

MITCHELL & HILLSIDE SCHOOL PRE-FEASIBILITY STUDY

DeFazio Park Site Development Study

TOWN OF NEEDHAM – PUBLIC SCHOOLS
NEEDHAM, MASSACHUSETTS



DEFazio PARK

FINAL REPORT

15 FEBRUARY 2013



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Acknowledgements

Needham Public Schools and Town of Needham

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Section B
Introduction & Background

INTRODUCTION & BACKGROUND

Overview

The goal of the Pre-Feasibility Study (July 6, 2012) was to closely review and determine possible long-term solutions / options for the Hillside and Mitchell Elementary Schools. The options presented in the study included additions and renovations to the existing schools, new schools on the existing sites, a new school on an alternate site and the option of a new grade 6 school at DeFazio Park that would allow for the conversion of the existing High Rock School to an elementary school.

Due to the existing site constraints at both the Hillside and Mitchell schools, the options for renovations to the existing schools or the construction of a new school on the existing sites would require moving students off site while the buildings or sites are under construction. DeFazio Park is considered one of the possible locations that could house a temporary modular elementary school for 500 students. DeFazio Park is also considered the possible location for a new grade 6 school if High Rock School is converted into an elementary school. The goal of this study is to assess the feasibility, cost and impact of constructing a permanent or temporary modular school at DeFazio Park. This report is intended to supplement previous reports and assist the Town of Needham in its preparation of a Statement of Interest (SOI) for the Massachusetts School Building Authority (MSBA).

Dore & Whittier worked closely with Nitsch Engineering to identify environmental site constraints that may impact the location and cost of construction. These constraints include identifying wetland setbacks, river front area, and solutions for treatment of stormwater runoff in areas where a high water table exist. Other considerations include the year round use of the play fields and playground, the need for parking during events and school, and the proposed plans for the relocation of an existing salt shed, the construction of a new DPW garage, and potential fuel station.

Site cost and building construction estimates were developed with the assistance of Project Management & Cost (PM&C) based upon the following three options:

- a single story temporary modular (lease or purchase) elementary school for 500 students;
- a two story temporary modular (lease or purchase) elementary school for 500 students;
- a permanent grade 6 school for 438 students.

Section C
Executive Summary

EXECUTIVE SUMMARY

The Pre-Feasibility Study (dated July 6, 2012) that preceded this report was a comprehensive study of the existing conditions and possible design options for the Hillside and Mitchell Elementary Schools. One of the potential options, which can be found in Section G of the 7/6/2012 report, is the consideration of DeFazio Park for either a temporary modular school or a permanent grade 6 school. The focus of this report is to evaluate the feasibility and cost associated with the development of the DeFazio Park site for the temporary or permanent school options.

The DeFazio Park site offers many opportunities, as well as constraints, as a potential school site. The adjacent and abundant playfields provide tremendous opportunity for outdoor physical education classes, and the nearby wetlands offer an outdoor learning lab for science classes. However, these opportunities also present new building development limitations.

The existing fields are well used by the community and serve as game fields and practice fields for many school sports. On game day or during special events, visitors often exceed the on-site available parking. This existing capacity is difficult to determine since the lot does not have delineated parking spaces, which creates inefficient parking configurations. Once the main parking area is full, visitors begin to park in the adjacent DPW parking and driveway, and in the Dedham Ave driveway of the Pollard School. Furthermore there is a lack of designated space for team busses.

Additional site circulation issues include a single entrance / exit to the site from Dedham Ave. A second means of entrance / exit can be accessed through the DPW site, however, there is a level of concern regarding the safety of the general public using the DPW entrance / exit due to the number of large vehicles and equipment moving through that site. Also at issue is the entrance to DeFazio Park from Dedham Ave crosses an open stream. A culvert has been installed to provide access across this stream, but the drive over the culvert is narrow. It appears that there is room to expand the width of this drive enough to provide a sidewalk on one side of the entrance drive as well.

The wetlands and river frontage also impose constraints on the potential building site, limiting the buildable area and requiring additional construction methods, such as dewatering to lower the high water table to accommodate new foundations. Because the placement of a school on this site will require the existing parking area to become a paved surface, storm water infrastructure, flood control, and pollutant removal will need to be considered due to the proximity to the wetlands. The permitting of these systems will require additional approvals from such entities as the Conservation Commission.

The following chart indicates the extent of site utility and permitting considerations based on each of the options that are presented in Section E of this report.

SITE SUMMARY TABLE



Minimal



Moderate



Extensive

	Option 1-Single Story	Option 1-2 Story	Option 3
SITE UTILITY CONSIDERATIONS			
Stormwater	●	●	●
Water	○	○	○
Sanitary Sewer	○	○	○
Private Utilities (gas, electric, communications)	○	○	○
PERMITTING CONSIDERATIONS			
EPA NPDES	○	○	○
Conservation Commission	●	●	●
Planning Board	○	○	○
Mass DEP (Sewer)	○	○	○

The building options (section E) that were developed include a single-story temporary modular elementary school, a two-story temporary modular elementary school and a permanent grade 6 school. The goals for the modular building design were to provide a school facility that would be large enough to support the Hillside or Mitchell School community. Currently there are 487 students at the Hillside School and 503 students at the Mitchell School, so a target population of 500 students was used for this study. The elementary modular schools include classrooms, special education spaces, art and music rooms, a library, and administration area. The cafeteria and activity room would be a shared space. In addition the two-story modular building includes a central stair and elevator. The grade 6 diagram is based on the MSBA guidelines for a middle school with a population of 438 students as the existing enrollment was used for design purposes. This three-story 83,200 sq. ft. building may require a special permit to exceed the allowable height for the zoning in this area, depending on the final design solution.

The result of this report indicates that either a temporary or permanent school facility and the associated parking for both the school and the play fields are possible for this site. However there are circulation considerations such as the timing of the end of the school day and the start of sports

practices that must be coordinated, and vehicular patterns of the DPW site to assure the safety of buses that will use that site for access to the school.

Cost estimates for each option are included in this report. The estimated costs include the underground stormwater management system, the installation of a 5000 sq. ft. gravel wetland, the relocation of the playground, pavement for the parking area, and construction of the school facility, based on building conceptual diagrams. Cost for the modular schools include both a four-year lease of the modular units and the purchase cost of the units. The grade six school site cost includes the use of the adjacent ballfield to the north for construction laydown area or temporary parking and the restoration of the ballfield after construction is completed. Detailed construction costs are included in the appendix and all costs reflect December 2012 dollars.

The estimated project cost are as follows:

Single Story Modular Elementary School - Lease	\$15,104,755
Single Story Modular Elementary School - Purchase	\$16,242,000
Two Story Modular Elementary School - Lease	\$16,459,000
Two Story Modular Elementary School – Purchase	\$17,025,238
Grade 6 - 83,200 sq. ft. School	\$44,949,000.

Section D
Site Analysis

SITE

DeFazio Park is a 35.6 acre parcel located on Dedham Ave just north of South Street. The property is bordered by MBTA rail lines to the north, the Needham Golf Club to the east, Dedham Ave to the west and the Needham Department of Public Works to the south.



In 2010, the “Field of Dreams” project was completed and provided DeFazio Park with state-of-the-art multi-purpose turf fields, baseball diamonds, and an eight-lane running track. In addition to the turf fields and track, the park now includes (2) 90’ baseball diamonds, a 60’ diamond, and a football field. There is a playground, picnic area, small gazebo with restrooms, and parking.

The jurisdictional control of the park is subdivided into three entities: the School Committee, the Park and Recreation Commission, and the Board of Selectmen. The Park and Recreation Commission acts as the administrator of the park controlling scheduling and maintenance.

DeFazio Park is used by the Needham community year-round, however, no official permits are issued from December 1 through March 15. Regardless, the playground, sand lot, and the track are often in use. The Pollard Middle School, located to the north and connected via a tunnel under the MBTA rail tracks, will use the track and field for physical education classes throughout the year, weather permitting. The Department of Public Work is adjacent to the site on the south side and will use the DeFazio parking area for auxiliary parking and as a supplemental snow dump area when needed. DeFazio Park also serves as an emergency heli-port location, one of three such sites in Needham.

In mid-March, park activity in the park increases. The Pollard Middle School physical education classes and some of the after school programs use the fields on a more regular basis. High School athletic programs begin practice sessions in mid-March with games generally beginning around the first of April. Game days generate large crowds that require 75 to 200 parking spaces with additional space needed for visiting team busses. Special events also bring large crowds to DeFazio Park and often the need for parking exceeds capacity. When this occurs, visitors will park at the Pollard School site. Parking needs during these events can range from 100 to 250 spaces. Due to unmarked parking spaces and inefficient parking methods, it is difficult to determine how many visitors are presently able to park on site.

