution to the organization.

4. Transformed subjectivities:

These projects “encourage students to see the world and themselves as urban planners do, grasp a more comprehensive realization of the challenges and opportunities faced by professionals in the field, and become more informed and sensitized about social responsibility and ethics in the profession” (Harris & Irazábal, 2011, p. 115). Through these projects, students are able to gain a new perspective on their field of study.

High Service-Low Learning

Projects in the high service-low learning category are defined by: 1) students performing low-skill tasks that do not reflect the professional work performed by designers or planners, 2) no opportunity for students to learn or apply new skills related to the course, and 3) student attitude/effort lacking.

1. Low-skill tasks not reflective of the professional work performed by designers or planners:

The work in these projects involves mundane or simplistic tasks that students may consider “busy work.” For example in Harris’ and Irazábal’s class, one student explained, “All the tasks and errands I did could have been done if I worked at Kinko’s rather than City Hall” (2011, p. 116).

2. No opportunity for students to learn or apply new skills related to the course:

Tasks in these projects tend to be unrelated to the course or field of study. Therefore, students are unable to gain relevant professional experience.

3. Student attitude/effort lacking:

Harris’ and Irazábal note that student attitude can play a large role in individual learning outcomes: “Students who took advantage of the resources and experiences available to them were more likely to have positive learning outcomes, regardless of the scope of the service-learning projects itself” (2011, p. 118). Some students in Harris’ and Irazábal’s class were able to overcome the shortcomings of their project by reaching out to the professionals, asking questions, and making an effort to learn more. Regardless, students are likely to experience

“high-learning” if the project is designed in a manner that allows them to perform work relevant to their chosen field.

Low Service-High Learning

Projects in the low service-high learning category include the following characteristics:

1) the community/organization mentors students, provides enriching experiences & wisdom, 2) the community/organization is an invaluable resource for students to learn from & to produce quality work for the course, and 3) contributions to the community are less tangible.

1. Community/organization mentors students, provides enriching experiences & wisdom:

In these projects the staff takes the time to meet with students, sharing professional experiences and knowledge. Students have the opportunity to interview the staff, sit in on meetings, and even shadow their work.

2. Community/organization is an invaluable resource for students to learn from & to produce quality work for the course:

Here, the staff serves as a source of “data” for students who are able to take what they’ve learned and use it to complete the course assignments. For example, in Harris’ and Irazábal’s class, students were able to use the knowledge gained from interacting with the staff toward writing the research paper that was assigned.

3. Contributions to the community less tangible:

While the student clearly benefits from these projects, there is little benefit to the community. This can be because, although the project may have a specific goal, the steps to reach that goal are unclear. As a result, the service component performed by the students can lack structure and direction.

Low Service-Low Learning

Projects in the low-service low learning category are the result of: 1) poorly-defined projects, 2) little direction or support by site staff, 3) unclear connection between service projects and expected learning outcomes, and 4) little initiative by students. These four characteristics can be interpreted as the opposite of the four described in the high service-high learning category.

Clearly high service-high learning is the outcome that should be strived for in a service learning project. Both the students and the community should benefit from the project. As Bringle and Hatcher explain, “High-quality service learning classes demonstrate reciprocity between the campus and the community, with each giving and receiving” (1999, p. 112). A summary chart for the USC service learning methodology can be seen in Figure 1.1.

USC Service Learning Evaluative Methodology

High Service-High Learning	
Benefits community & student	1. Clearly-defined, significant projects
	2. High level of support from on-site staff
	3. Close connection between service & course assignments
	4. Transformed subjectivities

High Service-Low Learning	
Benefits community, but little benefit to student	1. Basic, low-skill tasks not reflective of professional work by designers/planners
	2. No opportunity for students to learn or apply new skills related to the course
	3. Student attitude/effort lacking

Low Service-High Learning	
Little benefit to community, but beneficial to student	1. Community/organization mentors students, provides enriching experiences & wisdom
	2. Community/organization is an invaluable resource for students to learn from & to produce quality work for the course
	3. Contributions to community less tangible

Low Service-Low Learning	
Little benefit to community or student	1. Poorly-defined projects
	2. Little direction or support by site staff
	3. Unclear connection between service projects & expected learning outcomes
	4. Little initiative by students

Figure 1.1: An overview of the 4 categories in the USC Service Learning Evaluative Methodology

Public Participation in New London

As stated earlier in this chapter, working with the public is a key component to service learning. Throughout the course of the Riverside Park Project, events were held which were open to the public. These included a walk through the park followed by a series of five workshops. The workshops were held at the Winthrop School. They began in September 2012 and ended in May 2013. The purpose of the workshops was to involve the public in the design process, present CRDC's work along the way, and to obtain feedback from the community. A brief synopsis of each event and the general consensus from the public are included in this section. Detailed notes and graphics from the meetings are included in the appendix.

▪ *A walk through the park: September 15, 2012*

This walk through the park began the public participation process of the project. It served as a way to begin discussing ideas for the park. Some topics brought up were the confusion of the roads within the park, looking at ways to reduce the speed of vehicles driving through the park, increasing pedestrian and bike access, and the possibility of having a farmer's market.



Figure 1.2: Some attendees of the park walk

General Consensus from Public:

- improve signage, current sign is in wrong location
- need more pedestrian/bike access in park instead of just automobile (limit auto access)
- vehicles speed in park, consider options for reducing speed
- strengthen visual connection to the river (example: trimming up limbs of trees)

▪ *Workshop 1: September 19, 2012*

Those who attended this workshop were broken up into five teams. They were given an aerial photo of Riverside Park along with a “kit of parts.” The kit contained scaled pieces representing the following: a soccer field, parking, a skate park, ziplines, a conventional playground, and an adventure playground. With these pieces the teams could place the elements as they wished within the park. They did not have to use any pieces of the kit that they did not want to and could make notes on the plans. The teams worked on their individual plans for the park (Figure 1.3) and then made short presentations of their ideas to the entire group.



Figure 1.3: The teams working on their plans during the first workshop

General Consensus from Public:

- like the idea of “adventure playground” scattered throughout park
- add a pedestrian crossing at end of Adelaide Street
- need pedestrian and bike trails
- have multiple parking areas in park as opposed to a single location
- open up sight lines

▪ *Workshop 2: November 28, 2012*

This workshop began with presenting imagery of different types of playgrounds. The playground types were categorized as conventional, natural, adventure, and sculptural. The attendees were given a survey to take on their opinions of the different playground categories. Imagery was also presented about creative approaches to stormwater management. While there was no formal survey given about these approaches, people generally seemed to like the ideas.

General Consensus from Public:

- adventure and natural playgrounds should go in park
- conventional (plastic) playground not as popular
- creative stormwater management techniques liked

▪ *Workshop 3: February 13, 2013*

The third workshop began with an overview of CRDC's work on the Re-Connect New London Charrette and another project, called the Riverside Park & Environs Study. A recap was given on the summer Art Jams- which were arts and crafts events held over the summer of 2012 in the park, and a recap was given on the previous two workshops. We presented "issues and opportunities" for the park. Next, recommendations were given on how to enter the park, circulation in the park, and use areas within the park. The workshop ended with discussing the stormwater issue at the Winthrop School and the possibility of directing the water into the park.



Figure 1.4: CRDC director Peter Miniutti presenting material at the third workshop



Figure 1.5: Graduate student Madeline Schad discussing different categories of playgrounds at the third workshop

General Consensus from Public:

- people were concerned about cutting off handicap access within core of park
- need to identify parking locations
- like organization of existing spaces

▪ *Workshop 4: April 9, 2013*

A brief overview of the last workshop was given. This consisted of the circulation recommendations and creative stormwater imagery. A background of how the plan was developed and its objectives were discussed. The last part of the workshop consisted of a presentation on the stormwater issue at the Winthrop School, existing drainage in the park, and conceptual stormwater design options. The audience was given a survey to take on their opinions of the stormwater topic that was presented.

General Consensus from Public:

- like the idea of keeping the open space across from the basketball court to place tents for events
- like the idea of taking water from school and bringing it into park
- reuse some materials from the existing runnels in the park for a sense of history
- like the idea of bioretention gardens and treating stormwater from the school in the park

- *Workshop 5: May 21, 2013*

The final workshop consisted of a presentation of the master plan for the park by CRDC. The objectives of the program and how they are addressed in the plan were discussed. Sandy, the director of New London Landmarks, showed photos of the preliminary location for a Sandy Hook memorial playground. Brian Kent of Kent+Frost Landscape Architecture presented two layout options for Hodge's Square. This was followed by a discussion of the layouts with the audience.

CHAPTER 2 Riverside Park Case Study & Master Plan

Project Beginnings

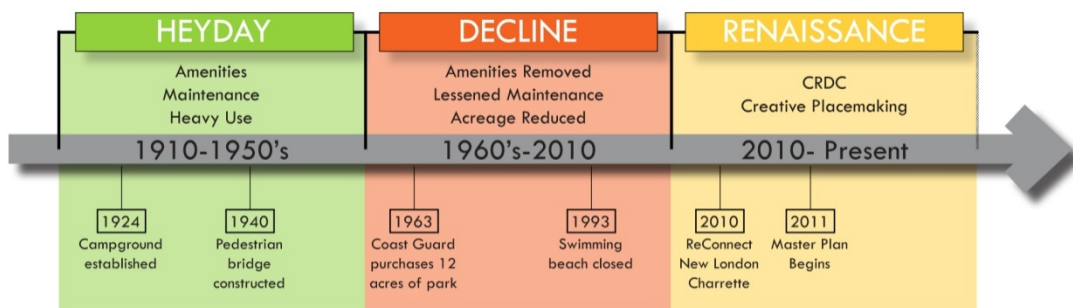
CRDC's work in New London, Connecticut began in June 2010, with a three day design charrette. This charrette, named Re-Connect New London, explored ways to reconnect the north end of the city with the downtown, which were bisected with the construction of I-95 in the mid 1900s. Re-Connect New London led to the following project- a master plan for Riverside Park. Riverside Park is an 18-acre wooded park located in the northern portion of New London along the Thames River (Figure 2.1).



Figure 2.1: Riverside Park in the context of the City of New London (Google Maps, 2006)

The status of Riverside Park has changed over time. There are three main periods that can be used to describe the park. These are the park's *heyday*, *decline*, and its *renaissance*. The heyday of the park was from approximately 1910 through the 1950s. It was a time when the park

was thriving. It had a number of amenities, was maintained, and experienced heavy use. The decline of the park began around the 1960s and lasted until 2010. This period saw amenities removed from the park, lessened maintenance, and a reduction in its acreage. The renaissance of the park began in 2010. CRDC's Re-Connect New London Charrette began this period of renewed interest in restoring the park to its heyday. The master plan process continued this streak. The timeline below (Figure 2.2) shows these three periods and some events that took place during each period. Each of these three periods will be described in further detail in the following sections.



Riverside Park Timeline

Figure 2.2: Three phases of the park's history

Park Heyday: 1910-1950s

Riverside Park was established in 1893 with the acquisition of 18 acres of land from New London's Post Hill Improvement Company. The park had expanded to nearly 33 acres by 1910 by gifts from Frank Brandegee, Sebastian Duffy Lawrence, and the Palmer Brothers (Riverside Park Conservancy, 2013). With their gift of 11 acres, Brandegee and Lawrence provided the following statement:

...being impressed with the importance of preserving forever to the people access to the beautiful waters adjacent to our maritime location and with the values of large open places of wooded land to the health and comfort of the public, we tender herewith as a gift to the City of New London a deed of the above described land... (Chalk, 2011).

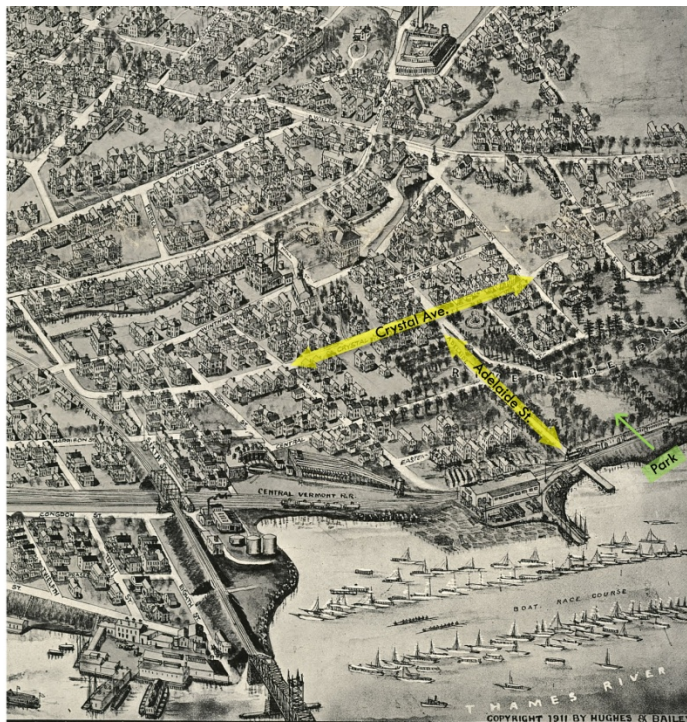


Figure 2.3: A 1911 birdseye view of the park
(Bailey & Hughes, 1911)

Although the city had acquired the land, it was not put to use for several years. In order to provide work for the unemployed, cleanup of brush began. According to an article in *The Day*, dated from 1922, “The city put up a summer house and a few other buildings and cut roads through and the result is one of the finest places for an outing in the state of Connecticut” (Delightful Riverside Park).



*Figure 2.4: The fountain near the Park's Adelaide Street entrance, circa 1923
(New London Historical Society, 1923)*



Figure 2.5: Another view of the fountain. Crystal Avenue is in the background. (Calvert, n.d.)

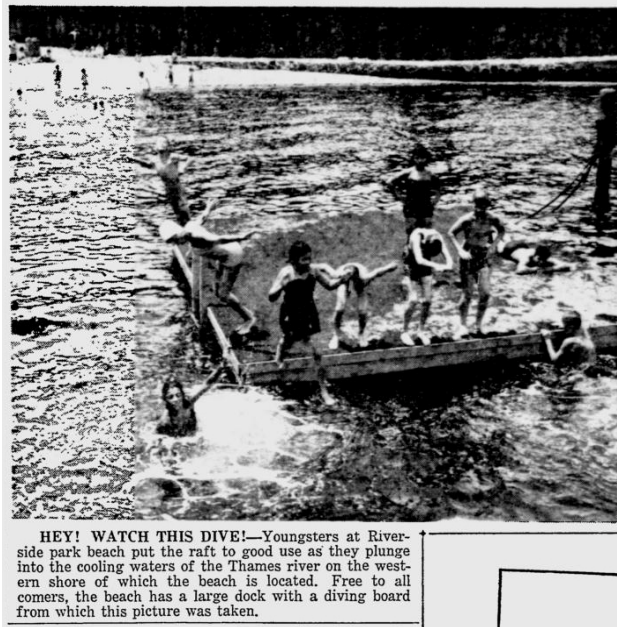


Figure 2.6: A scene in Riverside Park (Utley, Circa 1910)

The park was a flourishing destination with several amenities. A fountain was once in place near the entrance to the park (Figures 2.4 and 2.5). The park also featured a goldfish pond. The hilly terrain was ideal for children to sled ride during the wintertime. It was a great

location for a picnic and provided scenic views of the Thames River. Figure 2.6 is a fine representation of the wooded, yet manicured nature of the park with its sloping topography. Other highlights of the park included a swimming beach and a pier extending into the Thames River.

In 1924, a campground and camp house were established (Forgotten Park, 1980). The cost to camp in the park was 50 cents a day per automobile (New London 25, 1950). The 1940s brought the construction of a bathhouse and a pedestrian bridge over the railroad tracks. The railroad tracks, which run between the park and the waterfront, can be seen in Figure 2.3 at the end of Adelaide Street (on the waterfront side).



*Figure 2.7: Children playing at the beach
(New London Day- July 16, 1954)*

The beach remained a hot-spot into the 1950s (Figure 2.7). It featured a raft, the 100-foot long pier with a diving board, and a boat landing platform. The bathhouse was located west of the beach and had 36 dressing rooms. The pedestrian bridge (Figure 2.8) served as a safe way for children to get to and from the beach and the bathhouse (Jenkins, 1954, p. 5).

In 1953, the park had become so popular that options were weighed to help keep the crowd

down. There were a great deal of out-of-towners visiting the park. As a result of complaints by residents, the city considered either closing the park at sunset or allowing only New London residents to use the park (Riverside Park Overrun). While the crowds may have been a nuisance to some, this heavy use is indicative of the vitality of the park at the time.



Figure 2.8: The pedestrian bridge leading to the waterfront was constructed in 1940 (New London Day- May 16, 1940)

Park Decline: 1960s-2010

Although the park had become an attraction for residents as well as people outside of New London, it did not last. Over the years, the park's popularity had declined. The construction of I-95 isolated the park and the surrounding neighborhood from the rest of New London. In 1963, the Coast Guard Academy purchased 12 acres of Riverside Park to expand its grounds (Benson, 1994). Today Riverside Park totals about 18 acres- close to half of its size in the early 1900s. Maintenance lessened over time, leaving the vegetation overgrown and the amenities in poor condition. The camp house was closed and no longer exists in the park today. Over the years, articles in the New London Day, such as the one in Figure 2.9, have described the park's decline.



Figure 2.9: An article describing the state of the park in 1994
(New London Day- July 17, 1994)

The swimming beach had remained open through the 1980s, however the number of people who used it had diminished. Lifeguards (Figure 2.10) claimed that the beach was boring, and that they

never had a reason to go into the water (Collins, 1984). In the summer of 1991, Hurricane Bob tore away a portion of the shore, which was small to begin with, and left behind a trail of debris.

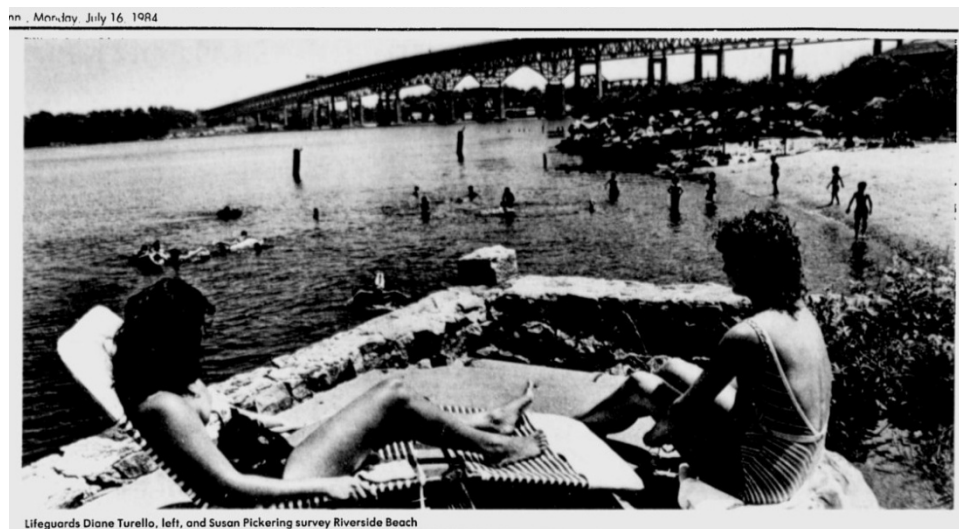


Figure 2.10: A view of the beach in 1984. I-95 can be seen in the background (New London Day- July 16, 1984)

The swimming beach officially closed in the summer of 1993 (Benson, 1994). It was one of the last few activities that had remained from the early days of the park. Figure 2.11 provides insight to the condition of the park at the time. The fountain is no longer in place. There is no pier. Waterfront access has been reduced due to the pedestrian bridge having been condemned. The bathhouse still stands, but it is no longer open for public use. Playground equipment has been removed. While some locals still use the park, it is no longer the attraction that it once was. Riverside Park became perceived to many as an unsafe place. Although there are few, if any actual records, people came to view it as a setting for drug transactions and other crimes.



Figure 2.11: A newspaper photo with a caption describing state of the park in 1994 (New London Day- July 17, 1994)

The aerial photos to the right show the effect of the highway interchange on the City of New London. The location of Riverside Park is highlighted in the magenta color. Figure 2.12 is a view in 1934 when the park was larger in size than it is today. At this time, the street system was overall well-connected, making it easy to travel throughout the city. Figure 2.13 is a view in 1965. By this time, the interstate began to separate the northern portion of New London from the rest of the city. By the 1980s, as shown in Figure 2.14, the highway interchange became much larger and more complex. In this view, it is clear that Riverside Park had become isolated from the rest of New London.

Figure 2.15 and 2.16 show the reduction in the acreage of the park. In 1934, the park was close to 33 acres. At this time, the fountain stood near the Adelaide Street entrance, and the pier was also in place near the end of Adelaide Street. By 1965, the park was close to the size it is today, which is about 18 acres. At this time the fountain was already gone, as was the pier.



*Figure 2.12: 1934 aerial view of New London
(Aerial Photo: UConn MAGIC 1934)*



*Figure 2.13: 1965 aerial view of New London
(Aerial Photo: UConn MAGIC 1965)*



*Figure 2.14: 1986 aerial view of New London
(Aerial Photo: UConn MAGIC 1985-1986)*



*Figure 2.15: A 1934 aerial view of the park and its estimated boundary at the time
(Aerial Photo: UConn MAGIC 1934)*



*Figure 2.16: A 1965 aerial view of the park and its estimated boundary at the time
(Aerial Photo: UConn MAGIC 1965)*

Park Renaissance: 2010-Present

Over the past few decades, attempts have been made to restore the park to its former glory. These have come and gone, leaving no lasting impact. The work that CRDC has done hopes to change this trend. Around the same time period that CRDC had become involved with work in New London and Riverside Park, the Coast Guard Academy (CGA) had proposed buying a portion of the park from the city in order to expand its grounds. If the sale went through, that portion would be closed off to the general public, becoming government property. The public was to vote on the issue of whether or not the city should sell the portion of the park to the CGA on Election Day 2011. This was a controversial topic in the city. For some, the history of neglect and short-lived attempts at improving the park were clear indicators that the city should sell the park. Others disagreed, viewing the park as an invaluable resource to the city that once gone would be gone for good. The initial results of the election on November 8, 2011 were in favor of the sale to the Coast Guard. The Coast Guard had won by 13 votes. Due to the count being so close, a recount of the votes took place. This time the results were against the sale to the Coast Guard. The park won by 19 votes and would remain city property open to the public. With the prospective sale over, plans for how to improve the park were further pursued. CRDC has been in the process of developing a master plan for Riverside Park over the past few years.

Master Plan Process

The overall design process for the master plan will be presented in four sections- program, inventory, analysis and design. Figure 2.17 illustrates the four phases of the landscape architecture design process which will follow.

