

TECHNICAL MEMORANDUM

To: Troy Scott DC United
CC: Phil Feola Goulston & Storrs
From: Robert B. Schiesel, P.E.
Maris Fry
Date: December 8, 2016
Subject: DCU PUD – Transportation Related Concerns from 11/28 Hearing

This memorandum presents responses to transportation related concerns expressed at the November 28th Zoning Commission hearing regarding DC United’s (DCU) Planned Unit Development (PUD) for the proposed new stadium in Buzzard Point, Washington DC (Zoning Commission Case No. 16-02). Specifically, this memorandum addresses concerns related to:

- Parking
This section reviews comparable stadia with parking spread out over distances up to a 15-minute walk away. In addition, it reviews stadium plans for team, media, and staff parking, and access for disabled drivers.
- Transit Access
This section reviews comparable stadia where transit access is also approximately 0.55 miles from the stadium site. It also reviews why Metrorail rather than bus service is the main focus for transit ridership at the new stadium, and how disabled metro riders are expected to be accommodated.
- Bicycle Accommodations
This section reviews projections of future bicycle ridership, anticipated routes to/from the stadium, and parking accommodations. It compares the proposed stadium’s accommodations to other comparable MLS stadia.
- Operational Planning (TOPP) and Timeline
This section details what will be included in the Transportation Operations and Parking Plan (TOPP), and the timeline of when it will be written and assembled, and how it will be updated.

Parking

This section addresses concerns the Commission expressed regarding the distance many parking lots are from the proposed stadium, questions regarding staff, media and team parking, and accommodations for disabled patrons arriving by car.

Team, Staff, and Media Parking

The following are the planned accommodations for team, staff, and media parking on game days:

- Team Parking. The team will park at their practice facility and be shuttled to and from games from the facility. The current facility is at the RFK campus, and the team is planning on find/construct a new one in the District once the

facilities at RFK become unavailable. The team will use the pick-up/drop-off facility on T Street on the southern side of the stadium.

- **Staff Parking.** On game days, staff (including event-only staff) will park remotely and walk to the stadium or use an employee shuttle. The parking lot used for staff will likely be one of the lots identified in the CTR parking inventory that is less desirable of a location for patron parking. Staff shuttles will use the team pick-up/drop-off facility on T Street on the southern side of the stadium.

On non-game days, permanent staff will park at local public parking garages that provide monthly passes for tenants, such as the lot at 2nd and T Streets adjacent to the stadium.

- **Media Parking.** Parking for the media will occur in a reserved area of one of the parking facilities closer to the stadium, for example 1900 Half Street. The media will also have the option of using the team pick-up/drop-off facility on T Street on the southern side of the stadium.

Disabled Access

The Applicant, DCU, is committed to serving their disabled patrons, and will make accommodations for those that drive. As discussed in the CTR, DCU will develop an operations plan prior to opening day, and final details of disabled accommodations will be included in those plans.

Potential strategies to accommodate disabled patrons that drive include:

- Designating a parking facility for disabled access, and providing a shuttle from the designated lot;
- Reserving parking at close-in lots within a short walking distance for disabled patrons; and
- Providing valet parking service at stadium for disabled patrons.

It is likely the team will employ multiple options for patrons. These options are in addition to having a designated pick-up/drop-off facility along the curbside of R Street on the north side of the stadium, which can be used for general pick-up/drop-off, MetroAccess, and hired vehicle services.

Distance from Parking Lots

The parking inventory presented in the CTR, replicated here in Figure 1, shows over 7,000 parking spaces spread out with some a short walking distance from the stadium and others over a 10-minute walk away. Although the parking is spread-out, it is anticipated that the majority of drivers will prefer lots closer to the stadium, and thus the average walking time for drivers will be less than 10 minutes, even during a sell-out.

Table 1 provides an example of how game-day parking (i.e. the inventory presented in Figure 1) may be distributed on a weekend sell-out game, where the projected patron parking demand is 3,450 spaces (serving a sell-out of 19,000 patrons).

