

EXHIBIT NO. 1  
City of Alexandria, Virginia

2  
6-27-05

MEMORANDUM

DATE: JUNE 22, 2005  
TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL  
FROM: JAMES K. HARTMANN, CITY MANAGER   
SUBJECT: REQUESTED "YATES GARDENS/OLD TOWN CIVIC ASSOCIATION COMPROMISE PLAN" AND RESPONSES TO QUESTIONS ON JONES POINT PARK FROM COUNCIL MEMBERS

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Attached as requested is the "Yates Gardens/Old Town Civic Association Compromise Plan" for City Council review and consideration at Council's June 27 Public Hearing on Jones Point Park Alternative Concept Plans.

A number of questions were raised by City Council Members about Jones Point Park issues and are outlined below for review:

- FIELD USES/INVENTORY
- FIELD LOCATIONS-JPP
- HYDROLOGY
- WETLANDS
- ST. MARY'S SCHOOL TURNAROUND
- CITY EMPLOYEE COMMUTER PARKING
- FIELD MAINTENANCE AND EXPENSE
- SECURITY ISSUES ASSOCIATED WITH BRIDGE AND PARK USERS
- SYNTHETIC SURFACING
- FIELD LIGHTING
- SCHEDULING OF EVENTS
- SETTLEMENT AGREEMENT/ADDITIONAL DOLLARS AVAILABLE FROM FEDERAL/STATE FOR CITY

**1. Field Uses/ Inventory: Availability of alternative field space within the City.**

There are several parks that were large enough in size to possibly accommodate an additional field, and these were reviewed for potential alternative field locations. These include Ben Brenman Park, Stevenson Square Park and All Veteran's Park.

**Ben Brenman Park**

There exists a large open green area at Ben Brenman Park that historically has been reserved for a possible Multi-generational Recreation Center. At this time, this area is still reserved, pending the Chinquapin Recreation Center Renovation, planned for completion in 2010-2011. Placing a multi-purpose playing field at Ben Brenman would require a Special Use Permit.

**Stevenson Square Park**

Stevenson Square Park, located off Stevenson Avenue in the west end of Alexandria, contains a playground and a ball field. This park is surrounded by woods. A large 110x60 yd field could be accommodated at the park as an "overlay" to the ball field, which would restrict the field use during the overlap of the baseball and soccer/lacrosse seasons. Construction of the field would require approximately 25-30 trees to be removed. A Special Use Permit would be required.

**All Veterans Park**

All Veterans Park is a possible alternative site. This park is located off N. Pickett Street, down the street from the CVS on Duke Street. This location could only accommodate a smaller field, due to the proximity of the Resource Protection Area. A Special Use Permit would be required.

**2. Field Locations within Jones Point Park: Alternative field layouts**

As noted in the February 22, 2005, Jones Point Park City Council Work Session, alternative field locations within JPP were reviewed that included fields under the bridge. A small field (40x80 yd) would physically fit under the bridge, but due to noise from the bridge directly above the field, staff did not recommend this alternative. A field located under the appropriate span height would impede maintenance of the bridge as well as impact the field as the maintenance occurred. Additional layouts were considered during the Jones Point Work Group process which included two 60x110 yd fields side by side north of the bridge, (ultimately labeled Scheme B), one 60x110 yd field north of the bridge and one 40x80 yd field south of the bridge (ultimately labeled Scheme C), and one field south of the bridge (originally labeled Scheme D). The schemes forwarded to City Council were Scheme A, field layout that is the most similar to the Approved Concept Plan, and Scheme E, a no field option. All five options can be found in Attachment 7 of the Work Group Report. City Council requested staff to bring the "Yates Garden/Old Town Civic Compromise Plan" forward and it is attached to this memo (Attachment 1). This scheme shows a small 45x75 yd field south of the bridge.

**3. Hydrology: The Hydrology of the area and proposed field impact on the neighborhood**

Attached is the Hydrology report that was requested by the Jones Point Park Work Group to address the Hydrology issues (Attachment 2). As noted in the February 22 Work Session, and the report, "The results of the analysis indicate that the playing fields will have no impact on the Potomac River flood plain in the area of Jones Point. Any future flood events will not be exacerbated by these playing fields." Staff recognizes that additional study is necessary prior to final design, however, staff concurs with the conclusion of the report.

