



Monroe Park Master Plan

Prepared for

CITY OF RICHMOND,
VIRGINIA

Consultants

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INCORPORATED
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REDEVELOPMENT
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LEGION DESIGN

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"Scene in Monroe Park, Richmond, VA." c. 1920 Courtesy VCU Libraries, Special Collections and Archives.

Monroe Park's history, location and character provide the groundwork for a landmark public space within the City of Richmond. Although decades of neglect have stunted the park's potential, the time is ripe for Monroe Park to return to the spotlight.



Introduction

PURPOSE OF THE PROJECT

Monroe Park is one of Richmond's oldest and most significant public spaces. Besides being a public park, it served as a state fairground and a military encampment. It is listed on the National Register of Historic Places and anchors the Monroe Park Historic District. In spite of all of its history and importance, 50 years of crime and vagrancy tainted Monroe Park's image, giving it a dangerous and uninviting reputation.

The recent increase in enrollment at the adjacent Virginia Commonwealth University's (VCU) Monroe Park Campus and resurgence in popularity of many of the surrounding residential neighborhoods and retail corridors have led to an increasing need for public open space within the City of Richmond. In light of this local population growth, the Departments of Community Development and Parks, Recreation and Community Facilities of the City of Richmond in conjunction with the Monroe Park Advisory Council issued a Request for Proposals to develop a Master Plan in September of 2006.

In November of 2006, a team consisting of landscape architects Rhodeside & Harwell, Incorporated, planners Biederman Redevelopment Ventures Corporation (BRV Corp.), civil engineers Legion Design and lighting designers Domingo Gonzalez Associates (DGA) were selected to prepare a Master Plan that establishes intermediate and long range goals for the renovation of plantings, site improvements, monuments, walkways, and for enhancing the visual aspects of Monroe Park.

This Master Plan accomplishes the following objectives:

- Address the historic features of Monroe Park
- Establish goals and objectives for improvements
- Propose phasing of the implementation of improvements
- Build a consensus for steps to increase public use of the park

Figure 1.1 - Central Fountain, Rhodeside & Harwell

SCOPE OF WORK

The focus of this Master Plan is to create schematic level drawings and written descriptions of the proposed modifications to Monroe Park that will inform future construction projects. This work makes full use of the extensive historic research conducted by the City of Richmond, as well as the Geographic Information Systems (GIS) data compiled by both the City of Richmond and VCU, and extensive on-site reconnaissance conducted by the Master Plan team. The Master Plan report is generally divided into two parts: analysis and recommendations. The first part (chapters one through four) walks readers through the site's history and existing conditions, setting a Period of Significance and describing the existing site features that are contributing to the park's historic integrity. The second part (chapters five through seven) describes the Master Plan process, presents treatment alternatives and a recommended treatment plan, and discusses implementation and management of the recommendations made.

Two public meetings were conducted by the Master Plan team to allow community members an opportunity to contribute their ideas to the plan and to garner support for the overall plan from the general public. The outcome of these meetings is described in more detail in chapter five. Additionally, the Master Plan team conducted a series of focus group interviews to learn the impressions and thoughts of Monroe Park from a broad cross-section of the community. Focus group participants included VCU students, faculty and staff, representatives from various departments within the City of Richmond, neighboring residents, business owners and representatives from non-profit and religious institutions. Throughout the process, the Master Plan team had regular meetings with the Monroe Park Advisory Council (MPAC), a group of City Council appointed local residents and business owners charged with the responsibility to advise City Council about the restoration, revitalization and improvement of Monroe Park as Richmond's centerpiece.

PROJECT LOCATION

Monroe Park is located within the City of Richmond, forming the western edge of the city's downtown grid. Situated among VCU's 140 acre urban campus, the park is surrounded primarily by institutional and residential uses. The residential communities of Carver, The Fan and Oregon Hill lie just to the north, west and south of Monroe Park, respectively.

The park is bound on the east side by Belvidere Street, a major artery through the city, and also the threshold between the northeast-southwest grid of Downtown Richmond and the north-south grid of Oregon Hill. Franklin Street, the continuation of Monument Avenue, forms the northeast border of the park. Laurel Street bends around the park's edge to surround it on both the west and northwest. Main Street lines the park's southern edge. With the exception of Belvidere Street and Laurel Street, all of the streets that form the boundaries of or dead end at Monroe Park are one-way streets.

DESCRIPTION OF THE SITE

Measured from the edges of the perimeter curbs, Monroe Park occupies an approximately ten acre site. The 7.36 acres of the park within the perimeter sidewalk are a gently sloping network of grass plats and curb-lined paths. Seven paths radiate out from a central fountain and terminate at one of seven park entrances located at the park's corners and the continuation of streets that dead end at the park. Additional paths bisect the site, connecting these entrances to one another and forming "goose foot" patterns at each entrance.

A variety of canopy, evergreen and small ornamental tree species cover the park, providing shade throughout much of the site during the summer months. A fountain at the center of the park provides an additional cooling effect to park visitors. Benches surrounding this fountain and the Wickham Statue to the west provide the park's only seating, although many users elect to sit on the grass during milder weather.

A number of statues and monuments dot the park's grass plats, primarily in the northwestern portion of the site. The park's only building is the octagonal two-story Checkers House just to the west of the central fountain. This structure, named for the checkers tournaments it once held, now serves as an office for the park keeper and public restrooms. The park is lit by city standard pole-mounted acorn fixtures containing high pressure sodium lamps.

As Richmond's first and oldest municipal park, Monroe Park is the centerpiece of the Monroe Park Historic District and a major landmark within the city of Richmond. The park's rich history should be used to inform its future use and development.



Figure 2.1 "Monroe Park, Showing Richmond Terrace, Richmond, VA" c. 1920. Courtesy VCU Libraries, Special Collections and Archives.

1680 to 1850 - Before There Was a Park

THE BYRD ERA

In the late seventeenth century, William Byrd I acquired the site of what is now Monroe Park as a part of extensive land holdings that encompassed most of present-day Richmond (Figure 2.2).

The original topography of the Monroe Park site and environs consisted of a plateau extending from the future location of the Carver neighborhood down to the site of present day Oregon Hill. Two deep creek valleys flanked this plateau. The site of Monroe Park stood at the northern edge of the plateau. The westernmost valley extended southward, roughly following the line of Linden Street. The remains of this ravine can still be seen in Hollywood Cemetery. To the east a larger ravine and creek extended from near present-day Grace and Belvidere streets between Oregon and Gambles Hills southwards to the site of the Tredegar Civil War Center. It appears that the eastern ravine formed the eastern edge of what became Monroe Park.

A description of the park site in the nineteenth century describes it as being cut by deep ravines, which suggest that fingers of the valley extended into the park site. A nearby nineteenth century house at Belvidere and Cary streets was aptly named Bleak Hill, conveying some idea of the ruggedness of the valley's terrain.¹

In the seventeenth and eighteenth centuries the Westham Road running east and west dissected the Monroe Park site. This colonial road possibly began as a Native American path and came into common use by the British settlers as a portage around the impassible Falls of the James River.

In 1758, William Byrd III built Belvidere, his Richmond home, overlooking the James River on the site of Oregon Hill. The house stood at the end of a long carriage drive off of the Westham Road and the long plateau along

* Site History, Bibliography (Appendix A) and 1904 Tree Inventory (Appendix B) prepared by T. Tyler Potterfield, 2007.

Figure 2.2 - Detail of William Byrd III's Lottery, 1769, courtesy of Richmond Department of Public Works

Figure 2.3 - Detail of Young's Map of Richmond, 1817, showing the Sydney and Rutherford Tracts. Courtesy of Richmond Department of Public Works

the carriage drive came to be known as the Plains of Belvidere. In 1769 Byrd's financial difficulties prompted his decision to offer most of his Richmond property as prizes in a private real estate lottery.

Aside from being the earliest detailed map of the Monroe Park site, the map of the lottery prizes (Figure 2.2) shows how Byrd divided his property into uniform 100-acre tracts or out lots, arranged north and south of Westham Road. The portion of the park site to the north was incorporated into Lottery Lot 779, and the southern portion was a portion of Lot 740. It is possible to orient the map and get a sense of scale by noting that the boundary between lots 742 and 740 formed the line of present-day Cherry Street.



While a considerable amount of property changed hands as a result of the lottery, little in the way of actual development took place in the years immediately following the event. In the decades following the American Revolution, two families acquired the site of Monroe Park and the adjoining neighborhoods. The Harvie family acquired a number of out lots that encompassed the future sites of the Virginia War Memorial, Oregon Hill neighborhood, and Hollywood Cemetery, along with the southern portion of the park site. Thomas Rutherford acquired extensive landholdings including all of downtown Richmond west of Foushee Street and south of Broad Street, as well as Grace and Franklin streets east of Laurel, and the northern half of the Monroe Park site.²

SYDNEY & THE FLUSH TIMES

At the turn of the nineteenth century, the Monroe Park site and environs constituted a rural enclave well west of both the corporate limits and developed portion of Richmond. Most of the land consisted of scrub fields with meandering paths and carriage roads. Only a few cottages and country houses dotted this rural landscape. The construction of the Westham Plank Road (present-day Cary Street) in 1804 was one of the few public improvements during this period.³

In the early nineteenth century, the Harvie family rented the southern half of the park site to “an old negro woman and her cottage.” Deep gullies cut through the site around her cottage and planks laid across the ravines provided access to it. The vegetation of the park site during this period is described as consisting of pine trees and blackberry bushes. This description of the Harvie Tract conveys the idea that the site was a wasteland at worst, a marginal outpost at best.⁴



1 Alexander Wilbourne Weddell, Richmond Virginia in Old Prints: 1737-1887. (Richmond: Johnson Publishing, 1932) (Plate XI. A Plan of the City of Richmond by Richard Young); Peter S. Michie. Richmond Virginia 1865. [Map] (Richmond: Richmond Civil War Centennial Commission, 1965.) Mary Wingfield Scott, Old Richmond Neighborhoods. (Richmond: Whittet and Shepperson, 1949) 212-213; Anonymous, “Walks With My Father” (An undated and unattributed typewritten manuscript) Monroe Park Vertical File, Valentine Richmond History Center, Richmond.

2 Weddell, Old Prints, Plate XI: Drew St. J. Carneal, Richmond's Fan District. (Richmond: The Council of Historic Richmond Foundation, 1995) 8-11.

3 Carneal, Richmond's Fan District, p. 12-19; “The Last of Its Kind [A March 1894 Newspaper Article republished in:] Rutherford, Thomas. Autobiography of Thomas Rutherford, Esq. of Richmond, Virginia, 1766-1852. (Richmond: Maylocks Publications, 1987)

Between 1816 and 1819, a period of real estate mania, the “flush times” created a frenzy of real estate subdivision and speculation around Richmond. The Harvie and Rutherford families proved susceptible to this mania and both laid out a large amount of speculative real estate. The second Richard B. Young map of Richmond published in 1817 (Figure 2.3) shows how the Rutherfords and Harvies laid out their property into streets, squares, and lots. To the north Thomas Rutherford continued the line of Grace and Franklin Streets from Richmond proper into his property west of present Belvidere Street. The expansion followed the northwest to southeast axis of the streets in the older portions of Richmond.

To the south and west, the Harvies laid out a much larger subdivision, Sydney, and in so doing planned a majority of the squares (blocks) and streets in the present-day Fan neighborhood. The Sydney plan diverged from the layout of the earlier sections of Richmond, with the street axis running east and west. This orientation appears to have derived from the line of the Westham Plank Road (now Cary Street) as the east-west axis and the eastern line of Byrd Lottery out lot 742 (present day Cherry Street) as the north-south axis. The Harvies’ property on the Monroe Park site was subdivided as a larger oddly-shaped parcel, distinct from the uniformity of the rest of Sydney.

These subdivisions determined the locations of streets that would eventually shape the boundaries of Monroe Park. The Rutherford plan determined the line of Franklin Street and the northernmost line Laurel Street. The Sydney plan set the lines of Belvidere, Franklin, and the southernmost line of Laurel Street.⁵

THE CHANGING LANDSCAPE OF NINETEENTH CENTURY RICHMOND

Early nineteenth century Richmond was a remarkably compact walking city that encompassed what we would today recognize as Downtown Richmond, Shockoe Bottom, the St. John’s Church neighborhood and a portion of Fulton Bottom. Although the areas along Main Street and the James River were densely developed, country houses and small cottages occupied the hill tops and periphery of Richmond.

The semi-rural residences of Richmond’s hills and outskirts came with gardens and land that would occupy one-quarter to two acre squares or blocks. In addition to their domestic gardens, Richmonders enjoyed a number of commercial public “pleasure gardens,” as well as an extensive

amount of fields and forest that surrounded the City.⁶ The only dedicated open spaces in the City consisted of the Commons along the James River between 15th and 29th Street (planned 1737, developed into the ship canal after 1816) and the 12 acres of Capitol Square (established 1780 and improved in 1816).⁷

The lack of public open spaces began to take a toll on the quality of life of Richmond in the early nineteenth century. The large private gardens, public pleasure gardens, and extensive countryside that Richmonders had enjoyed rapidly gave way to residential and industrial development in the 1840s and 1850s. The loss of these informal and temporal landscapes prompted Richmond’s civic leaders to take the farsighted approach of creating permanent public landscapes in addition to Capitol Square.⁸

1851 to 1872 - Early Development of a Square

THE DEVELOPMENT OF PUBLIC LANDSCAPES IN THE MID-NINETEENTH CENTURY

Like many British and North American cities in the nineteenth century, Richmond experienced rapid growth and loss of open space. An international movement soon developed to reform the urban environment and to create dedicated open spaces for the benefit of urban populations.

The creation of large landscaped cemeteries by private companies and local governments were some of the earliest manifestations of this landscape preservation movement. The extensive acreage and attractive monuments and walks of these cemeteries attracted thousands of visitors annually, making them the precursors of the true public parks that followed.

Richmond became a part of this international effort in 1847 when two Richmonders traveled to the first American rural cemetery, Mount Auburn near Boston. Upon returning to Richmond these individuals organized a company to acquire a picturesque 40 acre site overlooking the James River. The newly-formed Hollywood Cemetery Company then hired the noted landscape designer John Notman to lay out the site.⁹

The success of Notman’s 40-acre cemetery design in the “Natural” style prompted the Richmond City Council (many members of which were involved in the Hollywood project) to redesign Capitol Square. In 1850, the City of Richmond Capitol Square Committee undertook substantial

4 Anonymous “Walks With My Father” (An undated and unattributed typewritten manuscript). Monroe Park Vertical File, Valentine Richmond History Center, Richmond. David M. Clinger. [The Ghosts and Glories of Monroe Park: A Sesquicentennial History](#). (Richmond: Dietz Press, 1998) 3.

5 Carneal [Richmond’s Fan District](#). 26-35; Richard Young, [Map of the city of Richmond and its jurisdiction, including Manchester, to which is attached the 100 acre lots drawn as prizes in Byrd’s Lottery](#). Photographic reproduction of printed map. Richmond: Frank Bates, 1817, Library of Virginia Map collection. Richmond City 1736-1889 #755.44, 1817. The Library of Virginia. Richmond, Virginia; Weddell, [Old Prints](#) 7-8.

6 “Last of its Kind” Rutherford 81; Richmond City Council Public Squares Committee “Report on Richmond Public Squares,” 13 July 1851, Richmond, Virginia City Council, Record Book #12, January 24, 1848 - July 15 1852 [Microfilm Reel #105 Library of Virginia].

7 T. Tyler Potterfield “Capitol Square Historic Landscapes Report” (Unpublished Report Capitol Square Preservation Council 2003).

8 Richmond City Council. “Report on Public Squares.” 526; “Last of Its Kind” Rutherford, 81.

9 David Schuyler, [The New Urban Landscape: The Redefinition of City Form in Nineteenth Century America](#), (Baltimore: Johns Hopkins University Press, 1986), 37-56; Mary H. Mitchell. [Hollywood Cemetery: The History of a Southern Shrine](#). (Richmond: Virginia State Library, 1985.), 4-9.

modifications (also designed by Notman in the Natural style) to the formal layout of Capitol Square, which dated to 1816. The successful construction of the cemetery and square marked the beginning of an extensive period of park and cemetery development in Richmond that continued into the twentieth century.¹⁰

Buoyed by the establishment of Hollywood Cemetery and the improvements to Capitol Square, the Richmond City Council formed a committee to make recommendations on the establishment of a series of public squares in the spring of 1851. When the committee made their report to City Council in July of 1851, it noted that Richmond experienced a rapid increase in population and the growing “continuous lines of habitations” were eliminating open space. The report noted that prior to this period, public grounds were unnecessary because residences were isolated by surrounding gardens and pleasure grounds.

The report recommended that Council anticipate future growth and plan for “the health and comfort” of its citizens. Specifically, it called for Council to render the City more attractive by securing “breathing places in the midst of the City or convenient to it,” in order that the “Citizens of Richmond may enjoy their salutary influences.” The report pointed out that prompt action was essential because for every year that passed, development in the City increased the cost of the land and decreased the availability of suitable sites for public squares.¹¹

Richmond’s interest in the development of public squares reflected the development of an international “parks movement” in the middle and latter decades of the nineteenth century. At this time in Britain, most urban squares and botanical gardens were open only to subscribers and many of the commons that had provided recreation were being enclosed and sold. In an effort to preserve and create public walks, local governments created public parks of various sizes. The Royal parks of London gradually became landscaped and open to the public. The development and improvement of parks in Continental Europe took place over the course of the nineteenth century as well.¹²

The Richmond Squares report recommended urban parks and squares in the United States as models for Richmond to emulate, specifically parks and public squares in Boston, Philadelphia, Washington, and New York. The 40-acre Boston Common is considered the oldest public park in the United States. A fence around the common and extensive walks were installed in the 1830s and in the 1840s the City added gardens as a component of the planning and development of the new section of South Boston.¹³

The five squares of Philadelphia dated to the establishment of that city in 1681, but these spaces remained unimproved until the first half of the nineteenth century. Rittenhouse Square was one of the most noted of the squares, with improvements dating to the mid nineteenth century. Philadelphia established gardens and promenades around the Philadelphia Waterworks in the 1820s, and by 1859 the City had Fairmount Park under development.¹⁴

The 1791 L’Enfant plan of Washington, D. C. provided one of the most extensive collections of open spaces of any American city. The plan situated the public squares and public building sites at the intersections of various avenues, and the avenues provided lines of sight between the squares and buildings. Until 1851, Lafayette Square was the only landscaped open space in Washington. In that year, the Federal Government commissioned the landscape gardener A. J. Downing to design improvements to the square along with the Mall and the Ellipse, one of the first large scale urban park projects in the United States. The Federal Government implemented a large part of the Downing Plan in the decade that followed.¹⁵

New York possessed public spaces such as the Commons (City Hall Park) and the Battery dating back to the colonial era and the Commissioner’s Plan of 1811 established several public squares. The City enclosed and improved the commons around 1818 and improved many of the Manhattan squares in the 1840s. The completion of the Croton Aqueduct in 1842 provided an opportunity to place large fountains in these spaces. In spite of these improvements, the size of Manhattan (the fourth largest city in the world) dwarfed these open spaces so much that A. J. Downing in 1851 deemed them as unworthy of the title parks, but called them “mere grass-plots of verdure.”

In June of 1851, Mayor A. C. Kingsland presaged the Richmond committee report by calling for the establishment of a large park on the upper portion of Manhattan Island. The Kingsland report reflects the impetus of both large and small cities to provide open spaces adequate to their needs.¹⁶

Richmond City Council caught some of this national fever for municipal park improvement when it accepted the report on public squares. Following the adoption of the report in October of 1851, the City attempted to acquire four squares, however, the Council reduced the number to three squares by refusing to acquire a large tract of land on the north side of the City.

Western Square (present day Monroe Park) became the first of the squares for which the City acquired property.¹⁷ For Western Square the City acquired three tracts of land totaling some ten acres between October and December

10 Potterfield, “Capitol Square.”

11 Clinger, Monroe Park,3; Richmond City Council. “Report on Squares,” 526.

12 Richmond City Council, Report on Public Squares, 527; W. H. The Royal Parks, (London: W.H. Allen, 1986) 37-49; Cosway, Hazel, The Design and Development of Victorian Parks in Britain. Cambridge: Cambridge University Press, 1991.39-75.

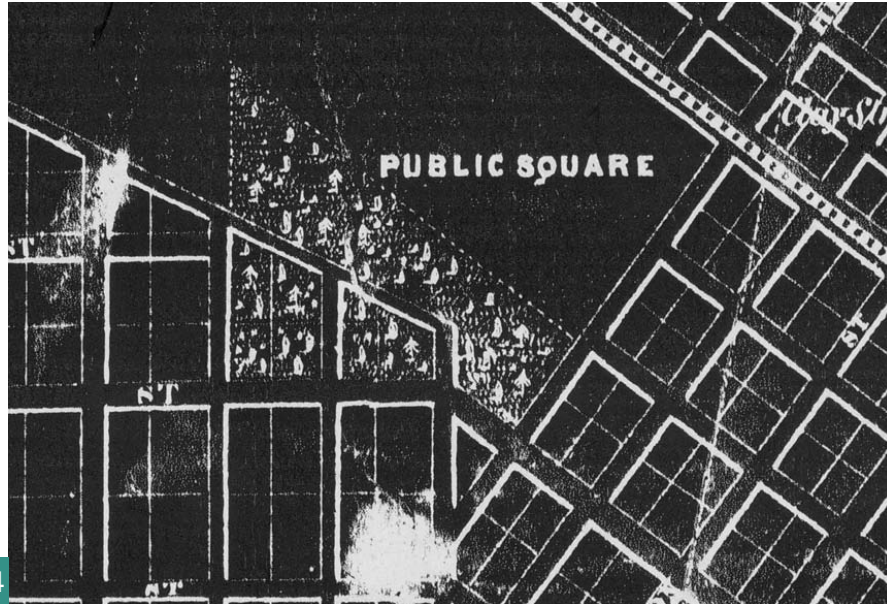
13 Phebe Goodman, The Garden Squares of Boston, (Lebanon, N. H.: University Press of New England, 2003), 67-116; John Marcus, The Complete Illustrated Guidebook to Boston’s Public Parks and Gardens. (New York: Silver Lining Books, 2002), 20-22.

14 Fairmount Park Commission, Philadelphia Squares. (Fairmount Park Commission Guide Series) (Philadelphia: Fairmount Park Commission, n.d.).

15 Michael Bednar, L’Enfant’s Legacy: Public Open Spaces in Washington, D.C., (Baltimore: Johns Hopkins University Press, 2006, 12 and 42-43.

16 City of New York City Council Committee on Lands and Places. First Annual Report on the Improvement of Central Park New York, (Including the Report of Mayor Kingsland and Article by A. J. Downing on Creating a Major Park for New York), (New York: Charles F. Baker, 1857), 77-78 and 159-164; City of New York Parks and Recreation. Three Hundred Years of Parks: A Timeline of New York City Park History. (New York: City of New York Parks and Recreation, 1987) 10-15.

1851. The configuration of the tracts is shown on the 1856 map of Richmond (Figure 2.4). The Harvie family sold the large tract that became the southern portion of Western Square. The descendants of Thomas Rutherford sold two tracts encompassing the northern half of the present park and extending into blocks bounded by Belvidere, Laurel, Grace, and Franklin streets. The total spent on the three tracts came to \$13,592.¹⁸



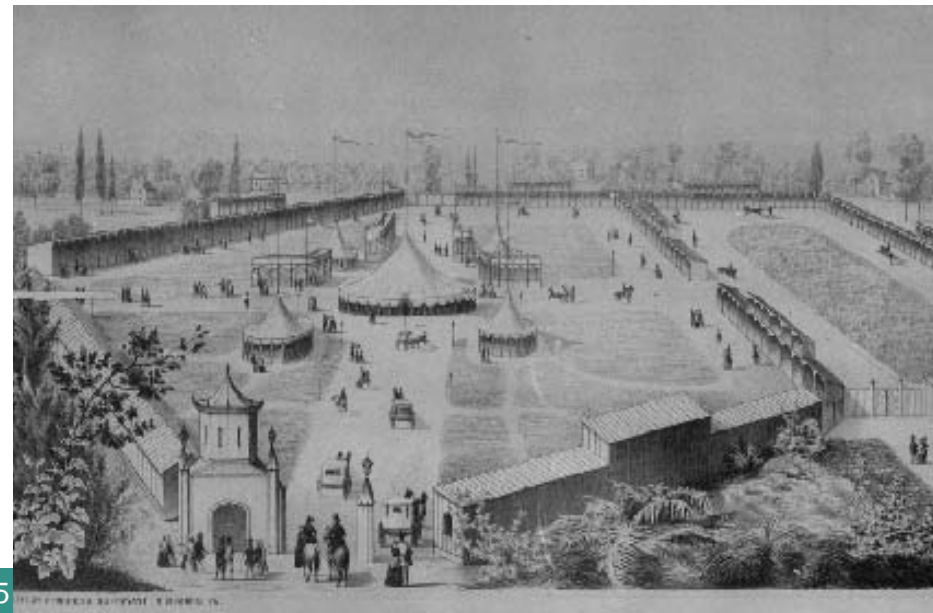
2.4

Shortly thereafter, the City acquired Gambles Hill, overlooking the James River between 2nd and 6th streets (now the New Market Corporate Headquarters) and land for Eastern Square at 27th and Grace streets (the present Libbie Hill Park). In spite of the enthusiasm for the creation of public squares, no actual improvements would be undertaken to landscape the three public squares for 20 years. The parsimony of Richmond City government and the Civil War delayed any action being taken. The failure to develop the squares does not diminish the farsightedness of acquiring them in the first place. What one generation acquired, the next generation would be left to improve.¹⁹

THE AGRICULTURAL FAIR YEARS 1853-1858

Of the three squares acquired in 1851, it is perhaps least surprising that Monroe Square did not develop as a park. Situated outside of the city limits, it would be understandable for the City to wait until development and the City boundaries could move out to it. Instead, the City undertook to make the property available for another type of public space entirely.

The Virginia State Agricultural Society organized in 1850 with the intent of establishing an annual agricultural fair. In 1853 they obtained the cooperation of the City in the development of Western Square as the home for the fair. The Western Square property provided an ideal site, as it was large, open, relatively flat, accessible by railroads and turnpikes, and located just outside the city proper. By November of 1853 any ravines had been filled in, the grounds had been leveled, and planned fairground improvements largely completed.



2.5

City Engineer William Gill and amateur architect Thomas Tabb Giles created a design for enclosed grounds. Their design is illustrated in a plan and in a perspective lithograph (Figure 2.5). These documents reveal broad axial avenues connecting the entrances of the grounds with a central exhibition tent, a perimeter enclosed with livestock stalls, an entrance at Main and Belvidere streets ornamented with a Chinese pagoda, and four pavilions spaced around the grounds. An 1854 article claimed that the City had donated \$54,000 in land and money for the fair. This included \$6,000 allocated by Richmond City Council to prepare the grounds. The Council also provided \$1,000 for police, \$425 for exhibition tents, and \$275 for a gateway at Elmwood and Belvidere streets.

The organizers of the fair proclaimed that the “skill and taste” of T. T. Giles had “adorned the grounds and fitted them up for our use and reception as no other grounds in the Union are fitted up.” While the

Figure 2.4 - Detailed map of Henrico County, 1853, by Robert Smith

Figure 2.5 - Fairgrounds Perspective, courtesy of the Valentine Richmond History Center

17 Richmond City Council, Report on Public Squares, 549-558.

18 Richmond Department of Public Works, City Property Deed Abstracts, Monroe Park; Ellyson, M. [Map of the City of Richmond, Henrico County, Virginia.](#) (Richmond: M. Ellyson, 1856).

19 W. E. Cutshaw, “Report of the City Engineer” in [Annual Reports of the City Departments for the Year Ending January 31, 1874.](#) (Richmond: Evening News Steam Presses, 1874.) 221.

Figure 2.6 - Detail of Michie Map of Richmond, City of Richmond Planning and Preservation Division

organizers felt the fairgrounds may have been singular, it certainly reflected national architectural trends. The arrangement of the grounds may have been influenced by the grounds surrounding the New York Crystal Palace, a major exhibition building constructed in 1852. Pavilions and stalls, with their decorative bargeboards, are influenced by the picturesque architectural designs of A. J. Downing. The pagoda proposed in the design reflected a long-standing western interest in Chinese architecture as landscape ornaments.

It is possible that not all of the elements of the fairgrounds were completed as envisioned in the lithograph. The Agricultural Society noted that because of a “want of adequate means” they had been “unable to carry out many important measures, which in the ardor of their zeal, they had fondly hoped to accomplish.” The curvilinear paths are not shown in an 1858 “as-built” view of the grounds. Since no comments have been found specifically referring to the pagoda, a notably outlandish feature, it appears that it may have been an “important measure” that was not executed.

The Virginia Agricultural Society, as reported by the review, stated that year that they could not “repress a feeling of gratification at the eminent success of their labors.” The Society, just formed in 1850, boasted that “no similar institution in the world” could “exhibit an instance of success so speedy, complete, and brilliant.” In 1854, *Debow’s Review*, a New Orleans journal devoted to Southern culture and economic development, noted that the fair drew large numbers and commended it as an excellent example of Richmond’s urban “progress.” The success of the Virginia fair prompted a national agricultural fair to be held on the fairgrounds in 1858.

The success of the fair prompted relocation of the annual event to larger quarters after only five years. In 1859, the fair moved to a large site at Hermitage Road and Broad Street. The organizers either demolished the original fair buildings or relocated them to the “New Fairgrounds.” Western Square, which was now graded and relatively level, became a large unimproved tract referred to for many years as the “Old Fairgrounds”.²⁰

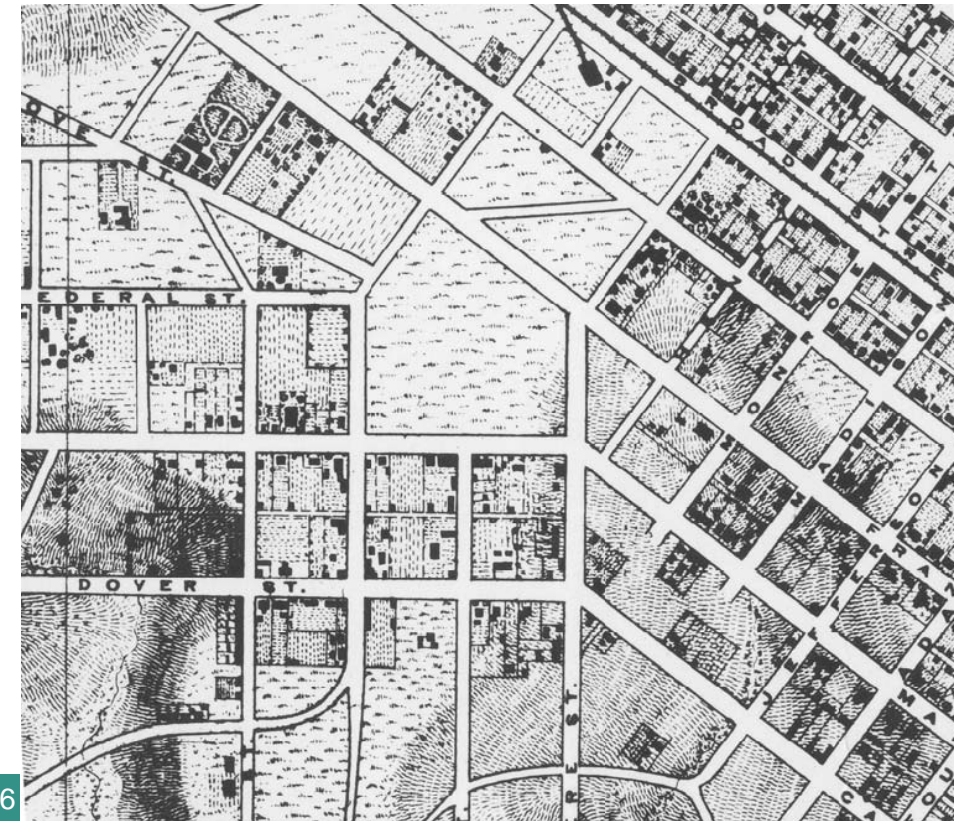
THE CIVIL WAR ERA 1859-1868

The cleared ground known as the Old Fairgrounds was used for military purposes during the Civil War. The emergence of Richmond as a major military depot placed a premium on open and flat land in or near the City that could be used for military encampments and drill fields. The Old Fairground site was near to the center of Richmond as well as superior

transportation, the site being located adjacent to the Richmond, Fredericksburg, and Potomac Railroad as well as turnpikes that extended into the surrounding countryside.

The Confederate Government appropriated the site for a camp of instruction from 1861 to 1862, and eventually constructed some sixteen barrack buildings on the square. The government adapted a number of similar sites including the New Fairgrounds (the future site of Broad Street Station, now the Science Museum of Virginia) and what is now Chimborazo Park for similar purposes.

Either late in the war or shortly after the end of the war, the Old Fairground barracks were removed. The 1865 Michie map (Figure 2.6) of the City shows the Old Fairgrounds as a flat and empty grassy site. The trampling of the Old Fairgrounds during the war left it a clean slate for improvement as a park.²¹



20 “The Virginia State Fair,” *Debow’s Review: Agricultural, Commercial, Industrial Progress and Resources*, Volume 1854, p. 608-610. Viewed on University of Michigan Making of America On Line Resource; Clinger 4-7.



2.7

1869 to 1875 - The Development of a Victorian Urban Square

ANNEXATION & THE IMPETUS TO DEVELOP THE SQUARE

In 1869 the City of Richmond annexed a portion of Henrico County that encompasses the present-day Oregon Hill and Fan neighborhoods. The annexation signaled the beginning of the urbanization of the then sparsely developed area around the Old Fairgrounds. By this time Richmond property owners had largely completed rebuilding the older portions of the City that were destroyed in the Evacuation Fire of April 1865. As foreseen by the City in 1851, dense urban development continued to move

westward. The Richmond City Council of 1869 recognized the desirability of developing Western Square into a landscaped public square as conceived in 1851. At this time Council renamed the square and the ward that surrounded it after Virginia-born president James Monroe.

At the time of annexation, Lt. Col. Albert Ordway, the adjutant general of the Federal Army occupying Virginia, represented the Monroe Square neighborhood on Richmond City Council. Ordway proved to be a vocal advocate for improving the square as a landscaped public space to serve his constituents and to enhance the property of adjoining owners, (which included himself). Ordway obtained modest amounts of funding to improve the square in 1870 and 1871, and in 1872 donated funds to construct a fountain in the center of the square. As a result of Ordway's efforts, the City Engineer, Charles Dimmock, prepared a plan of improvements for Monroe Square in 1871.²²

Charles Dimmock, a civil engineer, designed the Confederate Memorial, a large granite pyramid, and supervised the reinterment of the confederate dead from Gettysburg at the Hollywood Cemetery for the Hollywood Memorial Association. A plan of improvements for Monroe Square was one of Dimmock's first tasks as City Engineer.

Work on the improvements were underway in 1872. While no original Dimmock drawings of the square have survived, the Richmond Beer's Atlas of 1876 (Figure 2.8) provides an as-built representation of the square. The Beers drawing probably contains most of the features of the Dimmock Plan, and the Beers Company may even have copied it from Dimmock's drawing. The plan reflects Dimmock's knowledge of landscape design from his work at Hollywood Cemetery. In preparing the design, it is possible that Dimmock may have consulted or overlaid the Gill/Giles fairground plan of 1853.

The Dimmock plan eliminated the broad axial walks of the Gill/Giles plan, but may have incorporated some of the curvilinear path routes intended in the earlier plan. Dimmock's curvilinear walks are reminiscent of the improvements of Capitol Square, designed by John Notman in 1850. However, unlike Notman's design, Dimmock's Monroe Square design failed to provide a convenient means of traversing the square. Also, Dimmock's arrangement of the walks does not appear to have provided either long vistas within the square or views of the surrounding neighborhood.

Instead of vistas, the Dimmock plan provided a series of rambling and circuitous path routes that helped to create the illusion of a large and

Figure 2.7 - Monroe Square in the 1870s, courtesy of the Valentine Richmond History Center

21 Clinger, *Monroe Park*, 7-9; Peter S. Michie, *Richmond, Virginia 1865*, [Reprint of 1865 Map] (Richmond: Richmond Civil War Centennial Commission, 1965).

22 Clinger, *Monroe Park*, 10-11.

Figure 2.8 - Detail of Beers Atlas Showing Monroe Square 1876, courtesy of the Library of Virginia

Figure 2.9 - Rockwork Fountain c. 1890, courtesy of the Valentine Richmond History Center



2.8

extensive landscape. In this respect the plan strongly resembles the Ramble in Central Park designed by Calvert Vaux and Frederick Law Olmsted in 1858. The Ramble consists of a weave of curved paths through a wooded area, which creates the illusion of a much larger space.²³

The improvements implemented by Dimmock and his successor Wilfred Emory Cutshaw included a fountain donated by Councilman Ordway in 1871 (Figure 2.9). Dimmock made the fountain, the first ornamental feature installed in the square, a prominent feature in the western portion of the space. The rockwork fountain consisted of granite boulders surrounding an iron pipe, all of which was set in a basin. Water from the fountain came from the municipal water system. In 1871 the Council accepted William Hubbard's statue of George Washington, copied from the original by Houdon in the Virginia State Capitol Rotunda. Dimmock placed the statue just to the south of the fountain.

Dimmock's successor as City Engineer, Wilfred Emory Cutshaw, implemented the extensive number of curved paths in the Dimmock Plan. An early photograph of the square shows gravel paths in the park, though no gutters or edging along the walks can be seen. A planting plan from this period cannot be found and few details of the plantings emerge from documents of the period. The only plantings specifically listed in City documents are evergreens planted between 1873 and 1875. A photograph (Figure 2.7) from this period shows planting beds surrounded by cobblestone edging and evergreens of various sizes with whitewashed trunks.²⁴



2.9

The period photograph also shows that whitewashed board fencing surrounded sections of the square. Prior to 1890, a board fence entirely surrounded the square and may be what is visible in this photograph. In 1874, Cutshaw installed cast iron benches and gas lamps throughout the square.

23 Beers Atlas Company, *Atlas of Richmond, Virginia*, (Philadelphia: Beers Atlas Company, 1876); Charles Dimmock [the Younger], "Report to the Committee on Public Grounds" in *Annual Report of the City Departments of Richmond, Virginia for the Year Ending January 31, 1873*, (Richmond: Evening News Press, 1873); Mitchell, *Hollywood*, 73; Raymond Carroll, *Barnes and Noble Complete Illustrated Map and Guidebook to Central Park*, (New York: Silver Lining Books, 2003) 67-74.

24 Clinger, 12-24; Cook Photograph Collection, Valentine Richmond History Center, Image of Monroe Park in the 1870s. W. E. Cutshaw, "Report of the City Engineer" in: *City Departments for the Year Ending January 31, 1874*, (Richmond: Evening News Steam Presses, 1874), 221. W. E. Cutshaw "Report of the City Engineer" in *Annual Message and Accompanying Documents of the Mayor of Richmond to the Council for the Fiscal Year Ending January 31, 1876*. (Richmond: C. C. Baughman, 1876.) 128.



2.10

The gas lamps (Figure 2.10) appear similar to those installed in Capitol Square in 1856. No plan for the placement of the lamps exists, but it would seem that a number of them would have been placed in the square. The benches match the pattern used on Capitol Square in the 1870s and remained in the square as late as the 1950s (Figure 2.11).²⁵

1875 to 1907 - The Cutshaw Era of Monroe Square

WILFRED EMORY CUTSHAW

In his 34-year stewardship of Monroe Square, Wilfred Emory Cutshaw largely shaped the landscape character of the urban square. A native of Harper's Ferry, Virginia (now West Virginia), Cutshaw obtained a degree in Civil Engineering from Virginia Military Institute (VMI) in 1859. In addition to the valuable skills of surveying and structural engineering, Cutshaw apparently received training in architectural drawing. After service in the Confederate Army, where he rose to the rank of Colonel, Cutshaw taught mathematics and engineering at his alma mater. He left VMI in 1873 for the appointment as Richmond City Engineer.



2.11

As City Engineer, Cutshaw supervised the construction and maintenance of streets, sidewalks, sewers, public buildings and public grounds. Cutshaw proved to be a farsighted individual who advocated a master plan for the City. While his goal of a Richmond master plan would not be achieved until 40 years after his death, Cutshaw's office designed and implemented a significant number of public landscapes, buildings, and improvements, often with the twin virtues of beauty and functionality, during his tenure.

Much of the Richmond park system has its origins during the tenure of Cutshaw, when he led Richmond City government in the acquisition and improvement of parks and squares. Cutshaw placed importance on building public squares throughout urban neighborhoods. He noted that in "all cities, small squares...are necessary to the comfort of those who have not the time and means to visit large parks and country retreats, and in sultry summer evenings they become really breathing places to crowded populations so circumstanced." Cutshaw clearly distinguished between large parks on the periphery of the city and smaller squares in the heart of the City. He always referred to "Monroe Square" and that nomenclature will be used when discussing his stewardship of the space.²⁶

THE CUTSHAW DESIGN OF MONROE SQUARE

In his 1875 report, Wilfred Cutshaw pronounced the improvements to Monroe Square complete. A year later, he essentially recanted his earlier assessment and called for a new plan of walks for the square.²⁷

The immediate impetus for the decision to abandon the Dimmock plan appears to have been the United States Centennial Exhibition of 1876. This Philadelphia spectacular was one of the most noteworthy architectural events of the late nineteenth century, providing a showcase for architecture,

Figure 2.10 - Gas Light c. 1890, courtesy of the Valentine Richmond History Center

Figure 2.11 - Benches c. 1890, courtesy of the Valentine Richmond History Center

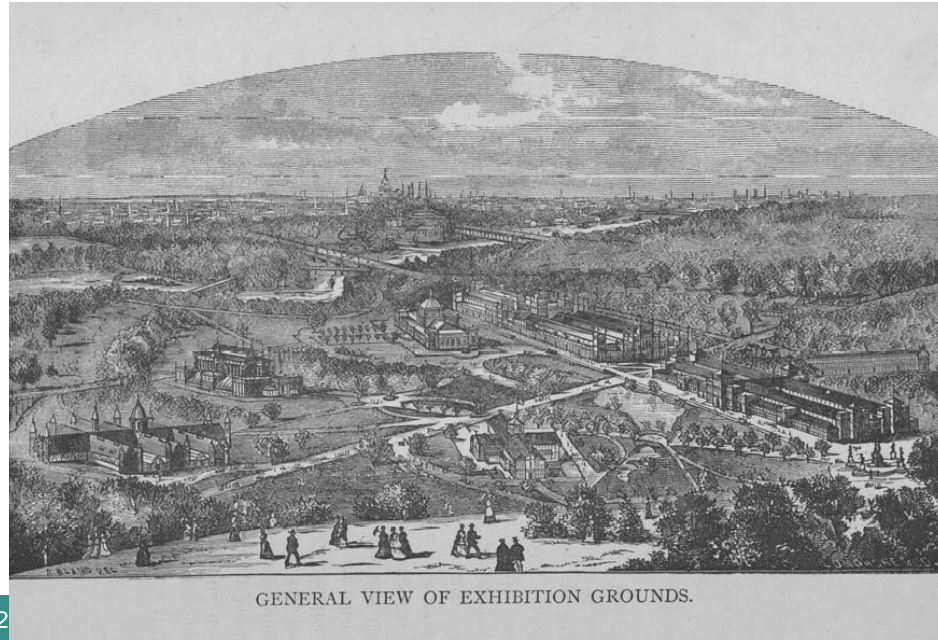
25 W. E. Cutshaw January 31, 1874, 221; W. E. Cutshaw January 31, 1876, 128.