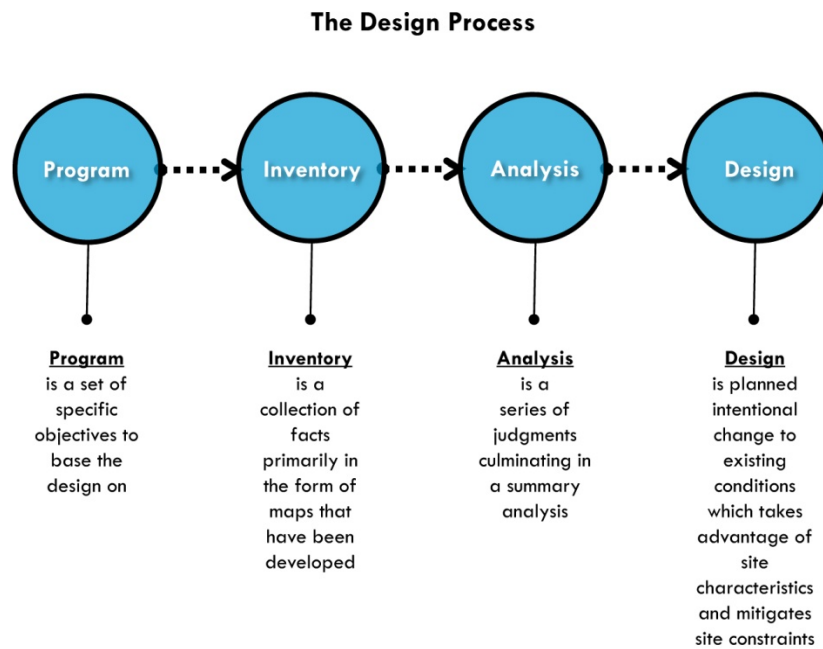


Figure 2.17: Four phases of the design process

Program

Overall, the goal of the plan is to increase the use of the park, making it comparable to its heyday. It should continue to be a neighborhood park and an asset to the City of New London.

There are five key objectives that the master plan seeks to achieve. They are as follows:

1. To create a connection between the school, the park, and the river
2. To improve circulation within the park
3. To organize activity areas within the park
4. To include attainable phases of implementation
5. To incorporate a solution to the stormwater problem at the Winthrop School

When the Winthrop School was recently transformed into a magnet school, its location next to the park influenced the theme of its curriculum to include science. It was anticipated that the park could be used as an outdoor classroom. Therefore, an improved connection between the school and the park is necessary for it to be easier to access and utilize. The park is named for its location along the Thames River, yet it lacks easy waterfront access due to the railroad tracks. The existing pedestrian bridge is no longer a safe means of crossing the railroad so a new connection must be made. There are numerous roads that run through the park, yet there is no separation among users. The plan seeks to improve the circulation. The park has existing activity areas, which are in good condition, as well as spaces where new ones could go. The master plan includes a way of organizing these spaces in the park. The master plan is not something that could be constructed all at once. Therefore a set of phases were developed that show how the plan could be gradually implemented over time. The Winthrop School's stormwater system currently has a problem. A solution was developed that could be incorporated with and complement the overall master plan. These five objectives will be discussed further in the design section.

Inventory

Riverside Park is located near I-95 in New London. On the western boundary of the park is the Winthrop Elementary School. This school underwent renovations around 2011. It reopened in 2012 as the Winthrop Elementary Magnet School. The Coast Guard Academy is located on the northern boundary of the park. On the eastern boundary of the park is the Thames River. Figure 2.18 shows these adjacent land uses and others in relation to the park.

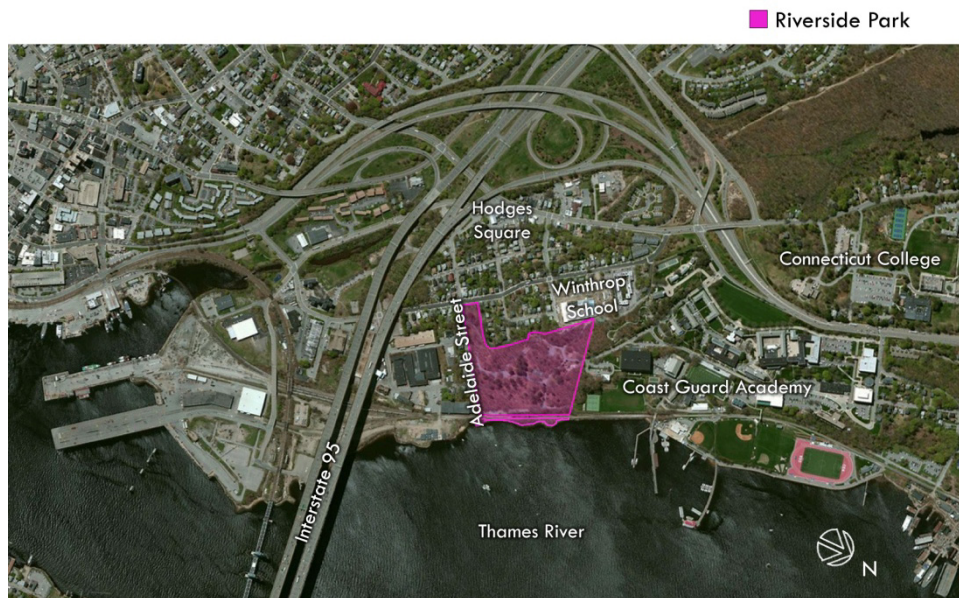


Figure 2.18: Riverside Park local scale (Aerial Photo: Bing Maps, 2011)

Riverside Park is made up of two parcels. The main parcel is 17.22 acres and the waterfront parcel is .91 acres (Figure 2.19). This acreage is based on the Southeastern Connecticut Council of Governments (SCCOG) GIS data. Figure 2.20 shows the area of the park that the Coast Guard had wanted to purchase. The land in the park slopes down from the school, to the waterfront. The elevation change is approximately 140' from the upper park boundary near the school to the waterfront (Figures 2.21 and 2.23). There are substantial slopes within the park, some of which are above 20% (Figure 2.22).



**Figure 2.19: The main parcel of the park and the waterfront parcel are shown
(Aerial Photo: Bing Maps, 2011)**



**Figure 2.20: The Coast Guard's proposed expansion is shown in yellow
(Aerial Photo: Bing Maps, 2011)**

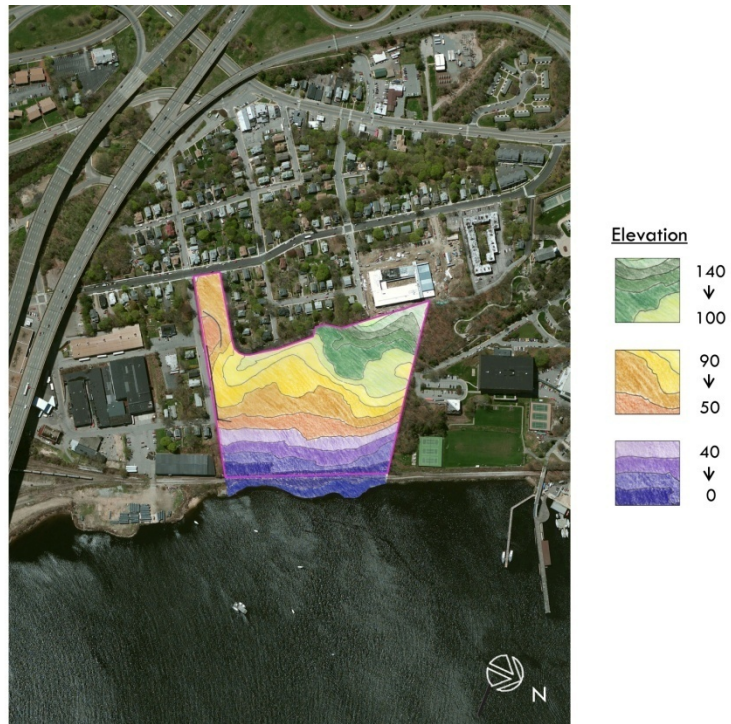


Figure 2.21: The elevation increases from the waterfront to the Winthrop School by approximately 140' (Aerial Photo Bing Maps, 2011)

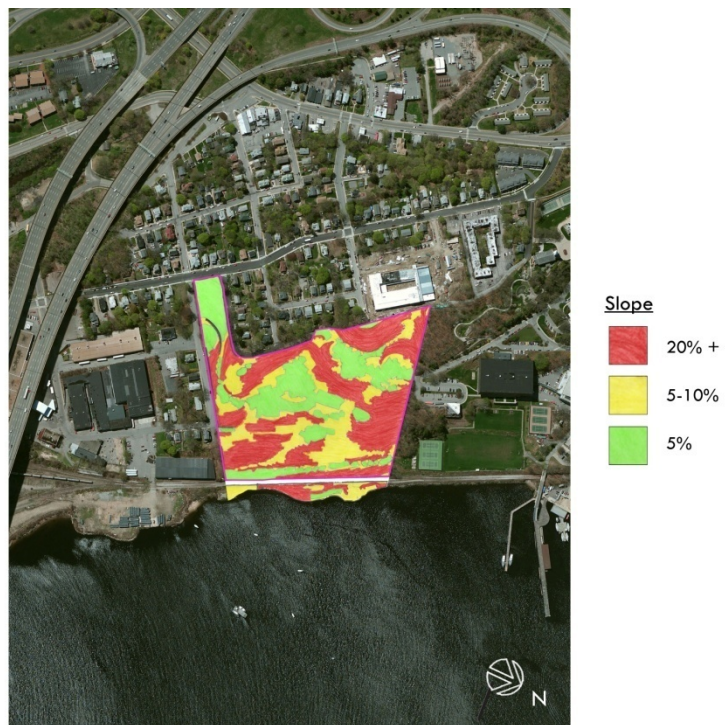


Figure 2.22: The slopes in the park are identified, ranging from very steep to flatter areas (Aerial Photo: Bing Maps, 2011)



Figure 2.23: A cross section from the school to the waterfront shows the 140' topographic change

Park Photos

Three groups of photos will follow. These were taken primarily in the park and include land uses, circulation, and activity areas. Figure 2.24 shows the land uses in and around the park. These include the Winthrop School, Coast Guard Academy, railroad tracks, and the Thames River.



Figure 2.24: Land uses in and around the park
(Aerial Photo: Bing Maps, 2011. Coast Guard Photo: <http://www.popularmilitary.com/images/cgacademy2.jpg>)

Methods of circulation in the park are shown in Figure 2.25. There are stairs which lead from the school to the park. These are made of railroad ties embedded into the hillside. They are not an ideal entrance to the park and should be improved. There are numerous roads which run through the park. It can be somewhat confusing if you haven't been to the park before. Parking can be found in various locations in the park. Another element is the pedestrian bridge. The bridge was built as a means to cross over the railroad tracks and reach the waterfront. The bridge is presently condemned due to its poor condition, which limits waterfront access.



Figure 2.25: Circulation within the park
(Aerial Photo: Bing Maps, 2011)

The park contains some activity areas (Figure 2.26). These include a basketball court and a picnic area. Both of these are in good condition. Other features of the park have been removed, such as a playscape which was in poor condition. A pavilion was also in place, but now only the concrete slab remains.



*Figure 2.26: Activity areas within the park
(Aerial Photo: Bing Maps, 2011)*

Analysis

An overall analysis of the park shows factors that should be considered in future planning for the park. For example, there are features that are in good condition and should remain. These include the basketball court and the picnic area. It should also be noted that reestablishing a connection between the waterfront parcel and the main park parcel is vital. The waterfront was a key amenity in the park's earlier years. Figure 2.27 shows a full analysis of the park. Figure 2.28 shows three main opportunities and constraints present in the park.

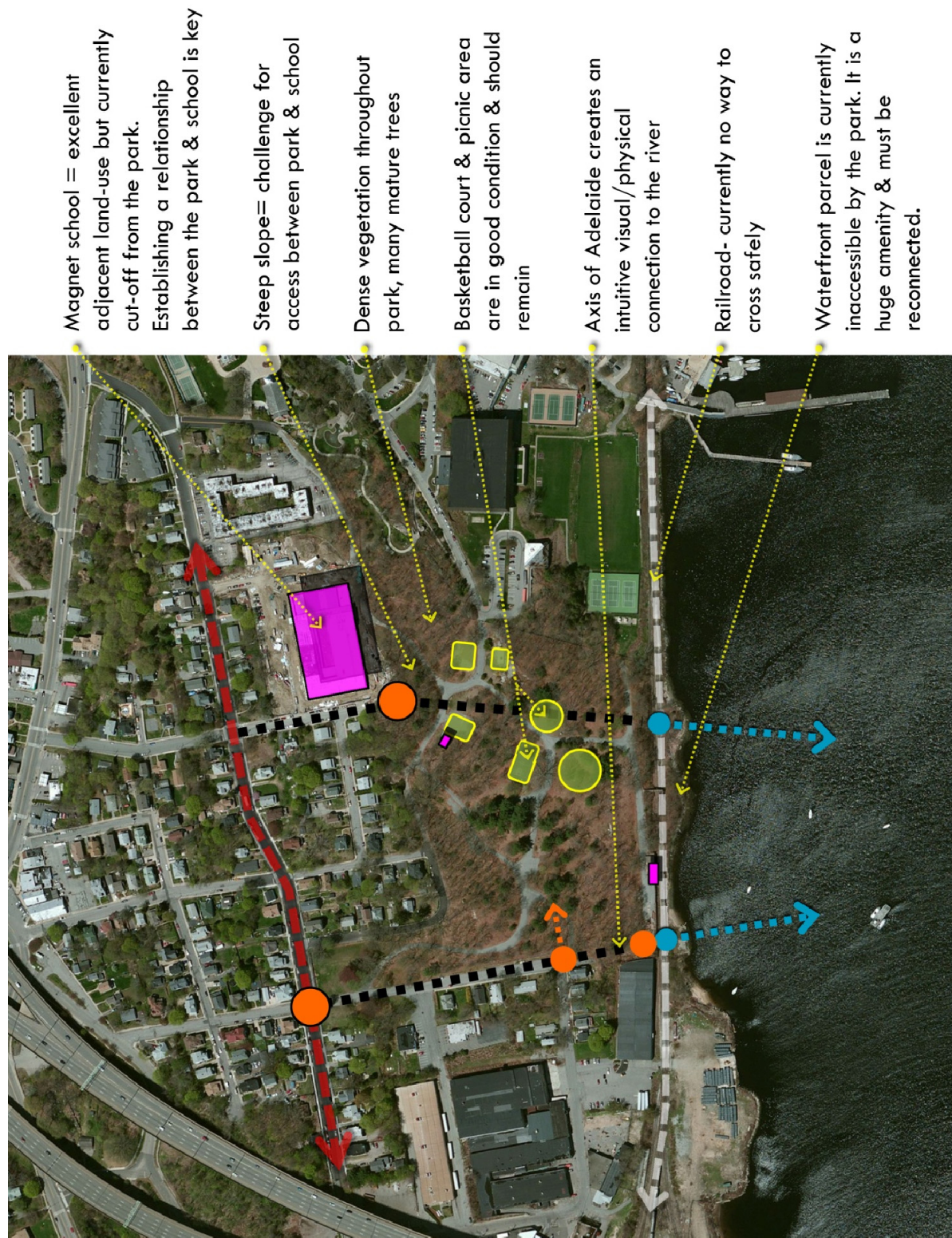


Figure 2.27: An analysis of the park (Aerial Photo: Bing Maps, 2011)



Figure 2.28: Opportunities and constraints of the park (Aerial Photo: Bing Maps, 2011)

Opportunities

Winthrop Magnet School: Science theme ideal for its location adjacent to the park

Thames River: Magnificent location, opportunities for views, recreation

Topography & Vegetation: Slopes toward a major resource (Thames River), varied, interesting. Mature trees, mix of evergreen & deciduous

Constraints

Railroad: Currently no safe way to cross the railroad to access the waterfront

Waterfront Condition: Overgrown vegetation, some steep slopes, currently inaccessible

Topography: Steep slopes present a challenge in developing the park

Design

The master plan (Figure 2.29) addresses the objectives of the program. The first objective was to create a connection between the school, the park, and the river. This was done by developing a “grand entryway” into the park from the school. This entryway includes a circular entrance with sets of stairs that lead into the park. This entrance then proceeds to a main pedestrian walk to the waterfront. At the end of this walk is a new pedestrian bridge over the railroad track which connects the main parcel to the waterfront parcel. The addition of a pier furthers the waterfront access. Additionally, Adelaide Street would be extended toward the waterfront. At the end of Adelaide would be another crossing at the railroad tracks followed by a pier. This pier would be close to the location of the one that was previously in place. The second objective was to improve circulation within the park. This was done by designating separate paths for pedestrians and automobile traffic. The third objective was to organize activity areas within the park. The activity spaces are all organized off of the main pedestrian walk between the school and the waterfront. Nearly all of these spaces were existing- the basketball court, picnic area, former playscape locations, former pavilion, and a parking area. The locations of the former playscapes, the former pavilion, and the current parking area are open to new uses. The fourth objective was to include attainable phases of implementation. Three phases were created which show how the plan could be gradually implemented over time. The final objective was to incorporate a solution to the stormwater problem at the Winthrop School. The solution involves directing the stormwater into the park. Due to the length of the study regarding the stormwater, it will be described in detail in the following chapter. An overview of the design will be shown in this section. A more detailed look at the design, including a closer look at specific zones of the park design, can be seen in the appendix.



*Figure 2.29: Riverside Park Master Plan
(Aerial Photo: Bing Maps, 2011)*

1. Connecting the school, the park, and the river

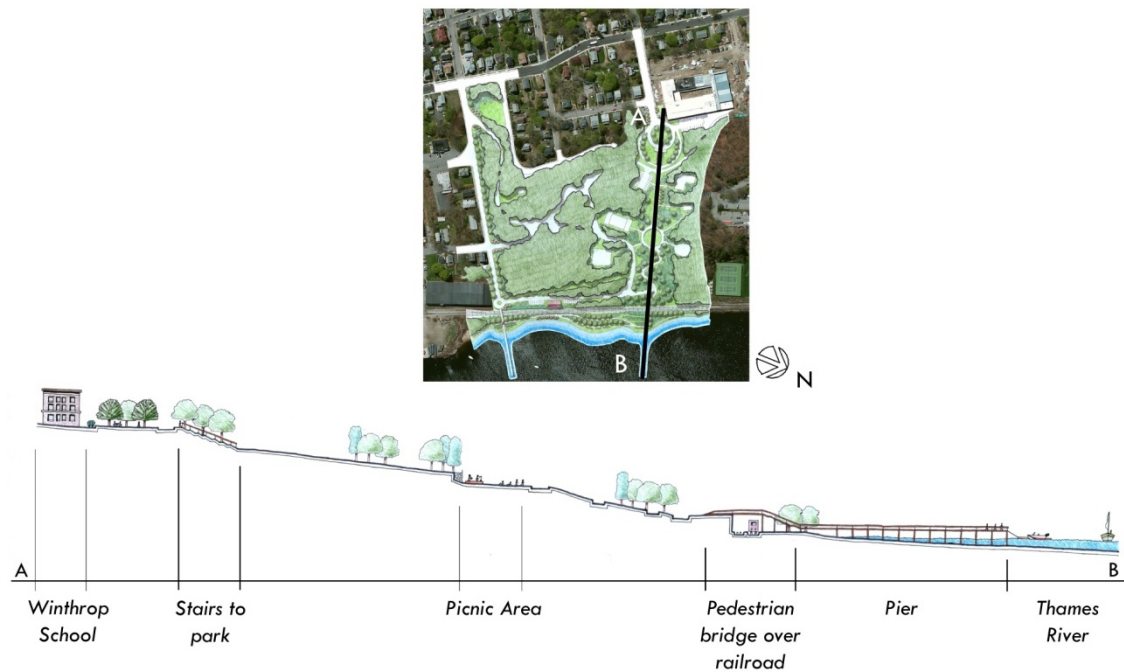


Figure 2.30: Proposed cross section from the school to the waterfront



Figure 2.31: The proposed grand entrance to the park from the school



Figure 2.32: Overview of the proposed pedestrian walk from the school to the waterfront

The length of each pier is 200'. This length is based on the recommendation of a company in Mystic, CT which specializes in marine design and construction. The company is familiar with Riverside Park and explained that in order to allow people to see up and down the river, this is the minimum length. Anything less would not provide much of a view.

2. Improving circulation

Changes to the park's circulation are recommended. There are currently numerous roads which run through the park that are shared between vehicles and pedestrians. CRDC recommends some separation among users of the roads. For example, a primary vehicular road is recommended which would begin approximately three quarters of the way down Adelaide Street toward the waterfront. The bottom portion of Adelaide Street, which is currently blocked off, would be reopened to allow vehicles to enter the park near the waterfront. The current entrance off of Adelaide Street would be designated for pedestrian use and limited vehicular use. The vehicular use would be limited to emergency access as well as unloading (for picnics and accessibility). The usage could be restricted with proper signage and the use of bollards. The pedestrian-only path would be between the school and the waterfront as well as a short path near the existing grove of pines in the central area of the park. The existing and proposed circulation can be seen in Figures 2.33 and 2.34.



*Figure 2.33: The existing circulation within the park is all shared by vehicles & pedestrians
(Aerial Photo: Bing Maps, 2011)*



*Figure 2.34: CRDC's recommended circulation provides designated areas for vehicles and pedestrians
(Aerial Photo: Bing Maps, 2011)*

3. Organizing activity areas

The plan takes advantage of the existing activity areas by branching them off of the main pedestrian path between the school and the waterfront (Figure 2.35).



**Figure 2.35: Activity areas along the main pedestrian walk
(Aerial Photo: Bing Maps, 2011)**

4. Phases of implementing the plan

The plan was broken down into three phases to show how it can be implemented over time. The three phases are detailed in the following three figures. Figure 2.36 shows the beginning phase, Figure 2.37 shows the intermediate phase, and Figure 2.38 shows the final phase.

