ABSTRACT

Title of Thesis: FAREWELL, RFK. HELLO

AFFORDABILITY AND PLACE.

Christopher Rudy Ramirez, Master of Architecture 2020

Master of Community Planning 2020

Thesis Directed By: Professor Matthew Bell, ARCH

The RFK Stadium is a 50-year-old building that is planned to be demolished by 2021. The building is deteriorating more over time. The cost of maintenance and utilities is 3.5 million dollars per year without creating revenue. But, once the stadium is gone, the entire RFK Campus (190 acres) becomes available. Currently, 167 acres are covered to asphalt. But, despite current plans that propose sport facilities, this thesis explores the dedication of the RFK campus for housing. First, it examines past and present planning efforts in order to draw principles of design. Second, it provides an analysis of the site with its benefits and constraints. Third, it studies successful cases as precedents. Finally, it proposes a master plan for the RFK Campus covering housing, institutional buildings, monuments, and parks.

FAREWELL, RFK. HELLO AFFORDABILITY AND PLACE

by

Christopher Rudy Ramirez

Thesis submitted to the Faculty of the Graduate School of the University of Maryland, College Park, in partial fulfillment of the requirements for the degree of Master of Architecture 2020

Advisory Committee:

Professor Matthew Bell, AIA, Chair Professor Casey Dawkins, PhD, Director, Urban Studies and Planning & PhD Programs Professor Emeritus Karl DuPuy © Copyright by Christopher Rudy Ramirez 2020

Dedication

To my nieces and nephews. May you fly even higher than I.

Acknowledgements

I would like to thank family and friends, especially my mother and sister for their love and care towards me.

I thank Prof. Bell, Prof. DuPuy, Prof. Dawkins, and Prof. Tilghman for their support and guidance throughout my thesis process.

I thank Christopher Perez for intentionally help me grow as a professional.

I thank Dr. Luna for being a mentor and open my mind to new possibilities.

I thank Dr. César Castellón for being a friend and an inspiration to me from the beginning.

Finally, I thank My Lord Jesus for being with me always.

Table of Contents

Dedication	ii
Acknowledgements	. iii
Table of Contents	. iv
List of Figures	. vi
Chapter 1: Can RFK Campus be Suitable for Housing?	1
RFK Demolition	1
The Need of Housing	2
Can RFK Campus Be Suitable for Housing?	3
Chapter 2: Brief History of RFK Campus and Stadium	
Brief History of RFK Campus Planning	4
Brief History of RFK Events	
Chapter 3: Current Planning Efforts	13
First Group of Master Plans	13
Extending the Legacy Master Plan, 1997	13
Anacostia Waterfront Initiative 2010	14
Neighborhood Planning Initiative	16
Second Group of Master Plans	17
The Fields at RFK, 2019	17
The Kingman Island and Heritage Island Planning and Feasibility Study, 2017	18
Master Plan for Reservation 13 Hill East Waterfront, 2003	19
Stadium-Armory Station Area Planning Study, 2006	20
Chapter 4: Current State of RFK Campus Context	21
Northern Context of RFK	21
Eastern Context of RFK	22
Southern Context of RFK	23
Western Context of RFK	25
Chapter 5: Site Analysis	26
Surounding communities	26
Capitol Hill Communities	26
Demographics	27
Figure-Ground	28
Mobility and Transportation	30
Streets	30
Metro station	31
Sidewalks	31
Trails	31
River	31
Barriers	32
The RFK Campus	32
The Anacostia River	
Highway Ramps	32

Services/Land Use	33
Future Zoning	34
Private vs Public	35
Main Elements	36
Man-made vs Nature	37
Topography	38
Hydrology	. 40
Chapter 6: Precedents	. 42
Gateway Monument Precedent	42
Arc de Triomphe, Paris	42
Champ the Mars	43
Waterfront Precedent	43
Fenway-Kenmore Waterfront Edge	. 44
Chapter 7: Findings	47
Original vision	47
Ownership of the Land	47
Flooding Area	47
Infrastructure	48
Other elements on RFK Campus	48
Is the RFK suitable for housing?	48
Chapter 8: Design Proposal	49
Site Conditions	
Housing Conditions	
The Community at RFK	
Design Principles	
Use Existing Infrastructure	
Topography	
RFK Site Plan	
Streets	
East Capitol St	
22 nd St. NE	
Constitution Ave NE	
Open Spaces	
Plazas	
Monument	
Waterfront	
Housing Types	
Conclusion	
Virtual Wall	72
Rihliography	. 73

List of Figures

Figure 1. RFK Campus (Source: Google Earth)	. 1
Figure 2. Washington, DC Population Growth & Forecast (000s) (Source: DC Offic	
of Planning)	
Figure 3. L'Enfant Plan, 1791 (Source: Library of Congress)	. 4
Figure 4. Ellicott's revision of L'Enfant Plan, 1792. Diagram highlighting the main	
differences (Source: Library of Congress)	_
Figure 5. The Report of the Senate Park Commission. The Improvement of the Park	
System of the District of Columbia. RFK Campus area is marked as "purchase is	
recommended" (Source: Library of Congress)	. 6
Figure 6. Diagram showing the symmetry of the plan (Source: Library of Congress)	7
Figure 7. Whitney Young Memorial Bridge and RFK Stadium (Source: Public	
Domain)	
Figure 8. RFK Stadium looking towards Capitol, 1988 (Source: Public Domain)	
Figure 9. Extending the Legacy Master Plan. (Source: NCPC)	13
Figure 10. Vision of RFK Campus. Extending the Legacy Master Plan, 1997 (Sourc	e:
NCPC)	
Figure 11. Anacostia Waterfront Initiative Master Plan, 2010 (Source: NCPC)	14
Figure 12. Neighborhood Planning Initiative, Capitol Hill (Source: DC Office of	
Planning)	16
Figure 13. Design Concept of RFK Campus by OMA	
(https://www.architectmagazine.com/project-gallery/rfk-stadium-armory-campus-	
masterplan_o)	17
Figure 14. The Fields at RFK (Source: NCPC)	17
Figure 15. Proposed Site Plan for Kingman and Heritage Island (Source: Department	ıt
of Energy and Environment)	18
Figure 16. Master Plan for Reservation 13 Hill East Waterfront, 2003 (Source:	
NCPC)	
Figure 17. Stadium-Armory Station Area Planning Study (Source: WMATA)	20
Figure 18. Northern Context of RFK (Source: Google Earth, Christopher Ramirez)	
Figure 19. Eastern Context of RFK (Source: Google Earth, Christopher Ramirez)	22
Figure 20. Southern Context of RFK (Source: Google Earth, Christopher Ramirez)	
Figure 21. Western Context of RFK (Source: Google Earth, Christopher Ramirez).	25
Figure 22. Capitol Hill Region (Source: NCPC)	26
Figure 23. Demographics Data 1 (Source: DC Office of Planning)	27
Figure 24. Demographics Data 2 (Source: DC Office of Planning)	28
Figure 25. Figure/Ground Diagram (Source: Christopher Ramirez)	29
Figure 26. Street Hierarchy Diagram and Stadium-Armory Station (Source:	
Christopher Ramirez)	30

Figure 27. Future Land Use (Source: NCPC)	33
Figure 28. Future Zoning Map (Source: NCPC)	
Figure 29. Private vs. Public Diagram (Source: NCPC, Christopher Ramirez)	
Figure 30. Main Elements Diagram (Source: Christopher Ramirez)	
Figure 31. Man-Made vs. Nature Diagram (Source: Christopher Ramires)	37
Figure 32. Topography showing Elevation (Source:	
https://contourmapcreator.urgr8.ch/, Christopher Ramirez)	38
Figure 33. Topography Showing Contour Lines 2ft. (Source:	
https://contourmapcreator.urgr8.ch/, Christopher Ramirez)	38
Figure 34. Aerial Photo, 1949 (Source: Google Earth)	
Figure 35. Missing Islands in Anacostia River 1865 (Source: Library of Congress	s,
Military Map of N.E. Virginia)	
Figure 36. Water Flow Diagram (Source: Christopher Ramirez)	40
Figure 37. 100-year and 500-year Floodplain (Source: FEMA)	41
Figure 38. Arc de Triomphe Comparison (Source: Google Earth, Christopher	
Ramirez)	42
Figure 39. Champ de Mars (Source: Google Earth, Christopher Ramirez)	43
Figure 40. Fenway-Kenmore Waterfront Edge (Source: Google Earth, Christophe	
Ramirez)	
Figure 41. Fenway-Kenmore Parkway example (Source: Google Earth)	45
Figure 42. West End Vancouver Road Along the Lake (Source: Google Earth)	
Figure 43. West End Vancouver Waterfront Edge (Source: Google Earth, Christo	opher
Ramirez)	
Figure 44. Area and Waterfront (Source: Christopher Ramirez)	49
Figure 45. Ramps (Source: Christopher Ramirez)	49
Figure 46. Urban Fabric (Source: Christopher Ramirez)	50
Figure 47. Metro Station and Ramps (Source: Christopher Ramirez)	50
Figure 48. Topography (Source: Christopher Ramirez)	51
Figure 49. 100-Year Floodplain (Source: Christopher Ramirez)	51
Figure 50. Housing and Population (Author: Christopher Ramirez)	52
Figure 51. Sidewalks, Tree cover, and Parks (Author: Christopher Ramirez)	52
Figure 52. Proposed Area for Residential (Author: Christopher Ramirez)	53
Figure 53. Parti Diagram (Author: Christopher Ramirez)	53
Figure 54. Lessons from L'Enfant Plan, 1791 (Source: Christopher Ramirez)	54
Figure 55. Lessons from Ellicott's Revision, 1792 (Source: Christopher Ramirez) 54
Figure 56. Lessons from McMillan Plan, 1902 (Source: Christopher Ramirez)	55
Figure 57. Lessons from Development of the central area west and east of the	
CapitolWashington D.C. 1941 (Source: Christopher Ramirez)	55
Figure 58. Lessons from Current Master Plan by OMA Architects (Source:	
Christopher Ramirez)	
Figure 62. Ramps Around the RFK Stadium (Source: Google Earth)	57
Figure 62. Southern Underpass (Source: Google Earth)	
Figure 62. Northern Underpass 1 (Source: Google Earth)	57
Figure 62. Northern Underpass 2 (Source: Google Earth)	
Figure 64. Current Topography (Source: Christopher Ramirez)	
Figure 64. Proposed Topography (Source: Christopher Ramirez)	58

