

<i>Typical Exterior Walls - Today's Minimum Requirements</i>	
Face Brick	0.39
Air Space	2.02
Air & Vapor Barrier	0.15
1/2" Gypsum Sheathing	0.45
Insulation	22.00
Vapor Barrier	0.15
Interior Gypsum Board	0.45
TOTAL R-VALUE	25.61
WINDOW TRIPLE PANE R-VALUE	5.00

Physical Conditions of Exterior Envelope - Windows

The windows are replacement double hung aluminum windows with double pane glazing. The windows are in good condition and should have routine maintenance to keep them operational.

Physical Conditions of Exterior Envelope - Roof

The roofing is membrane and is in good condition. No active leaks or damage was observed.

<i>McCall Existing Roof Condition</i>	
Rubber Membrane	0.40
3" Insulrock Insulation	7.00
Structure/Ceiling	5.00
TOTAL R-VALUE	12.40

<i>Roof Construction - Today's Minimum Standard</i>	
Rubber/PVC	0.40
4" Polyisocyanurate	30.00
Structure/Ceiling	5.00
TOTAL R-VALUE	35.40

Interior

Finishes are well suited for school use, but are showing signs of wear in some areas; some replacement is warranted.

Interior Partitions

In general, all interior partitions appear to be in good condition. The type of partition varies throughout the building as follows:

- Painted concrete masonry units
- Painted plaster
- Painted drywall
- Painted brick

Flooring

In general, the flooring is VCT and some minor damage is occurring in multiple locations. The existing flooring consist of the following types:



Brick at exterior of building



School roof



Cafeteria



Gymnasium

- Vinyl Composition tile (12x12)
- Wood floor at gymnasium

Wall Base

The wall base is rubber of various sizes. All base material appear to be in good condition.

Ceilings

The ceilings are a combination of 2x4 acoustical tile and plaster. They are generally in good condition although the gym ceiling is missing tiles that should be replaced. The existing ceilings consist of the following types:

- Suspended Acoustical tile
- Plaster

Doors and Frames

Doors are generally wood and many are chipped. The conditions are good. Doors have lever handle hardware that meet accessibility guidelines.

Fire Extinguishers

Fire extinguishers meet code.

Tackboards and Markerboards

Tackboards and markerboards are existing throughout and appear to be in good condition. Fire code regulations do not allow for tackboards to be within 5 feet of egress doors.

Regulations

The existing facility as a whole is in compliance with the original code, however, this does not mean it meets every standard of the current code. In accordance with the current code, an existing building is presumed to have met the codes and regulations in effect at the time of its construction and is allowed to continue in its use, provided it is maintained per the original code. Current building codes are applicable to any alteration or addition or change in use of the structure in accordance with 780 CMR 34.

Code Classification 780 CMR 302.1

The occupancy of the facility is non-separated mixed use with assembly and educational uses as follows:

Classrooms, Offices	E-Educational
Auditorium	A3-Assemble

Construction Classification

Based upon the definitions in the current code, the minimum classification of the building is as follows:

3B Noncombustible

Chapter 34: Repair, Alteration, Addition and Change of Use of Existing Buildings

A renovation project is governed by Chapter 34. This chapter is “intended to maintain or increase public safety, health, and general welfare, without requiring full compliance with the code for new construction.”

- i. Building renovation – For continuation of the same use groups the building shall comply with 780 CMR 3404.0.
- ii. New Building Systems – Any new building system or portion thereof shall conform to 780 CMR for new construction to the fullest extent practical.
- iii. Alterations and Repairs – Alterations of repairs to existing buildings, which maintain or improve the performance of the building may be made with like material, unless required otherwise under 780 CMR 3408 – Structural Requirements for Existing Buildings.
- iv. Number of Means of Egress – Egress for the existing facility is sufficient in accordance with the current building code.
- v. Capacity of Exits – There is sufficient egress capacity to meet current codes at the doors throughout the facility.
- vi. Length of Access Travel – Shall not exceed 200 feet, in building without a sprinkler system. All areas of the existing building are within 200 feet of an exit.
- vii. Exit Signs and Lights – For notes on the existing system, refer to the Electrical Existing Conditions Report.
- viii. Means of Egress Lighting – Refer to the Electrical Existing Conditions Report.
- ix. Height and Area Limitations – Under Chapter 34, the building is in conformance with applicable height and area limitations, so long as there is no change in use. Additions may be made to the structure.
- x. Fire Protection Systems – Fire protections systems must be provided for existing building that are “substantially” altered or “substantially” renovated where required for the specific use group.
- xi. Enclosure of Stairways – open egress stairways are prohibited. There shall be no minimum fire resistance rating required for an existing enclosure of a stairway.
- xii. Assembly Use Groups – Any alteration within an assembly use group shall comply with the code for new construction. This applies to the cafeteria, auditorium and gymnasium