Riverside Park – Proposed Overall Master Plan: Phases of Implementation



Figure 2.36: The beginning phase of the plan is described

Riverside Park – Proposed Overall Master Plan: Phases of Implementation



Figure 2.37: The intermediate phase of the plan is described

Riverside Park – Proposed Overall Master Plan: Phases of Implementation

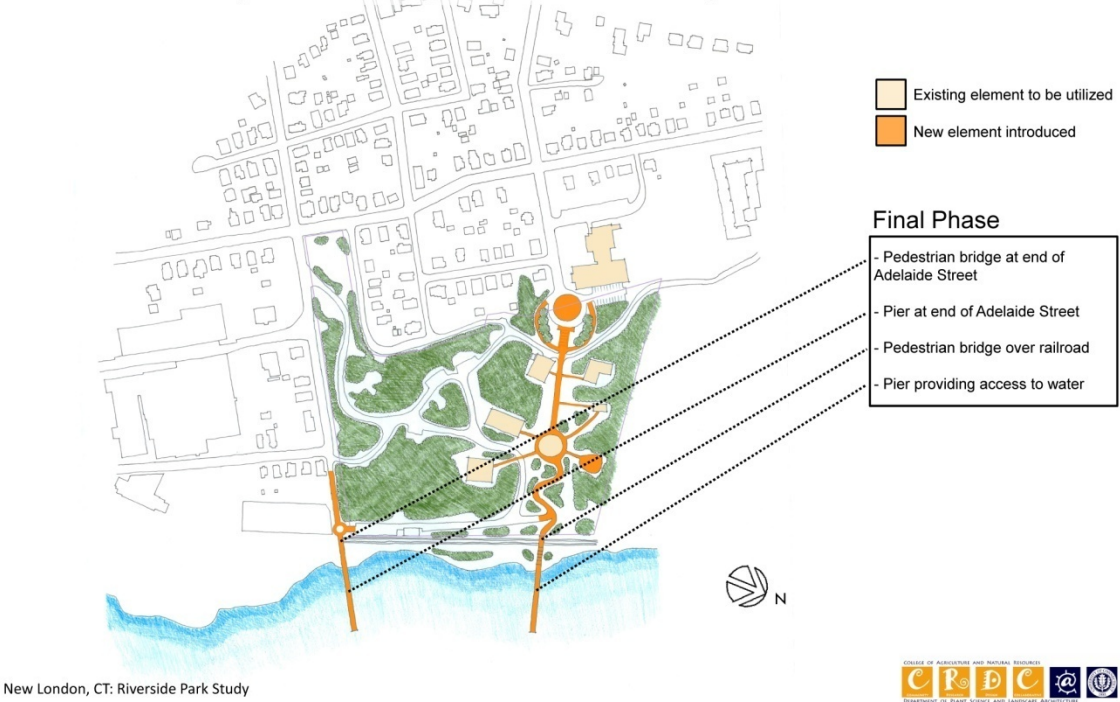


Figure 2.38: *The final phase of the plan is described*

5. Stormwater solution

The solution to the stormwater problem at the Winthrop School will be detailed in the following chapter.

CHAPTER 3 Stormwater Study

Introduction

During the master plan process for Riverside Park, there had been talk of an issue related to the stormwater system at the Winthrop School. CRDC began to investigate the matter in detail. CRDC was not directly asked to conduct this study, but it was a known issue and we wanted to see if a solution could be derived that would complement the master plan. The study began by reviewing meeting notes from the New London School Building and Maintenance Committee, which were published on the New London Public Schools' website. These notes provided some insight to the problem. CRDC was in contact with several people in the city, the firms involved with the school construction project, and affiliates of the University of Connecticut. Figure 3.1 provides a list of these contacts and their involvement. At this time, CRDC arranged to borrow the Winthrop School construction drawings from the New London Building Department. The grading and drainage plan was studied and was of great value because it showed the existing stormwater infrastructure and was used to determine where the stormwater is currently directed.

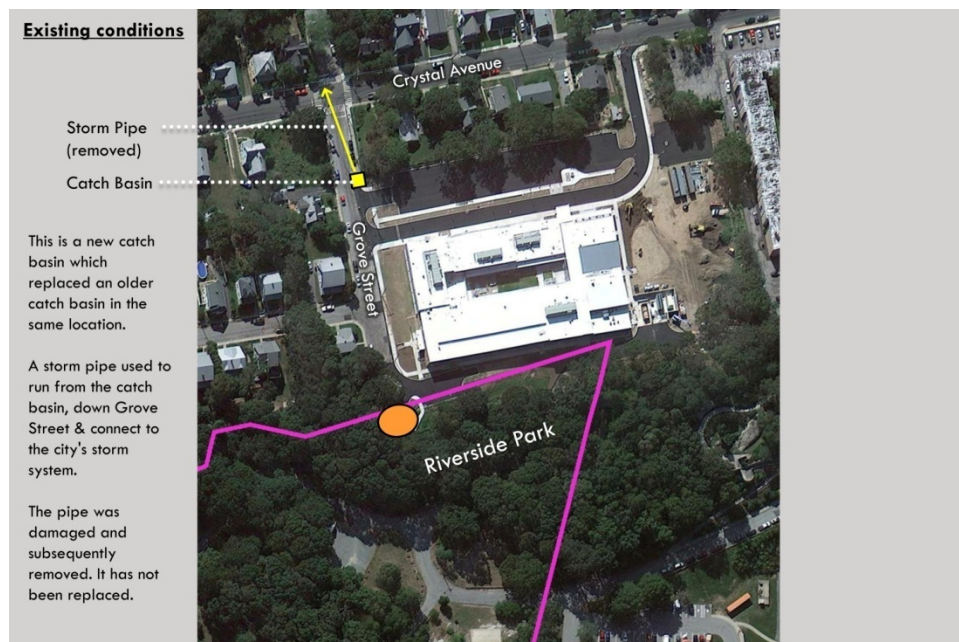
Winthrop School Stormwater Contacts		
Position/Committee		Notes
Kevin Beals	Tai Soo Kim Architects	Provided additional plumbing drawings to understand the roof drainage, explained the school's courtyard drainage
Mike Dietz	UConn NEMO	Info on sizing proposed stormwater system, design feedback
Getch Dires	New London Information Technology	Contacted about city GIS info
Tim Hanser	New London Public Works Director	Info on school drainage problem
Kenric Hanson	New London Sustainability Committee, School Building & Maintenance Committee	Info on school drainage problem from School Building & Maintenance Committee meetings
Bruce Hyde	New London Sustainability Committee, UConn NEMO, UConn CLEAR Land Use Educator	Requested info about CRDC's work regarding the school's drainage issue
Julia Kuzovkina	UConn Dept. of Plant Science & Landscape Architecture	Resources for plant selection
Maria Loitz	BVH Engineers	Asked her about school grading/drainage drawings, informed us that water from storm system can't flow to park via gravity due to its elevation
Vince McDermott	Milone & Macbroom	Asked him about school grading/drainage drawings, directed us to BVH Engineers
James Salmon	New London Building Department	Assisted with borrowing school construction drawings
Bob Stuller	New London Wetlands & Conservation Committee	Attended Riverside Park workshops & events, help with existing park drainage
Ronna Stuller	Riverside Park Conservancy	Attended Riverside Park workshops & events, provided additional contacts, help with existing park drainage
Ryszard Szczepke	Tai Soo Kim Architects	Attended School Building & Maintenance Committee meetings, provided general info on school drainage & directed us to Kevin Beals

Figure 3.1: A list of people CRDC was in contact with regarding the stormwater study

The Issue

Stormwater from the Winthrop School property drains to two locations. One of these is an area of riprap located at the upper park boundary between the park and the school. The rest of the stormwater is directed to a catch basin on Grove Street. The problem is that a storm pipe that was connected to this catch basin was damaged and therefore removed. As of now, it has not been replaced. The location of these structures can be seen in Figure 3.2. As a result of the pipe having been removed, water that enters the catch basin has nowhere to go, so the catch basin fills up and the water sheet flows down Grove Street.

Figure 3.3 is a color-coded diagram showing the portion of the school site draining to the catch basin (purple) and the portion draining to the riprap area (green). Approximately 66% of the school runoff goes to the Grove Street catch basin and the remaining 34% goes to the riprap area.



**Figure 3.2: The catch basin & location of former pipe are shown
(Aerial Photo: Google Earth, 2011)**

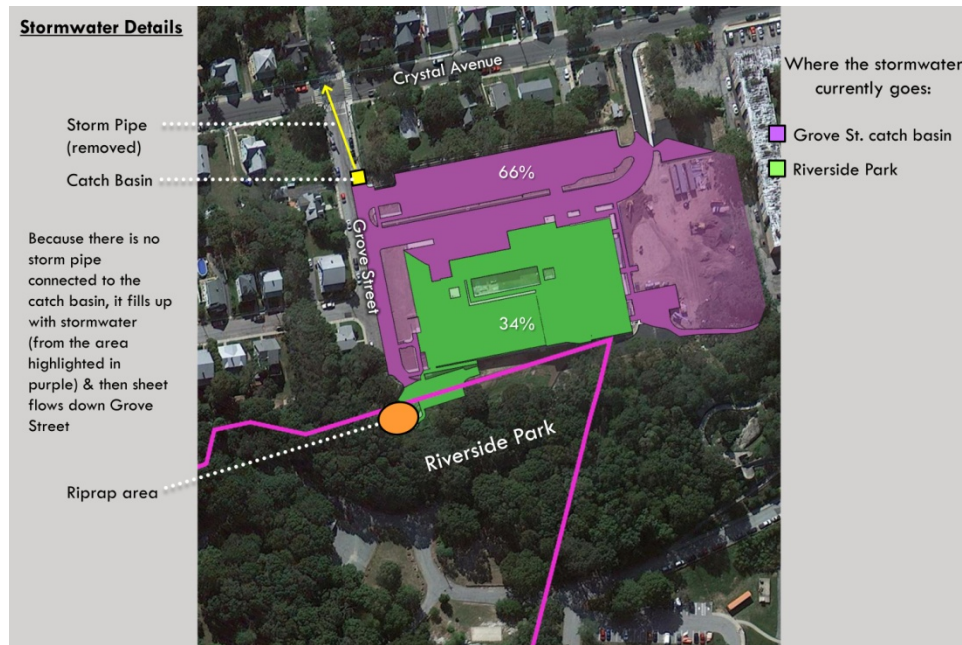


Figure 3.3: Diagram showing where the school runoff is directed (Aerial Photo: Google Earth, 2011).



Figure 3.4: The Grove Street catch basin is shown. The patch running down the road shows the location of the removed pipe.



Figure 3.5: A close up view of the catch basin shows it full of water. This is due to the lack of an outlet for the water to drain.

CRDC Proposed Solution

With the ongoing work pertaining to Riverside Park and its adjacent location to the school, the possibility of directing the stormwater currently entering the Grove Street catch basin into Riverside Park was explored. This would mean that 100% of the school runoff would enter the park. The stormwater would still enter the catch basin, but from there it would be directed into the park. Figure 3.6 diagrams this possibility and also notes that existing elevations pose a challenge. The catch basin is situated at elevation 123.75, while the elevation near the upper park boundary is 140.

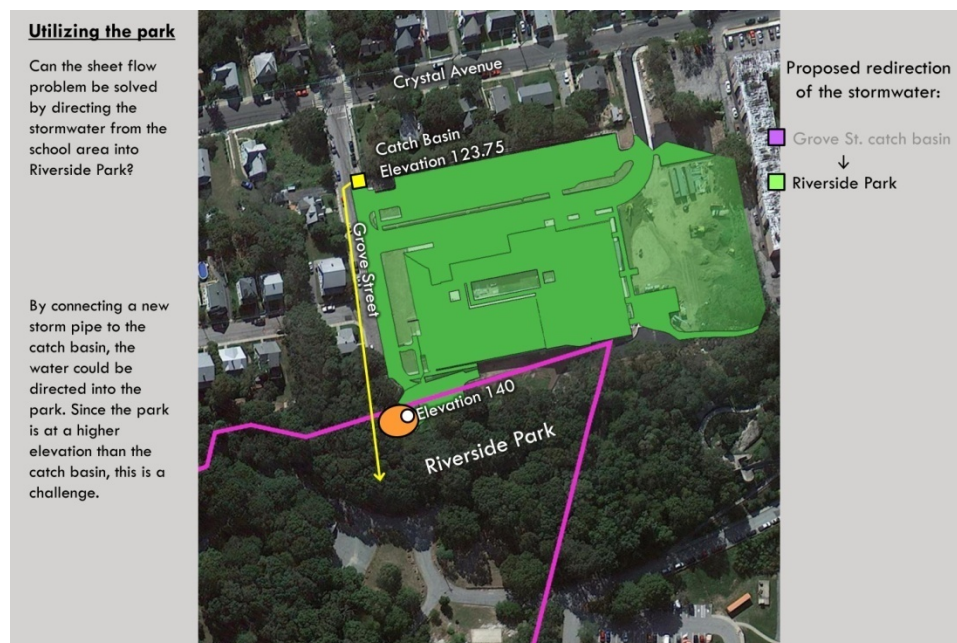


Figure 3.6: CRDC proposed diagram of the stormwater directed into the park (Aerial Photo: Google Earth, 2011)

Two options were presented to account for this roughly 16 foot difference. Option 1 would be to use gravity flow to direct the water into the park. This would require excavating a substantially deep trench- approximately 19' at its deepest point and installing a storm pipe for the water to flow through. Option 2 would be to use a pump connected to a storm pipe to direct

the water into the park. This would allow for a much shallower trench of approximately 3.5 feet. Figure 3.7 illustrates these two options. The remaining portion of the study is assuming the pump (option 2) is selected. This is due to the significant depth that option 1 would require as well as the likelihood that blasting would need to be done to accomplish this. The specific details surrounding the pump, such as sizing it, are beyond the scope of this project. It should also be noted that a storage tank may also need to be installed depending on the pump's ability to keep up with the volume of water.

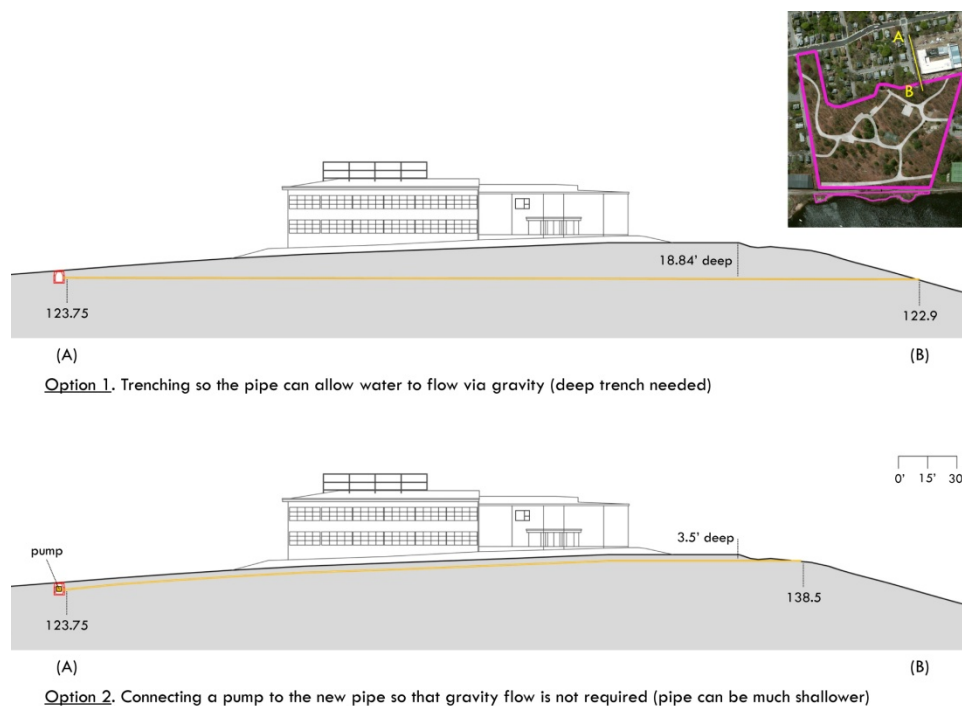


Figure 3.7: Two options for bringing the water into the park

Handling the Stormwater in Riverside Park

Once a method of getting the water from the catch basin and into the park was established, the next step was to address how the water would be handled within the park. At this point the purpose of the riprap area should be noted. Two photos of the riprap area are shown (Figure 3.8 and 3.9). The riprap functions as a means to slow down the flow of water. Within the

riprap area is a level spreader, which in this case can be described as a concrete lip with a level surface. This structure allows water to be dispersed evenly over its surface before flowing into the park. The ultimate purpose is to reduce erosion as the water enters the park; the riprap area is not designed to improve water quality. Figure 3.10 diagrams the function of the riprap area.



Figure 3.8: A view of the riprap area. Water enters through the pipe near the parking lot.



Figure 3.9: Another view of the riprap area looking toward the park

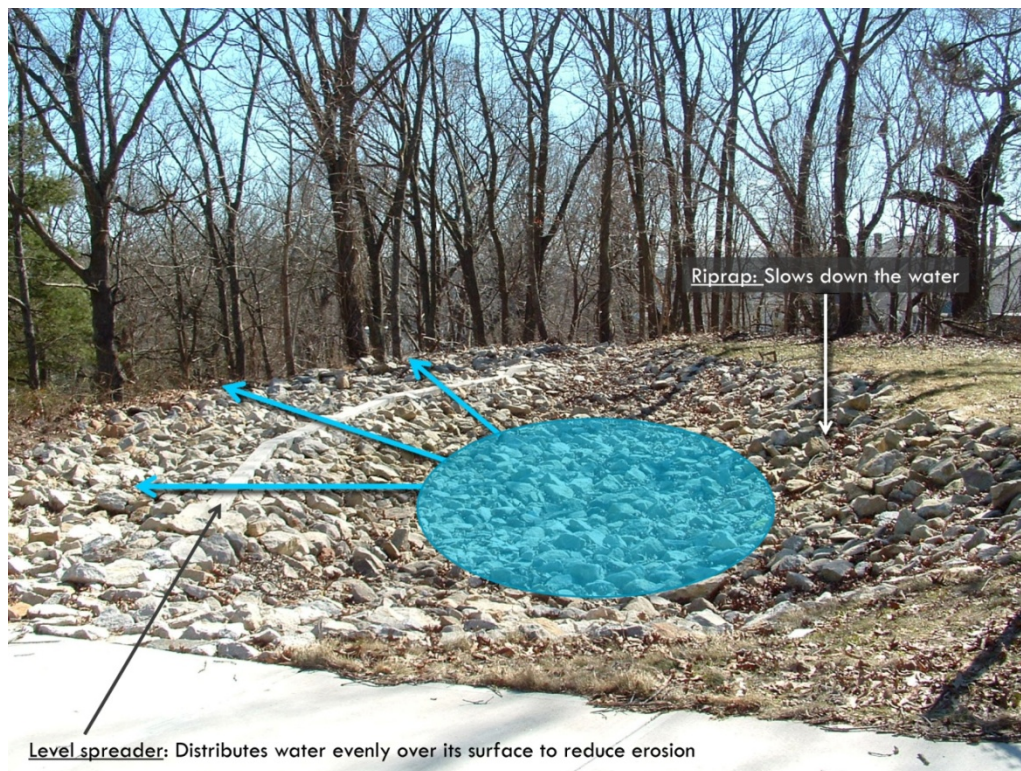


Figure 3.10: The function of the riprap area is diagrammed

CRDC proposes removing the riprap area for three main reasons:

1. It provides no benefit for water quality
2. It is unattractive
3. It interferes with the master plan's "grand entrance" to the park

In place of the riprap area, and throughout the park, CRDC proposes incorporating a stormwater system that will:

1. Improve water quality
2. Continue to reduce erosion within the park
3. Be an amenity

CRDC proposes that a series of bioretention gardens be introduced within the park in which the stormwater will be directed to. The City of Indianapolis' Office of Sustainability summarizes the purpose of bioretention gardens, which are also referred to as rain gardens:

A rain garden is a garden of native shrubs, perennials, and flowers planted in a small depression... It is designed to temporarily hold and soak in rain water runoff that flows from roofs, driveways, patios or lawns, preventing it from entering the storm sewer system. Soil and plant roots use natural processes to improve water quality by filtering pollutants.... The water is held by the garden and allowed to slowly infiltrate the soil, providing an important role in recharging ground water supplies and reducing storm water runoff volumes to local streams. (n.d., para. 2)

Runnels would be used to carry stormwater from one garden to the next. Runnels were chosen because they have been handling stormwater in the park since at least the 1930s (Figure 3.11) and continue to do so presently (Figure 3.12). Additionally, the runnels are a way to keep

the water exposed so that people can see it as it travels through the park between the gardens.

This is the opposite of the more conventional approach of handling the stormwater by directing it underground and disposing of it as quickly as possible. By keeping it exposed, the stormwater can become an amenity, versus something to hide.



One of a series of new gutters designed to drain Riverside park properly. The construction of these drains has permitted much improvement in the park roadways which formerly were frequently washed out during a heavy rainstorm.

Figure 3.11: A photo showing gutters/runnels within the park in the 1930 (New London Day- April 8, 1936)



Figure 3.12: A photo of one of the runnels taken in March 2013

Existing Drainage

In order to determine if bioretention gardens would be suitable for the park, a soil map (Figure 3.13) was created using data from the NRCS soil survey. Based on the map, all soil types have a drainage class of “well-drained.” The only exception is the area shown in red, which is labeled “urban land.” This area has no drainage classification listed, but is not in a location where a bioretention garden is proposed so does not pose an issue. The proposed bioretention

gardens are all located in the green and purple areas of the soil map, which are well-drained and should be acceptable for this purpose.



Figure 3.13: Soil types are diagrammed in the park and school area
(Aerial Photo: Bing Maps, 2011)

According to locals, there is a network of underground pipes. Unfortunately there is no available mapping which shows this. CRDC created a map which would show the existing drainage structures that can be seen walking through the park. Two New London residents took the time to walk around and took some photos which helped us to get started. CRDC visited the park to take a closer look and create a refined map. The map is shown in Figure 3.14.



*Figure 3.14: Existing drainage structures in the park
(Aerial Photo: Bing Maps, 2011)*

Feedback from Workshop 4

At public workshop 4 (April 9, 2013), two options for handling the stormwater were presented. A survey was handed out to ask how the audience felt about what was presented. The survey asked the attendees their thoughts on the following: treating the water currently entering the park from the school (i.e. the water that presently enters the riprap area), treating all of the runoff from the school within the park, and if they like the idea of bioretention gardens. They could answer with the following choices: “I like,” “I don’t like,” “We need this,” or “Not sure.” There was also a space on the survey designated for open-ended comments. Figure 3.15 shows the results of this survey. Overall, the results were positive toward the ideas presented. Fifteen out of the sixteen attendees liked the idea of treating the water currently entering the park from the school. Thirteen people liked the idea of treating all of the runoff from the school within the

park. All sixteen attendees liked the idea of bioretention gardens. None of the attendees selected “I don’t like,” for any of the topics.