26 W. E. Cutshaw Report January 31, 1874, 221; Selden Richardson, "Architect of the City," Wilfred Emory Cutshaw (1838-1907) and "Municipal Architecture in Richmond," Master of Arts Thesis, Art History Department, Virginia Commonwealth University, 1996, 1-11 and 58-65.

27 W. E. Cutshaw, January 31, 1876 128; W. E. Cutshaw "Report of the City Engineer" in Annual Message and Accompanying Documents of the Mayor of Richmond to the Council for the Fiscal Year Ending January 31, 1877, (Richmond: N.V. Randolph, 1877) 17.

Figure 2.12 - View of Philadelphia Centennial Exhibition 1876, collection of T. Tyler Potterfield

Figure 2.13 - Cutshaw's Plan for Monroe Square 1877, courtesy of the Library of Virginia



2.12

technology, art, culture and landscape design from around the world. Two hundred-plus acres of park-like grounds (Figure 2.12) housed both monumental exhibition buildings and hospitality pavilions (including one from Virginia) of a more residential character. It would have been impossible for Cutshaw to have avoided the stir that the fair created. Popular periodicals reported on it and illustrated it widely. It is not unreasonable to assume that he actually visited the fair. Some 5,000 Virginians attended the fair on Southern Day in the Fall of 1876. Southern Day attested to the popularity of the event among Virginians and would have provided Cutshaw a prime opportunity to attend this international event.²⁸

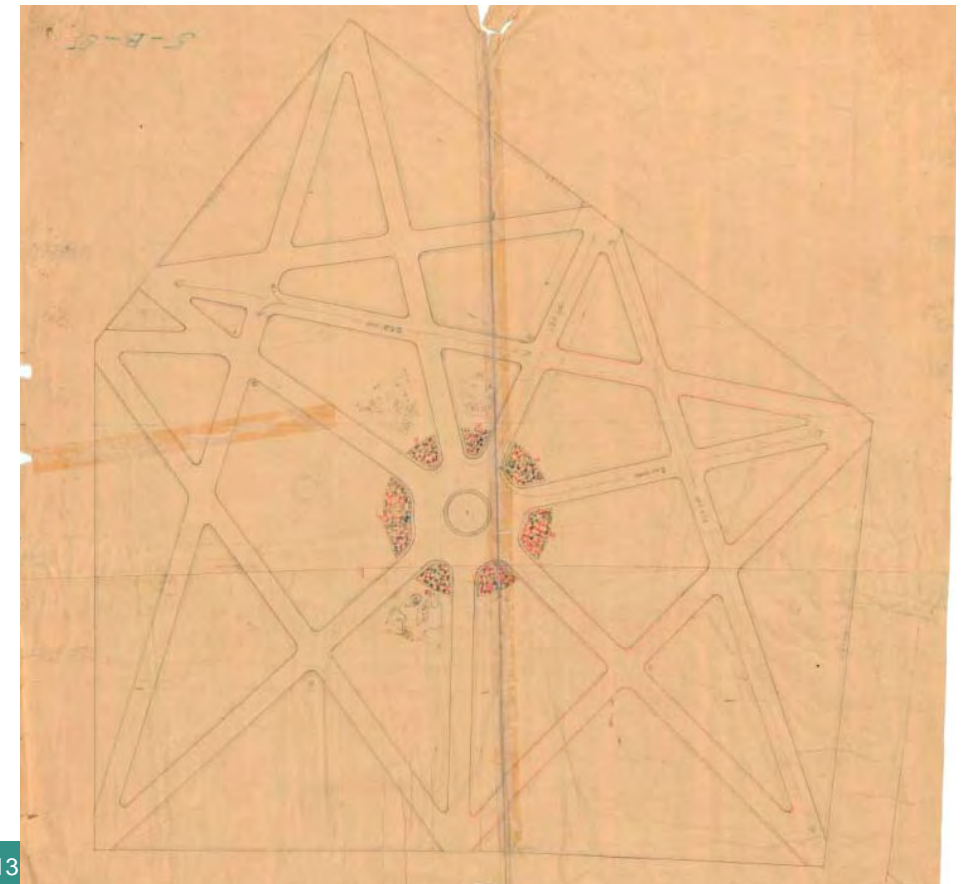
In his 1877 report, Cutshaw noted the completion of a new plan of walks by his office. A pair of undated walkway plans in the Richmond City Engineer drawing collection appears to be the new arrangement of walks referred to by Cutshaw in his report. The drawings can be dated as pre-1891 because they do not show the Wickham Monument and Keeper's Lodge dating from that time.

One of the drawings details the convergence of walks at a new fountain site. The other drawing (Figure 2.13) shows the new arrangement of walkways throughout the square. This arrangement of walkways, with the exception of a few later modifications corresponds exactly to the layout of

walks in Monroe Park at the present time. The 1877 drawings do not show the placement of trees, gaslights or seats in the square.

Completion of the square improvements proved to be a long time in coming. Funding limitations crippled Cutshaw's rearrangement of the paths and fountain, which he did not complete until 1884. There are no references to trees planted on the square in the 1880s, and tree planting to any extent probably did not begin until the first City Nurseryman was hired in 1890.²⁹

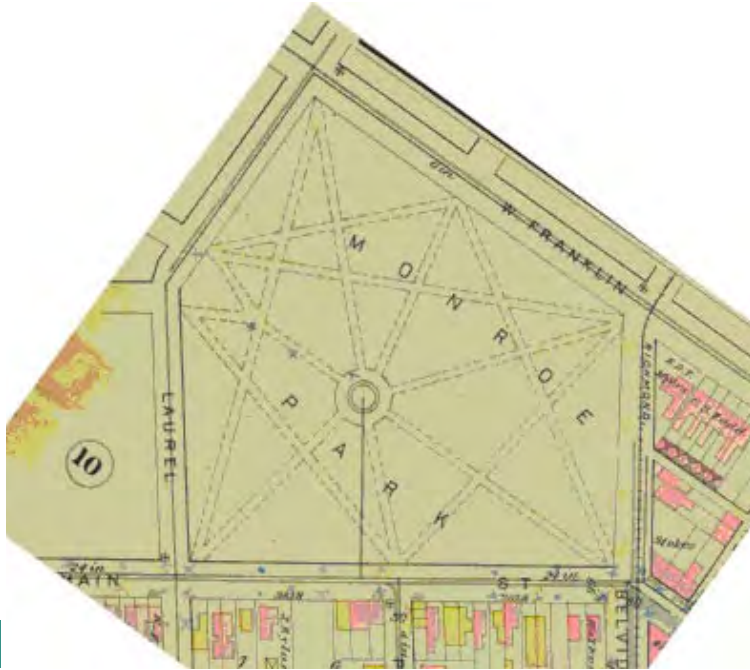
There is no report or document by Cutshaw that describes his 1877 design. To understand the Cutshaw plan, it is necessary to look at documentation of the square as completed. This documentation includes an as-built drawing of the square that can be dated to 1896 (Figure 2.15) and an extensive number of photographs from around the turn of the twentieth century.



2.13

28 Frank Norton, ed., *A Facsimile of Frank Leslie's Historical Register of the United States Centennial Exposition 1876*, (New York: Frank Leslie, 1877; Reprint New York: Paddington Press, 1974), 217-218.

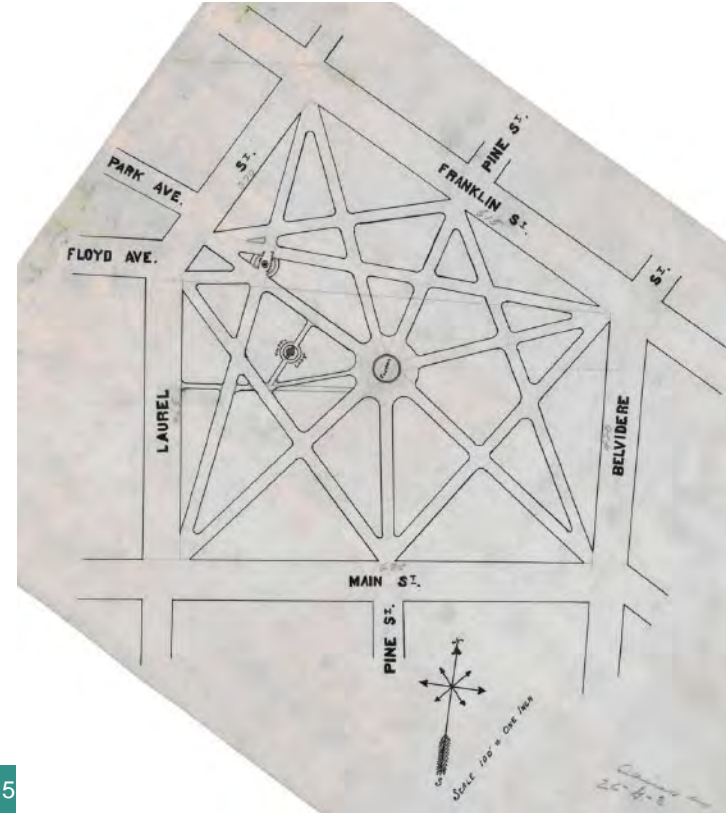
29 W. E. Cutshaw, "Report of the City Engineer for the Fiscal Year 1884" in *Annual Message and Accompanying Documents of the Mayor of Richmond to the Council for the Fiscal Year Ending January 31, 1885*. (Richmond: Walthall and Bowles, 1885) 7; W. E. Cutshaw, "Annual Report of the City Engineer" in *Annual Message of the Mayor of Richmond to the Council for the Fiscal Year Ending December 31, 1890*, (Richmond: C. Williams, 1891) 7, 73.



2.14

Through the study of these documents, it is possible to make some observations about the Monroe Square improvements as planned and executed by Cutshaw and the City Nurseryman:

1. Cutshaw created a strongly defined square perimeter and distinct entrances to the square. The perimeter included uniform perimeter trees around all sides of the square, brick sidewalks, and a privet hedge in the park proper spanning the spaces between the entrances.
2. Cutshaw placed entrances to the square at each of the street intersections around the square. The Cutshaw plan arranged each entrance as a “pâté d’oie” or goose foot of three or four walkways (in some cases including the perimeter walkways) radiating from a single entrance point (Figure 2.16).
3. Cutshaw laid out a radial system of walkways that provided multiple routes through the square and multiple views within, through, and out of the square.
4. Cutshaw placed a fountain and circular walkway in the center of the square creating a *ronde point*, a circular area where walks of the square intersected physically and visually (Figure 2.17).



2.15

5. Cutshaw’s radial arrangement of the walkways divided the square into numerous and variously-shaped plats of green space.
6. The City Nurseryman planted the tree-lined walkways, or *allées*, that formed canopies over the walkways. These well-defined *allées* framed the vistas in the square and delineated the edges of the walkways (Figure 2.18).
7. The City Nurseryman developed a highly varied arrangement of trees. The placement of various trees in the plats and at the many intersections of the square created contrasting and varied effects of shape, color, and foliage.³⁰

Keeping these characteristics of the Cutshaw Plan in mind, consideration of the origins and implementation of the plan can be considered in three basic areas:

- The arrangement of walks and plats
- Structures, statues, and appurtenances
- Trees and other plantings

Figure 2.14 - Monroe Square in 1889, courtesy of the Richmond Department of Community Development

Figure 2.15 - As-Built Plan of Monroe Square 1896, courtesy of the Library of Virginia

30 Plans for Monroe Park (Undated and Unsigned, Probably 1896), Richmond City Engineer Collection, Library of Virginia; W. E. Cutshaw. “Annual Report of the City Engineer” in *Annual Message of the Mayor of Richmond to the Council for the Fiscal Year Ending December 31, 1896*, (Richmond: O. E. Flanhardt, 1897) 9 [Cutshaw Recorded that plans for all Richmond Parks and Squares. The Monroe Square plan referenced above was probably prepared as a part of that effort.] Cook. Collection Photographs of Monroe Park #4734 (C. 1895), 4735, and 4736 (Both C. 1905); Images from Rarely Seen Richmond Post Card Website [http://dig.library.vcu.edu/cdm4/index_postcard.php?CISOROOT=/postcard] Special Collections, Virginia Commonwealth University Libraries, Various Images of Monroe Park, C. 1905; Goode, Patrick and Michael Lancaster, ed. *The Oxford Companion to Gardens*, (New York and Oxford: Oxford University Press, 1987) [For definitions of *allée* see 9, for a definition of *pate d’oe* see 244, and for definition of *ronde point* see 478.]

Figure 2.16 - Northwest corner of Monroe Square c. 1895. Courtesy of the Valentine Richmond History Center

Figure 2.17- Plan of Center of Monroe Square in Baist Atlas 1889. City of Richmond Planning and Preservation Division

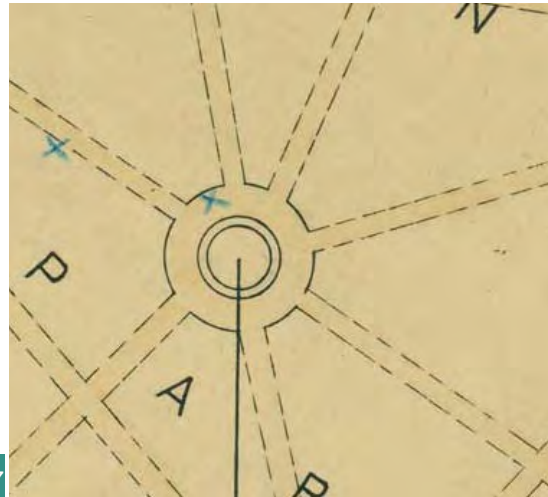
Figure 2.18 - Remnants of Old Allees in Monroe Square, 2006. City of Richmond Planning and Preservation Division



2.16

THE ARRANGEMENT OF WALKS & PLATS

As noted earlier, the Centennial Exhibition in Philadelphia in 1876 (Figure 2.19) provided the immediate influence on Cutshaw's redesign of Monroe Square. The design of the 200-acre exhibition grounds consisted of a mixture of formal and naturalistic elements. The formal elements of the plan include a large square at the entrance to the exhibition with walks



2.17

radiating away from a large tiered cast iron fountain by the French sculptor Bartholdi. From the entrance square, a visitor entered the park-like exhibition grounds which connected the major buildings of the site with broad radial walkways. Fountain Avenue, a central pedestrian promenade ornamented with large fountains that terminated at the botanical gardens, was the most prominent of the walkways.³¹

The prominence of the Centennial exhibition appears to have provided the starting point for Cutshaw's interest in formal planning that developed into the design for Monroe Square. Cutshaw possessed a significant interest in European cities that resulted in a leave of absence to study European parks in 1879. It is conceivable that in 1876 and 1877 Cutshaw began studying planning based on his experience in Philadelphia.

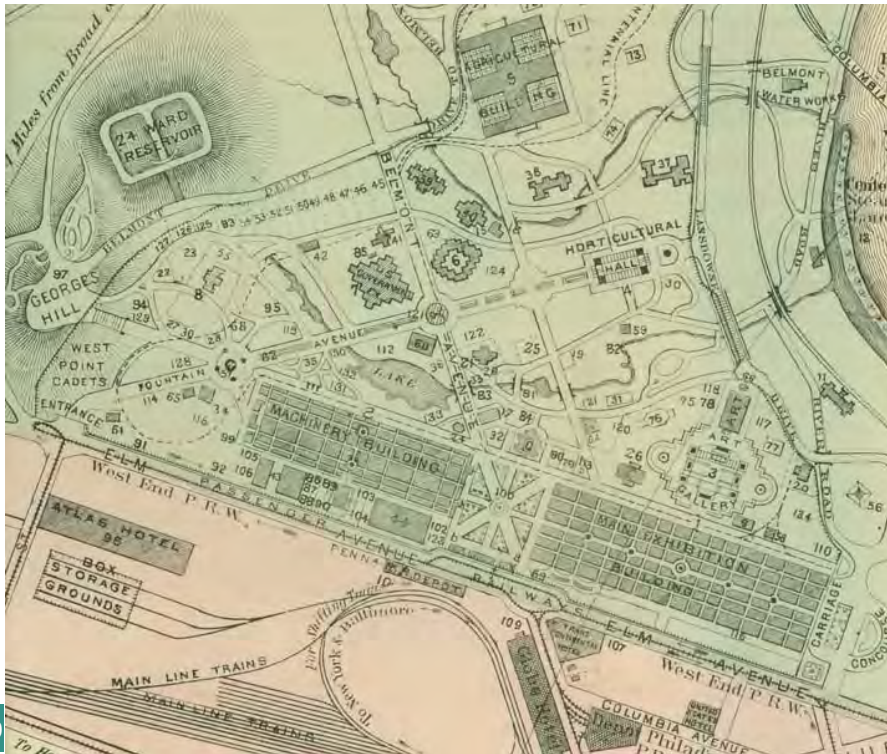


2.18

Assuming he followed a trip to Philadelphia with a study of formal planning there are several designs, in addition to the Centennial Exhibition, that may have influenced Cutshaw. These include:

1. The designs of Andre LeNotre at Versailles and other French palaces of the seventeenth century. Le Notre developed the classic French style of landscape design with long radiating avenues that visually linked the buildings and water features of his landscapes.

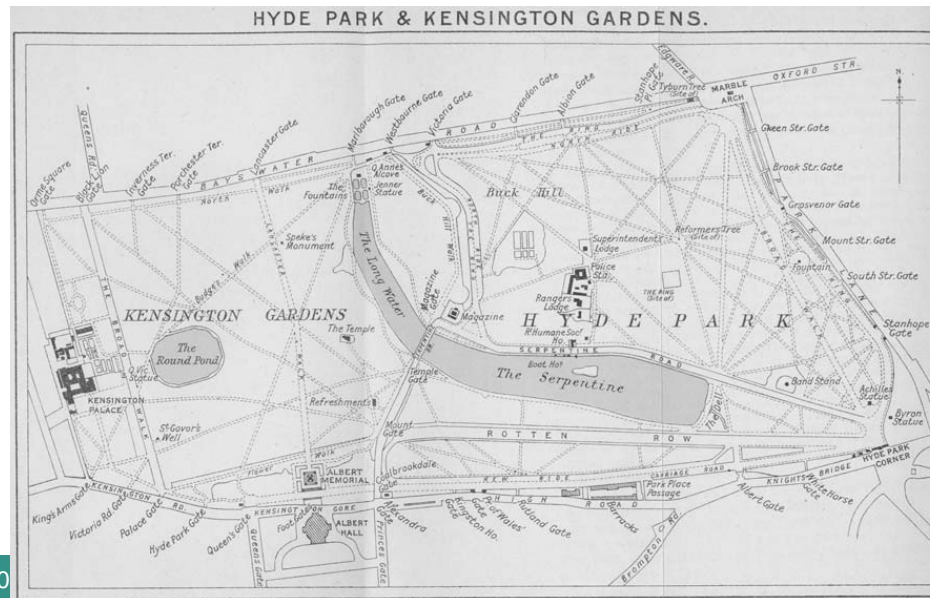
31 Norton, *Exhibition*, 109; Charles Keyser, *Fairmount Park and the International Exhibition at Philadelphia*, Centennial Edition, (Philadelphia: Claxton, Resmen, & Haffelfinger, 1876) 34-35, inset map between 34 and 35, 72-73.



2.19

2. The designs of Charles Bridgeman in early eighteenth century England, particularly at Kensington Gardens. Bridgeman made extensive use of tree-lined radiating avenues in the large English palace grounds and estates he designed.
3. Charles L'Enfant's urban plan of Washington, D.C. L'Enfant applied the classic French style to America's capital city at the end of the eighteenth century. The extensive radial avenues of the City provided a "reciprocity of views" between the public building sites and public squares of the plan.
4. Early nineteenth century improvements to Hyde Park in London, England. Decimus Burton's redesign of Hyde Park with its extensive use of tree-lined radial carriage drives and walkways marks an early use of this type of formal radial planning in an urban park (Figure 2.20).

The examples cited above are all on a vastly different scale than Monroe Square, with each of these designs extending over hundreds, if not thousands, of acres. Cutshaw was able to incorporate the lessons from these much larger projects into a modestly-sized urban square of about



2.20

nine acres. In reviewing the history of urban squares for this report, the author has been unable to identify any other urban square of comparable size laid out with such a radial plan.³²

Several different factors influenced Cutshaw's use of formal landscaping in general, and his radial design in particular. Cutshaw inherited an unusual five-sided site with which he had to work. The use of a formal radial plan allowed him to link the sides and corners of the square in an efficient manner. The divergence of walks from the "goose feet" at each entrance afforded the approaching pedestrian multiple routes around or through the square and conveniently linked all of the entrances. Accessibility was an important consideration, since the Richmond of 1877 was very much a walking city. Providing multiple routes across a public space was an important consideration in the planning of Capitol Square in 1850 and remained so when Cutshaw designed Monroe Square.³³

The relationship of Monroe Square to the architecture of the surrounding neighborhood also had an important influence on the design of the square. Monroe Square was located in the path of fashionable residential design in the developing West End of Richmond. Throughout his career, Cutshaw showed a far-sighted interest in City planning and the importance of good architecture. It certainly must have been evident to Cutshaw that some of the most important religious and residential architecture in the City would be constructed along the edges of Monroe Square (Figure 2.21). The arrangement of walkways in the square integrated the space with the

Figure 2.19 - Plan of Philadelphia Centennial Exhibition, 1876. Collection of T. Tyler Potterfield

Figure 2.20 - Plans of Kensington Garden and Hyde Park, London c. 1910. Collection of T. Tyler Potterfield

32 Goode and Lancaster, *Oxford Gardens*, 334-335; Allen, *Royal Parks*, 37,49-50; Bednar, L'Enfant, 15; Richardson, "Cutshaw," 27-28.

33 Potterfield, "Capitol Square," 35.

Figure 2.21 - View of Monroe Square and Sacred Heart Cathedral c. 1905. Courtesy of Virginia Commonwealth University Special Collections

Figure 2.22 - Fountain Plaza c. 1905. Courtesy of the Valentine Richmond History Center

buildings of one of Richmond's most architecturally significant neighborhoods by aligning the radial walkways with prominent building sites surrounding the square.³⁴

The creation of a *ronde point* around the fountain where the walkways converged created a fountain plaza that logically ordered the paths within the square and provided an important visual focal point. The fountain plaza served as a central gathering spot, with the largest concentration of benches in the square (Figure 2.22).



2.21

Cutshaw amended the plan to create a second *ronde point* in 1891, when a small plaza was created around the Wickham monument. The change in the plan is apparent when comparing the 1877 and 1896 plans of the square. The redesign involved eliminating one of the original plats of the square and creating a circular space where several walks converged. The placement of benches around the statue created a secondary gathering spot on the western side of the square (Figure 2.23).³⁵

In the actual construction of the walkways, Cutshaw used rolled stone dust, considered an excellent paving material since the action of pedestrians worked to keep it compacted. Cutshaw initially failed to provide any kind of drainage such as the brick gutters installed on the Capitol Square walkways in the 1850s. Erosion and drainage problems in the square soon became apparent. To correct this problem Cutshaw undertook the installation of "granolithic" (concrete) gutters throughout

the Square between 1898 and 1899. These are the same gutters that can be seen in the square today (2.24).

The use of stone dust paths within the square provided a distinctive paving system for the Square different from the brick sidewalk paving in the surrounding neighborhood. The square's perimeter, however, employed brick sidewalks like the surrounding neighborhood (2.25).

Cutshaw referred to the green spaces created by the path system as *plats*. It appears that all of the plats in the square were turfed. Tree planting on the edges of the plats created the *allées* of the square. The center of the plats were ornamented with trees and provided future opportunities for the placement of buildings and statuary.

As noted, Cutshaw placed gas lights and benches in the park in 1874. It appears that he simply relocated them in the 1877 replanning of the square. The rockwork fountain donated by Lt. Col Ordway was another carryover from the earlier square plan. It appears that Cutshaw disassembled and relocated the fountain on the site of the present fountain.



2.22

The present cast iron fountain is a tiered *tazzo* fountain, a style dating to sixteenth and seventeenth century France and Italy. The fountain design is from the Fiske Company of New York and dates to 1906. The presence of the Ordway fountain in circa 1895 photographs and the absence of the fountain in circa 1905 photographs suggests the placement of the new fountain during this decade (Figure 2.26).

34 Clinger, *Monroe Park*, 14-15; Richardson, "Cutshaw," 27-57.

35 Goode and Lancaster, *Oxford Gardens*, 9, 244, 478; Richmond City Engineer Office, Undated As-Built Plan of Monroe Square 1896; W.E. Cutshaw, "Annual Report of the City Engineer" in *Annual Message and Accompanying Documents of the Mayor of Richmond to the Council for the Fiscal Year Ending December 31, 1897*.



2.23



2.24



2.25



2.26

Figure 2.23 - Wickham Monument Plaza c. 1905. Courtesy of the Valentine Richmond History Center

Figure 2.24 - Granolithic Gutters 2006. City of Richmond Planning and Preservation Division

Figure 2.25 - Monroe Square Interior and Perimeter Paving c. 1895. Courtesy of the Valentine Richmond History Center

Figure 2.26 - Monroe Square Fountain With Electric Lights c. 1905. Courtesy of Virginia Commonwealth University Special Collections

Figure 2.27 - Keeper's Lodge c. 1905. Courtesy of the Valentine Richmond History Center

Figure 2.28 - City Engineer's Plan Showing Placement of the Wickham Monument and Keeper's Lodge, courtesy of the Library of Virginia

The presence of tiered tazzo fountains in Capitol Square as early as 1860 and the tiered Bartholdi Fountain at the Philadelphia Centennial Exhibition in 1876 may have inspired the replacement of the Ordway fountain with the more sophisticated design. The nineteenth century United States witnessed the installation of large numbers of cast iron fountains provided primarily by foundries in large cities such as Baltimore, Philadelphia, and New York. The ready availability and general affordability of fountains from these foundries makes it likely that the City Engineer simply picked a stock design out of a catalogue. However, it is possible that a Richmond foundry cast the Monroe Square fountain as a one-of-kind work to the design of Wilfred Cutshaw as has been suggested.³⁷

In 1890, the cornerstone of a massive monument to Jefferson Davis was laid in Monroe Square. The construction of the monument failed to gain traction and no other work on the monument was undertaken. It does not appear that the proposed monument altered the design of the square in any way.



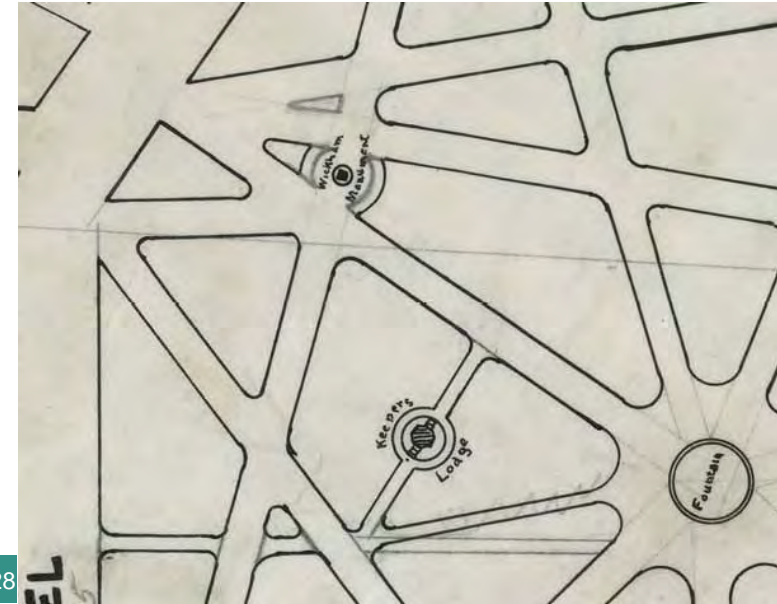
2.27

37 Clinger, *Monroe Park*, 23-24; Barbara Israel, *Antique Garden Ornament: Two Centuries of American Taste*, (New York: Harry Abrams, 1999) 21-28.

38 W.E. Cutshaw, "Annual Report of the City Engineer" in *Annual Message and Accompanying Documents of the Mayor of Richmond to the Council for the Fiscal Year Ending December 31, 1889*, (Richmond: C.N. Williams, 1890), 13; Clinger, *Monroe Park*, 21.

39 Cutshaw, "January 31, 1876," 128; Office of City Engineer, *Monroe Park* 1896.

Lodge until around 1890 when the City constructed a wood frame building (Figure 2.27) on the site of the Checkers House, the park house presently in Monroe Park. Instead of fitting the building within the walkway plan, the City Engineer's office placed it in one of the plats outside of the general circulation system of the square (Figure 2.28). The City Engineer's Office designed and constructed several similar keeper's lodges in parks and squares during this period. The Keeper's Lodge provided comfort stations for visitors to Monroe Square. It also housed the office and work space for the keeper responsible for maintenance and security of the square.³⁹



2.28

Cutshaw retained the use of a whitewashed board fence installed in the 1870s around the perimeter of the square for a number of years. In 1889, he replaced the fence with a California privet (*Ligustrum ovalifolium*). The privet hedge provided a neat border for the square for many years (Figure 2.29). It allowed pedestrians walking along the perimeter to view the interior of the square and clearly delineated the various entrances.⁴⁰

TREES & OTHER PLANTINGS

In the seventeenth, eighteenth, and nineteenth centuries, landscape writers and designers spent considerable time and energy contemplating the selection and placement of trees, the relationship of various species to each other, and the distinct qualities of different species: shape, size, texture and coloring. In nineteenth century America, the importance of trees in

landscape design is reflected in Treatise on the Theory and Practice of Landscape Design by A. J. Downing. Downing's treatise became the best selling book on landscape at the time. The largest portion of the book dealt with the attributes of various native and domestic tree species.⁴¹



2.29

The first comprehensive tree planting in Monroe Square appears to have begun with the appointment of the first City Nurseryman, C. N. Williams, in 1889. Over the next fifteen years, Williams supervised the planting of over 50,000 trees along the streets and in the squares and parks of Richmond. Unfortunately, there is no planting plan that survives for Monroe Square. However, Cutshaw recorded the results of the forestry effort with a pamphlet, Trees of the City. This comprehensive inventory lists the location and species of all the trees planted by the City Nurseryman and is the only surviving tree inventory of Monroe Square prior to 2005.

The planting of Monroe Square was an extremely sophisticated effort that appears to have been carefully guided by the expertise of the City Nurseryman. His efforts resulted in a veritable arboretum of trees in and around Monroe Square, with some 26 separate species of trees and a total of 362 individual trees (Figure 2.30). The 1904 inventory details the number and species of the trees present in 1904 and is included in the appendix of this document.⁴²

Photographs of the period show the Franklin Street side of the square planted with trees of the same size, shape, and, presumably, species (Figure 2.31). Planting the side of a square with uniform species had precedence in Richmond. In 1850 and 1851, the City planted each side of Capitol Square with a different species of tree. The presence of large numbers of maple



2.30

and elm trees in the inventory strongly suggests that one or both of these types of trees were used to plant sides of Monroe Square.⁴³

As discussed earlier, the City Nurseryman heavily planted walkways in the square to create allées (Figure 2.32). The large number of certain species in the inventory, such as maples, lindens, chestnuts, elms, and poplars, suggests there were allées with the same species on both sides of a section of walkway. The heavily planted allées would have strongly delineated the paths within the square and framed the vistas within, through, and from outside the square. The crowns of many trees would have grown out to meet each other creating a canopy over the walkways.⁴⁴

In spite of the large number of certain species, uniformity was not the predominant characteristic of the Monroe Square tree plantings. The planting of many species along the allées and in the plats created impressive contrast of color, shape, and texture throughout the square. A.J. Downing recommended the careful selection of trees based on unique characteristics such as foliage, bark, and shape. The reader will gain some idea of the tremendous variety of tree characteristics present in Monroe Square a hundred years ago by consulting the comments of Downing on the species of trees planted in the square at that time.⁴⁵

Figure 2.29 - Privet Hedge c. 1930. Courtesy of the Valentine Richmond History Center

2.30 - Trees West Side of Monroe Square c. 1905. Courtesy of the Virginia Commonwealth University Special Collections

40 Cutshaw, Trees of the City, 17; Cutshaw, "December 31, 1889," 6; Clinger, Monroe Park, 12-13

41 David Schuyler Apostle of Taste: Andrew Jackson Downing, 1815-1852, (Baltimore: Johns Hopkins University Press, 1996); A.J. Downing, A Treatise on the Theory and Practice of Landscape Gardening Adapted to North America, Dumbarton Oaks reprints and facsimiles in landscape architecture (Washington D.C.: Dumbarton Oaks, 1991. Reprint; Originally 4th Edition, Published New York: Putnam 1850), 85-231.

42 Cutshaw, Trees of the City [For the lists of specific trees and their page numbers in trees of the city, consult the appendix of this document].

43 See Appendix for the particulars of Elms and Maples in Trees of the City.

44 Goode and Lancaster, Oxford Gardens, 9.

45 Cutshaw, Trees of the City [complete list of trees in Appendix]; Downing, Landscape Gardening, 85-138, [comments on the attributes of particular trees by Downing are included in the Appendix].

Figure 2.31 - Perimeter Trees Along Franklin Street, courtesy of Virginia Commonwealth University Special Collections

Figure 2.32 - Trees Along Allees in Northwest Corner of Square, courtesy of the Valentine Richmond History Center

Figure 2.33 - Plats Near Franklin Street Perimeter c. 1905. Courtesy of Virginia Commonwealth University Special Collections

Figure 2.34 - Original Parterre Design, courtesy of the Library of Virginia



It is worth considering where trees were not placed within Monroe Square during this period. It appears that trees were not planted along the edges of the square near the privet hedge (Figure 2.34). It also appears that trees were set back from the central plaza so as not to interfere with the parterres planted around the plaza.⁴⁶

Parterres on the points of plats that converged at the fountain plaza appear to have been the only use of flowers in Monroe Square during this period (Figure 2.35). Parterre designs appear on the original 1877 plan for Monroe Square, though there is nothing to suggest that the City installed the parterres prior to the 1890s. Eugene Walton, the Keeper of Monroe Square starting in 1898, may have been the designer of the parterres. Walton had a background as a florist and may have worked out the parterre designs on the original square plan.

Photographs from the turn of the twentieth century show that the parterres in place at that time were parterres à l'anglaise, or parterres constructed in the English manner. These types of installations were extremely popular in British parks of the late nineteenth century and consisted of gazon coupée, or designs cut directly into the turf. Photographs indicate the parterre beds may have been slightly mounded to enhance the presentation of the designs, a technique used in British parks.⁴⁷



2.35

Twentieth Century Monroe Park

The death of City Engineer Wilfred Cutshaw in 1907 effectively marked the end of Monroe Square and the beginning of Monroe Park in official records regarding the space. More significantly, the death of Cutshaw marked the end of the formative era in the development of Monroe Park. The completeness of Cutshaw's improvements combined with a limited availability of funding for the next 100 years assured that Cutshaw's improvements have largely remained intact down to the present time.

PAVING & DRAINAGE

A nagging problem that persisted from the Cutshaw period was path erosion in Monroe Park. The gravel paths had a tendency to wash out, particularly at the entrances to the park. This prompted the installation of "granolithic" walkways at the entrances to the park beginning in 1907. After the paving of the entrances, the City slowly undertook the concrete paving of all the walks in the park. This work continued until 1923 when the City noted that "rock asphalt," apparently a form of concrete, had been used throughout the park (Figure 2.36). The annual report of that year proclaimed an end to dusty walks in the park.⁴⁸



2.36

EARLY TWENTIETH CENTURY TREES

The large number of trees in the 1904 inventory would suggest that the planting of the park was "complete" at that point, providing the framework of trees in the park for much of the twentieth century. The planting of

Figure 2.35 - Parterres at Fountain Plaza c. 1920 Courtesy of Virginia Commonwealth University Special Collections

2.36 - Monroe Park Paving 1933. Courtesy of Richmond Public Library

46 Rarely Seen Richmond Post Card Website [http://dig.library.vcu.edu/cdm4/index_postcard.php?CISOROOT=/postcard], Special Collections, Virginia Commonwealth University Libraries, *Varies Images of Monroe Park*, c. 1905.

47 Goode and Lancaster, *Oxford Gardens*, 422-424; City Engineer, *Monroe Park, 1877*, Rarely Seen Richmond Monroe Park Images; Clinger, *Monroe Park*, 23.

48 Clinger, *Monroe Park*, 23; Clyde Saunders "Department of Public Works Annual Report" in *Annual Report of the Mayor of Richmond to the City Council for the Year Ending December 31, 1923* (Richmond: Allen Saville, 1924), 66.

additional trees during this period appears to have been sporadic at best. The lack of thorough and careful planting, and the general deterioration of the tree stock meant a loss of the well-defined character the Cutshaw era plantings gave the park.

Little work to the park trees occurred until 1932, when Monroe Park became the site of a major public works effort to provide employment to those suffering the effects of the Great Depression. Relief workers excavated the entire surface of the park by hand, hauling away 31 loads of upper tree roots and trash. The workers removed five complete trees from the park, and it can be presumed that the reworking of the park wiped out the parterres around the fountain plaza. In 1932 and 1933, the public relief workers completely covered the park with soil from the demolition of the old Marshall Reservoir as well as graded and seeded the park.

In 1932, the City commissioned an inventory of all park and street trees. Unfortunately, this report by the Barton Tree Expert Company has been lost. Presumably this report guided the planting of some 28 trees in Monroe Park in 1932. Some of the species found in Monroe Park today, such as holly and water oak, may date to this particular planting in the park. A major storm in 1933 damaged a number of trees in the park and it seems reasonable to assume that the impact of the excavation work done in 1932 and 1933 to the root structure of the trees may have contributed to the damage.

The loss of tree numbers and diversity is evidenced when comparing the 1904 inventory with a 2005 inventory. The number of trees in and around the perimeter of the park has been reduced from 362 to 155. Of the 26 species of trees recorded in 1904, only 8 species remain with a total of 68 individual original trees. The loss of these trees and the massive size of the aged survivors diminishes the effect of the neatly planted allées evident in the first decades of the century. Other than Franklin Street, most of the perimeter trees around the park have been removed. The net effect of these changes has been to make the park as planted today substantially different from the park of a century ago.⁴⁹

LIGHTING & SIGNAGE

In the early 1920s, the City of Richmond Department of Public Utilities began to replace gas lighting on streets and in parks with electrical fixtures (Figure 2.37). The Department was developing hydroelectric facilities on the James River as an economical and modern energy source. In 1922, as part of this modernization, the Department of Public Utilities removed



2.37

the gas fixtures in the park and replaced them with the electrical fixtures that remain in the park today. These cast iron fixtures were used throughout the Richmond Park system, particularly in Byrd Park.⁵⁰

As part of the public relief activities during the Depression, the preparation of signage for Monroe Park and other City parks took place. Workers in Monroe Park painted “Keep off the Grass” signs for use throughout the City’s park system. A photograph from this period shows a “Bicycle Riding Prohibited” sign that perhaps used the same template as the keep off the grass signs (Figure 2.38).

It appears from this same photograph that the City tagged the trees in Monroe Park. Earlier in the century, park keepers were designated to help park visitors study the trees. A recommendation of the lost 1932 tree study may have been to tag trees by species.⁵¹

49 Richmond City Arborist, City of Richmond Tree Inventory, Electronic Data, 2005; J. Malcolm Pace, “Bureau of Recreation and Parks in Annual Report of the Mayor of Richmond to the City Council for the Year Ending December 31, 1932,” (Richmond: Meister and Smithie, 1933), 114; J. Malcolm Pace “Bureau of Recreation and Parks” in Annual Report of the Mayor of Richmond to the City Council for the Year Ending December 31, 1933, (Richmond: Meister and Smithie, 1934), 115.



2.38



2.40



2.39



2.41

Figure 2.38 - Behavioral Signage and Tree Tags 1933. Courtesy of the Richmond Public Library

Figure 2.39 - Bryan and Fitzhugh Lee Monuments 2006. City of Richmond Planning and Preservation Division

Figure 2.40 - Signal Station c. 1930. Courtesy of Valentine Richmond History Center

Figure 2.41 - Checkers House and remnants of 1951 Improvements 2006. City of Richmond Planning and Preservation Division

STATUARY & STRUCTURES

In 1911, two new monuments appeared in the park. Unlike the Wickham Monument two decades prior, the City did not elect to create new ronde points for the statues, but instead placed them in park plats. This arrangement of the monuments in plats follows a European tradition of embellishing garden plats with statuary.

The first monument, a Greek Cross, memorializes General Fitzhugh Lee for his service in the Spanish American War. The second monument is a full-length sculpture of Joseph Bryan (Figure 2.39). The bronze figure of the Richmond newspaper publisher rests upon a granite base. The Bryan monument commemorates his service to the community and is similar in scale to the Wickham Monument.

In 1923, the City opted to place a signal station for fire and police alarms in the northeast corner of the park along Belvidere Street. The placement of the building in the center of a plat did not disrupt the plan for the park and followed the tradition set by the park house in 1890. The classical revival building with its stone façade and large windows (Figure 2.40) was one of a number of elegant classical revival utilitarian buildings constructed by the City in the 1920s, including the hydroelectric plant and pumping stations in Byrd Park. The building, which faced Belvidere Street, was a commanding architectural presence.⁵²

The City opted to replace the original Keeper's Lodge with a new structure in 1939. This new structure appears to have the same footprint and be the same size as the original structure (Figure 2.41). Relief workers working a total of 2,157 hours at 25 cents per hour built the new park house. Since only \$95.07 was allocated for the non-labor costs of the park house, it seems likely that in building the new park house, workers recycled materials from the original structure. The new park house came to be known as the "Checkers House" because of the regular games of checkers played there.⁵³

1951 IMPROVEMENTS

On the centennial of the founding of Monroe Park, the condition of the park must have reached a critical point. For the past fifty years, it received only a modest amount of work and by this point, the park had deteriorated considerably. The poor condition of Monroe Park, the decline of the surrounding neighborhood, and the proposal to remove part of the park along Laurel Street for the Landmark Theatre prompted the formation of the Monroe Park Protective Association in 1947.

The association set out to rally the community on the occasion of the park's 100th birthday with two improvement projects in 1951. The association recruited the James River Garden Club to help the park and the club designated the improvement of Monroe Park their signature project for 1951. They commissioned the landscape architect David Laird to redesign the park.

Laird's design removed the "fast decaying, dilapidated, unsightly hedge" around the perimeter of the park. The plan placed species used in earlier planting efforts such as tulip poplars, beeches, and magnolias at "strategic spots" in the park. Laird introduced new plant species such as crape myrtles and azaleas around the fountain plaza where the crape myrtles remain today. It is possible that other species present in the park today but not listed in the 1904 inventory, such as American holly, water oak, and flowering dogwood may date from these improvements. It is also conceivable that these relative newcomers may date from the 1932 plantings.

For the second 1951 project the noted landscape architect Charles Gillette designed the Richmond World War II Monument. Following the pattern set by the 1911 monuments, Gillette centered the monument on a plat at the northwest corner of the park. The monument consisted of a brick wall inscribed with the names of Richmond's fallen, with Inglenook seats placed in front of the monument.

Taken together, the 1951 improvements represent a significant effort to revitalize and preserve the park. The improvements certainly helped to stave off development of the park. Although sporadic park projects have since been undertaken, the 1951 projects represent what was the last comprehensive effort to improve the park.⁵⁴

Postscript

In spite of the 1951 efforts, Monroe Park continued to decline in the closing decades of the twentieth century, threatening its very existence. The 1959 murder of Dr. Austin I. Dodson in Monroe Park in particular brought the whole existence of the park into question. Instead of closing the park altogether, however, the City temporarily removed the benches from the park to discourage the gathering of "vagrants."

