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# A Case Study Method For Landscape Architecture

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Mark Francis, FASLA is professor and past chair of landscape architecture at the University of California, Davis. Trained in landscape architecture and urban design at the University of California, Berkeley and Harvard, his work focuses on the use and meaning of the built and natural landscape. Much of this research has utilized a case study approach to study and design parks, gardens, public spaces, streets, nearby nature, and urban public life. He is the author of seventy articles and book chapters translated into ten languages and several books including *The California Landscape Garden* (University of California Press 1999), *Public Space* (Cambridge University Press 1992), *The Meaning of Gardens* (MIT Press 1990), and *Community Open Spaces* (Island Press 1984). He has received design, planning, and research awards from the National Endowment for the Arts, the American Institute of Architects, the American Planning Association, and eight national awards from the American Society of Landscape Architects including a 1999 Centennial Medalion.

*Abstract: Case studies are widely used in most professions, including medicine, law, engineering, business, planning, and architecture. This practice is becoming increasingly common in landscape architecture as well. The primary body of knowledge in landscape architecture is contained in the written and visual documentation—that is, stories—of projects, be it well-known ones such as New York’s Central Park, or more modest projects such as a small neighborhood park. Together, these cases provide the primary form of education, innovation, and testing for the profession. They also serve as the collective record of the advancement and development of new knowledge in landscape architecture. This article summarizes a research project commissioned by the Landscape Architecture Foundation (LAF) in 1997 to develop a case study method for landscape architecture. The project concludes that the case study method is a highly appropriate and valuable approach in landscape architecture. This article presents a case study methodology for landscape architecture including its limits and benefits, a suggested methodology and format, and an example case study of Bryant Park in New York City. With increased rigor and funding, the case study method promises to be an increasingly common and effective form of analysis, criticism, and dissemination for landscape architecture research and practice.*

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Outstanding new projects can result from putting a new twist on ideas from the past.  
*(Urban Land Institute, 1998)*

Case studies have a long and well-established history in landscape architecture. This is how landscape architects frequently inform their colleagues and the public about their work. Case studies have been frequently used in landscape architecture education and research, and practitioners have also utilized them to a more limited extent. As the profession develops more of its own theory and knowledge base and communicates this more broadly, the case study method promises to be an effective way to advance the profession.

This article presents the results of a study commissioned by the Landscape Architecture Foundation (LAF) to develop a case study methodology to improve the level of practice and scholarship in landscape architecture. The study involved a review of past approaches to case study analysis in other professions and the social and ecological sciences, including a summary of significant benefits and limitations. In addition, a survey was conducted to determine how environmental design professionals and researchers have utilized case study analysis for designed and natural places.<sup>1</sup>

[Insert Photo 1 — Central Park — about here]

## *The Case Study Method and A Definition*

The case study method has been utilized in various professions and fields as an established method of education and research.<sup>2</sup> Law, business, medicine, engineering, and public policy all use case studies (Yin and the Rand Corporation 1976; Yin 1993, 1994; Stake 1995). Fields such as sociology, economics, and psychology also use case studies as a research method. Case studies often serve to make concrete what are often generalizations or purely anecdotal information about projects and processes. They also bring to light exemplary projects and concepts worthy of replication.

While case study definitions have taken different forms, I offer the

following definition for use in landscape architecture:

*A case study is a well-documented and systematic examination of the process, decision-making and outcomes of a project, which is undertaken for the purpose of informing future practice, policy, theory, and/or education.*

Case studies can be valuable for a profession in a number of ways. For practitioners, they can be a source of practical information on potential solutions to difficult problems. For professional education, case studies are an effective way to teach by example, to learn problem-solving skills, and to develop useful evaluation strategies. For the profession as a whole, case studies are a way to build a body of criticism and critical theory, and to disseminate the effectiveness of landscape architecture outside the profession.

[Insert Photo 2 — Portland Fountain — about here]

There are several ways case studies can be used. In the design professions, such as landscape architecture, they are typically used to *describe* and/or *evaluate* a project or process. In other fields, case studies are sometimes used to *explain* or even *predict* theory related to practice or phenomena. Here, multiple case studies are considered with an eye for lessons from which one can generalize or principles that can advance knowledge.<sup>3</sup> Case studies can describe exemplary projects that demonstrate exceptional work, or they can also be conducted on more typical projects, which may be easier to replicate. They can be conducted on contemporary projects as well as more historic types. Successful cases typically include both aspects.

Literature on the case study method is clear on its potential benefits and limitations (Sommer and Sommer 1986; Sommer 1997; Webb et al. 1966; Zeisel 1990). While there are many benefits to a case study approach, there are some important limitations as well. One typical problem is the inability to compare across cases, especially when different types of data have been collected. In landscape architecture some designers consider taking photographs of built

projects as a form of case study analysis. Empirical and critical analysis is often lacking, along with the use of a systematic methodology. However, there is an opportunity through the leadership of the Landscape Architecture Foundation in cooperation with organizations such as the American Society of Landscape Architects (ASLA), the Council of Educators in Landscape Architecture (CELA), and others to increase the rigors as well as the application of case study analysis in landscape architecture. These organizations can show how case studies can both better inform practice and advance the state of landscape architecture research.

Case study analysis is one of several well-established research methods in landscape architecture.<sup>4</sup> Case studies typically employ a variety of research methods. These include experimental (Ulrich 1984), quasi-experimental (Zube 1984), historical (Walker and Simo 1994), story telling/anecdotal documentation (McHarg 1996) as well as multi-method approaches.<sup>5</sup>

#### *Use of Case Studies in Other Professions/Fields*

The professions of law, medicine, business, and engineering rely heavily on case studies for education, research, and practice (Feagin et al. 1991). For example, the case study method is a core part of the curricula in medicine, law, and engineering. Harvard Schools of Business, Law, and Medicine all routinely use case studies to train their students. In business and law, hypothetical case studies are invented specifically for use in education and practice (Cagranoff et al. 1991; Barnes et al. 1994). Cases are presented to demonstrate how difficult management or clinical situations could be handled in practice. They challenge students and practitioners to be effective problem solvers and to devise solutions to common situations encountered in practice. The case study method is now the standard method used in most

professional education. There is also a well-developed case study methodology in the social and natural sciences, much of which is useful for landscape architecture (Riley 1963; Platt 1992).

