

# The Princess Anne Athletic Center Project

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**Abstract - The Princess Anne Athletic Center Project** is a partnership between UMES and The Town of Princess Anne to convert a 4.5-acre old clam factory premises into an outdoor athletic center for the children of the Town. The project is funded by the HUD-HBCU Grant program and the Maryland Department of Natural Resources. The Demolition and Site Clearance Phases of the Project included the demolition of the 25,000 square foot old factory building and the dismantling and removal of 29 large steel and 2 fiber glass vertical and horizontal storage tanks, and their support structures. The work included the preparation of a Request for Proposal which was used to prepare a bid package that was processed through the State of Maryland Contract System. This culminated in the award of a contract to a local wrecking company for the demolition and site clearance phases of the project which have been completed. Environmental issues of soil and water contamination and a buried 1000-gallon tank full of heating oil were addressed and students and faculty of the Construction Technology Program were involved in several aspects of the project. The Project Management and Evaluation Committee comprised of UMES and The Town of Princess Anne representatives met regularly and a picnic was held on the site recently to heighten awareness and encourage community involvement in the planning of the project. This paper covers the Request for Proposal, the contract award details for the Demolition and Site Clearance Phases and the current status of the project.

*Index Terms* - Demolition, Environmental Issues, Community Involvement, partnership, site clearance, Request for Proposal

## INTRODUCTION

**The Princess Anne Athletic Center Project** is a partnership between the University of Maryland Eastern Shore (UMES) and The Town of Princess Anne to convert a 4.5-acre old clam factory premises into an outdoor athletic center for the children of the Town. The project received the 2004 US Department of Housing and Urban Development (HUD)-Historically Black Colleges and Universities (HBCU) 3-year Grant Award in the value of \$340,000 for the construction of the athletic center. In addition, another \$130,000 received from the Maryland Department of Natural Resources by the Town of Princess Anne was earmarked as part of the cost of the demolition activity in the project. Figure 1 shows the

condition of the project site before the demolition and site clearance exercises.

Four years ago, Princess Anne police became concerned that neighborhood children were entering the abandoned plant building and facility and using it as an unofficial club house (skate boarding, graffiti, drugs, and sex). Figure 2 shows the condition of the building at the beginning of the project. The Town Code Enforcement Officer condemned the property and contacted the Maryland Department of Environment to request an investigation. The Department of the Environment cited the owner (who now resides in New Jersey) for certain environmental violations and supervised a cleanup of the property. Once the Department of Environment was satisfied, the Town entered into discussions with representatives of the owner about the possibility of the property being given to the Town as a gift. Eventually the gift was made and the Town recorded the deed in 2004.



**Figure 1 The Property Site**

The plan was to construct an outdoor athletic center on the property for the children of low-income families in Princess Anne. The Facility included a 25,000 ft<sup>2</sup> building with several compartments, two loading ramps, sheds, a pump house and several horizontal and upright storage tanks. There was a fairly large volume of metal scraps, two trailer containers, old machines and air-handling units on the roof of the factory building.

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HUD POLICY PRIORITIES

The project was designed to be implemented in three stages. The first stage comprised the demolition of the factory building, the loading docks and accompanying concrete slabs, dismantling all the tanks and sheds and properly disposing of all materials: concrete, metals, steel, wood, concrete masonry blocks and clearing of the property. After the disposal of materials from the site, it was to be graded and landscaped. The second stage was the design and construction of the outdoor athletic fields and courts for soccer, basketball, baseball, and volleyball. The third and final stage comprised the construction of a parking area, lighting, restrooms, office, equipment storage room, and visitor seating. The three stages were further broken down into a total of six Activities with specific tasks. Each Activity was for a period of six months. The Activities are shown in Table 1.

Table 1 PROJECT ACTIVITIES

Activity #	Activity Name	Scope
1	Demolition	Demolishing the old building and dismantling of storage silos and tanks
2	Clearance of Site	Taking inventory of matured trees and disposal of metal tanks, silos and other materials in appropriate landfills.
3	Site Development and Planning	Survey of the land, landscape design and development of a site plan with all proposed features in place
4	Design of Infrastructure	Design of the soccer and volleyball fields, basketball courts, and a play ground
5	Construction of Fields and Walkways	Review of building plans, preparing contract documents and the construction of the fields, courts and walkways.
6	Build Equipment Storage Building and Office	Preparation of contract documents and the building of the Athletic Equipment Storage Building and Office



Figure 2 Inside of Old Factory Building

This project satisfied the following HUD Policy Priorities.