For several years after the murder, various proposals came forth to do away with the park. The park was proposed as the site of a medical research facility, but the diligent efforts of the Monroe Park Protective Association

50 Saunders, Clyde, "Department of Public Works Annual Report" in [Annual Report of the Mayor of Richmond to the City Council for the Year Ending December 31, 1923](#),

*Richmond: Allen Saville, 1924), 9.

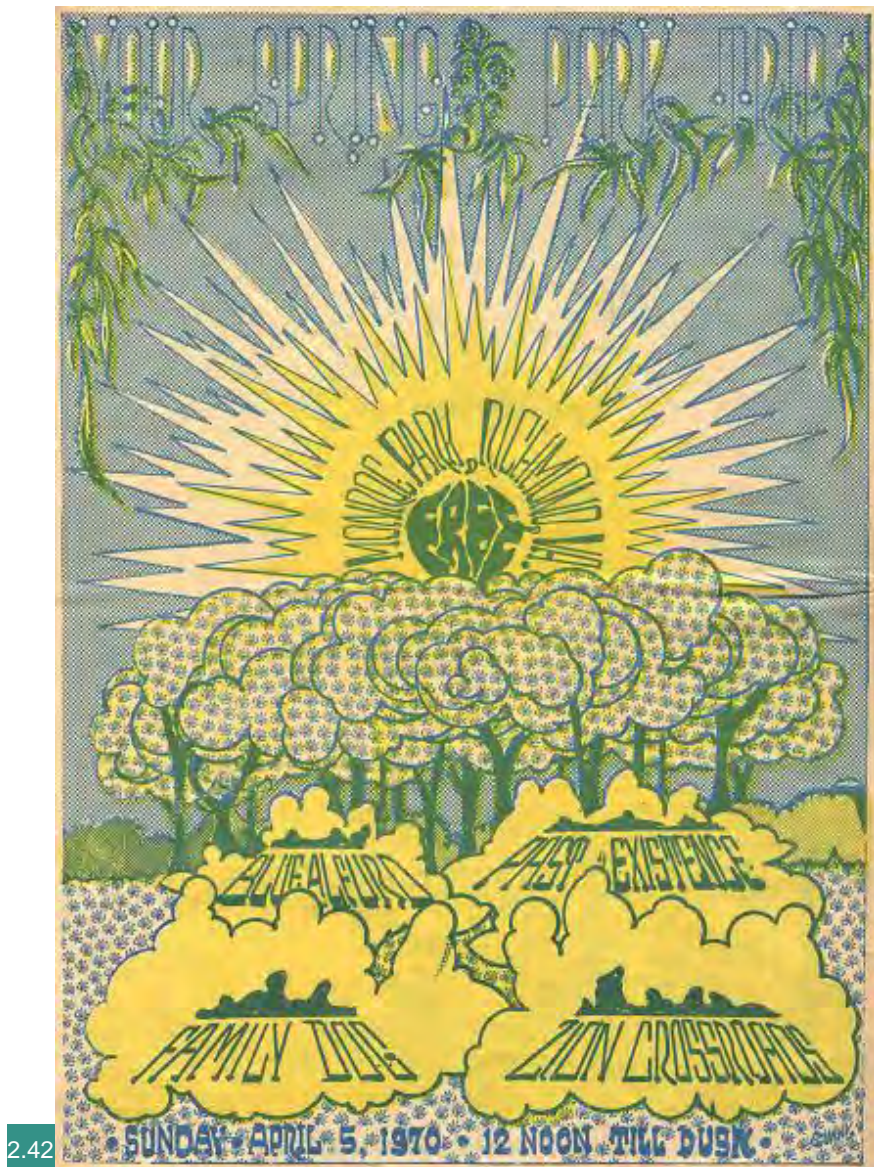
51 J. Malcolm Pace, [December 31, 1933](#), 115

52 Clinger, [Monroe Park](#), 25

53 G.M. Bowers, "Department of Public Works Annual Report" in [Annual Report of the Mayor of Richmond to the City Council for the Year Ending December 31, 1939](#).

and editorials in opposition in the Richmond newspapers allowed Monroe Park to avoid destruction by blocking the sale of the park to private developers.

In the 1960s and early 1970s, Monroe Park became a venue for open social expression and the stage for such pop icons as Bruce Springsteen and Jerry Lee Lewis. Free concerts regularly held in the park became a popular venue for both national and local acts (Figure 2.42).



2.42

While avoiding outright destruction, park alterations of the 1960s and 1970s ate away at the historic character of the park. In 1961, the City paved over the concrete walks, and in many cases the gutters, with asphalt. This led to the transformation of the walkways from attractive pedestrian routes to de-facto parking spaces. The widening of Belvidere Street in the 1970s demolished the signal station at the northeast corner of the park, removed the trees on the eastern edge of the park, and transformed the eastern edge from a straight line to a bow.



2.43

In spite of these unsympathetic changes, an overall lack of modifications served to preserve the essential character of the park. The 1877 plan of the park remains in place. A number of historic features of the park (the fountain, monuments, Checkers House, and electric lights) are intact. (Figure 2.42) The park retains a significant number of mature trees, a portion of which date back to the nineteenth century. Monroe Park is an important urban landscape recognized by its listing on the National Register of Historic Places, as the centerpiece of the Monroe Park Historic District and by a historical marker from the Commonwealth of Virginia (Figure 2.43).⁵⁵

Figure 2.42 - Poster advertising a free concert in Monroe Park, 1970. Richmond Chronicle

Figure 2.43 - Commonwealth of Virginia Historic Marker, Rhodeside & Harwell

54 Clinger, *Monroe Park*, 30-31; "Recalling a Day When Fairs, Expositions Flourished in Monroe Square," *Richmond News Leader*, March 10, 1951, Monroe Park Vertical File, Valentine Richmond History Center, Richmond

55 Clinger, *Monroe Park*, 32-33

In order to make informed design decisions about the future of Monroe Park, one must gain a full understanding of the park’s current state in the context of its historic evolution. This is done by evaluating all of the existing elements within Monroe Park in terms of the Park’s Period of Significance.



The Monroe Park Historic District

NATIONAL REGISTER OF HISTORIC PLACES NOMINATION

In 1983, Monroe Park was described as the centerpiece in the nomination of the Monroe Park Historic District to the National Park Service’s National Register of Historic Places.¹ The Monroe Park Historic District includes Monroe Park and 14 of the 16 buildings lining the park’s north and west sides (Figure 3.2). Contributing buildings range in size from two to 12 stories and were built between 1879 and 1923.

According to the nomination form, this District was nominated because of Monroe Park’s distinction as being the second oldest public space in the City of Richmond after Capitol Square, and the oldest public park within the City. Like most National Register nominations of the time, however, the Monroe Park Historic District nomination focused primarily on the District’s buildings; very little attention was paid to the landscape. Despite this focus on those historic structures that surround the park, it does describe six elements within the park as contributing elements to the Monroe Park Historic District:

- The Fountain
- The Wickham Monument
- The Bryan Monument
- The World War II Memorial
- The Fitzhugh Lee Monument
- The Checkers House

Although the nomination doesn’t expressly list them as it does structures within the park, it does describe a few general landscape elements that contribute to the historic integrity of the District. Elements such as the radial layout of walks, the central siting of the fountain, and use as a pleasure ground are among those landscape features described. The nomination does not, however, discuss the historic relevance of the park’s

Figure 3.1 - “Monroe Park, Richmond Virginia” showing three of the Monroe Park Historic District’s contributing structures c . 1905. Courtesy of Virginia Commonwealth University Special Collections

Monroe Park Historic District Map

Legend







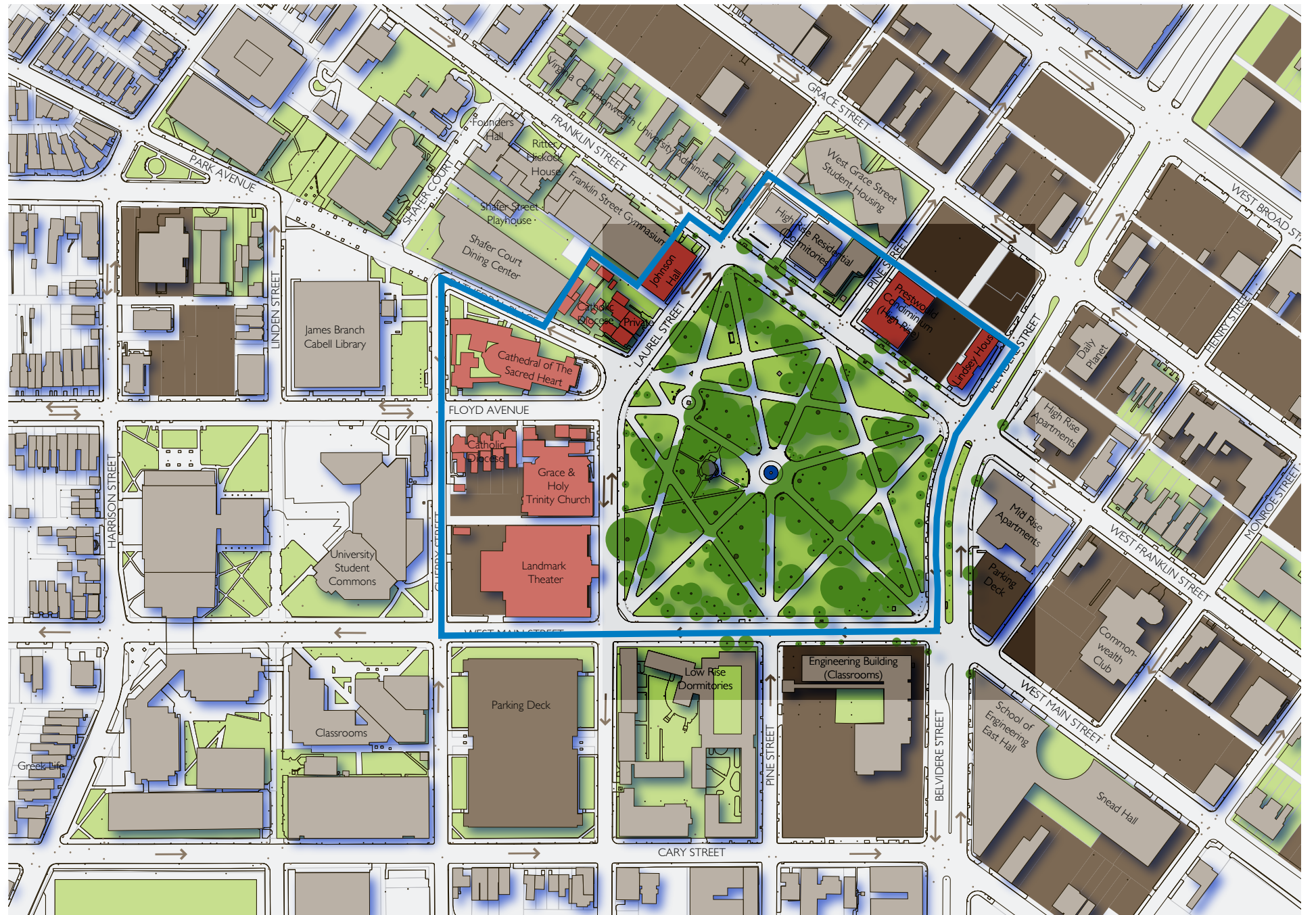
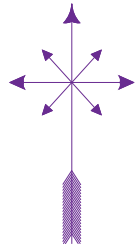
-  Existing Tree
-  Turf
-  Parking Lot
-  Building
-  Contributing Building
-  Historic District

Figure 3.2 - Monroe Park Historic District Map



vegetation; rather, it states that “trees and shrubs do not relate to this plan consistently; they are randomly distributed across the site.” Similarly, the nomination does not describe landscape elements such as paving, curbs and site furnishings, all of which contribute to the historic integrity of the site. These elements are most likely not discussed in the National Register nomination because at the time it was written, cultural landscapes were documented and nominated as historic places only if they were directly associated with an historic structure.²

Evaluation of Integrity

PERIOD OF SIGNIFICANCE

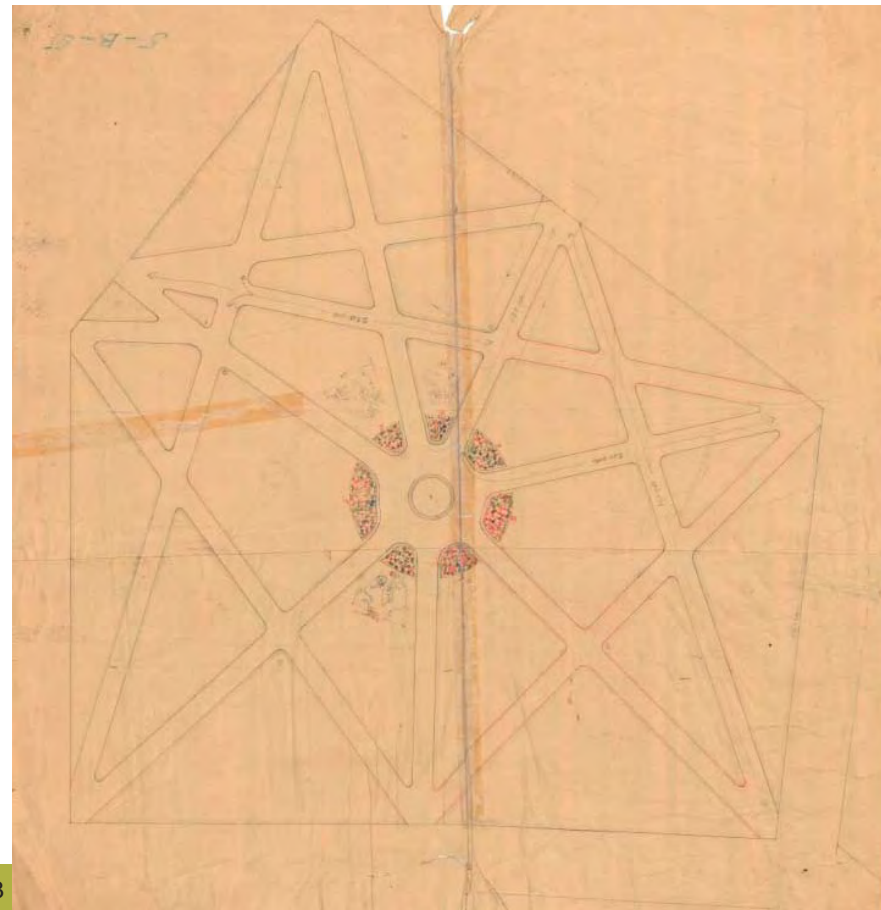
The National Register of Historic Places defines the term Period of Significance as “the length of time when a property was associated with important events, activities, or persons, or attained the characteristics which qualify it for National Register listing.”³ Based on the construction dates of contributing structures listed in the nomination, the Period of Significance for the Monroe Park Historic District can be defined as 1871 to 1948. However, because this Master Plan addresses Monroe Park in particular, the Period of Significance can be narrowed to the years between 1876 and 1907, or the tenure of Wilfred Cutshaw as Richmond’s City Engineer.

EVALUATION OF INTEGRITY

The Period of Significance begins in 1876, when Cutshaw announced a new plan for walks within Monroe Square. His 1877 plan for the park (Figure 3.3) shows essentially the same pathway alignment that exists today. One major change to the pathway alignment came in 1891 when the Wickham Monument was placed at the northwest corner of the site. The fountain that exists today was installed in 1906 to replace one that was installed on 1877 in the same location. The concrete (or “granolithic”) curbs that line the park’s walks were the result of an 1898-1899 effort to correct erosion problems in the park. Many of the large canopy trees that cover the site were planted by the City’s first Nurseryman, hired in 1890. Although the Checkers House was built in 1939, it replaced a structure of the same footprint, location and orientation built in 1890. The Period of Significance ends in 1907, with the death of Cutshaw.

Almost immediately after Cutshaw’s death, the City of Richmond began altering Monroe Park, starting with the 1907 to 1923 installation of “granolithic” walkways to replace the eroding stone dust surface. Additional

statues dotted Monroe Park’s landscape over the years, starting with the 1911 installation of the Fitzhugh Lee and Joseph Bryan monuments. The 1920s saw the replacement of Monroe Park’s gas lighting with the new City standard electric light fixtures that still exist today. The park renovation efforts of 1951 introduced many new plant species to the site, including unprecedented flowering and understory trees, to the park’s interior. Finally, a large piece of the east side of Monroe Park was sacrificed when the City widened Belvidere Street in the 1970s. Although a number of modifications, alterations and renovations would ensue, Cutshaw’s original vision still shines through today, giving the whole of Monroe Park a high degree of integrity.



3.3

In order to determine the integrity of a site, landscape elements are classified as contributing or noncontributing. Contributing elements are those elements that contribute to the historic integrity of a site and reinforce its Period of Significance. Most often, these are features that were con-

Figure 3.3 - Cutshaw's Plan for Monroe Square, 1877. Courtesy of the Library of Virginia

1 Robert P. Winthrop, “National Register of Historic Places Inventory - Nomination Form,” National Park Service (found at http://www.dhr.virginia.gov/registers/Cities/Richmond/127-0383_Monroe_Park_HD_1984_Final_Nomination.pdf) 1983.

2 Cari Goetcheus, “Cultural Landscapes and the National Register,” in *Cultural Resources Management* (found at <http://crm.cr.nps.gov/archive/25-01/25-01-11.pdf>) 2002.

3 *National Register Bulletin 16A: How to Complete the National Register Registration Form*, (Washington, D.C.: National Park Service, 1997): 42.

structed, planted or introduced to a site during the Period of Significance and have been preserved up to the modern day. Reconstructions, renovations or replicas of historic elements can sometimes also be considered contributing elements. Noncontributing elements are those elements that were introduced to the site outside the Period of Significance and disrupt the integrity of an historic site, changing the original design intent introduced during the Period of Significance. Due to the nature of Monroe Park's history and development, a third category has been added to the Evaluation of Integrity for this site. Historic Elements Outside the Period of Significance are those elements that were introduced to the site after 1907 but are still considered to be significant to the park's historic integrity (Figure 3.3).

CONTRIBUTING ELEMENTS

- Park Entrances: One entrance at each street intersection around the park, arranged as a goose foot.
- Pathway Configuration: The radial design laid out by Cutshaw, reminiscent of the Centennial Exhibition in Philadelphia in 1876 and other eighteenth and nineteenth century parks.
- Concrete, or "Granolithic" Curbs.
- Fountain: Both the fountain location, dating to 1877, and the fountain itself, dating to 1906.
- Checkers Building Location: Although the Checkers building was not constructed until 1939, it was built on the same footprint - and possibly from the same materials - as the original building.
- Canopy Trees.
- Magnolias: These are the park's only existing evergreen trees that date to the Period of Significance.
- Wickham Monument.

HISTORIC ELEMENTS OUTSIDE THE PERIOD OF SIGNIFICANCE

- Light Posts: Electric fixtures replaced the original gas lights in 1922, however many of those electric fixtures are still in place.

- Checkers Building Structure: Although it was constructed using the same footprint as the original 1890 Keeper's Lodge, the existing Checkers House was built in 1939.
- Joseph Bryan Monument.
- Fitzhugh Lee Monument.
- World War II Monument.
- McGuire's University School Memorial.

NONCONTRIBUTING ELEMENTS

- Park Footprint: The realignment of Belvidere Street in the 1970s carved a portion of land from Monroe Park's west side.
- Park Perimeter: The 1951 removal of the privet hedge left Monroe Park without a clearly defined vertical element dividing the perimeter sidewalk from the grass plats.
- Pathway Paving: Most recently resurfaced in 1961 with asphalt.
- American Hollies.
- Flowering Understory Trees.
- George Washington Memorial Tree Plaque: the tree associated with this plaque was removed and never replaced.
- Bollards: Introduced as a new site element in 2004 - outside of the Period of Significance - they help maintain the park's historic integrity by reserving the park's pathways for pedestrians.
- Trash Receptacles: Replaced c. 2005.
- Benches.

Contributing/ Noncontributing Structures Legend

Legend










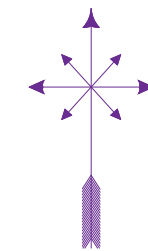
-  Existing Tree
-  Turf
-  Pavement
-  Parking Structure
-  Building
-  Fountain
-  Monument/Memorial
-  Bench
-  Trash Receptacle

Figure 3.4 - Existing Structures



At first glance, Monroe Park is an attractive, elegant, green oasis in the midst of increasingly dense, urban, mixed use development. Closer inspection reveals layers of modifications and improvements stacked upon an historic palette of paths, structures and trees.

Spatial Organization & Circulation

HORIZONTAL ORGANIZATION & CIRCULATION

The overall layout of Monroe Park has changed little since Cutshaw's 1877 redesign of the space. The site's odd pentagonal shape is the resultant tract of land created at the intersection of the historic Rutherford tracts, aligned with the grid created by Grace and Franklin streets and the historic Sydney tracts, aligned to what is now Cary Street (Figure 4.2). In a democratic response to these conflicting street grids, each one of the park's entrances is located at the corner of an intersection or at the continuation of a road that dead ends into the park. Each entrance is accessed via an approximately eight foot wide sidewalk that surrounds the site.

At the center of Monroe Park, a large, four tiered fountain (Figure 4.3) anchors a circular node. Seven paths radiate from this central plaza, extending to each of the park's entrances (there is a fork in the eastern radial path to access the entrances at the continuation of both Cathedral Place and Floyd Avenue). Completing the goose foot at each of the entrances is a second set of paths that connects the entrances to one another (Figure 4.4). Although the dimensions of these two paths are identical, a distinct hierarchy begins to appear: the primary radial paths serve as the park's central organizing theme, with the secondary pathways designed to improve circulation throughout the site.

The spaces between the park's intersecting paths are irregularly shaped areas ranging in size from approximately 1,300 square feet to approximately 25,000 square feet (approximately one-half acre). These open spaces, historically referred to as plats, are almost entirely covered with lawn; trees and light posts line the walkways; the park's monuments are placed in the center of the plats (Figure 4.5). One exception to this layout is the plat immediately to the west of the central fountain plaza, which contains the Checkers House and four concrete sidewalks leading to the building.



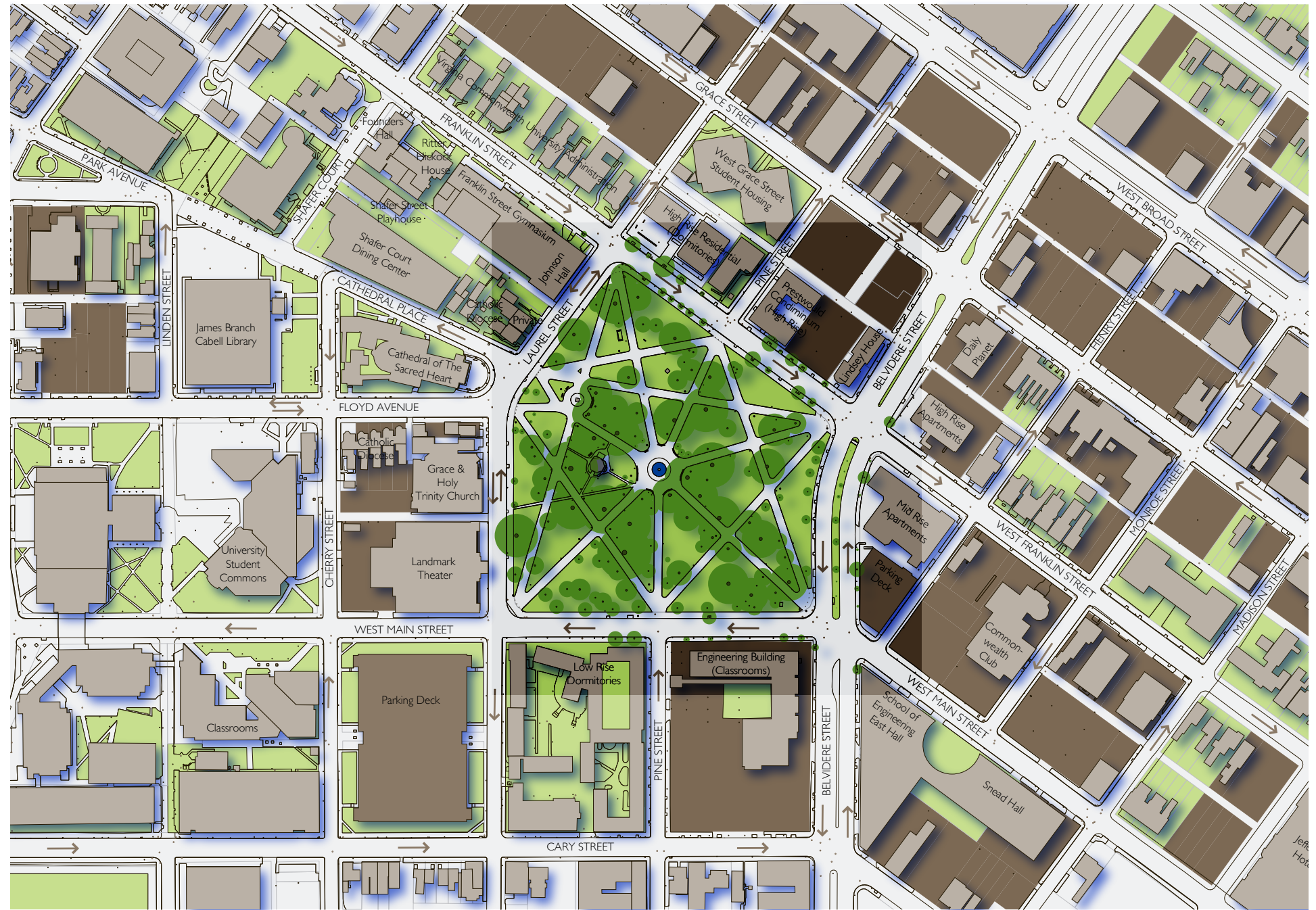
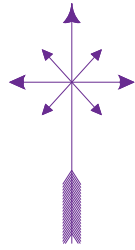
Figure 4.1 - View of the historic fountain and trees in Monroe Park, 2007. Rhodside & Harwell

Monroe Park Context Map

Legend

-  Existing Tree
-  Turf
-  Parking Lot
-  Building

Figure 4.2 - Monroe Park Context map showing the intersecting street grids of the historic Rutherford tracts (north and east) and the Sydney tracts (south and west).



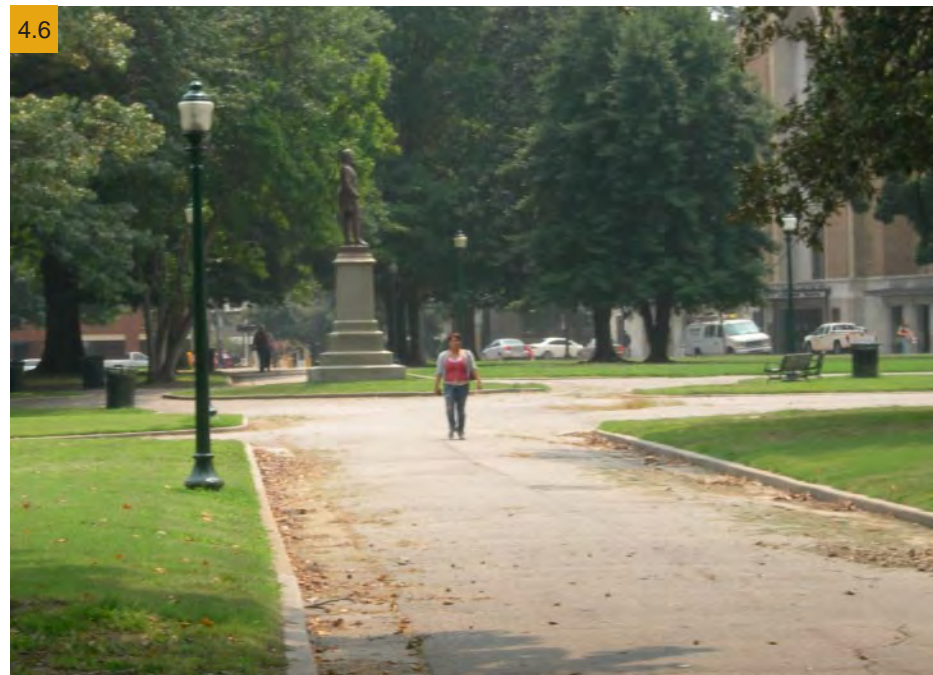


Figure 4.3 - Monroe Park Fountain, 2007. Rhodeside & Harwell

Figure 4.4 - Goose foot at the intersection of Pine Street and Main Street, 2007. Rhodeside & Harwell

Figure 4.5 - Typical grass plat in Monroe Park, 2007. Rhodeside & Harwell

Figure 4.6 - The Wickham Monument is placed directly in line with one of Monroe Park's pathways, a unique condition in the park, 2007. Rhodeside & Harwell

Figure 4.7 - View of Monroe Park c. 1969. This view depicts the ground plane and tree canopy that would have existed during the Period of Significance. City of Richmond Planning and Preservation Division

Figure 4.8 - Typical cross sections through Monroe Park's pathways, both existing and historic conditions. Rhodeside & Harwell

Figure 4.9 - Small flowering trees (crape myrtles in this image) add another level of complexity to Monroe Park's vertical organization. Rhodeside & Harwell

Besides the central fountain, the Wickham Monument is the only other site element that disrupts the park's straight paths (Figure 4.6). As the park's first monument, and the only monument placed in the park during the Period of Significance, the circular plaza surrounding the statue is a unique condition; every element placed in the park since 1907 was placed in the center of a grass plat, away from the park's primary circulation pattern. When he placed the Wickham statue in such a place of prominence, Cutshaw may have intended for this to be the only monument in Monroe Park. Alternately, he may have been trying to set a precedent, creating a pattern of secondary plazas around the primary central fountain plaza, each anchored by a different monument.

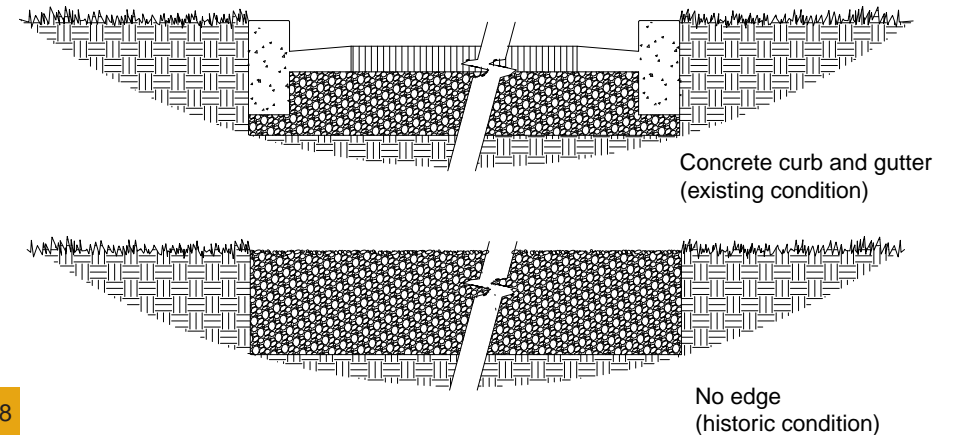
VERTICAL ORGANIZATION

In general, Monroe Park started its existence on two planes: a uniformly sloping ground plane consisting of both grass plats and walkways and a ceiling plane created by the high branching patterns of the site's historic canopy trees; the only vertical elements in the park were the slim lines of tree trunks and light poles (Figure 4.7).



4.7

During the Period of Significance, the Keeper's Lodge, central fountain and Wickham Monument became unique and significant elements within the park as they were the first focal points to contain one's view inside the site. As time passed, elements were slowly introduced, creating an increasingly complex cross section through the park. Although less conspicuous because of their locations, monuments and statues erected in the park following the Period of Significance created additional focal points.



4.8

In 1898, Monroe Park's continuous ground plane was drastically altered with the construction of concrete curbs along all of the park's sidewalks to correct erosion problems happening along the paths (Figure 4.8). Although the grade of the paths was only dropped by six inches, the visual impact across the site was significant, as it changed the path's appearance from a pedestrian walk to one similar to today's vehicular roadways. This condition created another issue when automobiles became more prevalent in Richmond, as motorists often assumed the 18 foot wide walks were drive lanes, using the square as a parking lot.



4.9

Perhaps the most noticeable component added to Monroe Park’s vertical organization since the Period of Significance is the evergreen and flowering understory trees that currently dot the site. The introduction of these lower branching trees created visual barriers, where views from one end of the park to the other were once possible (Figure 4.9).

Materials

PATHWAYS

Although the City of Richmond has experimented with a wide range of pavement types in Monroe Park, changes in material have always been applied park-wide. The park’s interior pathways are currently paved in asphalt, with remnants of the concrete pavement laid down in 1923 visible in places where the asphalt has eroded. Slightly newer than the concrete paving of the main paths, the concrete walks leading from the Checkers Building (laid with the 1939 construction of that building) are still intact. The granolithic curbs and gutters that were installed in 1898 and 1899 still line all of the park’s walkways and are still in good condition.



4.10

Similar to much of the rest of Downtown Richmond, the brick pavers on the park’s perimeter sidewalks were replaced with cast-in-place concrete. One small patch of brick paving remains at the northern entrance to the park (Figure 4.10). While these brick pavers may date to the Period of Significance, historic photographs show bricks laid in a herringbone pattern around Monroe Park; that these bricks are laid in a basketweave pattern indicates that they’ve been relaid at least once.

Beyond the limits of Monroe Park, sidewalks are paved using a combination of brick pavers and cast-in-place concrete. Brick pavers laid in a herringbone pattern are the historic pavement of choice for downtown Richmond. Many sidewalks have seen a return to this paving pattern as sites are redeveloped around the City; a reversal from previous decades of replacing brick sidewalks with cast-in-place concrete (Figure 4.11).

PLATS

As previously discussed, the plats that occupy the spaces between Monroe Park’s pathways are almost entirely covered in lawn. Small exceptions occur around the Wickham Monument, where recent efforts to introduce seasonal plantings have led to mulch beds being carved out of some of the lawn spaces.



4.12

Structures & Furnishings

CHECKERS HOUSE

The only building that exists on the Monroe Park site is the two story octagonal park house known as the Checkers House (Figure 4.12). This 1939 brick structure occupies the same footprint as the earlier Keeper’s Lodge and is likely made out of materials recycled from the original building. Although it no longer serves as the site of regular checkers games, the Checkers House houses multiple uses for the park. The lower

Figure 4.10 - Brick paving at the north corner of Monroe Park, 2006. Rhodeside & Harwell

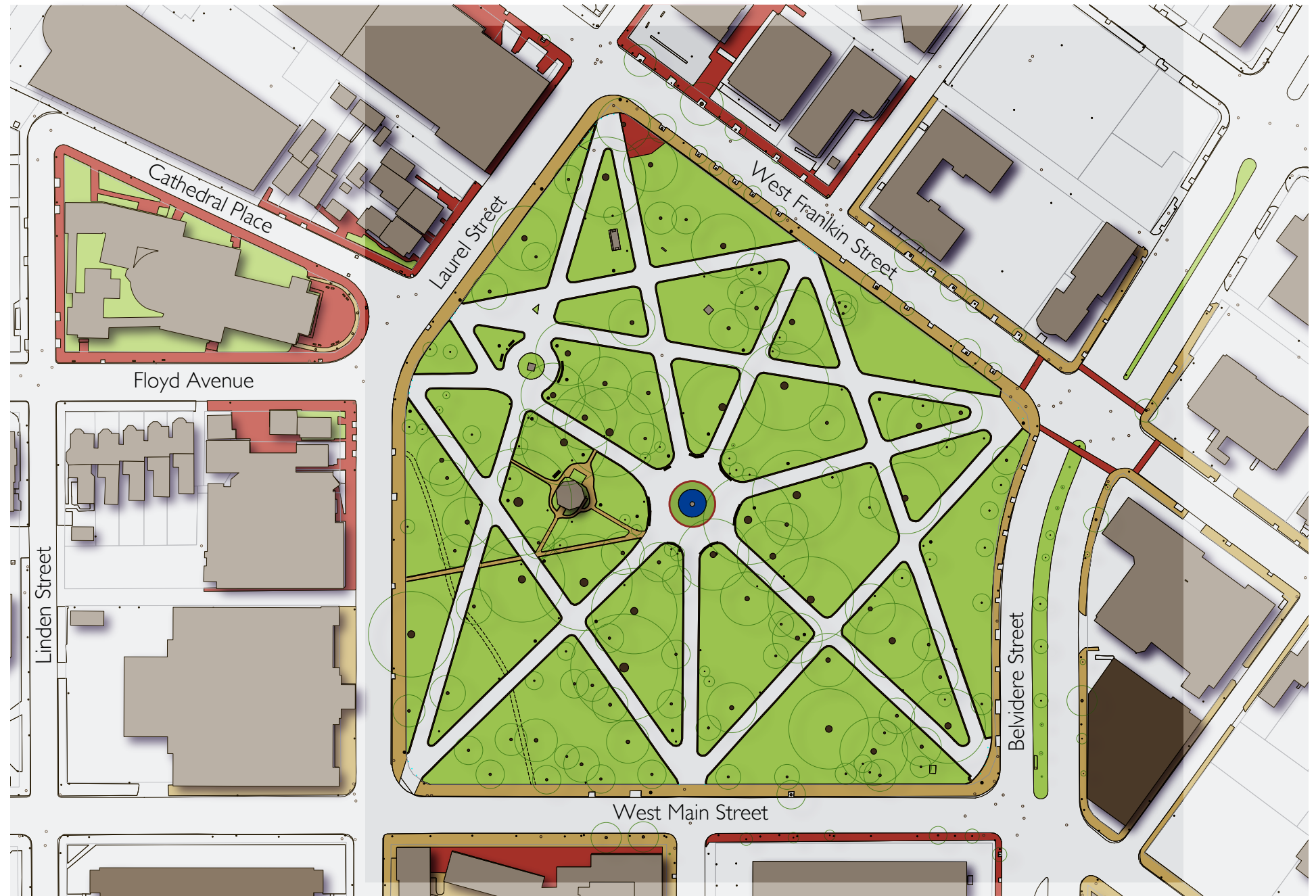
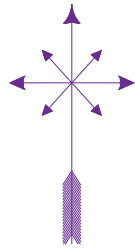
Figure 4.12 - The Checkers House, 2007. Rhodeside & Harwell

Existing Paving Map

Legend

-  Existing Tree
-  Turf
-  Asphalt Paving
-  Concrete Paving
-  Brick Paving
-  6"x6" Concrete Curb and 12" Concrete Gutter
-  Informal Pathway
-  Parking Structure
-  Building
-  Fountain
-  Monument/Memorial

Figure 4.11 - Existing paving in and around Monroe Park



level contains two public restrooms that remain open throughout much of the year. There are also two empty storage closets in the building's lower level. The building's upper level features a single room that serves as the park keeper's office. A large porch surrounds the Keeper's office and offers a commanding view of the entire park. Beside the Checkers House is a security call box providing a direct connection between VCU police services and a park user who may be in distress (Figure 4.13).

CENTRAL FOUNTAIN



At the confluence of the park's radial paths is a 48 foot diameter by approximately three foot deep basin containing a four-tiered cast iron fountain. A perennial planting bed, maintained by the Park Keeper, separates the fountain basin from an iron fence mounted on a low brick wall that surrounds the fountain (Figure 4.14). A break in the iron fence once provided access for children to swim in the fountain (Figure 4.15), however a locked gate was installed due to growing health and safety concerns.



Figure 4.13 - VCU Police call box, Rhodeside & Harwell

Figure 4.14 - Fountain, seasonal plantings and fence, Rhodeside & Harwell

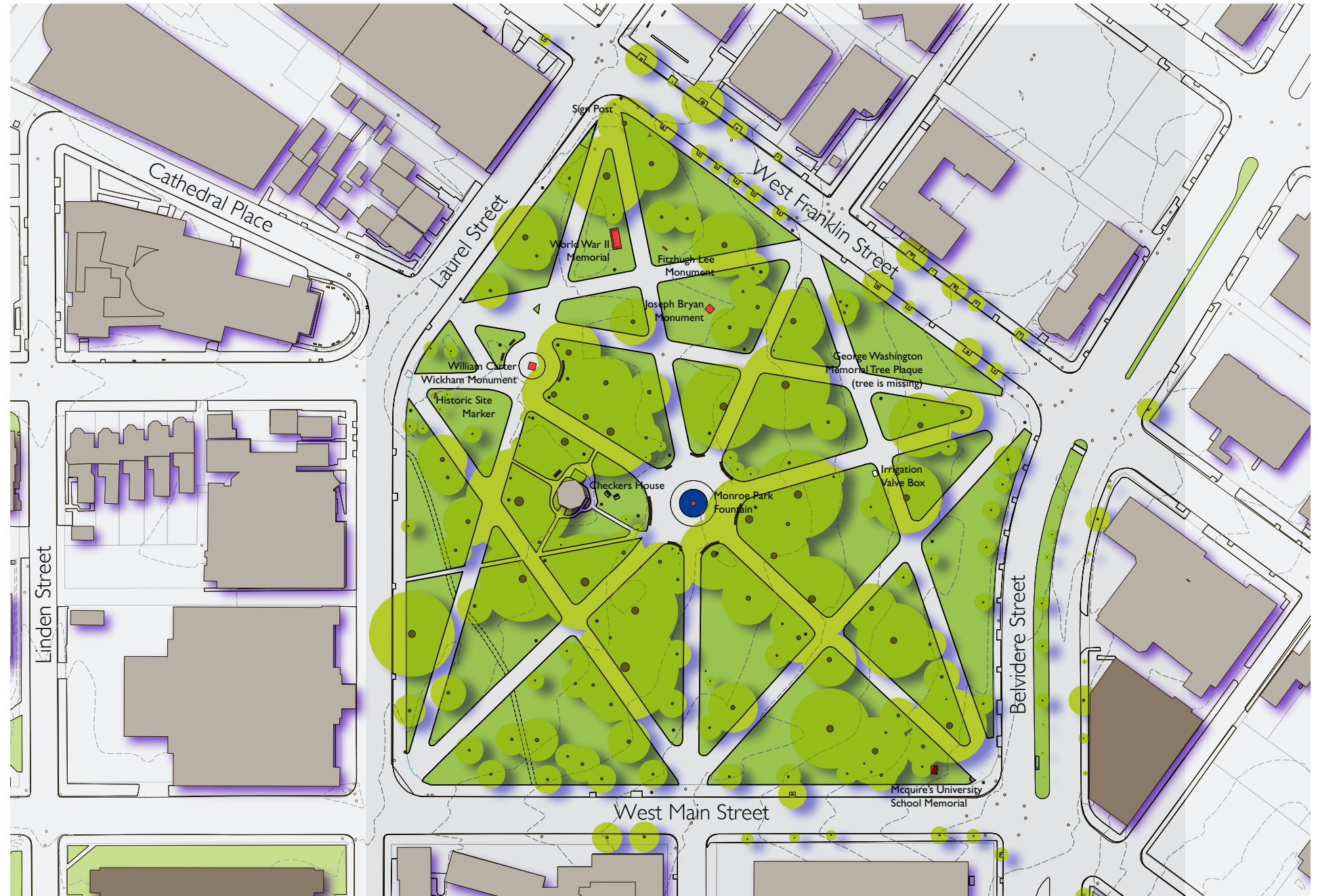
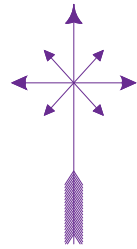
Figure 4.15 - Children swimming in the fountain, c. 1950. Courtesy Todd C. Woodson

Existing Structures

Legend

- Existing Tree
- Turf
- Pavement
- Parking Structure
- Building
- Fountain
- Monument/Memorial
- Bench
- Trash Receptacle

Figure 4.16 - Existing structures map



SCULPTURES & MONUMENTS

Starting with the erection of the Wickham Monument in 1891, Monroe Park has become home to a diverse collection of monuments and statues honoring a wide range of people and organizations (Figure 4.16).