[Insert Photo 3 — Faneuil Hall — about here]

Case studies in urban planning, architecture, urban design, and urban land development are most similar to ones used in landscape architecture. Research in architecture, planning, and urban design often relies on a case study approach, be it a historical, social, or policy-oriented examination.

#### *Similar Efforts*

A number of case study archives exist today in related fields including planning, urban land development, and urban parks. The Urban Land Institute (ULI), which is dedicated to advancing urban land development practice, has developed a strong record of using case studies. The ULI's Project Reference Files were started in 1985 and contain development details on over 250 innovative and successful projects. The Lincoln Land Institute, the Trust for Public Land, the American Planning Association, and the Urban Parks Institute are other organizations that develop and disseminate case studies related to urban parks, land conservation, community greening, and land economics. In landscape architecture, the Contemporary Landscape Inquiry Project at the University of Toronto's Virtual Landscape Architecture Library Web site includes over 160 project case studies in landscape architecture maintained by landscape architecture faculty and students. The site includes case studies of varying lengths and qualities, a case study search engine, and a way to make available new case studies online.

#### *The Value of Case Studies*

Robert Yin suggests that the value of case studies lies in their potential to "retain holistic and meaningful characteristics of real life situations" (1994, p. 3). Case study analysis is a particularly useful research method in professions such as landscape architecture, architecture, and planning where real world

contexts make more controlled empirical study difficult.

Case studies can often answer big questions at the intersection of policy and design. They are useful in participatory planning, for culturally sensitive design, and for studies trying to refine or test emerging concepts and ideas. The questions posed in case studies thirty to forty years ago by Ian McHarg, Kevin Lynch, Herbert Gans, and Jane Jacobs still form the basis for much contemporary thinking in environmental design. These cases have contributed seminal normative theory useful for design and planning.

There are several potential benefits of case studies for landscape architects. These are summarized in six general areas: teaching, research, practice, theory building, criticism, and communication and outreach.

*Teaching.* Landscape architecture is predominantly taught by example. Case studies are an effective and established way to use examples in the classroom or studio. Most schools include some form of case study method in their curriculum. Case studies are a useful way for students to gain insight into past projects in order to successfully design new ones. They are particularly instructive in teaching history and useful for students in community outreach projects. Case studies are an excellent way to get students involved in landscape architecture research since the method is easy for students to use.

Examples of past case study approaches to landscape architecture education include McHarg's early case study studios at the University of Pennsylvania (1995) which focused on the Delaware River Basin; Carl Steinitz's studios at Harvard, which developed useful information for specific communities or regions including Monroe County, Pennsylvania and Camp Pendleton, California (Steinitz et al. 1994; 1996); and those of Clare Cooper Marcus who with her students in her social factors seminar course at The University of California, Berkeley developed a large collec-

tion of case studies on the use and redesign of urban open spaces, particularly in the Bay Area (Marcus et al. 1997).<sup>6</sup>

More recent examples of case study approaches to landscape architecture education include Ann Spirn's studios at the University of Pennsylvania, which are developing and evaluating community garden case studies in west Philadelphia; Rob Thayer's bioregional studios at The University of California, Davis focused on the Putah/Cache Creek watershed of central California; and John Lyle's former studios at Cal Poly Pomona on regional design problems within the Los Angeles Basin. Several courses are utilizing case studies to teach theory in landscape architecture, particularly at Arizona State University, Harvard, The University of Virginia, and The University of California, Davis to name just a few.

*Research.* There is a large and well-developed body of literature on the case study method and its many applications. Landscape architecture researchers have employed the case study method in post-occupancy evaluations, landscape ecology, site technology, and historical analysis.<sup>7</sup> Many M.L.A. and Ph.D. theses and dissertations provide excellent examples of case study analysis.<sup>8</sup> Organizations such as the Council of Educators in Landscape Architecture, the American Society of Landscape Architects, and the Environmental Design Research Association all report on advances in case study research to some degree at their annual meetings.<sup>9</sup> Increased use of case studies can expand the research base in landscape architecture as well as to communicate these research advances to the profession.

*Practice.* Case studies are a structured way of recording landscape architecture projects. Case studies are a useful way for practitioners to evaluate the success and failure of projects, although few practitioners routinely do this. Future practice can

build on existing cases by understanding aspects of a project unique to a given context while gleaning principles useful in similar projects. Case studies can help practitioners replicate successes and avoid failures. Case studies can also help to demystify what landscape architects do and to explain how projects are successfully implemented. They can be particularly useful in the design process as a way of engaging a variety of people in the complex process of moving from identifying problems to creating solutions.

*Theory building.* While not always used this way, case studies can be instrumental in developing new theories related to landscape architecture. They not only describe projects or places but can also explain and predict future action. Case studies can be used to develop what Kristina Hill calls a "strategic approach" or rule-of-thumb regarding landscape architecture projects from the scale of the site to the region (1995). For example, case-by-case data on amounts of impervious surface can test the larger communal or regional impacts of a project. Findings from case studies on pedestrian or park behavior can be used to predict how activity may take place in similar projects.<sup>10</sup>

[Insert Photo 4 — Battery Park City — about here]

*Criticism.* A body of criticism is essential for any profession to develop and advance. Case studies are a useful way to develop that body of criticism in landscape architecture. They can illuminate both the positive as well as the negative aspects of projects. Case studies can also inform ongoing intellectual debates and critical discussions within landscape architecture.

*Communication and Outreach.* Case studies are an effective way to communicate the results of landscape architecture projects. They are particularly well suited for reporting to the media and can make the profession more accessible to the public.

#### *Limitations*

While case studies are one of the best means for communicating lessons in many fields, they are plagued with difficulties. One of the

most common limitations for landscape architecture is that case studies are often costly to do, especially if they are done well with time spent on-site. In addition, project designers, owners, and managers may be unwilling to provide frank information about problems with their projects—information that is necessary to prepare a full and critical case study. Case studies are also not as effective on new projects. For example, the Urban Land Institute typically waits one or two years after a project is complete before they begin a case study. Some projects are best evaluated after a decade or more. There is often limited information available on existing case studies. For example, cases done as graduate theses are rarely published and are often difficult to access.

Case studies can sometimes point out failures as well as successes of projects. While we often learn as much or more from failure, professionals are not eager to have this aspect of their project highlighted. There is often a lack of peer review for case studies unless they are submitted for publication in refereed journals such as *Landscape Journal*. As a result, publications that contain case study projects are not rewarded in the tenure or promotion process as often as “scientific” research.<sup>11</sup> Finally, a limited number of case studies is available beyond the well-known projects that tend to be studied over and over again such as New York’s Central Park. There is a critical need for case studies of more modest, everyday landscapes such as urban gardens, greenways, etc.