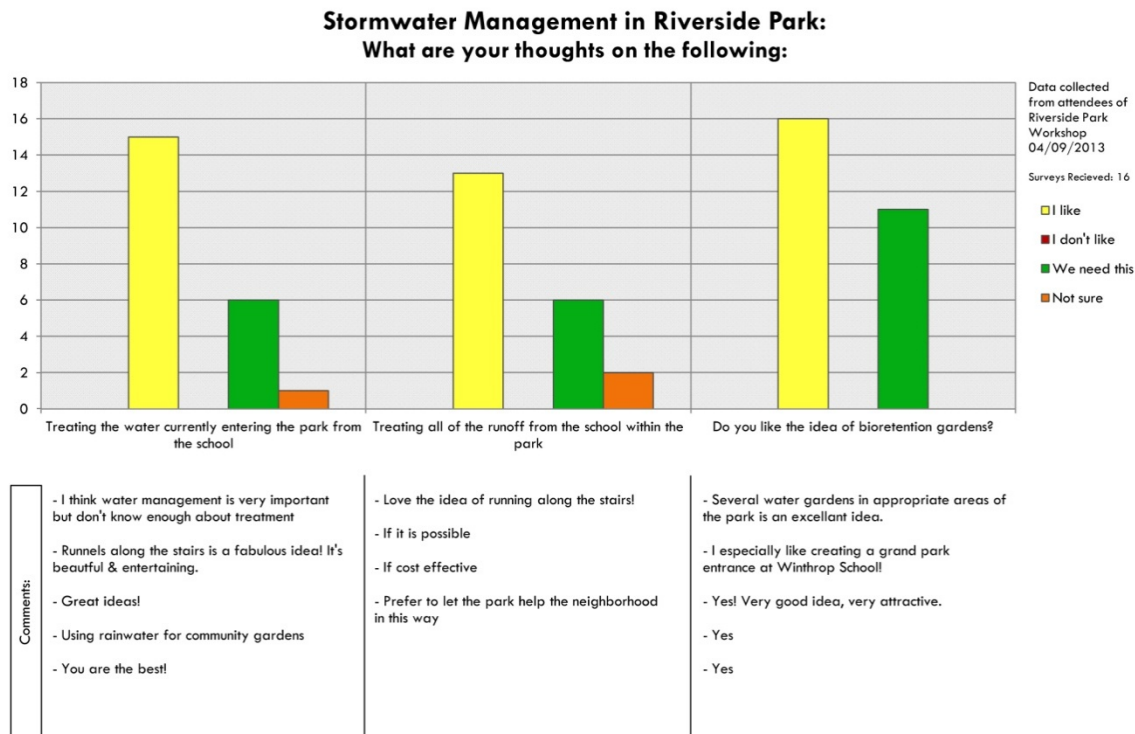


Figure 3.15: Audience feedback from workshop 4

Up until this workshop, CRDC was unsure how people would respond to the idea of treating stormwater runoff from the school in the park. This workshop showed that people were receptive to the idea, so the study was continued in more detail. The study will continue to presume that the pump option is selected and all of the stormwater from the school will enter the park.

Layout

The layout of the proposed stormwater system within the park is shown in Figure 3.16. There are five bioretention gardens with runnels to carry the water between them. Water from the school area enters the first garden via two entrance points- a pipe from the catch basin and a pipe

coming from the parking area. A portion of this water would infiltrate within the first garden and the remaining water would travel to the next garden through the runnels. This cycle would continue up until the last garden in the park. The gardens are sized to hold water from a one inch rain event. The runnels are designed to carry water from a one inch rain event, but also for larger storms, which would be a 10-year storm, a 25-year storm, and a 100-year storm. In New London County, a 100-year storm produces 8.3” of rain in 24 hours. The sizing methods for the gardens and runnels will follow.



*Figure 3.16: A diagram of the proposed stormwater system
(Aerial Photo: Bing Maps, 2011)*

Sizing the Proposed System

In order to create a detailed layout of the proposed stormwater system in the park, it was necessary to size the system based on the amount of stormwater that would be entering the system. The primary resources for the sizing process were the 2004 Connecticut Stormwater Quality Manual and the USDA Urban Hydrology for Small Watersheds (TR-55). The first step was to find the total amount of pervious and impervious surfaces which would drain into the park. To begin, an updated color-coded diagram was created based on the grand entrance to the park as proposed in the master plan. From this diagram, the square footages of the pervious and impervious surfaces were found (Figure 3.17).



Figure 3.17: Proposed areas of impervious/pervious surfaces draining into the park
(Aerial Photo: Google Earth, 2011)

With these data, the two drainage areas were added together to find the total area that would drain into Riverside Park. This area, totaling approximately 181,455 square feet, is shown in the far right column of Figure 3.18.

Stormwater runoff from Winthrop School area: Proposed			Combined (Total Area Entering Park)	
Impervious Surfaces:			Impervious Surfaces:	
	Grove Street Catch Basin	Bioretention Garden A		
School Building	5,564.29	44,189.12		49,753.41
Sidewalks	13,386.51	5,074.10		18,460.61
Roads	39,415.14	7,868.62		47,283.76
Curbs	945.11	154.71		1,099.82
Greenhouse		206.79		206.7922
Walls	370.48			370.48
Total (ft. ²)	59,681.53	57,493.34		117,174.87
Pervious Surfaces:			Pervious Surfaces:	
	Grove Street Catch Basin	Bioretention Garden A		
Turf Block Parking	5,633.59			5,633.59
Lawn, etc.	48,432.41	4,164.23		52,596.64
Bioretention Garden A		6,049.55		6049.5541
Total (ft. ²)	54,066.00	10,213.78		64,279.78
Total Watershed Area (ft. ²)	113,747.53	67,707.13		181,454.66

Figure 3.18: The total watershed area that would drain into the park is shown

Garden Sizes

The next step was to find the water quality volume (WQV). The WQV is the volume of runoff which is generated from one inch of rainfall on the site. The reason for using one inch of rain is because in the northeast United States, 90% of the annual rain events are one inch or less. (CT DEP, 2004). By using this method, 90% of the annual pollutant load can be filtered through the bioretention gardens. The WQV was calculated as .221 acre-feet. The WQV was then converted into cubic feet by multiplying by 43,560. This gave a total of 9,627 ft³ of above-ground storage in bioretention gardens needed to handle the WQV. Figure 3.19 shows the calculations for the WQV and the required bioretention garden area. The five gardens were sized to fit with the master plan and meet the WQV size requirement. The garden sizes and their ponding depths are shown in Figure 3.20. The garden sizes range from approximately 1,186 ft³ to 2,760 ft³.

Water Quality Volume (ac-ft) (1" Water Quality Storm)	$WQV = (P)(R)(A)/12$ $P = 1"$ $R = 0.05 + 0.009(I)$ $I = \text{Percent Impervious Surfaces}$ $A = \text{Total Watershed Area (Acres)}$ $R = 0.05 + 0.009(117,174.87/181,454.66)$ $R = 0.05 + 0.009(65\%)$ $R = 0.05 + 0.585$ $R = 0.635$ $A = 181,454.66/43,560$ $A = 4.166$ $WQV = (1)(0.635)(4.166)/12$ $WQV = (2.65)/12$ $WQV = .221 \text{ ac-ft}$ 1 acre foot = 325,850 gallons .221 ac-ft x 325,850 = 72,012.85 gallons $WQV \times 43,560 = \text{ft}^3 \text{ of bioretention gardens needed}$.221 x 43,560 = 9,626.76 ft³ of bioretention gardens needed
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Figure 3.19: The WQV is calculated along with the total required bioretention area

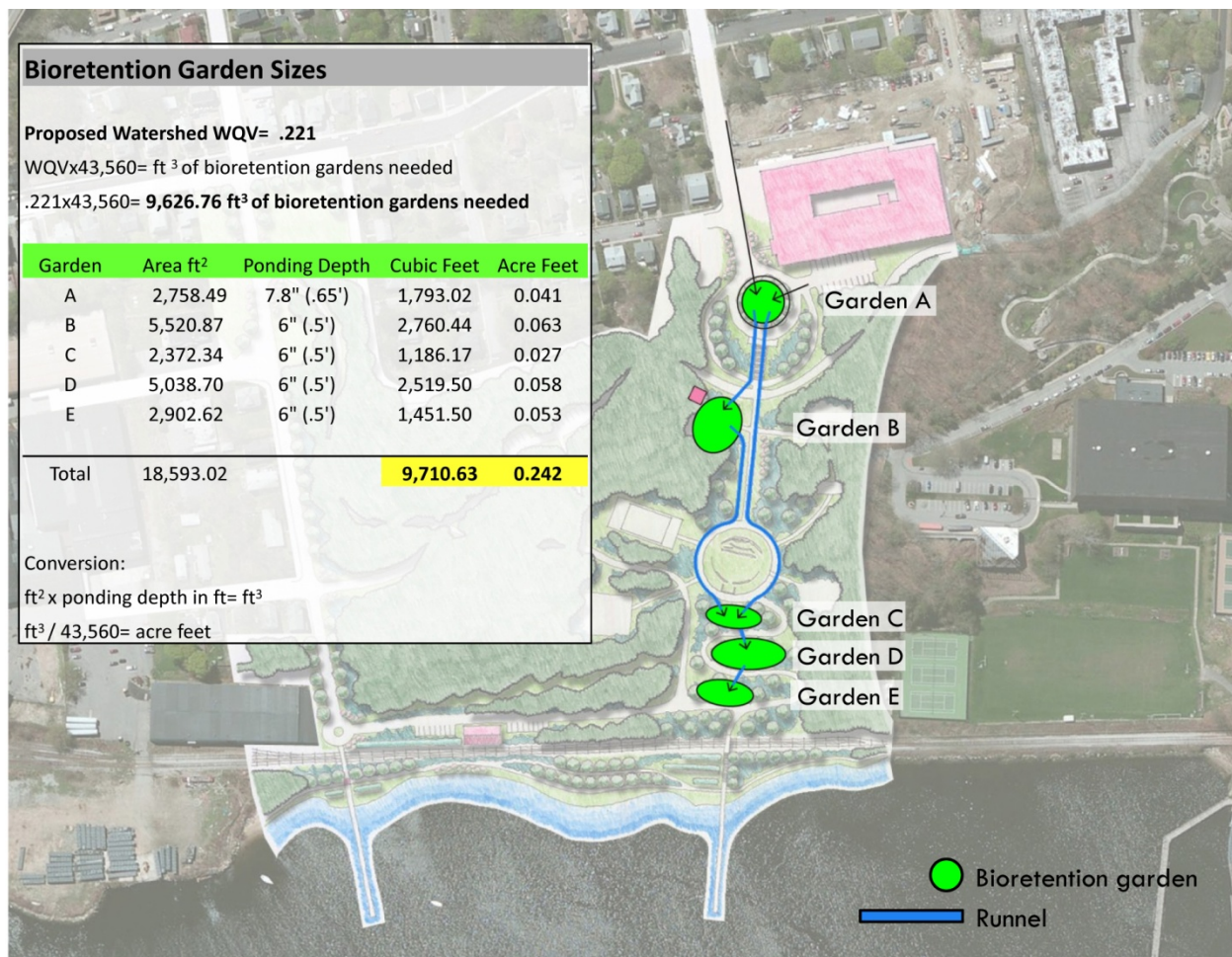


Figure 3.20: Sizes of the 5 proposed bioretention gardens
(Aerial Photo: Bing Maps, 2011)

Runnel Sizes

Sizing the runnels, which would carry the stormwater through the park, was a bit more involved than sizing the gardens. This is because the gardens only need to be sized based on the WQV, which is calculated from one inch of rainfall. The runnels on the other hand, have to be able to accommodate rain events larger than one inch so that the system does not overflow. In order to size the runnels, the peak discharge in cubic feet per second (CFS) of certain rain events had to be found. These rain events include a one inch storm (also called the “Water Quality Storm”), a 10-year, 25-year, and 100-year storm. The Graphical Peak Discharge method, as described in TR-55, was used to find the peak discharge of each of these storms. The runoff in inches per 24 hours for each storm was found using data from Cornell University’s Extreme Precipitation in New York and New England website. The peak discharge for each storm is as follows: 1” storm= 1.9 CFS, 10-year= 12.9 CFS, 25-year= 16.2 CFS, and 100-year= 23 CFS. Figure 3.22 shows how these peak discharges were found.

One step toward finding the peak discharge of each design storm was to find the time of concentration. The time of concentration (TOC) is the time that it takes for water to flow from the most hydraulically distant point in the watershed to the outlet. In this case the outlet is the end of the pipe that discharges into the first bioretention garden. The TOC was calculated as .45 hours (27 minutes). The procedure for finding the TOC can be seen in the appendix.

Graphical Peak Discharge Method

(Based on TR-55 Worksheet 4)

1. Data

Drainage area..... A_m =	0.007	mi ² (acres/640)
Runoff curve number.....CN =	96	
Time of concentration..... T_c =	0.45	hr
Rainfall distribution..... =	III	(I, II, or III)

2. Frequency

3. Rainfall, P (24-hour)

4. Initial abstraction, I_a (use CN with Table 4-1)

5. Compute I_a/P

6. Unit peak discharge, q_u (use T_c and I_a/P with Exhibit 4-III)

7. Runoff, Q (Figure 2-1)

9. Peak discharge, q_p (Where $q_p = q_u A_m Q$)

Water Quality Storm	Storm 1	Storm 2	Storm 3
90% of CT storms	10	25	100
1"	4.85"	6"	8.3"
0.083	0.083	0.083	0.083
0.083	0.0171	0.0138	0.01
420	420	420	420
0.63	4.38	5.53	7.82
1.85	12.88	16.23	22.99
Equation for Q: $Q = \frac{(P-0.2S)^2}{P+0.8S}$	Equation for Q: $Q = \frac{(P-0.2S)^2}{P+0.8S}$	Equation for Q: $Q = \frac{(P-0.2S)^2}{P+0.8S}$	Equation for Q: $Q = \frac{(P-0.2S)^2}{P+0.8S}$
$S = (1,000/CN) - 10$ $S = (1,000/96) - 10$ $S = .417$	$S = (1,000/CN) - 10$ $S = (1,000/96) - 10$ $S = .417$	$S = (1,000/CN) - 10$ $S = (1,000/96) - 10$ $S = .417$	$S = (1,000/CN) - 10$ $S = (1,000/96) - 10$ $S = .417$
$Q = \frac{(1-0.083)^2}{1+(0.8 \times .417)}$	$Q = \frac{(4.85-0.083)^2}{4.85+(0.8 \times .417)}$	$Q = \frac{(6-0.083)^2}{6+(0.8 \times .417)}$	$Q = \frac{(8.3-0.083)^2}{8.3+(0.8 \times .417)}$
$Q = \frac{.840889}{1.3336} = 0.63 \text{ in.}$	$Q = \frac{22.724289}{5.1836} = 4.38 \text{ in.}$	$Q = \frac{35.010889}{6.3336} = 5.53 \text{ in.}$	$Q = \frac{67.519089}{8.6336} = 7.82 \text{ in.}$
$q_p = q_u A_m Q$ $q_p = 420 \times .007 \times 0.63$ $q_p = 1.85 \text{ ft}^3/\text{s}$	$q_p = q_u A_m Q$ $q_p = 420 \times .007 \times 4.38$ $q_p = 12.88 \text{ ft}^3/\text{s}$	$q_p = q_u A_m Q$ $q_p = 420 \times .007 \times 5.53$ $q_p = 16.23 \text{ ft}^3/\text{s}$	$q_p = q_u A_m Q$ $q_p = 420 \times .007 \times 7.82$ $q_p = 22.99 \text{ ft}^3/\text{s}$

Figure 3.22: The peak discharges for the 1" Water Quality Storm, 10-year, 25-year, and 100-year storms are calculated and shown in row 9

Once the peak discharge values were found, an online channel flow calculator from Auburn University's College of Engineering website was used to size the runnels. The runnels on either side of the stairs, Runnel 1 and Runnel 2, would be rectangular in shape and made of concrete. The remaining runnels within the park, Runnels 3-10, would be trapezoidal in shape and made of brick. This shape was selected to be similar to the existing runnels within the park. At workshop 4, the idea of reusing the bricks from the existing runnels was brought up by one of the attendees as a way of incorporating a piece of history with the proposed design. The runnel sizes and water flow depths for each design storm are shown in Figure 3.23.



Figure 3.23: Runnel sizes and water flow depths for each design storm
(Aerial Photo: Bing Maps, 2011)

Grading Plan

A majority of the grading is located along the main axis between the school and the waterfront. The entryway from the school to the park requires fill to be added to the hillside. Due to the fixed elevation of the school's first floor, keeping this area accessible would have been difficult to achieve with cutting the grade. It was not feasible to grade the entire main walkway to be accessible, which requires a maximum slope of 8.33% (1:12). However, there are portions that were able to be graded for accessibility. Specifically, the central picnic area and a portion of the walkway surrounding it are accessible. Another portion of the walk near Bioretention Garden D is also accessible, providing an opportunity for people to observe the garden. These two areas also allow for people to be dropped off if needed. Additionally, the ramp leading up to the pedestrian bridge is within the accessible slope range. Going down from the pedestrian bridge to the water, is an area that would have to be studied in more detail. Since there is a required clearance of 23 feet between the railroad and the bridge, this distance would require a significant length for an accessible ramp to be constructed- a minimum of 276 feet long excluding intermittent landings. As the waterfront parcel has limited space, this is not an ideal solution. An outdoor lift/elevator type structure is something that could be considered in this area.

Bioretention Gardens C, D, and E each have a wall in place around one half of them. The walls have a high point in the center and then taper down on either side with the grade. An overview of the grading plan can be seen in Figure 3.24. The following figures, Figure 3.25 and Figure 3.26 show enlargements of the grading plan in more detail.

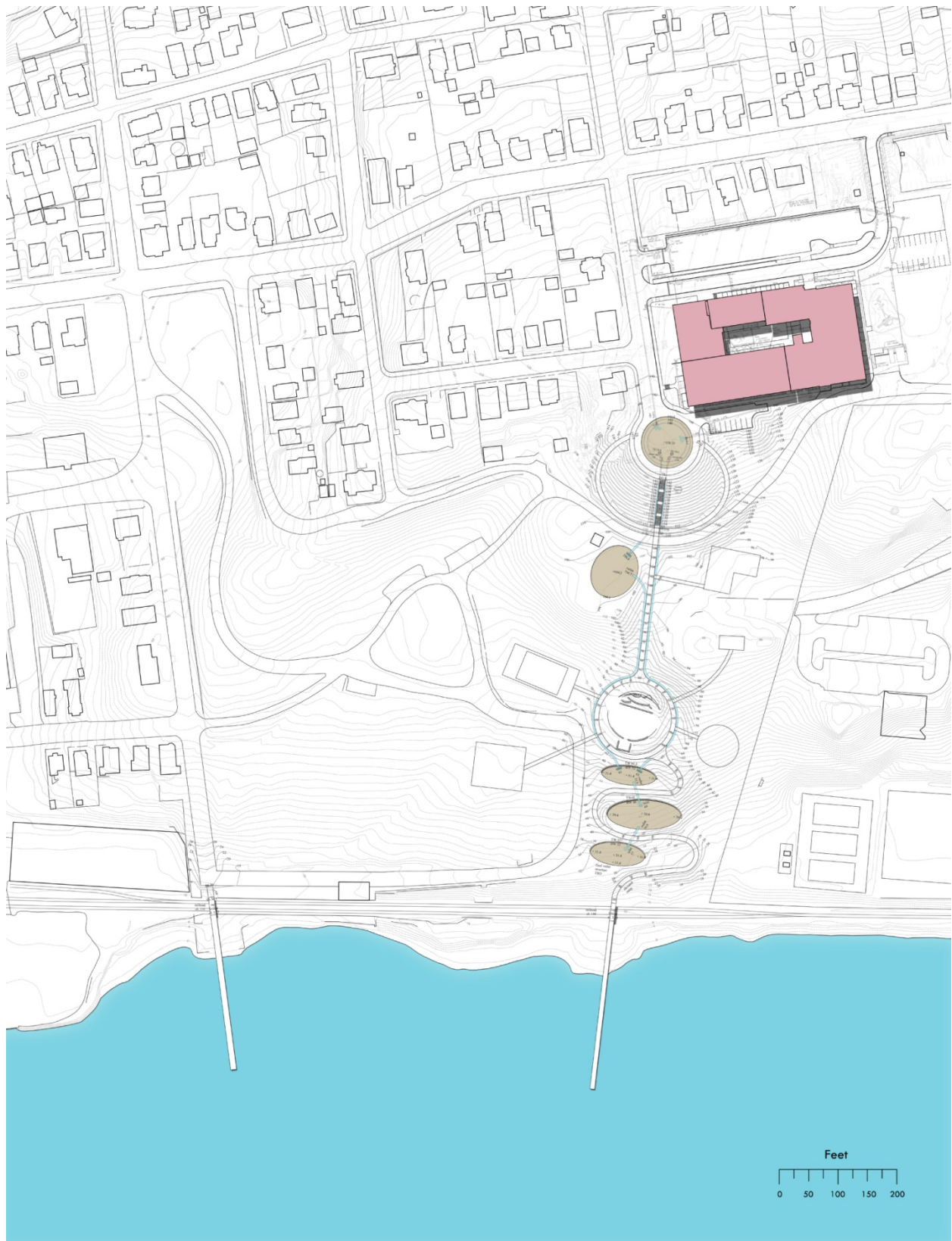


Figure 3.24: An overview of the grading plan

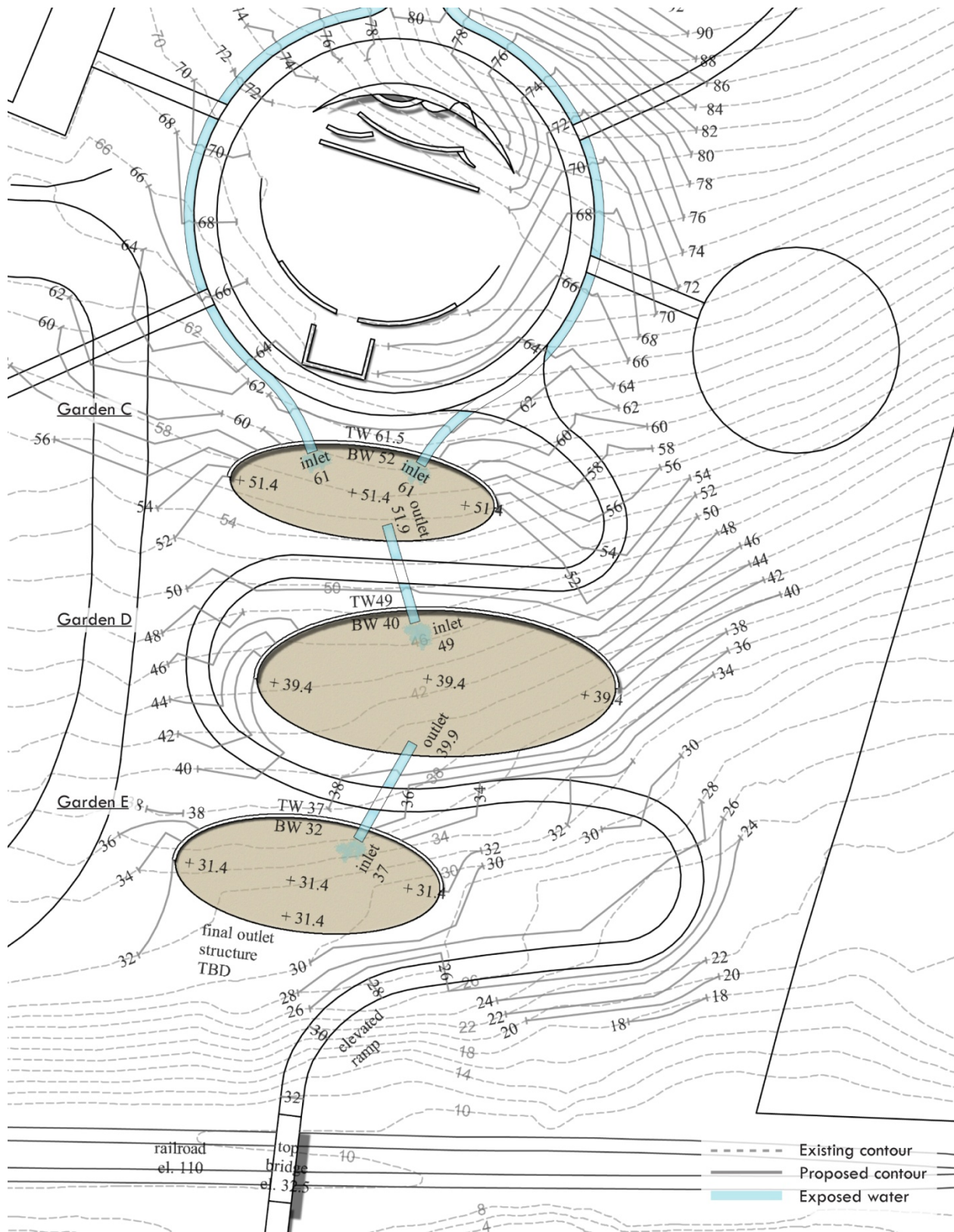


Figure 3.26: Enlarged view of lower park area grading

Planting Plan

In order to develop the planting plan for the gardens, a set of criteria was made for plant selection. According to the public works director, the park roads are treated with salt during the winter. Given that the bioretention gardens would all be located near roads and walkways, plants were selected that demonstrate salt tolerance. The plants were also chosen for their suitability for use in bioretention gardens. Finally, the plants that were selected were all native to Connecticut.

