

**DEREK DIPIAZZA
CONSTRUCTION MANAGEMENT
CM FACULTY ADVISOR: DR. HORMAN
WARRENTON AQUATIC & RECREATION FACILITY
OLD WATERLOO ROAD
WARRENTON, VA 20186
OCTOBER 5, 2007**



TECHNICAL ASSIGNMENT # 1

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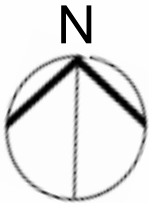
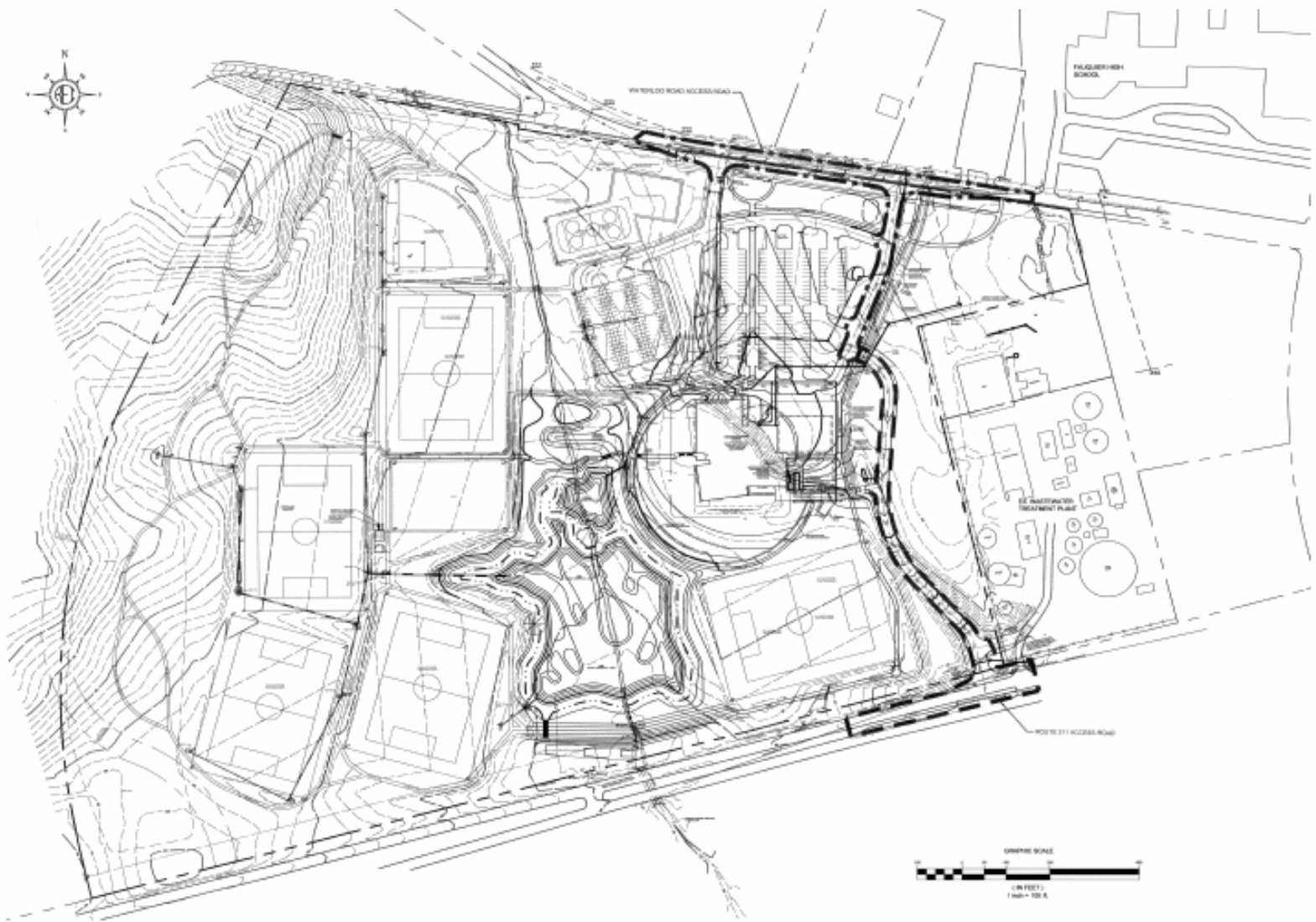
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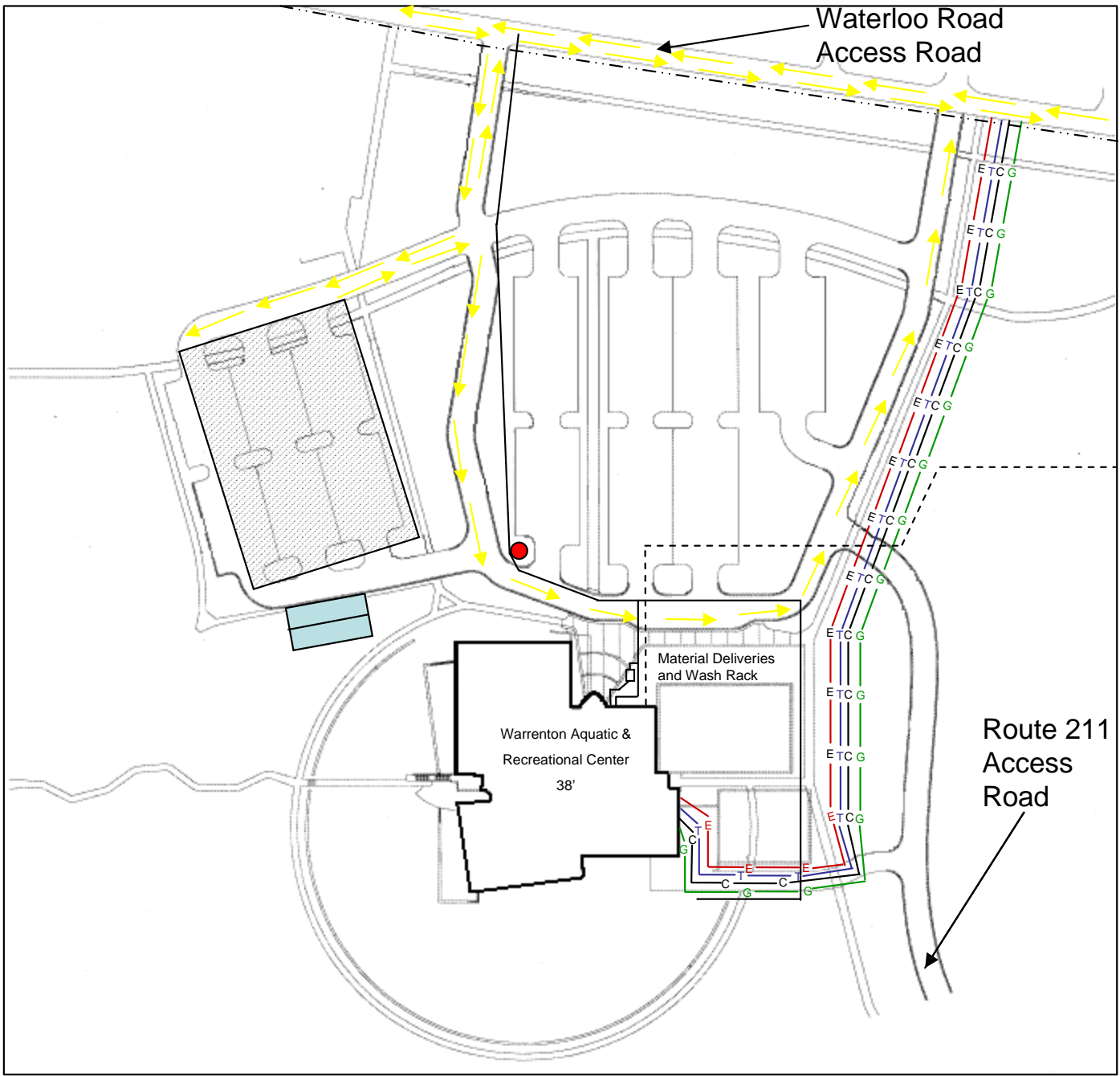
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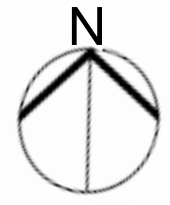