**4. Wetlands: The impact of the fields or parking on the wetlands**

It is the intent of the project to have the least impact on the wetlands as possible. All field locations are shown outside the delineated wetlands. The parking option for 110 spaces crosses the wetland area with a bridge as does the layout for 80 spaces. The newest parking layout shown on the “Yates Gardens/Old Town Civic Compromise Plan” shows a culvert over the wetland area as well. Staff and the community have acknowledged the need to update the delineated wetland areas during the design process, but staff recognizes that any design must be accomplished in a manner that does not adversely impact the wetland area.

**5. St. Mary’s School Turnaround: The impact of a new park entrance and parking on Royal Street**

At this time, all schemes show parking inside the park, allowing for free movement along Royal Street. No parking is proposed on Royal Street, other than what currently exists as a public street. There is a proposed turnaround or cul-de-sac at the end of Royal which will enable St. Mary’s School to coordinate their afternoon pick up without interference from park parking.

**6. City Employee Commuter Parking: Alternative locations for City employee parking**

At the February 22 Work Session, several sites were reviewed for alternative employee parking arrangements. Those sites included: the Lee Center, Business Center Drive, and Hunting Towers. At this point, due to the rush hour traffic situation both morning and afternoons, the Lee Center and Business Center Drive are not feasible locations for this parking. Shuttles would be caught in the morning and evening rush hours, making transitions from the sites to City Hall difficult. The Hunting Towers site was recommended, but is not likely to be available due to the owner’s desire to sell the property. At this time, this site is not feasible. Staff will continue researching possible sites, preferably north of City Hall, for alternative parking arrangements, but it is highly unlikely that a site will be found where we can provide very low cost parking. It should be noted that the parking available for employees serves an important need for individuals within the lower and mid pay scale levels.

**7. Maintenance and Expense: Field related**

The field maintenance at the proposed design level would cost \$15,000-\$20,000 per field per year. A smaller field would require less in annual maintenance. The estimated construction cost for the fields is \$1 million - \$1.5 million, depending on field size and is funded under the Woodrow Wilson Bridge Settlement Agreement.

**8. Security Issues Associated with Bridge and Park Users**

Security thresholds are set by the Transportation Security Agency (TSA). The City has to gain approval from Maryland SHA, VDOT, and TSA in order to have any plan which includes parking under the bridge or within the security setbacks.

**9. Synthetic surfacing**

Currently, the field usage using regular turf standards is 9 months out of the year. Creating one field in a high end new synthetic turf would allow using the field 12 months a year. The utility for one field in this synthetic turf would capture 1 ½ to 2 times greater playing time, but would not cover the usage for two games in concurrent play.

**10. Field Lighting**

Field lighting is not proposed for the fields at Jones Point Park.

**11. Scheduling of Events**

Events, such as the City's birthday celebration, may be scheduled in the future at Jones Point Park if the appropriate security measures can be achieved and once construction is completed.

**ATTACHMENTS:**

Attachment 1. "Yates Gardens/Old Town Civic Association Compromise Plan"