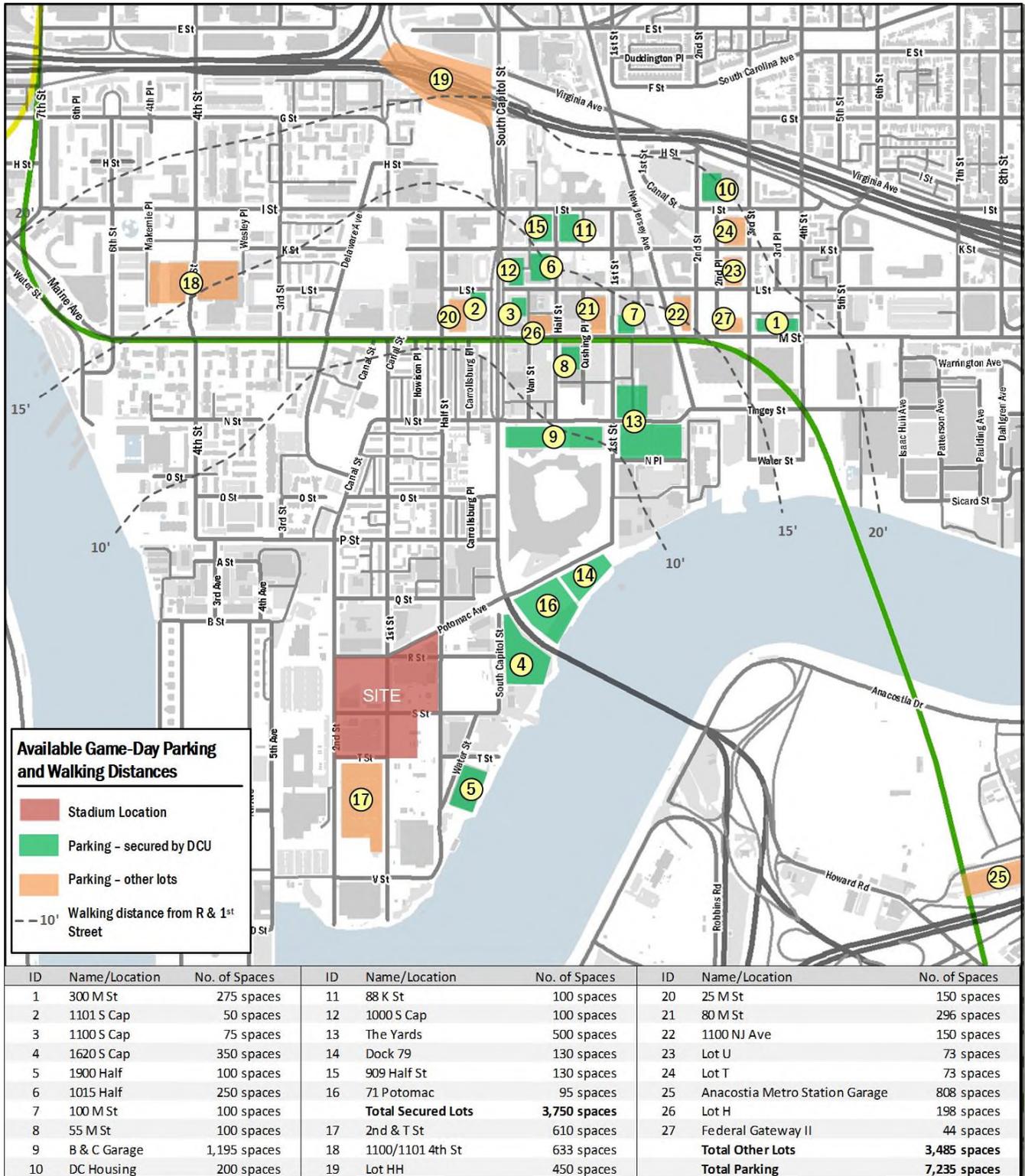


Figure 1: Potential Parking Facilities on Opening Day

Table 1: Potential Distribution of Game Day Parking (Sell-Out)