Summary of criteria for plants:

- *Salt tolerant*
- *Recommended for bioretention gardens*
- *Native to Connecticut*

The plant list (Figure 3.27) provides details about the plants that were selected. The list includes twenty different species. An exhaustive plant list was not desired, but enough species were selected to provide some variety among the five gardens. The plant types include trees, shrubs, grasses, perennials, and groundcovers. A short list of sources was used to select the plants. These can be seen at the bottom of the plant list. All of the plants showed up in at least two of the sources, indicative of a good choice of plant. Space was provided within the gardens to allow for cleaning and other maintenance as needed.

Plant List							
Symbol	Botanical Name	Common Name	Foliage	Height	Spread	Bloom Color/Time	Source
Trees							
AL	Amelanchier laevis	Allegheny Serviceberry	Deciduous	15-25'	5-10'	White/Early spring (late April)	2, 3
Shrubs							
AC	Amelanchier canadensis	Canadian Serviceberry	Deciduous	6-20'	15-20'	White/ Late March	2, 3, 4
CA	Clethra alnifolia	Sweet Pepperbush	Deciduous	5-8'	4-6'	White/Late summer (July/Aug)	2, 3, 4, 5
CP	Comptonia peregrina	Sweetfern	Deciduous	2-4'	4-8'		2, 3, 4
CR	Cornus racemosa	Gray Dogwood	Deciduous	10-15'	10-15'	White (early to mid June)	2, 3
IG	Ilex glabra	Inkberry Holly	Evergreen	4-8'	4-8'		3, 4, 5
IV	Ilex verticillata	Winterberry Holly	Deciduous	6-10'	6-10'		2, 3, 4
MP	Morella (Myrica) pensylvanica	Bayberry	Semievergreen	5-6'	4-6'		2, 3, 4
RC	Rosa carolina	Carolina Rose	Deciduous	1-3'	6-8'	Pink/June-July	2, 4
VC	Vaccinium corymbosum	Highbush Blueberry	Deciduous	6-12'	6-12'	White to light pink/Spring (May)	2, 3, 4
VD	Viburnum dentatum	Arrowwood Viburnum	Deciduous	5-9'	5-9'	White/Spring (May-June)	2, 3, 4
Grasses							
PV	Panicum virgatum	Switchgrass		3-6'	3'		1, 2, 3, 4
Perennials							
AI	Asclepias incarnata	Swamp Milkweed		2-4'		Pink/June-August	1, 3, 4
AN	Aster novi-belgii	New York Aster		1-3'		Purple/July-October	1, 4
EP	Eupatorium purpureum	Sweet Scented Joe Pye Weed		3-7'		Pink/Mid summer	2, 3
IR	Iris versicolor	Harlequin Blueflag		1-3'		Blue to purple/May-July	1, 2, 3
SS	Solidago sempervirens	Seaside Goldenrod		1-8'		Yellow/August-November	1, 2
Groundcovers							
AU	Arctostaphylos uva-ursi	Bearberry	Evergreen	6-12"	15"		2, 3
Sources:							
<u>For bioretention suitability and salt tolerance:</u>							
1. Blue Water Baltimore Five Salt-Tolerant Native Plants for Rain Gardens http://www.bluewaterbaltimore.org/blog/five-salt-tolerant-native-plants-for-rain-gardens							
2. Connecticut Coastal Planting Guide http://web2.uconn.edu/seagrant/publications/coastalres/CTCoastal_planting.pdf							
3. NEMO Rain Garden Plant Database http://nemo.uconn.edu/raingardens/plants.php							
4. Prince George's County Bioretention Manual http://www.aacounty.org/DPW/Highways/Resources/Raingarden/RG_Bioretention_PG%20CO.pdf							
5. Westmoreland Conservation District Primer on Bioretention in Clay Soils http://wcdpa.com/wp-content/uploads/BioretentionInClaySoils.2013.pdf							
<u>For perennial bloom time/color:</u>							
Chart of Connecticut Native Perennials http://www.ct-botanical-society.org/garden/commontable.html							

Figure 3.27: Plant list for the bioretention gardens

An overview of the planting plan can be seen in Figure 3.28. This shows all five of the gardens in relation to the entire park. The following figures, Figure 3.29 and Figure 3.30 show detailed enlargements of the gardens with all of the plants labeled.

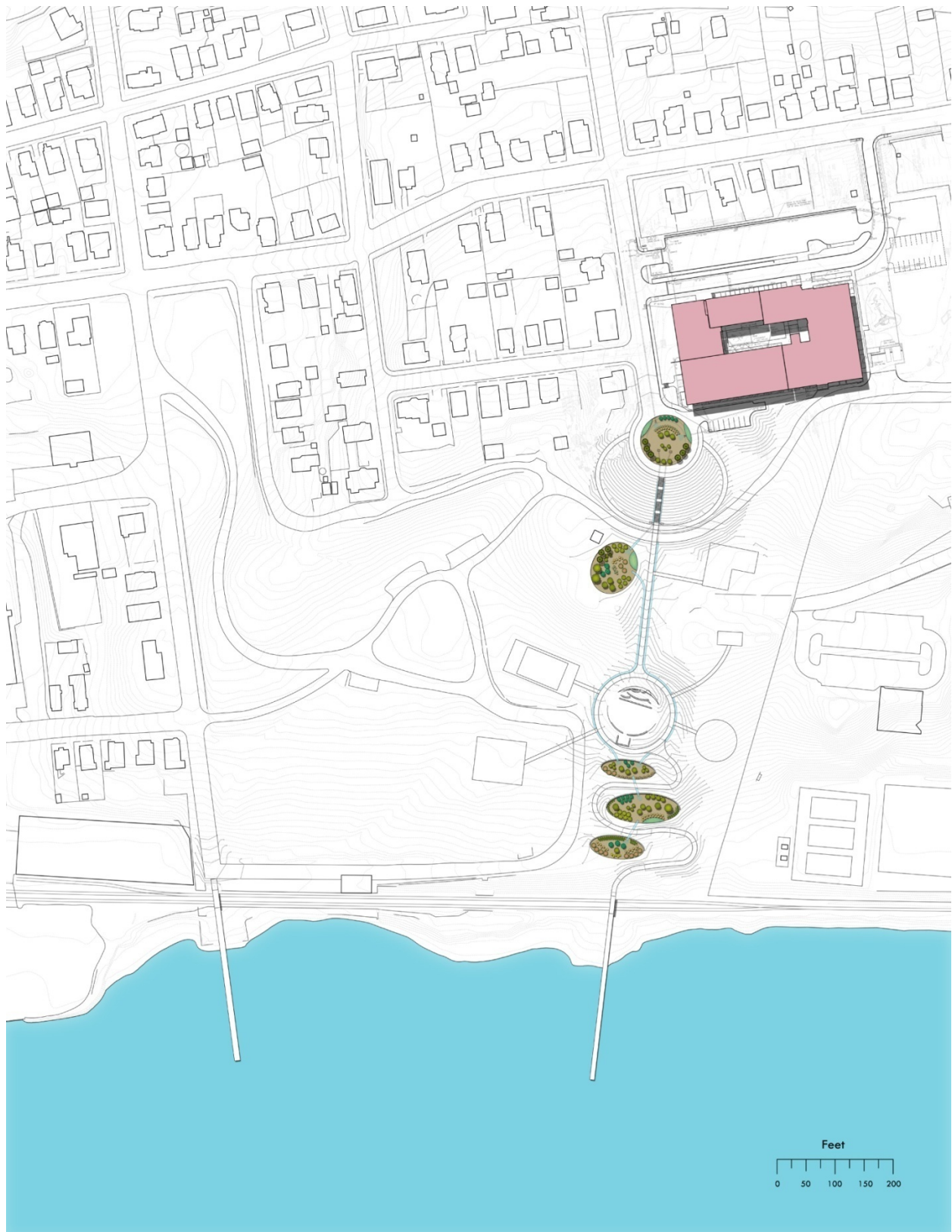


Figure 3.28: An overview of the planting plan

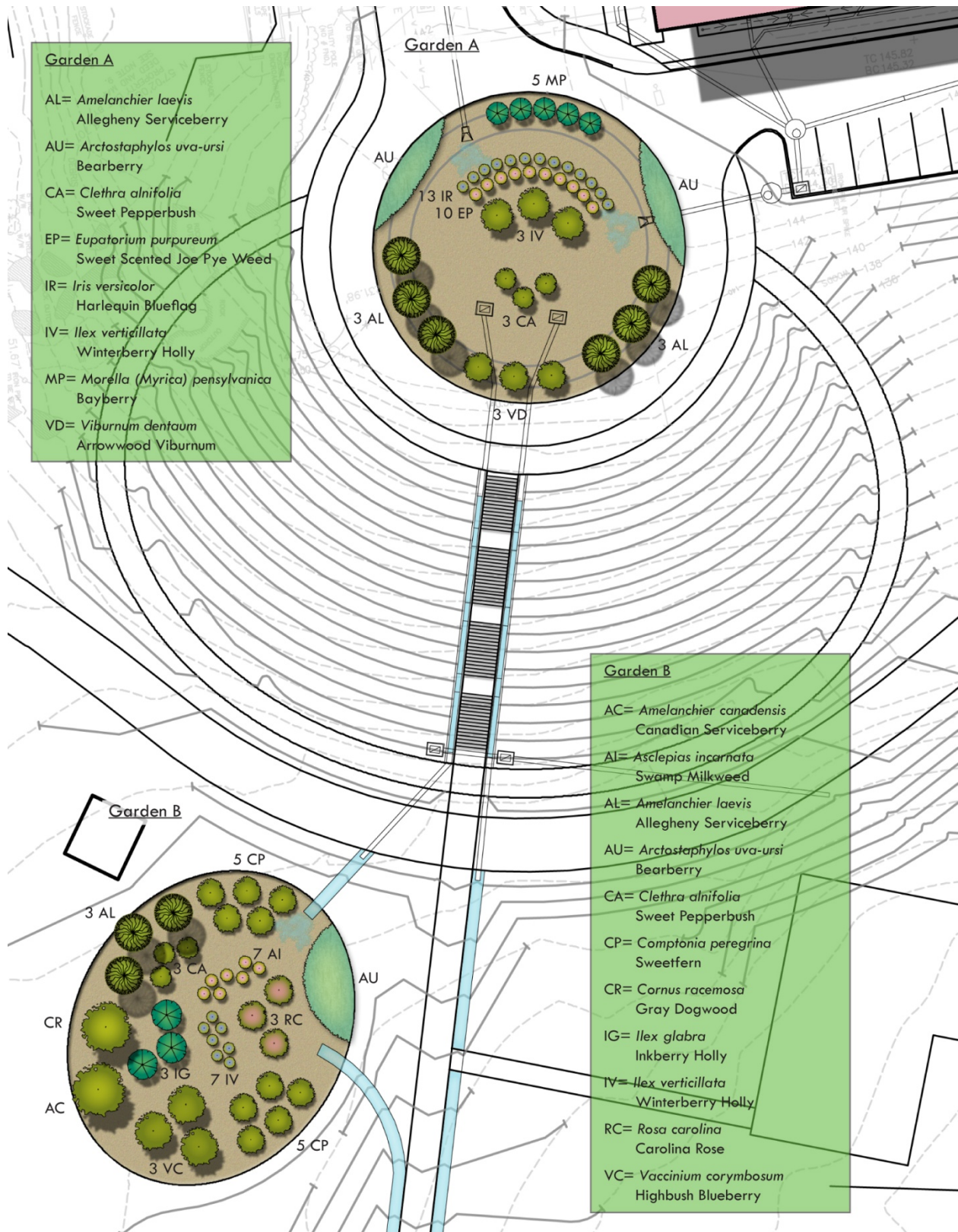


Figure 3.29: Enlarged view of Gardens A & B

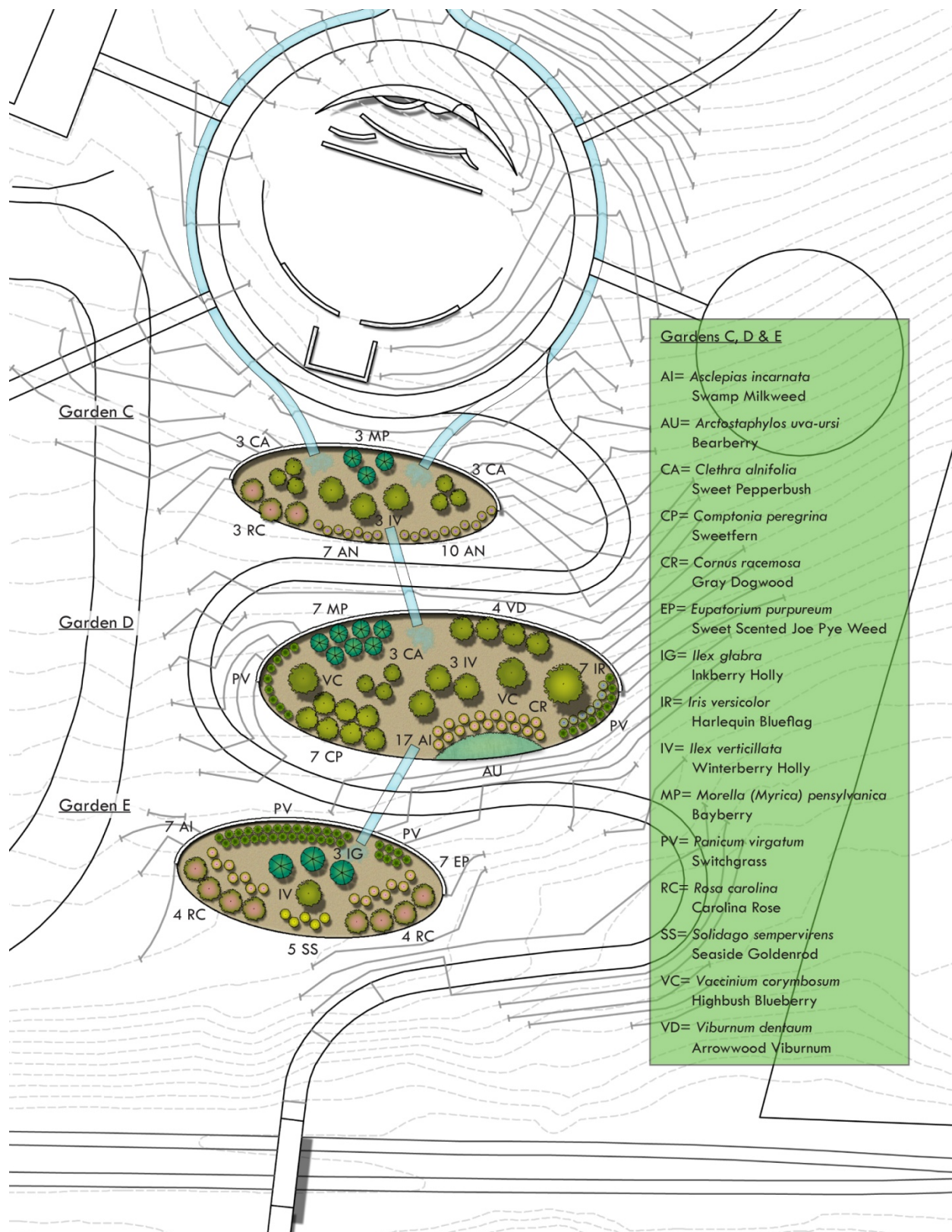


Figure 3.30: Enlarged view of Gardens C, D, & E

CHAPTER 4 Evaluating the Riverside Park Project

Student Reflection

Many publications about service learning in landscape architecture focus on projects in undergraduate programs, with students working among a group of students in a class. My experience was different in that as a graduate student, I worked primarily independently, without a cohort of classmates. This is because of the way the graduate program at the University of Connecticut is structured. It is set up for individualized masters degree study, with no formal landscape architecture courses at the graduate level. This had its pros and cons. Since the project spanned several semesters, I was able to partake in it throughout my graduate studies. Typical service learning projects in undergraduate programs last one semester, and if they do last longer they require more planning to be sure the academic requirements of the students are met. As a longer project, there was time for more activities to take place with the community than if it had only lasted a semester or two. For this project if there were a group of students working on it, tasks could have been dispersed among them. Perhaps even more interaction with the community could have taken place, such as interviews with residents of New London. As an individual student working on the project, it wasn't possible to pursue everything that a group could, but it was easier in some ways as there was less coordination to be done.

Benefits

Looking back on the project, there were numerous benefits to me as a student. I was able to practice technical skills that I had learned as an undergraduate such as creating a grading plan, planting plan, and a cost estimate. The project also required me to do tasks that were new to me. For example, the city's GIS data did not show the newly renovated Winthrop School. As a result,

I had to merge the architect's school grading plan drawing with the city's data to create a map in AutoCAD that reflected the current conditions of the park and the adjacent school. I also broke a project down into phases of development for the first time. The phasing of the project had several purposes. It was to make implementation less overwhelming, allowing people to visualize how it could be accomplished gradually. It was also strategic, beginning with the smaller tasks, such as trimming trees to open up sight lines to the Thames River, and ending with larger tasks- the piers extending into the River. The phasing could be useful in financing the project and applying for future grants.

Other skills I was able to develop were research and writing. For example, my research involved locating obscure historical photos. Newspaper archives proved to be invaluable in finding these photos and understanding more of the history of Riverside Park. I was also tasked with writing a report on part of the project to help fulfill a grant requirement.

I gained experience in interacting with the community through the events and workshops. The workshops helped me to learn how to obtain and utilize the feedback from a community. One of the challenges was that the community members came up with so many ideas. The question was how to sift through all of them? Ultimately I created a matrix (per advice from my advisor) by finding common ideas among teams and noting how many teams desired each particular idea. I found it to be an effective way to prioritize the ideas and a useful tool to help incorporate them into the design. This matrix can be seen in the appendix. Surveys were also handed out in the workshops. This was a good way to get anonymous input from the attendees as a whole, since not everyone may voice their opinion during the workshop. The results of the

surveys were presented at each subsequent workshop. The project also gave me more experience in public presentations and helped me to become more comfortable in doing so.

I had the opportunity to work with an interdisciplinary team during the course of the project. The workshops were attended by some public officials. I was able to gain useful information from them. For example, the public works director was open about the stormwater problem at the Winthrop School and explained the situation to me to help understand it. The stormwater study required me to examine the grading and drainage plan, the plumbing plans for each floor of the school, and the roof plan to trace the path of the stormwater and identify the drainage areas. The architects that worked on the Winthrop School renovation reviewed my diagram of the existing drainage areas for accuracy and answered some questions that I had about the drainage in the courtyard of the school. The design of the stormwater system required in-depth research into sizing methods, which I had not previously done in this level of detail. My graduate committee included a stormwater expert which gave advice on sizing methods. Also on my committee is a horticulture professor who provided resources which were used for plant selection in the bioretention gardens. Having an interdisciplinary team allowed me to interact with people with knowledge and skills outside of the realm of landscape architecture and incorporate them into the project.

Project Downfalls

While the project was beneficial, there were some downfalls. The distance to travel to New London was a constraint. My commute to New London was a 120 mile round trip. This made it necessary to take many photos and notes during my trips to gather as much information

as I could to help with the project. I traveled to the park numerous times, but instances did occur where I wished that I had a photo of something that I missed. A closer project location would have been more practical. Schedule conflicts also arose. During a semester one of my classes ended close to the beginning time of the public workshops. Along with the travel distance, this made it difficult to make it to some of the workshops on time.

Another downfall to the project was the workshop attendance. While a good number of people attended, it could have been better. Since those that did come to the workshops were enthusiastic and had a positive outlook on the project, it was a shame that more did not come. Early in the project, there were concerns over ensuring a good turnout for the workshops. My advisor and I met with a professor in the Department of Geography at the University of Connecticut. One of her areas of specialization is in integrating research, education, and outreach. She pointed out issues such as the time of day that the workshops would be held. Since the time of day for all of the workshops was the same- 7:00-9:00 PM, it limited those who came. For example, people who work during those hours could not attend. However, we were assured that the workshop attendance would not be an issue so it was not pursued further.

Community Feedback

In order to gain some perspective on how the community felt about this project, a post-project survey was given to community representatives who were heavily involved throughout the course of the project. The survey consisted of ten questions that were aimed at determining if CRDC's work actually benefited the community and the overall success of the project. The full results of the survey can be found in the appendix.

Based on the responses of the survey, CRDC's work was extremely beneficial to the New London community. They viewed the public workshops as satisfactory, with one respondent describing them as, "informative, interactive, [and] entertaining." Another community representative explained, "The workshops brought people together and helped them realize that they DO have a voice in what happens to their neighborhood. The ideas they expressed are in the Master Plan. They got to know each other and are now working together."

When asked if community members were satisfactorily involved in the project, "agree" and "slightly agree" were selected on a scale of choices that ranged from strongly agree to strongly disagree. The consensus was that while the workshops were well-attended, ideally more people would have participated. As one response explains, "The opportunities for community involvement were well advertised and fairly well attended. However, there were key members of the community who should have been involved but weren't, and it has been challenging to get those individuals' full support for implementing recommendations that came out of the project." The respondents felt strongly that community members had the opportunity to voice their opinions and ideas. One wrote, "Each workshop invited input from community members." Another responded, "All their ideas were included in the wrap-up event at the Winthrop School in June 2013 and are in the Master Plan that was presented to City Council in early 2014."

There is strong agreement that the work performed by CRDC will be useful for planning future development of the Riverside Park and Winthrop School area, with one respondent saying that "the work is already being used for Riverside Park planning." There is also agreement that CRDC's work will be helpful in pursuing and receiving funding for future projects in New

London, although as of yet it has been difficult. The quality of graphics and visual representation of the project were rated as very good. In addition, the materials produced by CRDC are still actively being used. As one of the representatives explains, “We continue to use the presentation slides and master plan to educate the public and help people visualize the potentials of the neighborhood.”