Figure 65. Extended Grid (Source: Christopher Ramirez)	58
Figure 66. Street Hierarchy (Source: Christopher Ramirez)	
Figure 67. Blocks (Source: Christopher Ramirez)	59
Figure 68. Buildings (Source: Christopher Ramirez)	59
Figure 69. Green Areas and Open Spaces (Source: Christopher Ramirez)	60
Figure 70. RFK Site Plan (Source: Christopher Ramirez)	61
Figure 71. East Capitol St. Perspective Looking East (Source: Christopher Ramirez	
	62
Figure 72. East Capitol St. Institutional Section (Source: Christopher Ramirez)	62
Figure 73. East Capitol St. Mid-Rise Apartment Section (Source: Christopher	
Ramirez)	63
Figure 74. East Capitol St. High-Rise Apartment Section (Source: Christopher	
Ramirez)	63
Figure 75. 22nd St. NE Perspective Looking South (Source: Christopher Ramirez).	64
Figure 76. 22nd St. NE Section (Source: Christopher Ramirez)	64
Figure 77. Constitution Ave. NE Perspective Looking East (Source: Christopher	
Ramirez)	
Figure 78. Constitution Ave. NE Section (Source: Christopher Ramirez)	65
Figure 79. Plazas (Source: Christopher Ramirez)	66
Figure 80. Monument Placeholder (Source: Christopher Ramirez)	67
Figure 81. Lincoln Memorial and Monument Location Comparison (Source:	
Christopher Ramirez)	67
Figure 82. Waterfront (Source: Christopher Ramirez)	
Figure 83. Waterfront-Active Recreation Area (Source: Christopher Ramirez)	68
Figure 84. Land Use Map (Source: Christopher Ramirez)	
Figure 85. Rowhouse & 2over1(Source: Christopher Ramirez)	69
Figure 86. Walk-Ups (Source: Christopher Ramirez)	70
Figure 87. Apartments (Source: Christopher Ramirez)	
Figure 89. RFK Housing Project Aerial View (Source: Christopher Ramirez)	71
Figure 88. RFK Current Conditions (Source: Google Earth)	71

Chapter 1: Can RFK Campus be Suitable for Housing?

RFK DEMOLITION

Officials from the District of Columbia confirmed the demolition of RFK stadium in 2021¹. The stadium covers an area of 10 acres, but the entire RFK campus covers 190 acres of land². Since the stadium will not be functioning, the required amount parking spaces becomes useless and even detrimental for the environment. But, could this be a good opportunity to place housing in that area? Or to be more specific, is the RFK Campus suitable for housing?

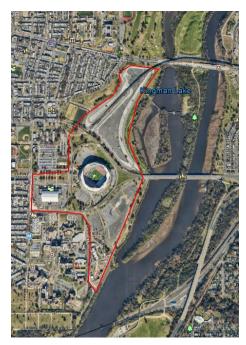


Figure 1. RFK Campus (Source: Google Earth)

¹ Robert McCartney, "Bye-Bye, Bouncy Seats: District to Raze RFK Stadium by 2021," Washington Post, September 5, 2019, sec. D.C. Politics, accessed November 13, 2019, https://www.washingtonpost.com/local/dc-politics/district-to-raze-rfk-stadium-by-2021--but-not-necessarily-so-redskins-can-build-a-new-one/2019/09/05/48b18fc6-cfea-11e9-87fa-8501a456c003 story.html.

² "Congressional Record," legislation, accessed November 14, 2019, https://www.congress.gov/congressional-record/2019/3/26/extensions-of-remarks-section/article/e353-1.

THE NEED OF HOUSING

Washington D.C. has experienced a growing population since 2000 and it is expected to continue growing in the following 25 years³. Housing development responded to this growth by creating one of the fastest periods of production in D.C.'s recent history, but housing supply is not keeping up to meet the needs of the growing population⁴. In addition, housing production consisted mostly of small rental units targeted to households earning more than 120 percent of the Median Family Income⁵. Based on this projection, Washington, D.C. faces a shortage of 5,220 affordable houses⁶. The RFK campus could become a big contributor to meet the needs of the region by providing housing at market rate and affordable housing.

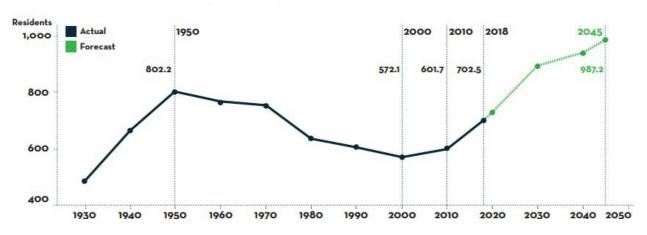


Figure 2. Washington, DC Population Growth & Forecast (000s) (Source: DC Office of Planning)

³ District of Columbia, Office of Planning, "Housing Equity Report Creating Goals for Areas of Our City" (October 2019): 20.

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

CAN RFK CAMPUS BE SUITABLE FOR HOUSING?

The RFK Campus is a prime location in the DC Area. It is located two miles west from the US Capitol. It has access to the Stadium-Armory Metro Station and Baltimore-Washington Parkway. The surrounding neighborhoods are well designed with beautiful single family attached homes, and their streets are pedestrian friendly. Residents of this area could enjoy the benefits of working locally, having access to many destinations through public transportation and automobile, and spend their lives in beautiful neighborhoods.

On the other hand, the RFK Campus has many limitations that could make it a difficult place to residence. First, the campus has always been marked as a public space. It opens to the Anacostia River even though right now the RFK Stadium and its parking lots block the access. Second, the Anacostia River has been terribly damaged in the past years. The area is also low enough for flooding. Last, Metro railways and the ramps from the highway might be a hinderance for a residential zone.

But the question remains open, is the RFK Campus suitable for housing? And if it is not, can it be designed to be safe for housing?

Chapter 2: Brief History of RFK Campus and Stadium

BRIEF HISTORY OF RFK CAMPUS PLANNING

The RFK Campus, as we know it now, appeared on the first maps of Washington D.C. Pierre Charles L'Enfant was hired in 1791to survey the city for the new capital of The United States⁷. The result was an ambitious master plan showing the location of important buildings and their relationship to the terrain⁸. He placed the Capitol in the middle and divided the city from there. He placed the National Mall east from the Capitol where citizens had access. The brilliance of this plan is the merge of a baroque plan with a grid. L'Enfant created a grid of streets aligned with the cardinal points. He also projected diagonals avenues that connected main

buildings and important places in the city. L'Enfant's plan shows the RFK Campus as an open space at the edge of the city with

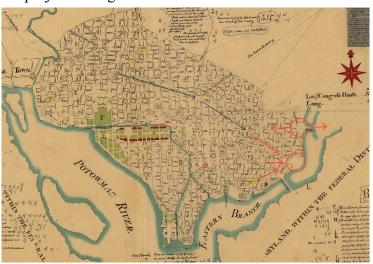


Figure 3. L'Enfant Plan, 1791 (Source: Library of Congress)

⁷ Events DC, "EventsDC - Our History," accessed November 13, 2019, http://eventsdc.com/Venues/RFKStadium/OurHistory.aspx.

⁸ "A Brief History of Pierre L'Enfant and Washington, D.C.," *Smithsonian*, accessed November 14, 2019, https://www.smithsonianmag.com/arts-culture/a-brief-history-of-pierre-lenfant-and-washington-dc-39487784/.

diagonals and a bridge. This open space was intended as a gateway to the city going straight to the US Capitol. The map also shows Massachusetts Avenue in segments terminating at current Congressional Cemetery.

L'Enfant was very strong in his ideas. When he realized that he would not be able to execute them, he resigned⁹.

Andrew Ellicott, the city's surveyor, took his place and made some changes to

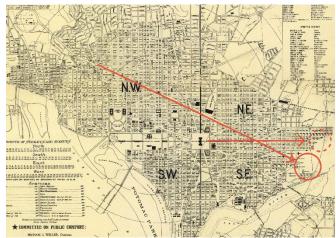


Figure 4. Ellicott's revision of L'Enfant Plan, 1792. Diagram highlighting the main differences (Source: Library of Congress)

Massachusetts Avenue run

L'Enfant's plan. Ellicott made

straight terminating in Reservation 13. He also removed the open space and the bridge at the end of East Capitol Street. In this way, the RFK Campus area was lost.

⁹ Ibid.

In 1901, The Commission on the Improvement for the Park System (also known as the McMillan Commission) created a map for public open spaces and areas recommended for purchase ¹⁰. The McMillan Commission was comprised of Daniel Burnham, Frederick Law Olmsted, Jr., Charles F.McKim, and Augustus St. Gaudens¹¹. The excellence of their work was mostly displayed on the National Mall¹². However, in order to unify DC, they identified green areas for

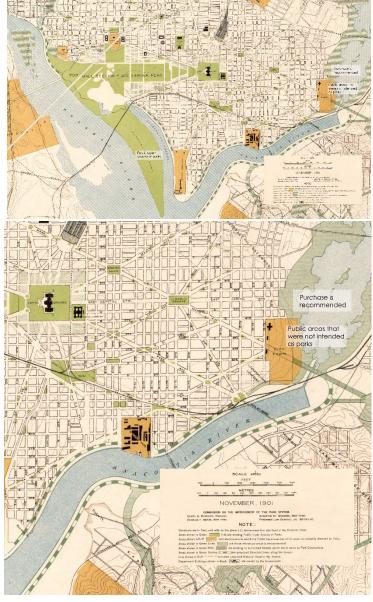


Figure 5. The Report of the Senate Park Commission. The Improvement of the Park System of the District of Columbia. RFK Campus area is marked as "purchase is recommended" (Source: Library of Congress)

public use, among those, they marked the RFK Campus area as recommended for purchase.

¹⁰ "The L'Enfant and McMillian Plans," accessed November 14, 2019, https://www.nps.gov/nr/travel/wash/lenfant.htm.

¹¹ Ibid.

¹² Events DC, "EventsDC - Our History."

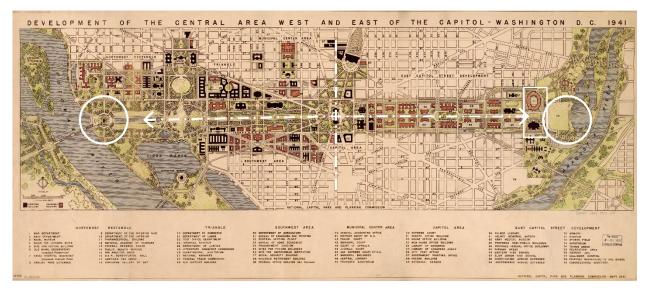


Figure 6. Diagram showing the symmetry of the plan (Source: Library of Congress)

The Following plan that marked a difference on how the RFK Campus was envisioned was the "Development of The Central Area West and East of the Capitol-Washington D.C. 1941." The plan expanded on the L'Enfant plan and the McMillan Plan to unify the core of DC. It ran civic buildings along East Capitol Street and placed a waterfront at the end. The stadium (showed in red within the box) is placed

in front of the DC Armory (showed in black within the box) and the open space at the end of East Capitol Street mirrors the Lincoln Memorial.

During the 1950's, citizens complaint about traffic congestion in DC and demanded a bridge on East Capitol Street. National Capital Park and Planning Commission (NCPPC) opposed the bridge in that location. But the bridge was approved, and the East Capitol Street Bridge was built in 1955. The Bridge was renamed Whitney Young Memorial Bridge in honor to civil right activist in 1974¹³.



