



Memorandum

Project DC Major League Baseball Park
Client DCSEC
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Attention Zoning Commission
From Susan Klumpp – HOK/D&P
Regarding Anacostia RIVERKEEPER response – Zoning Commission Hearing
Copies To Joe Spear – HOK/D&P, Bill Mykins –B&D, Chris Dunlavey – B&D, File

Comments

In response to the memorandum we offer the following information on “best practice environmental design” particularly with regard to minimization of impacts on the Anacostia River, specifically addressing the language in Section 1606.20 “**promote the use of best practice environmental design including minimizing potential impacts on the Anacostia River through storm water management and recycling practices**”

The following steps are being taken to protect the Anacostia River. An in-depth description of the storm water system is contained in the Delon Hampton, “SWM Narrative: Revised Declaration of Intent which is available upon request. Highlights include:

Storm water Management:

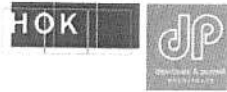
1A. Building wash-down system (lower and upper bowl drainage): There is a concern about whether the sand filtering system currently proposed for the storm-water system will be sufficient to handle the pollutants from building wash-down activities. HOK/D&P team has created a “super sand filter” (ref attached sketch) that will allow building wash down water to be captured and collected in (and enlarged/enhanced the first chamber of this structure and pumped at a low flow rate to the sanitary sewer system thereby ensuring that water potentially containing detergents does not reach the Anacostia River.

Note: The existing NPDES MS-4 Permit for the area of the city where the stadium is located does not regulate specific pollutants for storm water runoff. The pollutant mix in the river is way too complex. An important goal for cleaning up the Anacostia is the elimination of raw sewage that is dumped directly in the river during major rainfall (called combined sewage overflows or CSO's).

The balance of storm water collected from the lower and upper bowl systems will be run through debris guards with expanded wire mesh screens over the bowl drains. Area drains in the concourse will have sediment baskets with perforated lids. Water collected will then run through the “super sand filter” chambers for additional removal of particulates prior to being released to the storm water system.

1B. Field drainage: There is a concern that the field drainage system will not sufficiently remove nutrients (such as nitrogen and phosphorous) via the sand filtering system before storm water is discharged into the public storm sewer and the Anacostia River; the runoff of nutrient-enriched storm water is one of the most significant problems affecting the Chesapeake Bay watershed.

The field drainage system will have a series of under drain collection pipes that will collect the playing field water after it has percolated through roughly 18” of crushed gravel. The water will be redirected to a “sampling”



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manhole where it will be assessed periodically to ensure that fertilizers, pesticides and other designated chemicals are not present prior to being released to the storm water system. No other proposed drainage systems will be connected to this manhole; the field drainage was intentionally designed as a completely separate system.

1C. Deep Ground Water System: Migrating ground water on site has been identified as containing potential low levels of constituents. All groundwater on site will be collected through a series of pipes to a deep underground vault that will contain a permanent activated carbon type cartridge system that will treat the identified contaminants prior to discharge to the storm drain system. The deep under drain system was also designed as a completely separate system and does not connect with any other ballpark drain systems.

2. Green roofs: If additional funding becomes available, we would consider incorporating green roofs on a number of flat roof surfaces such as the roof of the restaurant, the roof over the expanded Option 2 First Street retail area (roughly 17,000 SF) and possibly the roofs over the upper deck restrooms and concessions stands.

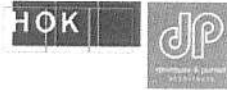
3. Site work and plazas: We are specifying drought resistant plant materials as indicated on the site plan that do not require irrigation, thereby minimizing water usage. LID techniques and details for the infiltration areas surrounding trees are being coordinated with DDOT. Street trees will be specified using DDOT's list of approved street trees. A double row of trees on streets other than S. Capital Street are not consistent with NCPD or DDOT's vision for the area and are therefore not being considered. English Ivy is being removed from the plant list per our coordination with DDOT. We are investigating where permeable pavers can be used and are also investigating the use of a green roof at the south plaza location over the below grade parking area.