Attachment 2. Hydraulic Review Study

**STAFF:**

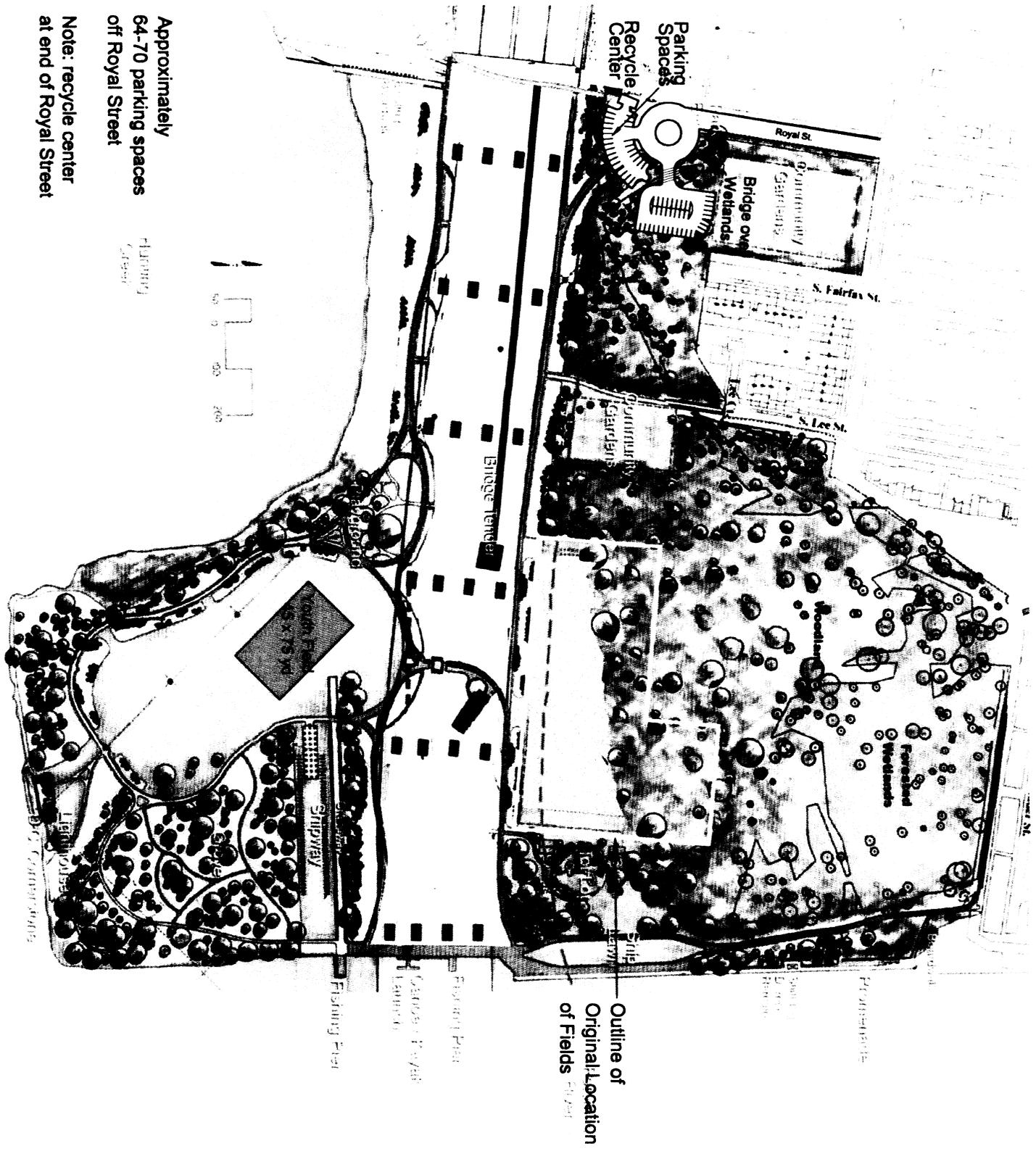
Kirk Kincannon, Director, RP&CA

Rich Baier, Director, TE&S

Jean Federico, Director, OHA

Roger Blakeley, Deputy Director, RP&CA

Aimee Vosper, Landscape Architect Supervisor, RP&CA

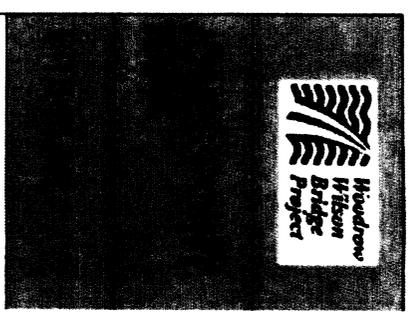


Approximately  
64-70 parking spaces  
off Royal Street



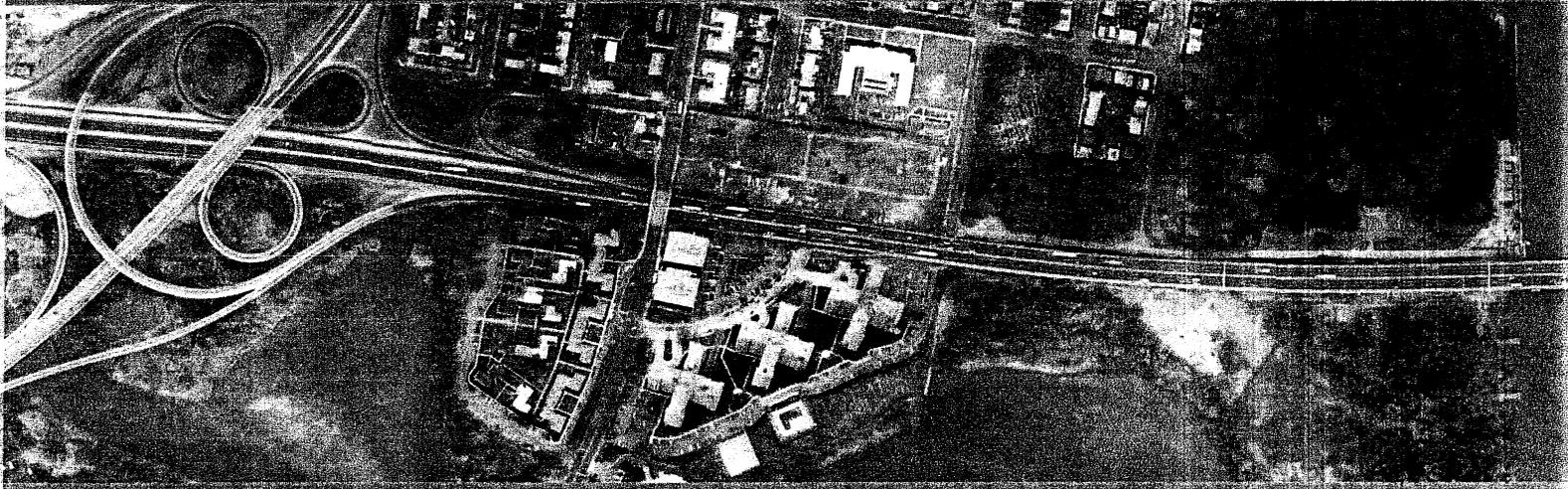
Note: recycle center  
at end of Royal Street

**"Yates Garden/  
Old Town Civic  
Association  
Compromise Plan  
June 16, 2005**



June 21, 2005

# Jones Point Park



# Hydraulic Review Study

April 2005

 **EarthTech**

A **tyco** International Ltd. Company



## TECHNICAL MEMORANDUM

**To:** The City of Alexandria, Department of Environmental Services  
**From:** Earth Tech, Inc., 675 N. Washington Street, Suite 300, Alexandria, VA 22314  
**Subject:** Jones Point Park Hydraulic Review Study  
**Date:** April 12, 2005  
**Conducted by:** Scott Delgado, PE and Joe Huesmann, PE

### INTRODUCTION

This memorandum conveys the findings of a Hydrology Review for the construction of two multi-purpose recreational fields as part of the Jones Point Park improvements. The review is based on the August 2001 plans provided by the City of Alexandria (65% plans from VDOT). The proposed multi-use fields consist of one 180' x 330' field oriented east-west and one 180' x 330' field oriented north-south. The multi-use fields will be constructed on fill over portions of the existing access road and within an existing wooded area approximately four (4) feet above the existing grade.

Jones Point Park is located within the City of Alexandria at the waterfront of the Potomac River, adjacent to the Woodrow Wilson Bridge (See Figure 1). The bridge bisects the park, approximately 23 acres to the north of the bridge and 25 acres to the south. The topography of the proposed site is flat, with specific areas previously identified (by others) as designated wetlands to the north of the site.

The site is bounded on the north and west by residential housing. Due to the proximity of the Potomac River, and the low-lying nature of Jones Point, this memorandum addresses the impacts of raising the grade by placing fill for developing the playing fields, and its affect on drainage.

### PROJECT SITE

Jones Point is flat, with some low areas that pond with water during rainfall events. Wet-weather ditches carry most of the runoff from the portion of Jones Point south of the Wilson Bridge directly to the Potomac River. Runoff in the northwestern portion of Jones Point is collected in a ditch that drains into a culvert that crosses beneath I-95. The culvert outfalls into a wetland area to the south of the existing bridge. The northeastern part of the site where the recreational fields are proposed is also fairly flat, and drains to the east into a swale which itself drains into the Potomac (See Figure 2).

Many of the residential streets surrounding Jones Point grade towards the park without inlets or storm drains. As a result, runoff from these streets drain directly into the park.