Warrenton Aquatic and Recreational Facility	
Existing Conditions Site Plan Full	
Date: 10/5/04	Approved By:
Drawn By: Derek DiPiazza	Drawing No. C-1



LEGEND

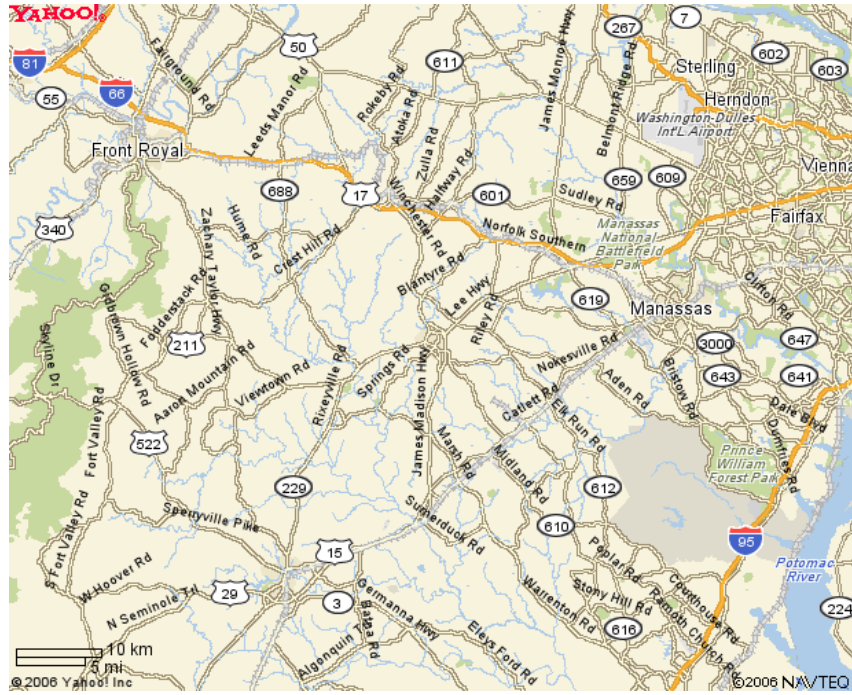
- G — New Gas Line
- E — New Electric Line
- c — New Cable Line
- T — New Telephone Line
- Site Trailer
- Construction Parking
- Vehicular Traffic
- - - - - Property Line
- Fire Hydrant
- New Water Supply
- - - - - New Sanitary Line



Warrenton Aquatic and Recreational Facility	
Existing Conditions Site Plan: Construction	
Date: 10.25.04	Approved By:
Drawn By: Derek DiPiazza	Drawing No.: C-2

VICINITY MAPS

TOWN OF WARRENTON



PROJECT LOCATION



LOCAL CONDITIONS

The construction site is located in the town of Warrenton, Virginia, acrossed the street from the Fauquier High School. Typically in the local area concrete is used to for the structural systems, however the owner and architect decided for the majority of the structural system to be steel with a composite deck floor system.

Construction congestion around the project should not be an issue at all due to the fact of it being located in a large field with no close neighbors. Contractors have the option of using sea containers for storage around the large open site and there is a variety of areas available for steel staging. The mobile crane that is used for the erection of the steel will have no problem navigating through the site also as a result of the open space. With regards to site traffic and parking, one of the parking lots and access roads were paved early to provide parking for the construction workers and will also allow for a clear route for site deliveries. Pedestrian traffic is not an issue because of the remoteness of the site. In the final months of the project the remaining parking lot will be paved along with an access road connecting route 211 to the Warrenton Aquatic parking lots and Old Waterloo Road. Waste from the project is being removed via dumpsters provided by Waste Management Inc. who is contracted through the general contractor

The soil at the site consists of three primary types. The first type is the top soil which is an average of 12 inches deep and will be removed and used later for grading. The second type of soil is silty/sandy clay and fine sandy silt. Because this soil has low plasticity it is considered to be suitable for structural fill. The last type of soil is “Greenstone” bedrock. This soil can be excavated easily in the top layers but may produce difficulties when excavating the competition pool areas because of the increased depth. This stone can be crushed and processed to 3” and mixed with soil fines in order to be considered suitable for structural fill and backfill.

CLIENT INFORMATION

The owner of the project is the town of Warrenton. Because the owner is not a single entity and does not have a large amount of construction experience, they hired a construction management agency to represent their best interests in the project.

The town decided to construct this project for multiple reasons. The first is because it is part of a plan to provide recreation facilities to the town of Warrenton. The facility fits in perfect with the surrounding baseball and soccer fields as well as the skateboard park and bike riding/hiking paths. The next reason is that the mayor and town councilmen wanted to provide the town of Warrenton with one of the best recreational facilities in the area. This is necessary because the town is primarily a rural area, so a development of this type will provide an entertaining venue for the town. The last reason for construction is to attract potential citizens to the area. The Washington D.C. area is continuously growing and Warrenton will use this building to help attract future citizens.

The expectations of the owner are high considering the amount of financial resources they are putting into the project. With regards to the budget, the public works department feels that the project will go over the \$22 million budget because of a few change orders. However, the project should stay well below the industry average of 6-8%. The public works department feels that the construction will finish early and turnover should be possible before July. The owner points out that the early completion will not sacrifice quality, however, as they mentioned that they are very pleased with how the construction is progressing. And the last expectation that the town has is that safety should be the first priority and no injuries or accidents should take place on the site. To make sure safety comes first, Forrester Construction (GC) has hired an independent safety inspector to perform random inspections as well as having their own OSHA certified employees and CM-agent employees inspect the site on a daily basis.