ID ⁽¹⁾	Name/Location	Walking Range	No. of Spaces	Percent full of DCU	
				Patrons (at sell-out)	Total patron cars
17	2nd & T St	1-5 mins	610	100%	610
4	1620 S Cap	1-5 mins	350	100%	350
5	1900 Half	1-5 mins	100	75% ⁽²⁾	75
14	Dock 79	6-10 mins	130	90%	117
16	71 Potomac	6-10 mins	95	90%	86
9	B & C Garage	6-10 mins	1,195	90%	1,076
2	1101 S Cap	11-15 mins	50	30%	15
3	1100 S Cap	11-15 mins	75	30%	23
6	1015 Half	11-15 mins	250	30%	75
7	100 M St	11-15 mins	100	30%	30
8	55 M St	11-15 mins	100	30%	30
12	1000 S Cap	11-15 mins	100	30%	30
13	The Yards	11-15 mins	500	30%	150
18	1100/1101 4th St	11-15 mins	633	30%	190
20	25 M St	11-15 mins	150	30%	45
21	80 M St	11-15 mins	296	30%	89
22	1100 NJ Ave	11-15 mins	150	30%	45
26	20 M Street	11-15 mins	198	30%	59
1	300 M St	16-20 mins	275	10%	28
10	DC Housing	16-20 mins	200	10%	20
11	88 K St	16-20 mins	100	10%	10
15	909 Half St	16-20 mins	130	10%	13
23	Lot U	16-20 mins	73	10%	7
24	Lot T	16-20 mins	73	10%	7
25	Anacostia Metro Station	16-20 mins	808	10%	81
27	Federal Gateway II	16-20 mins	44	10%	4
19	Lot HH	16-20 mins	450	0% ⁽³⁾	0
	Parked on-street	1-5 mins			50
	Parked on-street	5-10 mins			135
Total Parking Spaces/Cars			7,235 spaces		3,450 cars

⁽¹⁾ Per Figure 9 of the CTR

⁽²⁾ 25 spaces reserved for media parking

⁽³⁾ Game-day staff parking (shuttle provided)

The distribution in Table 1 assumes that DCU patrons will have a strong affinity for the lots closest to the stadium, though all of the lots identified in the potential inventory will be used. The table also accommodates for media and staff parking as described above. In this scenario, the average walking distance of a DCU patron that drives to the game will be approximately 7.5 minutes.

Comparable Stadia

Similar to the proposed DCU Stadium, Providence Park in Portland, Oregon does not have dedicated game-day parking on site, but has designated parking lots outlined on their website, as shown on Figure 2. There are two nearby lots that have designated parking for all games, both located within a 5-minute walk of the Park and providing a total of approximately 150 spaces. Three other small lots are located within a 5-minute walk of the Park and provide parking on select games only.

The team website suggests parking downtown at SmartPark lots or other private lots which generally range from 10 to 15-minute walking distances away. Overall, a small percentage of parking is within a 5-minute walk, with the majority of parking located between a 10 and 15-minute walk from the Park. This is comparable to the distribution of secured parking for the proposed DCU Stadium; however, the DCU has secured larger lots nearer to the Stadium than available at Providence Park.

This amount of parking and the distribution of parking is sufficient for Providence Park without encouraging driving as a mode of transportation. The parking plan also ensures that residential parking surrounding the Stadium is protected and explicitly discourages parking in the neighborhoods on the team website.

Red Bull Arena in Harrison, NJ also provides a comparable parking plan. The location of Red Bull Arena is similar to that of the proposed DCU Stadium in that it is located in an industrial, riverfront area that limits vehicular connectivity by way of physical barriers and interstate connections. As such, the spread-out parking plan helps disperse traffic throughout the network, as also expected at the proposed DCU Stadium.

There are small lots directly surrounding the Arena that provide VIP, Valet, and ADA parking, as well as a designated area for hired vehicle pick-up/drop-off. General event parking is located in additional lots located between 0.2 and 0.8 miles (or 5 to 15 minute walks) from the Arena, as shown on Figure 3.