Figure 7. Whitney Young Memorial Bridge and RFK Stadium (Source: Public Domain)

¹³ "Bridges Carry Bits of History Along With the Traffic (Washingtonpost.Com)," accessed November 14, 2019, http://www.washingtonpost.com/wp-dyn/articles/A1129-2005Apr19.html.

The bridge now connects to the Baltimore-Washington Washington Parkway and Maryland Route 214.

The RFK Stadium opened in 1961 and the area remains the same until this day ¹⁴. The ramps from Whitney Young Memorial Bridge divided the RFK Campus in 3 locating the stadium in the middle section. Parking lots cover 167 acres of land while green spaces only cover 23 acres ¹⁵. The RFK Campus remains federally owned but in March 26, 2019, a bill was introduced to sell the land to DC but no it has not been approved ¹⁶.

¹⁴ "TOPN: District of Columbia Stadium Act of 1957," LII / Legal Information Institute, accessed November 14, 2019,

https://www.law.cornell.edu/topn/district_of_columbia_stadium_act_of_1957.

¹⁵ "Congressional Record."

¹⁶ Ibid.

BRIEF HISTORY OF RFK EVENTS

The RFK Stadium was filled with many events. There were many games filled with tears and joy from fans of different sports.

There were also concerts were big stars made their appearance and shared with DC their great talent.

Here is a general timeline with highlights of the events that took place in RFK Stadium.

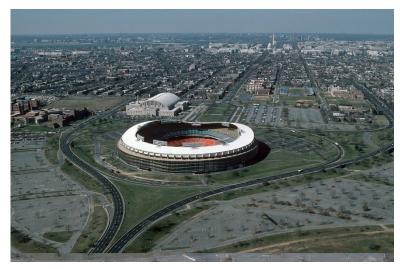


Figure 8. RFK Stadium looking towards Capitol, 1988 (Source: Public Domain)

In the early 1950's, Griffin Stadium started to show signs of deterioration and it was necessary to build a new stadium for Washington Redskins (NFL) and Senators (MLB)¹⁷. The Robert F. Kennedy Memorial Stadium, originally named District of Columbia Stadium, was designed by George Dahl, Ewin Engineering Associates and Osborn Engineering as a multipurpose facility for football and baseball, and years later, it also incorporated soccer¹⁸. DC Stadium was leased for the first time in December 12, 1958¹⁹. DC Stadium opened its doors for its first official event on

¹⁷ "RFK Stadium - History, Photos & More of the Former NFL Stadium of the Washington Redskins," *Stadiums of Pro Football - Your Ticket to Every NFL Football Stadium*, n.d., accessed November 13, 2019, https://www.stadiumsofprofootball.com/stadiums/rfk-stadium/.

¹⁸ Events DC, "EventsDC - Our History."

¹⁹ Ibid.

October 1, 1961²⁰. The Washington Redskins lost to the New York Giants in the inaugural game that held 36,767 spectators, including President John F. Kennedy²¹. On April 9, 1962, the Washington Senators played their first game at RFK stadium and President John F. Kennedy threw out the first pitch²².

On January 18, 1969, the District of Columbia Stadium was renamed Robert F. Kennedy Memorial Stadium to honor U.S. Senator and presidential candidate who was assassinated the previous June in Los Angeles²³.

During the 1960's, the Washington Diplomats of the NASL joined the RFK Stadium adding soccer to the main sports housed by the stadium²⁴. During this time, the RFK Stadium held different concerts such as The Beatles (1966), The Rolling Stones (1972), Michael Jackson (1984), Bruce Springsteen & The E Street Band (1985), Madonna (1987), U2 (1987), Van Halen/Metallica (1988) and The Who (1989)²⁵.

During the 1990's RFK held two international events. In July 1994, RFK held 5 games for the FIFA World Cup and in 1996, it held 9 games for the Summer Olympic Games²⁶. Also, in 1996 D.C. United was born as Major League Soccer expands to the nation's capital. On December 22, 1996, the Redskins won their last game at RFK Stadium²⁷.

²⁰ Ibid.

²¹ Ibid.

²² Ibid.

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

In the last years, RFK stadium held major events. In January 19, 2009, Michelle Obama, and distinguished group of public officials led A Day of Service for Our Military as part of the Martin Luther King Jr. National Day of Service²⁸. 12,000 volunteers made over 80,000 care packages for American Troops overseas²⁹. During 2009 9/11 National Day of Remembrance, Greater DC Cares and Serve DC hosted the Armed Services YMCA's Operation Kid Comfort³⁰. Over 200 volunteers created nearly 100 personalized photo-transfer quilts and pillows for children of deployed servicemen and women³¹. On October 5, 2011, Events DC, city officials, former players, coached and participants celebrated the 50th anniversary of RFK Stadium³². On June 2, 2013, U.S. Soccer hosted the Centennial Celebration Match featuring the U.S. Men's National Team vs. Germany³³. But the life of the RFK Stadium has now come to an end. On September 9, 2019, DC Events announced the demolition of RFK by 2021³⁴.

_

²⁸ Ibid.

²⁹ Ibid.

³⁰ Ibid.

³¹ Ibid.

³² Ibid.

³³ Ibid.

³⁴ McCartney, "Bye-Bye, Bouncy Seats."

Chapter 3: Current Planning Efforts

FIRST GROUP OF MASTER PLANS

Extending the Legacy Master Plan, 1997

The L'Enfant plan laid a system of avenues over a grid to create important location and connect them through the city³⁵. The McMillan plan took this framework and added parks, civic buildings, memorials³⁶. They also stablished the National Mall that remains today³⁷. Extending the Legacy Master Plan took those elements and magnified them in DC creating museums,

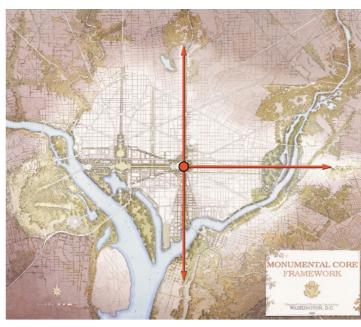


Figure 9. Extending the Legacy Master Plan. (Source: NCPC)

memorials, federal buildings, and ceremonial corridors³⁸. This plan also expanded on transportation and waterfronts³⁹. The RFK stadium was planned to be replaced by a memorial, an environmental center, and housing and commercial development.

³⁵ NCPC, "Legacy Plan," accessed November 15, 2019,

https://www.ncpc.gov/plans/legacy/.

³⁶ Ibid.

³⁷ Ibid.

³⁸ Ibid.

³⁹ Ibid.



Figure 10. Vision of RFK Campus. Extending the Legacy Master Plan, 1997 (Source: NCPC)

Anacostia Waterfront Initiative 2010

The vision of the Anacostia

Waterfront Initiative is to create "a vibrant mix of natural and neighborhood assets along a clean Anacostia River and preservation of our natural resources for the benefit and enjoyment of residents and source: NCPC)

The vision of the Anacostia South Capital South

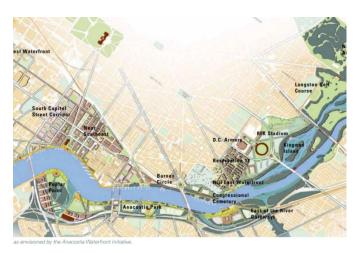


Figure 11. Anacostia Waterfront Initiative Master Plan, 2010 (Source: NCPC)

visitors"⁴⁰. The plan divides a program in 5 elements: Environment, transportation, parks, destination, and neighborhoods⁴¹. This plan seeks to restore the environment of

⁴⁰ Government of the District of Columbia, "Anacostia Waterfront Initiative," September 2010, https://www.capitolriverfront.org/_files/docs/awi10yearprog.pdf. ⁴¹ Ibid.

the Anacostia River by reducing the impact of the sewer system and expanding wetlands along the watershed among other initiatives⁴². The plan connects people and places through different modes of transportation on and along the river⁴³. The plan is invested in the creation and renovation of parks in different communities along the river⁴⁴. The Anacostia Waterfront Initiative also celebrates destination and places that are environmentally friendly⁴⁵. Last, the plan strives for vibrant neighborhoods that give life to the waterfronts⁴⁶. The RFK Campus is part of this plan but it does not have any of these characteristics yet. The Anacostia Waterfront Initiative is an important framework that will shape the RFK Campus.

...

⁴² Ibid.

⁴³ Ibid.

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Ibid.

Neighborhood Planning Initiative

The Neighborhood Planning Division has 5 main areas⁴⁷:

- 1. Developing small area plans and planning studies
- 2. Coordinating and tracking plan implementation
- 3. Participating in citywide planning initiatives that have a neighborhood impact
- 4. Monitoring and reviewing development projects
- 5. Acting as a liaison to elected officials and community stakeholders on land use, development, and planning issues

The plan at Capitol Hill covers the RFK Campus. The plan envisions to connect communities with other elements like the Langston Golf Course and National Arboretum areas to the north⁴⁸. It focuses on mixed-use

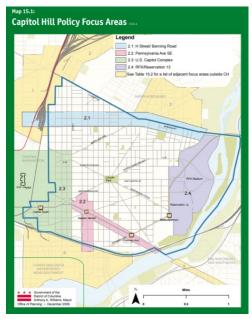


Figure 12. Neighborhood Planning Initiative, Capitol Hill (Source: DC Office of Planning)

development, transit-oriented development (TOD), and waterfront⁴⁹. This initiative seeks the implementation of the Master Plan for Reservation 13 which is adjacent to the RFK Campus⁵⁰.

⁴⁷ "Neighborhood Planning | Op," accessed November 15, 2019, https://planning.dc.gov/page/op-neighborhood-planning.

⁴⁸ Government of the District of Columbia, "Comprehensive Plan for the National Capital: District Elements, Volume II Area Elements, Chapter 15, Capitol Hill Area Element," n.d.

⁴⁹ Ibid.

⁵⁰ Ibid.

SECOND GROUP OF MASTER PLANS

The Fields at RFK, 2019

Located north RFK Stadium, there is a new set of multipurpose recreational fields. Their vision "to transform the RFK Stadium Campus by converting acres of asphalt into a new gateway to the city, featuring numerous community-focused sports, recreation and cultural amenities" ⁵¹. They hold tournaments for kids and adults ⁵².