- Improving the Quality of Life in Our Nation’s Communities.** This project seeks to turn an abandoned dilapidated old factory facility that area children turned into a gang meeting place for anti-social activities into an outdoor athletic center where the children of low-income families can have a safe and supervised environment for athletic activities which will impact their healthy physical and emotional development. This will improve the quality of life in this community for the children as well as the adults. The Town of Princess Anne, currently does not have any athletic facility for the children.
- Participation of Minority-Serving Institution in HUD Programs.** As an 1890 Land Grant and a Historically Black University, the mission of UMES is focused upon land grant imperatives for community outreach through partnerships and collaborations. Our goal in Community Outreach activities is to address the needs of the citizens of the local community and the State. In order to achieve this goal, UMES promotes community service and identifies community programs in need of support. UMES has been involved in many enriching activities in the local community in the past. However, this is the first HUD-HBCU grant that UMES has obtained. It is enabling UMES to expand its role and effectiveness in the Princess Anne community by helping to provide this much needed Athletic Center for the children of the Town.

ENVIRONMENTAL REPORT

The Department of the Environment performed an environmental investigation of the site after the supervised clean-up of the property. Several soil and underground water test holes were drilled and appropriate tests performed on the soil and water samples obtained. The findings indicated low-level arsenic contamination in the surface soil adjacent to the east side of the existing one-story block structure. Other environmental concerns included the potential for lead-based paint, asbestos insulation on pipes, polychlorinated biphenyls (PCBs) in the fluorescent light ballasts, and above storage tanks. An additional concern was the elevated levels of manganese in the groundwater. Owing to these environmental issues, HUD was concerned that the cost of the environmental remediation of the site could be substantial and exceed the budgeted amount for demolition and site clearance. It, therefore, favored a two prong approach to the execution of the project involving two scenarios.

**Scenario One:** The budgeted sum for demolition and site clearance is sufficient to cover the cost of environmental cleanup, demolition and site clearance. In this case, the project can proceed as outlined in the grant proposal. The six

activities of the project will then be carried out as proposed starting with the Demolition and Site Clearance Phases.

**Scenario Two:** The budgeted sum for demolition and site clearance will not be sufficient to cover the cost of environmental cleanup, demolition and site clearance and a substantial amount of the grant will be used to make the site environmentally ready for the project. In this case, the project cannot proceed as outlined in the grant proposal but would have to be revised. The revisions would allow some elements of the Center to be completed on a part of the site to the extent possible under the present grant. The rest of the site would have to be completed at a later date with another grant, if possible. For this purpose, the site was divided into two phases; Phase A and Phase B, see Figure 4. The two phases were separated by a drainage ditch running through most of the site. For demolition and site clearance purposes, the two Phases may be executed separately and separate bids prepared for each. Phase A may be fully executed first, including the demolition, site clearance and the full construction activities. Phase B may be embarked on only after the full completion of Phase A and the availability of funds to complete it. Phases A and B could be executed concurrently if funds are available to do so.

In order to determine the approach to follow in this project, it was decided that Scenario Two should be adopted to request bids for the two phases. Once the cost of implementing each phase is known, a decision would be made as to which of the two scenarios will be adopted. The Request for Proposal was therefore designed using this procedure.

### REQUEST FOR PROPOSAL (RFP)

#### *GENERAL REQUIREMENTS*

The Request solicited proposals to perform demolition and site clearance at the site of the Princess Anne Athletic Center Project as indicated in the attached figures and scope of work. All work was to be done in accordance with the requirements stated therein, attached Scope of Work Specifications, and applicable State of Maryland and Federal Laws.

The work consisted principally of providing bonds, labor, materials, equipment, and supervision necessary for the execution of the Demolition and Site Clearance components of the project. The project included but was not limited to the demolition, site clearance and removal of debris, walls contaminated with lead-based paint and tanks as indicated in the contract documents. See Figure 3 for the site plan of the project.

All Contractors submitting bids were required to carefully examine the site of the proposed work by attending the pre-bid meeting, which included a tour of the site and thoroughly review the contract requirements prior to submission of a bid proposal. A pre-bid meeting was held on May 17, 2005 at the Physical Plant Conference Room at UMES. A tour of the site was scheduled to follow the meeting. Each bidder was required to satisfy himself as to the character, quality, and quantities of work to be performed, and as to the requirements of the proposed contract. It was made clear that

the submission of a proposal would be prima facie evidence that the bidding Contractor had made such examination and was satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed Contract. Bids were accepted only from Contractors exhibiting a minimum of five (5) years approved environmental remediation construction experience. All bidding Contractors were required to hold a current license from the State of Maryland Licensing Board for General Contractors with the classification being Heavy Construction or Environmental Specialty.