4.17

General William Carter Wickham Monument, 1891: Erected by the employees of the Chesapeake and Ohio Railroad, this is the only structure placed along a pathway (Figure 4.17).



4.18

General Fitzhugh Lee Monument, 1911: This Greek Cross placed in a grass plat at the north end of the park honors General Lee's service in the Spanish American War (Figure 4.18).



4.19

Joseph Bryan Monument, 1911: Although it is located within a grass plat rather than along a pathway, this statue honoring the Richmond newspaper publisher's community service is similar in scale, design and materials to the Wickham Monument (Figure 4.19).



4.20

World War II Monument, 1951: The largest of the park's monuments, this brick wall memorializes Richmond's servicemen and women who died in World War II (Figure 4.20).

Figure 4.17 - Wickham Monument, Rhodeside & Harwell

Figure 4.18 - Lee Monument, Rhodeside & Harwell

Figure 4.19 - Bryan Monument, Rhodeside & Harwell

Figure 4.20 - World War II Monument, Rhodeside & Harwell

Figure 4.21 - McGuire's University School Monument, Rhodeside & Harwell

Figure 4.22 - Victor Stanley Bench C-10 with center arm rest, Rhodeside & Harwell

Figure 4.23 - Bollards at entrance, Rhodeside & Harwell

Figure 4.24 - Victor Stanley Trash Receptacle ES-242, Rhodeside & Harwell



4.21

McGuire's University School Monument, Unknown Date: This granite bench on a brick base serves as a reminder of the school located at the corner of Belvidere and Main Streets between 1888 and 1942 (Figure 4.21).



4.22

SITE FURNISHINGS

The site furniture that exists within Monroe Park consists of a relatively uniform palette of benches, trash receptacles and bollards. In an effort to prevent people from using them as beds, benches are located in groups facing the central fountain and surrounding the Wickham Monument. Most benches in the park are constructed of steel with wooden or composite slats, similar to the C-10 bench by Victor Stanley (Figure 4.22).

In 2005, the existing melange of trash receptacles was replaced with 24 gallon steel trash receptacles similar to the ES-242 trash receptacle by Victor Stanley (Figure 4.23). Bollards were installed at each of the park entrances in 2004 to prevent cars from entering the site and parking on the pathways (Figure 4.24). The bollards are placed at approximately six feet, on center and are cast in concrete footings. Two bollards have been omitted from the park's southern entrance to allow access for emergency and maintenance vehicles. All of the park's metal furnishings are painted dark green.



4.23



4.24

SIGNAGE

Monroe Park has an abundance of signage indicating park rules, advertising features and events in and around the park, and educating users about the park's history. Park signs are installed on freestanding posts, affixed to walls and mounted on light fixtures.



4.25

Monroe Park has amassed an unusually long list of posted rules in response to the many infractions committed by park users over the years. Park regulations are mounted on posts at all of the park's entrances, around the perimeter and at various other locations throughout the park. There is some difficulty for users to keep track of the park's various rules and regulations considering different sets of regulatory signs are placed at each entrance (Figure 4.25).



4.26

Affixed to many of the light posts in the park are banners sponsored by the City of Richmond advertising Monroe Park (Figure 4.26). These banners are a unifying feature throughout the City of Richmond's park system, informing visitors they are in a park owned and managed by the City.



4.27

At the north entrance to Monroe Park is a small hexagonal kiosk covered with flyers and advertisements posted by community members (Figure 4.27). The highly visible location has made this community bulletin board quite popular among VCU students and residents of the Fan district.



4.28

In 2004, Virginia's Department of Historic Resources worked with Monroe Park Advisory Council to place a sign along the western edge of Monroe Park educating park users about the history of Monroe Park, and the City of Richmond's park system as a whole (Figure 4.28). This is currently the only interpretive signage within Monroe Park.

Figure 4.25 - Regulatory signs, Rhodeside & Harwell

Figure 4.26 - Park banner, Rhodeside & Harwell

Figure 4.27 - Community bulletin board, Rhodeside & Harwell

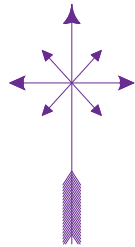
Figure 4.28 - Historic marker, Rhodeside & Harwell

Existing Vegetation Map

Legend

-  Deciduous Canopy Trees
-  Evergreen Trees
-  Small Ornamental Trees
-  Turf
-  Pavement
-  Seasonal Planting Bed

Figure 4.29 - Existing trees



Vegetation

TREES

Although reduced from the 1904 list of 26 species and 362 individual trees, Monroe Park remains quite green and diverse, with a total of 155 trees and 23 species (Figure 4.29). Of the 23 existing tree species, ten are from the 1904 tree inventory, and it is likely that a number of the existing trees - especially those near the central fountain - are the same trees that were planted during the Period of Significance. Trees in Monroe Park can be placed into three categories: deciduous canopy trees (Figure 4.30), evergreen trees and ornamental trees. All but one of the historic tree species is a deciduous canopy tree, the exception being the southern magnolia (*Magnolia grandiflora*), which is a broadleaf evergreen tree. Since the Period of Significance, three additional evergreen species and a number of individual plants have been introduced to the site, giving the trees a much denser overall appearance, especially in winter. Having been planted no earlier than the 1951 park renovations, ornamental trees are a relatively new introduction to Monroe Park. The list that follows is an inventory of all of the existing trees within Monroe Park.¹ Trees listed in bold indicate historic species.



4.30

Symbol	Botanical Name	Common Name
Canopy Trees		
AR	<i>Acer rubrum</i>	Red Maple
AS	<i>Acer saccharum</i>	Sugar maple
FP	<i>Fraxinus pennsylvanica</i>	Green Ash
GB	<i>Ginkgo biloba</i>	Ginkgo
GD	<i>Gymnocladus dioica</i>	Kentucky Coffee Tree
LT	<i>Liriodendron tulipifera</i>	Tulip Poplar
QC	<i>Quercus coccinea</i>	Scarlet Oak
QN	<i>Quercus nigra</i>	Water oak
QP	<i>Quercus palustris</i>	Pin Oak
QH	<i>Quercus phellos</i>	Willow Oak
TC	<i>Tilia cordata</i>	Littleleaf Linden
UW	<i>Ulmus alata</i>	Winged Elm
UA	<i>Ulmus americana</i>	American Elm
UP	<i>Ulmus pumila</i>	Siberian Elm
ZS	<i>Zelkova serrata</i>	Japanese Zelkova
Evergreen Trees		
IA	<i>Ilex americana</i>	American Holly
MG	<i>Magnolia grandiflora</i>	Southern Magnolia
MS	<i>Magnolia x soulangiana</i>	Saucer Magnolia
ML	<i>Metasequoia ghyptostroboides</i>	Dawn Redwood
Ornamental Trees		
CC	<i>Cercis canadensis</i>	Eastern Redbud
CF	<i>Cornus florida</i>	Flowering Dogwood
LI	<i>Lagerstroemia indica</i>	Crape Myrtle

SEASONAL PLANTS

Aside from the park's dense tree canopy, there are a few locations where the Friends of Monroe Park have installed and maintain small seasonal plant beds to provide the park with additional vegetative cover. Within the central fountain plaza, grasses and bulbs are planted between the fountain's basin and the iron fence that surrounds the fountain. A triangular patch of lawn was removed from the center of one of the western plats to make way for an annual plant bed that adds color to the view of Monroe Park from the steps of the Sacred Heart Cathedral. With the exception of the parterres that historically surrounded the central fountain plaza, these seasonal plant beds are not historically accurate, however they do provide an important opportunity for community members to take pride in Monroe Park by caring for these planted areas.

Figure 4.30 - Historic Kentucky Coffee Tree, 2006. Rhodeside & Harwell

¹ For a complete list of the trees inventoried in 1904, see appendix.

Figure 4.31 - Existing silt-covered inlet (the inlet's metal grate is circled in white), Rhodeside & Harwell

Figure 4.32 - Raised curb and curb inlet (far right of picture) at the southeast corner of the site, Rhodeside & Harwell

IRRIGATION

In 2006, VCU funded the installation of a park-wide irrigation system to provide some relief to the lawn and trees during Richmond's hot summer months. The sprinklers, which feed off of the City's water line, are controlled electronically through a controller station mounted to the Checkers House. While significant compaction and heavy shade has prevented the turf from thriving in some locations, the overall health of the trees has improved since the irrigation system went online.

Grading & Drainage

TOPOGRAPHY

When viewed from ground level, Monroe Park appears to be a nearly flat site. The scale and openness of the park are deceiving, however. The maximum vertical change across the park is approximately 15 feet, which creates a generally consistent two-and-a-half percent slope when stretched over the park's nearly 500 foot length. Monroe Park's high point is approximately 191 feet above sea level and is located at the mid point of the western edge of the park, along Laurel Street. The park's low point, approximately 174 feet above sea level, is at the southeast corner of the site, at the intersection of Belvidere and Main streets. The gradient of the grass plats and pathways is consistent throughout the site, with the only abrupt grade changes being at the curb separating the plats from the pathways (Figure 4.33).



4.31

STORM DRAINAGE

Monroe Park has 26 stormwater inlets that are generally located along curbs and gutters in paved areas. The observed condition of the existing inlets ranges from poor to good. Many of the inlets that do not receive much runoff have been covered in silt over time, while the inlets that receive the highest volume of stormwater remain relatively clear of debris (Figure 4.31).



During a storm event, sheet flow occurs fairly uniformly across the grass plats. The park's trees intercept and slow stormwater runoff including reducing volume, increasing the time of concentration and reducing peak flow. It is unclear how well the park's soil percolates, as existing soils have not been tested for composition as part of the Master Plan process. The stormwater that does not infiltrate into the soil of the grass plats flows towards the gutters that line the park's paths, flowing generally from the northwest to the southeast of the site. The drainage areas and flow lines shown on Figure 4.33 indicate most of the stormwater runoff is directed toward the park's two eastern entrances, where raised curbs temporarily detain the water before it is directed into a large curb inlet installed at each one of these entrances (Figure 4.32).

Existing Drainage Map

Legend









-  Turf
-  Pavement
-  Parking Structure
-  Building
-  Stormwater Inlet
-  Drainage Divide
-  Direction of Flow
-  Contour Line

Figure 4.33 - Existing topography and drainage

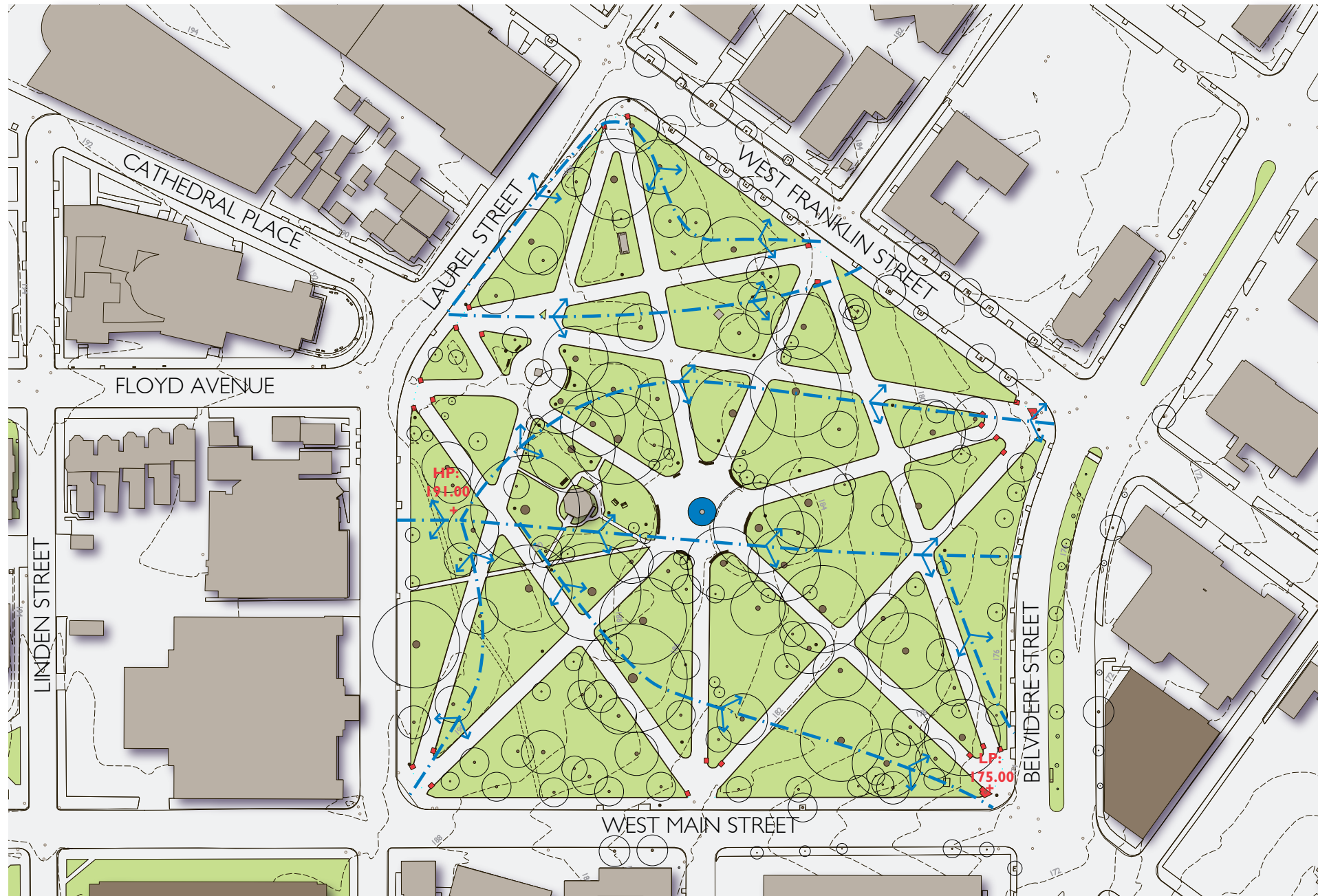
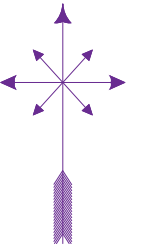


Figure 4.34 - Existing light pole, luminaire and banner, Rhodeside & Harwell

Figure 4.35 - Lighting calculation rendering image showing relative extent of light distribution, Domingo Gonzalez Associates



4.34

Lighting

OVERVIEW

During daylight hours, Monroe Park is graced by historic “Washington” pedestrian-scale light poles with “Granville” acorn luminaires located along walkways and at entrances (Figure 4.34). Pole spacing is regular, with some notable exceptions, and certain poles bear banners. The luminaire is mounted at a nominal twelve foot height, and is lamped with 150 high pressure sodium (HPS) sources. A textured glass enclosure shields the lamp, and the optical distribution is essentially symmetrical on all sides (NEMA type V). Only minor instances of vandalism to the light poles were noted during several visits to the site.

Based upon pole locations identified in a utilities survey (drawing date 5/31/07) and photometric characteristics most analogous to the existing luminaires, a lighting calculation was performed in order to project the performance of the park lighting system as a whole. Considering the entire park’s walkways, an illuminance (light level) range of 0.1 footcandles (Fc) to 1.8 Fc was obtained, for an average of 0.62 Fc. This is consistent with observed nighttime values (Figure 4.35).

Technology and its application never tell the entire story, of course. Discussions with park visitors and the community at large revealed a number of perceptions whose remediation help form the basis of recommendations for lighting improvement.



4.35

Overall inadequacy: Less a result of light level than uniformity (distribution), it appears that the combination of uneven pole spacing, the visual barrier afforded by fully-grown trees along the walking paths, and certain maintenance issues, conspire to create the impression of dark pockets and shadowy areas even in areas of elevated traffic. Additionally, the luminaires produce the perception of glare as a result of their optical distribution, causing a sensation of high brightness (when near a luminaire) in an overall dark surround. Pedestrians and objects in the distance can appear in silhouette, making it difficult for park visitors to discern intent.

Lack of “vista:” Tree growth and the fact that important park elements remain unlit contribute to a sense of visual density, making it difficult for visitors to orient themselves.

Deferred maintenance: By some estimates, approximately 30 to 40 percent of the park’s light poles are not energized at present. This is apparently the result of an existing sub-grade power issue that will be slated for correction as part of the Master Plan effort.

Lack of transparency from outside of the park: Some of the buildings surrounding the park are unlit at night, contributing to the sense of the park’s interior as foreboding.

Existing Lighting Map

Legend

- Existing Tree
- Turf
- Pavement
- Parking Structure
- Building
- Existing Light Pole Locations

Figure 4.36 - Existing lighting

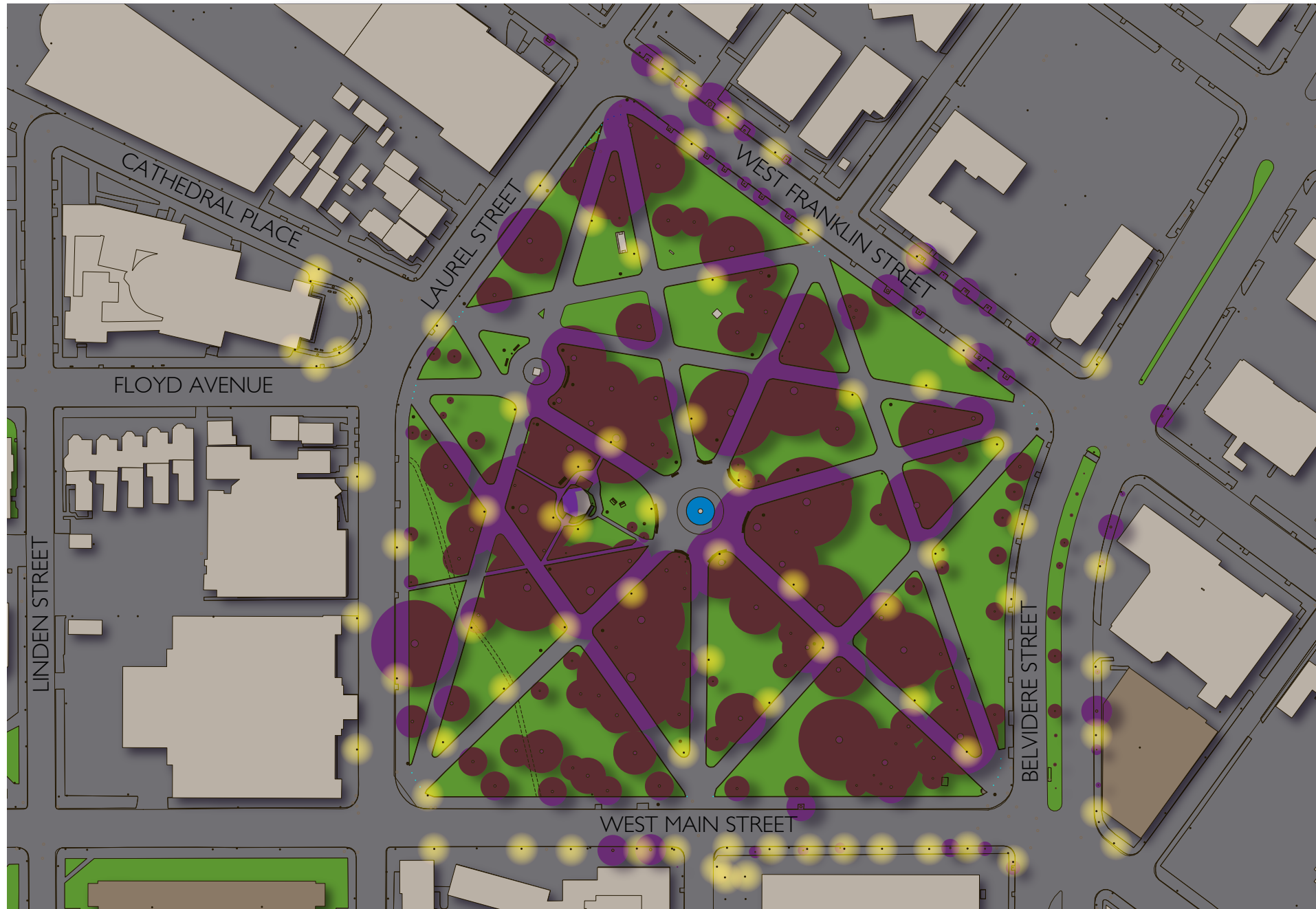
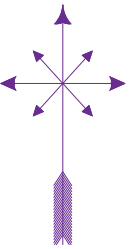


Figure 4.37 - Park Comparison Chart, BRV Corp.

Use

DESIRE LINES

With little programmed activity occurring within Monroe Park, the site's primary use is as a shortcut for VCU students walking to and from their classes. As a means of conveying people to their desired destinations, the park's circulation system is extremely effective. With straight lines connecting the park's entrances to one another using the shortest distance possible, there is little reason for pedestrians to stray from the park's paths (Figure 4.38). In fact, the only unpaved trail that has been worn through the site due to extensive pedestrian use is one from the dormitories at Laurel and Main streets toward the VCU dining commons and library to the northwest of Monroe Park.

PARK VISITORS

Those park visitors who stay in the park for an extended period of time generally fall into two groups: transients and VCU students. For several years, Monroe Park was a popular site for church and community service groups to stage homeless feedings during the weekends. On any given Saturday or Sunday, as many as 300 people could be seen lined up in the park, waiting to receive food being distributed by groups of volunteers. The homeless presence in Monroe Park poses an impediment to increased park usage.

Monroe Park serves as the primary open space for the 4,700 students enrolled at VCU's Monroe Park campus. When classes are in session, the park is used throughout the day as an outdoor classroom, venue for pickup soccer, football and frisbee games, or study hall - many students take advantage of the park's free wireless internet access.

PROGRAMMING

Before a new park opens, the management team should have a clearly defined strategy to draw visitors and distinguish the park from its competitors. This requires creating a detailed plan for programming Monroe Park with plenty of activities that will not only bring people into the park, but keep them there for an extended period of time.

Increasing the "dwell time" of park visitors will make the park appear busier at any one time, in turn generating more new visitors in response to the crowd scene. Food-related programming, wi-fi internet access, sports

and games, and episodic musical performances are some of the programs that can keep people in Monroe Park longer than they remain in other public spaces.

Before we lay out a detailed program for the park, we must first calculate how many visitors we need to attract to Monroe Park at any one time to make it appear busy and lively. Figure 4.38 compares various parks throughout the world, some successful, some not, and the features that have generated their success, or lack of it:

	Lively Parks			Empty Parks			Monroe Park
	Bryant Park	Parc Monceau	Post Office Square	Centennial Olympic Park	Public Square	Pershing Square	
Location	New York, NY	Paris, France	Boston, MA	Atlanta, GA	Cleveland, OH	Los Angeles, CA	Richmond, VA
Seating	3,500 chairs	Benches	Few chairs, benches	Benches	Benches	Long benches	Benches
Security	Foot patrol	Not visible	Summer only	Foot patrol	Not visible	Foot patrol	Not visible
Sanitation	Frequent pickup	Frequent Pickup	Clean	Clean	Fair	Fair	Fair
Lighting	Yes - 8 Forms	Standard poles	Standard poles	1-2 forms	1-2 forms	1-2 forms	1-2 forms
At Grade	Slightly Raised	Yes	Yes	Yes	Partly sunken	Slightly raised	Yes
Desire Lines	Yes	Yes	Yes	Some	Some	Some	Yes
Horticulture	Extensive	Extensive	Some	Minimal	Some	Minimal	Small beds, lawn
Program	Yes	Occasional	Occasional	3-4 festivals	Rare	Yes	Rare
Perimeter	Excellent	Excellent	Acceptable	Acceptable	Ignored	Ignored	Fair
Retail	Extensive	No	1 kiosk	In-park café	Not visible	No	No
Size (acres)	6	~3	1.7	21	10	5	9.25
Peak Visitors (non event)	5,400	~300	500	100	~200	200	~100
Visitors (acre)	900	~100	294	5	20	40	~15

We can see that a good target density for Monroe Park is 100 people per acre, and we can calculate the target number of visitors (at one time during peak periods like lunch hours on weekdays) by multiplying our target density by the acreage of the park:

Target density (peak): 100 people per acre
 Park acreage: 9.25 acres
Target park visitors (peak): 925 people

Desire Lines Map

Legend







-  Existing Tree
-  Turf
-  Parking Lot
-  Building
-  Node
-  Desire Line

Figure 4.38 - Desire lines through the site

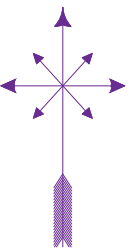
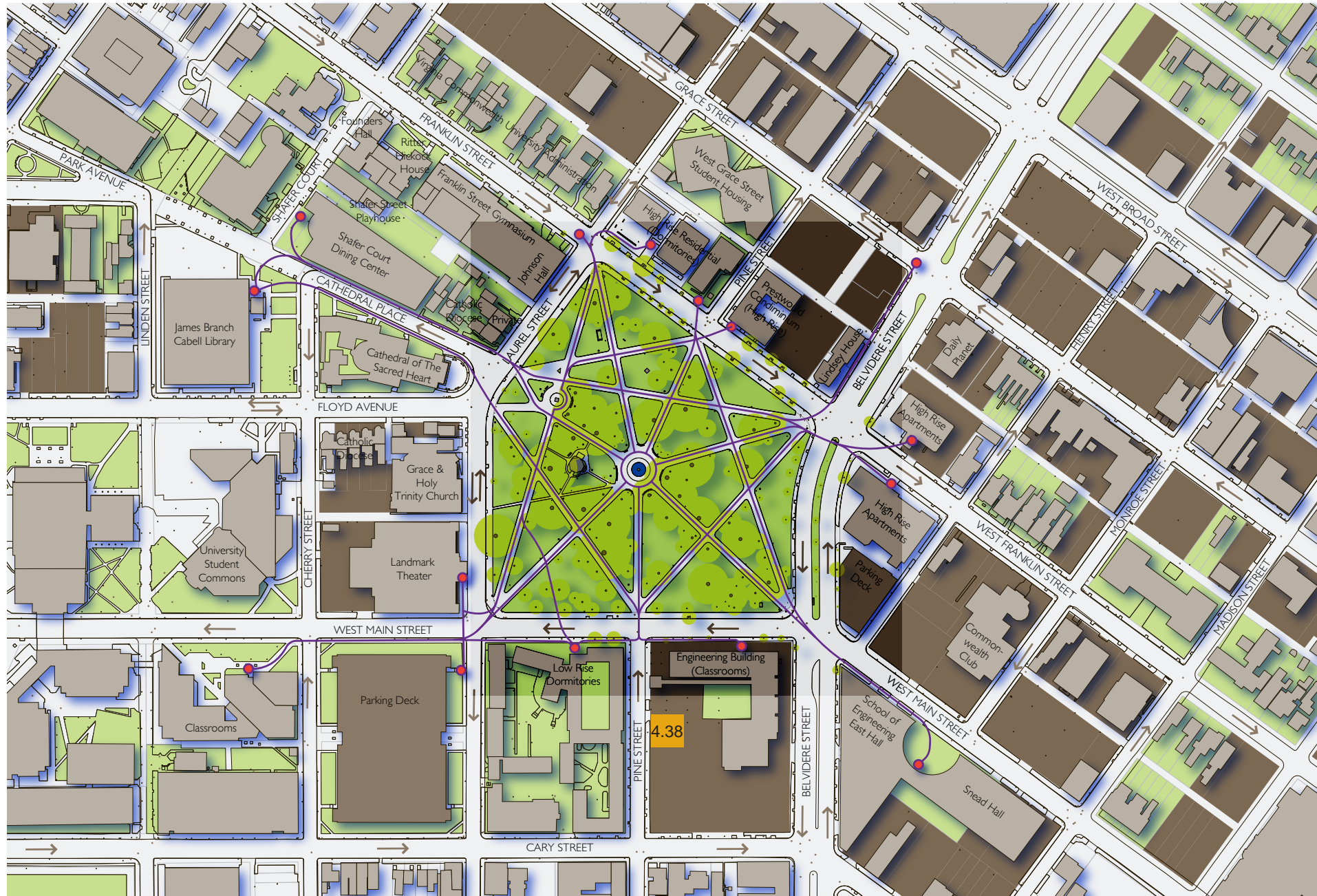


Figure 4.39 - Map of the area of anticipated park users, Rhodeside & Harwell

Next we need to determine how many people are likely users of the park. We do this by figuring out the number of people within a short distance of the park, as they have the greatest potential for being drawn into it. We add the number of people living in nearby apartments, condos, or dormitories; working in nearby offices; and visiting either VCU or the religious institutions that border the park (Figure 4.39).²

Finally, we divide our target number of park visitors by the total number of likely visitors to calculate our target “market share:”

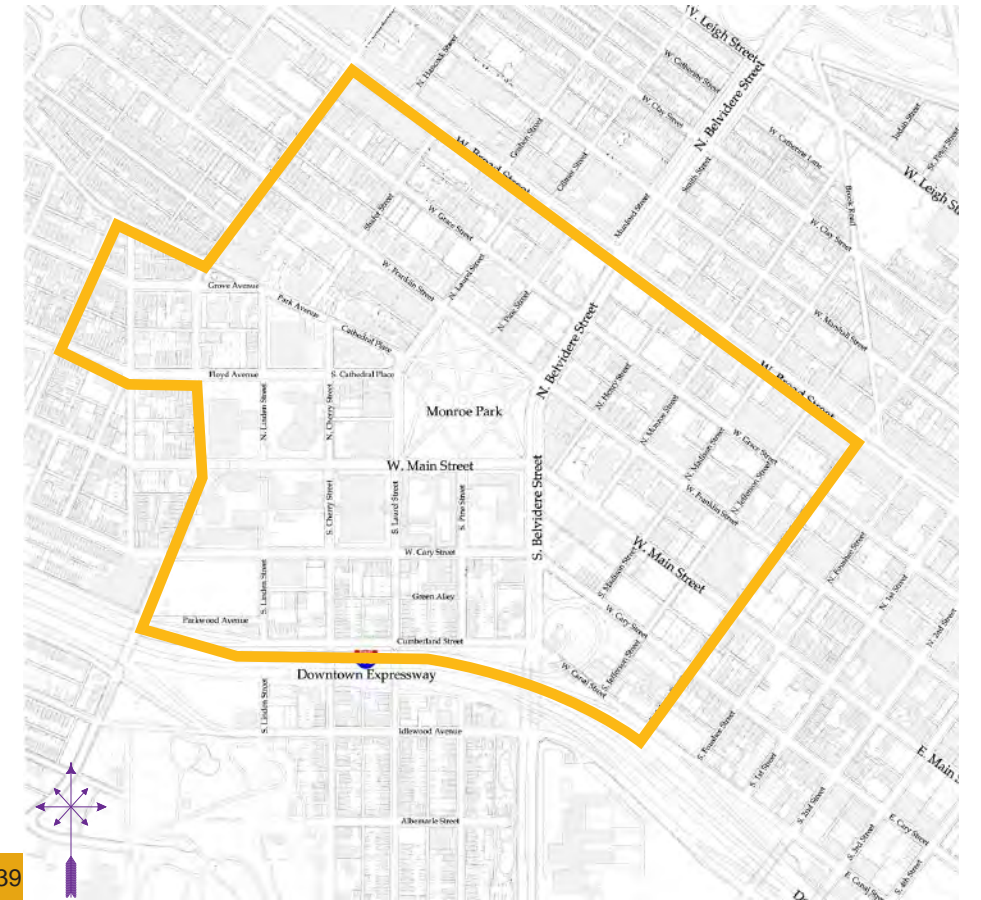
Target park visitors (peak):	925
Total potential visitors:	20,200
Target “market share” (peak):	4.6%

Source of visitors	Potential visitor contribution	Assumptions
Residents (except students in dorms) ³	4,000	Average of two residents per dwelling unit
Residents (students in dorms) ⁴	4,700	Average of two people per dorm room
VCU faculty/staff ⁵	11,000	Includes all VCU employees at Monroe Park Campus
Visitors to VCU, religious institutions	500	Estimate (at any one time)
Total Potential Visitors	20,200	

A market share of 4.6% at peak hours will be extremely difficult, but not impossible, to achieve. For purposes of comparison, Bryant Park, after fourteen years of highly visible and positive publicity, as well as 25-50 discrete programs to draw people into the park, earns an estimated peak-hour market share of 4%; when it opened, its market share was an estimated 1.5%.

While Monroe Park benefits from the presence of VCU students who will likely visit the park in good numbers and at many desired off-peak hours, it will also be competing with all of the other places where students like to socialize not just other outdoor spaces but libraries, on-campus eateries, and lounges.

In order to draw enough visitors to the park, we will need an array of programs that provide experiences unavailable anywhere else in Richmond, as well as more traditional park programming.



² While there are others who may visit, maybe from further into the Fan or even from a suburban location, the numbers drawn from these locations will not be substantial.

³ Source: City of Richmond

⁴ Source: Virginia Commonwealth University

⁵ Source: Virginia Commonwealth University

Public approval is crucial to a successfully implemented Master Plan, and the best way to obtain that approval is to involve the public in the design process. Public meetings and workshops allow community members to contribute their thoughts and ideas to the Master Plan.

Public Process

PUBLIC MEETING #1: DESIGN WORKSHOP

On 19 April, 2007, the Master Plan design team held a design workshop attended by over 70 permanent Richmond residents, VCU students, local business owners and City employees to brainstorm programming and design ideas for the future of Monroe Park. From this meeting, the design team was able to narrow down a series of physical improvements the public felt were a priority, as well as a list of popular programs, events and elements attendees felt should be introduced to the park.

Following introductions of the design team and a brief summary of the history and existing conditions of Monroe Park, participants were divided into eight groups. Each group was provided with a blank site plan, a set of markers and a stack of stickers, each containing an icon representing a different possible program or site element (including a few blank cards for participants to suggest their own elements). The list of design elements suggested by the design team is as follows:

Food/Drink:

- Cafe/restaurant
- Retail kiosks: newspaper stand, coffee, sundries
- Candy and ice cream carts

Music:

- Performance area/stage
- Piano
- Army bands
- Classical Concerts
- College bands (jazz, a capella)
- Student dance groups
- Dance bands (swing, ballroom)



Figure 5.1 - Public Meeting #1, April 2007. Rhodeside & Harwell

Information:

Wireless internet access
 Map
 Weather station
 Historical plaques/markers

Markets:

Weekend farmers market
 French market
 Flower stall/kiosk
 Book stalls

Fine Arts:

Permanent sculpture
 Temporary art exhibitions
 Reading room
 Speakers corner

Children:

Giant map
 Carousel
 Toy boats in fountain

Sports, games & recreation

Bike Racks
 Seasonal ice rink
 Sports-related talks
 Petanque
 Board games: chess, checkers, backgammon

Other

Restrooms
 Class meeting area
 Moveable seating & umbrellas
 Decorative water features
 Botanical gardens
 Festivals (music, art, vendors, food, etc.)
 Open lawn panels for informal recreation

The groups were asked to choose which program elements they felt were appropriate for the park and indicate where on the site each element should be placed. Additionally, each participant was asked to complete a survey asking his or her personal preference regarding each of the program elements proposed.

Armed with the information and ideas gained from the public meeting, the design team returned home to analyze the drawings and comments pre-

sented by the community and to synthesize a preliminary park plan that overlays professional sensibilities with the desires of the park's users. The result was a set of drawings that introduced the programs community members wanted and pointed out the necessary site modifications that would be necessary to implement those programs and create a more inviting, sustainable and historically sympathetic park (Figures 5.2 and Figure 5.3).

MONROE PARK ADVISORY COUNCIL

Throughout the Master Plan process, the members of the Monroe Park Advisory Council (MPAC) have played an important role in representing all of Monroe Park's stakeholders. Prior to the first public meeting, MPAC members introduced the design team to Monroe Park, pointing out its assets and constraints and communicating the community's desires for the future of the park. After the first public meeting, the design team refined the program element locations and specification and developed alternative treatment options for various physical features of the park. Between May and October of 2007, MPAC held a series meetings with the design team and various departments within the City of Richmond to discuss and carefully consider each of the treatment alternatives. After many thoughtful conversations, the members of MPAC reached a consensus on a draft preferred treatment approach. The elements of the park the design team presented to MPAC included:

- Programmed activities & events
- Program & attraction locations
- Vegetation removals & new vegetation
- Pathway configuration
- Paving & hardscape materials
- Perimeter treatment
- Lighting

PUBLIC MEETING #2: PRESENTATION

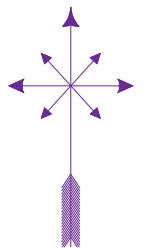
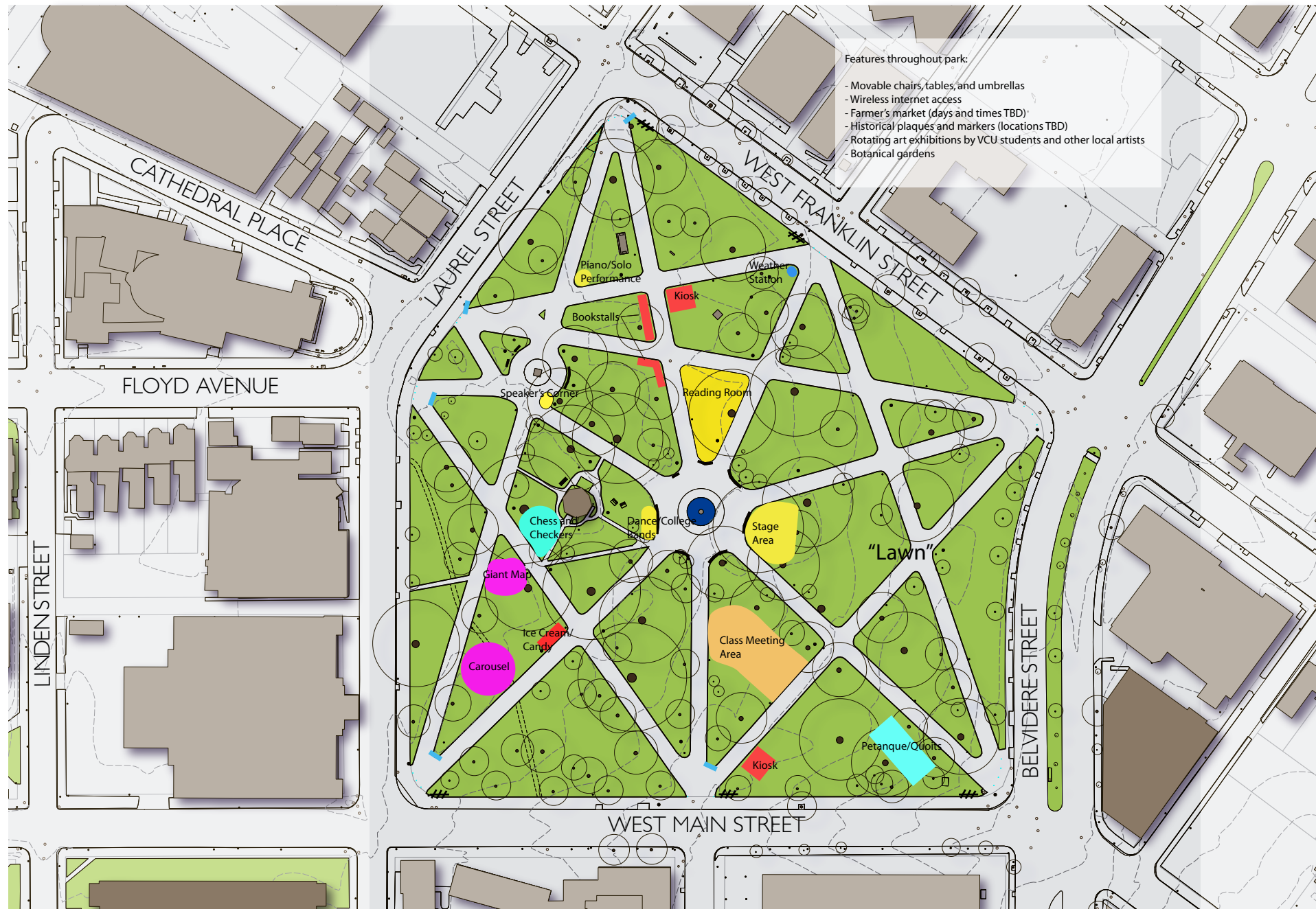
Once MPAC decided upon a draft preferred treatment approach and the design team refined their plans to reflect those decisions, the general public was given another chance to provide input into the Master Plan process. On 18 October, 2007, the design team presented the draft preferred treatment plan to an audience of permanent Richmond residents, VCU students, local business owners and City employees. The plan was generally endorsed by all present.

Preliminary Program Locations

Legend

-  Existing Tree to Remain
-  Turf
-  Walkway
-  Parking Structure
-  Building
-  Fountain
-  Monument/Memorial
-  New Bike Rack
-  New Information Kiosk

Figure 5.2 - Programming locations as proposed by community members

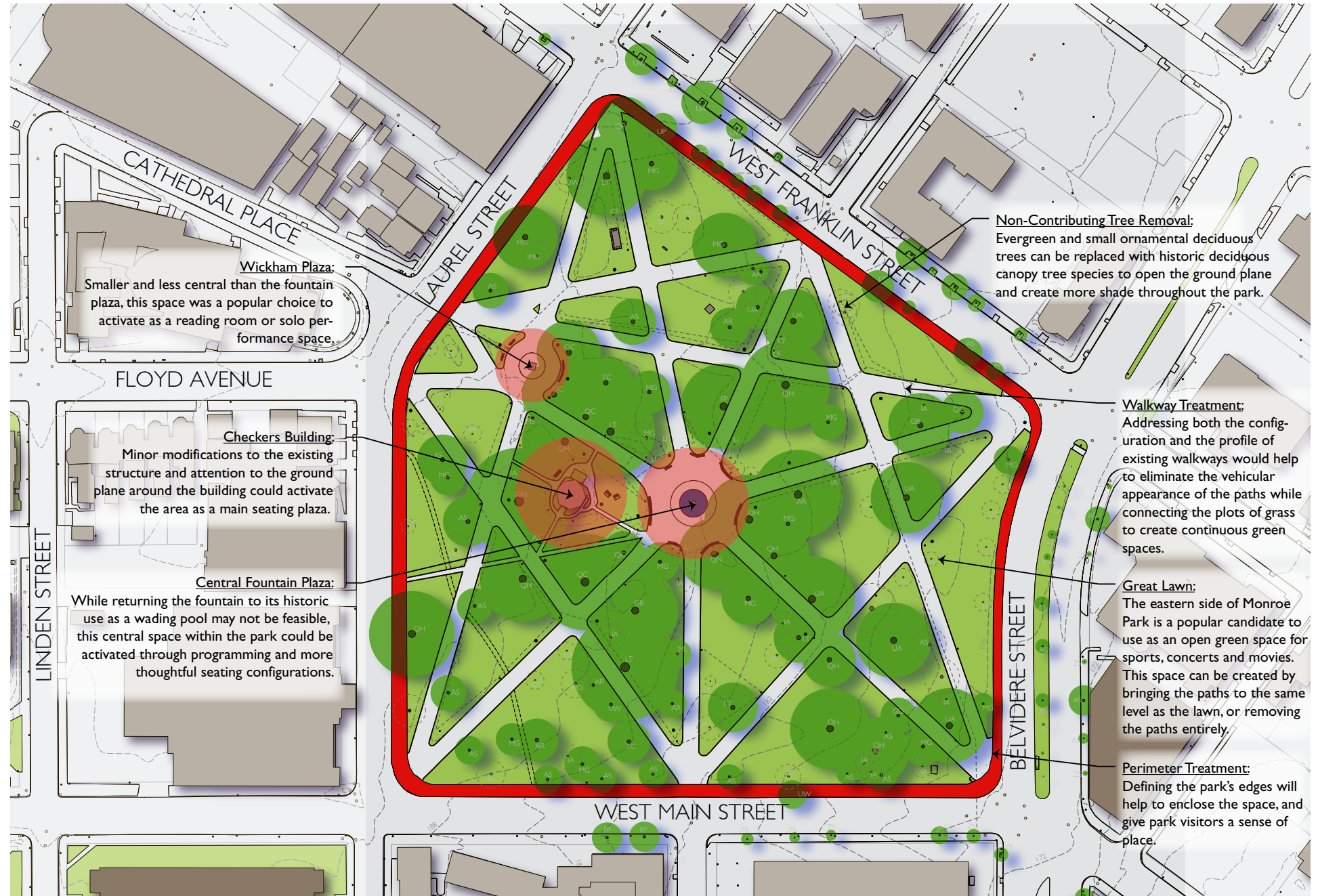
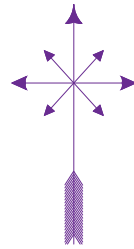


Preliminary Treatment Plan

Legend

- Existing Tree to Remain
- Remove Existing Tree
- Turf
- Walkway
- Parking Structure
- Building
- Fountain
- Monument/Memorial
- Physical Improvement Opportunity

Figure 5.3 - Landscape architectural treatment options



Concept Alternatives

CAPTURING A TARGET “MARKET SHARE”

An emerging art of improving and revitalizing lackluster or downright dangerous public spaces has been refined over the last decade. Using a well-defined set of core principles, professionals within this movement have managed to turn some of the most destitute public spaces into safe, vibrant, urban nodes. These core principles form a template for recommendations for Monroe Park:

Public spaces must fight hard for each visitor, and the more visitors a space draws and retains, the more other potential users view it to be safe and inviting.