Figure 14. The Fields at RFK (Source: NCPC)

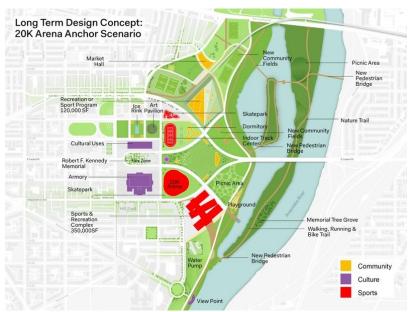


Figure 13. Design Concept of RFK Campus by OMA (https://www.architectmagazine.com/project-gallery/rfk-stadium-armory-campus-masterplan_o)

This plan is part of a bigger effort that seeks to replace the RFK Stadium and add new elements to the RFK Campus. The Office of Metropolitan Architecture (OMA)

17

⁵¹ Events DC, "The Fields at RFK Campus," *The Fields at RFK Campus*, accessed November 15, 2019, https://rfkfields.com/the-future/. ⁵² Ibid.

has provided 3 different scenarios but the plan is not official yet. However, it gives an idea of the RFK Campus could become.

The Kingman Island and Heritage Island Planning and Feasibility Study, 2017

East to the RFK Campus are the Kingman Island and Heritage Island. They have produced a study "to create an oasis focused on conserving and restoring precious ecosystems"⁵³. They analyzed the cost and feasibility of developing and maintaining

conjunction with many entities and volunteers from the communities around⁵⁵. Their study features open spaces for visitors and outdoor classrooms for kids⁵⁶. The RFK Campus is directly connected to the islands and its planning must involve nature restoration with community engagement.

a state-of-the-arts nature center⁵⁴. They work in

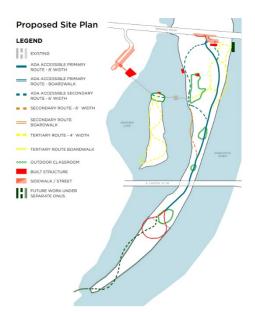


Figure 15. Proposed Site Plan for Kingman and Heritage Island (Source: Department of Energy and Environment)

⁵³ "Kingman and Heritage Island Proposal - V2.1Pages from 2017_10-30.Pdf," n.d., 8, accessed November 15, 2019,

https://doee.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/Page s%20from%202017_10-30%20Kingman%20and%20Heritage%20Island%20Proposal%20-%20V2.1.pdf.

⁵⁴ "Kingman Island & Heritage Island Planning & Feasibility Study | Ddoe," accessed November 15, 2019, https://doee.dc.gov/publication/kingman-island-heritage-island-planning-feasibility-study.

⁵⁵ Ibid.

⁵⁶ "Kingman and Heritage Island Proposal - V2.1Pages from 2017_10-30.Pdf."

Master Plan for Reservation 13 Hill East Waterfront, 2003

Reservation 13 is located south of RFK Campus. The Master Plan for Reservation 13 Hill East Waterfront envisions "an urban waterfront district that serves the District of Columbia and connects the surrounding neighborhoods to the Anacostia River via

public streets and green parks"⁵⁷. The plan for the 67 acres of land suggests mixed-use of healthcare, recreation, education, residential, retail, underground parking, civic and municipal buildings, waterfront, and parks⁵⁸. Reservation 13 is planned to be a transit-oriented development with an expected number of approximately 3,000 dwelling units near Stadium-Armory Metro station⁵⁹.



Figure 16. Master Plan for Reservation 13 Hill East Waterfront, 2003 (Source: NCPC)

⁵⁷ "DC General (Reservation 13) Draft Master Plan, March 31, 2002," accessed November 15, 2019, http://www.dcwatch.com/issues/Res13-020331.htm. ⁵⁸ lbid.

⁵⁹ "Zoning Commission for The District of Columbia Notice of Final Rulemaking and Z.C. Order No. 04-05 2004-05.Pdf," n.d., accessed November 15, 2019, https://planning.dc.gov/sites/default/files/dc/sites/op/publication/attachments/Zoning%2520-%2520Approved%2520Case%252004-05.pdf.



Figure 17. Stadium-Armory Station Area Planning Study (Source: WMATA)

Stadium-Armory Station Area Planning Study, 2006

In response to the Master Plan for Reservation 13 Hill East Waterfront, Metro conducted a study "to improve access to the station, enhance the appearance of the station and coordinate these improvements with other area planning initiatives" 60. The study covered the development of a master plan, traffic analysis, station capacity and enhancements, and order of magnitude cost estimate 61.

⁶⁰ "Stadium-Armory Final Report.Pdf," n.d., 8, accessed November 15, 2019, https://www.wmata.com/initiatives/plans/upload/Stadium-Armory-FinalOReport.pdf. "Stadium-Armory Final Report.Pdf."

Chapter 4: Current State of RFK Campus Context

NORTHERN CONTEXT OF RFK

The north context of RFK has 3 main elements. First, The Fields at RFK opened in June 2019 taking what used to be Lot 7 of the RFK Stadium⁶². It covers 27 acres and has 3 multipurpose recreational fields. They hold tournaments for kids and adults⁶³. Second, the Orange line of Metro divides the area in two. It comes out of the ground and then it is elevated on ramps to go over



Figure 18. Northern Context of RFK (Source: Google Earth, Christopher Ramirez)

Benning Rd NE bridge. Its appearance is not flattering and might become a negative asset in the future development of RFK Campus. Last, Benning RD NE marks the limit of RFK Campus on the north side. Its bridge was built in 1797 and then replaced in 2012 adding more lanes⁶⁴.

⁶² Cortlynn Stark, "While Stadium Rusts Away, Newly Opened Fields at RFK Offers a Glimpse into Site's Future," Washington Post, accessed November 15, 2019, https://www.washingtonpost.com/local/dc-politics/while-rfk-stadium-rusts-away-thenewly-opened-the-fields-at-rfk-offers-a-glimpse-into-the-future/2019/08/17/1377edacb3aa-11e9-8949-5f36ff92706e story.html.

⁶³ Events DC, "The Fields at RFK Campus."

^{64 &}quot;Benning Road Bridge Replacement | Volkert," accessed November 15, 2019,

EASTERN CONTEXT OF RFK

The Eastern context
of RFK has 5 different
elements. First, The
Anacostia River flows
south until it meets with the
Potomac River. Its
watershed extends into
Montgomery County and
Prince George's County
covering 176 square
miles⁶⁵. Second and third,
Kingsman Island and

Heritage Island Wayside



Figure 19. Eastern Context of RFK (Source: Google Earth, Christopher Ramirez)

which have gone under many changes and are now subject to restoration and protection. Fourth, River Terrace, constructed in 1937, and Greenway which dates in the 1880's. Last, Potomac Electric Power Company (PEPCO) located northeast from RFK Campus.

22

⁶⁵ "Fun Facts About the Anacostia," *Anacostia Waterfront Trust*, accessed November 15, 2019, https://www.anacostiatrust.org/anacostia-trust/2015/10/07/fun-facts-about-the-anacostia-2.

SOUTHERN CONTEXT OF RFK

The area located south from the RFK Campus has many elements. First, the DC Armory open in 1941 as the headquarters, armory and training facility for the DC National Guard⁶⁶. In 1948 the DC Armory Board (known today as Events DC) to facilitate non-military use of the Armory. It has a capacity of 10,000 seating for sports and theater events, and 70,000 square feet of exhibition space. Second, Stadium-Armory Station openned in 1977 to provide service for Hill East community and for events at RFK stadium and DC Armory. Third, Reservation 13 (numbers 3-14 on the map) has a large group of historic, medical, and vacant buildings. Last, the Congressional Cemetery (15) is located on the lower part of the map.

The following list corresponds to the numbers in the map:

^{66 &}quot;EventsDC - OurHistory," accessed November 15, 2019, http://www.dcconvention.com/Venues/DCArmory/OurHistory.aspx.

- 1. DC Armory
- 2. Stadium-Armory Station
- 3. St Coletta of Greater Washington
- 4. Ambulatory Care Center and Emergency Care Center
- 5. HOYA Clinic, and DC General Family Shelter
- 6. Vacant
- 7. Vacant
- 8. Anne Archbold Hall
- 9. Women's Services, and Chest Clinic/TB Clinic
- 10. DC Healthcare Alliance
- 11. DC Water Swirl Facility
- 12. DC Jail, DC Central Detention Facility
- 13. Correctional Treatment Facility
- 14. Court Services and Offender supervision agency for the District of Columbia Re-Entry & Sanctions Center
- 15. Congressional Cemetery



Figure 20. Southern Context of RFK (Source: Google Earth, Christopher Ramirez)

WESTERN CONTEXT OF RFK

Kingman Park and Hill East are located to the west of RFK Campus.

Kingman Park dates its origins in 1898 when Congress approved dredging the Anacostia River and place the mud on dryland to create flats⁶⁷. But its development occurred in 1928 and early 1950's for African Americans during times of intense segregation⁶⁸. In 2018, the norther part was designated a historic district for its cultural and architectural characteristics⁶⁹. The region is mostly residential with recreation centers and



Figure 21. Western Context of RFK (Source: Google Earth, Christopher Ramirez)

educational facilities including Eliot-Hine Middle School and Eastern Senior High School. Hill East had its major increase in the 1920's when developers were able to provide rowhouses that looked like Craftsman bungalows to the middle class⁷⁰.

⁶⁷ "History," *Kingman Park*, accessed November 15, 2019, http://kingmanpark.com/history.html.

^{68 &}quot;Capitol Hill Restoration Society » Kingman Park Historic District," accessed November 15, 2019, https://chrs.org/kingman-park-historic-district/.

^{69 &}quot;DC_Kingman Park HD Nomination.Pdf," n.d., accessed November 15, 2019, https://planning.dc.gov/sites/default/files/dc/sites/op/publication/attachments/DC_Kingman%20Park%20HD%20Nomination.pdf.

⁷⁰ "Big-3-Rowhouse-Builders.Pdf," n.d., accessed November 15, 2019, https://chrs.org/wp-content/uploads/2013/04/big-3-rowhouse-builders.pdf.

Currently, Hill East is mainly residential (considering Reservation 13 as a separate region) with few services including Washington DC Fire & EMS Station.

Chapter 5: Site Analysis

SUROUNDING COMMUNITIES

Capitol Hill Communities

The Capitol Hill region is composed by 8 neighborhoods: Capitol Hill, Kingman Park, Stanton Park, Near Northeast, Hill East, Lincoln Park, RFK Stadium, and Eastern Market.



Figure 22. Capitol Hill Region (Source: NCPC)

Demographics

Based on the data, more than 8,400 people moved into the Capitol Hill region. 78% of the population are between 18 to 64 years old. Poverty level is low at 12% and income is high at \$107,662. 74% moved in since the year 2000. 48% of the population rent their homes. Based on these characteristics, the population moving in might be working in DC earning a high amount of money. Providing new housing, both market rate and affordable, would increase create a population with diverse income.