Section 2 | McCall Middle School Existing Conditions

- xiii. Accessibility for Persons with Disabilities – Accessibility for persons with disabilities shall be provided in accordance with the regulations of the Architectural Access Board.
- xiv. Energy Provisions for Existing Buildings – Alterations to components affecting energy conservation performance shall comply with 780 CMR 13 generally, and 780 CMR 1304.2 or 780 CMR 1304.5 or 780 CMR 1309 specifically. Existing components may remain.
- xv. Evaluation of Existing Building – The structural engineer shall make a structural evaluation of the existing building to determine the adequacy of all structural systems that are affected by alteration or damage to be repaired.
- xvi. Existing Lateral Load Capacity (Refer to Structural Existing Conditions Report for further information) – Alterations shall not be made to elements or systems contributing to the lateral load resistance unless the altered lateral load resisting system conforms to 780 CMR 1611.0 and 1612.0; or there is no reduction in the lateral capacity to the building as a whole. Existing elements of systems may be reinforced or replaced with new elements or systems of equivalent strength and stiffness.
- xvii. Earthquake Loads (Refer to Structural Existing Conditions Report for further information) – For no change in use groups, but alterations exceeding 50% of the assessed valuation of the building, the project is defined as Seismic Hazard Category 2.
- xviii. Earthquake resistance shall comply with the requirements of 780 CMR 3408.3.5
- xix. The provisions of 780 CMR 34 govern Fire Resistant Materials – Fire resistance construction systems.

Interior Finishes 780 CMR 8

Interior trim and finishes altered as a part of a renovation shall conform to the requirements of 780 CMR 801. Flame spread of Interior Finishes for the E and A-3 use Groups, shall conform to Table 803.4. Existing finishes are code compliant.

The State Fire Marshall introduced regulations in 2003 restricting display of paper in egress areas. The provisions are as follows:

- i. Paper display in classrooms shall not exceed 20% of the wall area. Measurement of wall area shall include windows and doors.
- ii. Paper display in corridors shall not exceed 10% of the wall area and shall not be placed within 5 feet of an egress door. It shall be applied directly to the wall and shall not be grouped in areas bigger than 6 feet by 12 feet.

Handicap Accessibility

The building complies with Massachusetts Architectural Access Board (MAAB) regulations.

Mechanical Engineering

Overall the McCall Middle School systems are in good condition. The school was renovated in 2000. The last addition was completed in the summer of 2009. The mechanical, electrical and fire protection systems are generally working well. Systems have received normal maintenance.



2.5 | Muraco Elementary School

Landscape Architecture

Civil Architecture

Architecture

Structural Engineering

Mechanical Engineering

Electrical Engineering

Plumbing Engineering

Fire Protection

Data/Communications

Section 2 | Muraco Elementary School Existing Conditions



Unofficial Property Record Card - Winchester, MA

General Property Data

Parcel ID **11 192 0**
 Prior Parcel ID **-**
 Property Owner **MURACO SCHOOL**
 Mailing Address **33 BATES**
 City **WINCHESTER**
 Mailing State **MA** Zip **01890**
 ParcelZoning **SCI**

Account Number
 Property Location **33 BATES RD**
 Property Use **MUNICPL**
 Most Recent Sale Date **2/6/1963**
 Legal Reference **N/A**
 Grantor **MURACO SCHO**
 Sale Price **0**
 Land Area **11.020 acres**

Current Property Assessment

Card 1 Value Building Value **24,099,700** Xtra Features Value **0** Land Value **737,000** Total Value **24,836,700**

Building Description

Building Style **SCHOOL**
 # of Living Units **1**
 Year Built **1960**
 Building Grade **VERY GOOD**
 Building Condition **Good**
 Finished Area (SF) **53414.5**
 Number Rooms **20**
 # of 3/4 Baths **0**

Foundation Type **CONCRETE**
 Frame Type **WOOD**
 Roof Structure **FLAT**
 Roof Cover **TAR+GRAVEL**
 Siding **BRICK**
 Interior Walls **DRYWALL**
 # of Bedrooms **0**
 # of 1/2 Baths **6**