To draw these visitors, **a space manager must pay attention to minute details.**

Above all, **owners or managers must insist on high standards.**

To achieve those standards, **public spaces should be privately financed and privately managed.** Managers of city services often are forced to reply to the “squeaky wheel,” providing competent service until the complaining stops and then moving on to the next problem, as the prior problem they improved deteriorates again. Further, downtown areas, with few voting residents, are always fighting an uphill battle for attention at City Hall. As a result, public spaces are better served when privately supported.

To finance a great public space, its developer/manager must have access to **multiple revenue sources.** This avoids periods when short funds lead to deferred maintenance, which sends a visual cue that allows disorder to creep back in.

Managers must **continuously survey their results and adjust their offerings and management tools.** Among the best survey techniques are frequent visitor counts, with special attention paid to female/male ratios. Women tend to be more acutely aware of disorder than men, and throng to spaces that seem completely safe. Ratios of 1:1 indicate great success; dangerous, unpopular spaces tend to yield 1:3 or even 1:4 female/male counts. The ratio of non-homeless users to apparently homeless ones must be at least 75-100:1 to draw female visitors in great numbers.

PROGRAMMING ACTIVITY IN MONROE PARK

In order to capture our target market share, we need programs - both daily and episodic - that appeal to different groups of people: children’s activities, programs aimed at students, amenities for people living near the park and attractions for visitors to adjacent university buildings and religious institutions. The idea is to fill the park with programs that will attract small crowds in early years in order to create publicity that, in turn, will grow small crowds into larger ones through positive press, word-of-mouth and people passing by the park and noticing the activity. Potential programs are listed by category, below.

1. Retail

Kiosks - Kiosks would offer a variety of quick dining options (coffee, pastries, sandwiches, salads) for students and VCU employees at lunchtime as well as other visitors throughout the day, who would eat their meals in the park (Figure 5.4).

Candy and ice cream carts - Carts selling sweets, placed near the carousel (discussed below) will delight children and parents alike. Modeled after those in Tivoli, Italy, they will certainly add to the carousel experience (Figure 5.5).

Greenmarket/French market - Either concept would work along the internal park paths. The greenmarket requires trucks on the scene, whereas the “French markets” run by the Besidoun family in America and France operate under a series of tent-like structures that are easily assembled and disassembled once or twice a week.

Bookstalls - Along the path that currently has a heavy flow of VCU students in the park’s northwest quadrant, booksellers in attractive stalls would draw appreciative crowds, even at off-hours.

2. Music

Stage area - Facing east toward Belvidere Street, an area for setting up a temporary stage for large concerts and other performances would be located to minimize noise that may disturb neighbors and give the audience the best quality sound (Figure 5.6).

Dance music at the fountain - Small dance bands will draw people after work and classes, as they do in similar locations in Tivoli Gardens in Copenhagen, and in some British parks.

College bands - Also located near the fountain, these would be coordinated through the park’s events manager and will concentrate on drawing VCU students into the park by giving them a place for listening to their peers perform.

Figure 5.4 - Food kiosk in Bryant Park, BRV Corp.

Figure 5.5 - Ice Cream Cart in Paris, France, BRV Corp.

Figure 5.6 - Temporary stage set up in Bryant Park, BRV Corp.

Figure 5.7 - Weather station, courtesy Scientifics Online



Piano music - Ragtime and jazz pianists can draw delighted crowds who will sit at moveable chairs and tables and enjoy cold drinks and sandwiches from a nearby kiosk.

3. Information

Historical exhibits - Richmond's residents are intrigued by the City's history, and visitors are curious. Monroe Park in particular has a notable history. Carefully researched, written and designed history panels at key spots in the park would slightly lengthen the "dwell time" of visitors.

Wireless internet access - Now a huge draw in Bryant Park (about 6,000 users a month) and emulated in 25-50 other American cities (including at Monroe Park), wi-fi access costs little and is attractive to sponsors. It keeps visitors aged 18-40 in the park for many extra hours and draws new visitors who need to check their e-mail between classes or appointments.

Weather station - If the read-outs for the public are well designed, this can also intrigue visitors and offer them another unexpected park feature. It also raises the park's profile when readings are announced on local radio or television newscasts (Figure 5.7).

Information Panels - Located at park entrances, these panels will display basic information about the park, including hours of operation, park rules and a park map.

4. Fine Arts & Culture

Rotating art exhibitions - Based on arrangements with VCU and local galleries, frequent display of accessible and appropriate art on the lawn will draw visitors to the park.

Library/reading room - An innovative program in Bryant Park, this draws a different kind of visitor who will be engaged by the changing selection of books, magazines and newspapers on loan.

Book signings & lectures - Held at the reading room, these will benefit from a steady flow of authors on tour. Bryant Park is now hosting 15 to 20 of these per year.

Speaker's corner - Successful at London's Hyde Park and on many university campuses across the United States, it would need some initial publicity to get going, as well as some help from the VCU debate team and others.

5. Children

Carousel - Carousels can find an audience virtually anywhere, and there is no carousel currently in Richmond. Nearby residential

neighborhoods are not required for success, though the proximity of The Fan doesn't hurt. Additionally, adults love to sit nearby and watch (Figure 5.8).

Giant map of Virginia - On the ground and set into "play safe" material, a map of Virginia will be fun and educational for children.

6. Sports & Games

Chess, checkers & backgammon - A concession with game boards, clocks and other needs, placed around the Checkers House would enhance the park's prominence as a site for games. The concessionaire will run simultaneous chess exhibitions, tournaments and visits by well-known experts in each game.

Petanque/quoits - These European (French and English respectively) games of urban parks draw an enthusiastic crowd of onlookers, but may have to be introduced artificially by paying local clubs to play and instruct others. Monroe Park benefits from active petanque and quoits clubs in the area (Figure 5.9). It should also be noted that quoits, an historic game of iron stakes, or "hobs," and steel rings which was a precursor to horseshoes was wildly popular in nineteenth century Richmond.

Bike Racks - The park's perimeter should have plenty of bike racks to facilitate students and others spending time in the park.

7. Other

Class meeting area - This idea takes advantage of wireless internet access and the eagerness of students to stay outside during days with nice weather. The setup, best sited in the southeast quadrant of the park, requires only chairs and tables, and would be coordinated through the park's event manager.

Moveable tables and chairs - These are the fastest and easiest way to turn around a public space. They should be spread throughout the park; both in the paved areas and in the grass plats (Figure 5.10).

Clean, attractive restrooms - Any effort to attract swarms of visitors will require clean restrooms. Further, visitors who are drawn to a space by new food concessions will demand these facilities. Newly designed versions of the street toilets in Europe (made and serviced by three European companies) can add to a space's sense of amenity, especially if the park's existing restrooms are not adequate under ADA regulations to renovate and manage (Figure 5.11).

Pet friendly - Monroe Park should be a place that welcomes pets. Accommodations for pets should include signage allowing leashed pets into the park and pet waste removal stations.

Figure 5.8 - Carousel on the National Mall, approximately the same size as would be appropriate for Monroe Park. Rhodeside & Harwell



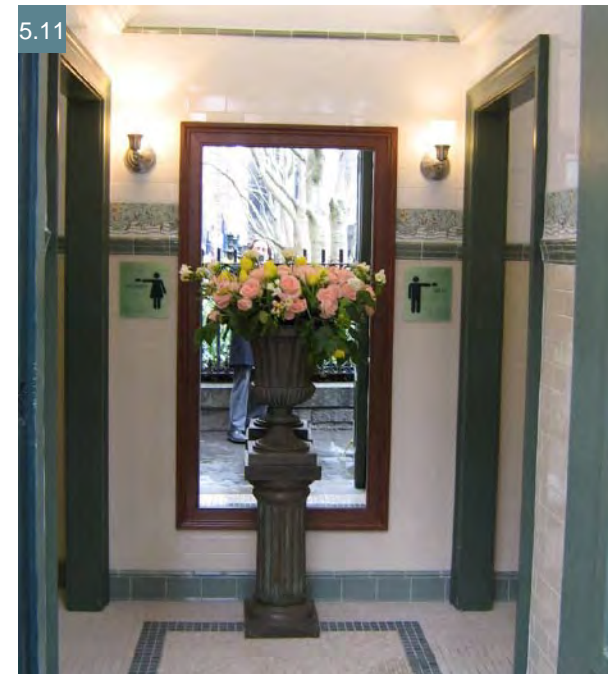
Figure 5.9 - Petanque court in Bryant Park, BRV Corp.



Figure 5.10 - Bryant park users enjoying moveable chairs and tables and the park's free wireless internet access, BRV Corp.



Figure 5.11 - Fresh flowers in Bryant Park's restroom signify care and attention to detail. BRV Corp.



VEGETATION REPLACEMENT

The original plant palette for Monroe Park was based on a simple, yet strong, set of organizing principles: a ground plane of turf accentuated by seasonal color around the central fountain and surrounded by a continuous privet hedge; all of this under the roof of densely planted canopy trees. The major park improvements that took place during 1932-33 and 1951 both had a drastic effect on Cutshaw's original planting concept. The relief efforts that took place between 1932 and 1933 included removing the parterres around the central fountain plaza as well as cutting down five mature trees. Additionally, extensive root pruning and regrading throughout the site probably led to the further demise of trees within the park. Twenty eight new trees were also planted in the park during this time, including many low branching evergreen trees.

David Laird's 1951 redesign of Monroe Park called for the complete removal of the privet hedge, taking with it the distinct separation between sidewalk and park. Laird also introduced new forms of vegetation in the park. Where once there was the distinct dichotomy of groundcover and canopy tree plantings, Laird added shrub and understory layers of vegetation to Monroe Park. The planting of azaleas, crape myrtles, dogwoods and redbuds diminished the contrast and transparency created by multiple levels of vegetation.

In order to return Monroe Park to both a more historically accurate and safer place, all of the small ornamental trees and shrubs, and many of the noncontributing evergreen trees, should be removed from the site (Figure 5.13) and replaced with tree species listed in the 1904 plant inventory. In addition to re-creating the original ground plane/canopy design intent, the lack of lower branching tree species will allow more visibility through the park. Evergreen and small ornamental trees may still be appropriate in carefully selected locations, to provide additional seasonal color to the park.

The 62 trees scheduled for removal include all of the American hollies, crape myrtles, dogwoods and redbuds. Also included in the total is the removal of some of the site's younger magnolias to thin out the dense clusters of evergreen trees. Finally, this tree removal effort provides the opportunity to take down two sugar maples that are already dead or in sharp decline. The removal of these evergreen and small ornamental trees will be offset by the installation of approximately 80 new canopy trees throughout the park. These new trees will consist entirely of species from the 1904 plant inventory (or modern cultivar equivalents) with an emphasis on native plant species.

5.1 Sustainable Concepts: Transplanting Trees

While the Master Plan calls for the removal of approximately 62 trees from the Monroe Park site, many of those trees scheduled for removal are healthy, attractive, viable trees that could potentially be an asset to other parks within the City of Richmond park system.

Tree transplanting is the process by which trees are dug and moved from one site to another. Although this is a fairly common practice among gardeners wishing to move small trees and shrubs from one location to another within one's own yard, technologies and techniques for digging and moving



5.12

larger, mature trees has evolved rapidly in recent years. Although modern tree transplanting techniques still do not guarantee the tree's long term viability, a successfully transplanted tree would result in a larger tree at less cost than the purchase and installation of a new tree of the same size. The risk, in this case, would be losing a tree that was scheduled to be cut down anyway.

In order to transplant many of the trees within Monroe Park, a tree spade (similar to one in Figure 5.13) would be used to dig and transport the tree to its new location. A tree spade has three or four sharp hydraulic blades that stab into the ground, cleanly slicing a tree's roots to create a rootball. The spades then form a bucket so the rootball can be lifted from the ground and transported. Once a new hole for the tree has been dug and prepared with the proper soil additives, the spade places the tree in its new location.

Further study should be conducted to determine whether tree transplanting is a viable alternative to cutting down Monroe Park's existing trees scheduled for removal. If tree spading proves to be cost prohibitive, the City should consider recycling the removed trees as firewood or mulch instead of placing them in a landfill.

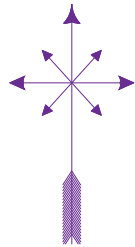
Figure 5.12 - Tree Spade, Courtesy of www.cdaletreemovers.com

Vegetation Removals Plan

Legend

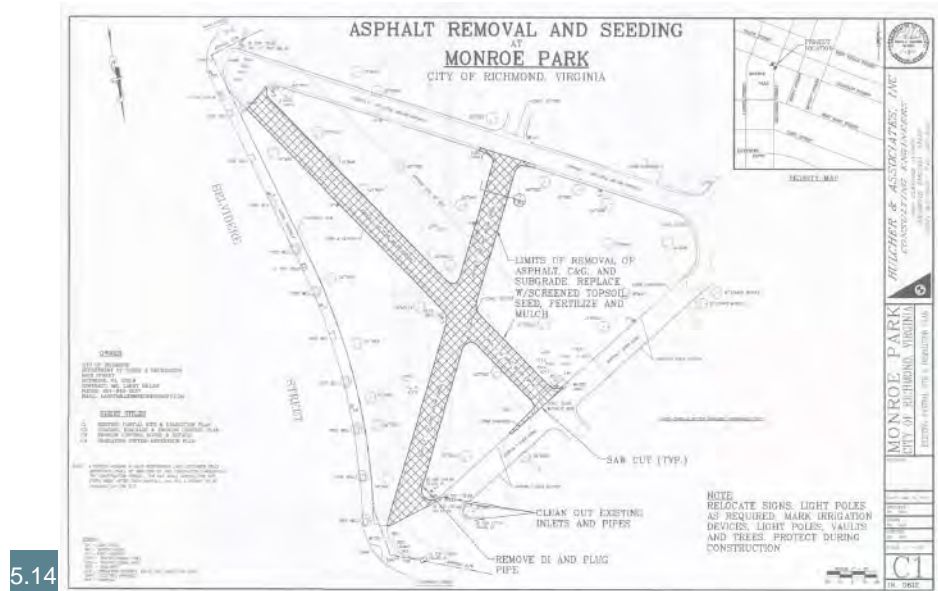
-  Deciduous Canopy Trees to be Removed
-  Evergreen Trees to be Removed
-  Small Ornamental Trees to be Removed
-  Existing Trees to Remain
-  Turf
-  Pavement
-  Seasonal Planting Bed

Figure 5.13 - Vegetation removals plan



PATHWAY CONFIGURATION

The original impetus for this Master Plan was a January, 2007 plan to remove specific paths in order to create a Great Lawn, providing VCU students with much needed additional recreation space (Figure 5.14). Following some review by the City's Department of Community Development, it was determined that further study should be undertaken to see if additional recreation space could be accommodated in Monroe Park without destroying one of the park's contributing resources (its circulation system).

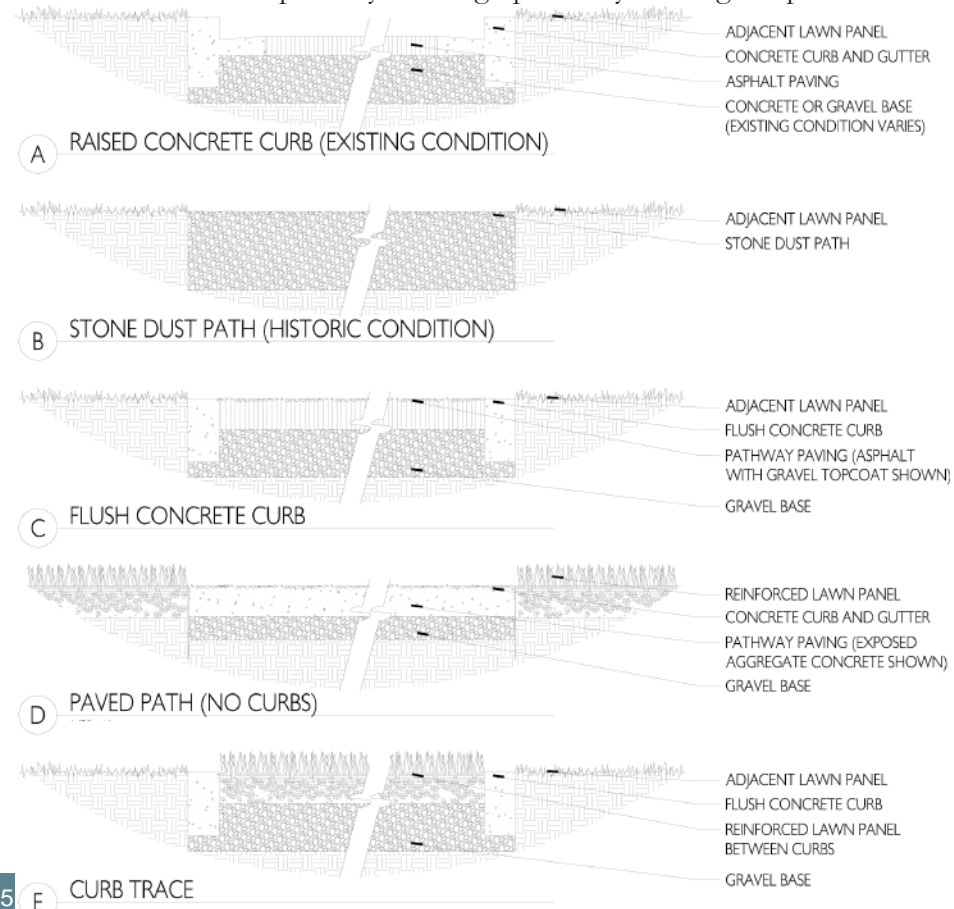


5.14

In May, 2007, the Master Plan team presented five alternatives for treating the existing pathways in order to join some of the grass plats for use as larger playing fields. The site was studied both in plan and in section, and recommendations ranged from altering the vertical arrangement of existing paths to the removal of entire pathways (Figures 5.15-5.20). MPAC chose from the options presented, and their preferred alternative is presented in chapter six of this report.

Each of the five pathway configuration alternatives references a series of proposed pathway section options, showing different possibilities for treating both the walks themselves and the interface between the paved surface and grass plats (Figure 5.15). Section A describes the existing condition of all of the pathways inside Monroe Park: grass plats flush to the top of a concrete curb, which is raised six inches above a concrete gutter and asphalt paving. While the asphalt paving is relatively new, the

vertical relationship of the grass plats, curbs and paved surfaces is the same as it was during the latter half of the Period of significance. Section B shows the historic condition of the pathways as they existed between 1876 and 1898: stone dust pathways butting up directly to the grass plats.



5.15

In addition to considering the existing and historic paving sections as treatment alternatives for the paths in Monroe Park, sections C, D and E represent three newly introduced concepts for treating the paths. Section C proposes keeping the existing granolithic curbs in place and raising the level of pavement to be flush with the top of curb and grass plats. This alternative allows contributing resources (the curbs) to remain intact while also providing a level surface to connect the grass plats into larger playing fields. Section D shows the complete removal of the existing curbs to return the paths to their 1876 to 1898 appearance while using a paving material less susceptible to erosion than the original stone dust that necessitated the granolithic curbs in the first place. Section E is a compromise

Figure 5.14 - Pathway Removal Plan, January, 2007. Courtesy of Hulcher & Associates

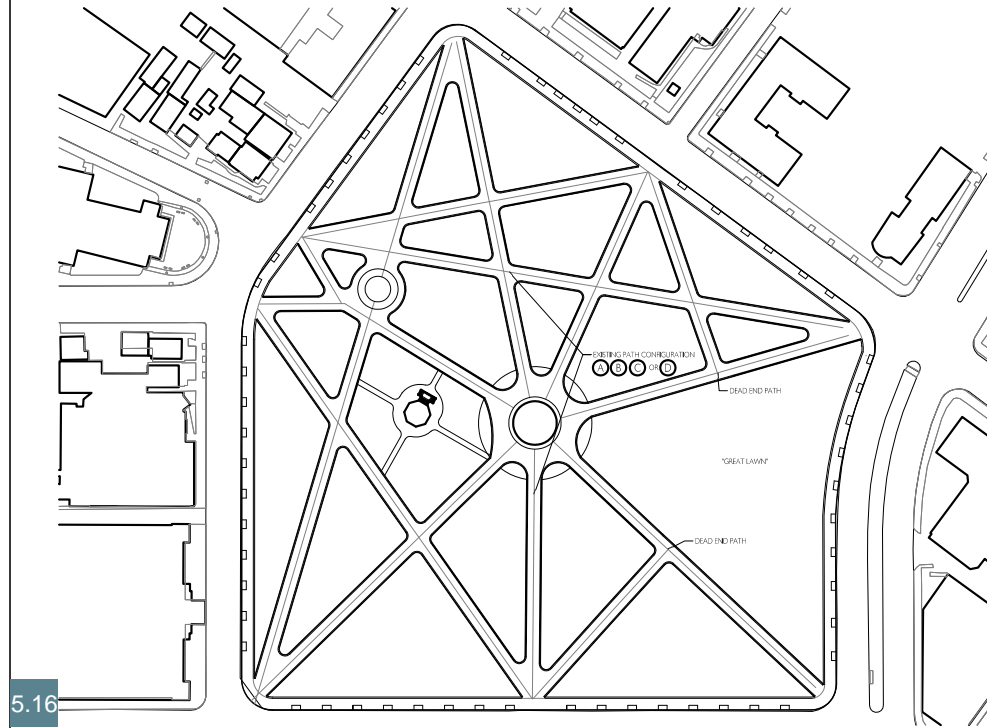
Figure 5.15 - Proposed pathway section options, Rhodeside & Harwell

Figure 5.16 - Pathway Configuration Concept One, Rhodeside & Harwell

Figure 5.17 - Pathway Configuration Concept Two, Rhodeside & Harwell

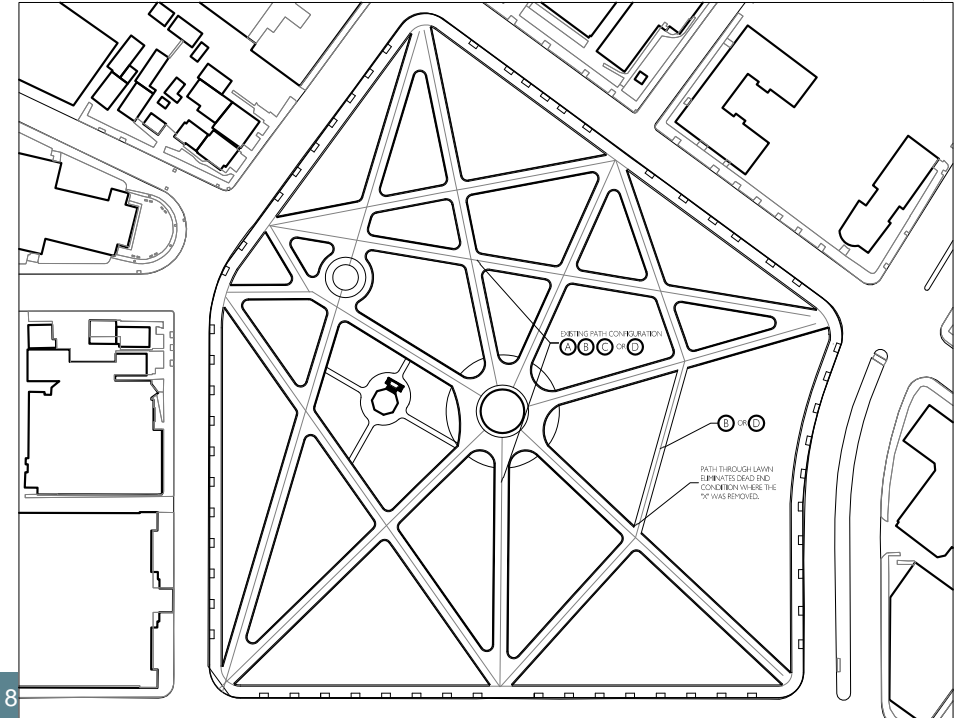
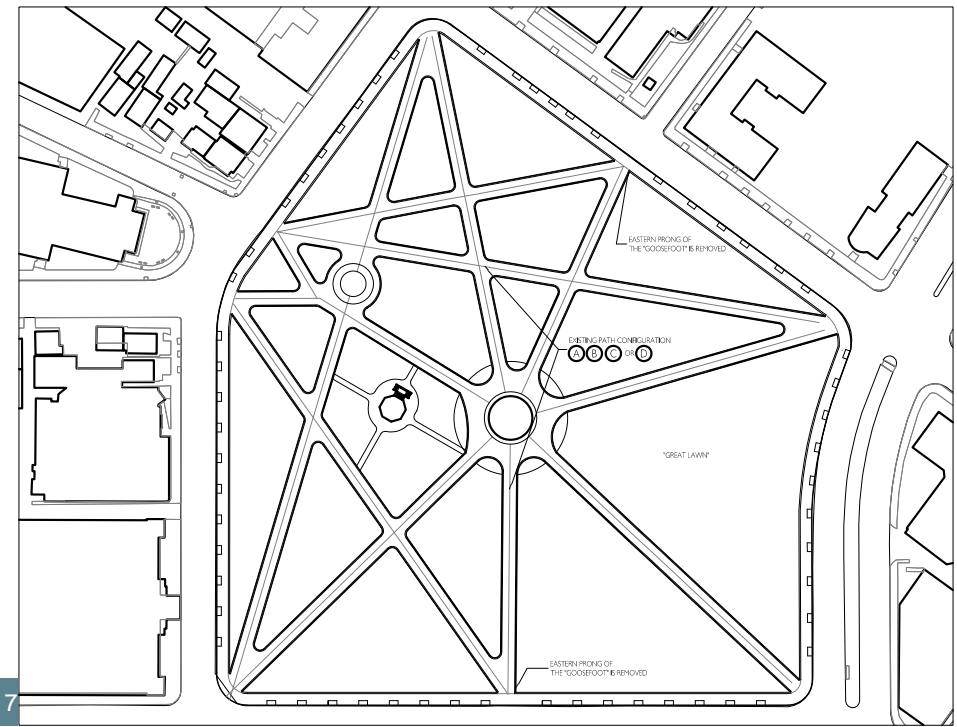
Figure 5.18 - Pathway Configuration Concept Three, Rhodeside & Harwell

between the desire to eliminate existing pathways to connect the grass plats with the desire to retain contributing site elements. While the pathway paving is replaced with turf, the historic curbs are retained as a visual representation of the historic pathway alignment.



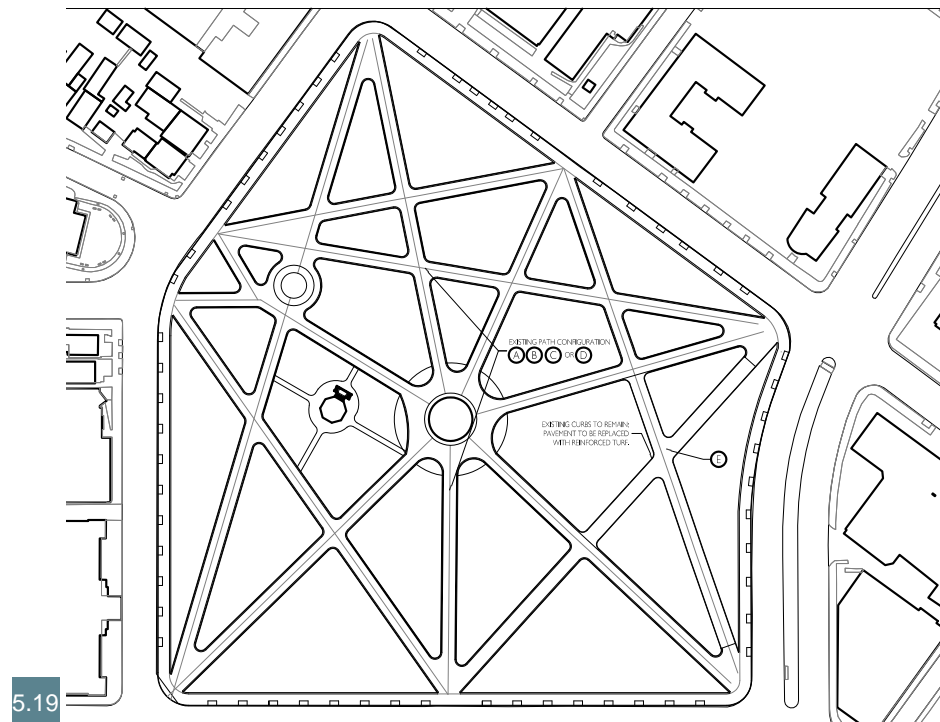
Concept One shows the original proposal put forth by MPAC, removing two intersecting pathways in the eastern sector of the site, creating one large, triangular Great Lawn (Figure 5.16). While this scheme succeeds in creating more green space for VCU students and surrounding residents, it also creates dead end conditions for two of the previously connecting paths and does not accommodate the desire line that will be created since the opening of the VCU School of Engineering East Hall and Snead Hall. The remaining pathways could be constructed using sections A, B, C or D.

Concept Two creates the same large green space shown in concept One while solving the problem of the dead end paths (Figure 5.17). The two paths that create the “X” in the eastern sector of the park have been removed in their entirety, starting from their origins at the mid-block entrances of Main and Franklin streets and ending at the corner entrances. The drawback to concept Two, however, is that it would eliminate two heavily used pathways, causing park users to walk on the grass, creating

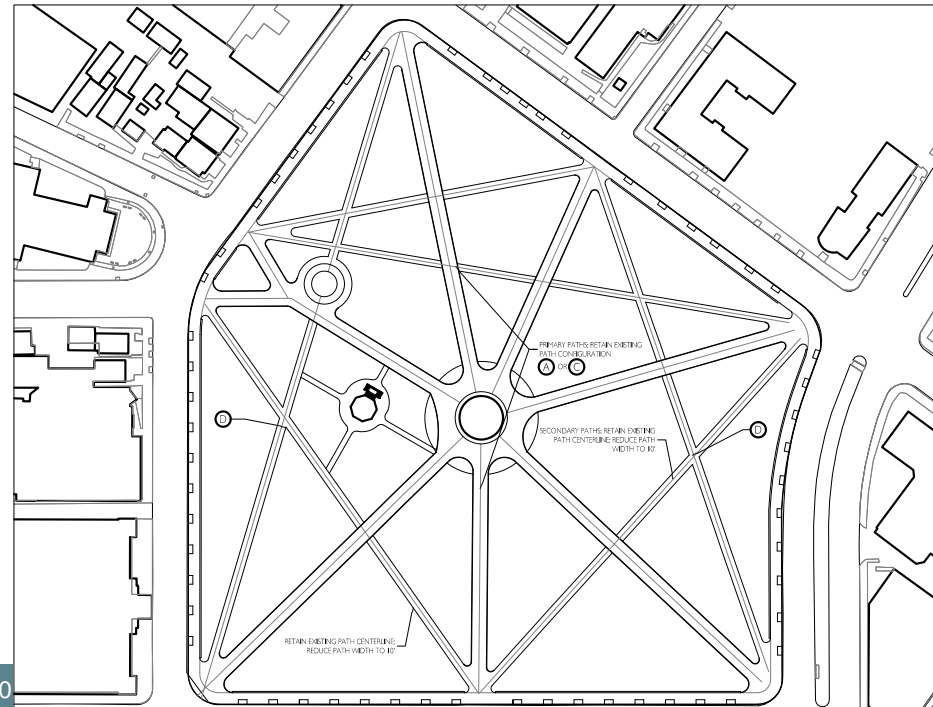


worn patches where walkways once were. Like concept One, sections A, B, C or D could apply to the remaining walkways.

Concept Three resolves the problem of dead end paths posed in concept One while providing minimal pavement in the Great Lawn area (Figure 5.18). This new path alignment gives the appearance of a loop path around the central fountain plaza, which is not the historic intent of the pathway design. Because it is not an historic path location, the new connector path that resolves the removal of the “X” should be paved using a different cross section than the existing, historic paths, possibly Section D.



In order to create an open green space while still respecting the historic configuration of paths, Concept Four proposes to leave the existing curbs intact while replacing the existing pavement in the eastern sector of the park with reinforced turf at the same level as the surrounding grass plots (Figure 5.19). This alternative is entirely reversible, should future plans call for the restoration of the historic path alignments, and the reinforced turf will ensure a consistent grade between the grass plots. The curb trace would be constructed using Section E, while the remaining paths could be paved using sections A, B, C or D.



Concept Five proposes to retain the existing historic path centerlines while introducing the concept of a path hierarchy within the park (Figure 5.20). The paths radiating out from the central fountain plaza will remain wide with curbs (either flush or raised), while the remaining paths will be reduced to a ten foot width, with flush curbs or no curbs. Reducing the secondary path widths will create much more green space throughout the park while reducing the vehicular feel the paths currently have. The primary, radial paths would be paved using section A or C while the secondary paths would be paved using section C or D.

PAVING MATERIALS

Since 1874, Monroe Park has seen at least four different paving materials applied to its pathways, each one with its own advantages and disadvantages. The one constant with regards to paving over the years has been that all of the surfaces within Monroe Park have been of a uniform paving material, as has the entire length of perimeter sidewalk. Consistent with the Period of Significance, this Master Plan recommends the installation of two types of paving material: one for the entirety of the perimeter sidewalk and one for all of the interior paths. While the use of materials from the Period of Significance is preferred, there are some modern adaptations to historic paving materials that make them more viable options.

Figure 5.19 - Pathway Configuration Concept Four, Rhodeside & Harwell

Figure 5.20 - Pathway Configuration Concept Five, Rhodeside & Harwell

Figure 5.21 - Brick pavers in both a basketweave (left) and herringbone (right) pattern, Alexandria, Virginia, Rhodeside & Harwell

Figure 5.22 - Asphalt paving with a chip seal topcoat, Libby Hill Park, Richmond, Virginia, Rhodeside & Harwell

Figure 5.23 - Exposed aggregate concrete paving, West Side Park, Newark, New Jersey, Rhodeside & Harwell

Historically, brick pavers were the sidewalk paving material of choice in Richmond (Figure 5.21). They are durable, easy to install, and replaceable, should utility work need to be done under the sidewalk. In response to the increasing amount of brick paving along sidewalks surrounding Monroe Park, brick paving is the recommended paving material for the perimeter sidewalk.



5.21

The current paving material on Monroe Park's pathways is asphalt. While durable and inexpensive, the current paths appear to be geared more toward automobiles than they do pedestrians. A simple alternative would be to add a chip seal topcoat to the existing asphalt paving by resurfacing the walks and using a pneumatic roller to roll crushed aggregate into the



5.22

finished surface while it is still hot (Figure 5.22). The result is a surface that appears similar to gravel with a much lower rate of erosion during heavy storms than gravel. While more durable than gravel, a chip seal topcoat does require regular maintenance to prevent the aggregate coming loose and washing away completely.

While considerably more expensive than asphalt, exposed aggregate concrete is more durable and provides a similar gravel-like appearance with very little regular maintenance (Figure 5.23). Installation in large quantities is difficult, however, as two batches of concrete rarely turn out to be identical.



5.23

Highly compactible, inexpensive and easily installed, stone dust is an excellent paving material that also relates to the Period of Significance (Figure 5.24). When installed over an aggregate base, this finely ground stone surfacing is porous and requires little effort to remove, should there be a need to replace a paved area with turf. One significant drawback to stone dust paving, however, is the amount of maintenance required for it to retain its appearance (Figure 5.25). The pathways will need to be replenished after erosion caused by heavy rainstorms. Additionally, the stone dust will need to be raked regularly to keep the paths smooth and free of debris. While maintenance must occur more often on stone dust than it would on brick, asphalt or concrete paving, the effort, material and time required for each maintenance incident is far less than with the other paving materials.

5.2 Sustainable Concepts: Local Materials

When specifying materials for Monroe Park, one major consideration to take into account is the availability of local materials. The Richmond area is rich with manufacturers of construction materials that would be appropriate for use within Monroe Park. Additionally, the City of Richmond stockpiles construction materials for recycling and reuse.



5.26

The use of locally produced or stockpiled materials means that they travel a much shorter distance, reducing the amount of energy it takes to get them from the factory to the construction site. Besides the environmental benefits, this is advantageous to a project's cost, construction staging and ongoing maintenance. Shorter distances usually result in a reduction in shipping costs and require less lead time for a general contractor to account for when scheduling deliveries for a construction project. Additionally, local materials become much more easily accessible should subsequent maintenance require in-kind replacement of certain site elements.

As an historical hub for industry in the South, many raw materials manufacturers are headquartered or have facilities in and around Richmond. Crushed stone, brick, concrete and iron are just four examples of locally manufactured or processed construction materials in the Richmond area. Additionally, whenever a park or streetscape is demolished or renovated, the City of Richmond collects all of the granite curbing and brick pavers that are in good condition and stockpiles them for reuse in later City projects.



5.24



5.25

Figure 5.24 - Stone dust paving with a solid edge, National Gallery of Art Sculpture Garden, Washington, DC, Rhodeside & Harwell

Figure 5.25 - Stone dust paving without regular maintenance. Note the lack of a clearly defined edge between paving and grass. National Mall, Washington DC, Rhodeside & Harwell

Figure 5.26 - Locally produced crushed stone and brick pavers. Courtesy Luck Stone

Figure 5.27 - Hart Office Building. Washington, DC, Rhodeside & Harwell

Figure 5.28 - Hart Office Building, Washington, DC, Rhodeside & Harwell

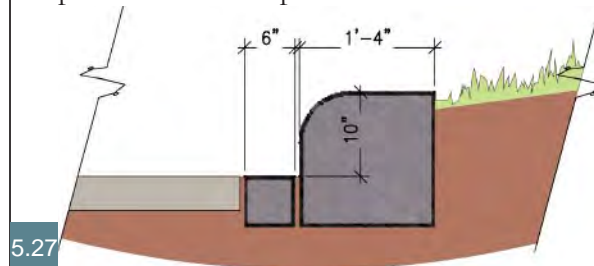
Figure 5.29 - Smithsonian National Museum of the American Indian, Washington, DC, Rhodeside & Harwell

Figure 5.30 - Bartholdi Park, Washington, DC, Rhodeside & Harwell

Figure 5.31 - Hirshorn Museum of Modern Art, Washington, DC Rhodeside & Harwell

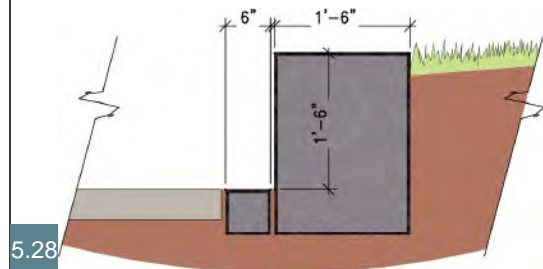
PERIMETER TREATMENT

Choosing a perimeter treatment that strikes a balance between a feeling of safety and enclosure while inside the park and an inviting appearance while outside the park is a difficult challenge. The benefits of such a treatment, however, create a space that is at once inviting, secure and attractive. Since the 1951 removal of the privet hedge from Monroe Park's perimeter, there has been nothing to delineate the edge of the park from the surrounding sidewalk. Reinstalling a hedge of some sort around the park's perimeter will once again prove to be a maintenance issue and a security risk, while installing a fence would be a complete departure from the Period of Significance. Instead, the raised curbs of the site's pathways serve as the inspiration for installing a tall curb or low seatwall around the site's perimeter. The Master Plan team studied various tall curbs or low seat walls and presented seven options:



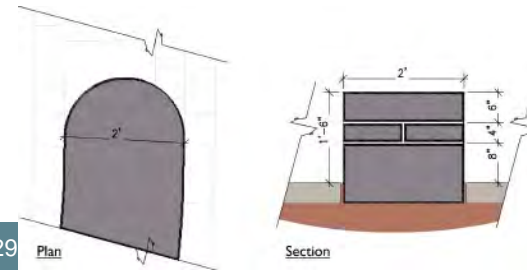
5.27

Rolled Curb: The height of this curb is such that it could double as a seat wall, but it's also comfortable to step over. The outside edge is rounded to create a softer vertical transition (Figure 5.27).



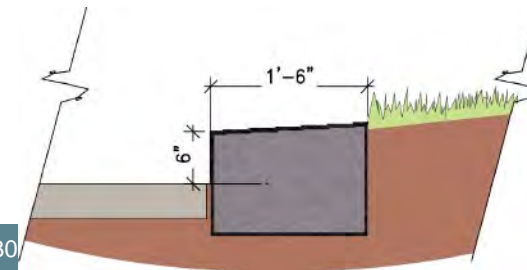
5.28

Seat Wall: As it is too high to comfortably step over, this feature functions as a seat wall, preventing access to the planted areas behind it. The hard corner is prone to damage from skateboards (Figure 5.28).



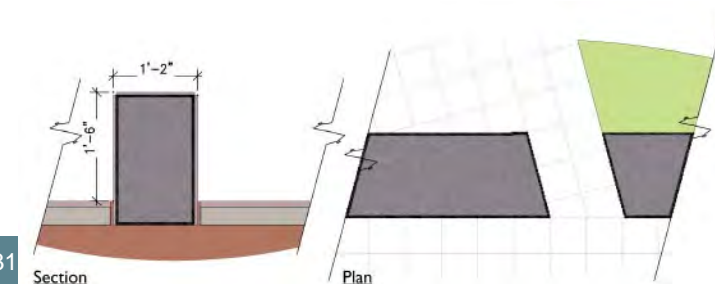
5.29

Curved Seat Wall: This seat wall is designed to be a vertical extension of the site's paving pattern. The freestanding wall terminates in a graceful curve that prevents some damage from skateboarders and allows people to sit on either side of it (Figure 5.29).