#### *Case Studies in Landscape Architecture*

Case study analysis has a long history in landscape architecture. Although these documents are not always called case studies, the documentation and dissemination of projects has been done since the days of Olmsted. However, many of these documents lack more in-depth and critical review. Some contemporary landscape architects have used case studies to develop and test their theories and design ideas. They include landscape architects such as Rich

Haag, Randy Hester, Ann Spirn, Ian McHarg, Carl Steinitz, Rob Thayer, John Lyle, and Peter Walker, to name just a few. There is also a sizable body of literature on landscape architecture projects based entirely or in part on case studies. There has been a recent increase in the number of case studies, particularly those published by Process Architecture and Space-maker Press in the United States. Professional design awards are also a useful source of exemplary case studies.<sup>12</sup>

#### *Seminal Case Study Projects*

There are several seminal projects that make up a large part of the knowledge base as well as the popular culture of landscape architecture. These single projects, as well as comparative studies of project types, have had enormous influence on the development of the profession. They illustrate the impact that well-documented case studies can have on practice. Several single or comparative case studies have been commonly cited as seminal to the theory and practice of landscape architecture. While not a comprehensive survey, it demonstrates the large number of well-recognized case studies that have had a significant impact on landscape architecture thought and action (See Table 1).

[Insert Table 1 about here]

#### *Critical Dimensions*

Case studies can be utilized to bring out several kinds of information. While some of this information may be unique to the given project and its context, it may also be useful for advancing knowledge in the profession in general. The elements that a full case study should include are: baseline information; the roles of key participants; financial aspects; process; problem definition and response; goals; program; design; site visit(s); use; maintenance and management; and perception and meaning. Additional critical dimensions to include in a case study are: scale;

time; unique constraints; community and cultural impacts of the project; environmental sensitivity and impact; impact on the profession; infrastructure impacts; lessons learned and theory. In addition, it is useful to examine outside critiques, reports of the projects in the popular media, and peer reviews in the form of awards and honors. These dimensions are discussed in further detail in Table 2.

[Insert Table 2 about here]

#### *A Suggested Format for Case Studies*

From the range of knowledge that can make up a case study, at least three levels of information are possible in a case study analysis. The first, and simplest, is a project abstract of two to three pages. The second level is a full project case study. The third level is a more in-depth case study with contextual or specialized material included. While each level of information may have a different audience, the greatest need, especially in teaching, is for the more detailed case studies of the second and third level (see Table 3).

[Insert Photo 5 — North Park — about here]

#### *Methods/Process*

Case study analysis typically involves designing the case study, conducting the case study, analyzing the results, and disseminating the results. Case studies can be done alone or together to compare across projects (Yin 1994). Case studies in landscape architecture can be organized around the type of project, the problem, the geographical region, or the designer. Each has its own unique purpose and benefits.

One methodological issue is who should actually prepare the case study. It is important that objectivity be ensured in the design and execution of the case study. Subjectivity can be avoided if other people such as academics, journalists, and users are involved in preparing the case study. The person or team that prepares the case study needs to be free of bias and skilled in asking questions, listening, and comprehending the issues involved.

Information for case studies can

be gathered in a variety of ways. It is important to be systematic and consistent in using these methods. Most successful case studies incorporate a variety of methods such as site visits; site analysis; historical analysis; design process analysis; behavioral analysis; interviews with designer(s), developer(s), manager(s), and public officials; interviews with users and non-users; archival material searches including project files, newspaper articles, public records; bibliographic searches; and internet searches.

*A Landscape Typology*

Case studies can be organized in several ways. One method is based on geography, documenting projects within a region or part of the country or world. Another method is to organize the case studies by type of funding, decision-making, or the role of the landscape architect. A third method is to arrange the case studies by project type, which is particularly helpful to compare and learn across projects. Case studies of projects can follow a typology for landscape architecture that may include the following types (partial listing)<sup>13</sup>: campuses, cemeteries, city plans, community open spaces, gardens (private), gardens (public), greenways/parkways, historic landscapes, housing environments, institutional and corporate landscapes, landscape planning, metropolitan open spaces, national forests, national parks, new community design, plazas, recreational areas, regional plans, restored natural landscapes/reclamation, state parks, streets, urban parks, and waterfronts.

[Insert Photo 6 — Boston City Hall Plaza — about here]

*An Issue Typology*

Case studies can also be conducted and organized around issues that face landscape architectural projects.<sup>14</sup> While several types of issues are possible, they can address, for example, approaches to community participation, design decision making, development costs, low cost urban parks, use and users, meaning, park

management and maintenance or permanency in community gardens.

*Example Case Study: Bryant Park*

To illustrate how case study analysis could be structured two example case studies were developed.<sup>15</sup> Bryant Park in midtown Manhattan is presented here to illustrate the kind of information that can be contained in a case study. It is not presented here as a full or complete case but as an abbreviated illustration of the type of information that should be included in case studies of landscape architecture projects.

hand and unrealistic on the other. Clearly many urbanites seek a place of retreat from the activity of the city, and Bryant Park is one of the few places in central Manhattan that could conceivably offer this respite. Indeed, in their 1976 study of the park, Nager and Wentworth found that relaxing or resting was the most frequent activity engaged in by the park users they interviewed.

However, as these same researchers suggest, some of the very factors that made the park a place for retreat and relaxation, such as its ample vegetation and the stone

Project Name:	Bryant Park, New York City <sup>16</sup>
Location:	Avenue of the Americas between 41st <sup>t</sup> and 42nd Streets, behind New York Public Library, Manhattan
Date Designed/Planned:	Original design completed in 1934; redesigned early 1990s
Construction Completed:	Built in phases from 1991 to 1995
Construction Cost:	Park Rehabilitation = \$5.9 million
Size:	4.6 acres
Landscape Architect(s):	Hanna/Olin, Landscape Architects
Client/Developer:	New York City Parks Department and Bryant Park Restoration Corporation (BPRC)
Consultants/Architects:	Hardy Holzman Pfeiffer, New York City
Managed By:	New York City Parks Department and Bryant Park Restoration Corporation (BPRC)

*Context.* Bryant Park, located one block from Times Square and behind the main branch of the New York Public Library, is a major public open space in Manhattan's bustling midtown. It is located in a busy office and educational district of Manhattan and serves as an outdoor retreat for office workers, tourists, and students. In the 1970s it was populated by drug dealers and the homeless. Today it is heralded as a revitalized and democratic urban public space that can serve as a model for other cities.