The main improvement that could have been made regarding the project, based on the survey results, was to have more people involved. One respondent explained, “Looking at it a year later, I'm sorry that we did not get more public participation for the workshops. Though there was a strong core group as well as many neighborhood residents involved, we are finding that implementing the plans is getting some resistance from individuals who did not feel involved in the process. I'm not sure, even now, what the best way to reach them (and draw them in) would have been.” Another response was similar, “There is always more to be done, more neighbors to get involved, and many more projects to begin. Given the money available, a great deal was achieved. A second summer of activities in the park would have involved more people and maintained momentum for improvement, but money was not available...While many neighbors did get involved, additional effort to bring more people into the project would have been good.” It was also noted that the financial condition of New London is a limiting factor in implementing physical improvements in the city. The feedback from this survey provided useful insight as to how the community perceived the project.

Service Learning Evaluative Methodology

Based on Harris and Irazábal's methodology as described in Chapter 1, CRDC's project in New London fits into the high service-high learning category. The project meets all four of the characteristics of this category (Figure 4.1).

USC Service Learning Evaluative Methodology		Riverside Park Project
High Service-High Learning		
Benefits community & student	1. Clearly-defined, significant projects	✓
	2. High level of support from on-site staff	✓
	3. Close connection between service & course assignments	✓
	4. Transformed subjectivities	✓
High Service-Low Learning		
Benefits community, but little benefit to student	1. Basic, low-skill tasks not reflective of professional work by designers/planners	
	2. No opportunity for students to learn or apply new skills related to the course	
	3. Student attitude/effort lacking	
Low Service-High Learning		
Little benefit to community, but beneficial to student	1. Community/organization mentors students, provides enriching experiences & wisdom	
	2. Community/organization is an invaluable resource for students to learn from & to produce quality work for the course	
	3. Contributions to community less tangible	
Low Service-Low Learning		
Little benefit to community or student	1. Poorly-defined projects	
	2. Little direction or support by site staff	
	3. Unclear connection between service projects & expected learning outcomes	
	4. Little initiative by students	

Figure 4.1: CRDC's project in New London meets the characteristics of the "high service-high learning" category

An explanation of how the Riverside Park Project met each of these characteristics will proceed.

1. Clearly-defined, significant projects:

The task at hand was straightforward- to develop a master plan for the park to increase its use, as seen in its heyday. The five objectives for achieving that goal (as described in Chapter 2) aided the design process. With a clear program, it was possible to execute the design. Each workshop began with an overview of the previous workshop as a refresher for the community members and to help new attendees understand the project. This was followed by the new topic/activity of the current workshop. The workshops always ended with the opportunity for attendees to provide additional input or ask questions. The consistency in the overall workshop format made preparation less complicated.

2. High-level of support from on-site staff:

Overall, the residents, City, and the staff of New London Landmarks were very supportive throughout the course of the project. During the stormwater study, the public works director answered questions to help me understand the issue at the Winthrop School. He and a member of the building department also arranged for me to borrow the Winthrop School construction drawings which were invaluable in identifying the existing flow of water and performing the study. Two New London residents even took the time to do a preliminary map of the existing drainage infrastructure of the park and take photos for me. This was used as a beginning for the drainage map of the park as shown in Chapter 3, Figure 3.14. The community representatives that were selected to complete the post-project survey were happy to do so and responded promptly.

3. Close connection between service and course assignments:

The master plan and the stormwater study were relevant to my field of study. Throughout the project, I was able to develop landscape architecture skills. At times there were the “busy work” tasks that were described in the high service-low learning category, (i.e. printing, copying, etc.) but these were by far overshadowed by the design work. In addition to honing in on skills learned as an undergraduate, I was able to partake in new experiences through the public workshops and stormwater study.

4. Transformed subjectivities:

The project allowed me to see some of the challenges in design, such as the cost. Throughout the course of the project several people made reference to New London’s financial situation as being poor. A city member mentioned its “dwindling budget.” This also appeared in the results of the post-project survey.

Through this service learning project, I had experiences that may not have happened had I been working on a “conventional” landscape architecture project. At the beginning of the project, when Riverside Park was going to be on the election ballot to be sold to the Coast Guard or remain city property, a public forum was held on the topic. At this forum, some New London residents who opposed the sale spoke about what the park meant to them. These included people that lived right next to the park. I of course did not want to see the park sold and closed to the public, but can admit that in the beginning I did not feel that strongly toward the park. That changed upon hearing the neighbors speak firsthand about the park and its value to them. It was

an unexpected experience that changed my point of view and I was able to see the situation more from the residents' perspective. From that point on, I felt more invested in the project.

Discussion

The Riverside Park Project is considered a highly successful service learning project based on student feedback, community feedback, and Harris and Irazábal's evaluative methodology. Part of what made it successful was the strength of the local community. The director of New London Landmarks was devoted to the project. She was well-respected in the community and supportive of the work that CRDC was doing. She was successful in obtaining multiple grants for work in Riverside Park from the New London Water Authority, the Connecticut Department of Economic and Community Development, and the Office of the Arts.

The project shows the importance in having the public involved in projects like this. As stated in the post-project survey, there is some opposition from people in New London who did not attend the workshops. The more involved the community is, the more likely they will feel part of the design process, versus feeling that a project is being imposed upon them. In this case, CRDC was not directly involved with getting people to come to the workshops, however finding ways to maximize attendance for events like this should be a goal in service learning projects. Also, based on the post-project survey, maximizing attendance could potentially make funding a project's implementation easier.

At the end of the project, a final report including CRDC's work was created. This report includes an overview of the project and its recommendations for the park. It allows the City of New London to have a vision for the future of the park. This document as well as other materials produced by CRDC are currently being used to seek funding for the project. There is confidence

that funding will be received in the future. CRDC's past work in New London helped receive funding for this project, so it is likely that this work will also do so in time.

As a service learning project, this project has provided me with experiences that I would not have had in a typical outreach project. For example, during my graduate studies I was involved with several smaller projects which while "real," did not involve the community. These projects were still useful to me, but I gained much more experience in New London. As a result of the duration and scope of the Riverside Park Project, it will likely be more memorable to me than other projects as time goes on.

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Appendix

Workshop Notes & Graphics



Notes: A walk through the Park (to discuss ideas for the master plan)

Saturday, September 15th, 2012. 1: 00 pm-2:30 pm

Attendance: The group walk fluctuated between 16 and 17 people

General Discussion

- Signage, current sign is in the wrong place- needs to be out near the road (Crystal Ave.)
- Having the sign where it is it too late, people already know where the park is if they made it that far
- Need a delineated entry at the beginning of the road (an arch, gate, etc.)
- Wayfinding signs to lead people to the park
- The open grass at the entrance is nice, don't take it all away
- Could place some kind of structure like a fountain in the lawn area
- Other ideas: playscape, farmers market
- "Adventure playground": natural, unique, ropes, etc. (not plastic)
- First impression "all these roads in here...woah"
- Limiting automobile access in the park
- Adding parking outside the park
- Parking without taking away the beauty of the park
- Cars speed in the park, could tackle this by: limiting impervious surface (i.e. dirt/gravel roads), speed bumps, narrowing the road
- Width of roads make it comfortable to speed
- Possible 1-way road
- No vehicles in core of park, it is a sanctuary (emergency access, but no pleasure vehicles)
- Inside the park currently designates danger...wooded, dark, history of drug use
- Need to get rid of that memory/image of the park
- People need to feel safe in the park
- Have a semi-permeable exterior, need to know that you can be seen inside the park
- Park should be an amenity for the people who live on the hillside, it's not easy for them to enter the park
- Need more pedestrian/bike access in the park instead of purely automobile
- There is a lot of runoff in the park
- Could have natural filtration, retention with appropriate plants
- Utilize the grade change: sledding hill, zipline, skateboarding (do not want a formal skate park here though)
- Should have a much stronger visual connection to the river- trimming up the limbs of trees



Notes: Workshop 1- Design & Ideas for the Park

Wednesday, September 19th, 2012. 7: 00 pm-9:00 pm

Attendance: 27

Those who attended the workshop were broken up into 5 teams. They were given an aerial image of Riverside Park along with a "kit of parts." The kit contained scaled pieces representing the following: a soccer field, parking, a skate park, ziplines, a conventional playground, and an adventure playground. With these pieces the teams could place the elements as they wished within the park. They did not have to use any pieces of the kit that they did not want to.

The teams worked on their individual plans for the park and then made short presentations of their ideas to the entire group. The ideas are listed according to each team below.

1. "A" Team: Kevin Lester, Monica Raymunt, Kenric Hanson, Art Costa

- Want park to stay natural
- Preserve "quiet space"
- Thin the thick undergrowth
- Maybe gate off road for events to keep cars out
- Restroom buildings
- Jog/Walk/Bike Trail
- Use city-owned space near entrance for additional "satellite parking"
- Softball/kickball on lawn near park entrance
- Adventure playground split up in park to fit with the natural setting
- Basketball court is currently used, but is it in the right spot?
- At-grade crossing & maybe gates for train so people can cross safely
- Biking- thinner paths could be added
- Roads leading to Coast Guard, why are they there?
- No skate park here, should go under bridge
- Park entrance road near school should be more prominent

2. The Knuckleheads

- 4-season pavilion where the basketball court is (walls that can be removed in the summer, etc.)
- Have a vista from the pavilion
- Move basketball court where old pavilion foundation is (up the hill)
- Access from end of Adelaide Street into the Park
- Bioswale

3. The Dreamers: Bud, Ronna Stuller, Chris Schurn, Gwen Montgomery

- Grand entrance
- Community gardens in city-owned space near entrance
- Reclaim fountain & add seating
- Interpretive signage in park
- Pedestrian entrance at end of Rosemary Street
- Adventure playground throughout park
- Conventional playground near basketball court
- Zipline from school down to waterfront
- Stairs from school
- Overpass & at-grade at the end of Adelaide Street
- Open up sight lines
- Keep pine grove
- Add walking/biking trails

4. Conservationists: Tim Hanser, Lily Fayerweather, Jerry Sinnamon

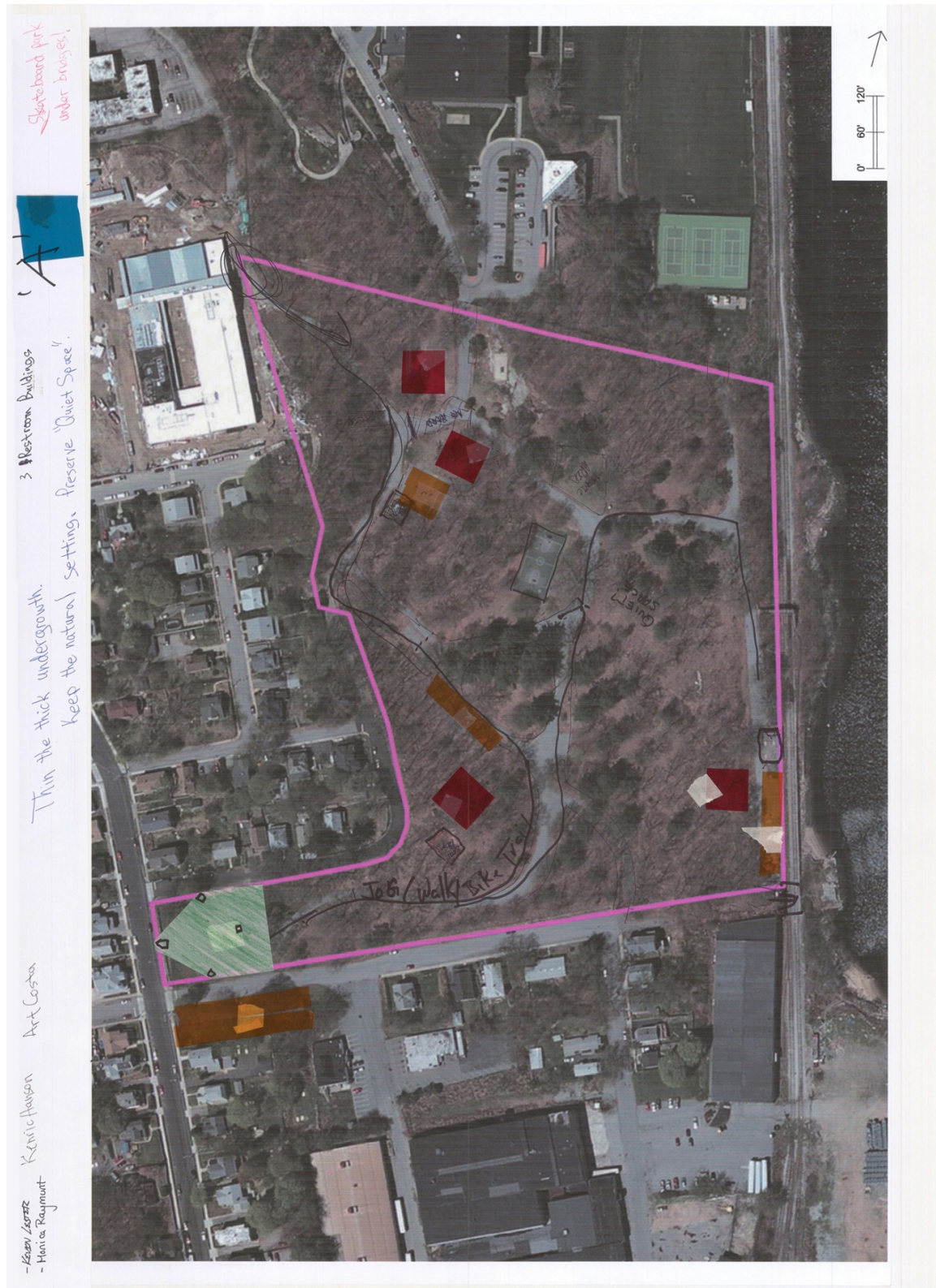
- Adventure playground in park
- Centralized parking near pine grove
- Reduce vehicular traffic
- Playground near entrance
- Open up views to river, & also between Park and Coast Guard
- Restore river access
- Basketball court near the Coast Guard
- Footpaths & trails
- Central area for a meadow with views to the water
- Native plantings, flowering plants
- Identifying plants could be part of the school curriculum
- Community garden
- Lighting
- Picnic tables, grills, benches

5. The "The Team": Brian Kent, Josh Stoffel, Mirna, Dwayne, Diane

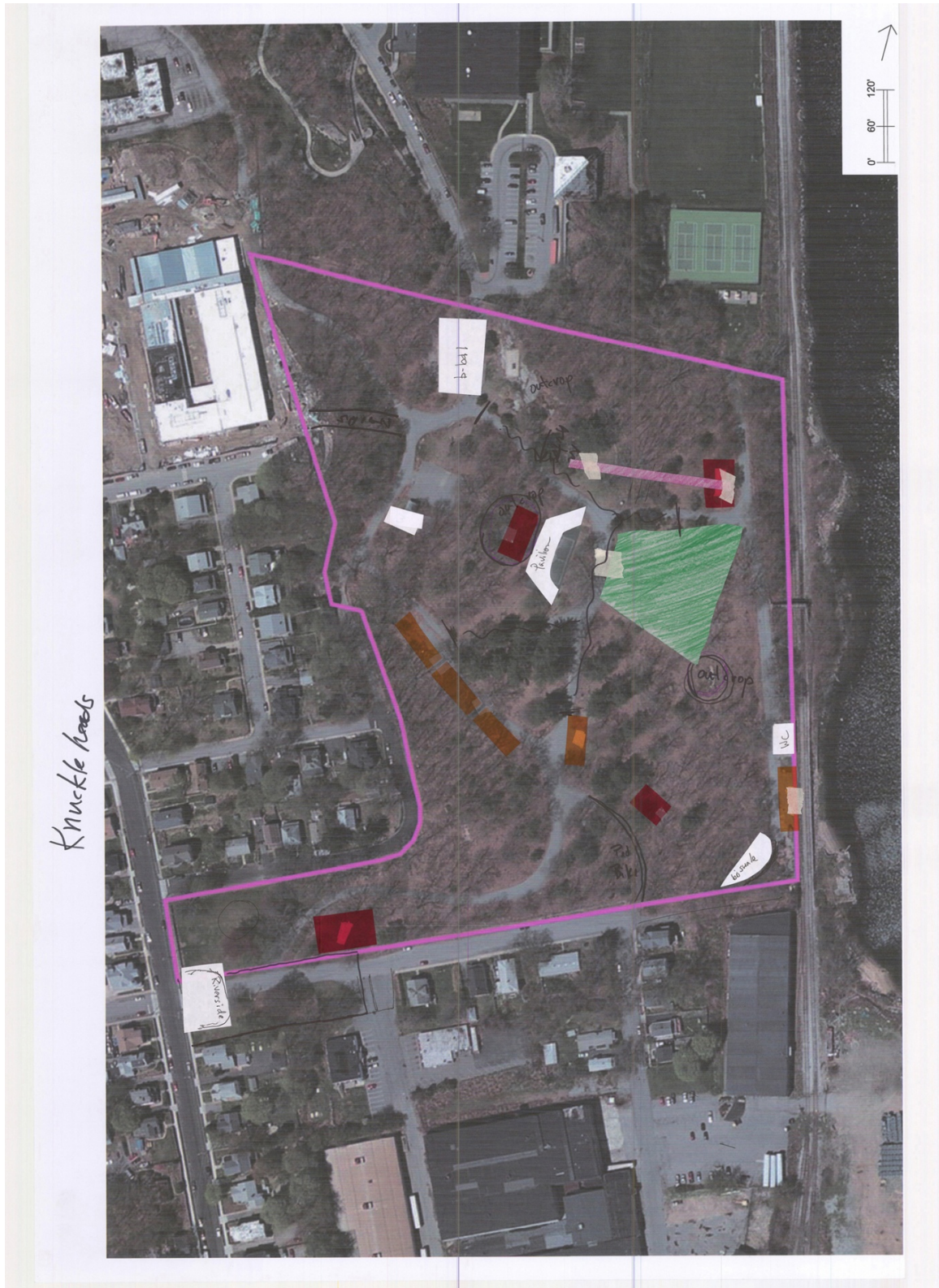
- Meadow in the middle
- Adventure playground (use existing boulders for play)
- Basketball court to remain
- Stairs from school flanked w/ slides to slide into the park
- Dog park
- Community garden
- Pavilion
- Playscape
- Trails running along Park
- Open up sight lines
- Area adjacent to Coast Guard unused, maybe trails could go there
- At-grade crossing at Adelaide
- Skate & BMX park under bridge, not in park
- Preserve pine grove
- Restore pedestrian bridge

Team Plans (Aerial Photos: Bing Maps, 2011)

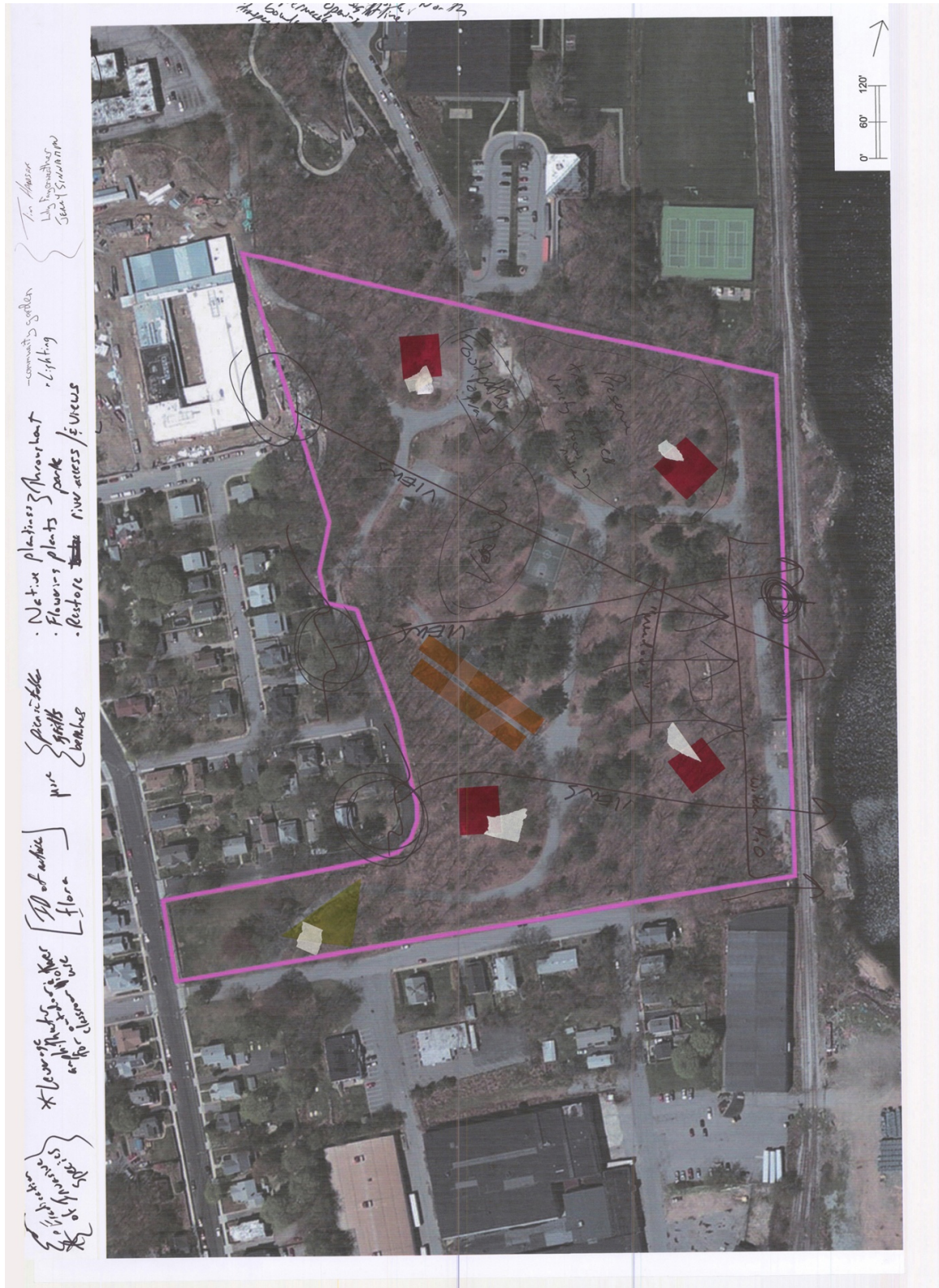
1. "A" Team Plan



2. “Knuckleheads” Plan



4. “Conservationists” Plan



5. "The Team" Plan



Overview of Team Ideas

Riverside Park Design Ideas Workshop 9.19.2012							<div><div></div>wanted by 1-2 teams</div> <div><div></div>wanted by 3 teams</div> <div><div></div>wanted by 4-5 teams</div>
	A Team	Knuckleheads	Dreamers	Conservators	The Team	Total	
Recreation:	Playgrounds						
	Adventure playground (throughout park)	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	5
	Conventional playground (single location)	<div></div>		<div></div>	<div></div>	<div></div>	4
	Athletics						
	Consider relocating basketball court	<div></div>	<div></div>		<div></div>		3
	Basketball court to remain as is					<div></div>	1
	Softball/kickball field	<div></div>					1
	Sports field near coast guard edge			<div></div>			1
	Soccer Field						0
	Extreme Activities						
	Zipline		<div></div>	<div></div>		<div></div>	3
	Skate park outside of park, under bridges	<div></div>		<div></div>		<div></div>	3
	Skate park within Riverside Park						0
	Other Activities						
	Community gardens			<div></div>	<div></div>	<div></div>	3
School garden			<div></div>			1	
Dog park					<div></div>	1	
Circulation	Wayfinding						
	Grand entrance to park (such as an archway)			<div></div>			1
	Access signage			<div></div>			1
	Interpretive signage within park			<div></div>			1
	Pedestrians						
	Pedestrian & Biking Trails	<div></div>		<div></div>	<div></div>	<div></div>	4
	Stairs from Winthrop School		<div></div>	<div></div>		<div></div>	3
	Entrance at end of Rosemary Street			<div></div>			1
	Waterfront Access						
	Pedestrian crossing end of Adelaide Street	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	5
	Repair existing pedestrian bridge					<div></div>	1
	New pedestrian bridge in new location			<div></div>			1
	Vehicles						
	Gate off park roads for events	<div></div>					1
	Reduce vehicular traffic				<div></div>		1
Parking							
Multiple areas	<div></div>	<div></div>	<div></div>		<div></div>	4	
All in one area				<div></div>		1	
Ecological	Vegetation						
	Open up sight lines (i.e. limbing up/thinning trees)		<div></div>	<div></div>	<div></div>	<div></div>	4
	Keep pine grove			<div></div>		<div></div>	2
	Central Meadow				<div></div>	<div></div>	2
	Thin the thick undergrowth	<div></div>					1
	Thin & remove dead/non-native trees					<div></div>	1
	Native plantings & flowering plants				<div></div>		1
	Plant identification part of school curriculum				<div></div>		1
	Drainage						
	Bioswale		<div></div>				1
Other	Amenities						
	Restrooms	<div></div>	<div></div>		<div></div>		2
	Picnic Tables & Benches			<div></div>	<div></div>		2
	Pavilion		<div></div>			<div></div>	2
	Grills				<div></div>		1
	Lighting				<div></div>		1
	Reclaim fountain			<div></div>			1