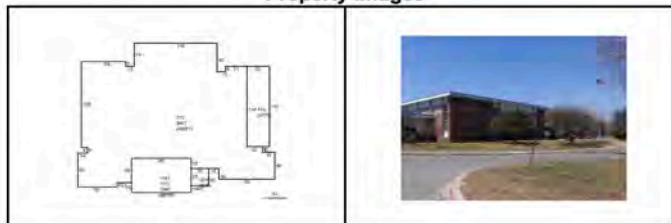
Flooring Type **CARPET**
 Basement Floor **N/A**
 Heating Type **FORCED H/A**
 Heating Fuel **GAS**
 Air Conditioning **0%**
 # of Bsmt Garages **0**
 # of Full Baths **0**
 # of Other Fixtures **6**

Legal Description

Narrative Description of Property

his property contains 11.020 acres of land mainly classified as MUNICPL with a(n) SCHOOL style building, built about 1960 , having BRICK exterior and TAR+GRAVEL roof cover, with 1 unit(s), 20 room(s), 0 bedroom(s), 0 bath(s), 6 half bath(s).

Property Images



Disclaimer: This information is believed to be correct but is subject to change and is not warranted.



SPACE SUMMARY			
Room Type	Room NFA	# of Rooms	Area Total
CORE ACADEMIC SPACES			
23	23	21036	23
36	Classroom	958	1
37	Classroom	1210	1
23	Classroom	811	1
25	Classroom	852	1
24	Classroom	1016	1
38	Classroom	807	1
30	Classroom	887	1
30	Classroom	883	1
44	Classroom	960	1
42	Classroom	811	1
43	Classroom	1175	1
29	Classroom	848	1
15	Classroom	827	1
11	Classroom	827	1
9	Classroom	785	1
16	Classroom	1021	1
30	Classroom	1036	1
31	Classroom	786	1
17	Classroom	791	1
3	Kindergarten	1137	1
6	Kindergarten	1433	1
10	Kindergarten	1016	1
8	Storage	159	1
SPECIAL EDUCATION			
9		2762	10
40	ELL	442	1
13	OT	447	1
61	Sped Classroom	871	1
27	Speech	445	1
39	Storage	159	1
12	Storage	143	1
26	Storage	152	1
41	Toilet	35	1
	Toilet	34	1
14	Toilet	34	1
ART & MUSIC			
2		1237	2
60	Art	859	1
49	Music	378	1
VOCATIONS & TECHNOLOGY			
0		0	0
HEALTH & PHYSICAL EDUCATION			
4		4317	4
70	Multi-Purpose Room	4048	1
71	Storage	132	1
M-07	Storage	76	1
67	Storage	61	1
MEDIA CENTER			
1		2361	1
48	Library	2361	1
DINING & FOOD SERVICE			
0		0	0
MEDICAL			
0		0	0
ADMINISTRATION & GUIDANCE			
7		2439	7
52	Administration	516	1
51	Counseling	413	1
50	Faculty Room	477	1
57	Office	405	1
2A	Principal's Office	200	1
2	Reception	264	1
4	Storage	164	1
CUSTODIAL & MAINTENANCE			
6		1012	6
20	Cust.	49	1
45	Cust.	68	1
32	Cust.	57	1
65	Custodian	401	1
63	Receiving	256	1
62	Storage	181	1
OTHER			
2		800	2
68	Partnership Program	604	1
67	PPP	196	1
TOTAL BUILDING GROSS FLOOR AREA			
	1	55416	1
	Floor 1	55416	1

SPACE SUMMARY			
Room Type	Room NFA	# of Rooms	Area Total
CORE ACADEMIC SPACES			
1		21036	23
---	Classroom	17291	19
---	Kindergarten	3586	3
8	Storage	159	1
SPECIAL EDUCATION			
4		2762	10
40	ELL	442	1
13	OT	447	1
61	Sped Classroom	871	1
27	Speech	445	1
---	Storage	454	3
---	Toilet	103	3
ART & MUSIC			
2		1237	2
60	Art	859	1
49	Music	378	1
VOCATIONS & TECHNOLOGY			
0		0	0
HEALTH & PHYSICAL EDUCATION			
1		4317	4
70	Multi-Purpose Room	4048	1
---	Storage	269	3
MEDIA CENTER			
1		2361	1
48	Library	2361	1
DINING & FOOD SERVICE			
0		0	0
MEDICAL			
0		0	0
ADMINISTRATION & GUIDANCE			
7		2439	7
52	Administration	516	1
51	Counseling	413	1
50	Faculty Room	477	1
57	Office	405	1
2A	Principal's Office	200	1
2	Reception	264	1
4	Storage	164	1
CUSTODIAL & MAINTENANCE			
3		1012	6
---	Cust.	174	3
65	Custodian	401	1
63	Receiving	256	1
62	Storage	181	1
OTHER			
2		800	2
68	Partnership Program	604	1
67	PPP	196	1
TOTAL BUILDING GROSS FLOOR AREA			
	1	55416	1
	Floor 1	55416	1