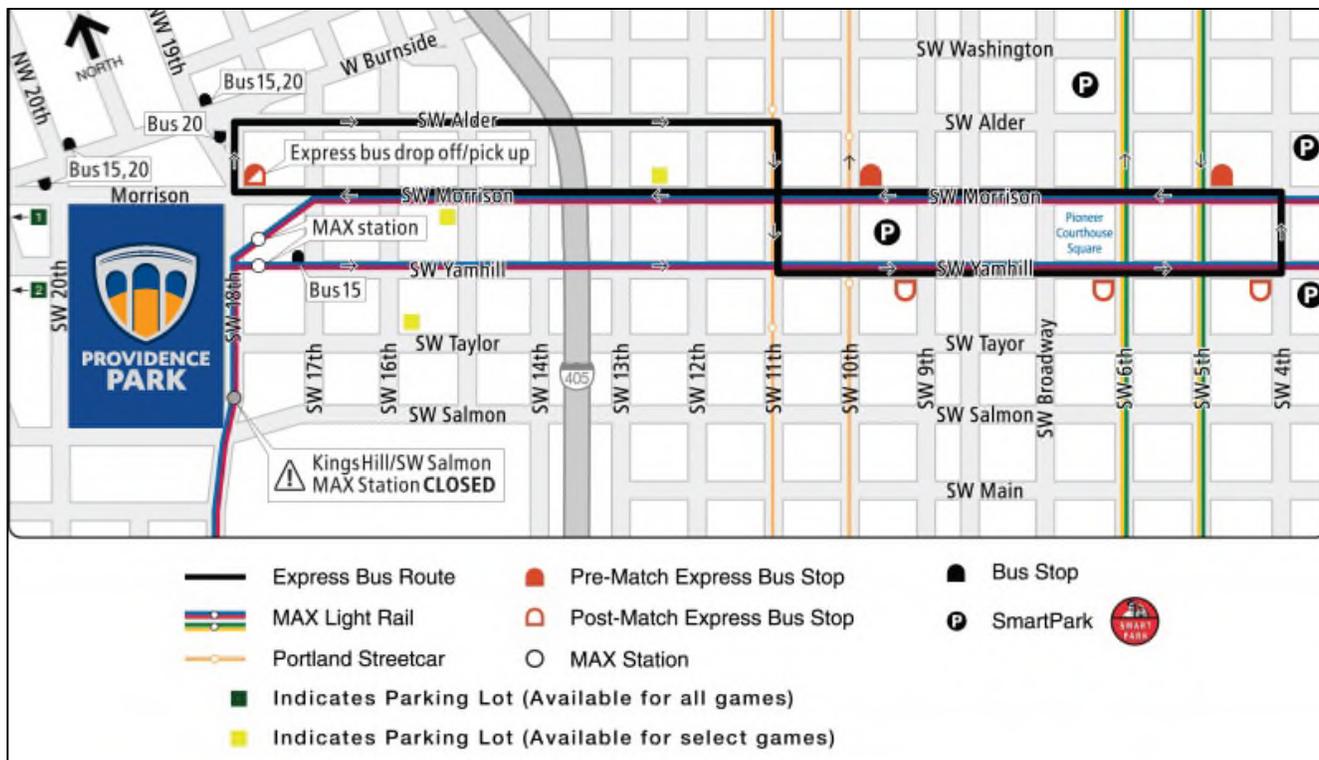


Figure 2: Providence Park Parking and Transportation Map (<http://www.timbers.com/matchday/parking-directions>)