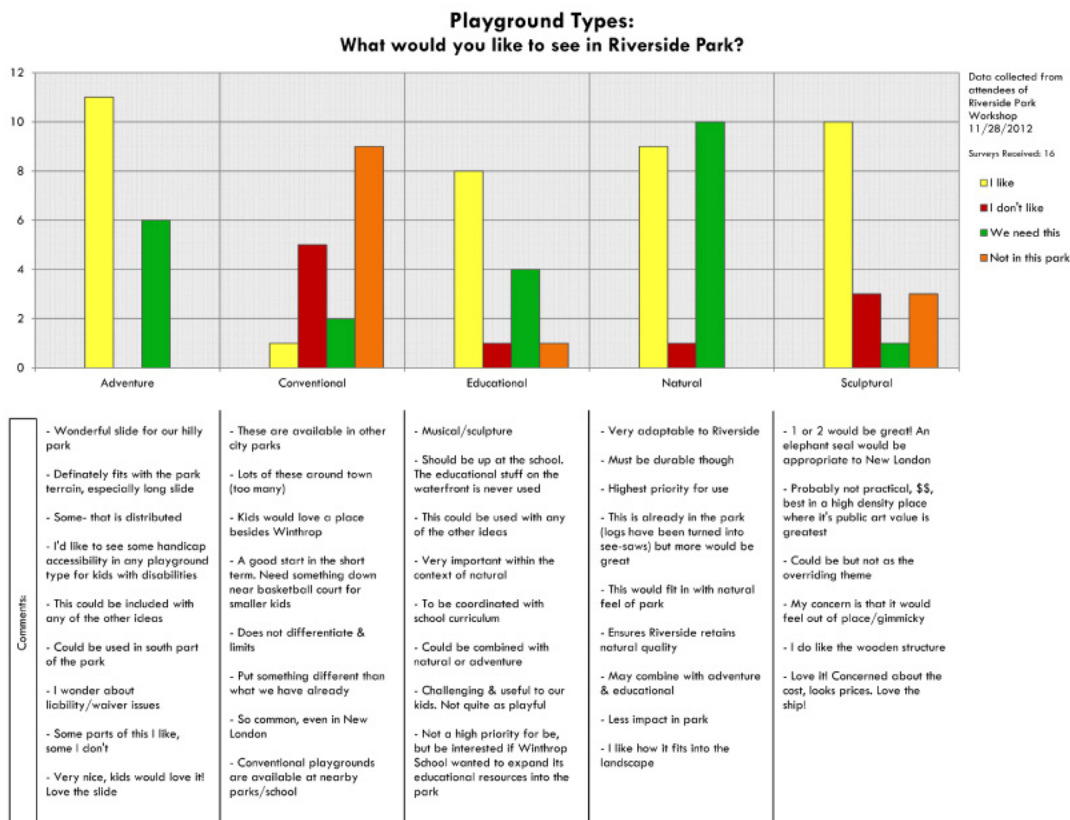


Notes: Workshop 2- Design & Ideas for the Park

Wednesday, November 28th, 2012. 7:00 pm-9:00 pm

This workshop consisted of the following:

- Presented imagery of different playground types
 - Conventional, natural, adventure, educational, sculptural
- Gave audience a survey to take on their opinions of the different playground categories (see chart below for results)
- Presented imagery of creative stormwater management techniques
- No survey was given on the stormwater, but generally people liked the ideas





Notes: Workshop 3- Design & Ideas for the Park

Wednesday, February 13th, 2013. 6:30 pm-9:00 pm

This workshop consisted of the following:

- An overview of CRDC work on:
 - Re-Connect New London Charrette 2010
 - Riverside Park Study 2010
- Brief overview of summer art jams
- Overview of past 2 workshops (September 19, 2012 & November 28, 2012)
- Presented "issues and opportunities" for the park
- Presented recommendations for
 - How to enter the park
 - Circulation in the park
 - Use areas within the park
- Discussed stormwater issue at the Winthrop School & the possibility of directing the water into the park

Feedback from audience:

- Some people concerned about cutting off handicap access within "spine" of park. For example, right now older people can drive through the park to enjoy it. If it becomes pedestrian-only they will no longer be able to.
- But...perhaps can be allowed to enter on special occasions where bollard could be removed. Or it could be drop off only (convenience for dropping off picnic supplies, etc.)
- Where do you park?
- One woman liked how the adventure play could be tailored to different age groups
- Brian Kent mentioned that you don't typically send a 4 year old off to play (i.e. scattered adventure play)
- Community garden idea liked, raised bed system may be needed (soil quality) others in New London currently have raised beds
- Like the organization of the existing spaces along the "spine"



Notes: Workshop 4- Design & Ideas for the Park

Tuesday, April 9, 2013. 7:00 pm-9:00 pm

This workshop consisted of the following:

- Presented a brief overview of last workshop
 - Circulation within the park
 - Creative stormwater imagery
- Presented background of how the plan was developed: 4 original program elements
- Presented section on stormwater:
 - Winthrop School
 - Existing park drainage
 - Stormwater conceptual design options
- Gave audience a survey to take on their opinions of the stormwater topic that was presented

Audience Feedback:

- Could look into storing water for use in community gardens (i.e. rain barrels, cistern, etc.)
- How about meandering paths within the park? Aside from our main "pedestrian spine" could look into other areas for footpaths. They may not be able to be designed as of now without knowing what plant species (i.e. invasives, etc.) are in the way...but could look into "zones" of where paths might want to be placed.
- Sandy likes the idea of keeping the open space (where there used to be a playscape) across from the basketball court, and offsetting a playground near that space. This would allow that open space to be used for events and to place tents (like with the events that were held in the summer)
- Ronna: Could we look into how community gardens could fit in with the design on either side of the Adelaide Street entrance...the city-owned plot and the open lawn area in the park. Ronna said soil tests came out bad near hillside for a community garden.
- Elisa: Liked the idea of taking the water from the school and bringing it into the park. Both are acting as a connection- the grand entrance to the park as well as stormwater from the school entering the park.
- The idea of a rain garden at the bottom corner of the park (near end of Adelaide) could potentially happen within the next year with a grant that Sandy mentioned.
- Could the materials (stones, bricks, pavers...) from existing runnels in the park be used for new ones that we are proposing? It would be neat for a sense of history.



Notes: Workshop 5- Design & Ideas for the Park

Tuesday, May 21, 2013. 7:00 pm-9:00 pm

This workshop consisted of the following:

- Madeline: Presented overview of master plan for the park
 - Program elements and how they are addressed in the plan
- Sandy: Showed photos of the preliminary space for the Sandy Hook memorial playground
 - Shady area near where tent was placed during Art Jam events
 - We do not get final say as to where playground is located
- Brian: Presented two layouts for Hodge's Square
 - Two layouts were on trace
 - Audience gathered around a table as Brian described each layout
 - Discussion of the layouts

Audience Feedback:

- Ronna: Regarding community gardens, they will start with the city-owned space across from the lawn area of the Park. City has been receptive to the idea.
- Regarding Hodge's Square layouts, general agreement that historic fountain should be placed in a manner that would allow people to walk up to it and see the details

Additional Historic Photos



Figure A.1: An early view of one of the Park roads (Utley, 1908)



Figure A.2: A picnic in Riverside Park, circa 1910 (Berman & Danziger, 1910)



Figure A.3: Boulders in Riverside Park, August 1928 (New London Historical Society, 1928)



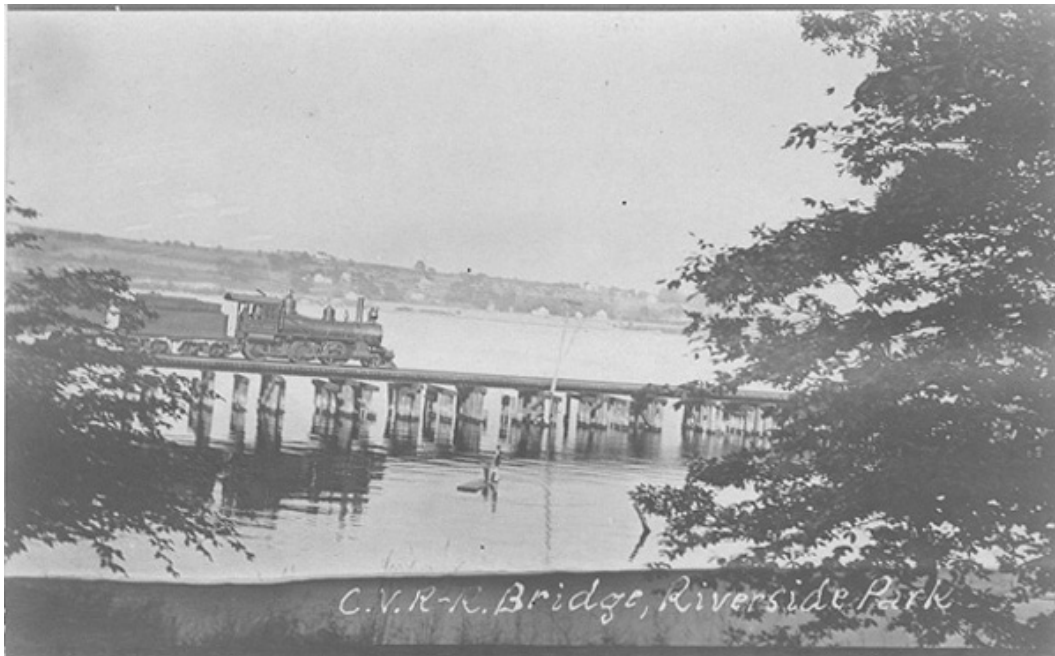
Figure A.4: A former fountain in Riverside Park, July 17, 1919 (New London Historical Society, 1919)



Figure A.5 Another view near the former fountain (Riverside Park Conservancy, n.d.)



Figure A.6: Bathing Beach at Riverside Park circa 1930 (New London Historical Society, 1930)

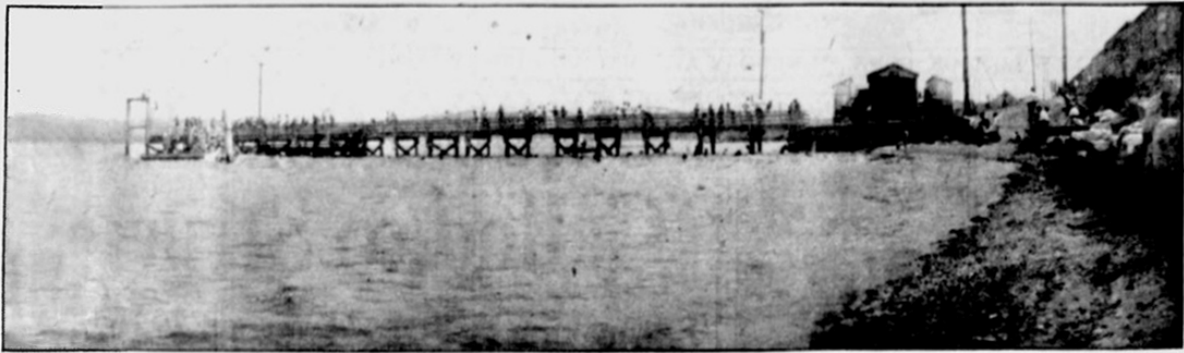


*Figure A.7: A view of the Central Vermont Railroad Bridge from the Park
(New London Historical Society, n.d.)*



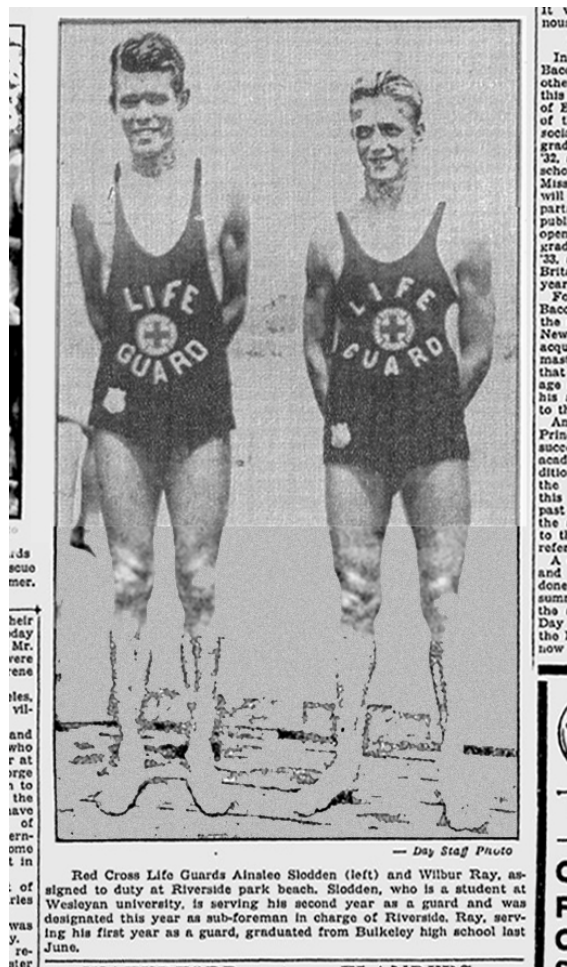
*Figure A.8 Figure A.7: Another view of the Central Vermont Railroad Bridge from the Park
(New London Historical Society, n.d.)*

VIEW OF RIVERSIDE BEACH AND LIFE GUARDS ON DUTY THERE



— Day Staff Photo
A southerly view of the bathing beach and pier at Riverside park. As the only city bathing beach north of Greens Harbor beach the Riverside beach attracts hundreds of bathers daily during the summer from East New London. Portable bathing houses, a raft and a diving tower are maintained by the city there.

Figure A.9: A view of the pier on the beach (New London Day- August 30, 1934)



— Day Staff Photo
Red Cross Life Guards Alnaleo Slodden (left) and Wilbur Ray, assigned to duty at Riverside park beach. Slodden, who is a student at Wesleyan university, is serving his second year as a guard and was designated this year as sub-foreman in charge of Riverside. Ray, serving his first year as a guard, graduated from Bulkeley high school last June.

Figure A.10: Riverside Park beach lifeguards (New London Day- August 30, 1934)



Figure A.11: Looking toward the Park, the pier can be seen along with newly constructed retaining walls on either side of the railroad tracks (The New London Day- June 27, 1936)



Figure A.12: Sea Scouts from Northampton, Mass. tied up their boats on the pier and camped in Riverside Park during part of their summer cruise to undergo training in seamanship (The Day- August 3, 1937)



There's plenty of room for water games at Riverside Beach

John Ligos

Figure A.13: A small amount of people still used the Riverside Park beach in the 1980s. Ocean Beach Park was a more popular destination. (New London Day- July 16, 1984)

42 The Day, New London, Conn., Tuesday, July 31, 1984



New London's Riverside Beach provides area children a place to frolic in the water

John Ligos

Figure A.14: A small amount of people still used the Riverside Park beach in the 1980s. Ocean Beach Park was a more popular destination. (New London Day- July 31, 1984)

Proposed Design Zones



**Proposed Design
Zone 1: Adelaide Street**

- Legend**
- Gateway
 - Pedestrian Entry
 - Vehicular Entry
 - Adelaide St. Extended
 - Railroad Tracks
 - Pedestrian Crossing
 - Pier



Proposed Design
Zone 2: Wooded

Legend

Vegetation:



Wooded



Individual Trees



Proposed Design
Zone 2: Wooded

Legend

Circulation:

— Vehicular Road

— Parking

.... Pedestrian Path

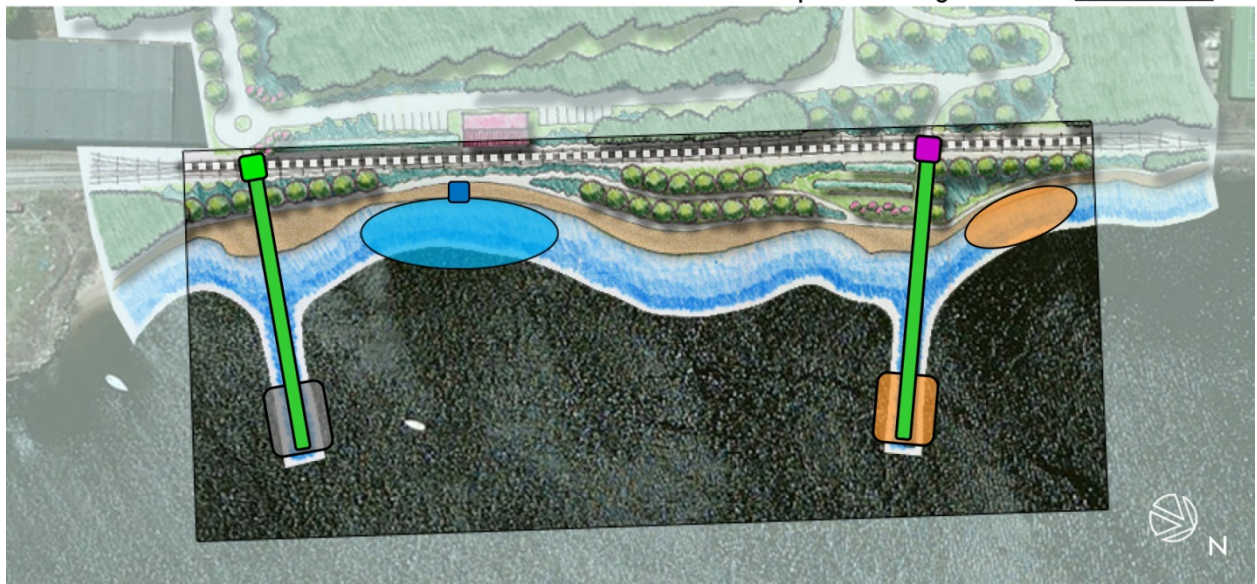
— Pedestrian Path
+ Limited Access

Legend

- | | |
|---------------------|----------------------|
| ○○○ Railroad Tracks | Swimming/Wading Area |
| Pedestrian Crossing | Lifeguard |
| Pedestrian Bridge | Fishing Area |
| Pier | Boat Storage |



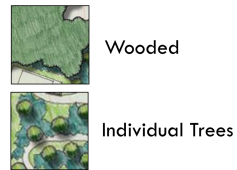
Proposed Design Zone 3: Waterfront





Proposed Design
Zone 4: Pedestrian Spine

Legend



Proposed Design
Zone 4: Pedestrian Spine

Legend



Cost Estimate

Riverside Park New London, CT

PRELIMINARY ESTIMATE OF PROBABLE COSTS

Site Development and Landscape

Notes:

This data is based on RS Means Site Work & Landscape Cost Data 2011

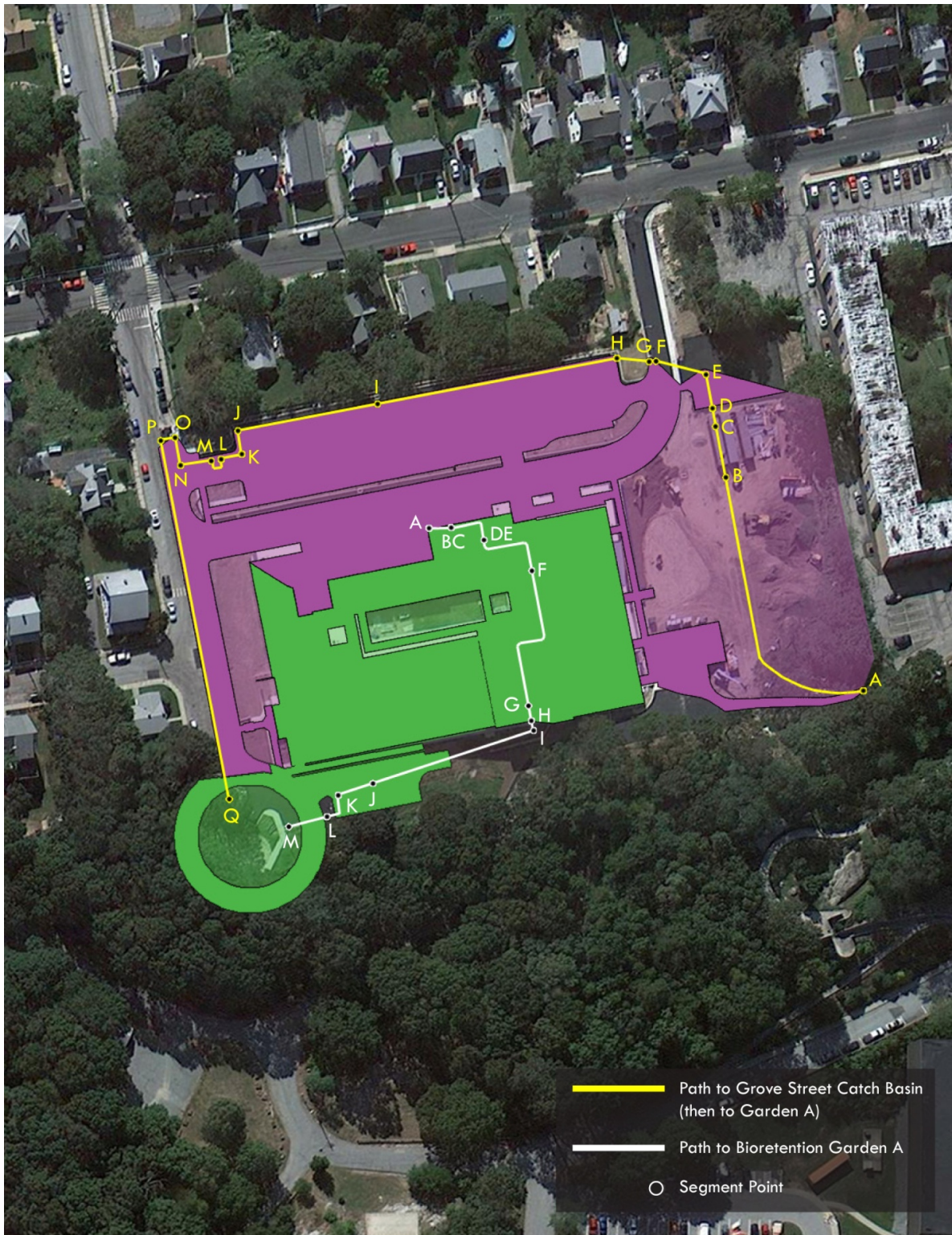
This cost estimate was done prior to a final grading plan so earthwork is not included