Finally the owner mentioned the one key issue for a successful and satisfactory completion of the project. That is that they want to receive the highest value for the amount of money they have invested. To guarantee that this happens, Forrester Construction has hired some of the areas finest subcontractors to ensure that the quality of work is of award winning craftsmanship. If a sub is not performing to the owners of

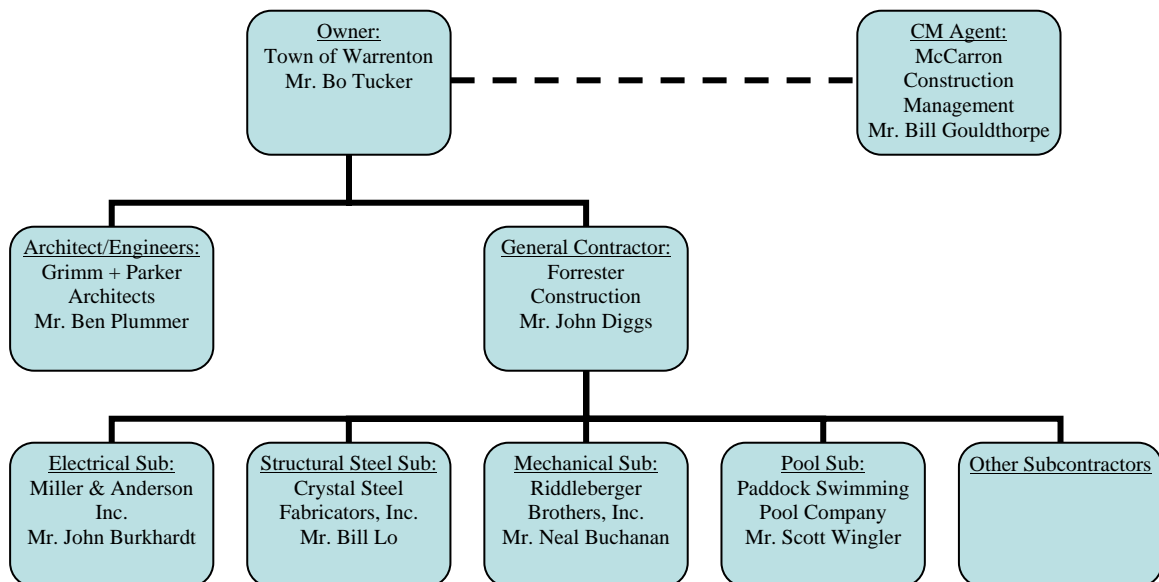
their own high standards, Forrester has and will replace the subcontractor to make sure that the end product is well above the owner's satisfaction level.

PROJECT DELIVERY SYSTEM

The Warrenton Aquatic and Recreation Facility is being delivered as a Design-Bid-Build job. The owner, the town of Warrenton, is holding Lump Sum contracts with the architect/engineers, general contractor, and also with a construction management agent. Forrester Construction Company was the low bidder and therefore became the general contractor.

The contracts through Forrester construction were also handled in a similar fashion. Bid packs were created to split up the work and the purchasing department sent out bid invitations to the local contractors. The bids were then awarded based on the bid price and qualifications of the subcontractor. After the appropriate subcontractors were selected they signed a master subcontract agreement with Forrester as well as a Lump Sum project contract.

PROJECT DELIVERY CHART



PROJECT STAFFING PLAN

The staff on the Warrenton Aquatic and Recreation Center was organized by the general contractor into three groups based on their company structure. These departments are the purchasing group, accounting group, and the operations group, with an administrative assistant to help process paperwork.

The purchasing group consisted of one cost engineer who was responsible for contacting subcontractors with different bid packages. The cost engineer would then compare bids and based on the companies system for selecting subcontractors, would award the appropriate sub. the contract. This process started after the general contractor was selected and has continued through the first eight months of the schedule. The cost engineer also worked with the project manager (PM) and assistant project manager (APM) to try and make sure all work and materials were accounted for.

The accounting group consists of one accountant who devotes a portion of time to processing the financials of the project. These responsibilities include tracking payments and work-in-place, processing payments to subcontractors and suppliers, and logging losses and gains compared to the estimate. The PM also works with the accountant to help keep the numbers as realistic and up to date as possible as well as to keep the cash flow moving and positive.

The largest part of the project staff is the operations group. At the head of the group is the project executive. This person is responsible for general project oversight and project troubleshooting while providing communication between the client and the rest of the project team. The next level in the staff is the PM and superintendent. The superintendent's primary responsibilities are project safety, the project schedule, construction coordination, and quality control of work being done. The project manager's responsibilities include negotiating contracts and change orders, subcontractor correspondence, material delivery log, and the aforementioned accounting and purchasing work. The APM assists the PM in all his duties as well as maintains meeting minutes and monthly project reports, submittal logs, and quality control. Finally, the field engineer and intern keep track of the site deliveries, conduct coordination and safety meetings, process RFI's, updating drawings, and complete the misc. project tasks.

PROJECT STAFFING CHART