LANDSCAPE ARCHITECTURE

General

The Muraco School is located in a residential neighborhood with the back of its site bounded by the MBTA Commuter Rail embankment and the Aberjona River. The Tri-Community Bikeway that connects Woburn, Winchester and Stoneham crosses the Muraco site and connects it to Leonard Field. The wooded area across the Aberjona to the north has been removed and is currently undergoing conversion into soccer fields. The topography of the site is such that the building has three levels of access, with the main entrance door higher than the parking level and the lowest level, being the storage space for the playing field.

Vehicular Access & Circulation

There are two separate vehicular access routes to the school: Bates Road, which leads to the parking area and Tufts Road, which leads to the lower loop by the playing fields. Bates Road is the main entrance and includes a newer school sign at the beginning of the parking lot. Circulation is color-coded for parking cars (white) and student drop-off along the curb (yellow), which is marked with signs. The pavement continues to a service area and staff parking (with directional sign) on the south side of the building where the pavement ends. A former link to Irving Street is blocked off to vehicles with boulders. Pavement in the larger parking area is in reasonably good condition with some cracking. The drop-off loop has granite curbing. For service area pavement condition, see “Service Area” below.

The loop from Tufts Road is a simple one-way circulation with a spur service road that runs to the end of the lowest building level (playing field level) where athletic equipment is stored. There is little signage at this location other than an “End of Public Way” indication. The roadway pavement is worn but in reasonably good condition with granite curbing.

Parking Location, Arrangement & Quantity

The main parking lot off Bates Road is lined for 75 spaces with 1 additional handicap space. Eight of the spaces are marked “staff” in worn paint. There are no vertical HP signs. Circulation is one-way and connects with a spur to the service area with five lined parking spaces for staff and two additional handicap spaces marked “Drop-off Area”. The main parking is an attractive area surrounded by wooded edges and includes curbed islands with trees and ornamental plantings. Presumably, vehicles park around the Tufts Road loop for athletic events taking place at field level, although there are no marked spaces. We estimate that 15-18 vehicles could park in this area.



School sign at the end of Bates Road



Clearly separated parking and drop-off lanes

Pedestrian Circulation

There are several pedestrian routes into the site from the surrounding neighborhoods. Bates and Tufts Road both dead-end at the school site. Bates Road has a worn but curbed asphalt sidewalk from Washington Street along its southern side; Tufts has no sidewalk so pedestrians must walk in the street. There is also a pedestrian link from the Irving Street sidewalk on the south. And the path of the Tri-Community Bikeway (under construction) provides access for walkers from the north.

Section 2 | Muraco Elementary School Existing Conditions

Once on site, both parking/drop-off areas are ringed with asphalt sidewalks and both have pathways connecting up to the School's main door. At the north of the school, pedestrians from the Tufts loop can use the pavement that runs along the athletic storage area to walk on to the school site, but the path ends at the building corner. At the south, there is a paved path behind the service/parking area, but walkers clearly prefer to walk along the building face where they can reach the entrance door to the Annex in back. There is no exterior pedestrian connection from the south side of the school to the court/playground level to the west, approximately one floor level below. At the west side (back) of the school, circulation consists of a long concrete ramp and sloped asphalt path from two school doorways down to the basketball court level, from which one can access the play area. There are no paved connections to the fields. The asphalt pavement varies in condition but is relatively worn and cracked in most places. The ramp (discussed below under "Pedestrian Accessibility") is recently installed and in good condition.