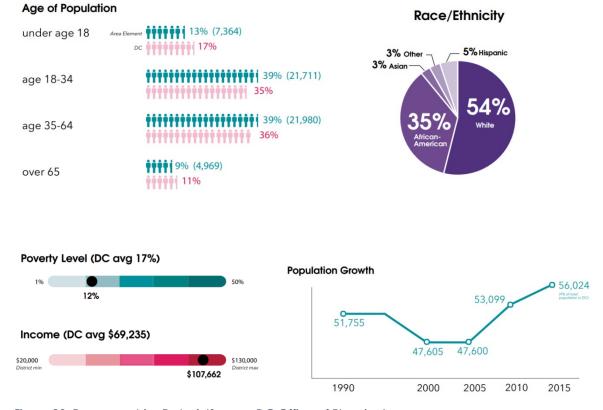


Figure 23. Demographics Data 1 (Source: DC Office of Planning)

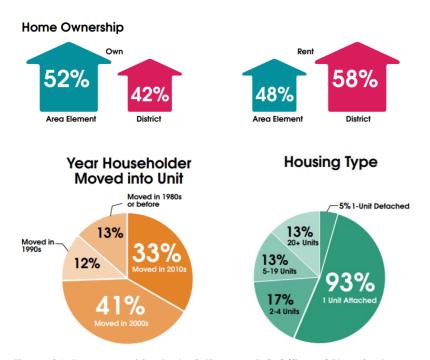


Figure 24. Demographics Data 2 (Source: DC Office of Planning)

FIGURE-GROUND

The figure ground diagram shows the difference between the RFK Campus and its surroundings. The grid of the city is continuous on the West side while the RFK Campus has mainly object buildings and transportation infrastructure. The difference to the East side is even greater having the Anacostia River with Kingman and Heritage Islands. The diagram shows a residential scale on the West, a monumental scale in the middle, and only the bridge stands as a human structure on the islands.

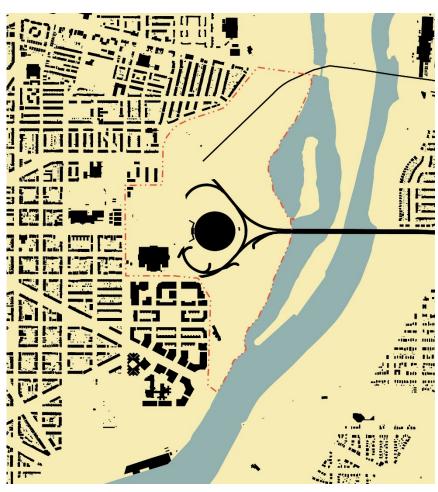


Figure 25. Figure/Ground Diagram (Source: Christopher Ramirez)

MOBILITY AND TRANSPORTATION

Streets

The streets in DC run on a grid form. Their width is generally 40 feet. Avenues run on top of the grid creating diagonals to connect main points in the city. Their width ranges from 40 feet to 60 feet.



Figure 26. Street Hierarchy Diagram and Stadium-Armory Station (Source: Christopher Ramirez)

Metro station

The Stadium-Armory Metro Station is located near DC Armory on 19th Street SE.

The station provides access to the Blue, Orange, and Silver line which is a big asset connecting to Downtown DC, Maryland, and Virginia.

Sidewalks

The RFK Campus is generally a parking lot but the streets in the urban fabric have sidewalks on both sides of the streets. Intersections have crosswalks and ramps for wheelchairs.

Trails

Trails are located on the along the Anacostia River providing a good environment for hiking and biking. They connect through bridges to Heritage and Kingman islands.

They are part of a system of trails connecting parks along the Anacostia River.

River

The Anacostia River is not a main way of transportation from the RFK Campus. However, it can be used for small boats and recreational purposes. An example of such practices is the Anacostia Community Boathouse, located 1/2 mile south from the RFK Campus.

BARRIERS

The RFK Campus

The RFK Campus is a major barrier between residents and the Anacostia River. There are 167 acres dedicated to parking lots with no intention to bring pedestrians to the river.

The Anacostia River

The Anacostia River creates a division between the communities on both sides. There is no unifying element that would attract both neighborhoods to interact in the river.

The Whitney Young Memorial Bridge is a good connector from the Automobile perspective, but it is unattractive for pedestrians and other modes of transportation.

Highway Ramps

The Highway ramps that connect from The Whitney Young Memorial Bridge to C St NE and Independence Ave SE divide the RFK Campus in three parts. The RFK Stadium is in the center with parking lots on the other side of both ramps. The ramps are designed for high speed for better automobile access, but it is not suited for pedestrians and other modes of transportation. The ramps allow for 2 underpasses in the north and 1 in the south.

SERVICES/LAND USE

The Future land use for the area surrounding RFK Campus include moderate and medium residential, local public facilities, mixed use, and park, recreation and open spaces. Currently, the RFK campus can only be used for recreational purposes.

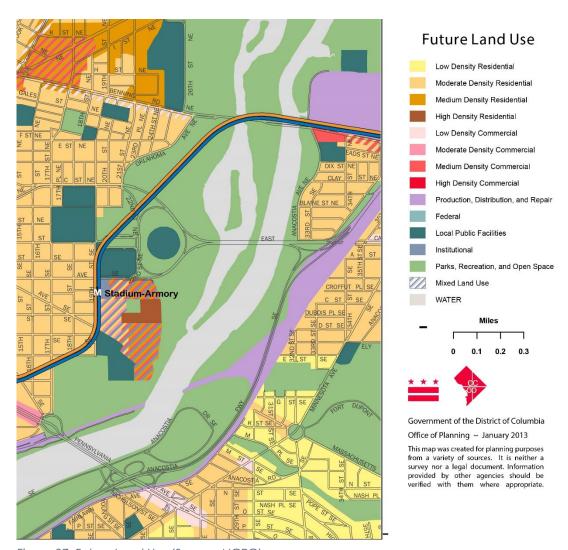


Figure 27. Future Land Use (Source: NCPC)

FUTURE ZONING

The RFK Campus is federally owned and it is currently unzoned. The surrounding area zones are the following:

RF-1, attached row houses on small lots within which no more than 2 dwelling units.

MU-4, mixed-use developments that permit a broad range of commercial,
institutional, and multiple dwelling unit residential development at varying densities.

HE-1, HE-2, HE-3, HE-4, Hill East, correspond to Federal Reservation 13

MU-11 is applied generally in the vicinity of the waterfront. It is intended to permit open space, park, and low-density and low-height waterfront-oriented retail and arts uses; and be applied in undeveloped waterfront areas.

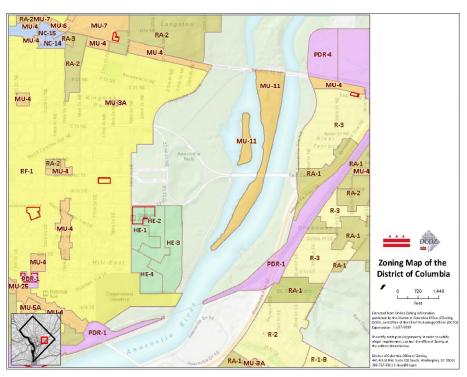


Figure 28. Future Zoning Map (Source: NCPC)

PRIVATE VS PUBLIC

The RFK Campus, being part of the National Park system is for public use. Other public institutions in the area are public schools, the DC Armory, DC Jail, and the Correctional Treatment Facility. The rest, shown is black, are privately owned.

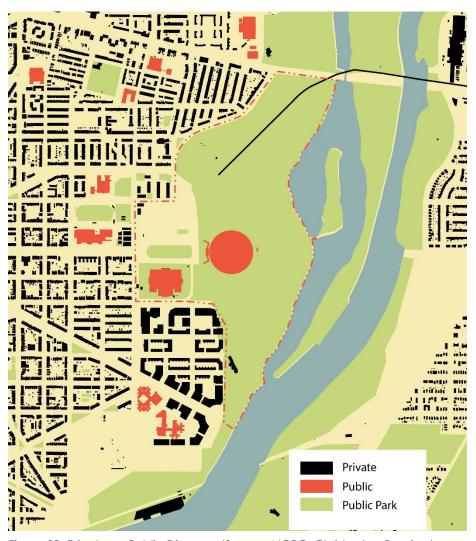


Figure 29. Private vs. Public Diagram (Source: NCPC, Christopher Ramirez)

MAIN ELEMENTS

The RFK Campus has 5 major elements that dictate the program of the area. First, the Anacostia River is a major asset creating the opportunity of a waterfront. Second, the RFK Stadium as a monument or element to terminate the street. It will be important to place an element that serves as a gateway or node that marks arrival to the city. Third, the highways ramps divide the area and blocks the access to the river. Forth, the elevated Metro railway dissects the northern part, blocking access to the river and hindering the presence of future structures around it. Finally, the DC Armory will influence the form of any building across the street.

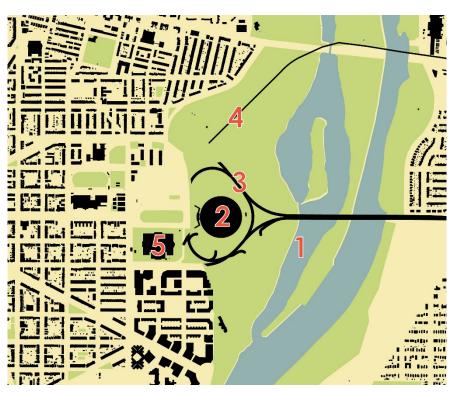


Figure 30. Main Elements Diagram (Source: Christopher Ramirez)

MAN-MADE VS NATURE

The RFK Campus is between the urban form of the city and the natural elements along the river. The city offers a rigid grid of buildings and streets, while the river offers a flow of natural elements. The transition of both worlds is key in the RFK Campus.

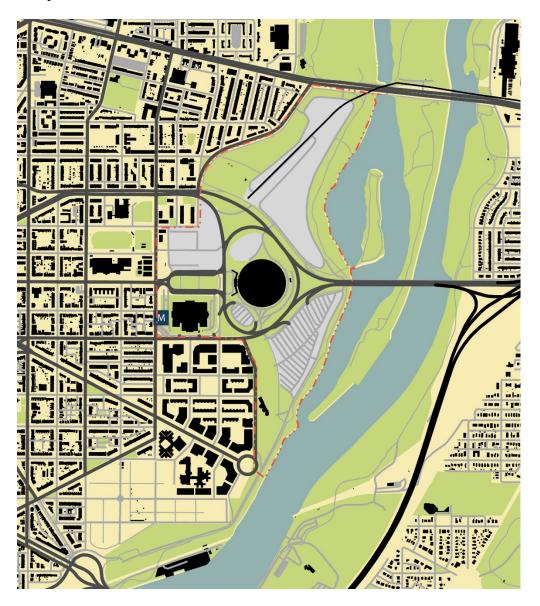


Figure 31. Man-Made vs. Nature Diagram (Source: Christopher Ramires)

TOPOGRAPHY

The elevation at the RFK Campus is relatively low. Even the residential area on the northern part presents a low point. But this area has been subject to change. There are 2 high points that were made with the construction of the highway ramps. The aerial photo of 1949 presents an area with a more consistent slope towards the river. The Map of 1865 shows lot division all the way to the edge of the river, but the Kingman and Heritage islands are missing.