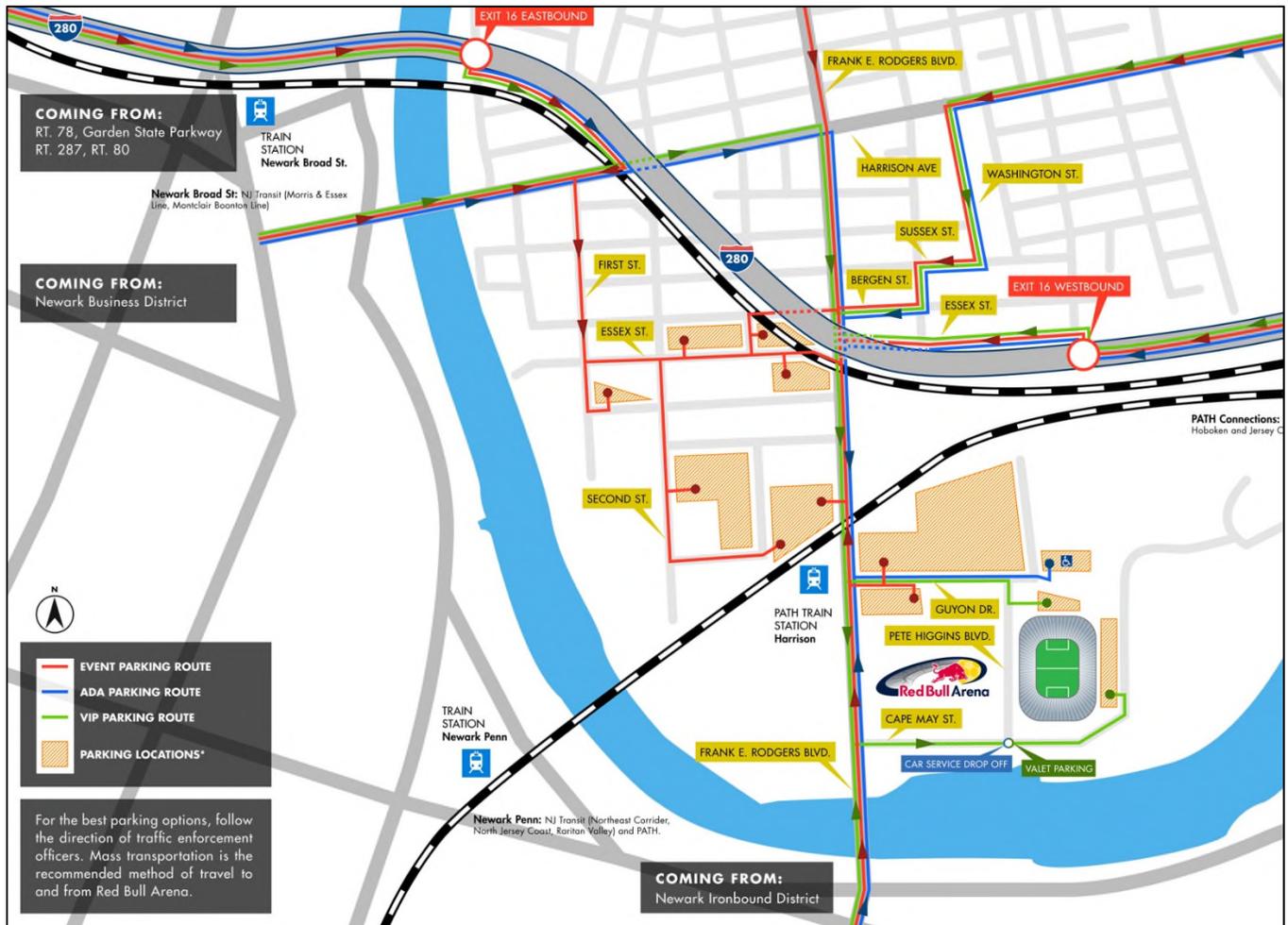


Figure 3: New York Red Bulls Parking Map

Transit Access

This section reviews comparable stadia where transit access is also approximately 0.55 miles from the stadium site. It also reviews why Metrorail rather than bus service is the main focus for transit ridership at the new stadium, and how disabled metro riders are expected to be accommodated.

Transit Ridership Projections

A successful campaign to maximize transit usage for the stadium will result in nearly 10,000 riders during a sell-out. The Stadium’s Transportation Management Plan (TMP) outlines several mode split and travel demand scenarios, with the high-transit use scenario on a weeknight having the highest transit demand, of 9,500 riders (adjusted to reflect the current capacity of 19,000 patrons).

Serving this level of transit demand requires that the majority of transit riders will walk to/from MetroRail rather than use buses or a combination of the two. Ten six-car Metrorail trains can hold 9,500 transit riders, while it would take 190 buses to carry the same amount of people (assuming 960 riders on a 6-car train, and 50 riders per bus). Accommodating that many riders via bus or shuttle would create an infeasible number of buses to accommodate curbside at the stadium, and on the

local roadways surrounding the stadium. Thus, the only way to reach the transit goals outlined in the TMP is with a strategy based on transit riders walking to/from Metrorail.

Disabled Access

The Applicant, DCU, is committed to serving their disabled patrons, and will make accommodations for those who want to take Metrorail to the stadium. DCU will develop a final operations plan prior to opening day, and final details of disabled accommodations will be included in those plans.

The most likely solution to accommodate these transit riders will be a shuttle to and from the Navy Yard station. As discussed above, such a shuttle would need to be limited to serve only patrons that cannot ably walk to the stadium, as the total ridership would overwhelm a shuttle. Other solutions could involve new or expanded bus routes that service the stadium more directly.

Comparable Stadia

Many cities maintain “Arena Districts” that house two or more large event spaces and share resources such as parking, tailgating spaces, restaurants and bars, transit facilities, etc. Seattle in particular shares many characteristics with the potential “Arena District” that would result with construction of the proposed DCU Stadium near Nationals Park.

CenturyLink Field and Safeco Field, which are home to Seattle’s MLS, MLB, and NFL teams are located adjacent to each other, in an area that strongly mimics that of the Buzzard Point neighborhood. There is a rail station at the north end of the “Arena District” with the two Fields located in the center and on the south end of the “Arena District”, such that one Field is within a quarter-mile of the rail station and the other Field is approximately 0.6 miles from the station. This is similar to the proposed configuration of DC’s “Arena District” in which Nationals Park is located within a quarter-mile of the Navy Yard Metrorail Station and the proposed DC United Stadium location is approximately 0.55 miles for that station.