Throughout the summer, the running track, (2) 90' and (1) 60' diamonds and the (2) synthetic turf fields are constantly in use. Track club events can bring in over 200 cars and special events exceed the onsite parking capacity. From September to November, all fields, diamonds and the running track see activity. The playground, picnic area, and gazebo are also used throughout this season. Parking needs can range from 20 to 40 cars during the morning and early afternoon, to 150 cars during practice times (about 3:00-5:00) and during sporting events*.

The parking needs and field use is an important aspect in the consideration of locating a school on this site. The Mitchell and Hillside School Options included in the July 2012 report a target of 90 to 95 parking spaces per school. Parking layouts included in this report were designed to accommodate 250 spaces with the assumption that the school and park would share the parking areas. Careful consideration and coordination must be given to practice start and the school release times to avoid conflicts with parking and site circulation.



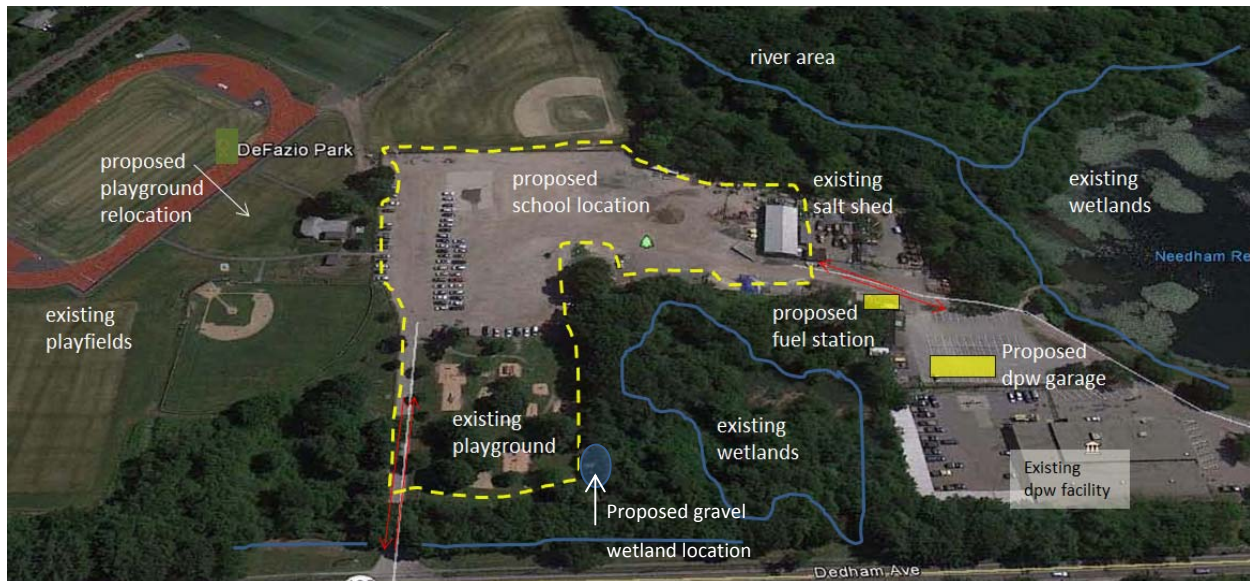
In addition to the parking needs other site constraints and limitations must be considered including zoning limitations, wetlands setbacks, riverfront set back, the single, narrow entrance drive and the proximity to the Department of Public Works facility. The diagram above indicates the wetlands and

**Parking information and field use was provided by the Park and Recreation Commission*

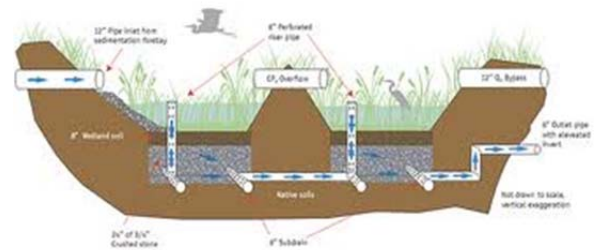
the setback requirements in the area of consideration (noted in yellow). Currently, there is a proposal to relocate the existing salt shed and to construct a six-bay garage and fueling station on the DPW site. The proposed locations for these structures are shown in the diagram below.

In June of 2012, improvements were made to the parking area of DeFazio Park which included re-grading and adding a layer of compacted crushed stone. These upgrades were to resolve some of the flooding and ponding issues in this area. Parking requirements for an occupied school will require a more durable paved surface and greater control of stormwater runoff than achieved with the current surface, as well as an increase in the number of parking spaces as noted above.

The existing playground is considered the appropriate location for the parking expansion and by relocating the existing playground to an area in front of the gazebo children will receive additional supervision and safety.



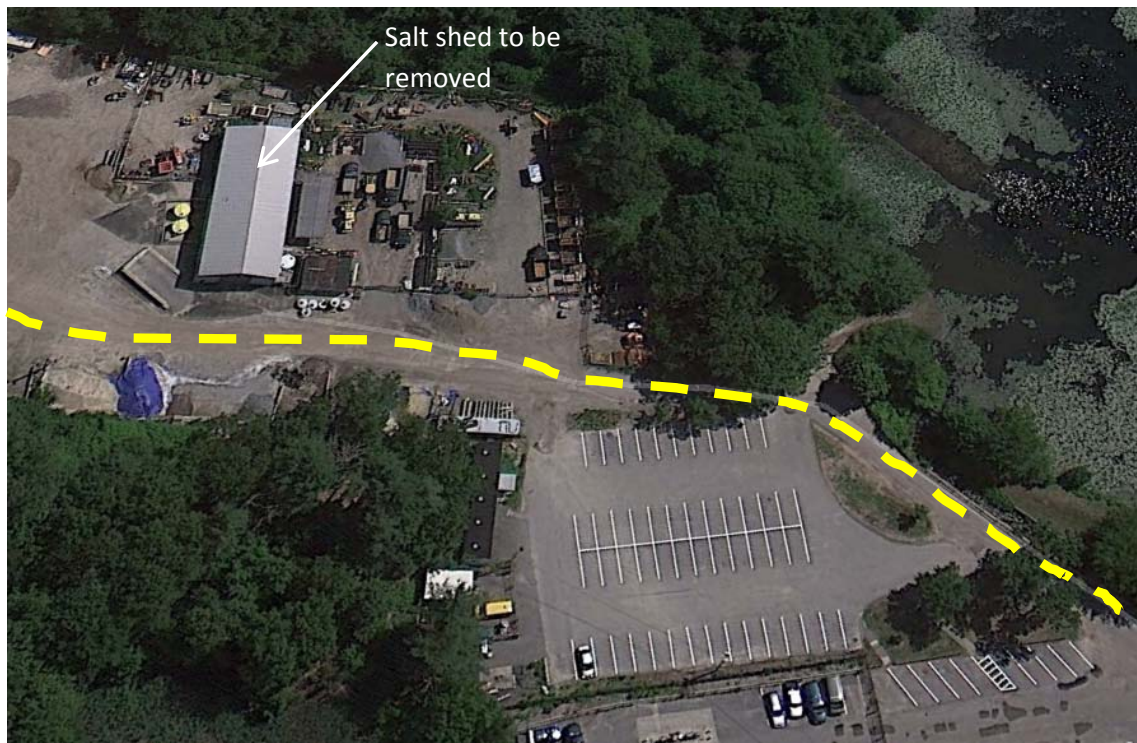
Expanding the parking area and providing a more durable parking surface will require additional stormwater control. For this reason, a gravel wetland has been proposed and included in the design options. The benefit of such a system is to provide year-round stormwater treatment, reduce peak stormwater flows, provide local flood control, reduce soil erosion, and provide high pollutant removal. This type of system is appropriate for use in areas with high water tables, therefore making it a good candidate for this site. The proposed gravel wetland will be constructed between the 50' and 100' wetland buffer which limits its size to approximately 5,000 sq. ft. Additionally, approximately 5,000 linear feet of underground detention with catch basins will be required.

*Example of a Gravel Wetland**Diagram of a Gravel Wetland*

The preferred location for the gravel wetland is in an area of pre-disturbed land, however, per local ordinances, any tree that is removed from the wetland buffer must be replaced at a ratio of 2:1. It is unclear at this time how many trees would need to be replaced and where they would be located.

The increased use and additional parking requirements of the site also require a review of the site circulation. Currently there are no marked drive aisles. The entrance drive is narrow and there are no sidewalks that lead into the property. Pedestrians entering from Dedham Ave must walk in the narrow entrance drive to access the site which crosses a culvert. The headwalls of the culvert are such that the entrance drive can be made wider and a sidewalk added to one side of the entrance drive. The separation of parent traffic and busses is difficult on sites where only one entrance exists. On this site, the proposed bus access would be through the DPW site, eliminating the need for busses to sit in the parent pick up and drop off queue. This bus route may require site improvements to meet the needs of the increased traffic.