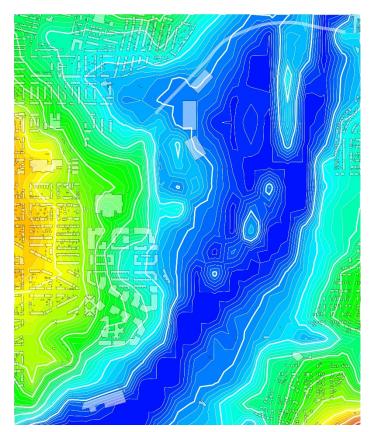


Figure 32. Topography showing Elevation (Source: https://contourmapcreator.urgr8.ch/, Christopher Ramirez)

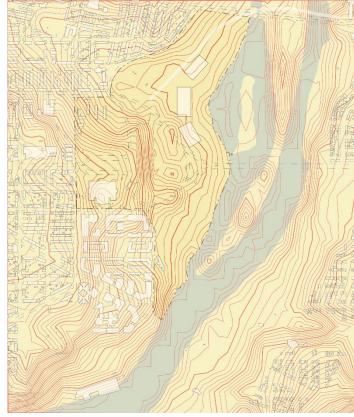


Figure 33. Topography Showing Contour Lines 2ft. (Source: https://contourmapcreator.urgr8.ch/, Christopher Ramirez)



Figure 34. Aerial Photo, 1949 (Source: Google Earth)



Figure 35. Missing Islands in Anacostia River 1865 (Source: Library of Congress, Military Map of N.E. Virginia)

<u>HYDROLOGY</u>

Based on the topography, rainwater runoff is channeled to flows from northwest to the river. Also, all the water from the parking lots flow into the river. But the biggest concern to dedicate the RFK Campus as a residential area is flooding.

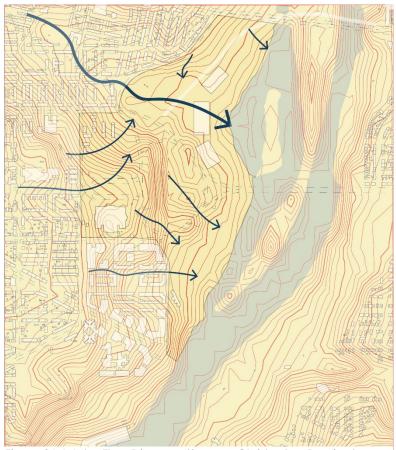


Figure 36. Water Flow Diagram (Source: Christopher Ramirez)

The 100-year floodplain, shown in light blue on the map, reaches the parking lots on the North and on the South. The 500-year floodplain, showed in light brown, reaches higher levels, going through the underpasses of the highway ramps toward the center area.

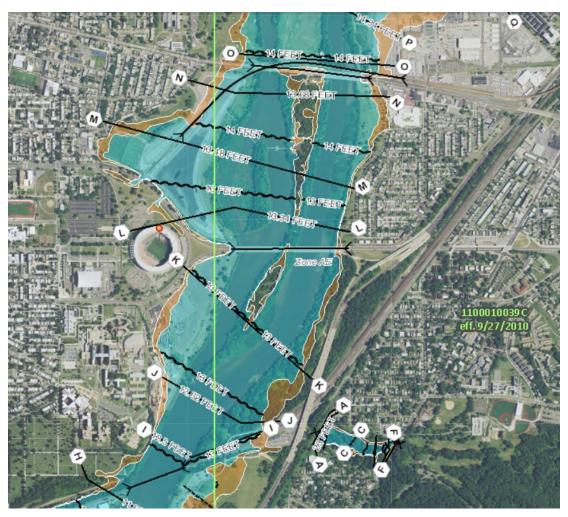


Figure 37. 100-year and 500-year Floodplain (Source: FEMA)

Chapter 6: Precedents

GATEWAY MONUMENT PRECEDENT

Arc de Triomphe, Paris

The first exploration presents a circle as a gateway. The circle could be the place for a monument, a plaza, or any other civic space. The circle would eliminate the need for

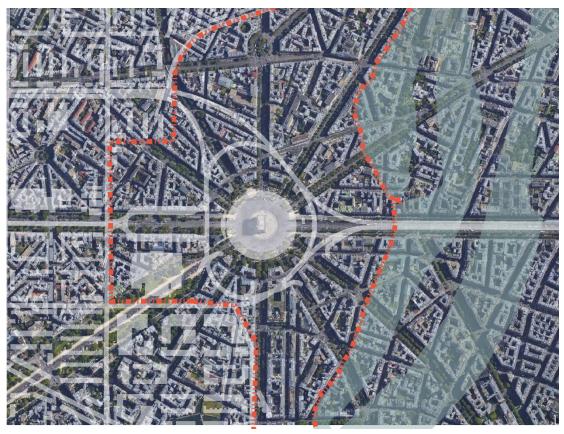


Figure 38. Arc de Triomphe Comparison (Source: Google Earth, Christopher Ramirez)

the ramps. It can also provide organization to place activities in the RFK Campus and access for both vehicular and pedestrian.

Champ the Mars

Champ de Mars provides linear or rectangular gateway for the RFK Campus. The highway ramps could be eliminated and come to a T intersection, then go around. The space in the middle would be suitable for a park. Cars could also have access to a road along the river and connect to other parks and waterfronts.

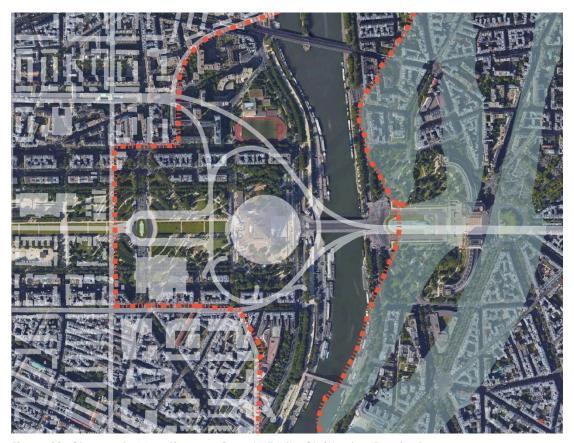


Figure 39. Champ de Mars (Source: Google Earth, Christopher Ramirez)

WATERFRONT PRECEDENT

Given the characteristics of RFK waterfront and the relationship to the Kingman and Heritage islands, the waterfront selection as case study show a natural environment.

Fenway-Kenmore Waterfront Edge

In this case, the edge is treated as a riverside drive. Streets would be narrow for ease crossing at any point and designed for low speed. Parking spaces could be provided on designated spots for activities or vistas. The rest would be wide paths designed for pedestrian and other non-motorized modes of transportation. The edge would be a



Figure 40. Fenway-Kenmore Waterfront Edge (Source: Google Earth, Christopher Ramirez)

large linear park along the river with large trees.

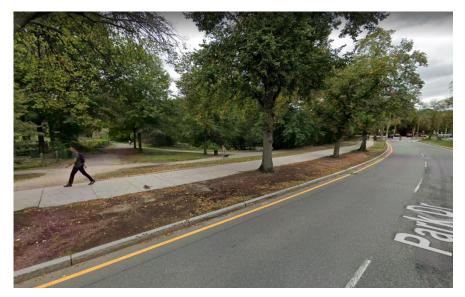


Figure 41. Fenway-Kenmore Parkway example (Source: Google Earth)

West End Vancouver Waterfront Edge

West End Vancouver has a road running along the coast and another running along

the lake. The space between
them is a beautiful park with
many trails, vistas, open spaces,
and access to the water. The
park serves as a good transition
between the city and other
natural features. RFK waterfront
could be a park that connects

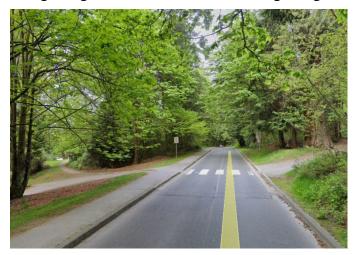


Figure 42. West End Vancouver Road Along the Lake (Source: Google Earth)

with other parks along the Anacostia River.

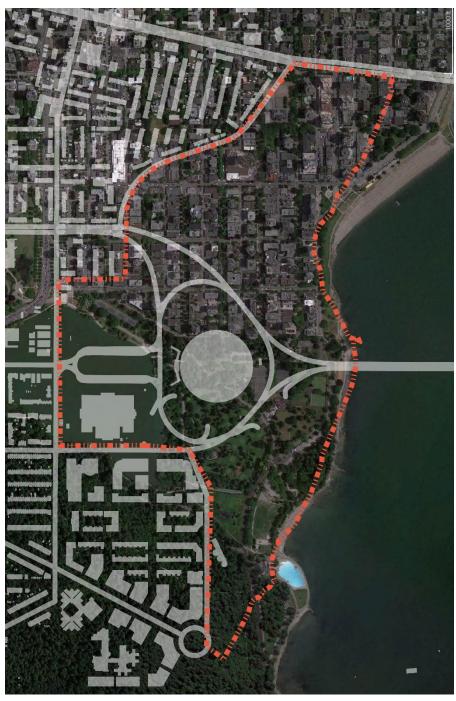


Figure 43. West End Vancouver Waterfront Edge (Source: Google Earth, Christopher Ramirez)

Chapter 7: Findings

ORIGINAL VISION

The original plans of Washington, D.C. made by L'Enfant, figured the RFK Campus as a main open space with a bridge to connect to the city. But in the plans elaborated by Ellicott, proposed the extension of lots beyond the limits of the Anacostia River.

This denotes the possibility or at least the intention to place housing near the Anacostia River.

OWNERSHIP OF THE LAND

In the creation of the Park System by the McMillan commission, they recommended the city of DC the acquisition of the RFK Campus from the Federal government.

Ownership of the area would give them the ability to use the area as best desired. Up to this day, the RFK Campus is part of the National Park System and only recreational uses are allowed. For that reason, most proposals of the RFK do not include residential in their plan.

FLOODING AREA

Almost half of the RFK area is under the 100-year floodplain. It would be imperative to either avoid residential construction within the floodplain area or raise the floor levels. The western part of the RFK remains the safest for residential.

<u>INFRASTRUCTURE</u>

The elevated Metro railways divide the northern part of the RFK Campus. Housing around the railways is undesirable. But other services or spaces can be created to foster urban art. The highways ramps also divide the area. They can be eliminated and brought straight for a better "arrival" to the city. Multimodal connection to the other side of the Whitney Young Memorial Bridge is also very important. In that way, amenities created on site can benefit residents on the other side as well.

OTHER ELEMENTS ON RFK CAMPUS

While the interest of this thesis is housing, there are other elements that need to take place on the RFK Campus. Fist, the waterfront must be designed in a way that benefits the Anacostia River and gives access to the public. Second, a main gateway or monument should take place to receive visitors into the city. Last, other services must be provided as the population increases. Mixed use areas can incorporate such services from the beginning.