In both scenarios, spectators must walk by the Field near the rail station in order to reach their further destination, resulting in a “sense of place” that decreases the perceived walking distance. Seattle’s “Arena District” also provides restaurants and bars along the walking routes from the rail station to encourage spectators to meet before the game and/or celebrate after the game. Similar “sense of place” strategies are proposed as part of the DC United Stadium in order to provide an enjoyable and stimulating walking route between the Metrorail station and the Stadium.

Bicycle Accommodations

This section reviews comparable stadia where transit access is also approximately 0.5 miles from the stadium. It also reviews why Metrorail rather than bus service is the main focus for transit ridership at the new stadium, and how disabled metro riders are expected to be accommodated.

Bicycling Projections

Based on the approximate cycling mode share that was experienced at Nationals Park during playoffs, it is estimated that typically 3 percent of game-day trips will arrive by bike (further discussion is contained within the Stadium's TMP and EMS). This amounts to approximately 570 bike trips for a sold-out game condition, including those arriving and/or departing via Capital Bikeshare.

Approach/Departure Routes

Leading directly to the Stadium, cyclists will have access to a network of multi-use trails, protected bicycle facilities, and local and residential streets that facilitate cycling. The bicycle network provides good conditions for local trips and there are several routes for trips between the Stadium and many areas within the District, including areas across the Anacostia River, as well as Northern Virginia.

There are several existing bicycle facilities leading up to the Stadium that provide quality bicycle connectivity, such as bike lanes on 4th Street SW, bike lanes on 4th Street/6th Street SE, bike lanes on 1st Street/Potomac Avenue NE, and the Anacostia Riverwalk Trail. Prior to the completion of the DCU Stadium, the gaps in these networks will be filled such that many routes to and from the Stadium will be entirely along on- and off-street bicycle facilities. Along Potomac Avenue/R Street SW a protected two-way cycle track will be installed along the north side of the roadway and along 2nd Street SW a protected two-way cycle track will be installed along the west side of the roadway. Additionally, a cycle track along Maine Avenue will be installed as part of the Wharf redevelopment. Further in the future, the Anacostia Riverwalk Trail will be expanded in conjunction with the South Capitol Street Oval project. The projected bicycle routes on opening day and future routes after the construction of the South Capitol Street Oval are shown on Figure 4 .

The new facilities will provide safe and direct access to the proposed bicycle racks in public and private space as well as the bicycle valet location, as discussed below. Further coordination on the bicycle treatments of the intersections surrounding the Stadium will be coordinated during the TOPP.



Figure 4: Bicycle Facilities and Routing

Bicycle Parking

It will be essential to provide ample bicycle parking at the Stadium to account for the projected amount of bicycle trips. Bicycle facilities to accommodate these bike trips will include permanent bike ramps positioned within public and private space, designated areas within public private space for temporary game day racks, a free bike valet, and a Capital Bikeshare station with the space to provide a Bikeshare corral during high attendance events.

Figure 5 outlines the potential locations for these facilities. DCU has committed to providing a minimum of 400 bicycle parking spaces when the stadium opens, and has also committed to monitoring parking demand and expanding supply as needed. The facilities shown on Figure 5 identify where the initial parking spaces will be located when the stadium opens, and also identifies potential expansions or locations for temporary racks that would allow the supply to reach over 750 spaces.

Placement of bicycle parking was based on anticipated approach routes to the stadium and avoiding areas of high concentration of pedestrians pre-game, while acknowledging that some cyclists will park as close as they can to the entry gates. Thus, bike racks are located surrounding the stadium on all sides, with a concentration to the northwest and northeast, where the stadium meets the proposed 2nd Street and Potomac Avenue cycletracks. Sets of racks will be accompanied by maps of available bicycle parking at the stadium in order to inform cyclists on their options, including the location of the bike valet.

A bike valet service is proposed at the southwest corner of the Stadium along 2nd Street with a capacity for 190 bicycles on racks with additional space for un-racked bikes. The location along 2nd Street has excellent connectivity to the future cycle tracks along 2nd Street and Potomac Avenue and routes bicycles around areas of high pedestrian activity such as First Street and the Plaza. In order to help encourage cyclists to use the valet service, a small exit gate has been placed adjacent to the valet to allow patrons easy access to the valet post-game.