The ramps noted in this estimate became stairs in the final plan

#	ITEM	QUANTITY	UNIT	UNIT COST	EXTENDED
1.00	Site Preparation	N.I.C.			
2.00	Demolition				
2.01	asphalt road	1,177	sy	\$5.20	\$6,120.40
2.02	tree removal	1.27	acre	\$5,875.00	\$7,461.25
2.03	stump removal	1.27	acre	\$3,525.00	\$4,476.75
3.00	Utilities				
3.01	septic	N.I.C.			
3.02	drainage	N.I.C.			
3.03	water	N.I.C.			
3.04	electrical	N.I.C.			
3.05	gas	N.I.C.			
4.00	Earthwork	N.I.C.			
5.00	Paving				
5.01	asphalt road	760	lf	\$66.09	\$50,228.40
5.02	concrete ramps	440	lf	\$43.40	\$19,096.00
5.03	brick platform top of stairs	500	sf	\$11.70	\$5,850.00
5.04	circular drive/auto drop-off	340	lf	\$66.09	\$22,470.60
6.00	Walls and Stairs				
6.01	Concrete, cast in place stairs	10	ea	\$2,116.00	\$21,160.00
6.02	Steel prefabricated pan stairs, picket rail	81	ea	\$1,240.00	\$100,440.00
7.00	Structures				
7.01	Prefabricated pedestrian bridges	2	ls	\$25,000.00	\$50,000.00
7.02	Piers	400	lf	\$1,000.00	\$400,000.00
8.00	Lighting				
8.01	Aluminum poles 20' height	42	ea	\$3,004.18	\$126,175.56
8.02	Bollards on piers	2	ls	\$5,000.00	\$10,000.00
9.00	Furnishings				
9.01	school stair handrails, steel	60	lf	\$41.00	\$2,460.00
9.02	ramp and bridge ramp handrails, aluminum	400	lf	\$52.50	\$21,000.00
9.02	pier handrails	400	lf	\$150.00	\$60,000.00
sub-total					\$906,938.96
contingency 10%					\$90,693.90
sub-total					\$997,632.86
contractor OH&P 10%					\$99,763.29
Estimate of Probable Costs					\$1,097,396.14

Time of Concentration Data

The TOC was found for two paths- the water going into the Grove Street catch basin and the water that drains to directly into Bioretention Garden A. This was to see which had the longer TOC, which was then used to find the water quality flow.



Time of Concentration

(Based on TR-55 Worksheet 3)

Path to Grove Street Catch Basin (then to Garden A)

Sheet Flow

Segment ID	AB	BC
1. Surface description.....	Dense grass	Turf block pavers
2. Manning's roughness coefficient, n	0.24	0.15
3. Flow length, L	255.6176	44.3825
4. Two-year, 24-hour rainfall, P ₂	3.4	3.4
5. Slope, s	0.0578	0.016
6. T _c = $\frac{.007 (nL)^{.68}}{P_2^{.5} s^{.04}}$	0.32	0.09
Compute T _thr		
Total= .41		

Shallow Concentrated Flow

Segment ID	CD	DE
7. Surface description (paved or unpaved)	Unpaved (Turfblock pavers)	Paved (Asphalt)
8. Flow length, L	15.6543	29.2952
9. Watercourse slope, s	0.016	0.0331
10. Average velocity, V (from TR-55 fig. 3-1)....ft/s	2.05	3.65
11. T _c = $\frac{L}{3600 V}$	0.002	0.002
Compute T _thr		
Total= .004		

Channel Flow

Segment ID	EE	FG	GH	HI	IJ	KL	LM	MN	NO	OP	PQ
12. Cross sectional flow area, a	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
13. Wetted perimeter, P _w	3.927	3.927	3.927	3.927	3.927	3.927	3.927	3.927	3.927	3.927	3.927
14. Hydraulic radius, r = $\frac{a}{P_w}$	0.313	0.313	0.313	0.313	0.313	0.313	0.313	0.313	0.313	0.313	0.313
15. Channel slope, s	0.022	1.8717	0.0078	0.0106	0.0109	0.0063	0.0036	0.0105	0.0082	0.005	0.0553
16. Manning's roughness coefficient, n	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
17. V = $\frac{1.49 r^{2/3} s^{1/2}}{n}$	7.85	72.31	4.62	5.46	5.46	4.15	3.15	5.38	4.85	3.85	12.31
Compute V											
18. Flow length, L	45.4877	3.8094	28.2997	209.0468	121.6074	19.1842	22.3088	27.5295	24.5196	12.8276	312.7676
19. T _c = $\frac{L}{3600 V}$	0.0016	0.000015	0.0017	0.011	0.0062	0.0012	0.002	0.0014	0.0014	0.00093	0.0071
Compute T _thr											
20. Watershed or subarea T _c or T _t (add 6, 11, & 19)											
.45 Hour											
Total= .035845											
Total to CB= .027815											

(Based on TR-55 Worksheet 3)

Sheet Flow

Shallow Concentrated Flow

Segment ID

12. Cross sectional flow area, a	ft^2	0.09
13. Wetted perimeter, p_w	ft	1.037
14. Hydraulic radius, $r = \frac{a}{p}$	Compute r	0.087
15. Channel slope, s	ft/ft	0.1
16. Manning's roughness coefficient, n		0.012
17. $V = 1.49 r^{2/3} s^{1/2}$	Compute V	7.67
18. Flow length, L	ft	1.08
19. $T_t = \frac{L}{3600 V}$	Compute T_t	0.000039
20. Watershed or subarea T_t or T_t (add 6, 11, & 19)		0.05

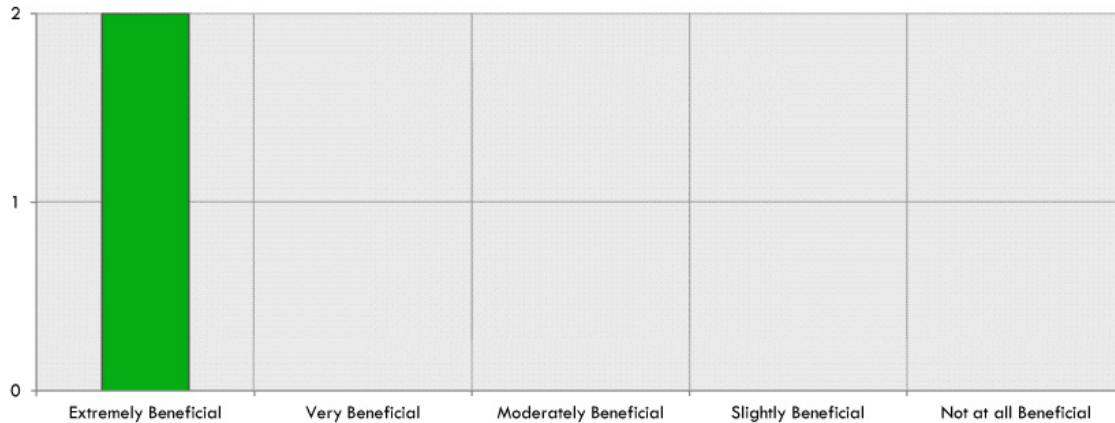
N Value Sources:
http://www.kcmo.org/iad/groups/publicworks/documents/publicworks/specifications/specifications_5600supplement2.pdf
 TR-55 Table 3-1
[http://projects.gesyntec.com/NPSManual/fact sheets/Permeable Paving_edited.pdf](http://projects.gesyntec.com/NPSManual/fact%20sheets/Permeable%20Paving_edited.pdf)

2 Year, 24 Hour Rainfall Data:
2004 CT Stormwater Quality Manual, Table 7-2

Community Survey Results

1. Overall, how beneficial do you think that CRDC's work and activities were to the New London community?

Answered: 2 Skipped: 0

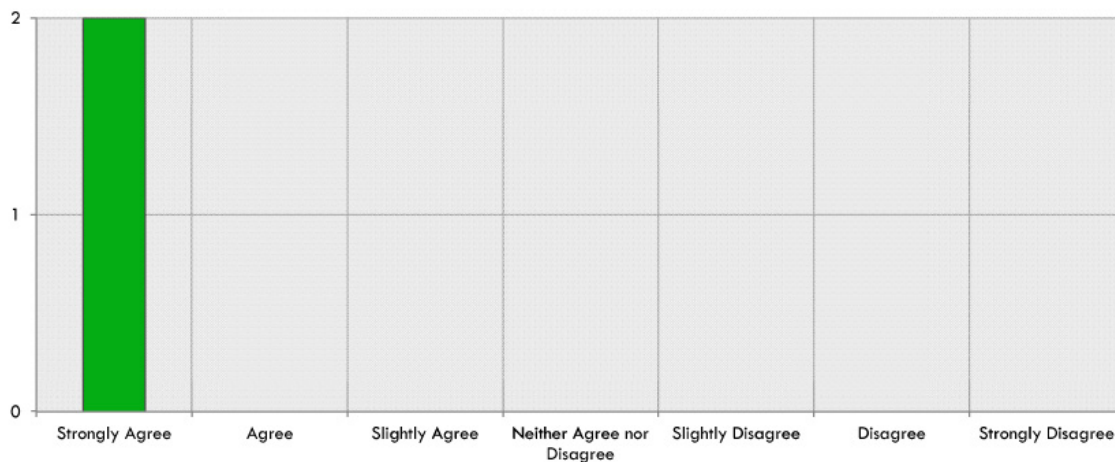


Comments (2):

- Especially because the CRDC's work in New London coincided with a particularly tumultuous period for the Winthrop School/Riverside Park neighborhood, the ideas generated have helped guide plans for the future of those areas.
- This work in the Riverside Park neighborhood really brought the area to the attention of city officials, the city council, and the larger city. The residents of the area have established their own Hodges Square Village Association and are active in neighborhood improvements.

2. CRDC community workshops were satisfactory.

Answered: 2 Skipped: 0

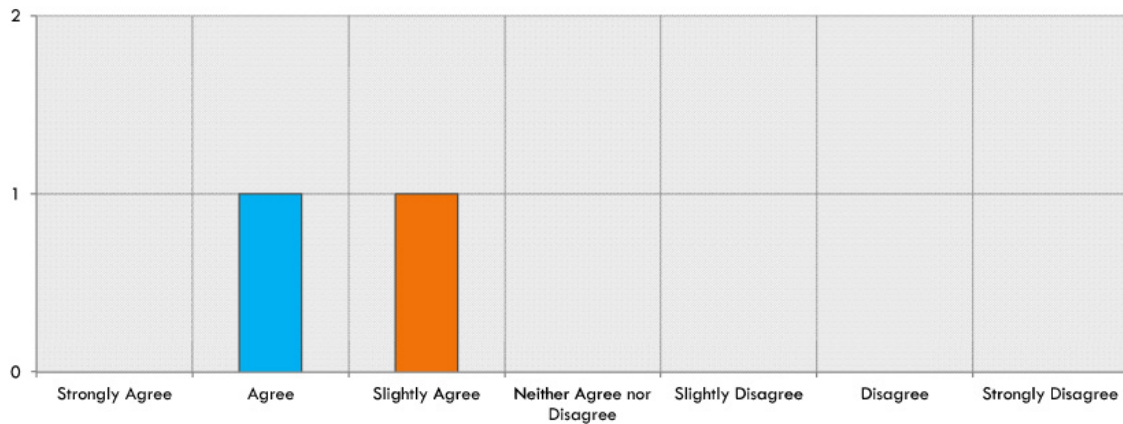


Comments (2):

- Informative, interactive, entertaining.
- The workshops brought people together and helped them realize that they DO have a voice in what happens to their neighborhood. The ideas they expressed are in the Master Plan. They got to know each other and are now working together.

3. Community members were satisfactorily involved in the project.

Answered: 2 Skipped: 0



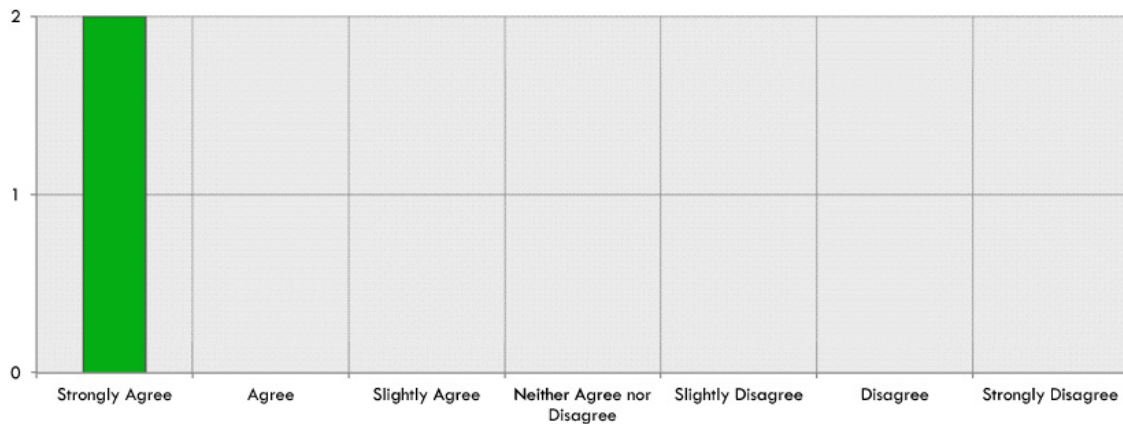
Comments (2):

- The opportunities for community involvement were well advertised and fairly well attended. However, there were key members of the community who should have been involved but weren't, and it has been challenging to get those individuals' full support for implementing recommendations that came out of the project.

- There is much more to do to increase the number of neighbors working in the district but the Village Association combines residents and business owners in bringing people together.

4. Community members had the opportunity to voice their opinions and ideas.

Answered: 2 Skipped: 0



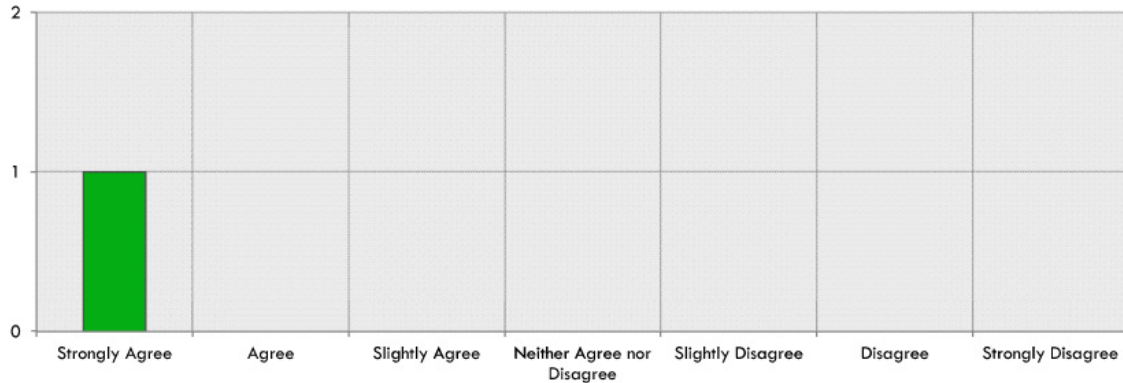
Comments (2):

- Each workshop invited input from community members.

- All their ideas were included in the wrap-up event at the Winthrop School in June 2013 and are in the Master Plan that was presented to City Council in early 2014.

5. The work performed by CRDC will be useful for planning future development of the Riverside Park/ Winthrop School area.

Answered: 1 Skipped: 1

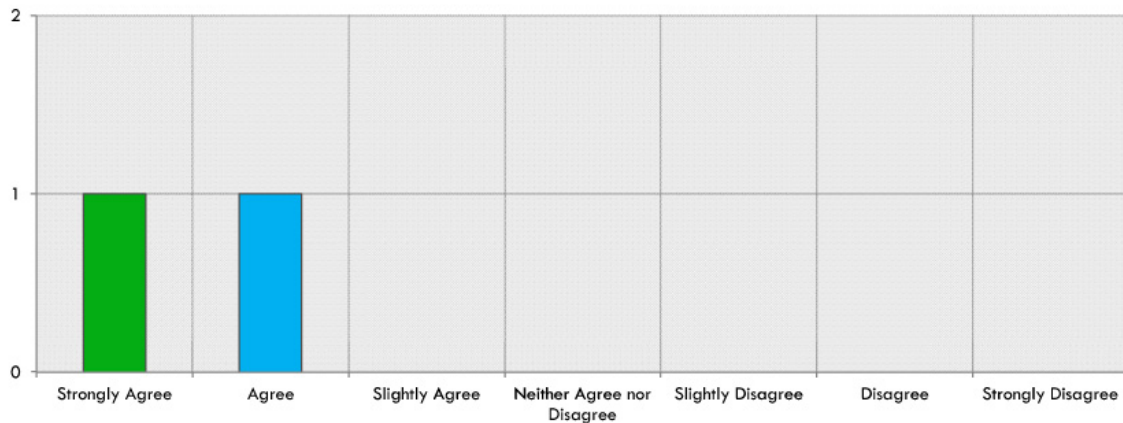


Comments (2):

- The work is already being used for Riverside Park planning.
- Events in Riverside Park, The Hodges Square Farmers Market in the summer of 2013, the construction of the new playground in Riverside Park and improvements along Williams Street have all contributed to responding to their opinions and ideas.

6. The work performed by CRDC will be helpful in pursuing/receiving funding for future projects in New London.

Answered: 2 Skipped: 0

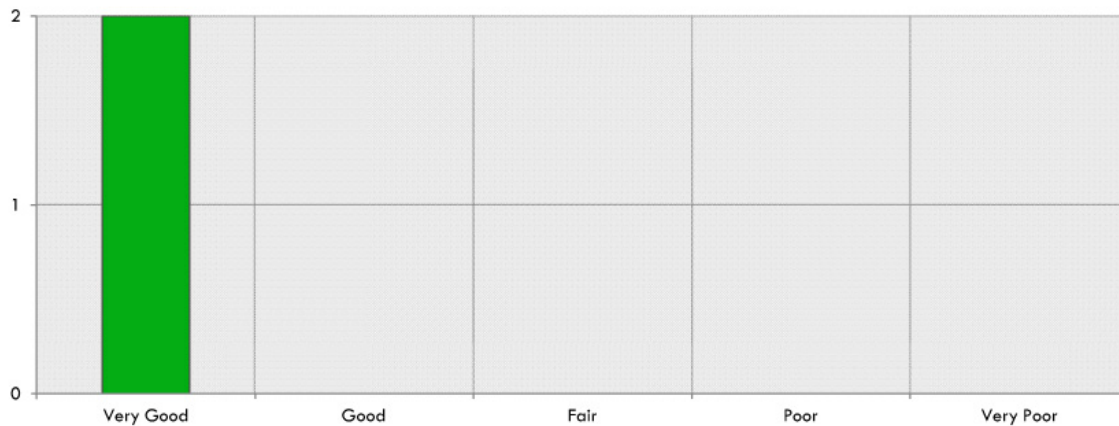


Comments (2):

- So far, it has been challenging to receive funding for the projects, and a couple grant requests based on the work have been rejected. However, I am optimistic that funding will be received, as these sorts of improvements to city environments become more generally acknowledged as essential to their revitalization.
- This work is essential to increased funding opportunities. The current economic situation in New London is a limiting factor

7. How would you describe the quality of graphics and visual representation of the project?

Answered: 2 Skipped: 0



Comments (2):

- We continue to use the presentation slides and master plan to educate the public and help people visualize the potentials of the neighborhood.
- The Master Plan is lavishly illustrated with photos and graphic illustrations.

8. What did you like about the project and workshops?

Answered: 2 Skipped: 0

Responses (2):

- I liked that the project and workshops incorporated an educational component that went beyond merely providing a plan for the area - such as providing understanding about the underlying principles of good landscape design and urban planning.
- It achieved its goals of bringing the neighborhood together, raising consciousness about the area through detailed economic studies of the many positive aspects and unique opportunities in the Riverside Park, Hodges Square area. The ideas and plans that emerged from the workshops helped residents see the possibilities for positive growth and development in their neighborhood. They learned they have a voice is what could happen and then organized to make their voices heard.

9. What could have been improved regarding the project and workshops?

Answered: 2 Skipped: 0

Responses (2):

- Looking at it a year later, I'm sorry that we did not get more public participation for the workshops. Though there was a strong core group as well as many neighborhood residents involved, we are finding that implementing the plans is getting some resistance from individuals who did not feel involved in the process. I'm not sure, even now, what the best way to reach them (and draw them in) would have been.

- There is always more to be done, more neighbors to get involved, and many more projects to begin. Given the money available, a great deal was achieved. A second summer of activities in the Park would have involved more people and maintained momentum for improvement, but money was not available. More involvement from the Coast Guard Academy and Connecticut College would have been helpful. While many neighbors did get involved, additional effort to bring more people into the project would have been good. The community garden got off to a good start in 2013 and hopefuls will bring in more people in 2014. Involved people are what the project needs to maintain positive activities and the Village Association is working on that.

10. Please provide any additional comments on the project overall.

Answered: 2 Skipped: 0

Responses (2):

- Many thanks to Madeline and Peter (and Norman)! It was great to see fresh perspectives on our fair city.

- There is great potential in this neighborhood. If Connecticut College and the Coast Guard Academy got really involved in improvements and projects in the area it could make a great difference. Unfortunately the financial condition of the City of New London limits the city's ability to do what it should with infrastructure to improve the area.