The history of the park graphically demonstrates some of the conflicts inherent in managing public spaces in dense urban centers. Considering its location, the notion of Bryant Park as a place for relaxation can be viewed as appropriate on one

fences separating it from the street, also encouraged its intensive use by drug dealers, who operated easily in the semi-seclusion of the park from the 1970s until its redevelopment in the 1990s. During the 1970s it became clear that some design or management changes were necessary in order to counteract the appropriation of the park by dealers and their clients and to increase its use by a wider range of people, including local office workers and shoppers. This concern gave rise to current redesign and development of the park, completed in phases from 1991 to 1995.

*Site Analysis.* Bryant Park is bounded on three sides by streets and on the fourth by the back of the New York Public Library. Two of the three streets, 42nd Street and Avenue of the Americas, are heavily trafficked. Historic elements include a stand of heritage sycamore trees on the site framing a central lawn area and a plaza at the western end. There are stunning views of the skyline of midtown Manhattan from most parts of

the park, and the New York Public Library building forms a strong visual edge at the east end of the park. Anita Nager and Wally Wentworth (1976) conducted a behavioral analysis of Bryant Park in the early 1970s, followed by filming and observation of use of the park by the sociologist William Whyte (1979). Landscape architect Laurie Olin conducted detailed sketches, site analysis, and redesign studies of the park in the 1980s.<sup>17</sup> Several economic studies were done on the importance and redevelopment of the park during that same period.

*Project Background and History.* While Bryant Park has served as a public open space since the mid-1850s, its main configuration was established in 1934 and then modified in the early 1990s. Bryant Park was originally a potter's field in 1823. It was developed as a park in 1847 and named Reservoir Park, "after the city reservoir that was constructed on the site now occupied by the public library" (Berens 1998, p. 45). In 1884, it was renamed Bryant Park after the poet William Cullen Bryant, who was a strong advocate for parks. When Robert Moses became head of the New York City Parks Department in 1923, he mounted a major redevelopment of the park. Moses intended the park to be a place of "restful beauty," with ample trees and hedges, rather than a space for active recreation (Biederman and Nager 1981). Moses held a design competition and the winning design converted the park into a classically influenced formal space surrounded by a stone fence and laid out in a symmetrical fashion.

[Insert Photo 7 — historic photo of Bryant Park — about here]

Until then the park was on grade with the surrounding sidewalk, but fill was used from nearby subway construction to raise the park above the surrounding streets. Gayle Berens of the ULI, who has written an excellent and detailed case study of the park, attributes the decline of the park to the late 1960s when it was "ignored by leisure-time" users (1998, p. 46). The recent redevelopment effort largely addressed the perception of Bryant Park as a "needle

park" for drug dealing (Longo 1996). Years of neglect, deterioration, and problems of use led the Rockefeller Brothers Fund to finance a reexamination of the park. The fund brought in noted public space expert William Whyte, who used past research on the park to create a formula for redesign (see program).

After Whyte's report, the Bryant Park Restoration Corporation (BPRC), a public-private partnership, was formed to redevelop the park, and a team of designers was hired. Construction of the park took place in the early 1990s and it has enjoyed a rebirth as a result. Today it is a well-used and popular open space in midtown Manhattan.

*Genesis of the Project.* The recent redevelopment of Bryant Park grew out of significant social and crime problems within the park, especially during the 1970s. To redevelop the park, the BPRC, a private nonprofit group funded primarily by corporations located near the park and the Rockefeller Brothers' Fund, was founded in 1980. While the corporation dealt extensively with maintenance and security issues in cooperation with the city's parks and police departments, its major goal was "to fill Bryant Park with activity, to attract to the park as many legitimate users as possible" (Bryant Park Restoration Corporation 1981). In the years it has operated, the restoration group, in conjunction with the Parks Council, the Public Art Fund, and other organizations, has been responsible for an array of events and new activities in the park. These include several concert series, an artists-in-residence program, arts-and-crafts shows, a booth selling half-price tickets to musical and dance events, and book and flower stalls (Carr et al. 1992). It is generally agreed that these activities, along with improvements in policing and maintenance, significantly increased park use and reduced crime (Cranz 1982). However, it was clear that more had to be done to restore and refresh the park.

The landscape architectural firm Hanna Olin was hired in the early 1990s to redesign the park. Their design goal was to make the park a multi-use and user-friendly urban open space.

*Design/Development Process.* Six million dollars worth of physical changes were made to the park in several phases in the early 1990s. These included adding more seating; increasing access points; refurbishing hedges, lawns, and flower beds; restoring the fountains and Bryant statue; and expanding the library's central book stacks underneath the Great Lawn (Program on Public Space Partnerships 1987). The office of Hardy Holzman Pfeiffer Associates, an architectural firm known for its sensitivity to historical landmarks, was hired for the restaurant addition at the rear of the New York Public Library, facing the park. The proposed encroachment into the public park with a private development met with considerable opposition, including objections from the influential private advocacy group, the Parks Council. After three years of public debate and review, a scaled-down proposal called for two smaller buildings on the upper terrace, one housing an upscale restaurant, the other concessions for lower-cost food. Design coupled with an aggressive events program increased maintenance (including an annual maintenance budget of \$2 million and the employment of a staff of thirty-five full-time people) and new elements such as food, music, and movable seating provided the ultimate formula for success for the park (Thompson 1997; Berens 1998).

*Role of Landscape Architect(s).* Landscape architect Laurie Olin and his firm Hanna Olin played a major role in the design and redevelopment process.<sup>18</sup> Their concern was "design, rather than sociology" since the existing park had many physical problems ranging from years of neglect to numerous dead ends, hidden places, and a general lack of amenities. In the end, many of the changes were subtle, building on the classical principles of Moses's 1930s design.