### ANALYSIS METHODOLOGY

Earth Tech performed a cursory hydraulic analysis of the Jones Point area, using as a partial base the hydraulic analysis performed by the Maryland State Highway Administration (SHA), entitled "Woodrow Wilson Bridge Project, Hydrology and Hydraulic Report for Purpose of Scour Evaluation, Replacement Structure for the I-95/495 Crossing of the Potomac River." The SHA

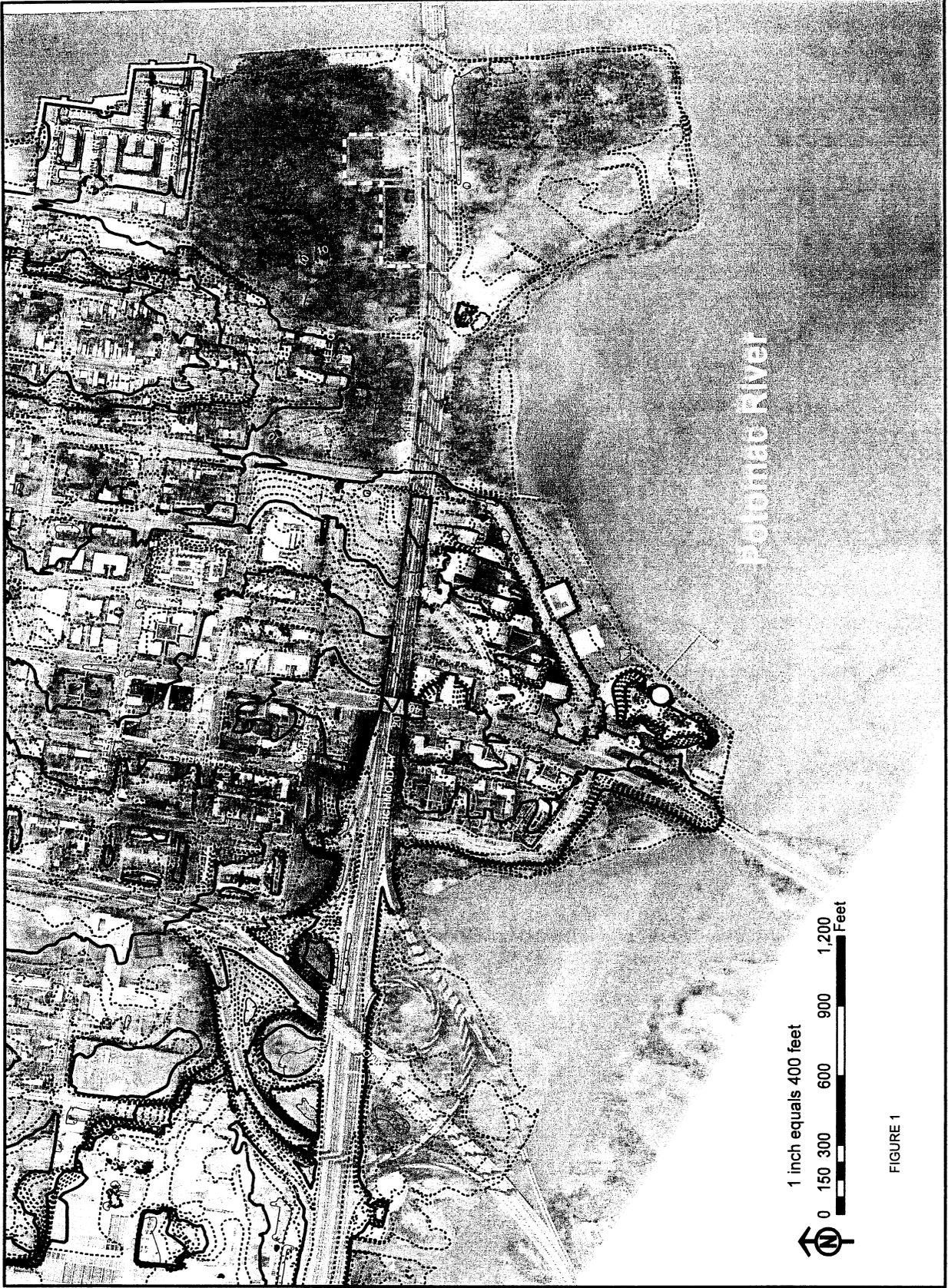


FIGURE 1

# Jones Point Park

FEATURE	SYMBOL
Bridge	—
Bridge Surface Contour	—
Inner Contour	—
Inner Depression Contour	—
Intermediate Depression Contour	—
Intermediate Contour	—
Road	—
Water	—
Water Park	—
15 Foot Minimum Pool Buffer	—