Drop-off/parking loop at the end of Tufts Road



Looking up from Tufts Road to Washington Street



Service to athletic service off Tufts Road loop



Signage at Tufts Road loop

Pedestrian Accessibility and Code Compliance

The main doorway to the school sits at a higher elevation than either of the two parking/drop-off areas and although there is a code-compliant ramp at that entrance, access is from inside the building to the outdoor kindergarten area only. The pathways to this entrance from either parking lot are steeper than 5% so the main entrance does not meet ADA or MAAB requirements. At the Bates Road drop-off, there is a directional sign to the accessible entry door (Door #6) on the south face of the building at the service area. However, while the threshold has been made flush, the paved route to this area is in poor condition (see "Service Area" below) and the uneven surface presents a code violation. Doors #9 and #10 to the kindergarten area are accessible. However the other egress doors on this façade have steps and are not. At the back of

the school, the recently built concrete ramp (over 80 LF long) connects Door M2 to the basketball court level. This ramp appears to comply with code requirements. Also at the back of the school, pavement has been ramped up to Door #8, but the interior has stairs so this entrance is not accessible. To get access from the exterior ramp to the playground and to the fields, one must cross the basketball court. Cracks in the pavement have been repaired but it is still not an unbroken surface (see “Recreation Spaces” below) as required by code. The play areas at the back, with the exception of one climber, are connected by smooth concrete paths in good condition. The accessibility issue here, as at the kindergarten play space, is that a ramping system is needed from the edge of pavement into the variable height loose surfacing. There is no paved access to the climber by the large birch or to the adjacent playing field.

The curb cuts at the Tufts Road loop are built to code and associated with a cross-walk. The curb cuts at the Bates Road loop are asphalt and not code-compliant. The 75-space parking lot requires a minimum of 3 parking spaces, and a total of 4 are



Service to athletic courts off Tufts Road



Extensive crack repair at basketball court pavement



Pedestrian/vehicular access to athletic storage next to field



Flowering tree and garden plantings at front of school

required if we combine it with the 5 space lot by the service area. So the single space within the larger lot plus the two HP “Drop-off” spaces do not fulfill MAAB requirements. In addition, the single space does not have an associated curb cut or vertical sign.

Service Areas

The school does not have a loading dock. Deliveries and trash pick-up are serviced at the south side of the building using available doors. The asphalt pavement is heavily patched and has both smooth and uneven areas.

Courtyards / Exterior Student Gathering Spaces

While there are no courtyards per se, each playground area has an associated paved space that functions as a gathering space with seating and/or picnic tables. For further information see “Recreation Spaces” and “Site Furnishings” below.

Recreational Spaces

The Muraco’s recreational spaces include a Kindergarten Playground, School-age Playground, basketball court, playing fields and some older play equipment associated with the Tufts Road loop.

The age-appropriate play structures at both the “Muraco School Kindergarten Playground” (2003) and the “Muraco Community Playground” (2002) are by Playworld and in very good condition. A combination of concrete pavement edge and plastic timbers retain the loose wood chip surfacing in both locations. One exception is the raised timber edge around the independent climber, an older installation not connected to the paved circulation and seating areas which has non-accessible pea-stone surfacing. In addition to connecting the various play structures, the concrete pathways provide space for seating and picnic tables and, in the case of the kindergarten, are used for play graphics. Vinyl-coated chain link fencing in good condition partially encloses the Kindergarten play area. The basketball court is large enough for extensive pavement play and includes other play graphics. Its surface cracks have been repaired but it remains worn and uneven.

The playing field to the northwest of the school is bounded by the Aberjona River and the MBTA embankment, both fenced. Early in the playing season, some worn patches of turf were observed but the field looks well used. Passing trains are both visible and audible from this area.

The final “play area” is at the lawn adjacent to the Tufts drop-off loop where an old spring rider and swing set remain. Several other pieces of equipment are visible in the adjacent woods. This equipment is outdated and is not installed over appropriate resilient and accessible surfacing as required by code.

Site Lighting

Utility pole-mounted floodlights and cobra head fixtures illuminate the parking and drop-off loops. Doorway overhangs incorporate lighting on the building. There is no additional lighting of the pedestrian pathways and no athletic or playground lighting.

Site Furnishings

Furniture on the site includes a flagpole by the main entrance, composite timber benches and picnic tables associated with both playgrounds, and one steel trash receptacle. There are also aging concrete retaining walls at the base of the slope by the Tufts Road loop and the chain link fencing at the perimeter of the playing field and play area is very old and in poor condition. It is unclear whether the fencing along the MBTA right-of-way belongs to the school or to the MBTA. Given the proximity to the bike trail, it is surprising that there are no bike racks on the site.