*Existing park entrance*



Proposed bus route through DPW site

Additional Site Considerations

Construction phasing is an important consideration for this site. The phasing must include coordination of a temporary or permanent building at the beginning of the school year, as well as coordination of site work around the use of the sports fields. In each option, the relocation of the playground, installation of the gravel wetland and the expansion of the parking will need to precede the preparation of the building foundations and construction. If the permanent grade 6 school is chosen, a larger construction laydown and staging area will be required. Our options indicate the ballfield to the north of the proposed site for parking and laydown throughout the time of construction. We estimate that this field would be out of commission for approximately three seasons.

Section E
Options

Options

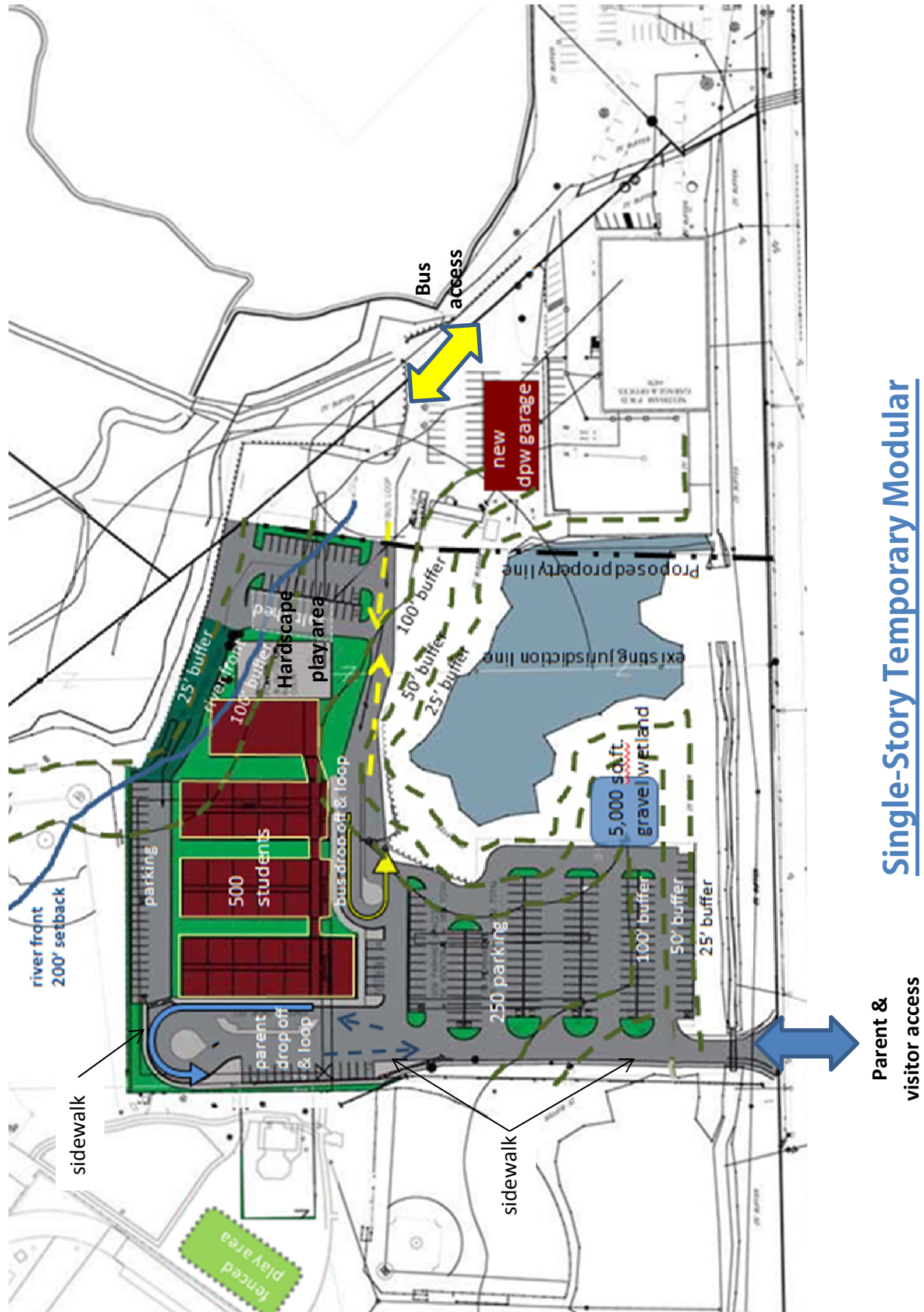
The focus of this Study was to determine the feasibility and cost of developing a temporary or permanent school on the DeFazio Park site. In defining the size of the school, we returned to the base Pre-Feasibility Study which outlined four distinct options. Two options were considered to be in line with the district goals of providing smaller schools and maintaining a grade 6 school. The first of these options proposed the construction of new schools for both the Hillside and Mitchell communities. If alternate sites are not available for a new school, students would need to be moved off site while new schools are constructed on the existing sites. DeFazio Park is being studied as one of the possible locations for this temporary school.

The building program for the temporary modular school was based on the 2011 enrollment of the Hillside and Mitchell Schools, with a maximum of 500 students, along with the MSBA guidelines for the number of classrooms, special education teaching spaces, art, music, and administrative areas. Two potential layouts for the modular classrooms include a single-story design and a two-story design with stair towers and an elevator. In both options, the cafeteria will double as an exercise or large play room and the library / media space will be made up of three modular classroom units. The options indicate modular classrooms of 900 sq.ft. This is the minimum size, per the MSBA guidelines, for a general classroom, however it is considered undersized for the kindergarten rooms. The options assume a half-day kindergarten for both the single and two-story schemes. The 900 sq.ft. modular is also the basis for the special education classrooms, and art and music rooms. This dimension is considered undersized for these spaces per the MSBA guidelines, as well. That said, these spaces are an improvement over the existing conditions of both the Hillside and Mitchell Schools where current special education spaces are minimal, ad hoc spaces, and the art rooms at each school are 800sf and 500sf, respectively.

The second option proposed in the base study that aligned with the district's goals is a new school for grade 6 students. In this option, the High Rock School would be renovated to accommodate grades K-5. The Mitchell School would be renovated or new for an increased number of students, Hillside would be re-purposed, and all K-5 students would be redistricted. The grade 6 school design option was based on MSBA guidelines for 438 middle school students. With a total gross square footage of approximately 83,200sf, this building may be three stories tall.

Planning diagrams of the three options, single and two-story modular elementary schools, and grade 6 school, are shown on the following pages. Each of these options proposes to increase the width of the entrance drive, relocate the playground, install a 5000 sq. ft. gravel wetland, and increase the parking to 250 spaces. In each diagram, parents and visitors would enter the site via the main DeFazio Park entrance and school busses would access the site via the DPW entrance and site. Additionally, the jurisdictional boundary line has been relocated to prevent the existence of more than one occupied building on the site, a requirement under the current zoning bylaws. A sidewalk has been added to allow pedestrians to enter the site from Dedham Ave and reach the school by following a designated path.