*Program Elements.* The park redesign program was essentially identified in the original behavioral research done by Anita Nager and Wally Wentworth, two doctoral students in environmental psychology at the City University Graduate Center, which directly faces the park (Nager and Wentworth 1976). William Whyte summed up the park's problems by stating that "access is the nub of the matter. Psychologically, as well as physically, Bryant Park is a hidden place. The best way to meet the problem is to promote the widest possible use and enjoyment by people" (quoted in Berens 1998, p. 46). Whyte translated this observation into a number of specific recommendations in 1979:

- Remove the iron fences
- Remove the shrubbery
- Cut openings in the balustrades for easier pedestrian circulation in and out of the park
- Improve visual access up the steps on the Avenue of the Americas
- Provide a third set of steps midway between the existing stairs and 42nd Street
- Provide ramps for the handicapped
- Open up access to the terrace at the back of the library with new steps
- Restore the fountain, and
- Rehabilitate Carrere and Hastings' historic restroom structures

While not all these ideas were adopted in the final design program, they became the essential redesign agenda for Bryant Park. A number of additional elements were included in the park, such as 2,000 movable folding chairs and extensive new planting to make the edge of the park more like a public garden. The restrooms were also restored, complete with fresh flowers and a baby-changing table.

*Maintenance and Management.* One of the keys to the park's rebirth (as described in recent case studies of Bryant Park) was its extensive man-

agement and maintenance program (Berens 1998; Thompson 1997). Aggressive activity programming has clearly played a key role in the park's success. For example, numerous free concerts, fashion shows, and fairs have been held in the park on a regular basis. A staff of more than thirty people maintain and manage the park including "a full-time horticulturist, a maintenance and sanitation crew, and a security team that operates 24 hours a day, seven days a week" (Thompson 1997, p. 33). This unusual level of maintenance is made possible by a unique public-private partnership between the city of New York (which in many ways gave up its claim to maintaining the park), corporate and institutional tenants of surrounding buildings, and the private foundations. A Business Improvement District (BID) assesses fees that are used to fund management and staff maintenance for the park.<sup>19</sup>

*User/Use Analysis.* Significant behavioral problems identified in several detailed studies of the park led to the current redevelopment. In the early 1970s, the detailed study conducted by environmental psychology doctoral students Anita Nager and Wally Wentworth (1976) identified many of the core physical problems with the park. Many of these were perceived safety concerns that kept people out of the park except during peak periods. My faculty office at the City University Graduate Center was directly across the street from Bryant Park from 1977–80 and I frequently used the park during lunch hours and on nice days. I also had my students use the park as a way to evaluate the use and meaning of urban parks. The park was a run-down, yet pleasant, retreat from the busy world of Midtown Manhattan. One would see drug dealing occurring on the edge of the park, but the central lawn was often a safe haven, especially during periods of heavy use.<sup>19</sup> It was this perceived sense of danger that led planners and

land owners to want to change the park.

Since the redesign, the amount of use and the diversity of users have clearly increased in the park. Park use has reportedly more than doubled since the redesign, and use of the park by females is up considerably according to records kept by the managers (Thompson 1997, p. 33). A post-occupancy evaluation was conducted after some construction was completed in 1993 by a student in the same City University of New York (CUNY) environmental psychology program that conducted the original 1976 study of the park (Park 1993). Using behavioral observation and interview methods, the author found that people felt safer using the park as a result of increased visual and physical access. The CUNY study found that much of the success was due more to increased maintenance and policing than physical design. It is clear, however, that the redesign is a magnet for users and contributes to the park's overall success. Continued observation, evaluation, programming, and redesign will be needed to keep the park functioning as a successful urban park.

[Insert Photo 8 — Bryant Park before reconstruction — about here]

*Peer Reviews.* Bryant Park has enjoyed a very favorable reception by the larger landscape architecture and urban design communities. It has received many awards from organizations such as the ASLA, the AIA, and the Regional Plan Association (Thompson 1997, p. 34). It has been widely publicized in professional magazines and books. Bryant Park was selected by a distinguished jury assembled by Urban Initiatives in 1996 as one of the sixty most flourishing and successful public spaces in America (Longo 1996). In 1998 the Environmental Design Research Association and the journal *Places* awarded Bryant Park one of the first Exemplary Place Awards. The jury for this prize included the landscape architect Lawrence Halprin, architect Donlyn Lyndon, and social researcher Clare Cooper Marcus. In terms of peer review, Bryant Park has become one of the most publicized and her-

alded urban parks since Olmsted's Central Park.

*Criticism.* Bryant Park has also enjoyed quite favorable reviews in the popular press. According to Bill Thompson (1997, p. 34), *Time* magazine named Bryant Park the "Best Design of 1992," *New York Magazine* called it a "touch of the Tuileries . . . the perfect endorsement for restoring public space with private funds," and a *New York Times* article by Paul Goldberger called the restored park "a monument of pure joy." Yet the redesigned park has not been without critics. Some have expressed fear that the park has become privatized. With its redesign and upgrading and the addition of an expensive restaurant, the park has attracted an upscale clientele and has discouraged use by more undesirable users.

[Insert Photo 9 — Redesign Plan — about here]

Urban designer Stephen Carr, environmental psychologist Leanne Rivlin, planner Andrew Stone and myself raised a number of concerns before the redevelopment of the park took place (Carr et al. 1992). The first issue was whether Bryant Park could accommodate all of these new activities and still serve as a place of retreat and relaxation for some of its users. Another issue was a debate about who has ultimate control over public parks. In spring 1983, the Restoration Corporation, in cooperation with the New York Public Library, entered into a thirty-five-year agreement with the city parks department whereby the corporation would be responsible for all aspects of the park's maintenance, management, and renovation under the overall supervision of the city's parks commissioner. Responding to the original cafe proposal and the overall management plan, Peter Berle, then president of the Parks Council, said:

*I'm concerned about taking public land, removing it from the protections of public park status and turning it over to a private entity. If you have a private entity running a public park, who is to say that you and I may not be the undesirables next year?* (Carmody 1983, p. B3).

*Significance and Uniqueness of the Project.* Bryant Park has become a model for how to transform rundown historic urban parks into lively and successful public spaces. The private-public partnership used to redevelop Bryant Park has been widely heralded as one of the best ways to renew older urban open spaces in periods of declining public funding of parks and open spaces (Berens 1998).

[Insert Photo 10 — Park after restoration — about here]

*Limitations.* It is unclear if the early success enjoyed at Bryant Park can be sustained over the long term. Recent declines in funding for maintenance and management of Bryant Park have caused some to worry whether current levels of use can be maintained without affecting the park's overall image and safety.