4. Sustainable Site: We consider the ballpark to have a number of sustainable qualities including:

- a. The site's location in close proximity to a mass transit system that is used extensively.
- b. We are encouraging a number of alternative transportation uses including bike racks for ballpark employees and spaces in the parking garages for fuel efficient vehicles.
- c. Roughly 30 acres (25 acres onsite and 5 acres offsite) is being separated into pure storm and pure sanitary sewer systems. The site, when purchased, had a combined storm and sanitary sewer system that discharged into the Anacostia River.
- d. The site is part of the Voluntary Cleanup Program. (VCP). It will be left in a much better condition environmentally than when it was purchased considering the remediation efforts currently underway. The VCP includes the proper removal of any underground storage tanks, the removal of old diesel fuel lines buried in Half Street, the removal and disposal of contaminated soil, and the treatment of contaminated groundwater prior to discharge from the site.
- e. Because of the condition of the site and its participation in the VCP program, it is a candidate for the Brownfield Redevelopment credit as described by the USGBC in the "Sustainable Site" section of the rating system.

5. Water Efficiency : As mentioned in the site work section above, we are incorporating the following water conserving measures:

- a. We are specifying drought resistant plant materials as indicated on the site plan that do not require irrigation thereby minimizing water usage.
- b. We are providing low flow plumbing fixtures including spring timed faucets in all rest room areas throughout the ballpark.



- c. The site originally contained roughly ½ acre of landscape. With the addition of a playing field, the amount of lawn area for this site has increased from ½ acre to 3 acres. Studies show turf grasses play a significant role in reducing runoff calculated as up to 15 times less runoff than a lower quality lawn. Studies also show that turf grass soil will aid in breaking down various organic pollutants, air contaminants and pesticides used in lawn care.

6. Materials and Resources : We are incorporating the following material conservation measures:

- a. We are providing space for recycling within the building.
- b. We are using materials that contain recycled content of up to 10% of the total building materials provided for this facility.
- c. We are providing regional materials of up to 10% of the total building materials within 500 miles of the site thereby saving in transport costs.
- d. We are providing carpets, millwork, paints, sealants, adhesives and coatings that are environmentally low-emitting materials including the use of recycled tire treads for rubber flooring and carpet that contains recycled content.

North Area Development

The development on the north is not officially pursuing LEED certification however the project will implement enough of the credits to qualify for the minimum 26 points required.

Some of the sustainable features will include:

- 1. Green roofs on many of the roof surfaces.
- 2. High performance glazing for energy efficiency.
- 3. Shading devices for the Curtainwall to minimize heat gain.
- 4. Low flow plumbing fixtures to reduce water usage.
- 5. Interior finishes that are environmentally preferable including low VOC paints, adhesives and sealants.
- 6. Dedicated area of recycling.

The project is also researching appropriate HVAC equipment that will reduce life cycle energy costs and improve energy efficiencies.

Environmental Aspects

Sustainable Site

- Transit-oriented Design
- Voluntary Cleanup Program
- Brownfield Site Remediation
- 20 Acres Separated Storm and Sewer

Storm Water Management

- Super Sand Filter for Wash-down
- Sampling Manhole for Playing Field
- Carbon Filters for Contaminated Groundwater

Water Efficiency

- Drought-resistant Plant Materials
- Spring Timed Faucets



BEST PRACTICE ENVIRONMENTAL DESIGN
D.C. Major League Baseball Park



Environmental Aspects

Building Materials

- Up to 10% Total Building Materials Recyclable
- Up to 10% Total Building Materials Regionally Procured
- Environmentally Sensitive Flooring, Millwork, Carpet, Adhesives, Paint, Sealants, and Coating
- Heat-minimizing Roof Materials

Dedicated Space for Recycling



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