The work performed under this contract could not commence until the Contractor had submitted a Performance Bond, Labor & Material Bond, and Certificate of Insurance. Performance Bond in an amount equal to 100% of the contract price; Labor & Material Payment Bond equal to 100 % of the contract price; and Certificate of Insurance as per the attached requirements and countersigned by a licensed resident agent in the State of Maryland.

For the purpose of this Request for Proposal, the first two activities of the project as indicated below will be executed. The Request for Proposal was divided into two phases; Phase A and Phase B, see Figure 4. The two phases were separated by a drainage ditch running through most of the site. For demolition and site clearance purposes, the two Phases may be executed separately and separate bids prepared for each. Phase A may be fully executed first, including the demolition, site clearance and the full construction activities. Phase B may be embarked on only after the full completion of Phase A and the availability of funds to complete it. Phases A and B could be executed concurrently if funds are available to do so.

#### *Phase A*

The work in this Phase included the demolition of the old building, removal of all metal or wooden doors, electrical and plumbing fixtures, roofing materials including concrete slabs, steel roof trusses and pulling down the walls. It was determined that the walls of the old factory building contained lead paint. It was therefore important that all state and federal EPA requirements were followed in the demolition and disposal of the contaminated wall materials. The environmental evaluation of this section of the site showed that there was chemical contamination (arsenic) in a section of the site that was used as the loading dock. The concrete slab, foundation and walls in this contaminated area were broken up and properly disposed off and the soil dug to a depth of one (1) foot, removed and disposed off in appropriate landfills. This section after removal and disposal of the contaminated materials was filled with approved soil and compacted in six (6) inches layers to the original level consistent with the rest of the site. The area involved was obtained by staking out 50 feet from the northeast and southeast corners of the factory building over the length of the building. The work here also included the dismantling and removal of all tanks and their contents, the break-up and removal of all designated concrete

floors, slabs and ramps, trees, heavy brush, undergrowth and other structures including buried structures and pipes. All materials dismantled and removed from the site were disposed of in appropriate landfills.

*Phase B*

The work in this Phase included the dismantling and removal from the site of all vertical and horizontal storage tanks, their support structures and concrete foundations with all related fixtures, heavy brush and undergrowth and other mounted structures and sheds.

**PROJECT EXECUTION**

The University of Maryland Eastern Shore’ Office of Procurement used this RFP to prepare a bid package, UMES Project Number: ES04/05-#023, that was placed in the State of Maryland’ Contracts Register. Bids were expected to be returned three weeks after the date it appeared in the Register. Although four contractors toured the site and three interested parties attended the pre-bid meeting and indicated interest in the project, only two contractors submitted bids at the bid opening. The two companies that responded to the bid and the bid details are shown in Table 2. It shows that Reynolds Excavating, Inc had the lower bids for the two phases (Phases A & B) of this project with a total bid sum of \$112,750.00. Based on the above analysis and because our evaluation showed that Reynolds Excavating, Inc. met all the requirements stated in the Request for Proposal (RFP), it was therefore recommended that Reynolds Excavating, Inc should be awarded the contract to execute the two Phases (Phases A & B) for a total sum of \$112,750.00. This amount was below the \$130,000 that was earmarked as part of the demolition cost.

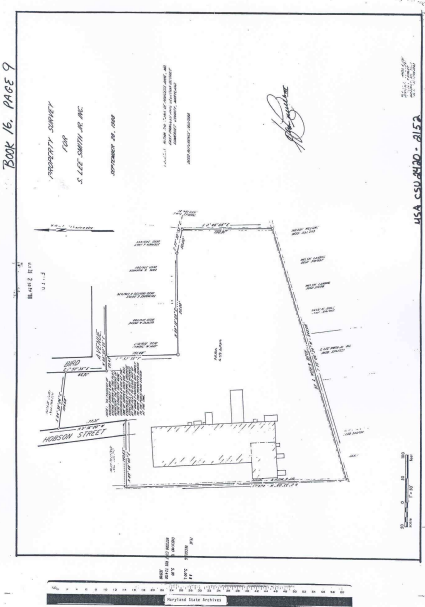
**Table 2 Financial Results of Bid ES04/05-#023**

COMPANY	PHASE A	PHASE B	BID SUM
Mike Davidson Excavating	\$220,000	\$134,500	\$354,500
Reynolds Excavating, Inc	\$77,800	\$34,950	\$112,750