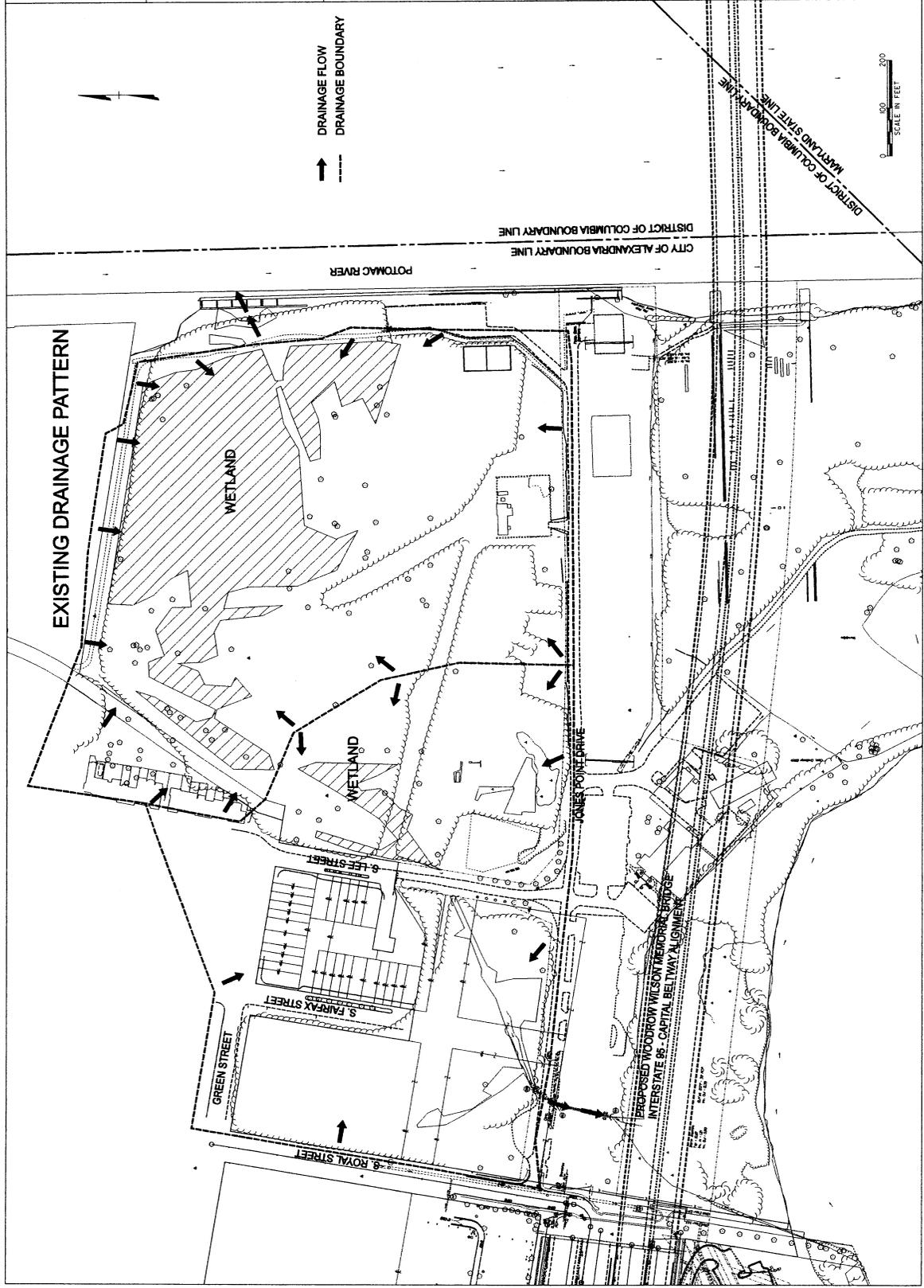


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 CAD ENGINEER: \_\_\_\_\_ Date: \_\_\_\_\_  
 DIVISION CHIEF: \_\_\_\_\_ Date: \_\_\_\_\_  
 CITY ENGINEER: \_\_\_\_\_ Date: \_\_\_\_\_  
 DIRECTOR TRCS: \_\_\_\_\_ Date: \_\_\_\_\_

Scale: 1"=200' Project No. \_\_\_\_\_  
**FIGURE 2**  
 REVISIONS  
 Date: \_\_\_\_\_ Initials: \_\_\_\_\_ Comments: \_\_\_\_\_





analysis was performed in HEC-RAS for the purpose of scour evaluation for the proposed bridge, not for establishment of flood elevations.

The Wilson Bridge project surveyed a number of cross sections of the Potomac River for use in the scour analysis. One of the cross sections (#91095) is located approximately 100' upstream of the existing bridge, in the immediate vicinity of the proposed recreational fields. This cross section was used as the basis for our hydraulic analysis.