Trees, Planting, and Other Vegetation

The Muraco site features mature shade trees, flowering trees, shrubs and annuals. Entry to the site along Bates Road is through a wooded “channel” and the drop-off loop rings central islands with mature pines and birch. The embankment up to the school at the end of the loop is dotted with flowering trees and the walkways up from both drop-off loops are shaded by larger trees. Massive shade trees dominate the slope behind the school. A large, spreading paper birch provides shade to the playground. The trees appear to be in good health and condition. Foundation plantings include seasonal bulbs and some evergreen shrubs at the Kindergarten façade. There are ornamental lower plantings at the parking lot drop-off loop and around the outside of the kindergarten.

Lawn condition varies depending on location. Areas by the school entrance and where pedestrians have worn paths are compacted and bare, while areas that get little foot traffic, such as the embankment at the back of the school, look healthy and green.

Finally, there is a wooded area between the Tufts Road loop and the playing field that seems to be used for storage. When leafed out, this area must become quite dense and could present a potential safety issue.

CIVIL ENGINEERING

General Site Conditions

Landscaped areas around the school have poor grass coverage and there are several unpaved paths, including the primary path to the rear of the school, throughout the site.

There are three play structure areas on site, two at the rear of the school and one for the kindergarten at the front of the school. The larger play area has some damaged plastic curbing and the smaller play area has decaying wooden curbing. The play structures themselves appear to be in good condition but further evaluation should be done by a certified playground safety inspector. The surface of the play areas was either common mulch or peastone. The pavement in the paved play area at the rear of the school is in poor condition.

There is one set of swings on the side of the school that appear to be original to the school construction with no associated safety area or resilient surfacing.

Not all of the sidewalks have curb cuts at cross walks or primary crossing areas. There are ramps at the rear and front doors for accessibility and the doorway at south side of the school is at grade.

The area behind and to the north side of the school are within the 100-year flood plain and the site has witnessed flooding in recent years. The ground floor of the building and the parking areas are not within the 100-year flood plain.

The Aberjona River runs along the north side of the site crossing through a culvert under the train track at the rear of the school. (The Town of Winchester's multi-year Flood Mitigation Program has identified this culvert as in need of widening to accommodate more water to flow through to alleviate flooding.) The northeast corner of the existing building may be within the 200-foot riverfront area associated with the Aberjona River.



Unpaved path



Decaying wood

Parking and Circulation

The main parking lot at the school is in front of the school and features a one-way counter-clockwise circulation. The main parking area appears to have been recently reconstructed and the pavement is in good condition. There are a couple of flood-type security lights in the area closest to the school. The parking area drains to a closed drainage system and there was no evidence of ponding or puddling in the main parking area.

There is one accessible parking spot in the main parking lot. The slopes in the accessible parking space do not appear to meet accessibility guidelines (less than 2% slope in any direction) and there is no curb cut to the sidewalk adjacent to the accessible parking spot.

Section 2 | Muraco Elementary School Existing Conditions

There is a small parking area (5 standard spots plus 2 striped accessible spots) on the south side of the school. The pavement in this lot is in poor condition and the slopes at the accessible parking spots do not appear to meet accessibility guidelines.

Utilities

There is a closed drainage system in the main parking area. Downspouts along the front of the school discharge to grade. The school is connected to the town sewer system but there was no evidence of an external grease-trap. The gas meter and electric transformer are located on the south side of the building adjacent to parking, the dumpster, and a secondary entrance. Both the transformer and gas meter have some bollards around them.

ARCHITECTURE

Organization

The Muraco School was built in the mid- 1960s and is approximately 50,000 square feet. The building contains classrooms, a multi-function room (cafetorium), Media Center and offices. A (2) classroom modular addition was added in 2008.

Circulation

The building is one story. There is a partial basement space at the north side of the building which contains storage spaces and access to an exterior covered play space. Access to the lower level is by stairways only.

Program and Space Issues

The Muraco School includes 22 classroom spaces of approximately 900 square feet typically. Two courtyards at the plan interior bring daylight to the corridors. Comparisons with current MSBA space standards indicate that classrooms and core academic spaces are undersized. See the chart below.

	Muraco Elementary	MSBA Standards
Classroom	910 square feet	950 square feet
Music	378 square feet	1,200 square feet
Library	2,361 square feet	2,020 square feet
Art	859 square feet	1,000 square feet
Gymnasium	0 square feet	6,000 square feet

Physical Conditions of Exterior Envelope - Walls

The building is faced with red brick in a running bond pattern, with a large roof overhang. The envelope appears to be in good condition. There are few areas on the north side where the brick has cracked and there are no expansion joints in the brick. The wood at the roof edge appears to have been recently painted and is in good condition. See the charts below.