IS THE RFK SUITABLE FOR HOUSING?

Currently, it is partly suitable. The area closer to the neighborhood could be developed, but as it gets closer to the river, the chances of flooding increase.

Currently, the RFK Campus is partly suitable for housing, but it can become suitable.

Chapter 8: Design Proposal

SITE CONDITIONS

Current site conditions have pros and cons for housing.

Understanding these factors will help take an appropriate design approach.

First, the RFK Campus covers 190 acres, which is a significant amount of land in DC. Second, the Anacostia River provides the benefit of a waterfront. On the other hand, being too close to the river might not be a benefit.

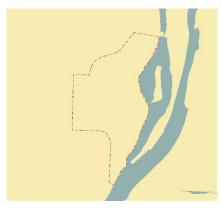


Figure 44. Area and Waterfront (Source: Christopher Ramirez)

Third, there is a connection to Baltimore-Washington
Parkway (MD-295), making it easier for residents to stay
connected to other regions. However, the ramps divide
the RFK Campus into 3 areas.



Figure 45. Ramps (Source: Christopher Ramirez)

Fourth, the RFK Campus is adjacent to the urban fabric, which is great for housing.

There is no need to up-zone nor to fight over other types of land use.



Figure 46. Urban Fabric (Source: Christopher Ramirez)

Fifth, the RFK Campus has access to the Stadium-Armory Metro Station. This is a great asset to the community, especially to motivate less dependence on cars and the use of public transportation. This would provide access to DC and parts of Maryland and Virginia. However, the metro ramp divides the northern part of the RFK Campus with an element that is rather difficult to deal.



Figure 47. Metro Station and Ramps (Source: Christopher Ramirez)

Sixth, the terrain is very irregular. The area outside the ramps is flat. And the area inside the ramps has many hills and high slopes. Placing housing in these conditions would be complicated.



Figure 48. Topography (Source: Christopher Ramirez)

Last, the 100-year floodplain covers most the area outside the ramps. As noted before, the area outside the ramp is flat while the floodplain may go up to 14 feet above current water levels. Placing housing outside the ramps would be challenging but other uses can be accommodated.



Figure 49. 100-Year Floodplain (Source: Christopher Ramirez)

HOUSING CONDITIONS

The current housing conditions near the RFK Campus has pros and cons.

Understanding these conditions will help take an appropriate design approach.

First, single family attached homes take 53% of the area near the RFK Campus. This is good because it creates a clear identity in form. But on the other hand, it leaves little options for the population. As a direct consequence, one type of housing attracts only one kind of the population, leaving no room for diversity.

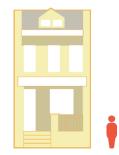


Figure 50. Housing and Population (Author: Christopher Ramirez)

Second, there are sidewalks on every street, making them walkable and inviting.

Third, the area has a consistent tree canopy cover which creates a barrier between pedestrians and cars, gives a

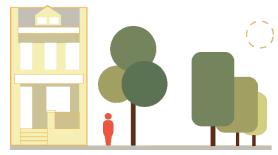


Figure 51. Sidewalks, Tree cover, and Parks (Author: Christopher Ramirez)

beautiful impression to the aesthetics of the place, and helps reduce urban heat island effect, among many other benefits.

Fourth, Capitol Hill has beautiful parks that residents use from morning to dawn.

These parks provide an opportunity for residents to be outside in a safe environment; enjoying the place, enjoying the people, and enriching the neighborhood.

THE COMMUNITY AT RFK

Given the conditions, the best place for a community at RFK would be within the ramps. It is close to the urban fabric, it has access to the major connections, and it is safe from flooding. It would be necessary to build with high density in order to accommodate the desired population. The rest of



Figure 52. Proposed Area for Residential (Author: Christopher Ramirez)

the RFK area can be used to restore the park and, in this way, connect to the river and the islands.

The Part diagram shows the RFK Campus divided in two uses: residential in the center connecting to the West, and parks in the rest, connecting to the East.



Figure 53. Parti Diagram (Author: Christopher Ramirez)

DESIGN PRINCIPLES

Previous master plans provide possible solutions for the RFK Campus. Even though they focus on different aspects of the area, they still provide reliable insights.

The L'Enfant Plan proposes the RFK area as a public space that serves as gateway for DC. It also proposes connections that extends as avenues and a bridge that goes over the Anacostia river.



Figure 54. Lessons from L'Enfant Plan, 1791 (Source: Christopher Ramirez)

Ellicott's revision proposes the RFK Campus as a residential area. It extends the urban fabric until it reaches the edge of the river.



Figure 55. Lessons from Ellicott's Revision, 1792 (Source: Christopher Ramirez)

The McMillan Plan made an emphasis on the green spaces and saw the RFK Campus as a valuable place for a park. It is also connected with the network created for the entire DC area. It recommends the purchase of the land and the creation of a park of high quality.



Figure 56. Lessons from McMillan Plan, 1902 (Source: Christopher Ramirez)

The East-West central corridor developed a series of institutional buildings along East Capitol St. in order to connect both sides. It places a stadium in front of the DC Armory to provide symmetry to the street. This plan also builds on top of the McMillan plan and terminates the street on a public park.



Figure 57. Lessons from
Development of the central
area west and east of the
Capitol--Washington D.C. 1941
(Source: Christopher Ramirez)

The current plan by OMA

Architects proposes a series of
buildings for community, culture,
and sports. The plan keeps the
ramps and connects to the
waterfront using the existing
underpasses.

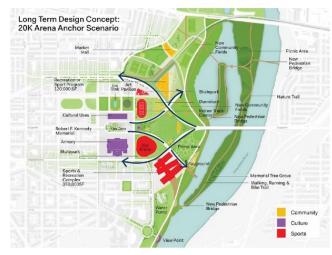


Figure 58. Lessons from Current Master Plan by OMA Architects (Source: Christopher Ramirez)

This thesis proposes a solution based on principles extracted from the previous master plans.

Use Existing Infrastructure

The bridge and the ramps divide the area, but the reconstruction or proposal of new infrastructure would be too expensive. It would also affect the traffic negatively. Keeping the existing bridge and ramps will maximize the resources in place and save a significant amount of money. To maintain connection to the river, the underpasses will be used. The underpasses will make easy and safe to cross the ramps with traffic.



Figure 62. Ramps Around the RFK Stadium (Source: Google Earth)



Figure 62. Southern Underpass (Source: Google Earth)



Figure 62. Northern Underpass 1 (Source: Google Earth)



Figure 62. Northern Underpass 2 (Source: Google Earth)

Topography

Current terrain is not adequate for building. It goes up and down following current inner ramps and the stadium's footprint.



Figure 64. Current Topography (Source: Christopher Ramirez)

New terrain is proposed which has a slope of 5% or lower for accessible streets. The proposed terrain also connects to the underpasses to maintain the current levels.



Figure 64. Proposed Topography (Source: Christopher Ramirez)

Based on Ellicott's revision, the grid extends following the same spacing.



Figure 65. Extended Grid (Source: Christopher Ramirez)

Streets follow the grid pattern and they are divided by hierarchy.



Figure 66. Street Hierarchy (Source: Christopher Ramirez)

The space between streets a variety of creates blocks.



Figure 67. Blocks (Source: Christopher Ramirez)

Buildings are placed according to the streets. Big buildings face main streets while small buildings face tertiary streets. Based on the East-West Central Corridor plan, a civic building is placed in front of the DC Armory providing symmetry and balance.



Figure 68. Buildings (Source: Christopher Ramirez)

Green areas and open spaces are provided for light and air.

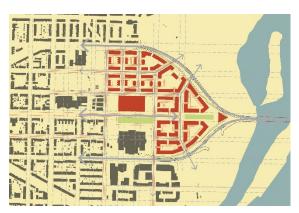


Figure 69. Green Areas and Open Spaces (Source: Christopher Ramirez)

RFK SITE PLAN

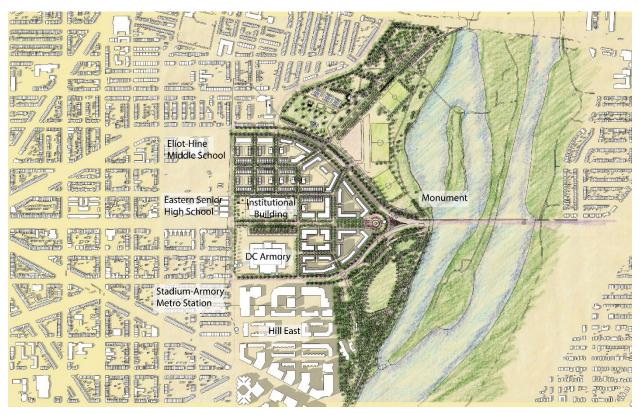


Figure 70. RFK Site Plan (Source: Christopher Ramirez)

The proposed site plan has a central area designated for housing while the rest is dedicated to parks. A placeholder for institutional building is located across DC Armory. And a placeholder for a monument at the end of East Capitol St.

STREETS

East Capitol St.



Figure 71. East Capitol St. Perspective Looking East (Source: Christopher Ramirez)

East Capitol Street is a high-density residential area. It has institutional buildings,

mixed use retail and residential, and high-rise apartment buildings.



Figure 72. East Capitol St. Institutional Section (Source: Christopher Ramirez)

Streets are wide, providing two-way traffic with bike lanes and parking. Sidewalks are 24' wide to accommodate pedestrian space, trees, and street furniture. All sidewalks use pervious pavement.



Figure 73. East Capitol St. Mid-Rise Apartment Section (Source: Christopher Ramirez)

East Capitol St. terminates on a park that serves as a pedestrian connection to the monument.



Figure 74. East Capitol St. High-Rise Apartment Section (Source: Christopher Ramirez)

22nd St. NE



Figure 75. 22nd St. NE Perspective Looking South (Source: Christopher Ramirez)

22nd St. NE is a two-way street with parking on both sides.

Sidewalks are 12' wide to accommodate pedestrians and trees. It also has 18' for setback to accommodate open spaces, small gardens, and green areas.

All sidewalks are cover with pervious pavement.



Figure 76. 22nd St. NE Section (Source: Christopher Ramirez)

Constitution Ave NE



Figure 77. Constitution Ave. NE Perspective Looking East (Source: Christopher Ramirez)

Constitution Ave. NE is moderate density residential at this point.

Streets are narrow for slow traffic.

Sidewalks are 9' for pedestrians and trees. Houses are provided with a 19' setback for gardens.