Boundary conditions (starting water surface elevations) for our analysis were taken from the study performed by the Maryland State Highway Administration (SHA) for confirmation to FEMA that the proposed bridge will not exacerbate flood elevations upstream of the bridge—the Conditional Letter of Map Revision (CLOMR) process. The FEMA flood flows used in the SHA CLOMR study were used in our analysis (10-, 50-, 100- and 500-yr recurrence intervals). See Table 1 for details.

(The recurrence interval is a measure of the probability of a storm of a given magnitude occurring during any particular year. For instance, a 25-year storm has a 100%/25, or 4% probability of occurring, while a 5-year storm has a 100%/5, or a 20% chance of occurring.)

Version 3.1.2 of HEC-RAS was utilized for our analysis. HEC-RAS is the most current one-dimensional hydraulic analysis application, often used for floodplain analysis and delineation, and approved by USACE for this purpose.

As our analysis was not a detailed analysis, and not intended to be used for regulatory purposes (e.g. establishing flood elevations), we created a simple model by duplicating the #91095 cross section at various distances.

TABLE 1	Recurrence Interval			
	10-yr	50-yr	100-yr	500-yr
FEMA Flood Insurance Study Water Surface Elevation (feet) NGVD29	6.7	9.5	11.4	14.7
MD SHA CLOMR Water Surface Elevations (feet) NGVD29	6.8	9.2	10.5	13.8
Flows (cfs)	236,000	381,000	457,000	658,000

The proposed playing fields were modeled on the cross sections by raising the ground profile by the 4' that the fields are intended to be raised, with dimensions appropriate to the layout of the fields.

Computational runs were made of the existing conditions model with no playing fields, and the proposed conditions model with playing fields in place, in order to determine the effects of construction of the playing fields on flood elevations.

**ANALYSIS RESULTS**

Comparison of the existing conditions model with no playing fields, and the proposed conditions model with playing fields, showed no measurable increase in the flood elevations of the Potomac River resulting from construction of these playing fields along the segment of waterway modeled.



## FINDINGS AND RECOMMENDATIONS

Although careful consideration will need to be given to the drainage system, typical general engineering and construction practices will be sufficient for construction of the fields as currently designed in the 65% plans. The results of the analysis indicate that the playing fields will have no impact on the Potomac River floodplain in the area of Jones Point. Any future flood events will not be exacerbated by these playing fields.

However, recognizing that the site falls within an existing flood plain along the Potomac River, and certain large storm events will undoubtedly result in flooding in the future, several special requirements may help minimize the impacts of such an occurrence and facilitate the maintenance requirements after such an event. One consideration (included in the current design) includes constructing the fields at an approximate elevation of 11.0, which is approximately 0.85 ft higher than the 100-yr flood plain elevation of 10.15 (NAVD88) established by FEMA (FEMA floodplain mapping shows a 100-yr elevation of 11.0, however, FEMA elevations are given in the NGVD29 datum, which in the area of Alexandria is approximately 0.85 ft higher than the current NAVD88 datum. Thus, elevation 11.0 in NGVD29 is equivalent to 10.15 in NAVD88.)

Additionally, other hazard mitigation techniques include:

- installation of a granular material within the top 12 inches of the fill to drain the surface properly;
- utilization of select fill to ensure proper compaction and drainage;
- installation of an underdrain system to facilitate drainage of the fields. Possibly larger diameter underdrains (6- or 8-inch in lieu of the typical 4-inch diameter) to eliminate silting problems;
- additional clean-out stubs for underdrain maintenance;
- construction of a sediment trap to be used after flood events when flushing deposited sediment from the field surface;
- installation of removable structures (i.e. goal posts, benches, bleachers) and development of a plan for their relocation

The drainage design for the 65% plans has not been finalized. However, the 65% plans indicate a series of stormwater management ponds to the immediate south of the proposed playing fields, draining towards the Potomac River to the east. In addition, the 65% plans show that approximately half of the playing field area is proposed to be redirected to drain to the SWM ponds to the south, whereas, currently the entire area drains to the flat area to the north. See Figure 3.

Only hydraulic issues related to the construction of the proposed multi-purpose fields are addressed in this report, additional elements of the design have been addressed by others and are not part of this report.



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 COMMENTS: \_\_\_\_\_  
 INITIALS: \_\_\_\_\_