DCU has also committed to installing a bikeshare station and operating a bikeshare corral for highly attended games. Although the location for a Capital Bikeshare station has not been finalized, multiple locations have been identified that have enough space to accommodate a sufficient amount of docks, while also providing space for a potential Bikeshare corral. The goal is to select a location that optimally serves both game day traffic and neighborhood usage. Locations currently under consideration include 2nd Street near the northwest corner of the Stadium, on the North side of R Street across from the Stadium (and adjacent to the cycletrack), and on the east side of the Plaza adjacent to Half Street.

Comparable Stadia

There are currently only two MLS stadia that provide bike valet systems (Providence Park in Portland, Oregon and BC Place in Vancouver, Canada) and less than half of MLS stadia provide information on bicycle parking and/or routing information on their team websites. Providence Park is located near bicycle lanes, but bicycle facilities leading directly to the stadium are nonexistent. BC Place is served by bicycle lanes that directly surround the stadium.

When completed, the DCU Stadium will be the only stadium in MLS with a combination of bike valet and protected bicycle facilities directly serving the stadium. In addition to the bike racks and Capital Bikeshare station proposed, this would instantly put the new stadium in the upper echelon of bicycle friendly MLS venues.

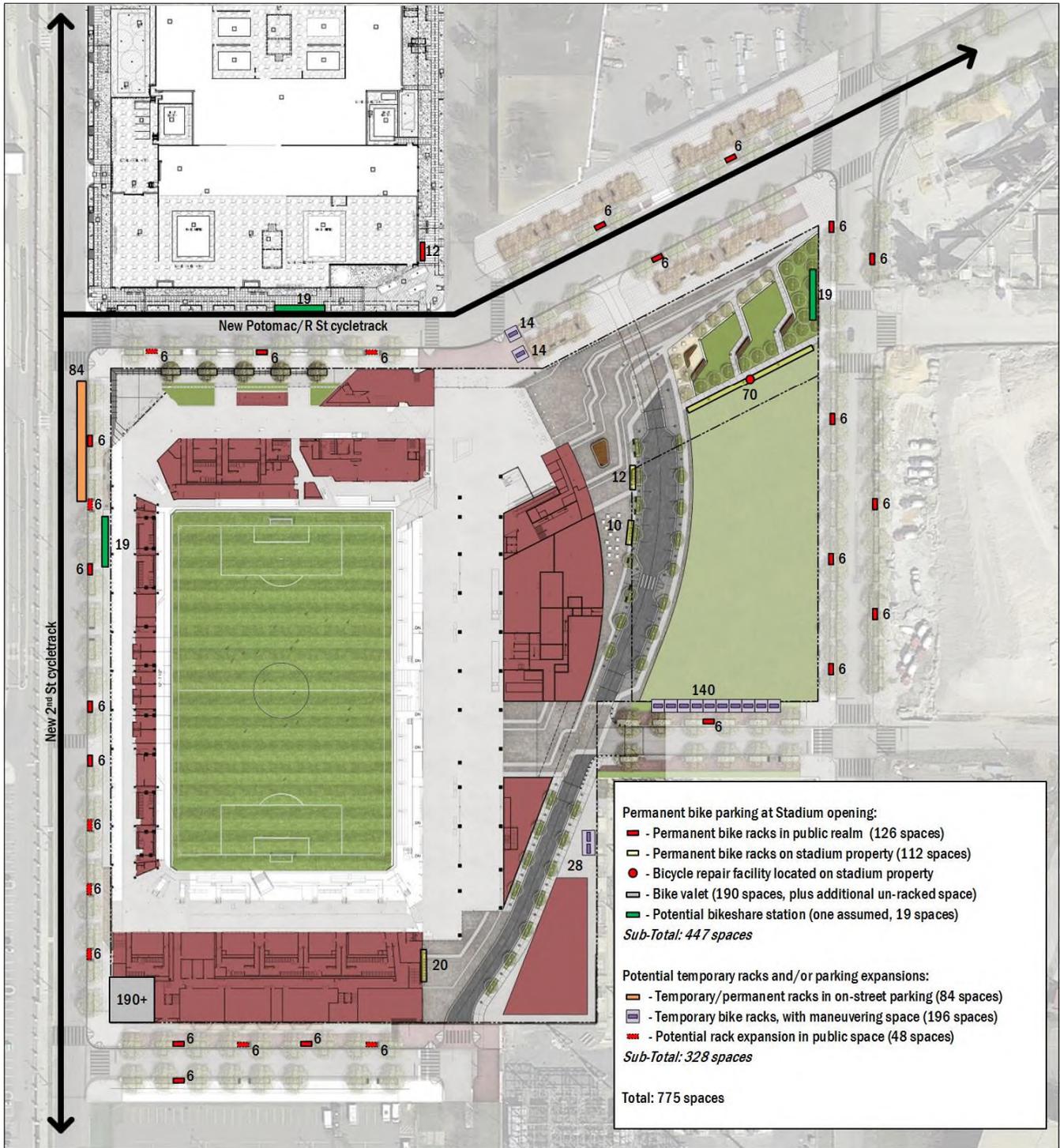


Figure 5: Bicycle Parking Locations

Operational Planning (TOPP) and Timeline

This section details what will be included in the Transportation Operations and Parking Plan (TOPP), and the timeline of when it will be written and assembled, and how it will be updated.

TOPP Contents

The following is an outline of what could be included in the TOPP, based on FHWA standards¹, the TOPP for Nationals Park, and requests from DDOT's November 18, 2016 staff report.

- Travel demand/scenarios
 - TOPP scenarios outlined – weeknight/weekend, levels of attendance, setting parameters for other strategies (this includes a list of which strategies are to be employed for each scenario)
 - Travel demand profiles provided for each scenario
- Pedestrian Measures
 - On-going/Permanent – signage, wayfinding
 - Day of Event – placement of barriers, use of traffic control officers to facilitate crossings
- Bicycle Measures
 - On-going/Permanent – signage, wayfinding, marketing/incentives, bike valet configuration, bikeshare location
 - Day of Event – temporary racks, bikeshare coral operations, bike valet operations
- Transit Measures
 - On-going/Permanent – signage, wayfinding, marketing/incentives, review of potential bus route changes/additions
 - Day of Event – shuttles to/from Metro for disabled
- Parking
 - On-going/Permanent – signage, wayfinding, route marketing/influencing, organization with parking lot owner/operators, identification of current inventory