Figure 78. Constitution Ave. NE Section (Source: Christopher Ramirez)

OPEN SPACES

Plazas

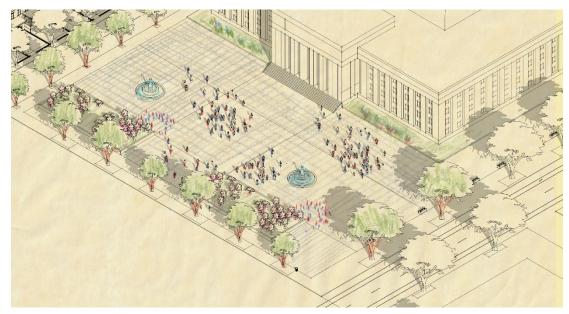


Figure 79. Plazas (Source: Christopher Ramirez)

Plazas serve as buffer for the institutional building. They also provide space for social gathering, music, art, and other activities for the community.

Monument

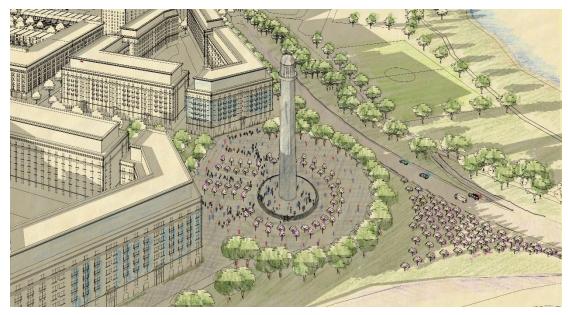


Figure 80. Monument Placeholder (Source: Christopher Ramirez)

The plan has an area designated for a monument. This element works as both a transition and connection to DC. It is raised marking the entrance of the city. While the monument is not designed, the element of verticality is highly encouraged.

The location of the monument was strategically selected base on the similarity of Lincoln Memorial. Both of them are located on the same axis.

They are approached on a bridge. They serve as gateway to DC.



Figure 81. Lincoln Memorial and Monument Location Comparison (Source: Christopher Ramirez)

Waterfront

The waterfront is divided in 3 areas. The first area is located near the housing area. Here are the playground park, tennis courts, basketball courts,



Figure 82. Waterfront (Source: Christopher Ramirez)

skateboard, and green

areas. The second area has soccer fields and has connections to Kingman and Heritage Islands. The third area is for passive recreation having Parkways, paths, open areas, and connection to Kingman Island.



Figure 83. Waterfront-Active Recreation Area (Source: Christopher Ramirez)

HOUSING TYPES

There are 3 main residential types:

Moderate density residential, Medium density residential, and High density residential. Each of these types is located according to the type of street.



Figure 84. Land Use Map (Source: Christopher Ramirez)

Rowhomes and 2 over 1 are located on tertiary streets and they are appropriate for Large families with different incomes.

Also, this units have a basement that can be rented at affordable price, providing income for owners and affordable housing for renters. This project has 140 units and 14 of them are required for affordable housing under Inclusionary Zones Program.



Figure 85. Rowhouse & 20ver1 (Source: Christopher Ramirez)

Walk-Ups are located on secondary streets. They are good for single families that need 2 or 3 bedrooms.

This project has 60 units and 6 of them are required for affordable housing under Inclusionary Zones Program.



Figure 86. Walk-Ups (Source: Christopher Ramirez)

Apartments are located on primary streets such as East Capitol St. and along the ramps. These units are good for single families, singles, and retired. This project provides 5500 units and 550 of them are required for affordable housing under Inclusionary Zones Program.



Figure 87. Apartments (Source: Christopher Ramirez)

CONCLUSION

This thesis took a paved desert combined with a housing crisis and created new housing for mixed incomes. It used existing infrastructure to maximize resources. It established a network that connects the waterfront to the city. It created placeholders for a monument and institutional buildings. But above all, it created a place for a thriving community.

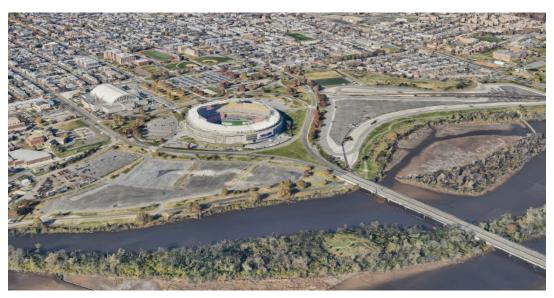
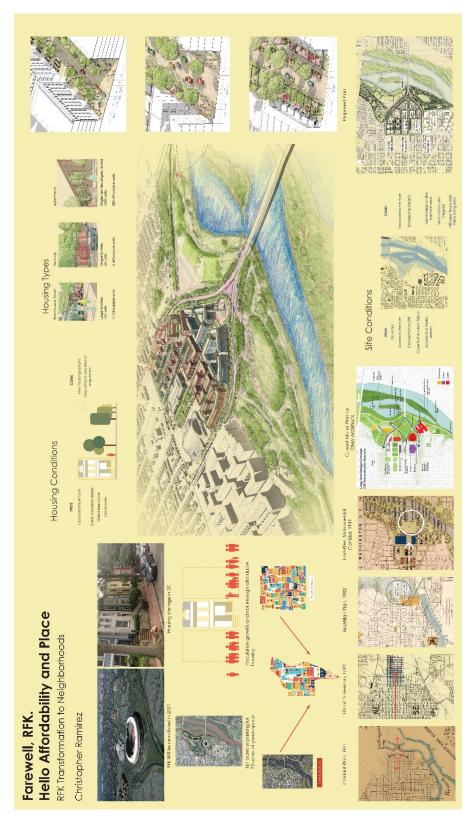


Figure 89. RFK Current Conditions (Source: Google Earth)



Figure 89. RFK Housing Project Aerial View (Source: Christopher Ramirez)

Virtual Wall



Bibliography

- Cortlynn Stark. "While Stadium Rusts Away, Newly Opened Fields at RFK Offers a Glimpse into Site's Future." *Washington Post*. Accessed November 15, 2019. https://www.washingtonpost.com/local/dc-politics/while-rfk-stadium-rusts-away-the-newly-opened-the-fields-at-rfk-offers-a-glimpse-into-the-future/2019/08/17/1377edac-b3aa-11e9-8949-5f36ff92706e story.html.
- District of Columbia, Office of Planning. "Housing Equity Report Creating Goals for Areas of Our City" (October 2019): 20.
- Events DC. "EventsDC Our History." Accessed November 13, 2019. http://eventsdc.com/Venues/RFKStadium/OurHistory.aspx.
- ——. "The Fields at RFK Campus." *The Fields at RFK Campus*. Accessed November 15, 2019. https://rfkfields.com/the-future/.
- Government of the District of Columbia. "Anacostia Waterfront Initiative," September 2010. https://www.capitolriverfront.org/files/docs/awi10yearprog.pdf.
- ———. "Comprehensive Plan for the National Capital: District Elements, Volume II Area Elements, Chapter 15, Capitol Hill Area Element," n.d.
- McCartney, Robert. "Bye-Bye, Bouncy Seats: District to Raze RFK Stadium by 2021." *Washington Post*, September 5, 2019, sec. D.C. Politics. Accessed November 13, 2019. https://www.washingtonpost.com/local/dc-politics/district-to-raze-rfk-stadium-by-2021--but-not-necessarily-so-redskins-can-build-a-new-one/2019/09/05/48b18fc6-cfea-11e9-87fa-8501a456c003 story.html.
- NCPC. "Legacy Plan." Accessed November 15, 2019. https://www.ncpc.gov/plans/legacy/.
- "A Brief History of Pierre L'Enfant and Washington, D.C." *Smithsonian*. Accessed November 14, 2019. https://www.smithsonianmag.com/arts-culture/a-brief-history-of-pierre-lenfant-and-washington-dc-39487784/.
- "Benning Road Bridge Replacement | Volkert." Accessed November 15, 2019. https://volkert.com/projects/benning-road-bridge-replacement/.
- "Big-3-Rowhouse-Builders.Pdf," n.d. Accessed November 15, 2019. https://chrs.org/wp-content/uploads/2013/04/big-3-rowhouse-builders.pdf.

- "Bridges Carry Bits of History Along With the Traffic (Washingtonpost.Com)." Accessed November 14, 2019. http://www.washingtonpost.com/wp-dyn/articles/A1129-2005Apr19.html.
- "Capitol Hill Restoration Society » Kingman Park Historic District." Accessed November 15, 2019. https://chrs.org/kingman-park-historic-district/.
- "Congressional Record." Legislation. Accessed November 14, 2019. https://www.congress.gov/congressional-record/2019/3/26/extensions-of-remarks-section/article/e353-1.
- "DC General (Reservation 13) Draft Master Plan, March 31, 2002." Accessed November 15, 2019. http://www.dcwatch.com/issues/Res13-020331.htm.
- "DC_Kingman Park HD Nomination.Pdf," n.d. Accessed November 15, 2019. https://planning.dc.gov/sites/default/files/dc/sites/op/publication/attachments/DC Kingman%20Park%20HD%20Nomination.pdf.
- "EventsDC OurHistory." Accessed November 15, 2019. http://www.dcconvention.com/Venues/DCArmory/OurHistory.aspx.
- "Fun Facts About the Anacostia." *Anacostia Waterfront Trust*. Accessed November 15, 2019. https://www.anacostiatrust.org/anacostia-trust/2015/10/07/fun-facts-about-the-anacostia-2.
- "History." *Kingman Park*. Accessed November 15, 2019. http://kingmanpark.com/history.html.
- "Kingman and Heritage Island Proposal V2.1Pages from 2017_10-30.Pdf," n.d. Accessed November 15, 2019.

 https://doee.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/Pages%20from%202017_10-30%20Kingman%20and%20Heritage%20Island%20Proposal%20-%20V2.1.pdf.
- "Kingman Island & Heritage Island Planning & Feasibility Study | Ddoe." Accessed November 15, 2019. https://doee.dc.gov/publication/kingman-island-heritage-island-planning-feasibility-study.
- "Neighborhood Planning | Op." Accessed November 15, 2019. https://planning.dc.gov/page/op-neighborhood-planning.
- "RFK Stadium History, Photos & More of the Former NFL Stadium of the Washington Redskins." *Stadiums of Pro Football Your Ticket to Every NFL Football Stadium*, n.d. Accessed November 13, 2019. https://www.stadiumsofprofootball.com/stadiums/rfk-stadium/.

- "Stadium-Armory Final Report.Pdf," n.d. Accessed November 15, 2019. https://www.wmata.com/initiatives/plans/upload/Stadium-Armory-Final0Report.pdf.
- "The L'Enfant and McMillian Plans." Accessed November 14, 2019. https://www.nps.gov/nr/travel/wash/lenfant.htm.
- "TOPN: District of Columbia Stadium Act of 1957." LII / Legal Information Institute.

 Accessed November 14, 2019.

 https://www.law.cornell.edu/topn/district_of_columbia_stadium_act_of_1957.
- "Zoning Commission for The District of Columbia Notice of Final Rulemaking and Z.C. Order No. 04-05 2004-05.Pdf," n.d. Accessed November 15, 2019. https://planning.dc.gov/sites/default/files/dc/sites/op/publication/attachments/Zoning%2520-%2520Approved%2520Case%252004-05.pdf.