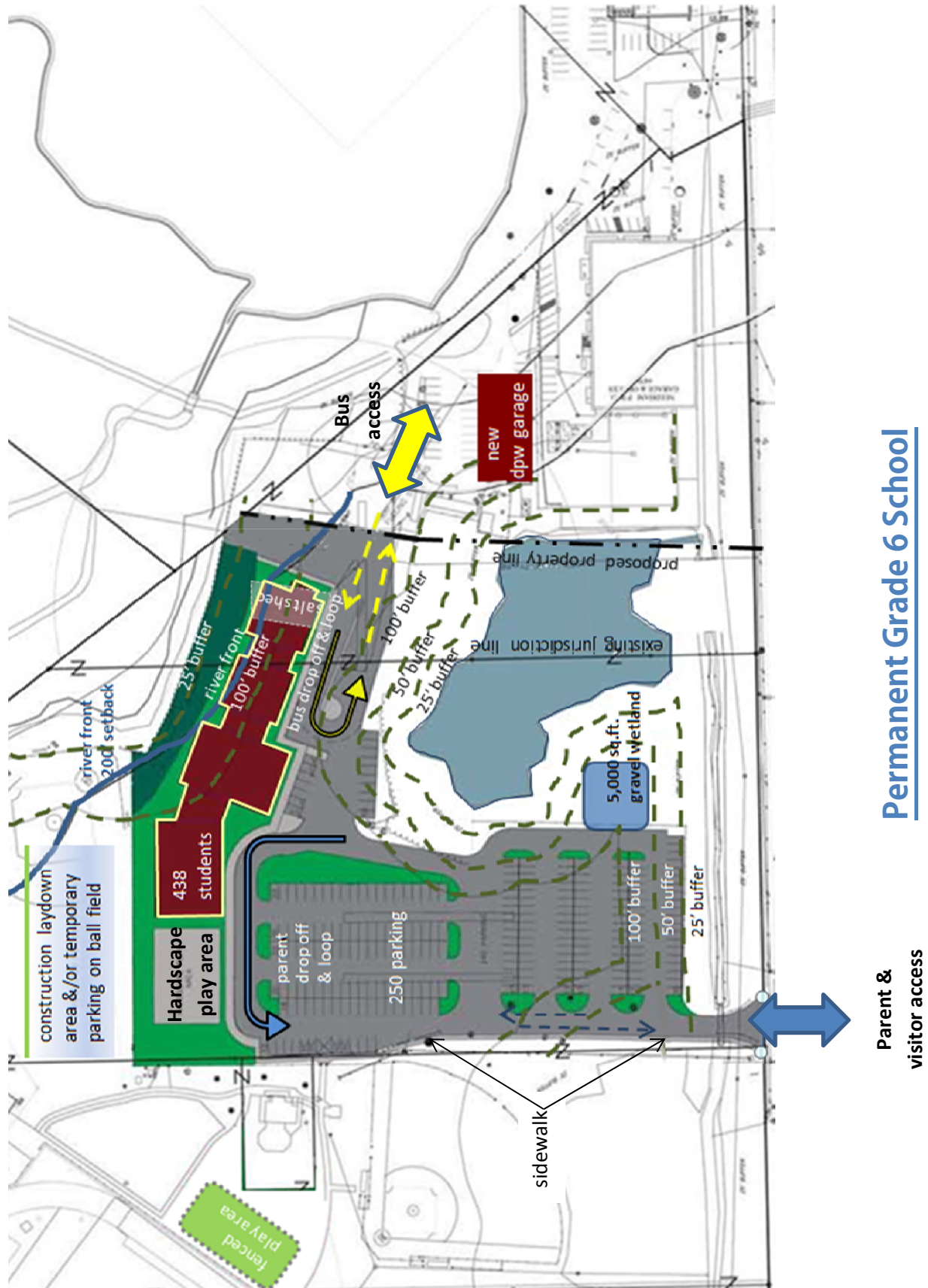
The following options are representations of the potential solutions for the temporary modular school design or permanent grade 6 school. Additional programming is required for the development of each option to assure that all needs are being met by each facility. Both modular school options take into account handicap accessibility, providing ramps at each entrance / exit and, in the case of the two-story option, an elevator to access the upper level. The two-story option is designed to limit the need for multiple elevators and provides one central stair and additional egress stairs at the end of each modular unit.



Single-Story Temporary Modular



Two-Story Temporary Modular



Section F
Cost

Cost Estimates

The following pages include the cost estimates for each of the options currently under consideration. Cost estimates have been developed to correspond with each of the conceptual options and take into account the site specific costs, including impact to wetland, storm water, high water table, site improvements, and the delivery and removal of modular units, and restoration of playfields in applicable options.

These costs are conceptual in nature for comparison purposes only; they are not intended for use in construction. Cost was based on current market conditions in December 2012 and must be adjusted for annual inflation and changing construction market conditions for each year beyond this date. Actual project cost will vary and will ultimately be based on a defined scope of work, specifications, testing, site development, and permitting requirements.

PRELIMINARY Estimated Project Costs Summary						15-Feb-13	
DeFazio Park Site Development Study							
Needham Massachusetts							
The following is a summary of Estimated Project Costs developed for DeFazio Park as they relate to the development of the Hillside and Mitchell Elementary Schools. The options developed are conceptual in nature and therefore the estimated project costs are intended to provide a preliminary order of magnitude view at the potential project costs.							
Project costs consist of estimated site and temporary or permanent building construction costs, design and construction contingencies, phasing, soft costs to cover the values of the design team, owner's project manager, investigative services, etc and fixtures, furniture and technology costs.							
*The project costs presented are in December 2012 dollars and may need to be adjusted for inflation depending on future construction timeframes.							
Options:					# Sections Per Grade	Pop	Estimated Costs
Option 1: Temporary Classrooms - Single Story							
	Modular Lease				4	500	\$ 15,104,755
	Modular Purchase				4	500	\$ 16,242,000
							Potential Add Alternates:
							Add Permanent Gym \$ 987,121
							Add Porous Pavement \$ 279,040
							Add Synthetic Field \$ 956,796
							Add Natural Field \$ 510,423
Option 1: Temporary Classrooms - Two Story							
	Modular Lease				4	500	\$ 16,459,000
	Modular Purchase				4	500	\$ 17,025,238
							Potential Add Alternates:
							Add Permanent Gym \$ 987,121
							Add Porous Pavement \$ 279,040
							Add Synthetic Field \$ 956,796
							Add Natural Field \$ 510,423
Option 3: New 6th Grade School - DeFazio Park							
	New 6th Grade School at DeFazio Field				20	438	\$ 44,949,000

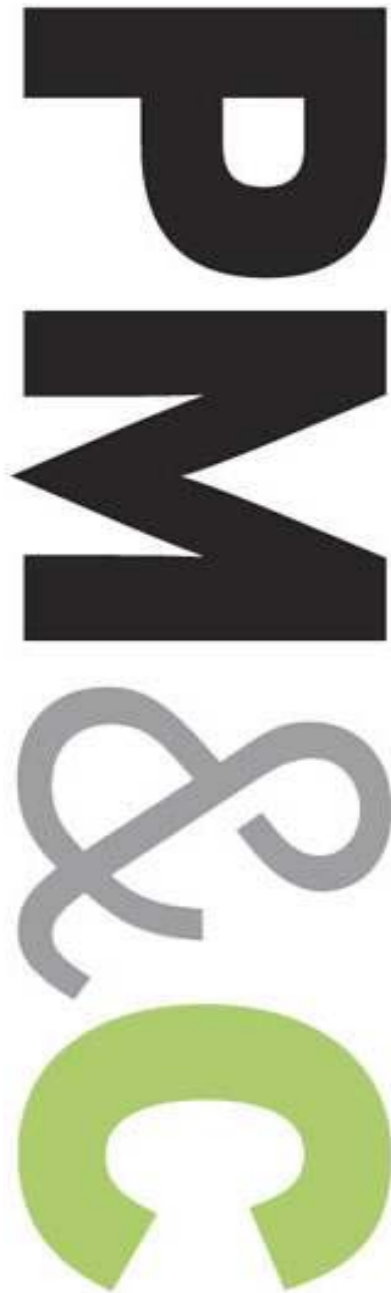
Estimated Project Costs						15-Feb-13
DeFazio Park Site Development Study						
Needham Massachusetts						
Option 1: Temporary Classrooms - Single Story						
	Modular Lease					
		500 students				
			Sq Footage:	Estimated Cost:	Comments:	
Construction Costs:						
	Construction Phasing Costs:			\$ 250,000	Move to temp school	
	Site Development			\$ 3,301,655		
	Building Construction:					
		Modular Lease	40404	\$ 4,648,600		
		Modular Purchase		\$ -		
		Modular Removal		\$ 464,646		
		Activity/Lunch Rm	8600	\$ 1,088,355		
		Sub-total		\$ 9,753,256		
	General Conditions, Bonds, Insurance, OH/Fee			\$ 1,035,855		
		Construction Subtotal:		\$ 10,789,111		
Project Contingency:			(Design + Construction)	\$ 1,618,367	15% of Construction	
		(Unknown site conditions)		\$ 539,456	5% of Construction	
		Contingency Subtotal:		\$ 2,157,822		
Soft Costs:						
	Owner's Project Manager,					
	Arch/engineering, Owner direct,					
	Survey, Geotechnical, Hazardous					
	Materials, Printing, Legal, etc.					
		Soft Costs Subtotal:		\$ 2,157,822	20% of construction	
Project Cost Summary:						
	Total Construction			\$ 10,789,111		
	Project Contingency			\$ 2,157,822		
	Soft Costs			\$ 2,157,822		
	*Estimated Total Project Costs			\$ 15,104,755		
Potential Add Alternates:						
		Add Permanent Gym		\$ 987,121		
		Add Porous Pavement		\$ 279,040		
		Add Synthetic Field		\$ 956,796		
		Add Natural Field		\$ 510,423		
*The project costs presented are in December 2012 dollars and may need to be adjusted for inflation depending on future construction timeframes.						