<i>Representative R-Values (1940s Walls)</i>	
12" Masonry	1.17
TOTAL R-VALUE	1.17
WINDOW DOUBLE PANE R-VALUE	0.91
<i>1960s: 4" exterior brick, 8" masonry</i>	

<i>Typical Exterior Walls - Today's Minimum Requirements</i>	
Face Brick	0.39
Air Space	2.02
Air & Vapor Barrier	0.15
1/2" Gypsum Sheathing	0.45
Insulation	22.00
Vapor Barrier	0.15
Interior Gypsum Board	0.45
TOTAL R-VALUE	25.61
WINDOW TRIPLE PANE R-VALUE	5.00

Section 2 | Muraco Elementary School Existing Conditions

Physical Conditions of Exterior Envelope - Windows

About half of the windows are replacement windows and the rest are original single glazed windows. Other than the lack of energy efficiency, the windows appear to be functioning properly.

Physical Conditions of Exterior Envelope - Roof

The roofing is membrane at all areas. Generally, the roofing appears to be in good condition. There is minor damage at the roof edge in one location. Also, there is some evidence of a roof leak that has occurred in the newer modular section of the school. The joint at the connections of the two modular sections appears to be the location of the leak. See the charts below.

<i>Muraco Existing Roof Construction</i>	
Rubber Membrane	0.40
2" Insulrock Insulation	5.00
2" Rigid Insulation	5.00
Structure/Ceiling	5.00
TOTAL R-VALUE	15.40

<i>Roof Construction - Today's Minimum Standard</i>	
Rubber/PVC	0.40
4" Polyisocyanurate	30.00
Structure/Ceiling	5.00
TOTAL R-VALUE	35.40



School windows from exterior



School exterior and play area

Interior

Finishes are well suited for school use and have been well maintained. Light quality is generally good.

Interior Partitions

In general, all interior partitions appear to be in good condition. The type of partition varies throughout the building as follows:

- Exposed brick
- Painted plaster

- Painted drywall
- Glass wall windows

In a renovation, various existing plaster walls to remain could be cut open to accommodate new electrical, plumbing and technology systems. All walls should have acoustical batt insulation to improve acoustical performance.

Flooring

In general, all flooring is in good condition. Carpet covers many of the classroom spaces and appears well maintained. The type of flooring that exists is as follows:

- Asbestos containing tile (9x9)
- Vinyl Composition tile (12x12)
- Slate
- Carpeting

Wall Base

The wall base is rubber of various sizes. All base material appears to be in good condition.

Ceiling

The ceilings are 2x4 suspended acoustical tiles and are in good condition. Although some tiles show evidence of slight cupping, possibly due to moisture issues. The existing ceilings consist of the following types:

- Suspended acoustical tile

Doors and Frames

Doors are generally wood and many are chipped and damaged. The conditions are fair to good. Most if not all doors are equipped with lever handles.

Fire Extinguishers

All existing fire extinguishers appear to be operational and certified.

Tackboards and Markerboards

Tackboards and markerboards are existing throughout and appear to be in good condition. Fire code regulations do not allow for tackboards to be within 5 feet of egress doors.

Regulations

The existing facility as a whole is in compliance with the original code, however, this does not mean it meets every standard of the current code. In accordance with the current code, an existing building is presumed to have met the codes and regulations in effect at the time of its construction and is allowed to continue in its use, provided it is maintained per the original code. Current building codes are applicable to any alteration or addition or change in use of the structure in accordance with 780 CMR 34.

Code Classification 780 CMR 302.1

The occupancy of the facility is non-separated mixed use with assembly and educational uses as follows:

Construction Classification

Based upon the definitions in the current code, the minimum classification of the building is as follows:

Chapter 34: Repair, Alteration, Addition and Change of Use of Existing Buildings

A renovation project is governed by Chapter 34. This chapter is “intended to maintain or increase public safety, health, and general welfare, without requiring full compliance with the code for new construction.”