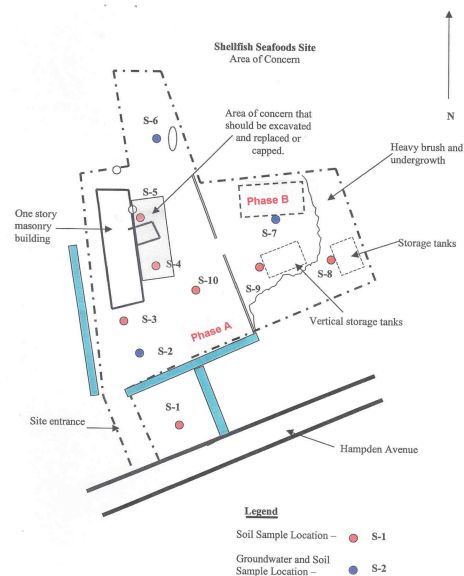
**CONTRACT EXECUTION**

The first activity by the contractor was the dismantling and removal of all tanks and their contents and support structures. All materials that were dismantled and removed from site were disposed of in appropriate landfills. A total of 29 steel tanks were dismantled, cut open, folded up, loaded onto a low-loader and taken to the recycling center. Over 300 tons of scrap metal were removed from the site for recycling. The second action was the demolition of the factory building. This

included the removal of all the air handling units on the roof, the roof system, the walls and the floor. The loading docks and all other concrete slabs were broken up and several trucks of debris were taken to a landfill. The third and last activity was the general clearance of the site which included the removal of all brush, trees, undergrowth and the grading of the site. All materials that were dismantled and removed from site were disposed of in appropriate landfills. Figure 5 shows the project site after the completion of the demolition and site clearance phases.



**Figure 3 Factory Site Plan**



**Figure 4 Phase A and Phase B Sections of the Project**



**Figure 5 Completed Demolition and Site Clearance Phases**

### **ENVIRONMENTAL ISSUES**

It was determined that the walls of the old factory building contained lead paint. It was therefore important that all state and federal EPA requirements were followed in the demolition and disposal of the contaminated wall materials. The environmental evaluation of this section of the site showed that there was chemical contamination (arsenic) in a section of the site that was used as the loading dock. The concrete slab, foundation and walls in this contaminated area were broken up and properly disposed off and the soil dug to a depth of one (1) foot, removed and disposed off in an appropriate landfill. After removal and disposal of the contaminated materials, this section was filled with approved soil and compacted in six (6) inches layers to the original level consistent with the rest of the site.

The groundwater contamination makes it necessary to restrict its use to non-potable use. The Town of Princess Anne has addressed this issue by pledging to make available public water to the Center to be used for potable water purposes.

During the demolition and removal of the factory's concrete floor slab, a 1000-gallon tank full of heating oil was found buried under the concrete floor slab. The tank was about five feet in diameter and about six feet long. The Maryland Department of the Environment was notified and an official came to evaluate the site. A certified company pumped out 966 gallons of oil and properly disposed of it. The tank was cleaned out and taken to a designated recycling center. The soil around the tank was cut out and replaced by approved soil. All certificates of compliance were obtained from the Maryland Department of the Environment.

### **FACULTY AND STUDENT INVOLVEMENT**

Faculty and students were actively involved in this project. The estimating class was required to prepare a bid for the demolition of the facility. The class visited the site and took measurements of all the features on the site. They prepared an inventory of all materials to be demolished and removed from site. They also got information on local metal recycling centers and landfills. With all the information gathered including the inventory, the class was able to prepare an estimate for the cost of demolition and site clearance for the

project. The class discovered that the regular estimating software used in the class did not offer much help for this project and it had to look for unit rates and other parameters from other sources. This exercise was a great learning experience on demolition projects for the students.

The architectural drawing and the site development classes were also involved in the planning and development of the athletic center. The site plan for the project was obtained from the local court house. With the bearings of the sides of the plot, the site was plotted. Next, the standard sizes of each of the proposed courts and fields, e.g. soccer field, basketball court and volleyball court, etc, were obtained from architectural data books (Callender 1982, Ballast 1990), and AutoCAD (Autodesk 2005) was used to obtain several schemes of placing these field and courts on the site. One of these schemes is shown in Figure 6. An aerial map of the site was downloaded from the internet (Google Earth 2005, Terra Server 2005). These are free resources that provide aerial maps of several US sites. The most recent aerial photo of Princess Anne, MD was in 1998. The site was virtually unchanged from 1998, the date the aerial photograph was taken and therefore the map proved to be valid.