5.30

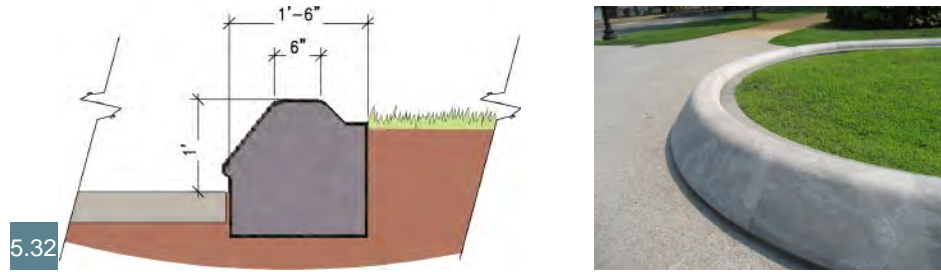
Wide Curb: The height of this curb is the standard six inches, however it is three times the width of a standard curb (18 inches). The result is a very dramatic separation of spaces between the sidewalk and the park (Figure 5.30).



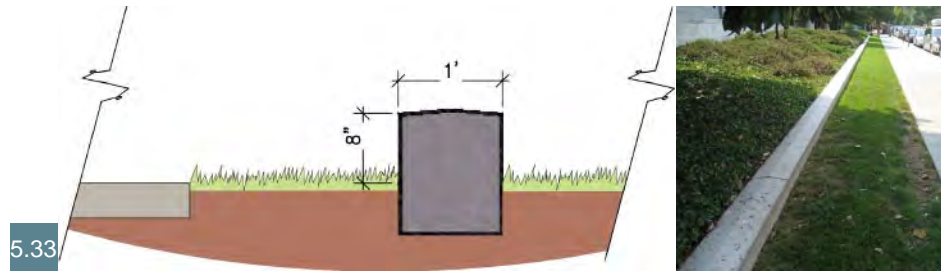
5.31

Broken Seat Wall: This series of freestanding walls provides a buffer between the path and the planted area as well as a transition between the main paths of travel and pathways that lead to seating areas (Figure 5.31).

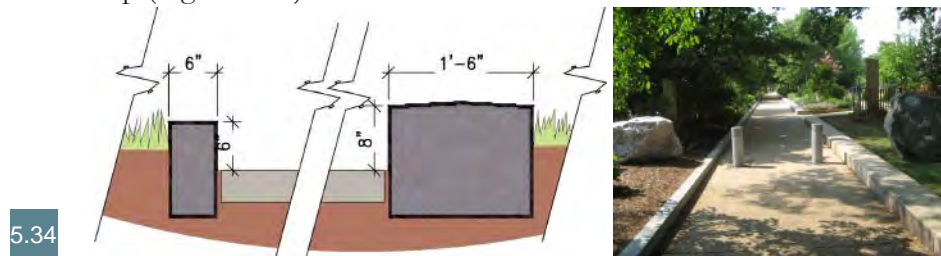




Curved Wall: This wall provides an elegant transition from a paved area to lawn, however it is difficult to sit on. (Figure 5.32).



Wide Curb with Grass Buffer: This feature is slightly higher than a standard curb and about twice as wide, making it a more substantial transition. Additionally, a grass strip between the curb and sidewalk provides a place outside the main path of travel for pedestrians to stop (Figure 5.33).



Curb/Wall Comparison: This pathway is lined on one side by a typical six inch by six inch curb and a low wall on the other side, making the two treatments easy to compare. Additionally, the low wall is peaked at the center to prevent water from pooling atop the wall. (Figure 5.34).

LIGHTING

The first of several opportunities to improve the lighting for Monroe Park will be to correct the deficiencies identified by park visitors and through the Master Plan team’s site inspections.

The introduction of a new family of regularly spaced light poles will contribute significantly to the improvement of uniformity, enabling nighttime visitors to proceed along park paths, confident that people and objects in the distance can be discerned. It is important to note the difference between light level (illuminance, or light falling on a surface) and uniformity (distribution of light over a given surface, in this case, walkway pavement). People do not actually perceive illuminance, but rather luminance, which can be defined as light reflected from a surface or seen directly, as when viewing a luminaire. Because luminance is more difficult to measure, illuminance is usually cited as a preferred metric for light level criteria. Uniformity is typically expressed by means of a maximum- or average-to-minimum light level ratio, in order to prevent areas of insufficient or excessive illuminance. Typically, sidewalks, roadways, and pedestrian paths are lit to obtain a uniformity of not greater than 6:1 average-to-minimum. Illuminance levels can be expressed in a range, with the low value as the minimum light level recommended for a given area. Figure 5.35 compares the relevant recommendations of the Illuminating Engineering Society of North America (IESNA) Recommended Practice 33-99, Lighting for Exterior Environments, and recommendations for parks such as New York City’s Brooklyn Bridge and Hudson River parks. Recommendations for Monroe Park will be further developed as design work progresses.

Area	IESNA RP-33-99	Hudson River Park	Brooklyn Bridge Park	Monroe Park
Park Walkways	.5Fc	1.0 horiz./ 0.5Fc vert.	1-1.2Fc	0.8-1.0Fc
Plazas and Open Areas	0.5Fc	N/A	0.3-0.5Fc (lawns)	Pending
Kiosks	N/A	0.5	1.0 horiz/ 5-8Fc vert.	Pending

The power issues that have plagued the park in recent history will be corrected by the implementation of a new electrical power delivery system. The improvement of this infrastructure will provide the backbone for all ensuing lighting opportunities.

The existing acorn (non-cutoff) glass luminaires can be replaced with fixtures that have more efficient optical distributions, and can reduce the potential for glare by constraining the amount of luminance likely to reach the eye from normal viewing angles.

Figure 5.32 - George Mason Memorial, Washington, DC, Rhodeside & Harwell

Figure 5.33 - Department of Interior Headquarters, Washington, DC, Rhodeside & Harwell

Figure 5.34 - Smithsonian Natural History Museum, Washington, DC, Rhodeside & Harwell

Figure 5.35 - Illuminance criteria comparison, Domingo Gonzalez Associates

Figure 5.36 - Comparison of light distribution provided by a non cutoff light fixture versus a full cutoff light fixture. Domingo Gonzalez Associates

Figure 5.37 - Diagram semi-cutoff, cutoff and full-cutoff fixtures, Domingo Gonzalez Associates

Figure 5.38 - Exterior luminaire source characteristics, Domingo Gonzalez Associates

5.3 Sustainable Concepts: Full Cutoff Site Lighting

Exterior luminaires are classified by distribution and potential for light pollution and light trespass, among other parameters (Light pollution is generally described as light cast directly into the sky or reflected from surfaces on the earth that causes glare, clutter, or sky glow, whereas light trespass usually means unwanted light falling on one's property). This Luminaire



5.36

Classification System defines the percentage of light emitted from a luminaire in all directions, with ten separate zones describing the potential for spill light, trespass, and sky glow. The LCS is a complex system that replaces the more intuitive, but less descriptive, classification of exterior luminaires into four types. Non-cutoff fixtures tend to cast light in all directions, whereas semi-cutoff, cutoff and full cutoff luminaires are shielded or designed to prevent varying degrees of upward light. Please refer to the illustrations following.

Cutoff or full cutoff luminaires can help mitigate the potential for glare from normal viewing angles, as well as preventing wasted or unnecessary light from traveling unhindered into the night sky.



5.37

There is a wide range of light sources capable of delivering energy economies, color temperatures and color rendering attributes necessary to successful park lighting. Light sources should be evaluated with regard to color rendition, color temperature, lamp life, lamp mortality, efficacy (as expressed in lumens per watt), and commercial availability. From the point of view of visual impact, two important concerns are correlated color temperature (CCT) and color rendering index (CRI). In the interest of promoting a positive visual impression of spaces and surfaces, light sources with relatively high CRIs (65 to 85) are strongly recommended. With respect to color temperature, light sources with CCTs below 3000K tend to favor warmer surface colors, while CCTs of 4000K and above favor a cooler color palette.

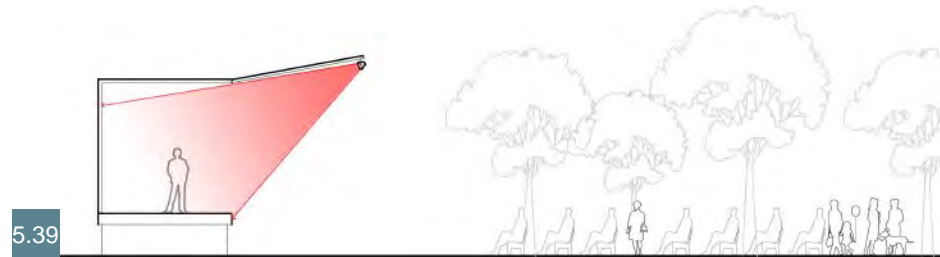
Light Source	Energy Efficacy (lumens per watt)	Lamp Life (hours)	Restrike Time (minutes)	Color Temp. (CCT)	Color Rendition (CRI) (1-100)
High Pressure Sodium (HPS)	90-100	24,000	1-2	2200°K	22
Metal Halide (MH)	80-100	15,000	2-8	3000°K to 4000°K	75-85
Metal Halide Ceramic/Pulse Start	86	24,000	10-15	4000°K	85

5.38

High pressure sodium sources have many excellent characteristics, but tend to render color less well than other appropriate source options. Although slightly less efficient, metal halide sources render colors nearly four times better than high pressure sodium. An improvement in color rendering can contribute to perceived security. If utilized park-wide, metal halide sources

could also serve to define the Park as a unique “urban room” within the city at large. The selection of the preferred park-wide light source should be determined by an on-site comparative mockup contrasting standard and improved-color-rendering HPS sources with 3000K and 4000K CCT metal halide sources, against a backdrop of typical plant material as well as park structure.

The next family of opportunities speaks to the need for lighting to respond to programmed events or areas in which structured activities may take place. For example, lighting should be provided for theatrical performances. One proposal presented during the community forums was to mount adjustable fixtures directly onto the portable stage (Figure 5.39), thus eliminating the need for additional poles throughout the “seating area” that might obscure sight lines. Truck-mounted lighting also saves the expense associated with providing for light pole foundations and power.



Lighting can also be proposed to encourage positive uses, such as nighttime petanque/quits competitions, or at strategic seating areas, or along walkways where retail kiosks may be in use in the early evening, after dark.

Lighting can provide a sense of destination, drawing attention to long and intermediate vistas that aid navigation throughout the park. This improvement can be realized in several ways:

- Provide new lighting, or supplement existing lighting, where new walkways or revised-width paths are being introduced. Where a new lighting layout can be considered, light poles can be located strategically to avoid trees and enhance a “boulevard effect.”
- Lighting can bring focus to the heart of the park: the fountain. At present the fountain is lit, but not brightly enough to acknowledge its central location or its importance within the park’s geometry. The potential for the fountain to draw visitors into the center of the park for rendezvous, or simply as a navigation point, should not be underestimated (Figure 5.40).



Figure 5.39 - Stage mounted lighting for performances, Domingo Gonzalez Associates

Figure 5.40 - Central fountain during the day (Rhodeside & Harwell) and Rendering of proposed concept for nighttime fountain illumination (Domingo Gonzalez Associates).

5.40

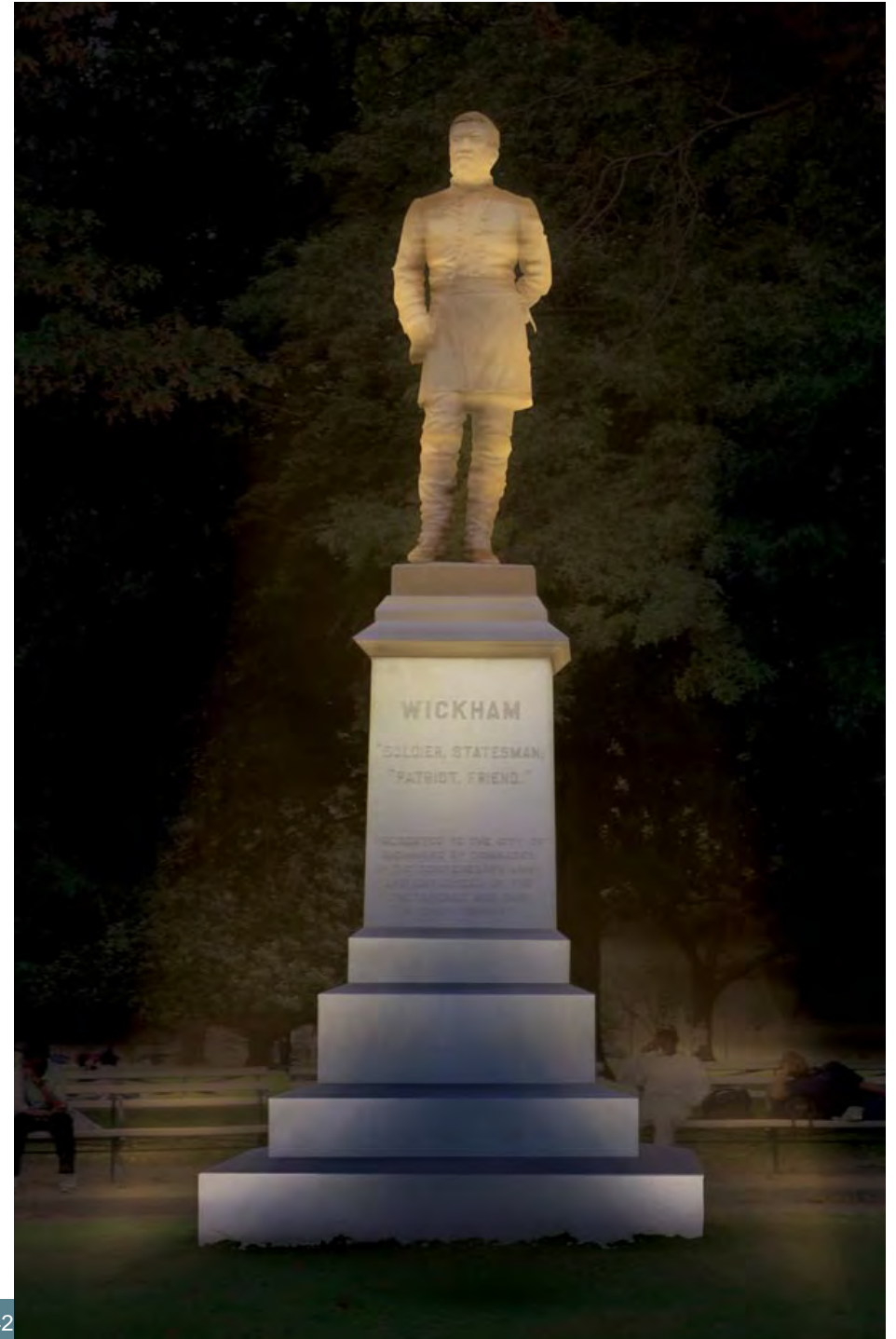
- Light historic statuary, monuments, and features within the park. Once key items throughout the park are lit, these can serve as visual landmarks or destinations: “meet me by the statue of Joseph Bryan,” encouraging foot traffic and aiding in way finding (Figures 5.41 and 5.42).
- Elevated light levels at park entrances, of course, can help to announce the entrances and encourage passersby to step within.

Perhaps one of the greatest opportunities that can be identified as part of this master plan is the extension of the park into the neighborhood at large via lighting. First, the park’s perimeter can be defined with elevated, uniform light levels to increase the sense of transparency and invitation. This would involve the addition of light poles around the park’s perimeter, in addition to lighting emphasis at the entrances.

Figure 5.41 - World War II Memorial during the day and proposed nighttime statue lighting, Domingo Gonzalez Associates.

Figure 5.42 - Wickham Monument during the day and proposed nighttime statue lighting, Domingo Gonzalez Associates.

Secondly, a proposal has been shared with park users and stakeholders that calls for the lighting of adjacent buildings' facades, wherever feasible. Depending upon one's vantage point, the view into the park may be bright, but the view beyond, into the immediate neighborhood, is less so, as many surrounding buildings have no or little light on their prominent vertical surfaces. Enlivening these surfaces can serve to make the park seem safer, more inviting, and establish the park as the definitive "urban room."



The Recommended Treatment Plan strikes a balance between preserving the historic integrity of Monroe Park and updating it to meet the needs of modern-day users. The plan presented in this section is composed of alternatives presented in Chapter Five that best integrate historic preservation with modern recreation needs.



Figure 6.1 - Monroe Park on one of 2007's first warm days. Rhodeside & Harwell

Site-Wide Elements

PERIMETER

Every visitor's experience of Monroe Park begins before one even enters the site. In order to draw more visitors into the park, it is crucial to present an attractive and inviting perimeter. On-street parking, street trees, street lighting, sidewalk paving and edging are all elements that come together to create an attractive streetscape, giving visitors a positive first impression of Monroe Park.

On-street parallel parking spaces should be expanded from their location along Franklin Street to permit-only locations along Laurel and Main streets. Parked cars surrounding the park in as many locations as possible provides an additional buffer between pedestrians on the perimeter sidewalk and the fast moving traffic along the streets that surround Monroe Park. This will allow pedestrians to feel safer and encourage more use of the perimeter sidewalk. To allow motorists to exit their cars without trampling on street trees, a 12 inch wide brick courtesy strip should be installed behind the existing curb (Figure 6.4).

Beyond the courtesy strip, continuous planting strips extend along all sides of the park, with street trees planted at 35 foot intervals and liriopie planted between the street trees to create a continuous facade around the park. Street lights will be placed at regular intervals between the street trees to reinforce this pattern.

The perimeter sidewalk should be paved in brick to match both Richmond's historic paving pattern, and the new trend of brick sidewalk paving that is being installed in sidewalks around the Monroe Park site.

Recommended

Site Plan

Legend


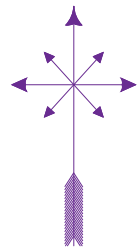
-  Existing Tree
-  Proposed Tree
-  Flower Bed
-  Turf
-  Brick Paving
-  Stone Dust with Flush Concrete Curb
-  Play Surface
-  New/Improved Structure
-  Granite Seat Wall
-  Bollard
-  Light Fixture
-  Moveable Seating

Figure 6.2 -Recommended Site Plan



6.1 Sustainable Concepts: Street Tree Planting

In recent years, a lot of research has been put into techniques to give street trees healthier, longer lives. Solutions ranging from low-tech concepts such as minor changes to planting practices to highly engineered structural elements have found varying degrees of success, and many of them are applicable to Monroe Park.



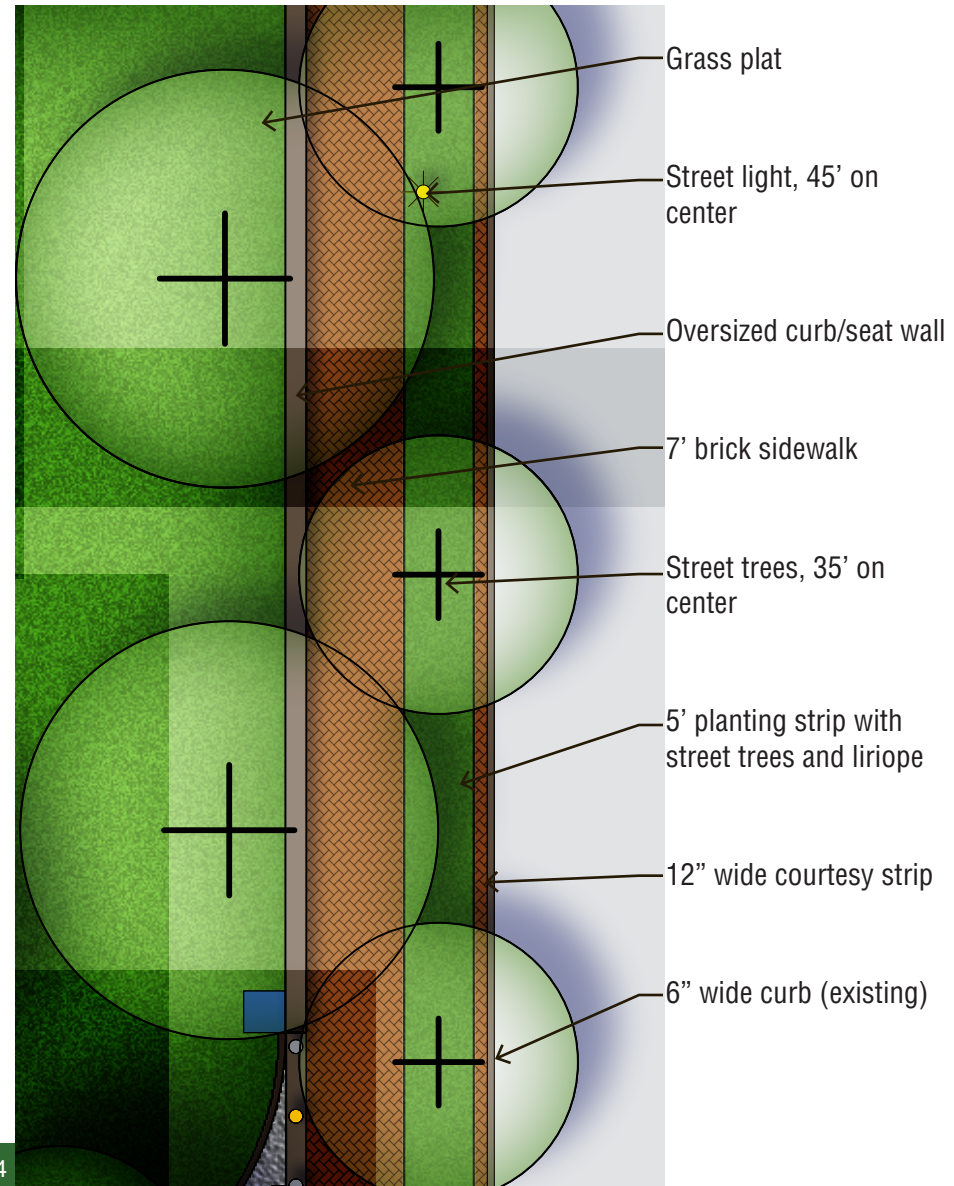
6.3

Normally, street trees are planted at the same level as the surrounding sidewalk and then mulch is piled on top of the root ball, creating a mound around the tree trunk. Simply by planting the tree's crown slightly lower than the level of the sidewalk, the amount of rainwater that tree receives can be greatly increased. Shallow sumps in these lower planting areas will catch and infiltrate stormwater runoff that would otherwise flow directly into the street.

Street trees planted in continuous planting strips have proven to have a healthier life than those planted in isolated tree wells. In order to install a sidewalk, the ground underneath the sidewalk must be compacted to prevent settlement. This compacted soil limits the area for tree roots to expand to the small, unpaved planting pit around the tree. A continuous planting strip allows tree roots to extend the entire length of the street, creating a healthier, more vigorous tree.

Various structural solutions have been developed to allow tree roots to expand beneath sidewalks, often allowing them to grow into adjacent planting areas, such as the grass plats of Monroe Park. Fiberglass cells, like the ones produced by Deep Root (Figure 6.3) provide the structural integrity needed for a sidewalk without compacting the soil under the sidewalk. Additionally, structural soils comprise a mix of planting medium and gravel that can be compacted enough to support a sidewalk while surrounding uncompacted soil for roots to grow.

Dividing the park's perimeter sidewalk and the grass plats is an oversized granite curb that doubles as a seat wall (Figure 6.5). This feature is substantial enough that it marks a clear division between the streetscape and the park's interior, while low enough to allow people to step over it with little difficulty. Additionally, this curb can provide seating for pedestrians looking to stop along the sidewalk who may not necessarily want to enter the park to rest.



6.4

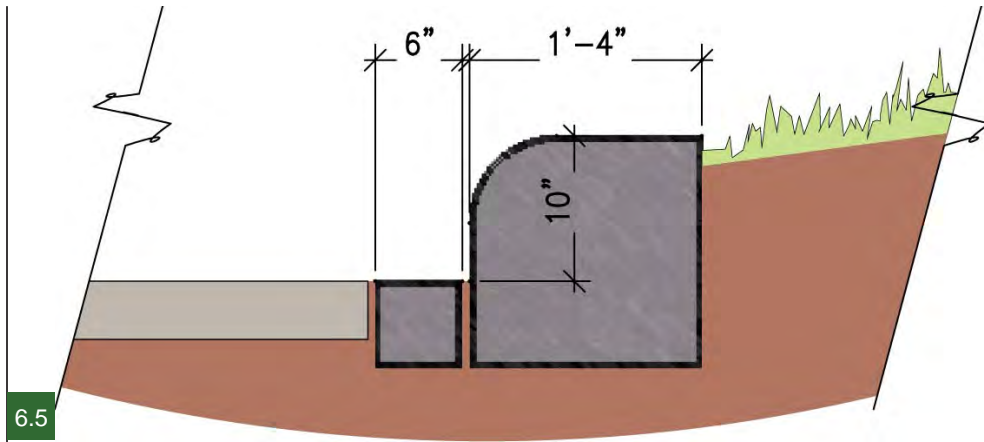
Figure 6.3 - Structural Soil Cell, courtesy Deep Root

Figure 6.4 - Streetscape detail plan, Rhodeside & Harwell

Figure 6.5 - Recommended perimeter treatment: enlarged granite curb to divide perimeter sidewalk from grass plat. Rhodeside & Harwell

Figure 6.6 - Photosimulation showing an existing path (top) and the same path, narrowed and raised to be flush with with the curbs and grass plats. Rhodeside & Harwell

Figure 6.7 - Stone dust paving typical cross section, Rhodeside & Harwell



6.5

PATHWAYS

Monroe Park’s pathway configuration is a key element to the site’s historic integrity. As such, the pathways’ geometry that was laid out during the Period of Significance should remain; their actual construction, however should be updated to meet modern needs. The recommended site plan shows three key components to upgrading the park’s existing pathways:

Raise the grade of the paths to be flush with the tops of curbs: By bringing the paths, curbs and grass plats flush with one another, Monroe Park will once again have a continuous ground plane, much as it was during the Period of Significance. The existing curbs should remain in place to create an edge between the paths and the grass plats. This treatment will also eliminate the tripping hazards created by the curbs, allowing users to run from grass plat to grass plat without worrying about tripping on raised curbs (Figure 6.6).

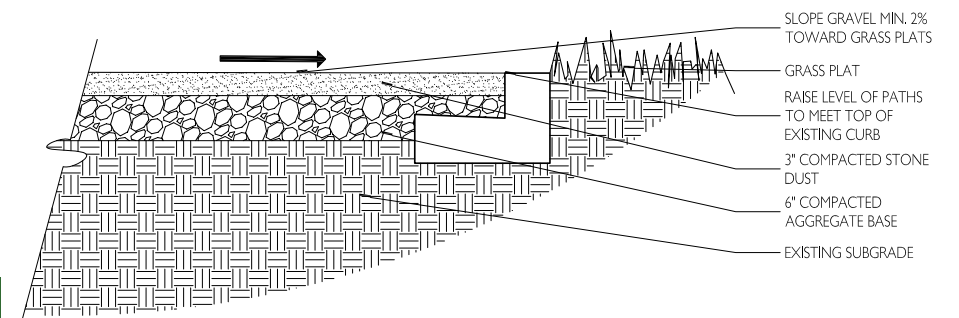
Reinforce the hierarchy of paths by narrowing secondary walkways: Preserve the existing 17 foot curb-to-curb width of the radial paths that serve to anchor Cutshaw’s original design intent. Those paths that connect the entrances to one another should be reduced to a width of ten feet to increase the size of the grass plats and reduce the visual impact of the pathways.

Differentiate the perimeter paths from the interior paths through paving materials: The perimeter walkway should be paved in brick to respond to the brick sidewalks that occur along the streets that surround Monroe Park. Within the park, the pathways should return the paving material used during the Period of Significance: stone dust. Although this will require more maintenance than other

surfaces, a carefully designed cross section that allows for infiltration (Figure 6.7) and an improved drainage plan (discussed later in this chapter) will greatly reduce the erosion problems that plagued the first installation of gravel pathways during the Period of Significance.



6.6



6.7



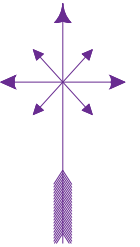
Vegetation

Plan

Legend

-  Existing Tree to Remain
-  Existing Tree to be Removed
-  New Tree
-  Turf
-  Seasonal Plant Bed

Figure 6.8 - Plan showing existing trees to remain, existing trees to be removed and new trees to be planted



VEGETATION

Monroe Park's planting scheme needs to be simplified by returning to the plant palette of the Period of Significance. Additionally, while the introduction of an irrigation system to the park was a step in the right direction, more measures should be taken to ensure the long term health of the vegetation within the park. The following actions should be undertaken to accomplish these two goals (Figure 6.8):

Noncontributing tree removal: Evergreen and small ornamental deciduous trees can be replaced with historic deciduous canopy tree species to open the ground plane and create more shade throughout.

Plant selection: The 1904 tree inventory of Monroe Park should be used as a reference when selecting new trees to plant. Although this plan recommends canopy trees as the primary vegetation type within Monroe Park, it does not preclude the inclusion of some additional evergreen or flowering ornamental tree species in locations that do not disrupt the park's transparency. Recommended species include:

Acer saccharum (sugar maple)
Fagus grandifolia (American beech)
Gymnocladus dioica (Kentucky coffee tree)
Liriodendron tulipifera (tulip poplar)
Quercus alba (white oak)
Quercus phellos (willow oak)
Tilia americana (American linden)
Ulmus americana 'Princeton' (American elm)

Allees: Additional trees lining the walks that radiate from the central plaza will reinforce the geometry of the walkways.

Seasonal plantings: Historically, parterres anchored the corners of the grass plats around the central fountain. Restoring these plantings would help to define the central fountain plaza.

Street trees: A continuous edge can be created around the park's perimeter by installing a regular cadence of trees. Planting these trees in continuous soil panels allows much more space for roots to spread, providing the opportunity for a healthier, longer living street tree. Street trees should be American elms (*Ulmus americana* 'Princeton').

Regular Maintenance: A tree maintenance plan should be implemented by a qualified arborist to regularly inspect, prune and fertilize trees in the park.

GRADING AND DRAINAGE

Monroe Park's current drainage system needs to be improved in order to reduce the amount of runoff flowing into inlets, and increase the amount of water infiltrating the park's soil. Not only will this reduce the burden on the City's already overtaxed storm sewer system, but it will reduce the park's reliance on its irrigation system.

By raising the level of the park's pathways to be flush with the curbs and grass plats, the site's drainage scheme changes from a network of gutters to sheet flow across the entire site. Several changes to both the site's existing storm sewer infrastructure and ground plane treatments will need to be made in response (Figure 6.9).

All of the drain inlets that currently exist along the pathway gutters near the park entrances should be removed and replaced with water quality inlets placed within the grass plats. Water quality inlets are designed with an inlet filter¹ to prevent silt and other debris from clogging a piped system (Figures 6.10 and 6.11). Additionally, four new water quality drain inlets should be installed within the body of the park and connected by perforated pipes (placed parallel to the existing paths) to the inlets near the entrances. The purpose of these new inlets is to capture the runoff earlier within the larger drainage areas and to decrease the time of concentration.

Slotted drains should be used at the entrances, parallel to the granite band that separates the brick paving from the stone dust (Figure 6.12). These drains will catch any runoff coming from the park's pathways before it drains onto the surrounding streets.










Natural inlets should be added along the inside edge of the enlarged curb (Figure 6.13). These inlets will help contain the water within the limits of the park, catching runoff before it goes on to the sidewalk. Perforated pipe may be used to channel the water into existing drainage systems within the park. If soils testing reveals the soils are permeable, the perforated pipe may be eliminated.

Engineered soil panels should replace existing topsoil in areas outside of critical root zones of existing trees, particularly in the Great Lawn. While specifications vary upon a site's existing soils conditions, the ultimate goal of engineered soil is to design a soil and stone mixture that creates a larger rooting volume with increased porosity, nutrient holding capacity and drainage while withstanding compaction. A specific mix for Monroe Park should be designed by a materials engineer following the completion of soils and geotechnical testing.

¹ "Round Inlet Filters" from FlexStorm website [http://flexstorminletfilters.com/index.php?option=com_content&task=view&id=18&Itemid=35]

Drainage Plan

Legend

-  Existing Inlet to be Removed
-  New Inlet
-  New Slotted Drain
-  New Storm Drain Pipe
-  New Perforated Pipe
-  Direction of Flow
-  Area of Engineered Soil
-  Electrical Conduit
-  Electrical Junction Box

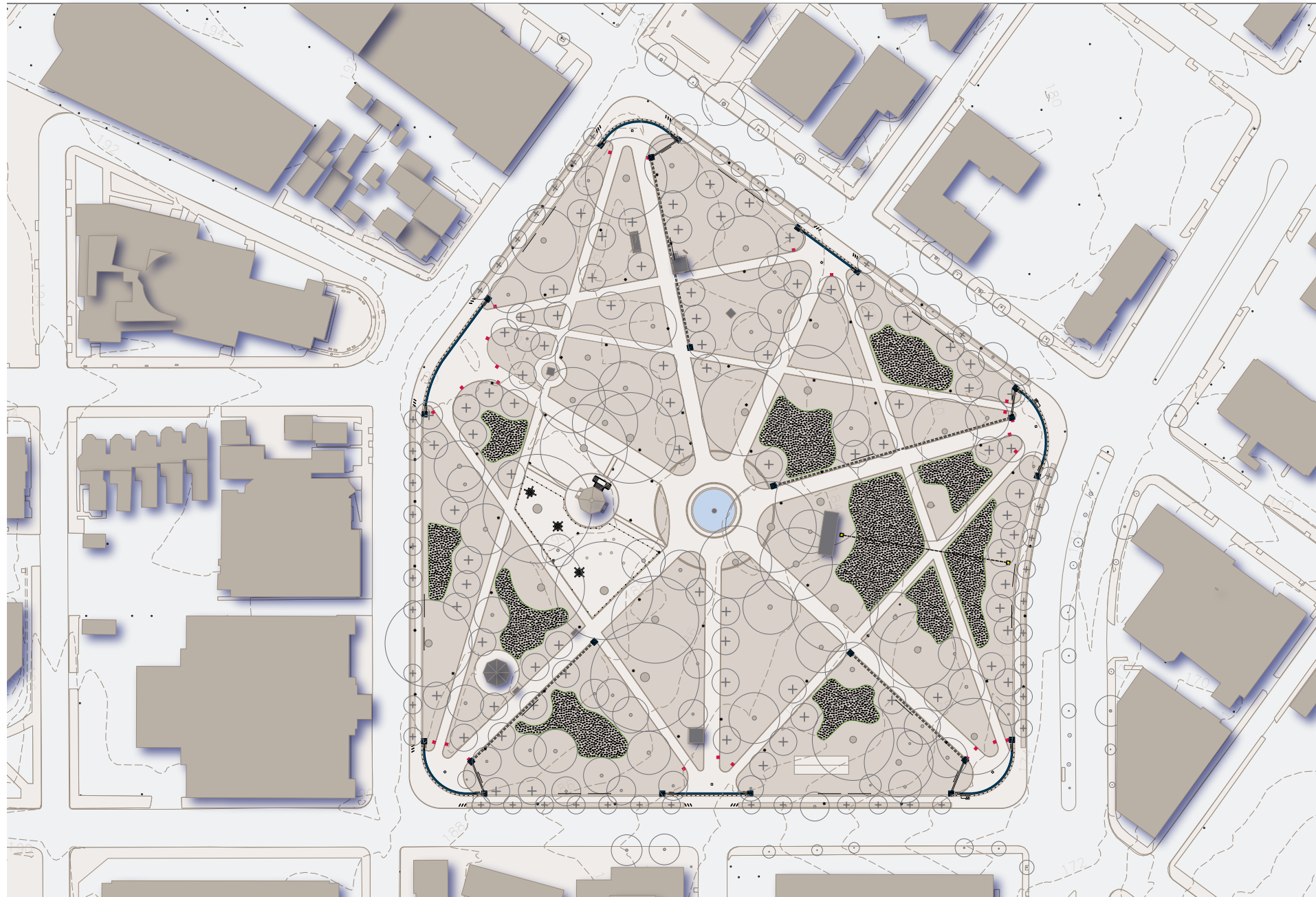


Figure 6.9 Drainage and utility plan

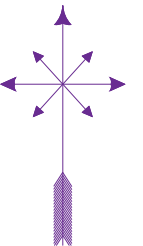


Figure 6.10 - Inlet filter, courtesy FlexStorm



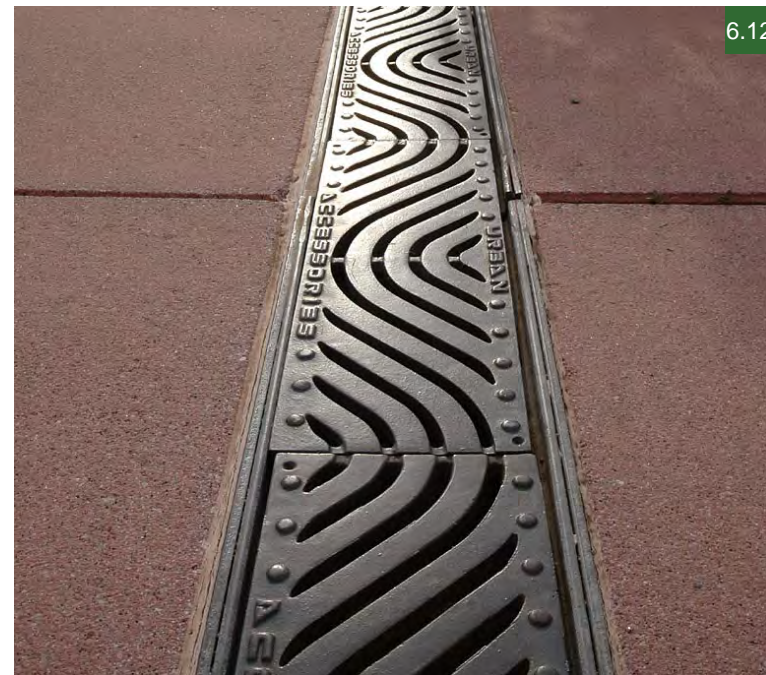
6.10

Figure 6.11 - Approximate size and location relative to sidewalk of new yard inlets. Note, inlet may be round or rectangular. Rhodeside & Harwell



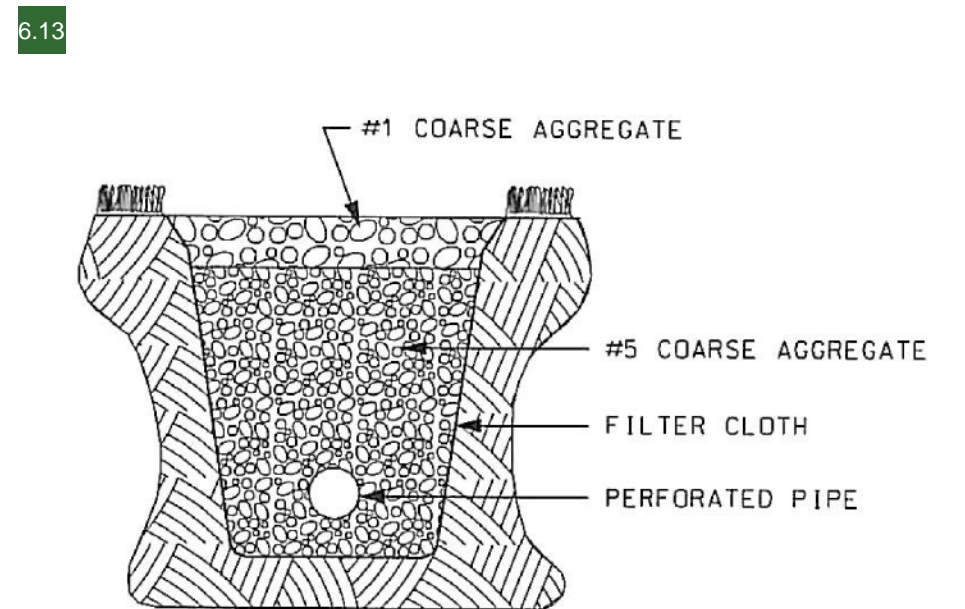
6.11

Figure 6.12 - Decorative slotted drain, Rhodeside & Harwell



6.12

Figure 6.13 - Natural inlet detail, Legion Design



6.13

LIGHTING

Lighting recommendations can be divided into three parts: technology, techniques, and design factors.

1. Technology

Use good color rendering sources that afford a distinctive park identity. This recommendation entails the use of metal halide sources to make Monroe Park visually distinctive from its surrounding neighborhood. It's worth noting that HPS sources have their advantages, not the least of which is a warm color temperature that complements Richmond's many brick buildings. However, HPS sources' ability to render a full range of color, especially at night, is less than that of MH sources. The relative cool quality of MH lamps also tends to render greenery – trees, lawns, and so on – more sympathetically than HPS lamps.

Use luminaire optical systems that aid uniformity and reduce the potential for perceived glare. This recommendation calls for the replacement of all existing non-cutoff luminaires with optically precise fixtures that prevent the casting of light in an upward direction (above 80°).

Use a family of poles, luminaires, and bollards that retain the Park's historic integrity while updating the lighting to respond to current visual requirements. All lighting elements should be sufficiently durable to last for a minimum of fifty years. Figure 6.14 illustrates the recommended aesthetic for a pole and bollard. The bollard is suggested for use at park entrances.

2. Techniques

Locate lighting equipment (poles, bollards, feature lighting) for maximum effectiveness. The park's lighting should be designed to improve uniformity and to increase vertical illuminance – light on faces and the vertical surfaces of park features – without causing high-angle glare or unwanted upward light. Lighting should reinforce circulation and encourage passive recreation (Figures 6.15 and 6.16).

Enhance long and intermediate vistas via lit destinations. Statue, monument, fountain, kiosk and court lighting are all part of this recommendation (Figure 6.17). Consideration should be given to a park-wide lighting control system that not only regulates lighting on a day-to-night continuum, but also allows for feature lighting to respond to seasonal variations. For example, pole and bollard lighting along walkways and at entrances might remain energized from dawn to dusk

for reasons of safety and perceived security, but lighting designed to enliven the fountain might be turned off in cold weather months should the water feature be converted to a winter display. Many opportunities exist for variability in programming; in fact, lighting control decisions can be made on an ongoing basis as park needs might warrant, should a controls system be provided.

Increase the visual permeability of the park. This recommendation encompasses the lighting of the park's perimeter sidewalk and includes the addition of lighting of neighborhood buildings' facades, at a future date.