Estimated Project Costs						15-Feb-13
DeFazio Park Site Development Study						
Needham Massachusetts						
Option 1: Temporary Classrooms - Single Story						
	Modular Purchase					
		500	students			
				Sq Footage:	Estimated Cost:	Comments:
Construction Costs:						
	Construction Phasing Costs:				\$ 250,000	Move to temp school
	Site Development				\$ 3,301,655	
	Building Construction:					
		Modular Lease				
			Modular Purchase	40404	\$ 5,252,520	
			Modular Removal		\$ 464,646	
			Activity/Lunch Rm	8600	\$ 1,216,900	
		Sub-total			\$ 10,485,721	
	General Conditions, Bonds, Insurance,OH/Fee				\$ 1,115,694	
Construction Subtotal:					\$ 11,601,415	
Project Contingency:			(Design + Construction)		\$ 1,740,212	15% of Construction
			(Unknown site conditions)		\$ 580,071	5% of Construction
			Contingency Subtotal:		\$ 2,320,283	
Soft Costs:						
	Owner's Project Manager,					
	Arch/engineering, Owner direct,					
	Survey, Geotechnical, Hazardous					
	Materials, Printing, Legal, etc.					
			Soft Costs Subtotal:		\$ 2,320,283	20% of construction
	Total Construction				\$ 11,601,415	
	Project Contingency				\$ 2,320,283	
	Soft Costs				\$ 2,320,283	
*Estimated Total Project Costs				\$ 16,242,000		
Potential Add Alternates:						
			Add Permanent Gym	\$ 987,121		
			Add Porous Pavement	\$ 279,040		
			Add Synthetic Field	\$ 956,796		
			Add Natural Field	\$ 510,423		
*The project costs presented are in December 2012 dollars and may need to be adjusted for inflation depending on future construction timeframes.						

Estimated Project Costs						15-Feb-13
DeFazio Park Site Development Study						
Needham Massachusetts						
Option 1: Temporary Classrooms - Two Story						
	Modular Lease					
		500 students				
			Sq Footage:	Estimated Cost:	Comments:	
Construction Costs:						
	Construction Phasing Costs:			\$ 250,000	Move to temp school	
	Site Development			\$ 3,091,278		
	Building Construction:					
		Modular Lease	47696	\$ 5,647,179		
		Modular Purchase		\$ -		
		Modular Removal		\$ 548,504		
		Activity/Lunch Rm	8600	\$ 1,088,355		
		Sub-total		\$ 10,625,316		
	General Conditions, Bonds, Insurance,OH/Fee			\$ 1,130,910		
		Construction Subtotal:		\$ 11,756,226		
Project Contingency:		(Design + Construction)		\$ 1,763,434	15% of Construction	
		(Unknown site conditions)		\$ 587,811	5% of Construction	
		Contingency Subtotal:		\$ 2,351,245		
Soft Costs:						
	Owner's Project Manager,					
	Arch/engineering, Owner direct,					
	Survey, Geotechnical, Hazardous					
	Materials, Printing, Legal, etc.					
		Soft Costs Subtotal:		\$ 2,351,245	20% of construction	
	Total Construction			\$ 11,756,226		
	Project Contingency			\$ 2,351,245		
	Soft Costs			\$ 2,351,245		
	*Estimated Total Project Costs			\$ 16,459,000		
Potential Add Alternates:						
		Add Permanent Gym		\$ 987,121		
		Add Porous Pavement		\$ 279,040		
		Add Synthetic Field		\$ 956,796		
		Add Natural Field		\$ 510,423		
*The project costs presented are in December 2012 dollars and may need to be adjusted for inflation depending on future construction timeframes.						

Estimated Project Costs					15-Feb-13
DeFazio Park Site Development Study					
Needham Massachusetts					
Option 1: Temporary Classrooms - Two Story					
Modular Purchase					
	500 students				
			Sq Footage:	Estimated Cost:	Comments:
Construction Costs:					
	Construction Phasing Costs:			\$ 250,000	Move to temp school
	Site Development			\$ 3,091,278	
	Building Construction:				
	Modular Lease				
	Modular Purchase	47696		\$ 5,883,520	
	Modular Removal			\$ 548,504	
	Activity/Lunch Rm	8600		\$ 1,216,900	
	Sub-total			\$ 10,990,202	
	General Conditions, Bonds, Insurance, OH/Fee			\$ 1,170,682	
			Construction Subtotal:	\$ 12,160,884	
Project Contingency:	(Design + Construction)			\$ 1,824,133	15% of Construction
	(Unknown site conditions)			\$ 608,044	5% of Construction
			Contingency Subtotal:	\$ 2,432,177	
Soft Costs:					
	Owner's Project Manager,				
	Arch/engineering, Owner direct,				
	Survey, Geotechnical, Hazardous				
	Materials, Printing, Legal, etc.				
			Soft Costs Subtotal:	\$ 2,432,177	20% of construction
Project Cost Summary:					
	Total Construction			\$ 12,160,884	
	Project Contingency			\$ 2,432,177	
	Soft Costs			\$ 2,432,177	
	*Estimated Total Project Costs			\$ 17,025,238	
Potential Add Alternates:					
	Add Permanent Gym			\$ 987,121	
	Add Porous Pavement			\$ 279,040	
	Add Synthetic Field			\$ 956,796	
	Add Natural Field			\$ 510,423	
*The project costs presented are in December 2012 dollars and may need to be adjusted for inflation depending on future construction timeframes.					

Estimated Project Costs					15-Feb-13
DeFazio Park Site Development Study					
Needham Massachusetts					
Option 3: New 6th Grade School					
DeFazio Field					
438 students					
			Sq Footage:	Estimated Cost:	Comments:
Construction Costs:					
Construction Phasing Costs:			\$	250,000	Move to new school
Site Development			\$	3,321,888	
Special Site Considerations			\$	200,000	Temp parking @ baseball field
			\$	300,000	Replace baseball field
			\$	400,000	High groundwater measures
Building Construction:					
Modular Lease					
Modular Purchase					
New Construction			83200	\$ 24,793,600	\$298/sf
Construction Subtotal:				\$ 29,265,488	
Project Contingency:					
(Design + Construction)			\$	5,853,098	20% of Construction
(Unknown site conditions)			\$	1,463,274	5% of Construction
Contingency Subtotal:			\$	7,316,372	
Soft Costs:					
Owner's Project Manager,					
Arch/engineering, Owner direct,					
Survey, Geotechnical, Hazardous					
Materials, Printing, Legal, etc.					
Subtotal			\$	7,316,372	25% of construction
Fixtures Furnishings and Equipment (FF&E):					
Subtotal			\$	1,051,200	Student population x \$2400
Project Cost Summary:					
Total Construction			\$	29,265,488	
Project Contingency			\$	7,316,372	
Soft Costs			\$	7,316,372	
FF&E Costs			\$	1,051,200	
*Estimated Total Project Costs			\$	44,949,000	\$ 540 per sf
Potential Add Alternate:					
CM @ Risk delivery method premium			\$	1,427,909	
*The project costs presented are in December 2012 dollars and may need to be adjusted for inflation depending on future construction timeframes.					



Feasibility Submission

DeFazio Park Design Options

Needham, MA

Prepared for:

Dore and Whittier

January 21, 2013



DeFazio Park
Design Options
Needham, MA

21-Jan-13

Feasibility Submission

MAIN CONSTRUCTION COST SUMMARY

	Gross Floor Area	\$/sf	Estimated Construction Cost
<hr/>			
Option 1 - TEMPORARY CLASSROOMS, SINGLE STORY (PURCHASE)			
ASSOCIATED SITEWORK			\$3,301,655
MODULAR CONSTRUCTION (Purchase)	40,404	\$141.50	\$5,717,166
MODULAR ACTIVITY/LUNCH ROOM (Purchase)	8,600	\$141.50	\$1,216,900
SUB-TOTAL	49,004	\$208.88	\$10,235,721
GENERAL CONDITIONS	6%		\$614,143
BONDS	0.65%		\$66,532
INSURANCE	1.25%		\$127,947
PERMIT			NIC
OVERHEAD AND FEE	3%		\$307,072
DESIGN AND PRICING	15.0%		\$1,702,712
CONTINGENCY			
TOTAL OF ALL CONSTRUCTION OPTION 1	49,004	\$266.39	\$13,054,126
ALTERNATE TO PROVIDE POURIOUS PAVEMENT AT LOWER PARKING AREA; Includes 3,000 LF reduction in Underground Detention Piping		ADD	\$279,040
ALTERNATE CONSTRUCT PERMANENT GYM ILO MODULAR ACTIVITY/LUNCH ROOM		ADD	\$987,121
ALTERNATE TO ADD MULTI-PURPOSE FIELD - TURF		ADD	\$956,796
ALTERNATE TO ADD MULTI-PURPOSE FIELD - GRASS		ADD	\$510,423
SOFT COSTS			NIC