The Principal Investigator and other Faculty and Staff involved in the project held regular project meetings to discuss the progress and plan the sequencing of the project. They visited the site and met with the contractor often.

In addition, three students worked regularly on the site to monitor the day to day progress of the work. They ensured that the work was done according to the contract terms. They measured out the areas to be dug and removed and took photographs of the activities of the contractor regularly. One of the students helped to develop a Webpage (The Princess Anne Athletic Center Webpage 2005) for the project.

### **COMMUNITY INVOLVEMENT**

The Project Management and Evaluation Committee comprised of representatives from the Town of Princess Anne and UMES meets regularly to evaluate, discuss, and monitor the progress of the tasks and activities of the project. One of the main goals of the committee is to have the community fully involved in the project by creating an awareness of the project in various community forums. The Committee through its activities ensured that the project was being executed at all stages according to the tasks in the Activities set forth in the grant application. At the completion of this project, this committee shall transform to The Princess Anne Athletic Center Caretaker Committee which will oversee the proper management of the Center.

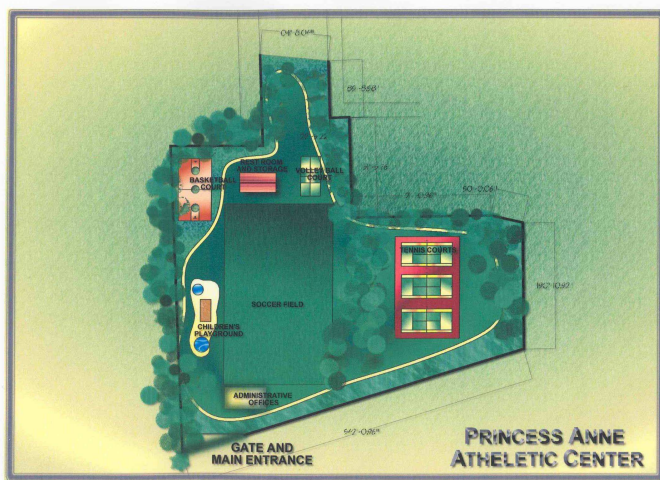
In August 2005, the committee organized a picnic for the community at the project site to heighten the community awareness of the project. During this picnic, the attendees completed questionnaires to indicate the kind of activities they want built in the Center. There were two sets of questionnaires: one for children and the other for young adults/adults. A total of 125 questionnaires were completed

and the results indicated that basketball is the most desired sport in the center.

The responses will be considered in the final design of a community friendly athletic center. This project, through its Project Management and Evaluation Committee is enhancing the relationship between UMES and the Town of Princess Anne and is leading to the formation of an Action Group for the Town of Princess Anne and Committees to look into the creation of Maturity and Youth Centers for the community.

### SITE PLANNING AND DEVELOPMENT STAGE

The next task in this project is site planning and development, which will include the planning of several potential layouts that will establish the position of the fields and courts. This is already in progress and a typical scheme is shown in Figure 6.



**Figure 6 A Scheme for the Athletic Centre Showing Proposed Features.**

### CONCLUSIONS

The Demolition and Site Clearance Phases of the project have been fully completed. A Request for Proposal was prepared and used to prepare a bid package that was processed through the Maryland Contract System. This culminated in the award of a contract to a local demolition company to execute these two phases of the project. Over 300 tons of scrap metal were removed from the site for recycling and several trucks of debris were removed and taken to appropriate landfills. Environmental issues of soil contamination and a 1000-gallon tank full of heating oil buried under the factory's concrete floor slab were addressed by complying with state and federal environmental laws and appropriate certificates of compliance obtained.

The project provided a great opportunity for faculty, staff and students to be involved in a demolition project. Students in the estimating, architectural drawing and site development classes were involved and it provided them a great learning opportunity on this type of demolition project.

Students were also involved in the day to day activities, taking photographs and creating and maintaining a web page for the project. Faculty and staff were involved in the planning, holding project meetings and giving general leadership to the project through the Principal Investigator.

The Princess Anne Athletic Center Project is contributing uniquely to improve UMES presence and contribution to the development of the immediate environment and the Town of Princess Anne and in providing a much needed recreational facility for children of low to medium income families in the area. In addition, this project, through its Project Management and Evaluation Committee, is enhancing the relationship between UMES and the Town of Princess Anne. This has led to the formation of an Action Group for the Town of Princess Anne and Committees to look into the creation of Maturity and Youth Centers for the community.

The Center's development is on track and the project team is actively working on the next phase: the Site Planning and Development Phase.

### ACKNOWLEDGEMENT

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