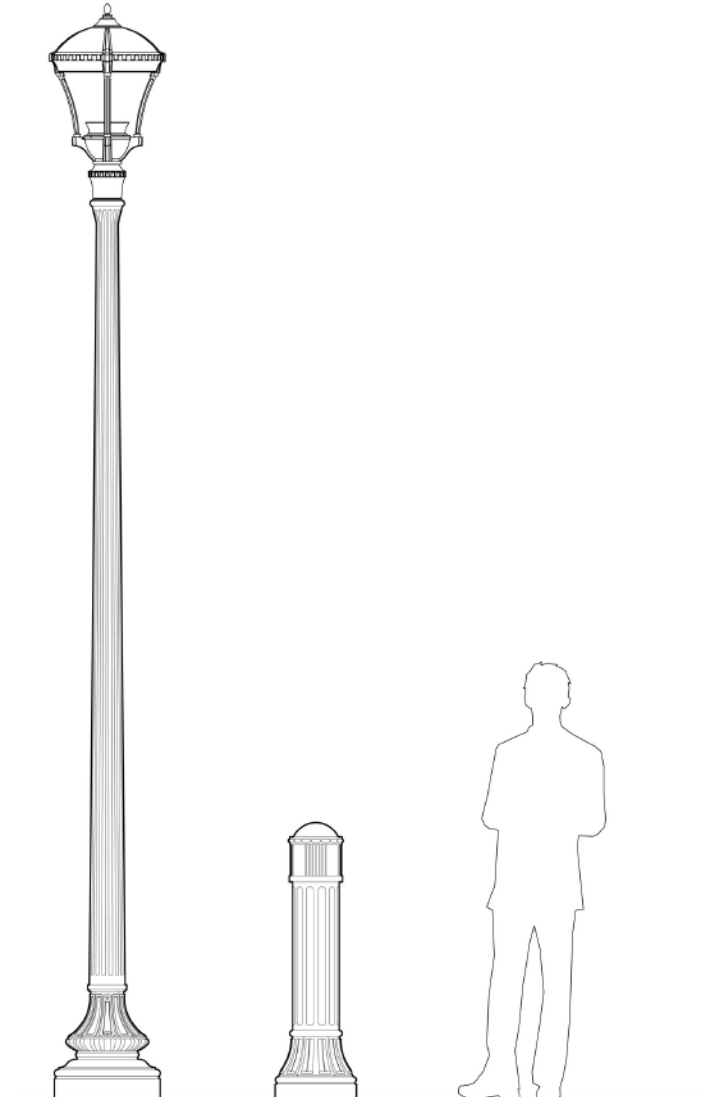
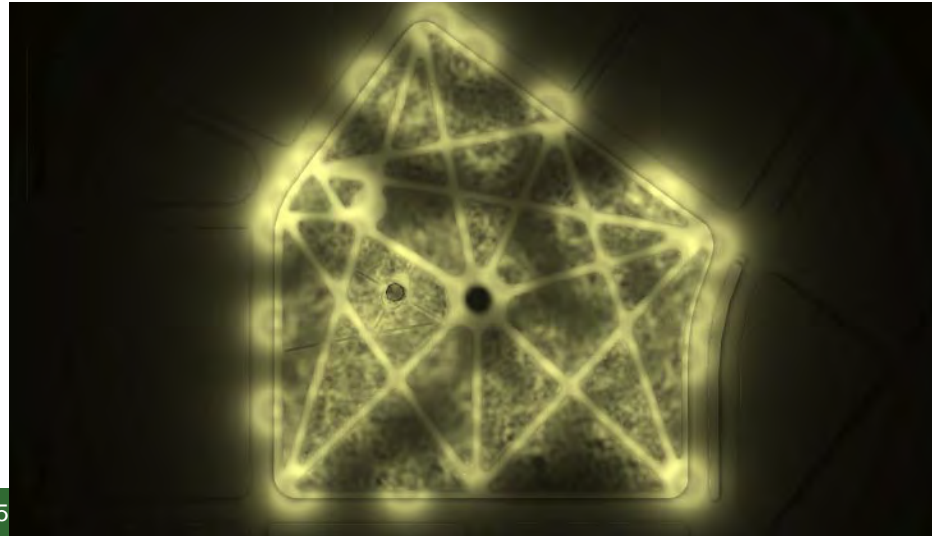


Figure 6.14 - Recommended light pole and lit bollard, Domingo Gonzalez Associates

Figure 6.15 - Existing lighting calculation rendering image showing relative extent of light distribution, Domingo Gonzalez Associates

Figure 6.16 - Proposed lighting calculation rendering image showing relative extent of light distribution using MH sources, Domingo Gonzalez Associates



6.15



6.16

4. Design Factors

Safety. Specifically, this principle summarizes the improvement in park walkway lighting levels, both measured and perceived, with an emphasis on vertical brightness; the enhancement of visual acuity via the use of better color rendering sources (such as metal halide or improved-color HPS), and enhancing the sense of visual transparency through and throughout the park. Safety considerations include:

- Perceived safety and sense of security for park visitors and employees
- Visual clarity and orientation

- Horizontal and vertical illuminance requirements
- Concerns for vandalism

Economy. Capital cost can be reduced wherever existing pole locations (footings) can be re-used, pending a thorough inspection of existing foundations. In the event that walkways are revised or narrowed to preclude this possibility, operational (maintenance) costs can be realized by the utilization of energy efficient, long-life sources, such as the 24,000 hour (average rated life) of Philips' pulse-start ceramic MH lamps. Operational cost can also be acknowledged by the selection of durable cast iron poles and bollards to ensure their usability long into the future. Economic considerations include:

- Initial capital cost and life cycle parameters
- Energy efficiency, sustainability principles and opportunities for park-wide controls
- Coordination with signage and identity programs
- Operations and maintenance
- Standard of durability and standardization of lighting equipment

Drama. Drama can be realized through the creation of a singular park identity by means of a consistent, distinctive light pole selection. Appropriate contrast is afforded by highlighting key historic elements such as monuments and the central fountain. Incorporation of seasonal or holiday lighting can lend drama and be as simple (and cost-effective) as the addition of outlets at the base of strategically-selected trees or structures. Reinforcement of the sense of the park's center by selective tree uplighting can also provide a sense of appropriate contrast. Emphasis at perimeter facades is a powerful concept, addressing safety as well as drama, and acknowledging the park, via lighting, as a key attractor in Richmond at large. Dramatic considerations include:

- Contrast in the visual field as a dynamic aspect of lighting
- Variety and vitality
- Emphasis at entrances and park features
- Lit destination
- Integration with public art, retail and advertising
- The revelation of the landscape in a sympathetic, historically responsive manner

Site Lighting Plan

Legend







-  Post Mounted Light
-  Lit Monument
-  Lit Structure
-  Uplight Tree
-  Entrance Lighting
-  Building Lighting

Figure 6.17 - Recommended lighting plan

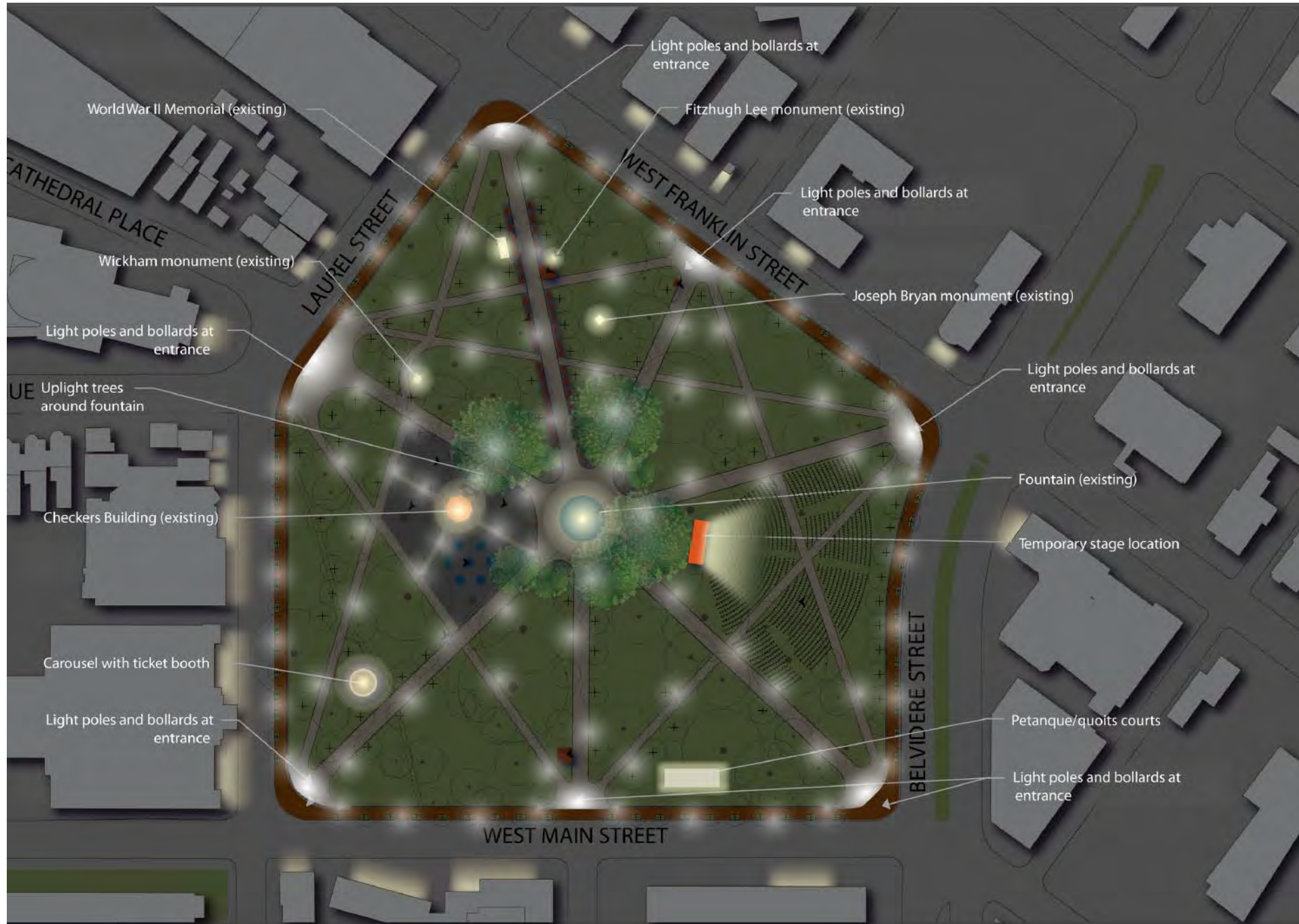
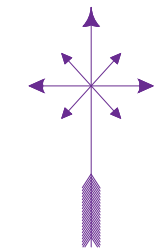
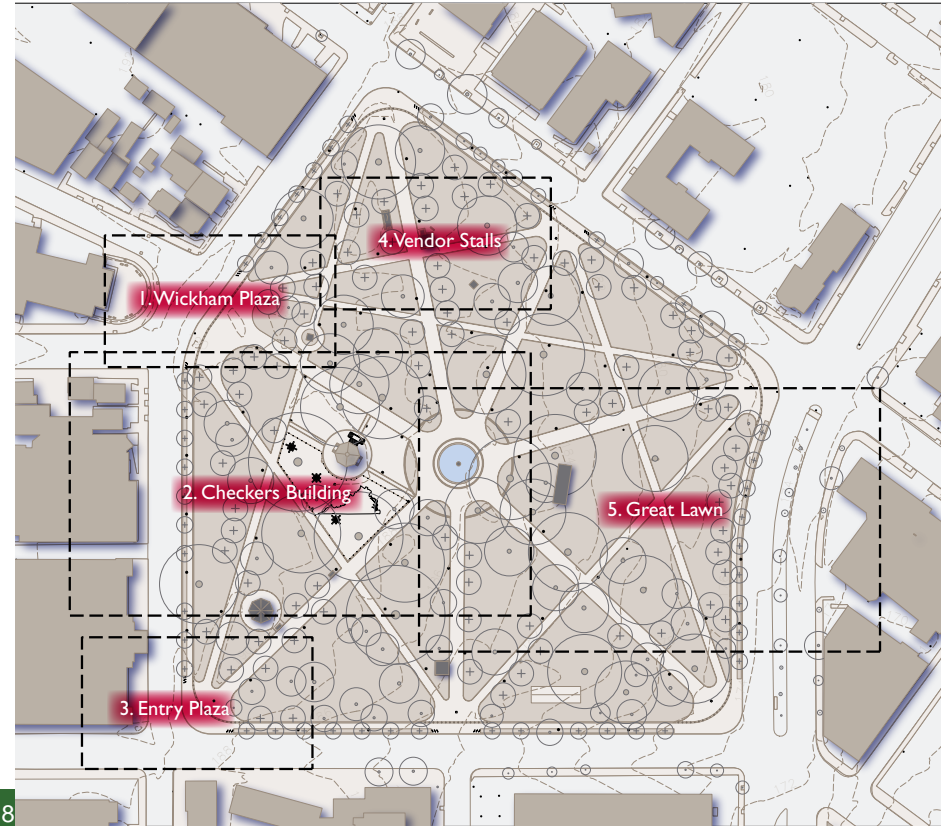


Figure 6.18 - Detail plan key

Figure 6.19 - View from Wickham Monument to the Cathedral of the Sacred Heart, Rhodeside & Harwell

Detail Plans



6.18

WICKHAM PLAZA

The area immediately around General Wickham's statue is the only place where major realignment of existing pathways is required under this Master Plan. The realignment simplifies the park entrance here and reinforces the visual connection between the Wickham Monument and the Cathedral of the Sacred Heart (Figure 6.19). An enlarged entrance plaza here accommodates the irregular angles at which the park's pathways terminate; however, the use of uniform paving materials, furnishings and lighting at all of the entrances will help make this unusual geometry less conspicuous. Canopy trees are carefully placed around the Wickham Monument to provide shade to the area but not to impact the reciprocity of views between the statue and the Cathedral of the Sacred Heart. Immediately around Wickham Monument is a small plaza that might serve as a "speaker's corner" or a small performance area for musicians (Figure 6.20).



6.19








TYPICAL ENTRY PLAZA

All seven of Monroe Park's entrances will receive a uniform treatment to give the park a distinct, unified identity (Figure 6.21). A granite paver band will serve as a transition from the brick paving of the perimeter sidewalk to the stone dust of the park's interior paths (Figure 6.22). This band will be the same width and material as the enlarged curb that separates the grass plats from the perimeter sidewalk to create a continuous line all the way around the park. Centered atop the granite band, bollards will be spaced approximately five feet apart across each entrance to prevent vehicles from entering (Figure 6.23). The mid-block park entrances along both Main Street and Franklin Street will be emergency entrances for the park. These entrances will each include removable bollards to allow emergency and maintenance vehicles into the park. A slot drain lines the inside edge of every granite band to collect stormwater before it flows onto the street. Beyond the row of bollards, the grass plats and goose feet have been set into the park to form a small plaza at each entrance.

In addition to consistent ground plane treatments, each of the park entrances will host a uniform set of furnishings. Simple inverted "U" shaped bicycle racks will be placed on the perimeter sidewalk at either side of each park entrance (Figure 6.24). Additionally, an information kiosk containing a park map, list of events and interpretative information will be placed in the center of each entry plaza (Figure 6.25).

Wickham Plaza Plan

Legend

-  Existing Tree
-  Proposed Tree
-  Turf
-  Brick Paving
-  Stone Dust with Flush Concrete Curb
-  Cast-In-Place Concrete Paving
-  New/Improved Structure
- Granite Seat Wall
- Bollard
- Light Fixture
- Moveable Seating
- Information Kiosk
- Bicycle Rack

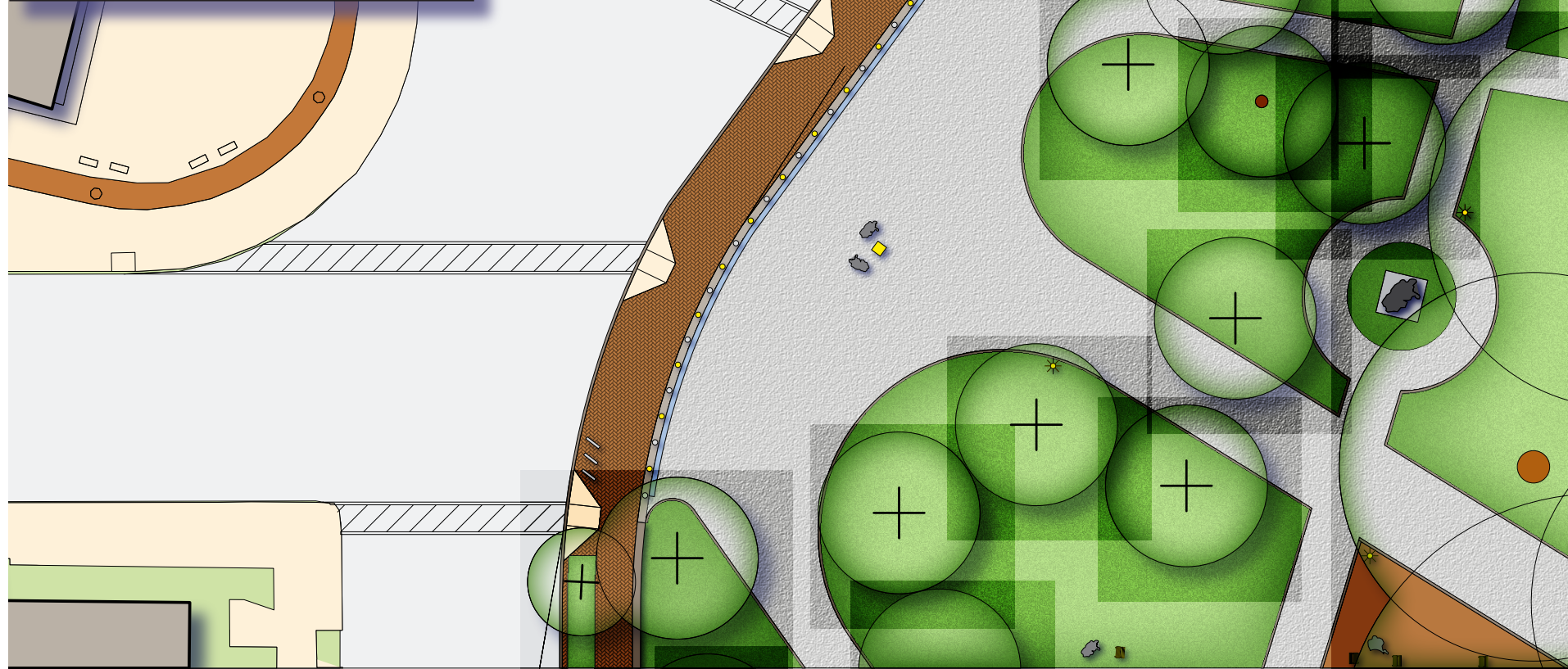
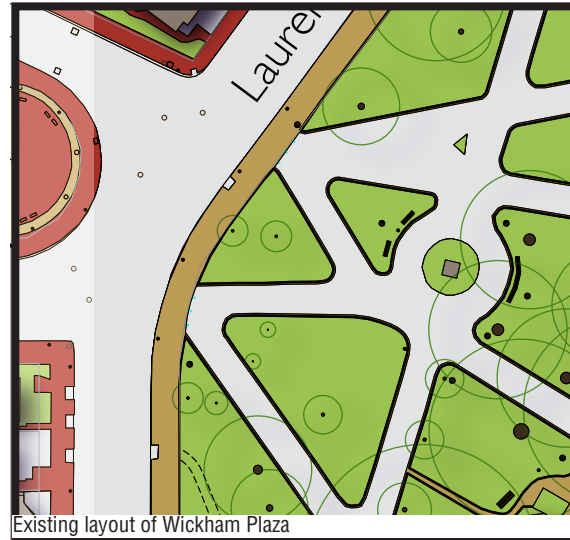
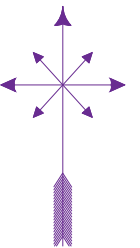















Figure 6.20 Wickham Plaza detail plan

Typical Entry Plaza Plan

Legend

-  Existing Tree
-  Proposed Tree
-  Turf
-  Brick Paving
-  Stone Dust with Flush Concrete Curb
-  Cast-In-Place Concrete Paving
-  New/Improved Structure
-  Granite Seat Wall
-  Bollard
-  Light Fixture
-  Moveable Seating
-  Information Kiosk
-  Bicycle Rack

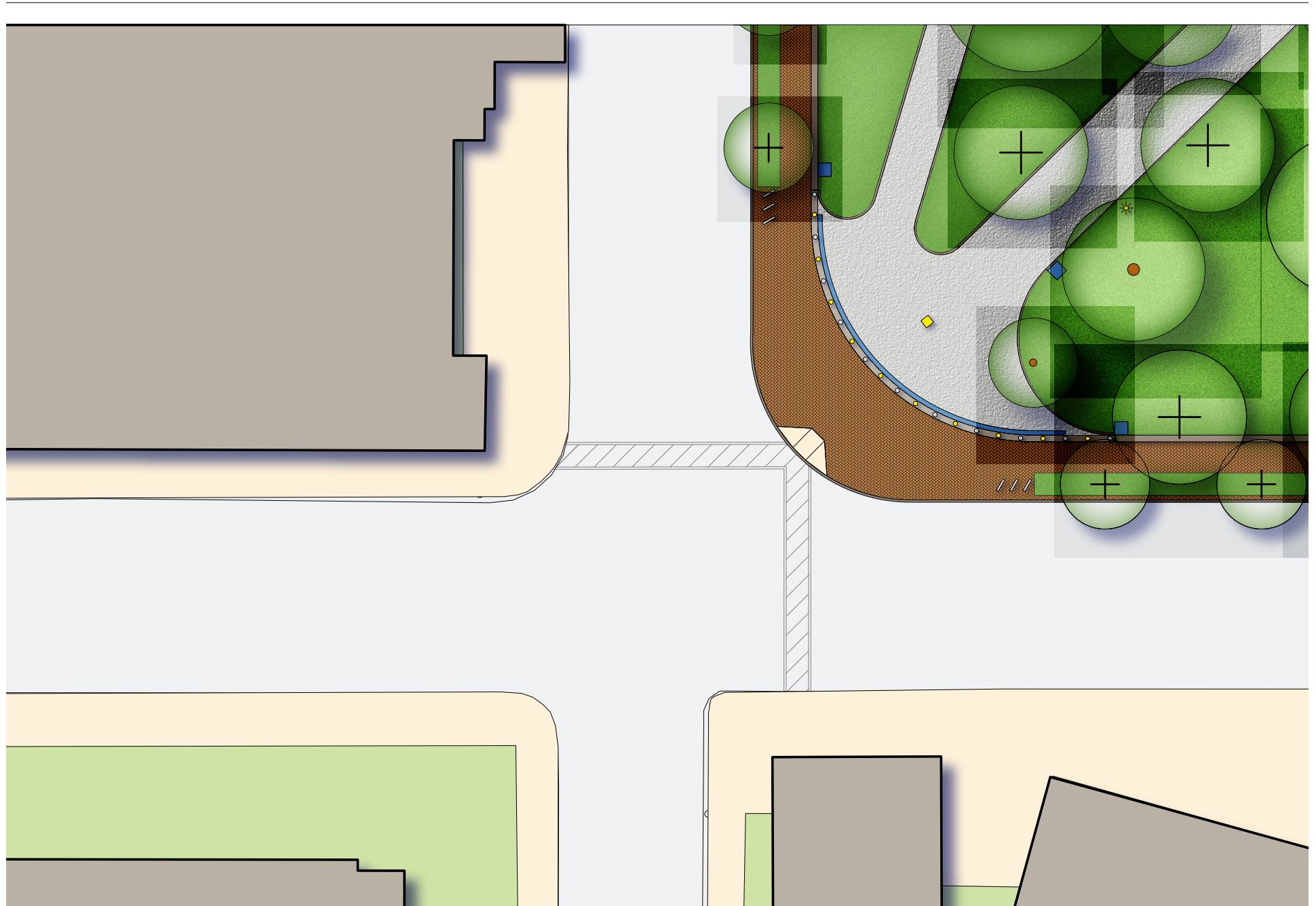
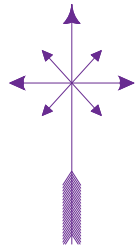


Figure 6.21 - Typical entry plaza detail plan



6.22



6.24



6.23



6.25

Figure 6.22 - Transition from stone dust to granite paving, Rhodeside & Harwell
















Figure 6.23 - Bollards set on an arc, centered on a granite band, Rhodeside & Harwell

Figure 6.24 - Inverted "U" bicycle rack, Courtesy Dumor Inc.

Figure 6.25 - Informational signage at Bryant Park, New York, BRV Corp.

Checkers Building Plan

Legend

-  Flower Bed
-  Existing Tree
-  Proposed Tree
-  Turf
-  Brick Paving
-  Stone Dust with Flush Concrete Curb
-  Cast-In-Place Concrete Paving
-  New/Improved Structure
-  Granite Seat Wall
-  Bollard
-  Light Fixture
-  Moveable Seating
-  Information Kiosk
-  Bicycle Rack
-  Playground Equipment

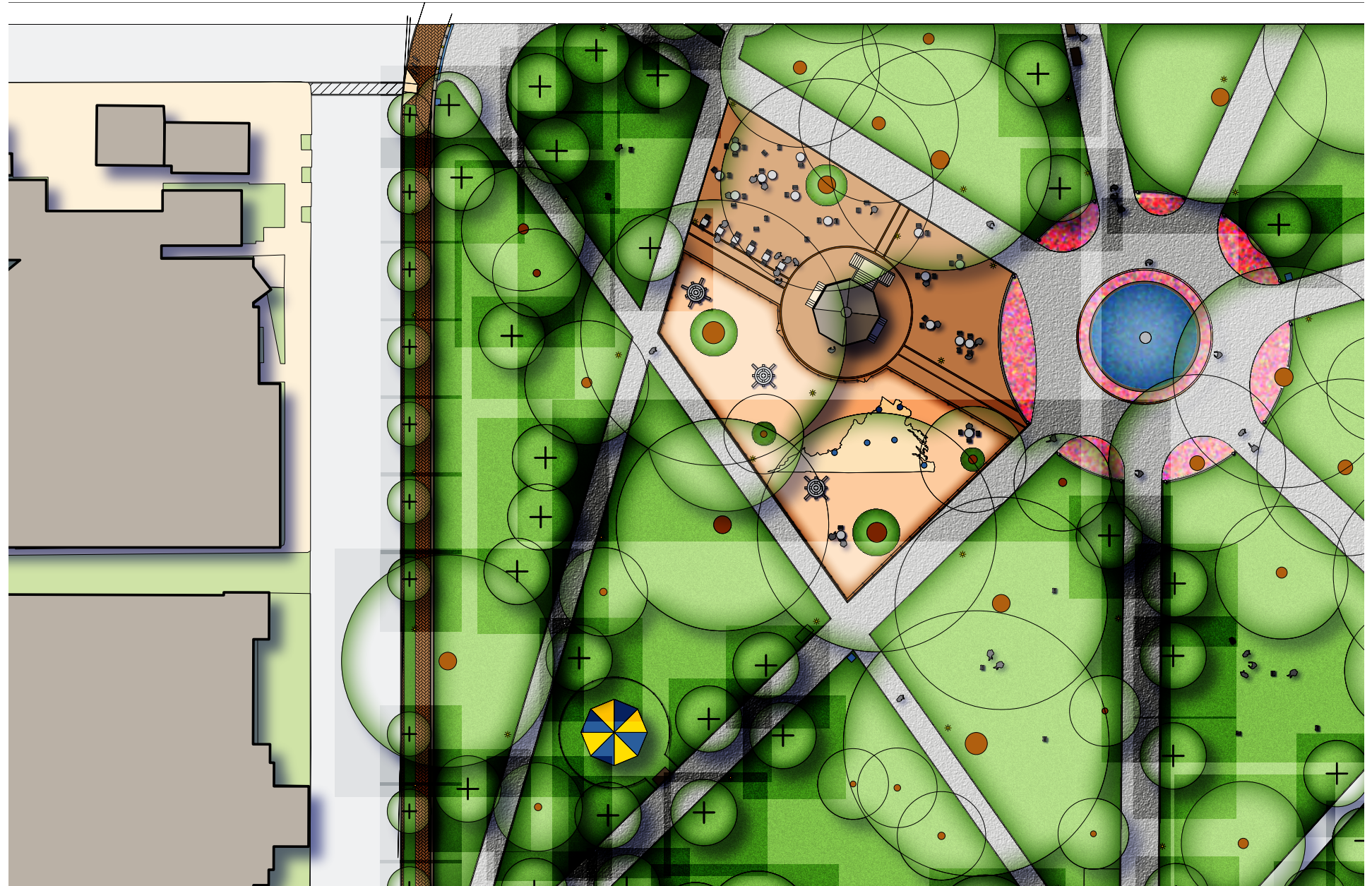
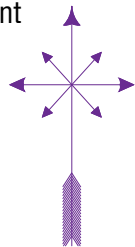


Figure 6.26 - Plan showing the area around the Checkers Building, including the carousel and central fountain plaza

CHECKERS BUILDING

As the largest structure within Monroe Park, the Checker's Building is a major focal point. Besides the bathrooms in the basement, however, the building is not activated as the landmark it appears to be. By creating a plaza around the Checkers Building, the space will become a central hub of activity for the park (Figure 6.26).

The smaller sidewalks that historically led from the park's main pathways across the grass plat to the Checkers Building serve to separate this new plaza into two distinct spaces. On the north side of the building is a large seating area to accommodate many of the site's moveable tables and chairs. This highly visible location becomes an ideal space for the park to host reading rooms, lectures or gaming tournaments. Additionally, with its proximity to the park's wi-fi hub (housed in the basement of the Checkers Building), it is the ideal place for visitors to use as an outdoor study hall or a mobile office.

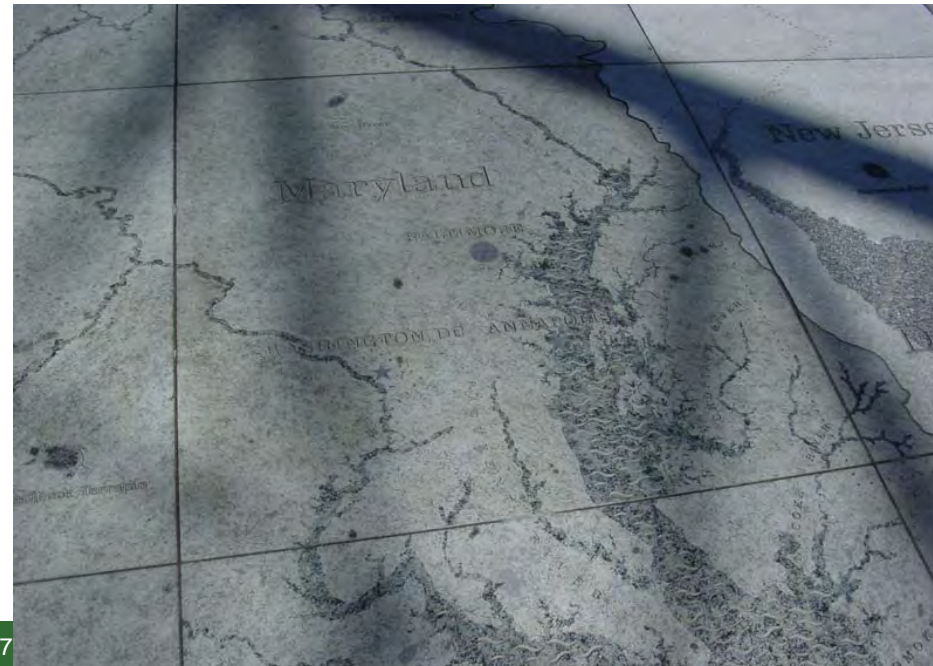
The southern half of the Checkers Building plaza is a fenced in play area, housing a giant map (Figure 6.27), spray park (Figure 6.28) and play equipment. The paving in this half of the plaza should be an Americans with Disabilities Act (ADA) compliant play surface that provides an added degree of safety for children using the play equipment and a porous material to allow water from the spray park to be collected and to recirculate. This play area combines with the area around the carousel to the south to delineate a zone of Monroe Park geared for children and families.

In response to the anticipated surge in park usage, the Checkers House will need to undergo major renovations to make it more attractive to visitors. The bathrooms should be enlarged and retrofitted to provide handicap access. Space in the basement should be allocated for the pumps and filters necessary for a recirculating water system in both the spray park and central fountain. Finally, the second floor could be renovated to be used as a public space.

Just to the east of the Checkers Building plaza, the ronde point surrounding the central fountain will undergo renovations to turn it into an attractive destination within the park. In addition to the seasonal plantings around the central fountain, perennial beds will be planted on the tips of the grass plats nearest the fountain.

These parterres, whose shape is similar to the parterres that historically surrounded the central fountain plaza, will be divided from the grass plats

by a band of the same granite pavers used in the park's entrances. Bollards to match those in the entrances will be put where the grass plats, perennial beds and walks all meet to mark one's entrance into the central fountain plaza. Atop the granite band, an iron fence to match the one surrounding the central fountain will protect the perennials planted into the parterres.



6.27















6.28

Figure 6.27 - Giant map of the Chesapeake Bay Watershed, Rhodeside & Harwell

Figure 6.28 - Water jets in Davidson, Michigan. Courtesy Peter Auger

Vendor Stalls

Plan Legend

-  Existing Tree
-  Proposed Tree
-  Turf
-  Brick Paving
-  Stone Dust with Flush Concrete Curb
-  Cast-In-Place Concrete Paving
-  New/Improved Structure
-  Granite Seat Wall
-  Bollard
-  Light Fixture
-  Moveable Seating
-  Vendor Stalls

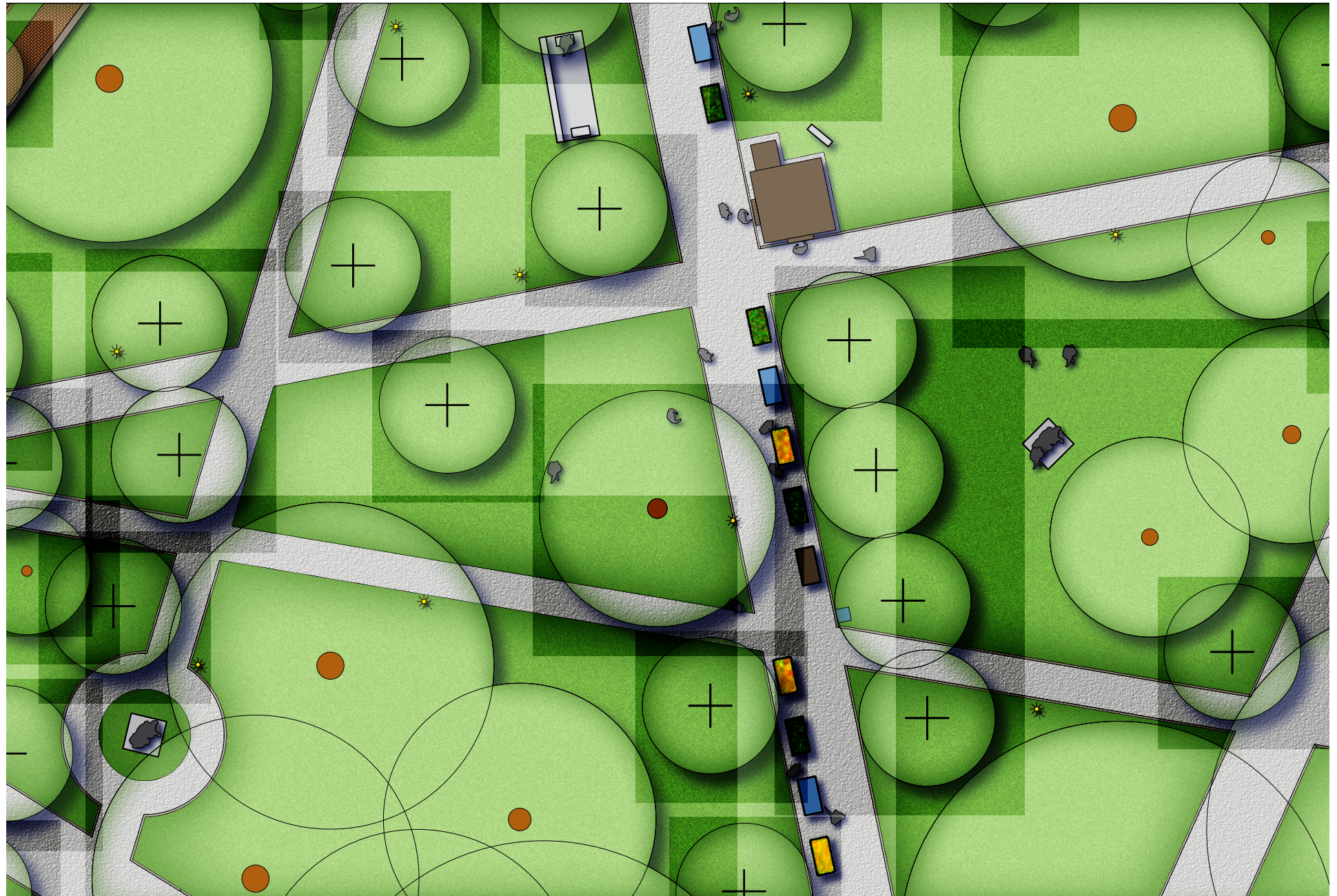
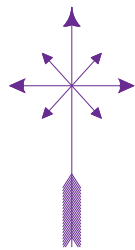


Figure 6.29 - Northern radial path with vendor stalls and a food kiosk

VENDOR STALLS

The idea of selling food in Monroe Park was one of the most popular programmatic elements discussed by community members during the public meetings for this Master Plan. Two strategically placed food kiosks will offer dining alternatives for area workers, VCU students and local residents that will invite more visitors to stay in the park for a longer period of time. Located near the corner of Laurel and Franklin streets, one of these kiosks (Figure 6.29) is placed to be immediately visible to the highest concentration of people in the area: the students living in the dorms across Franklin Street from the park. Depending on the type of vendor the space is leased to (part of VCU Dining Services, an extension of a local restaurant, or a pre-packaged system for example), this kiosk may be a self-contained trailer (Figure 6.30) or it may be a permanent structure with full electric, water and sewer hookups (Figure 6.31). Because there will not be a dedicated seating area in the immediate vicinity of the food vendors, patrons will take their snacks and meals all over the park, underlining the necessity for a regular trash removal program. This Master Plan recommends reusing the existing trash receptacles within the park and allowing the maintenance staff to move them to the highest use locations as they see fit.



6.31

Figure 6.30 - Ithaca, New York's Hot Truck is a popular destination among college students. Courtesy Slice

Figure 6.31 - Food kiosk (permanent structure) on The Mall in Washington, DC, Rhodeside & Harwell

Figure 6.32 - Holiday bazaar using uniform tents in Bryant Park, New York. BRV Corp.

Also along the park's north-south spine is the opportunity for temporary market stalls. Farmer's markets, holiday bazaars and craft fairs all have the potential to draw large crowds to Monroe Park. These markets could be highly organized events, with the event organizer owning uniform tents to be rented by vendors (Figure 6.32), or it could be an informal gathering of tables and tents provided by the vendors. Because there is no permanent structure involved, markets offer a wide range of flexibility, allowing them to grow in size as they increase in popularity, with little initial expense to the organizers.



6.30

















6.32

Great Lawn

Plan

Legend

-  Flower Bed
-  Existing Tree
-  Proposed Tree
-  Turf
-  Brick Paving
-  Stone Dust with Flush Concrete Curb
-  Cast-In-Place Concrete Paving
-  New/Improved Structure
-  Granite Seat Wall
-  Bollard
-  Light Fixture
-  Moveable Seating
-  Information Kiosk
-  Bicycle Rack

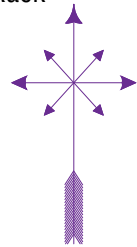


Figure 6.33 Great Lawn detail plan

GREAT LAWN

As one of the largest patches of open space in the surrounding neighborhood, the triangle between the central fountain and the two Belvidere Street entrances (where Belvidere Street intersects with Franklin and Main streets, respectively) will be one of the most significant places within Monroe Park (Figure 6.33). Many of the overall park changes proposed earlier in this chapter will help to define this space as a “great lawn,” open and versatile enough to host concerts and pick-up football games alike.

Once the grade of the pathways is raised to match the level of the grass plats and the secondary paths are narrowed to ten feet wide, the Great Lawn will be free of any abrupt grade changes that could pose as tripping hazards for park users running from grass plat to grass plat. The new stone dust paving and engineered soil beneath the lawn will further assist in making a continuous playing surface, providing the possibility of up to a 100 foot by 175 foot playing field.

The Great Lawn also becomes an optimal location for large crowds to gather and watch concerts, plays or movies. With a temporary stage located at the west end of the lawn (nearest the fountain), sound will be projected toward Belvidere Street, well away from the residential buildings that line the park. A dense line of trees planted at the eastern edge of the park will also help to keep noise contained within the Great Lawn.

Various options exist for providing a temporary stage to performers in Monroe Park. A set of lightweight, four foot by eight foot risers could be purchased to provide flexibility in the size and storage location of a por-



6.34

table stage (Figure 6.34). Alternately, the City of Richmond currently owns a portable stage that could be trucked into Monroe Park and placed on the Great Lawn.

For events such as outdoor movies or small concerts, adequate power exists within the park to provide electricity for sound amplification and video projection. For larger events, two junction boxes with a conduit running between them could house wiring to provide electricity from a portable generator placed along the park’s perimeter to the temporary stage location (Figure 6.35).

To the southwest of the Great Lawn, a rectangle of stone dust paving running parallel to Main Street serves as the location for two petanque or quoits courts. This relatively level, shaded area is far enough removed from other programming activities to provide ample space for players and spectators to gather, but near enough to the park’s edge to be visible from the street, inviting curious onlookers into the park to watch.

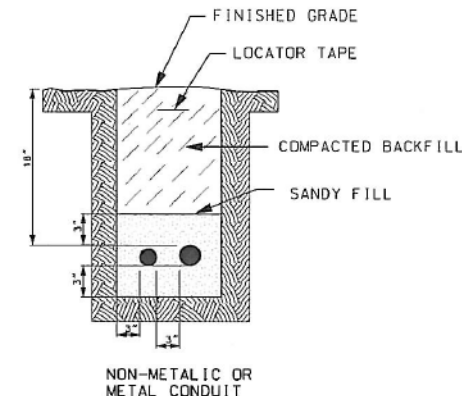
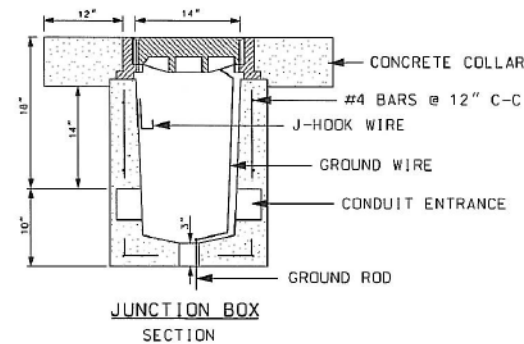


Figure 6.34 - Portable stage installation, courtesy Ignited Light & Sound. Inset: Individual riser used to construct portable stage, courtesy Stage Right, Inc.

Figure 6.35 - Electrical junction box and conduit detail, Legion Design

The work proposed in this Master Plan will take several years and several million dollars to complete, and attempting to manage, fund and construct every aspect of the plan at once is not realistic. Phasing for a park of this magnitude is crucial when fundraising, planning, design and construction considerations are taken into account.



Phasing

OVERVIEW

The recommendations presented in this Master Plan fall into two main categories: physical changes to Monroe Park and programmatic site elements introduced into the Park. By and large, the physical changes will involve extensive construction efforts and site disturbance, while the programmatic elements require little infrastructure and can be moved or removed as necessary.

While the physical changes proposed in this plan will most likely need to be funded by the City of Richmond, many of the programmatic site elements can be funded by sponsors or operated as a concession, generating their own revenue. This phasing plan does not preclude a programmatic element from being introduced in an earlier phase if an organization offers to sponsor it, however it is written with the understanding that sponsors will be more likely to come forward once the physical improvements to Monroe Park have already been made.

PHASE ONE: PARK-WIDE RENOVATIONS

Phase one comprises many of big ticket items for Monroe Park's renovation. Completing the park-wide renovations in one phase requires the entire park to be closed off for one construction effort, while later phases will only require small areas of the park to be closed for construction.

Perimeter Paths: Install brick pavers on the perimeter sidewalk.

Drainage: Replace the park's existing storm drain inlets with new water quality inlets and install slotted drains at the park entrances.

Interior Radial Paths: Demolish existing asphalt paving and install stone dust paving to be flush with existing curbs.