 - Day of Event – employee parking/shuttling, media parking, team parking, shuttles to/from disabled parking
- On-Street Parking
 - On-going/Permanent – inventory of surrounding curbside management, identification of neighborhood areas, recommended changes to signing/policies
 - Day of Event – signing/barriers for protecting neighborhood streets, enforcement of residential parking areas
- Curbside Management
 - On-going/Permanent – signage, wayfinding, route marketing/influencing, organization with hired vehicles (including uber, lyft, etc...), charter bus routing, pick-up/drop-off areas identified for ADA access, charter bus,

¹ *Managing Travel for Planned Special Events*, Federal Highway Administration, September 2003

- and other uses, parking identified for broadcast trucks, ENG/SAT trucks, MPD vehicles, ambulances, and other special vehicles
- Day of Event – temporary signage/barriers used to protect blocks
- Traffic Operations
 - On-going/Permanent – analysis of traffic volumes/modeling
 - Day of Event – signal timing plans, traffic control officer placement, turn restrictions (including signage)
- First Street
 - On-going/Permanent – identification of closures, timing per different event scenarios
 - Day of Event –and barriers/plans for implementing closure
- Summary of Operations Plan
 - Compilation of all day-of-event activities organized by scenario ('operator's manual' for event days)

Timeline

As per DDOT's request in their staff report, the Applicant agrees to assemble an initial TOPP in coordination with DDOT and other stakeholders approximately 6-12 months prior to the opening of the stadium. FHWA standards for special events suggest a timeline of having a draft final TOPP in place 30 days before an event, thus the outline by DDOT greatly exceeds this standard. DCU agrees though, that this timeline is appropriate given the multi-modal nature of the site and necessary coordination needed for a successful TOPP.

DCU proposes to begin development of the TOPP 12 months prior to opening day, with an initial draft approximately 6-9 months prior. Once the draft is issued, feedback can be received and the TOPP updated continuously prior to opening day. Although the TOPP will be a continuously updated document, the goal would be to have an initial agreed plan in place 90 days before opening day. It is anticipated that regular meetings with stakeholders will be necessary as it gets closer to opening day to coordinate operational details. DCU will work with DDOT to develop a detailed timeline of key deliverable dates and community/stakeholder engagement before starting the TOPP.

DCU also commits to annual updates of the TOPP, which will also be coordinated with DDOT. In addition to annual updated, during the first season, it is expected that the TOPP will also be updated mid-season after the first several home games occurred.