*Generalizable Features and Lessons.* The key ingredients of Bryant Park's rebirth—programming, movable seating, food, high quality maintenance, strong design, and detailing—are now considered standard for any successful public open space. Yet the scale of funding used to transform Bryant Park was not typical, even in major parks in other downtown areas. Yet there is evidence that funding is increasing for park rehabilitation.<sup>21</sup> Bryant Park's process and design offers several lessons for the design of similar park projects. Bryant Park is an exemplar of how behavioral analysis can be combined with thoughtful design to create successful public spaces. Yet not every urban park can command a multimillion-dollar budget raised from private sources. Most projects are more modest in budget and scope. However, the principles are the same—get people involved, do careful social and economic analysis, realize that design alone is often not enough (programming and management are critical as well), and expect that good parks must be continuously evaluated and redesigned to ensure success.

*Future Issues/Plans.* The Bryant Park Restoration Corporation is continually seeking additional funding

for the park. They would like to extend the park hours and institute a sculpture program (Berens 1998). In addition they would like to renovate the Pavilion at the corner of West 40th Street and Sixth Avenue. Landscape architect Laurie Olin offers the following assessment of the future of the park: "The Park now has a constituency of tens of thousands of people. It's going to endure" (Thompson 1997, p. 34).

#### *Recommendations and Implications*

Two types of recommendations result from this research. The first type of recommendation suggests specific ways the Landscape Architecture Foundation (LAF) and related organizations such as the American Society of Landscape Architects and Council of Educators in Landscape Architecture could become involved in the development and dissemination of case studies in landscape architecture. The second type of recommendation involves more general research recommendations and implications of this study.

The LAF Board has adopted a series of recommendations made as part of this work. Specifically they have endorsed the development of a "Case Studies in Landscape Architecture Initiative." The Initiative will develop ten or more new case studies of projects each year, several issue-based analyses of existing cases, and several hypothetical cases useful for education. In addition, LAF will provide a suggested methodology, a peer review process, a dissemination mechanism for the case studies, and a clear statement of the criteria for selection of cases.<sup>22</sup> Emphasis will be placed on cases that can advance theory, improve practice, and reach supportable conclusions and recommendations.

LAF has established a National Advisory Council to oversee the Initiative and to ensure that a high standard of quality and consistency is maintained. A call for proposals for "Land and Community Case Studies" in landscape architecture has been issued. LAF will award grants on a competitive basis for researchers to create the in-depth case studies, following a common format provided by



LAF. Landscape architecture programs would be invited to prepare the case studies in their own region.

It has also been recommended that LAF disseminate the case studies through publications and an online archive at their website. Starting in the second year of the Initiative, LAF would develop a series of Landscape Architecture “*Case Study Institutes*” or study courses. Institutes could be organized around project type or by geographic region. These would be particularly well suited for continuing education credit when and if this becomes part of professional licensure. LAF could join with CELA and/or ASLA to sponsor sessions on case studies at annual meetings and invite people who do this kind of work to present and discuss their projects.

After it has developed its own track record with case studies, LAF could form partnerships with other organizations such as Council of Educators in Landscape Architecture, American Society of Landscape Architects, Environmental Design Research Association, American Institute of Architects, American Planning Association, Trust for Public Land, Urban Land Institute, and Urban Parks Institute to develop a national archive of case study projects related to the built and natural environment. Partnership would allow LAF to reduce costs and reach a broader audience. At the end of the third year, the Foundation would conduct an evaluation of the Initiative to explore ways it could institutionalize the program.

#### *Future Research Issues*

Case studies offer a promising methodology to advance teaching, research, and practice in landscape architecture. However, before they can have a significant impact on the profession, several critical issues remain. There is a need for a large number of case studies that use comparable methods so that findings can be identified across cases. In addition, a number of research questions remain. Existing methods need to be more systematic and rigorous and

tested in a wider variety of settings. Comparative methodologies for case study analysis also need to be developed. More case studies are required on topics such as effective design practices, aesthetics, landscape perception, what constitutes a successful project, and design theory. There also need to be more post occupancy evaluations of landscape architecture projects, where evaluation becomes a part of built projects. More aggressive forms of dissemination are needed such as dual forms of publication where case studies are published in academic and professional journals as well as in more popular publications such as airline magazines. With increased support, case study analysis promises to greatly advance understanding of the profession for both practitioners and the larger public.

[Insert Photo 11 — Rich Haag and Gas Works Park — about here]

Case study analysis should occupy a central role in landscape architecture practice, education, and research. Case study analysis is an effective way for landscape architecture to advance and mature as a profession, providing a promising tool for the profession to train students, develop a research base, and improve practice.

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#### *Notes*

1. Interviews with leading researchers and practitioners were conducted to assess their views of the usefulness of the case study method in future research and practice. Questions included: What is the value/limitations of case study analysis in landscape architecture (design, teaching, research)? What are the seminal projects/examples/literature? What critical dimensions should be included in case study analysis? Would you use a case study archive in your practice, or in teaching? If so, how? In addition, the same questions were posed in an electronic survey using some key automated mailing lists including the Landscape Architecture Electronic Forum, Child-Youth Environments, Environmental Design Research Association, and the Urban Parks Institute. In Fall 1998, landscape architecture students from the University of California,

Davis tested the method on urban park and open space sites in various California towns and cities (Cochran, Francis and Schenker, 1998). At its October 1998 Board meeting, Landscape Architecture Foundation endorsed the recommendation to begin a three-year initiative to support and develop a critical mass of case studies in landscape architecture.

2. For an excellent overview of case study methods and applications in a variety of fields see Robert Yin’s *Applications of Case Study Research* (1993), and *Case Study Research: Design and Methods* (1994).

3. I am grateful to Robert Sommer of the University of California, Davis for pointing out that it is often in looking across multiple case studies with an eye toward synthesis and patterns—rather than at individual case studies—that common themes and principles can be identified. Two excellent examples of this are Rachel and Stephen Kaplan’s *The Experience of Nature* (1989) and *With People in Mind* (1998), which both summarize case studies of people-plant relations and present them as patterns and principles useful for design and management.

4. My purpose here is not to review the full array of landscape architecture research methods. Each method has its place depending on the research approach, hypotheses, and issues to be addressed.

5. Much of my own case study research has included a multi-method approach combining observational, attitudinal, archival, historical, and quantitative methods.

6. My own interest in the use and meaning of public space began as a student in Clare’s course in 1970 when we conducted case studies of Union Square in San Francisco and several neighborhood parks in Berkeley.