DeFazio Park
Design Options
Needham, MA

21-Jan-13

Feasibility Submission

Option 1 - TEMPORARY CLASSROOMS, SINGLE STORY (LEASE)

ASSOCIATED SITEWORK			\$3,301,655
MODULAR CONSTRUCTION (Lease)	40,404	\$126.55	\$5,113,246
MODULAR ACTIVITY/LUNCH ROOM (Lease)	8,600	\$126.55	\$1,088,355
SUB-TOTAL	49,004	\$193.93	\$9,503,256
GENERAL CONDITIONS	6%		\$570,195
BONDS	0.65%		\$61,771
INSURANCE	1.25%		\$118,791
PERMIT			NIC
OVERHEAD AND FEE	3%		\$285,098
DESIGN AND PRICING	15.0%		\$1,580,867
CONTINGENCY			
TOTAL OF ALL CONSTRUCTION OPTION 1	49,004	\$247.33	\$12,119,978
ALTERNATE TO PROVIDE POURIOUS PAVEMENT AT LOWER PARKING AREA; Includes 3,000 LF reduction in Underground Detention Piping		ADD	\$279,040
ALTERNATE CONSTRUCT PERMANENT GYM ILO MODULAR ACTIVITY/LUNCH ROOM		ADD	\$987,121
ALTERNATE TO ADD MULTI-PURPOSE FIELD - TURF		ADD	\$956,796
ALTERNATE TO ADD MULTI-PURPOSE FIELD - GRASS		ADD	\$510,423

SOFT COSTS

NIC



DeFazio Park
Design Options
Needham, MA

21-Jan-13

Feasibility Submission

Option 1 - TEMPORARY CLASSROOMS, TWO STORY (PURCHASE)

ASSOCIATED SITEWORK			\$3,091,278
MODULAR CONSTRUCTION (Purchase)	47,696	\$134.85	\$6,432,024
MODULAR ACTIVITY/LUNCH ROOM (Purchase)	8,600	\$141.50	\$1,216,900
<hr/>			
SUB-TOTAL	56,296	\$190.78	\$10,740,202
GENERAL CONDITIONS	6%		\$644,412
BONDS	0.65%		\$69,811
INSURANCE	1.25%		\$134,253
PERMIT			NIC
OVERHEAD AND FEE	3%		\$322,206
DESIGN AND PRICING	15.0%		\$1,786,633
CONTINGENCY			
TOTAL OF ALL CONSTRUCTION OPTION 1	56,296	\$243.31	\$13,697,517
<hr/>			
ALTERNATE TO PROVIDE POURIOUS PAVEMENT AT LOWER PARKING AREA; Includes 3,000 LF reduction in Underground Detention Piping		ADD	\$279,040
ALTERNATE CONSTRUCT PERMANENT GYM ILO MODULAR ACTIVITY/LUNCH ROOM		ADD	\$987,121
ALTERNATE TO ADD MULTI-PURPOSE FIELD - TURF		ADD	\$956,796
ALTERNATE TO ADD MULTI-PURPOSE FIELD - GRASS		ADD	\$510,423
SOFT COSTS			NIC



DeFazio Park
Design Options
Needham, MA

21-Jan-13

Feasibility Submission

Option 1 - TEMPORARY CLASSROOMS, TWO STORY (LEASE)

ASSOCIATED SITEWORK			\$3,091,278
MODULAR CONSTRUCTION (Lease)	47,696	\$129.90	\$6,195,684
MODULAR ACTIVITY/LUNCH ROOM (Lease)	8,600	\$126.55	\$1,088,355
<hr/>			
SUB-TOTAL	56,296	\$184.30	\$10,375,317
GENERAL CONDITIONS	6%		\$622,519
BONDS	0.65%		\$67,440
INSURANCE	1.25%		\$129,691
PERMIT			NIC
OVERHEAD AND FEE	3%		\$311,260
DESIGN AND PRICING	15.0%		\$1,725,934
CONTINGENCY			
TOTAL OF ALL CONSTRUCTION OPTION 1	56,296	\$235.05	\$13,232,161
<hr/>			
ALTERNATE TO PROVIDE POURIOUS PAVEMENT AT LOWER PARKING AREA; Includes 3,000 LF reduction in Underground Detention Piping		ADD	\$279,040
ALTERNATE CONSTRUCT PERMANENT GYM ILO MODULAR ACTIVITY/LUNCH ROOM		ADD	\$987,121
ALTERNATE TO ADD MULTI-PURPOSE FIELD - TURF		ADD	\$956,796
ALTERNATE TO ADD MULTI-PURPOSE FIELD - GRASS		ADD	\$510,423
SOFT COSTS			NIC



DeFazio Park
Design Options
Needham, MA

21-Jan-13

Feasibility Submission

Option 3 - NEW 6th GRADE SCHOOL

NEW 6th GRADE CENTER SCHOOL	83,200	\$298.00	\$24,793,600
PREMIUM FOR HIGH WATER TABLE; Increase gravel base; thicker slabs, underslab and perimeter drainage, waterproofing and dewatering			\$400,000
SITEWORK			\$3,821,888
SUB-TOTAL	83,200	\$348.74	\$29,015,488
GENERAL CONDITIONS	8%	Incl	
BONDS	0.65%	Incl	
INSURANCE	1.25%	Incl	
PERMIT			NIC
OVERHEAD AND FEE	3%	Incl	
TOTAL OF ALL CONSTRUCTION OPTION 3	83,200	\$348.74	\$29,015,488
PREMIUM FOR CM AT RISK ¹	5%		\$1,450,774
SOFT COSTS			NIC

¹ Costs may be off-set by increased MSBA reimbursement, lower change order costs and accelerated schedule.



DeFazio Park
Design Options
Needham, MA

21-Jan-13

Feasibility Submission

These feasibility cost estimates were produced from information provided by Dore and Whittier Architects and their design team dated December, 2012 with subsequent comments and information incorporated on Jan 8th, 2013. Design and engineering changes occurring subsequent to the issue of these documents have not been incorporated in this estimate.

This estimate includes all direct construction costs, construction manager's overhead and profit and design contingency. Cost escalation assumes start dates indicated.

Bidding conditions are expected to be public bidding under Chapter 149 of the Massachusetts General Laws to pre-qualified general contractors, and pre-qualified sub-contractors, open specifications for materials and manufactures.

The estimate is based on prevailing wage rates for construction in this market and represents a reasonable opinion of cost. It is not a prediction of the successful bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, lack or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors, however we do not warrant that bids or negotiated prices will not vary from the final construction cost estimate.

ITEMS NOT CONSIDERED IN THIS ESTIMATE

Items not included in this estimate are:

- All professional fees and insurance
- Building Permit costs
- Land acquisition, feasibility, and financing costs
- All Furnishings, Fixtures and Equipment
- Items identified in the design as Not In Contract (NIC)
- Items identified in the design as by others
- Owner supplied and/or installed items (e.g. draperies, furniture and equipment)
- Rock excavation; special foundations (unless indicated by design engineers)
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)



Feasibility Submission

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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OPTION 1 - TEMPORARY CLASSROOMS, SINGLE STORY

G SITEWORK

G10 SITE PREPARATION & DEMOLITION

Site Demolitions and Relocations

Site construction fence/barricades	2,717	lf	8.00	21,736
Remove roadway	11,230	sf	1.00	11,230
Clear and grub at existing park/playground	48,755	sf	0.60	29,253
Remove existing trees	30	loc	1,500.00	45,000
Miscellaneous demo	1	ls	25,000.00	25,000

Site Earthwork

Grading	9,389	cy	6.00	56,331
Dewatering	1	ls	100,000.00	100,000

Hazardous Waste Remediation

Haz mat - none assumed				NIC
Dispose/treat contaminated water				NIC

SUBTOTAL

\$288,550

G20 SITE IMPROVEMENTS

Bituminous concrete paving	165,900			-
gravel base; 12" thick	6,452	cy	28.00	180,647
bituminous concrete; 3" thick	19,355	sy	22.00	425,810
Granite curb	6,245	lf	32.00	199,840
Single solid lines, 4" thick	203	space	25.00	5,075
Wheelchair Parking	10	space	75.00	750
Crosswalks	6	ea	1,000.00	6,000
Other road markings	1	ls	5,000.00	5,000
Walkway				
gravel base; 8" thick	533	cy	28.00	14,933
Walkway, concrete	14,400	sf	5.50	79,200
New Playground				
gravel base; 8" thick	241	cy	28.00	6,741
Playground/basketball court, bituminous	6,500	sf	5.44	35,389
Basketball posts	1	ls	1,250.00	1,250
Line markings	1	ls	500.00	500
Underdrain at playground	1	ls	20,000.00	20,000
New play equipment and surfacing	1	ls	250,000.00	250,000
Demo temporary sidewalk	7,200	sf	0.35	2,520
New trees	60	ea	1,200.00	72,000
Other Landscaping	1	ls	150,000.00	150,000