Figure 7.01 - Monroe Park in early Summer, 2007.
Rhodeside & Harwell

Interior Secondary Paths: Demolish existing asphalt paving and concrete curbs. Using the original centerline, install new ten foot wide paths with new flush curbs.

Park Entrances: Install a granite band and bollards at the transition between the perimeter sidewalk and the interior paths.

Perimeter Curb/Seat Wall: Install a ten inch high, 16 inch wide granite curb between the grass plats and the perimeter sidewalk around the entire park (except at the entrances). Install natural drains behind the perimeter curb.

Engineered Soil: Pending a soils test and design from a materials engineer, install engineered soil in designated areas.

Pathway Lighting: Remove existing light poles and bases; install new pole-mounted lighting with 120 volt circuits to provide power outlets for vendors and park users. Path lighting to be part of the Department of Public Utilities' grid.

Fountain: Replace the current water pump with a recirculating system.

Conduit: Install junction boxes and conduit to provide generator power to a temporary stage¹.

Vegetation Removals: Remove noncontributing evergreen and small flowering trees, as well as dead or dying deciduous trees.

Tree Replacement: Plant new deciduous canopy trees using species from the 1904 plant list.

Seasonal Gardens: Invite the community to plant annual and perennial beds in the parterres surrounding the central fountain.

Furniture: Purchase moveable chairs and tables.

Food Kiosk: Install one food kiosk at the north end of the park.

PHASE TWO: CHECKERS BUILDING

Once the park-wide renovations are complete, upgrades can focus on providing users with amenities that will encourage them to stay in the park for a longer period of time. A logical place to start would be to restore the Checkers Building, whose continuing decline will be ever more noticeable within the newly renovated landscape of the park.

Bathroom Renovations: Enlarge the existing bathrooms, providing better access and ventilation.

Exterior Upgrades: Restore the building's facade to its original condition, including repointing the brick and installing a new roof.

Community Room: Restore the second floor, creating a public space out of the vacant, locked room.

Plaza: Install brick pavers on the north half of the grass plat where the Checkers Building is located; this plaza will be where most of the park's moveable tables and chairs will initially be located.

Play Area: Install a fence and ADA compliant playground surface on the south half of the grass plat where the Checkers Building is located. Include a giant map of Virginia in the paving pattern. Purchase and install playground structures in this area.

PHASE THREE: SITE AMENITIES

Phase three consists of small site amenities that occur throughout the park. These elements are not crucial to the overall success of Monroe Park and don't require significant construction efforts to install, however their presence makes the park a much more attractive & inviting space.

Information Kiosks: Design and install wayfinding and interpretive information kiosks at each of the site entrances and in key locations throughout the park.

Park Lighting: Install park lighting to be powered and maintained by Richmond's Department of Parks, Recreation and Community Development. This includes entry lighting, building and monument lighting, fountain lighting and tree lighting.

Spray Park: Install a spray park with a recirculating water supply in the area of the giant map. House the pumps and filters for the water supply in the basement of the Checkers Building.

Petanque/Quoits Court: Install two petanque/quoits courts in the southeast portion of the park.

PROGRAMMATIC ELEMENTS

The remaining elements can be implemented at any time after the initial park renovations take place. These are elements that can be purchased or sponsored for use in Monroe Park and easily removed if they are deemed unsuccessful. Timing for their introduction primarily relies upon the securing of a sponsor, donor, or funds from the City.

- **Carousel**
- **Temporary Stage**
- **Seasonal Market Stalls**
- **Food Carts**
- **Chess and Checkers Tables**
- **Weather Station**
- **Additional Food Kiosks**

¹ As concerts, outdoor movies and other events requiring a large electrical power source become more successful, the feasibility of a permanent power source to be installed in the Checkers House can be further explored.

Construction Cost Estimate

PHASE I: PARK-WIDE RENOVATIONS

Item	Unit	Qty	Unit Cost	Item Cost	Area Cost
HARDSCAPE					
Demolition - Concrete Sidewalk 8' Width	LF	2600	\$6.00	\$15,600	
Demolition - Concrete Curb and Gutter	LF	7100	\$5.00	\$35,500	
Demolition - Asphalt Paving	LF	3600	\$6.00	\$21,600	
Brick Paver Sidewalk (concrete base with sand setting bed)	SF	25100	\$14.00	\$351,400	
Stone Dust Pathways (4" thick)	SF	80200	\$5.00	\$401,000	
Stone Dust Plaza Areas (4" thick)	SF	19000	\$5.00	\$95,000	
Steel Edging for Stone Dust (6" width)	LF	8000	\$7.00	\$56,000	
Granite Accent Band at Entrances and Fountain Plaza	LF	1000	\$40.00	\$40,000	
10" x 16" Low Seat Wall w/ 6" Granite Gutter	LF	1700	\$60.00	\$102,000	
Bollard - Unlighted	EA	116	\$600.00	\$69,600	
Decorative Iron Fencing (40" Height)	LF	262	\$150.00	\$39,300	
Misc Grading, Site Prep and Incidentals	SF	43700	\$1.50	\$65,550	
				Subtotal:	\$1,292,550
DRAINAGE					
Inlet Protection	EA	32	\$200.00	\$6,400	
Storm Sewer Piping - 15" RCP	LF	700	\$80.00	\$56,000	
Storm Sewer Piping - 18" RCP	LF	300	\$80.00	\$24,000	
Single Grate Drop Inlet	EA	30	\$2,000.00	\$60,000	
Double Grate Drop Inlet	EA	2	\$4,000.00	\$8,000	
				Subtotal:	\$154,400
FURNISHINGS					
Moveable Chairs	EA	600	\$40.00	\$24,000	
Moveable Tables	EA	150	\$60.00	\$9,000	
Food Kiosk	EA	1	\$150,000.00	\$150,000	
				Subtotal:	\$183,000
LANDSCAPE					
Tree Removals	EA	66	\$800.00	\$52,800	
Shade Trees (5" caliper)	EA	76	\$800.00	\$60,800	
Street Trees (3" caliper)	EA	42	\$500.00	\$21,000	
Ground Cover (at each tree pit/shared rooting zone)	EA	9325	\$2.00	\$18,650	
Bulbs (at central fountain plaza)	EA	1200	\$2.00	\$2,400	
Perennials (central fountain plaza)	EA	1200	\$7.00	\$8,400	
Tree Pruning, Fertilization and Aeration	EA	128	\$400.00	\$51,200	
Engineered Soil	CY	3000	\$75.00	\$225,000	
Soil Preparation (12" Depth)	CY	100	\$75.00	\$7,500	
Repair/Adjust Existing Irrigation System	ALLOW	1	\$30,000.00	\$30,000	
Turf Rehabilitation	SF	30000	\$6.00	\$180,000	
				Subtotal:	\$657,750

LIGHTING/ELECTRICAL

Electrical Conduit Installation	LF	3600	\$30.00	\$108,000
Ornamental Lights and Poles, with foundation	EA	88	\$4,275.00	\$376,200
Lighted Bollards, with foundation	EA	69	\$1,431.00	\$98,739
Floodlighting for Great Lawn	EA	4	\$804.00	\$3,216
Conduit (for power supply to temporary stage)	LF	300	\$50.00	\$15,000
				Subtotal: \$601,155

Subtotal (selecting ALL above items): \$2,889,000

Mobilization, General Conditions: \$433,000 15%

Contractor Overhead & Profit: \$722,000 25%

Design Contingencies: \$433,000 15%

Probable Construction Bid: \$4,477,000

Construction Contingencies: \$672,000 15%

Total Cost \$5,149,000

Design, Survey, Geotech, Engineering, Permits, CA/CM Fees \$1,030,000 20%

Recommended Budget Amount \$6,179,000

PHASE II: CHECKERS BUILDING

Item	Unit	Qty	Unit Cost	Item Cost	Area Cost
HARDSCAPE					
Brick Pavers (concrete base with sand setting bed)	SF	11700	\$14.00	\$163,800	
Rubberized Play Surface (poured in place)	SF	7200	\$12.00	\$86,400	
Decorative Iron Fencing (40" Height)	LF	460	\$150.00	\$69,000	
Misc Grading, Site Prep and Incidentals	SF	21500	\$1.50	\$32,250	
				Subtotal:	\$351,450

CHECKERS BUILDING RENOVATIONS

Exterior Renovations	ALLOW	1	\$10,000.00	\$10,000	
Bathroom Renovation/Expansion ²	ALLOW	1	\$60,000.00	\$60,000	
Lighting	EA	8	\$245.00	\$1,960	
				Subtotal:	\$71,960

FURNISHINGS

Play Structures	EA	3	\$4,500.00	\$13,500	
				Subtotal:	\$13,500

LANDSCAPE

Tree Pruning, Fertilization and Aeration	EA	5	\$400.00	\$2,000	
				Subtotal:	\$2,000

LIGHTING/ELECTRICAL

Electrical Conduit Installation	LF	600	\$30.00	\$18,000	
Ornamental Lights and Poles, with foundation	EA	8	\$4,275.00	\$34,200	
				Subtotal:	\$52,200

Subtotal (selecting ALL above items):	\$491,000	
Mobilization, General Conditions:	\$74,000	15%
Contractor Overhead & Profit:	\$123,000	25%
Design Contingencies:	\$74,000	15%
Probable Construction Bid:	\$762,000	
Construction Contingencies:	\$114,000	15%
Total Cost	\$876,000	
Design, Survey, Geotech, Engineering, Permits, CA/CM Fees	\$175,000	20%
Recommended Budget Amount	\$1,051,000	

² Does not include cost of utility connections.

PHASE III: SITE AMENITIES

Item	Unit	Qty	Unit Cost	Item Cost	Area Cost
HARDSCAPE					
Stone Dust For Petanque Courts (4" thick)	SF	1300	\$5.00	\$6,500	
Wood Edging for Stone Dust (6" width)	LF	175	\$7.00	\$1,225	
Misc Grading, Site Prep and Incidentals	SF	1500	\$1.50	\$2,250	
				Subtotal:	\$9,975
FURNISHINGS					
Information Kiosks	EA	7	\$8,000.00	\$56,000	
				Subtotal:	\$56,000
LANDSCAPE					
Turf Rehabilitation	SF	1000	\$6.00	\$6,000	
				Subtotal:	\$6,000
SPRAY PARK					
Equipment	LS	1	\$40,000.00	\$40,000	
Plumbing ³	LS	1	\$15,000.00	\$15,000	
Electrical ³	LS	1	\$9,500.00	\$9,500	
Paving	SF	7200	\$12.00	\$86,400	
				Subtotal:	\$151,000
LIGHTING/ELECTRICAL					
Electrical Conduit Installation	LF	1500	\$30.00	\$45,000	
Uplighting of Statues/Monuments	EA	18	\$673.00	\$12,114	
Fountain Lighting	EA	4	\$1,426.00	\$5,704	
Uplighting of Trees	EA	8	\$360.00	\$2,880	
Petanque Court Lighting	EA	6	\$265.00	\$1,590	
				Subtotal:	\$67,288

Subtotal (selecting ALL above items): \$290,000

Mobilization, General Conditions: \$44,000 15%

Contractor Overhead & Profit: \$73,000 25%

Design Contingencies: \$44,000 15%

Probable Construction Bid: \$451,000

Construction Contingencies: \$68,000 15%

Total Cost \$519,000

Design, Survey, Geotech, Engineering, Permits, CA/CM Fees \$104,000 20%

Recommended Budget Amount \$623,000

³ Does not include cost of utility connections.

PROGRAMMATIC ELEMENTS

Item	Unit	Qty	Unit Cost	Item Cost	Area Cost
CAROUSEL					
Stone Dust Base	SF	2100	\$5.00	\$10,500	
Carousel	ALLOW	1	\$300,000.00	\$300,000	
Ticket Booth	EA	1	\$2,500.00	\$2,500	
LED Ropelight	LF	60	\$17.00	\$1,020	
Downlight	EA	10	\$306.00	\$3,060	
Subtotal:					\$317,080
TEMPORARY STAGE					
Prefabricated Mobile Stage	ALLOW	1	\$15,000.00	\$15,000	
Lighting	ALLOW	1	\$28,000.00	\$28,000	
Subtotal:					\$43,000
FOOD SERVICE					
16' x 16' Food Kiosk ⁴	EA	1	\$150,000.00	\$150,000	
Food Cart ⁴	EA	2	\$5,000.00	\$10,000	
Subtotal:					\$160,000
FURNISHINGS					
Checs/Checker Tables	EA	8	\$1,500.00	\$12,000	
Weather Station	EA	1	\$5,000.00	\$5,000	
Subtotal:					\$17,000

Subtotal (selecting ALL above items): \$537,000

Mobilization, General Conditions: \$81,000 15%

Contractor Overhead & Profit: \$134,000 25%

Design Contingencies: \$81,000 15%

Probable Construction Bid: \$833,000

Construction Contingencies: \$125,000 15%

Total Cost \$958,000

Design, Survey, Geotech, Engineering, Permits, CA/CM Fees \$192,000 20%

Recommended Budget Amount \$1,150,000

⁴ Does not include cost of utility connections.

Expense Budget & Staffing Plan

OVERVIEW

Having laid out our program for Monroe Park in enough detail that we hope can draw a respectable density of visitors in even the park's early years, we next need to estimate the operating obligations that the Master Plan will impose on the entity that manages Monroe Park (management options are discussed later in this chapter).

In any park or public space operation, payroll typically consumes 75-80% of the operating budget. So we'll start by laying out our staffing assumptions. There will be six departments that employ personnel: sanitation, security, horticulture, capital plant maintenance and repair, marketing/events management, and general management. We have an in-house versus contracting decision to make in several of these areas, which we'll discuss in the following sections:

SANITATION

Besides pushing brooms and wastebaskets, picking up litter through the park, sanitation workers are frequently called upon for other tasks. They're the only "laborers" available in the park, so they also set up concerts, distribute furniture and clean and paint park elements.

Sample Schedule, Year One (April through October)

	Shift	Attendants	Working Supervisors
Weekdays	7am to 3pm	1	1
	12pm to 8pm ⁵	1	1
Weekends	7am to 3pm	1	1
	12pm to 8pm	1	1

Estimated Labor Costs, Year One (April through October)

Attendants

Man-shifts	2 per weekday	10
	2 per weekend day	4
Labor Costs	3 at \$25,000 ⁶	\$75,000
Pro-Rated		
Labor Costs	7 months of the year	\$43,750

Working Supervisors

Man-shifts	2 per weekday	10
	2 per weekend day	4
Labor Costs	3 at \$30,000	\$90,000
Pro-Rated		
Labor Costs	7 months of the year	\$52,500

Sample schedule, year one (November through March)

	Shift	Attendants	Working Supervisors
Weekdays	7am to 5pm	1	1
Weekends	7am to 5pm	1	1

Estimated labor costs, year one (November through March)

Attendants

Man-shifts	1 per weekday	5
	1 per weekend day	2
Labor Costs	2 at \$25,000	\$50,000
Pro-Rated		
Labor Costs	5 months of the year	\$20,833

Working Supervisors

Man-shifts	1 per weekday	5
	1 per weekend day	2
Labor Costs	2 at \$30,000	\$60,000
Pro-Rated		
Labor Costs	5 months of the year	\$25,000

Additional costs include supplies (such as plastic bags and brooms), tools (as well as rent for storing supplies and tools), insurance, a dedicated phone line, uniforms and uniform cleaning. These will total about \$40,000 per year. As the number of park visitors increases, the man-hours will have to be increased to handle more people purchasing and eating food in the park as well as increased use of other programs.⁷

⁵ Lunchtime overlap is important on weekdays, with concert set-ups and lunch litter.

⁶ In all cases, fully loaded with taxes and fringe benefits.

⁷ See appendix for anticipated needs in years three and five.

Sanitation Expense Budget, Year One, Summary

	April - October	November - March	Total
Labor costs, Attendants	\$43,750	\$20,833	\$64,583
Labor costs, Supervisors	\$52,500	\$25,000	\$77,500
Tools, supplies, uniforms, etc.	\$25,000	\$15,000	\$40,000
Total Sanitation Expense Budget	\$121,250	\$60,833	\$182,083

SECURITY

Unarmed security officers will be responsible for enforcing the park rules and preventing the minor violations that signal to criminals that crime in the park is acceptable. These include drug use, consumption of alcohol, panhandling, loud cursing, rummaging through garbage cans, spitting, harassment of women, feeding pigeons and playing loud music. They will also be in regular communication with the VCU police who regularly patrol the area, as well as the Richmond Police Department. This department will possibly be contracted out, or it could be led by a former commander in the Richmond Police Department or VCU Police Department.

Sample Schedule, Year One

	Shift	Ambassadors	Supervisors
Weekdays	7am to 3pm	0	1
	3pm to 11pm ⁸	1	1
Weekends	7am to 3pm	1	1
	3pm to 11pm	1	1

Estimated Labor Costs, Year One

	Man-shifts	Staff	Cost	Total
Ambassadors	9 Total (1 x 5 weekday + 2 x 2 weekend)	2	\$25,000 ⁹	\$50,000
Supervisors	14 Total (2 x 5 weekday + 2 x 2 weekend)	3	\$35,000	\$105,000
Radios, insurance, supplies, uniforms, etc.				\$50,000
Total Costs				\$205,000

OTHER DEPARTMENTS

If the City decides to create a new, private entity to manage Monroe Park (see the “Governance and Management” section), it will have to decide whether or not the remaining departments will be managed in-house or contracted out. Certain departments make more sense to be contracted: it would be less expensive, at least in the near-term, for horticulture and capital plant repair to be handled by independent contractors.

Programming and events staffing may also be contracted to a local events producer in the park’s early years, before the park requires a full-time programming and events staff. The events manager will both program events and sift proposals for commercial events provided by others, as well as negotiate prices for the latter. This independent contractor would also engage in a small amount of promotion and marketing for the park’s events. In later years, the jobs of managing events and directing marketing efforts will be too time consuming for one person, so we’ve separated the jobs in the park’s fifth year.

The park will also need a dedicated, full-time park manager—not a steward, but a capable executive who wants to continually upgrade the park and will serve as director of the new management entity. The salary for this position must be competitive enough to attract top-quality candidates. He or she will also need an administrative assistant. Additionally, if a new entity is created to manage Monroe Park, it will need an office, which should run about \$40,000 annually for rent, supplies, telephone, and the like, unless donated by VCU or the City of Richmond. This expense is included under the general/administrative heading in the Expense Budget.

There will also be programming expenses in the initial years, depending on which programs (discussed in chapters five and six) are implemented, and which can be supported with outside funds through sponsorships or grants; we’ve allowed for a \$10,000 annual loss.

⁸ Unlike with sanitation workers, whose loads get much heavier during lunchtime hours, there is no need to overlap shifts of security officers.

⁹ In all cases, fully loaded with taxes and fringe benefits.

Monroe Park Expense Budget, Summary

Department	Year 1	Year 3	Year 5
Sanitation/ maintenance	\$180,000	\$240,000	\$260,000
Security	\$205,000	\$230,000	\$255,000
Horticulture	\$125,000	\$160,000	\$200,000
Capital plant maintenance and repair	\$40,000	\$40,000	\$40,000
Programming/ events staffing ¹⁰	\$55,000	\$60,000	\$65,000
Promotion/ marketing ¹¹	-	-	\$75,000
General/ administrative ¹²	\$150,000	\$160,000	\$170,000
Total	\$755,500	\$890,000	\$1,065,000

Revenue Plan

OVERVIEW

Several members of the Monroe Park Advisory Council have raised the issue of ongoing maintenance of the improvements associated with this Master Plan; so, too did members of the public who attended the 19 April, 2007 programming charrette. The City's Parks and Recreation Director, J.R. Pope, strongly supports the creation of an innovative revenue stream to help maintain Monroe Park improvements. Downtown Richmond is not a media capital, and much of the property that abuts Monroe Park is not in commercial hands. Nonetheless, we can adapt some of the revenue-raising techniques that have worked for our clients in New York and several cities more similar to Richmond, like Pittsburgh, Baltimore, and Atlanta.

EVENTS

Payments by major corporations, promoters, media outlets, and marketing agencies for the privilege of producing events for the public are the largest single revenue source supporting the five million dollar annual budget for the six-acre Bryant Park. Richmond, while not the size of New York or other media capitals, still possesses a large number of candidates to play

the same role: Philip Morris, Circuit City, Dominion Resources, Ukrops and many others. The trick with this revenue source, however, is to first make the park an exciting place where outside agencies are eager to show off their wares. Major revenue deals tend to surface in the fourth or fifth years, or later. Pricing savvy is critical: too many state and city agencies either prohibit commercial support or under-price the sponsorships.

FACILITY SPONSORSHIPS

Major corporations (or prominent individuals or families) are also a source of sponsorships for facilities like kiosks, the stage, the reading room, or the chess area. Sponsorships can be used toward capital costs during Monroe Park's renovation, or to help start an endowment.

CAFE AND KIOSK RENTS

If possible, all café and kiosk arrangements in Monroe Park will be ground leased, with the obligation of construction of the core and shell of each facility placed on the tenant. More likely, however, given no promise of park success, there will be "store leases" after small facilities are built with contributed or borrowed funds by the park operating entity. We fear annual concession revenues will be limited to the low five-figure neighborhood at first. Conversations with potential operators of the park's food concessions have already begun.

MEMBERSHIP/FRIENDS GROUP

Groups such as the Friends of Monroe Park are aimed at individual office employees and residents, rather than the owners of their buildings. Although these groups can sometimes cause management problems, they may raise real revenue in the case of Monroe Park, particularly if brochures and mailings are donated by abutting institutions. Certainly, the large showing at community meetings encourages some hope for revenues from this source. We would put a modest amount in a revenue projection.

IN-KIND CONTRIBUTIONS

In some cases, park services can be provided at no cost to the park operating entity by abutting organizations who must perform the same function on their own land: lawn cutting, security patrols, monitoring of security cameras, event production, snow removal and litter removal from curbs and park edges (VCU stands out as the most likely partner).

¹⁰ One events manager at \$35,000 per year, with intern assistant(s); assumes a \$10,000 programming deficit

¹¹ One marketing manager at \$40,000 per year, plus printed collateral allowance

¹² Park manager, administrative assistant, office overhead.

ENDOWMENT INCOME

Large chunks of park support contributions that come in after the park's capital budget has been raised from public and private sources can be assigned to create an endowment for park operations. Any amounts restricted in this way would probably be subject to an annual spending policy of five percent currently, or later at the rate typically imposed by local universities on their endowment income.

CORPORATE/INDIVIDUAL GIFTS

Monroe Park might benefit from fundraising efforts after its capital plant is built. Richmond seems to be on the generous side as cities go in this area, and an attractive case statement and competent outside fundraiser (preferably hired on some form of incentivized basis) could be productive for the park's revenue budget.

SUPPORT FROM NEIGHBORS

A small, but growing number of parks and public spaces are funded through mandatory assessments levied via a business improvement district. An assessment district already exists downtown, administered by Venture Richmond, so property owners are not wholly unfamiliar with the concept. Given the large number of non-profit and institutional property owners abutting Monroe Park, however, a better option is to create a voluntary assessment district, if the attendant "free rider" problem can be avoided. We think this is a real possibility, given the frequent communication so far with the abutting property owners like VCU and Grace and Holy Trinity Episcopal Church.

Governance & Management

OVERVIEW

The energized group of bright activists who comprise the Monroe Park Advisory Council could be the core of a new, private entity that would generate funds for park programming and maintenance and manage its daily operations. The aim would be to assure the financial future of Monroe Park without straining the budget of Richmond's Department of Parks, Recreation, and Community Facilities. As to the governance structure, we suggest the following:

1. A board of directors with 12 to 15 members, meeting quarterly, with representation from residential and commercial property owners, VCU, residents of nearby neighborhoods, retailers, donors to the park, and the City of Richmond.

2. A strong director who has experience in real estate management, design, business, and public spaces—or at least two or three of those fields.
3. Documents that reflect a significant transfer of operating authority and responsibility to this new entity from the City, as well as the right to collect all revenues generated by park activities.

A

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B

APPENDIX B: 1904 TREE INVENTORY

The following is a listing of the trees from Trees of the City by Wilfred Cutshaw. Each species is listed with quantities in Monroe Park, botanical name, common name (as they originally appeared) and page number. Comments from A. J. Downing in his book, A Treatise on the Theory and Practice of Landscape Gardening Adapted to North America on the character of certain species are summarized below (page numbers referenced are at the end of each paragraph).

Qty.	Botanical Name	Common Name	Page
7	<i>Populus alba</i>	aspen poplar	4
13	<i>Populus monilifera</i>	cottonwood	6

Downing noted that the poplar was “not highly esteemed” for landscaping but that he considered it to be a valuable tree “when judiciously employed.” It was valuable for the rapid creation of shade and foliage. Cottonwoods would become “majestic and superb trees when old” and were also known as the balm of Gilead Poplar. [175-179]

Qty.	Botanical Name	Common Name	Page
19	<i>Fraxinus americana</i>	white ash	4

Downing described the ash a “large and lofty tree,” and noted that it could grow up to sixty feet in height and do well in a variety of soils. Downing noted that ashes were noted for their extensive roots, which made it difficult for grass to grow beneath them. He recommended they be used to create “grand masses” and be used to “intermingle with other large groups of trees in an extensive plantation.” It was admired as a landscape tree in France and Germany. Downing noted that the English Landscape writer William Gilpin admired the lightness of the foliage and it could be successfully used to contrast with trees of more dense foliage. Downing considered the White Ash to be “the finest of all the species” of ash. In the fall it could be distinguished from other trees due to the deep brownish purple leaves. [162-165]

Qty.	Botanical Name	Common Name	Page
62	<i>Ulmus americana</i>	American white elm	7
36	<i>Ulmus campestris</i>	European elm	7

Downing admired the elm for thick trunks and gracefully curved limbs. These attributes contributed to the elm having “been well known for its beauty and usefulness since a remote period.” He described it as a “favorite here as in Europe for planting in public squares and along highways.” Downing recommended placement of elms in small groups or

in rows. Downing considered the American elm to be the most beautiful of all elms and one of the finest of shade trees. The branches created a “lightness and peculiar gracefulness of form,” and he recommended planting it where “the expression of elegant or classical beauty is desired.” Downing noted that this European elm is more upright tree than the white American elm and there were a dozen varieties of the species (152-157).

Qty.	Botanical Name	Common Name	Page
16	<i>Aesculus glabra</i>	horse chestnut	9

Downing described this native of Turkey as a “large, showy, much admired, ornamental tree.” Its distinctive features were leaves of seven leaflets, beautiful flowers, and round form. Downing proclaimed it the “most beautiful exotic tree which will bear the open air in this climate.” He noted that the head of the foilage “has much grandeur and richness in depth of hue and massiveness of outline.” “When handsome avenues or straight lines are wanted, the horse chestnut is again admirably suited, from its symmetry and regularity” (181-183).

Qty.	Botanical Name	Common Name	Page
6	<i>Tilia americana</i>	American linden	9
16	<i>Tilia europea</i>	European linden	10

Downing noted that linden trees were commonly used for planting avenues and walks in England and Europe. The American variety of linden was known as basswood and Downing considered it a healthier tree than the European. The European tree variety also known as a lime tree was widely planted in urban areas. The European linden had the advantage that it could be clipped and shaped but suffered from insects (107-171). Lindens were planted on Capitol Square in 1826 in the avenue in front of the Executive Mansion.

Qty.	Botanical Name	Common Name	Page
18	<i>Acer platanoides</i>	Norway maple	11
45	<i>Acer dasycarpum</i>	silver maple	11
8	<i>Acer rubrum</i>	scarlet maple	10
50	<i>Acer saccharum</i>	sugar maple	10

Downing considered the maple as suited for being used in graceful plantings due to their softness of outline and Europeans valued maples for their autumn color. He noted: “It is unnecessary for us to recommend this tree for avenues, or for bordering the streets of cities, as its general prevalence in such places sufficiently indicates its acknowledged claims for

beauty, shade, and shelter.” Downing noted that maples varied in their leafage and flowers. Downing recommended planting scarlet and sugar maples with ash, sycamore, and oak to create a fine display of fall foilage. Downing considered scarlet maples to be the more ornamental variety due to their deep color (191-196).

Qty.	Botanical Name	Common Name	Page
4	<i>Fagus ferruginea</i>	American beech	n/a

Downing described the beech as a “large, compact, and lofty tree” that had “the darkest and densest shade of any of our deciduous forest trees.” It was widely used by the Romans as a shade tree and was praised by the Roman poet Virgil. He noted that large mature beeches were “one of the heaviest and grandest” of landscaping trees and was suitable for mixing with other trees (171-175).

Qty.	Botanical Name	Common Name	Page
14	<i>Quercus phellos</i>	willow oak	9

Downing declared the willow oak as one of the most distinctive of oaks due to the willowy appearance of the limbs and leaves. Like all oaks, it was noted to spread considerably. Downing recommended it be placed singly because of its distinctiveness and spread (139-152).

Qty.	Botanical Name	Common Name	Page
6	<i>Gymnocladus canadensis</i>	Kentucky coffee tree	10

Downing described the Kentucky coffee tree as a “unique” tree. Noting it was “one of the most novel trees, in appearance, of our whole native sylvan.” He felt that the tree was “entitled to a place” in every collection of tree specimens due to the unusual leaf and shape of the tree. He recommended placing it amongst full-sprayed trees to contrast with them (232-234).

Qty.	Botanical Name	Common Name	Page
16	<i>Liriodendron tulipifera</i>	tulip poplar	6

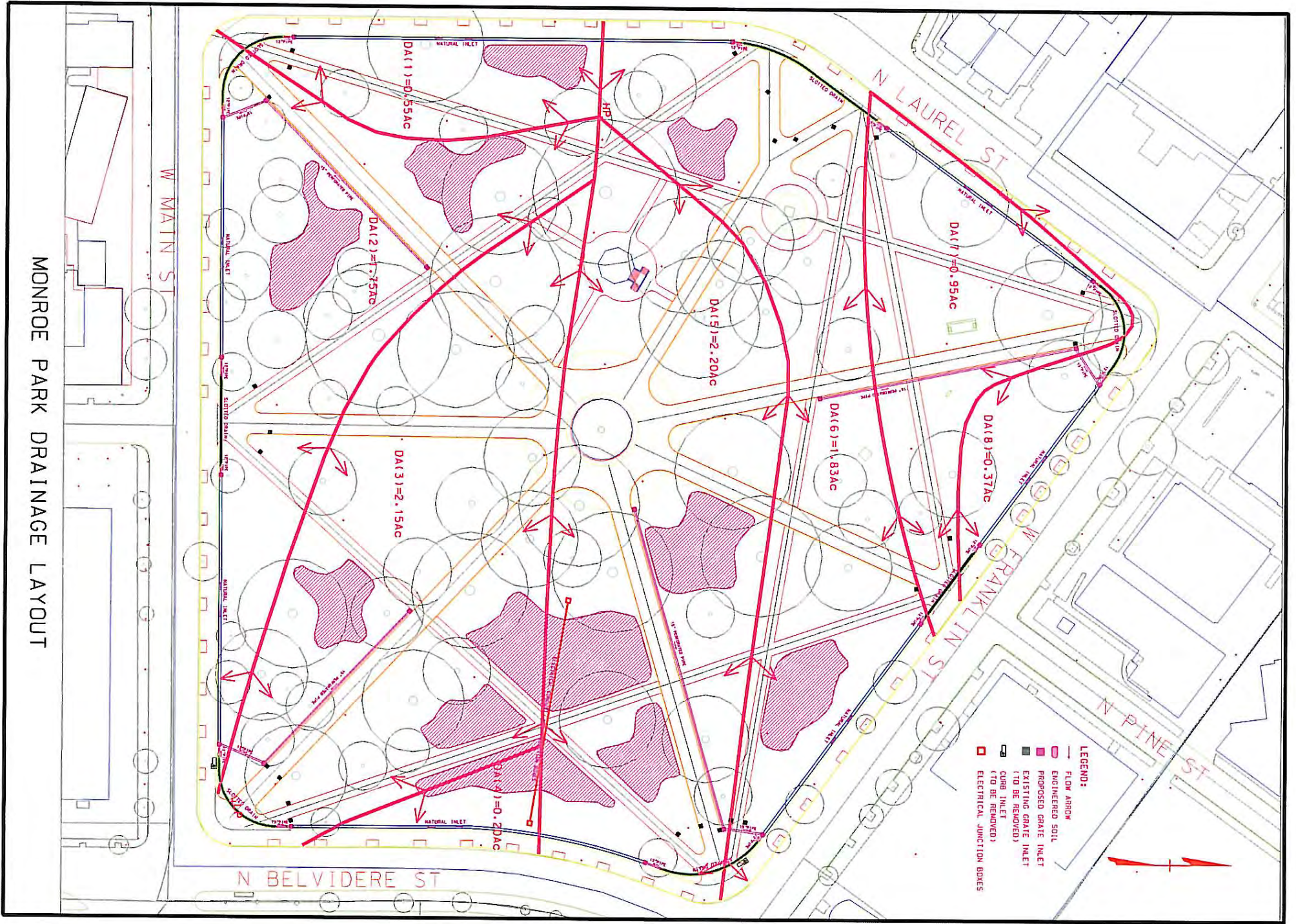
Downing admired the tulip tree, commonly but incorrectly known as the tulip poplar, for its long straight trunks and flowers. He considered it the “most stately tree in North America.” Downing recommended it for placement in squares, estates, and along avenues. He admired its overarching canopy. He noted the trunks of tulip trees displayed along an Avenue had a verdant canopy “supported on trunks almost architectural in their symmetry.” (256-257)

Qty.	Botanical Name	Common Name	Page
6	<i>Ginkgo biloba</i>	Japanese ginkgo	8
9	<i>Magnolia grandiflora</i>	magnolia	10
12	<i>Paulownia imperialis</i>	empress tree	7
1	<i>Taxodium distichum</i>	southern cypress	6
2	<i>Koelruteria japonica</i>	varnish tree	18
1	<i>Juglans nigra</i>	black walnut	27
1	<i>Taxus fastigiata</i>	Irish yew	18
1	<i>Cedrus deodora</i>	Himalayas cedar	5
1	<i>Quercus alba</i>	white oak	14
1	<i>Gleditsia triacanthos</i>	honeylocust	10
2	<i>Morus alba</i>	mulberry	13

Downing did not comment upon the above tree species.

C

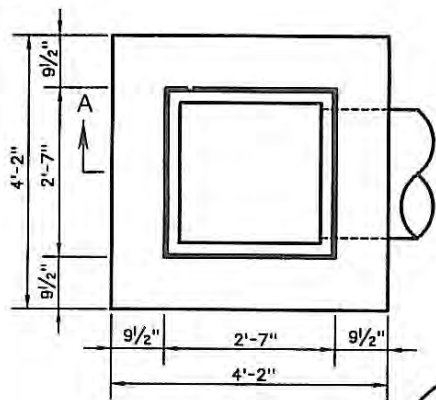
APPENDIX C: CIVIL DETAIL DRAWINGS



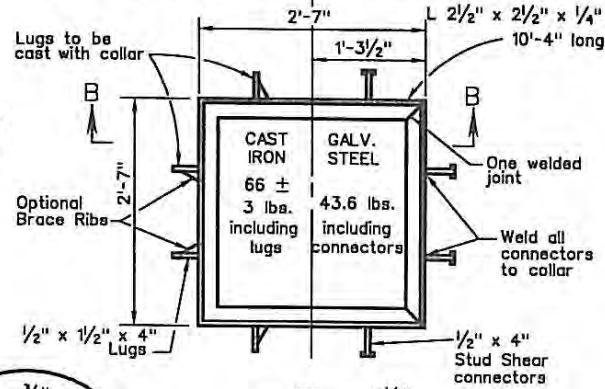
DI-1

1/2 SECTION CAST IRON — 1/2 SECTION STEEL

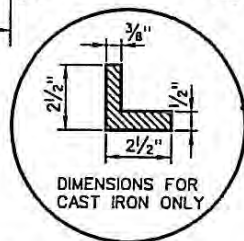
NOTES



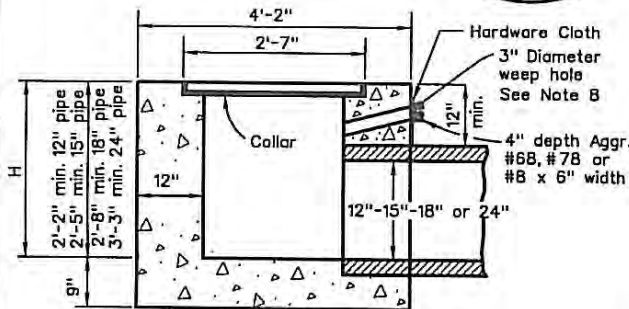
PLAN
(Grate Removed)



SECTION B-B
COLLAR DETAIL



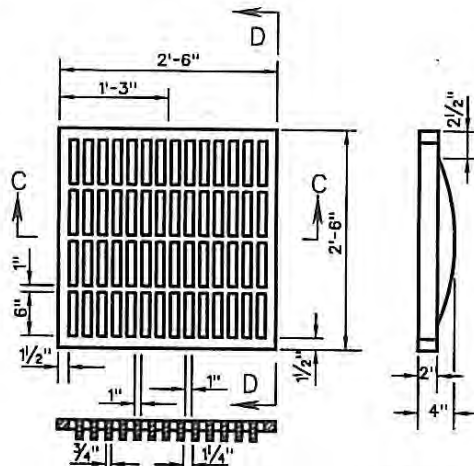
DIMENSIONS FOR
CAST IRON ONLY



SECTION A-A

CONCRETE QUANTITIES FOR MIN. DEPTH

- 12" concrete pipe - 1.440 Cu. Yds. Concrete
 - 15" concrete pipe - 1.528 Cu. Yds. Concrete
 - 18" concrete pipe - 1.620 Cu. Yds. Concrete
 - 24" concrete pipe - 1.817 Cu. Yds. Concrete
- Add 0.469 Cu. Yds. per additional foot of depth.



SECTION C-C **SECTION D-D**

GRATE DETAIL

APPROXIMATE WEIGHT
Cast Iron
Grate 363 ± 18 lbs

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS. FOR DEPTH GREATER THAN 10' USE STANDARD DI-1A
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO INLET SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
6. THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
7. # 4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 2"X4" NOTCH MAY BE PROVIDED. SEE STANDARD T-DI-3, 4 FOR ALTERNATE DESIGN.
8. 3" DIAMETER WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03". NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. CAST IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
10. ANY ALTERNATE METHODS OF ANCHORAGE MEETING THE APPROVAL OF THE ENGINEER MAY BE SUBSTITUTED FOR THE CAST IRON LUGS AS SHOWN HEREON.

STANDARD DROP INLET
12" - 24" PIPE: MAXIMUM DEPTH (H) - 10'
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION
REFERENCE

233
302

104.01

D

APPENDIX D: EXPENSE BUDGET ESTIMATES, YEARS 3, 5

Sanitation Department, Year Three:

	Shift	Attendants	Working Supervisors
Weekdays	7 AM - 3 PM	2	1
	12 PM - 8 PM	2	1
Weekends	7 AM - 3 PM	2	1
	12 PM - 8 PM	1	1

Estimated labor costs (April through October):

Attendants		
Man-shifts	4 per weekday	20
	3 per weekend day	6
Labor costs	6 attendants at \$25,000	\$ 150,000
Pro-rated labor costs	7 months of the year	\$ 87,500
Working Supervisors		
Man-shifts	2 per weekday	10
	2 per weekend day	4
Labor costs	3 working supervisors at \$30,000	\$ 90,000
Pro-rated labor costs	7 months of the year	\$ 52,500

Sample schedule (November through March):

	Shift	Attendants	Working Supervisors
Weekdays	7 AM - 5 PM	2	1
Weekends	7 AM - 5 PM	2	1

Estimated labor costs (November through March):

Attendants		
Man-shifts	2 per weekday	10
	2 per weekend day	4
Labor costs	3 attendants at \$25,000	\$ 75,000
Pro-rated labor costs	5 months of the year	\$ 31,250
Working Supervisors		
Man-shifts	1 per weekday	5
	1 per weekend day	2
Labor costs	2 working supervisors at \$30,000	\$ 60,000
Pro-rated labor costs	5 months of the year	\$ 25,000

Sanitation expense budget, summary

Labor costs, attendants	\$ 118,750
Labor costs, supervisors	\$ 77,500
Tools, supplies, uniforms, etc.	\$ 40,000
Total sanitation expense budget	\$ 236,250

Sanitation Department, Year Five:

Sample schedule (April through October):

	Shift	Attendants	Working Supervisors
Weekdays	7 AM - 3 PM	2	1
	12 PM - 8 PM	3	1
Weekends	7 AM - 3 PM	3	1
	12 PM - 8 PM	2	1

Estimated labor costs (April through October):

Attendants		
Man-shifts	5 per weekday	25
	5 per weekend day	10
Labor costs	7 attendants at \$25,000	\$ 175,000
Pro-rated labor costs	7 months of the year	\$ 102,083
Working Supervisors		
Man-shifts	2 per weekday	10
	2 per weekend day	4
Labor costs	3 working supervisors at \$30,000	\$ 90,000
Pro-rated labor costs	7 months of the year	\$ 52,500

Sample schedule (November through March):

	Shift	Attendants	Working Supervisors
Weekdays	7 AM - 5 PM	3	1
Weekends	7 AM - 5 PM	2	1

Estimated labor costs (November through March):

Attendants		
Man-shifts	3 per weekday	15
	2 per weekend day	4
Labor costs	4 attendants at \$25,000	\$ 100,000
Pro-rated labor costs	5 months of the year	\$ 41,667
Working Supervisors		
Man-shifts	1 per weekday	5
	1 per weekend day	2
Labor costs	2 working supervisors at \$30,000	\$ 60,000
Pro-rated labor costs	5 months of the year	\$ 25,000

Sanitation expense budget, summary

Labor costs, attendants	\$ 143,750
Labor costs, supervisors	\$ 77,500
Tools, supplies, uniforms, etc.	\$ 40,000
Total sanitation expense budget	\$ 261,250

Security Department, Year Three:

Sample schedule:

	Shift	Ambassadors	Supervisors
Weekdays	7 AM - 3 PM	1	1
	3 PM - 11 PM	1	1
Weekends	7 AM - 3 PM	1	1
	3 PM - 11 PM	1	1

Estimated labor costs:

	Man-shifts			# personnel	Labor cost	Total
	Weekdays	Weekend day	Total			
Ambassadors	2 shifts x 5 days = 10	3 shifts x 2 days = 6	14	3	\$25,000	\$75,000
Supervisors	2 shifts x 5 days = 10	2 shifts x 2 days = 4	14	3	\$35,000	\$105,000
Total labor costs						\$180,000

Security expense budget, summary

Total labor costs	\$180,000
Radios, insurance, supplies, uniforms, etc.	\$50,000
Total	\$230,000

Security Department, Year Five:

Sample schedule:

	Shift	Ambassadors	Supervisors
Weekdays	7 AM - 3 PM	1	1
	3 PM - 11 PM	1	1
Weekends	7 AM - 3 PM	1	1
	3 PM - 11 PM	2	1

Estimated labor costs:

	Man-shifts			# personnel	Labor cost	Total
	Weekdays	Weekend day	Total			
Ambassadors	2 shifts x 5 days = 10	2 shifts x 2 days = 4	16	4	\$25,000	\$100,000
Supervisors	2 shifts x 5 days = 10	2 shifts x 2 days = 4	14	3	\$35,000	\$105,000
Total labor costs						\$205,000

Security expense budget, summary

Total labor costs	\$205,000
Radios, insurance, supplies, uniforms, etc.	\$50,000
Total	\$255,000

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