7. See past ASLA Research Awards in *Landscape Architecture* for some more notable examples.

8. There continues to be a problem in accessing and disseminating graduate theses. This would be a useful project for organizations such as the Landscape Architecture Foundation and the American Society of Landscape Architects.

9. Many of these case studies are published in the *Proceedings* of these organizations, yet they are still largely unknown and inaccessible to most practitioners.

10. For example, William Whyte’s (1980) case studies of public spaces in Manhattan in the 1970s first alerted designers and city officials to the importance of use in creating successful outdoor spaces. His work led to the development of policies in many cities on the design of plazas and public space.

11. An exception to this situation is the case study that is published as a monograph or book, which can be rewarded in the tenure system. Two noteworthy examples are Herbert Gans’s *The Urban Villagers* (1966) and Clare Cooper Marcus’s *Easter Hill Village* (1975).

12. Publications of the professional awards programs of the ASLA, the Rudy Bruner Award, and the EDRA/*Places* Awards are sources of exemplary case study projects.

13. This typology is adapted from W. Tishler *American Landscape Architecture* (1989); and Carr et al. *Public Space* (1992).

14. I am indebted to Anne Vernez Moudon of the University of Washington for pointing out that case studies are needed that address processes and issues as well as specific types of projects.

15. See M. Francis "A Case Study Method for Landscape Architecture," Landscape Architecture Foundation, 1999 for a full presentation of both cases.

16. Material for this case is drawn from Biederman and Nager, "Up from Smoke: A New Improved Bryant Park?" (1981); Carr et al., *Public Space* (1992); Garvin and Berens, *Urban Parks and Open Space* (1997); Longo, *Great American Public Places* (1996); Nager and Wentworth, "Bryant Park: A Comprehensive Evaluation of Its Image and Use with Implications for Urban Open Space Design" (1976); and Thompson, *The Rebirth of New York City's Bryant Park* (1997).

17. See Olin's engaging sketches pp. 9–17 in W. Thompson, *The Rebirth of New York City's Bryant Park* (1997).

18. The redesign process and role of the landscape architect for Bryant Park is discussed in great detail in W. Thompson, *The Rebirth of New York City's Bryant Park* (1997).

19. For a detailed discussion of how the Business Improvement District was used to rebuild and maintain Bryant Park see Gayle Berens, "Bryant Park" (1998, p. 48).

20. It was interesting to me that the drug buyers I observed were typically well-dressed office workers from surrounding offices. This has been found to be the case in studies of drug-selling behavior in public space (Carr et al. 1992). One wonders if this activity has only shifted to less supervised and less policed public spaces. The problem in Bryant Park was that during periods of low use, drug dealing was the predominant activity in the park.

21. A number of private foundations have become funding partners for rehabilitating urban parks in large and medium-sized cities. Especially noteworthy is the Urban Parks Initiative of the Lila Wallace Reader's Digest Fund that is supporting up to \$100 million in park renovations in various cities. Other foundations are following Wallace's lead, including the Goldman Foundation, which is funding waterfront park projects for the Trust for Public Land in San Francisco.

22. Landscape Architecture Foundation has commissioned me to develop two prototype case studies including a project-based case study of Village Homes in Davis, California and an issue-based case study of user conflicts in urban open space.

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TABLE 1

## Seminal Case Studies in Landscape Architecture

*Single Case Studies:*

Amelia Island, Florida  
 Boston Commons, Massachusetts  
 Bryant Park, New York  
 Camp Pendelton Study, California  
 Central Park, New York  
 Easter Hill Village, Richmond, California  
 The Franklin Delano Roosevelt Memorial, Washington, D.C.  
 Gas Works Park, Seattle, Washington  
 Ghirardelli Square, San Francisco, Calif.  
 Greenacre Park, New York  
 Lovejoy and Forecourt Fountains, Portland, Oregon  
 Manteo, North Carolina  
 National Center for Atmospheric Studies, Boulder, Colorado  
 Reston New Town, Virginia  
 Plan for the Valleys, Maryland  
 Paley Park, New York  
 People's Park, Berkeley, California  
 Raleigh Greenway, North Carolina  
 Seaside, Florida  
 Seattle Freeway Park, Seattle, Washington  
 Stanford Campus Plan, Palo Alto, California  
 Tanner Fountain, Harvard, Cambridge, Massachusetts  
 Vietnam Memorial, Washington, D.C.  
 Village Homes, Davis, California  
 Washington Environmental Yard, Berkeley, California  
 The Woodlands New Town, Texas

*Comparative Case Studies:*

*American Society of Landscape Architects : 100 Years*, Simo, 1999.  
*Cities Reborn*, Levitt, 1987.  
*City Form and Natural Process*, Hough, 1984 .  
*Community Open Spaces*, Francis *et al.*, 1984.  
*Contemporary Landscapes of the World*, Kobayashi, 1990.  
*Design for Human Ecosystems*, Lyle, 1996.  
*Design with Nature*, McHarg, 1995.  
*Ecological Design and Planning*, Thompson and Steiner, 1997.  
*Gardens in Healthcare Facilities*, Marcus and Barnes, 1995.  
*Great Streets*, Jacobs, 1996.  
*Gray World, Green Heart*, Thayer, 1994.  
*Image of the City*, Lynch, 1961.  
*Modern Landscape Architecture*, Johnson, 1991.  
*Modern Landscape Architecture: A Critical Review*. Treib, 1993.  
*The Death and Life of Great American Cities*, Jacobs, 1961.  
*People Places*, Marcus and Francis, 1997.  
*Planning Neighborhood Space with People*. Hester, 1984.  
*The Politics of Park Design*, Cranz, 1982.  
*Public Space*, Carr *et al.*, 1992.  
*The Social Life of Small Urban Spaces*, Whyte, 1980.  
*Taking Measures Across the American Landscape*. Corner, 1996.  
*Urban Parks and Open Space*, Garvin and Berens, 1997.  
*Yard, Street, Park*, Girling and Helphand, 1994.