SUBTOTAL

\$1,455,655

G30 CIVIL MECHANICAL UTILITIES

Water supply

New DI water piping; 8"	1,800	lf	80.00	144,000
Connect to existing line	1	loc	5,000.00	5,000
New fire hydrant	3	loc	2,600.00	7,800
FD connection	1	loc	2,000.00	2,000
Gate valves/Tees	1	ls	5,000.00	5,000

Sanitary

8" PVC	700	lf	40.00	28,000
Manholes	4	loc	3,500.00	14,000
Pump station	1	loc	50,000.00	50,000
Connect to existing line	1	loc	3,000.00	3,000

Surface Water Drainage

Underground Detention

24" CPP	5,000	lf	70.00	350,000
Excavate and dispose on site for detention systems	5,100	cy	12.00	61,200
Back-fill infiltration bed with 3/4" crushed stone wrapped in filter fabric	1,700	cy	35.00	59,500

OCS	2	ea	3,000.00	6,000
WQS	2	ea	18,000.00	36,000
Catch Basins	10	ea	3,200.00	32,000



Feasibility Submission

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
OPTION 1 - TEMPORARY CLASSROOMS, SINGLE STORY							
	Manholes	15	ea	4,000.00	60,000		
	Gravel wetland	5,000	sf	25.00	125,000		
	Additional drainage at low lying areas	1	ls	50,000.00	50,000		
	Premium to bring utilities across existing culvert	1	ls	150,000.00	150,000		
	<u>Gas service</u>						
	E&B trench for new gas main, pipe and install by utilities - Allowance	560	lf	25.00	14,000		
	Gas Meter					NIC	
	SUBTOTAL						\$1,202,500
G40 ELECTRICAL UTILITIES							
	<u>Power</u>						
	Riser	1	ea	1,200.00	1,200		
	Primary ductbank 2-5" empty concrete encased (allow)	650	lf	80.00	52,000		
	Transformer pad	1	ea	1,500.00	1,500		
	1200A secondary service concrete encased	150	lf	255.00	38,250		
	<u>Communications</u>						
	Riser	1	ea	1,500.00	1,500		
	Communications ductbank 2-4" concrete encased	150	lf	70.00	10,500		
	<u>Site Lighting</u>						
	Site lighting - allow	1	ls	250,000.00	250,000		
	SUBTOTAL						\$354,950
TOTAL - SITE DEVELOPMENT OPTION 1							\$3,301,655



Feasibility Submission

<i>CSI CODE</i>	<i>DESCRIPTION</i>	<i>QTY</i>	<i>UNIT</i>	<i>UNIT COST</i>	<i>EST'D COST</i>	<i>SUB TOTAL</i>	<i>TOTAL COST</i>
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Option 1 - TEMPORARY CLASSROOMS, SINGLE STORY (PURCHASE)

G SITEWORK

F10 SPECIAL CONSTRUCTION

Modulars

Purchase of modulars	40,404	sf	90.00	3,636,360	
Installation of modulars	40,404	sf	40.00	1,616,160	
Removal of modulars	40,404	sf	11.50	464,646	
SUBTOTAL					\$5,717,166

TOTAL MODULAR CLASSROOMS PURCHASE OPTION 1	\$5,717,166
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Feasibility Submission

<i>CSI CODE</i>	<i>DESCRIPTION</i>	<i>QTY</i>	<i>UNIT</i>	<i>UNIT COST</i>	<i>EST'D COST</i>	<i>SUB TOTAL</i>	<i>TOTAL COST</i>
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Option 1 - TEMPORARY CLASSROOMS, SINGLE STORY (LEASE)

G SITEWORK

F10 SPECIAL CONSTRUCTION

Modulars

Lease of modulars	48	mths	61,950.00	2,973,600	
Installation of modulars	1	ls	1,675,000.00	1,675,000	
Removal of modulars	40,404	sf	11.50	464,646	
SUBTOTAL					\$5,113,246

TOTAL MODULAR CLASSROOMS OPTION 1 LEASE	\$5,113,246
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Feasibility Submission

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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Option 1 - TEMPORARY CLASSROOMS, TWO STORY (PURCHASE)

G SITEWORK

G10 SITE PREPARATION & DEMOLITION

Site Demolitions and Relocations

Site construction fence/barricades 2,740 lf 8.00 21,920

Remove roadway 11,230 sf 1.00 11,230

Clear and grub at existing park/playground NIC

Remove existing trees 30 loc 1,500.00 45,000

Miscellaneous demo 1 ls 25,000.00 25,000

Site Earthwork

Grading 7,911 cy 6.00 47,467

Dewatering 1 ls 100,000.00 100,000

Hazardous Waste Remediation

Haz mat - none assumed NIC

Dispose/treat contaminated water NIC

SUBTOTAL \$250,617

G20 SITE IMPROVEMENTS

Bituminous concrete paving 132,000 -

gravel base; 12" thick 5,133 cy 28.00 143,733

bituminous concrete; 3" thick 15,400 sy 22.00 338,800

Granite curb 4,260 lf 32.00 136,320

Single solid lines, 4" thick 209 space 25.00 5,225

Wheelchair Parking 10 space 75.00 750

Crosswalks 6 ea 1,000.00 6,000

Other road markings 1 ls 5,000.00 5,000

Walkway

gravel base; 8" thick 533 cy 28.00 14,933

Walkway, concrete 14,400 sf 5.50 79,200

New Playground

gravel base; 8" thick 241 cy 28.00 6,741

Playground/basketball court, bituminous 6,500 sf 5.44 35,389

Basketball posts 1 ls 1,250.00 1,250

Line markings 1 ls 500.00 500

Underdrain at playground 1 ls 20,000.00 20,000

New play equipment and surfacing 1 ls 250,000.00 250,000

Demo temporary paving 33,000 sf 0.45 14,850

Demo temporary pathway 7,200 sf 0.35 2,520

New trees 60 ea 1,200.00 72,000

Other Landscaping 1 ls 150,000.00 150,000

SUBTOTAL \$1,283,211

G30 CIVIL MECHANICAL UTILITIES

Water supply

New DI water piping; 8" 1,800 lf 80.00 144,000

Connect to existing line 1 loc 5,000.00 5,000

New fire hydrant 3 loc 2,600.00 7,800

FD connection 1 loc 2,000.00 2,000

Gate valves/Tees 1 ls 5,000.00 5,000

Sanitary

8" PVC 700 lf 40.00 28,000

Manholes 4 loc 3,500.00 14,000

Pump station 1 loc 50,000.00 50,000

Connect to existing line 1 loc 3,000.00 3,000

Surface Water Drainage

Underground Detention

24" CPP 5,000 lf 70.00 350,000

Excavate and dispose on site for detention systems 5,100 cy 12.00 61,200

Back-fill infiltration bed with 3/4" crushed stone wrapped in filter fabric 1,700 cy 35.00 59,500

OCS 2 ea 3,000.00 6,000

WQS 2 ea 18,000.00 36,000



Feasibility Submission

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
Option 1 - TEMPORARY CLASSROOMS, TWO STORY (PURCHASE)							
63	Catch Basins	10	ea	3,200.00	32,000		
64	Manholes	15	ea	4,000.00	60,000		
65	Gravel wetland	5,000	sf	25.00	125,000		
66	Additional drainage at low lying areas	1	ls	50,000.00	50,000		
67	Premium to bring utilities across existing culvert	1	ls	150,000.00	150,000		
68	<u>Gas service</u>						
69	E&B trench for new gas main, pipe and install by utilities - Allowance	560	lf	25.00	14,000		
70	Gas Meter				NIC		
71	SUBTOTAL					\$1,202,500	
72							
73	G40 ELECTRICAL UTILITIES						
74	<u>Power</u>						
75	Riser	1	ea	1,200.00	1,200		
76	Primary ductbank 2-5" empty concrete encased (allow)	650	lf	80.00	52,000		
77	Transformer pad	1	ea	1,500.00	1,500		
78	Secondary service concrete encased	150	lf	255.00	38,250		
79	<u>Communications</u>						
80	Riser	1	ea	1,500.00	1,500		
81	Communications ductbank 2-4" concrete encased	150	lf	70.00	10,500		
82	<u>Site Lighting</u>						
83	Site lighting - allow	1	ls	250,000.00	250,000		
84	SUBTOTAL					\$354,950	
85							
86							
87							
TOTAL - SITE DEVELOPMENT OPTION 1							\$3,091,278



Feasibility Submission

<i>CSI CODE</i>	<i>DESCRIPTION</i>	<i>QTY</i>	<i>UNIT</i>	<i>UNIT COST</i>	<i>EST'D COST</i>	<i>SUB TOTAL</i>	<i>TOTAL COST</i>
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Option 1 - TEMPORARY CLASSROOMS, TWO STORY (PURCHASE)

G SITEWORK

F10 SPECIAL CONSTRUCTION

Modulars

Purchase of modulars	47,696	sf	85.00	4,054,160	
Installation of modulars	47,696	sf	35.00	1,669,360	
Removal of modulars	47,696	sf	11.50	548,504	
Elevator, 2 stop; including pit	1	ls	100,000.00	100,000	
Stairs	3	flt	20,000.00	60,000	
SUBTOTAL					\$6,432,024

TOTAL MODULAR CLASSROOMS PURCHASE OPTION 1	\$6,432,024
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Feasibility Submission

<i>CSI CODE</i>	<i>DESCRIPTION</i>	<i>QTY</i>	<i>UNIT</i>	<i>UNIT COST</i>	<i>EST'D COST</i>	<i>SUB TOTAL</i>	<i>TOTAL COST</i>
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Option 1 - TEMPORARY CLASSROOMS, TWO STORY (LEASE)

G SITEWORK

F10 SPECIAL CONSTRUCTION

Modulars

Lease of modulars	48	mths	61,950.00	2,973,600	
Installation of modulars	1	ls	1,675,000.00	1,675,000	
Lease and installation of lobby, circulation space etc.	7,292	sf	115.00	838,580	
Removal of modulars	47,696	sf	11.50	548,504	
Elevator, 2 stop	1	ls	100,000.00	100,000	
Stairs	3	flt	20,000.00	60,000	
SUBTOTAL					\$6,195,684

TOTAL MODULAR CLASSROOMS OPTION 1 LEASE	\$6,195,684
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Feasibility Submission

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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Option 3 - NEW 6th GRADE SCHOOL

G SITEWORK

G10 SITE PREPARATION & DEMOLITION

Site Demolitions and Relocations

Site construction fence/barricades	2,717	lf	8.00	21,736
Remove roadway	11,230	sf	1.00	11,230
Remove & dispose salt shed	1	ls	5,000.00	NIC
Clear and grub at existing park/playground	48,755	sf	0.60	29,253
Remove existing trees	30	loc	1,500.00	45,000
Miscellaneous demo	1	ls	20,000.00	20,000

Site Earthwork

Grading	9,389	cy	6.00	56,331
Dewatering	1	ls	100,000.00	100,000

Hazardous Waste Remediation

Haz mat - none assumed				NIC
Dispose/treat contaminated water				NIC

SUBTOTAL \$283,550

G20 SITE IMPROVEMENTS

Bituminous concrete paving	139,000			-
gravel base; 12" thick	5,406	cy	28.00	151,356
bituminous concrete; 3" thick	16,217	sy	22.00	356,767
Granite curb	5,225	lf	32.00	167,200
Single solid lines, 4" thick	217	space	25.00	5,425
Wheelchair Parking	10	space	75.00	750
Crosswalks	6	ea	1,000.00	6,000
Other road markings	1	ls	5,000.00	5,000

Convert baseball field into temporary parking 200,000 sf 1.00 200,000

New baseball field to replace temporary parking 1 los 300,000.00 300,000

Walkway

gravel base; 8" thick	533	cy	28.00	14,933
Walkway, concrete	14,400	sf	5.50	79,200

Hardscape play area

gravel base; 8" thick	765	cy	28.00	21,425
Underdrain at playground	1	ls	20,000.00	20,000

Play area 20,660 sf 5.44 112,482

Basketball posts 1 ls 1,250.00 1,250

Line markings 1 ls 500.00 500

New play equipment and surfacing 1 ls 250,000.00 250,000

Chain-link fence 1,480 lf 45.00 66,600

New trees 60 ea 1,200.00 72,000

Other Landscaping 1 ls 150,000.00 150,000

SUBTOTAL \$1,980,888

G30 CIVIL MECHANICAL UTILITIES

Water supply

New DI water piping; 8"	1,800	lf	80.00	144,000
Connect to existing line	1	loc	5,000.00	5,000

New fire hydrant 3 loc 2,600.00 7,800

FD connection 1 loc 2,000.00 2,000

Gate valves/Tees 1 ls 5,000.00 5,000

Sanitary

8" PVC 700 lf 40.00 28,000

Manholes 4 loc 3,500.00 14,000

Pump station 1 loc 50,000.00 50,000

Connect to existing line 1 loc 3,000.00 3,000

Surface Water Drainage

Underground Detention

24" CPP 5,000 lf 70.00 350,000

Excavate and dispose on site for detention systems 5,100 cy 12.00 61,200



Feasibility Submission

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
Option 3 - NEW 6th GRADE SCHOOL							
65	Back-fill infiltration bed with 3/4" crushed stone wrapped in filter fabric	1,700	cy	35.00	59,500		
66	OCS	2	ea	3,000.00	6,000		
67	WQS	2	ea	18,000.00	36,000		
68	Catch Basins	10	ea	3,200.00	32,000		
69	Manholes	15	ea	4,000.00	60,000		
70	Gravel wetland	5,000	sf	25.00	125,000		
71	Additional drainage at low lying areas	1	ls	50,000.00	50,000		
72	Premium to bring utilities across existing culvert	1	ls	150,000.00	150,000		
73	<u>Gas service</u>						
74	E&B trench for new gas main, pipe and install by utilities - Allowance	560	lf	25.00	14,000		
75	Gas Meter				NIC		
76	SUBTOTAL					\$1,202,500	
77							
78	G40 ELECTRICAL UTILITIES						
79	<u>Power</u>						
80	Riser	1	ea	1,200.00	1,200		
81	Primary ductbank 2-5" empty concrete encased (allow)	650	lf	80.00	52,000		
82	Transformer pad	1	ea	1,500.00	1,500		
83	Secondary service concrete encased	150	lf	255.00	38,250		
84	<u>Communications</u>						
85	Riser	1	ea	1,500.00	1,500		
86	Communications ductbank 2-4" concrete encased	150	lf	70.00	10,500		
87	<u>Site Lighting</u>						
88	Site lighting - allow	1	ls	250,000.00	250,000		
89	SUBTOTAL					\$354,950	
90							
91	F10 SPECIAL CONSTRUCTION						
92	No work in this section						
93	SUBTOTAL					\$0	
94							
95	TOTAL - SITE DEVELOPMENT OPTION 3						\$3,821,888



Feasibility Submission

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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FIELD ALTERNATE - TURF

G SITEWORK

G10 SITE PREPARATION & DEMOLITION

Site Demolitions and Relocations

Site construction fence/barricades

1,000 lf 8.00 8,000

Clear and grub

60,000 sf 0.60 36,000

Miscellaneous demo

1 ls 10,000.00 10,000

Site Earthwork

Grading

4,444 cy 14.00 62,222

Hazardous Waste Remediation

Haz mat - none assumed

NIC

Dispose/treat contaminated water

NIC

SUBTOTAL

116,222

G20 SITE IMPROVEMENTS

Turf field; complete

60,000 sf 9.00 540,000

Concrete curb

1,000 lf 19.00 19,000

Fencing

1,000 lf 45.00 45,000

Athletic equipment

1 ls 30,000.00 30,000

SUBTOTAL

634,000

TOTAL - FIELD ALTERNATE - TURF

\$750,222



Feasibility Submission

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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FIELD ALTERNATE - GRASS

G SITEWORK

G10 SITE PREPARATION & DEMOLITION

Site Demolitions and Relocations

Site construction fence/barricades

1,000 lf 8.00 8,000

Clear and grub

60,000 sf 0.60 36,000

Miscellaneous demo

1 ls 10,000.00 10,000

Site Earthwork

Grading

4,444 cy 14.00 62,222

Hazardous Waste Remediation

Haz mat - none assumed

NIC

Dispose/treat contaminated water

NIC

SUBTOTAL

116,222

G20 SITE IMPROVEMENTS

Gravel base to field: 24" thick

4,444 cy 32.00 142,222

Top soil to field: 6" thick

1,111 cy 40.00 44,444

Seeding

6,667 sy 0.50 3,333

Concrete curb

1,000 lf 19.00 19,000

Fencing

1,000 lf 45.00 45,000

Athletic equipment

1 ls 30,000.00 30,000

SUBTOTAL

284,000

TOTAL - FIELD ALTERNATE - GRASS

\$400,222