TABLE 2

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Critical Dimensions of Case Studies

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- Baseline information/context—List the location, size, client, designer(s), consultant(s), density, land use type, etc.
- Roles of the key participants—What are the roles of the landscape architect and other professionals? Client? Users? What is the nature of the team? Who leads the team? What is their role in the beginning of the project? How does this change during the course of project?
- Financial—List the initial budget and the final costs. What are the reasons for any differences?
- Process—What is the political process? Decision making process? Design process? Implementation Process? Who influences a project's decisions and outcomes? Why? How does the project come together?
- Definitions of and responses to problems—What problem(s) is the project trying to solve? Was it solved? If so, how? If not, why not? Were other problems solved?
- Goals—What are the key goals (social, ecological, aesthetic)? How were they set? Who defined them? Did the goals change during the course of the project? If so, how?
- Program—How was the program developed? Who developed it? Was it modified during the course of the project?
- Design—What are the key design concepts? The inspiration for form? How did the designer translate goals into form?
- Site visit(s)—What does the project look like? How does it work? How does it feel?
- Use—How is the place used? Who uses it? Who does not use it?
- Maintenance and management—What are the problems of management and maintenance? What are the maintenance costs? How is the project perceived by space managers?
- Perception and meaning—Describe how the place is perceived and valued.
- Scale—What is the size of the project? Dimensions of key elements? Amount of site coverage and impervious surface?
- Time—How well does the place fare over time? How does the project age incrementally?
- Unique constraints—How were they addressed in the process?
- Community—How is the community served by this project? What is its social impact? Meaning?
- Environmental sensitivity and impact—How is the environment served by this project? What is its contribution to sustainability?
- Impact on profession—How is the profession served by this project? What does it contribute to the professional knowledge base?
- Infrastructure—What are the underlying challenges of the site? Technological constraints?
- Lessons learned—Describe the site-specific lessons learned in comparison to the more general lessons?
- Theoretical underpinning—Why was the project done? What are the question(s) it is trying to answer? Problem(s) it is trying to solve?
- Outside critiques—Include critiques by awards jury, experts, users, review committees, design critics, and journalists. Has there been any controversy associated with the project? Has this been resolved? If so, how?

TABLE 3

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A Suggested Format for Case Studies

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*Abstract/Fact Sheet:*

Photo(s).  
Project background.  
Project significance and impact.  
Lessons learned.  
Contacts.  
Keywords.

*Full Case Study:*

Project name.  
Location.  
Date designed/planned.  
Construction completed.  
Cost.  
Size.  
Landscape architect(s).  
Client.  
Consultants.  
Managed by.  
Context.  
Site analysis.  
Project background and history.  
Genesis of project.  
Design, development, and decision making processes .  
Role of landscape architect(s).  
Program elements.  
Maintenance and management.  
Photograph(s).  
Site plan(s) to scale.  
User/use analysis.  
Peer reviews.  
Criticism.  
Significance and uniqueness of the project.  
Limitations.  
General features and lessons.  
Future issues/plans.  
Bibliography of project citations/related references.  
Web sites/links.  
Contacts for further information.

*In-depth Analysis:*

Archival research (e.g., project records, newspaper articles, etc.).  
Awards or special recognition for the project.  
Copies of articles or reports on the project.  
Interviews with client.  
Interviews with managers and maintenance people.  
Interviews with users.  
Interviews with non-users.  
Longitudinal studies of the place over time.



Figure 1: New York City's Central Park has been documented numerous times as a case study project (Photo: Stephen Carr).



Figure 2: A well documented case study project is Portland's Ira Keller Fountain designed by landscape architect Lawrence Halprin (Photo: Mark Francis).



Figure 3: Boston's Faneuil Hall is an example of an urban landscape that has been developed as a case study (Photo: Mark Francis).



Figure 4: The Promenade at New York City's Battery Park City (Photo: Stephen Carr).

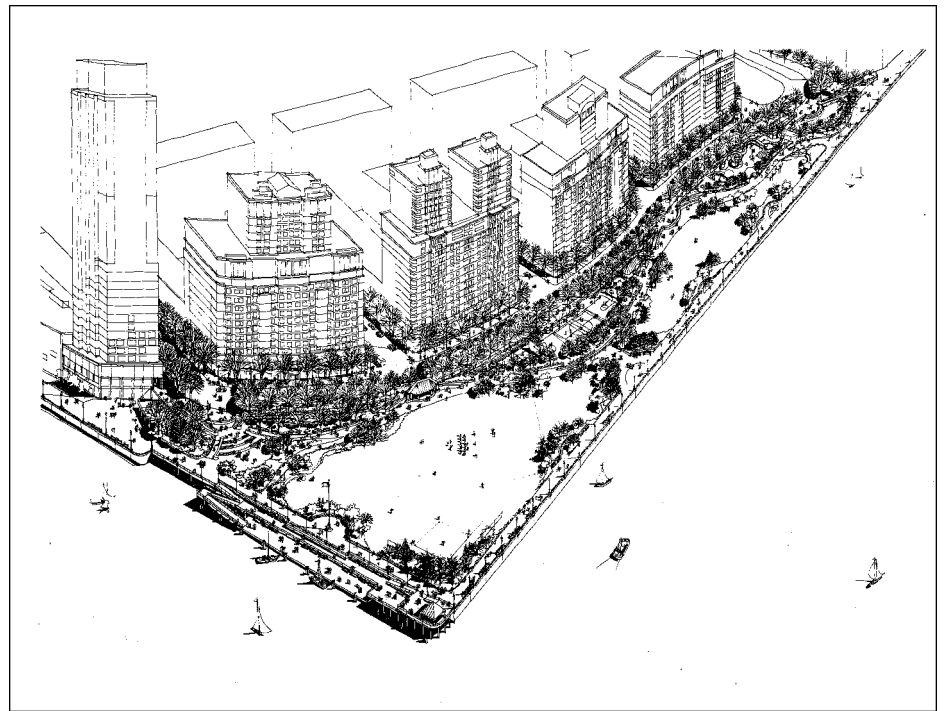


Figure 5: Plan graphics drawn to scale can be a useful part of case studies. The North Park at Battery Park City (Carr, Lynch , Hack and Sandell).





Figure 6: Case studies can be useful in redesigning existing projects such as currently is the case in the redesign of Boston's City Hall Plaza (Photo: Stephen Carr).



Figure 7: Early photo of Bryant Park, New York City (Courtesy New York Public Library).



Figure 8: The central lawn area of Bryant Park in use before the park's renovation in the early 1990s (Photo: Stephen Carr).



Figure 9: The Bryant Park Redesign Plan (Plan Courtesy of Olin Partnership).



Figure 10: Bryant Park in use after renovation (Photo courtesy of Spacemaker Press).



Figure 11: Landscape Architect Rich Haag leading tour of Gas Works Park, a well documented case study project (Photo: Mark Francis).