Section 2 | Muraco Elementary School Existing Conditions

- i. Building renovation – For continuation of the same use groups the building shall comply with 780 CMR 3404.0.
- ii. New Building Systems – Any new building system or portion thereof shall conform to 780 CMR for new construction to the fullest extent practical.
- iii. Alterations and Repairs – Alterations of repairs to existing buildings, which maintain or improve the performance of the building may be made with like material, unless required otherwise under 780 CMR 3408 – Structural Requirements for Existing Buildings.
- iv. Number of Means of Egress – Egress for the existing facility is sufficient in accordance with the current building code.
- v. Capacity of Exits – There is sufficient egress capacity to meet current codes at the doors throughout the facility.
- vi. Length of Access Travel – Shall not exceed 200 feet, in building without a sprinkler system. All areas of the existing building are within 200 feet of an exit.
- vii. Exit Signs and Lights – For notes on the existing system, refer to the Electrical Existing Conditions Report.
- viii. Means of Egress Lighting – Refer to the Electrical Existing Conditions Report.
- ix. Height and Area Limitations – Under Chapter 34, the building is in conformance with applicable height and area limitations, so long as there is no change in use. Additions may be made to the structure.
- x. Fire Protection Systems – Fire protections systems must be provided for existing building that are “substantially” altered or “substantially” renovated where required for the specific use group.
- xi. Enclosure of Stairways – open egress stairways are prohibited. There shall be no minimum fire resistance rating required for an existing enclosure of a stairway.
- xii. Assembly Use Groups – Any alteration within an assembly use group shall comply with the code for new construction. This applies to the cafeteria, auditorium and gymnasium
- xiii. Accessibility for Persons with Disabilities – Accessibility for persons with disabilities shall be provided in accordance with the regulations of the Architectural Access Board.
- xiv. Energy Provisions for Existing Buildings – Alterations to components affecting energy conservation performance shall comply with 780 CMR 13 generally, and 780 CMR 1304.2 or 780 CMR 1304.5 or 780 CMR 1309 specifically. Existing components may remain.
- xv. Evaluation of Existing Building – The structural engineer shall make a structural evaluation of the existing building to determine the adequacy of all structural systems that are affected by alteration or damage to be repaired.
- xvi. Existing Lateral Load Capacity (Refer to Structural Existing Conditions Report for further information) – Alterations shall not be made to elements or systems contributing to the lateral load resistance unless the altered lateral load resisting system conforms to 780 CMR 1611.0 and 1612.0; or there is no reduction in the lateral capacity to the building as a whole. Existing elements of systems may be reinforced or replaced with new elements or systems of equivalent strength and stiffness.
- xvii. Earthquake Loads (Refer to Structural Existing Conditions Report for further information) – For no change in use groups, but alterations exceeding 50% of the assessed valuation of the building, the project is defined as Seismic Hazard Category 2.
- xviii. Earthquake resistance shall comply with the requirements of 780 CMR 3408.3.5
- xix. The provisions of 780 CMR 34 govern Fire Resistant Materials – Fire resistance construction systems.

Interior Finishes 780 CMR 8

Interior trim and finishes altered as a part of a renovation shall conform to the requirements of 780 CMR 801. Flame spread of Interior Finishes for the E and A-3 use Groups, shall conform to Table 803.4. Existing finishes are code compliant.

The State Fire Marshall introduced regulations in 2003 restricting display of paper in egress areas. The provisions are as follows:

- i. Paper display in classrooms shall not exceed 20% of the wall area. Measurement of wall area shall include windows and doors.
- ii. Paper display in corridors shall not exceed 10% of the wall area and shall not be placed within 5 feet of an egress door. It shall be applied directly to the wall and shall not be grouped in areas bigger than 6 feet by 12 feet.

Handicap Accessibility

The building complies with Massachusetts Architectural Access Board (MAAB) regulations.

STRUCTURAL ENGINEERING

The Muraco School was constructed in the mid 1960's, is well maintained and in generally good condition. Two modular classrooms were added on the west side of the building in 2008. The roofing on the original building appears to be in good condition, and the wood building trim recently painted. The roofing on the modulares appears to have leaks at the east edge, and at the east west seam between modular units.

The original building is a one-story building, with the roof likely framed with open web steel joists and structural steel framing. There is a one story basement level on the north side of the building. Some of the basement areas were only partially excavated. Doors open into these areas where the first floor concrete framing is visible. Interior basement areas have asbestos warnings posted on some of the columns. Access to the basement areas is restricted.

Part of the northwest basement level is open to the exterior. The brick veneer of the first floor walls is supported on a steel shelf angle, attached to the concrete floor beam. The brick masonry is showing some distress, resulting from brick growth. The corners of the north wall have moved outward about 1", resulting in some cracking of the masonry near the corners of the wall. These cracks should be repaired, and control joints cut into the wall to limit future movement.

There are also spalls in the concrete foundation wall at the north east corner caused by brick growth in the north and east walls. Joints could be cut into these walls to minimize future movement.

At the front entry there is a brick pier supporting the roof, with vertical cracks on the north and south faces. The cracks are caused by corrosion and rusting of an embedded steel column. This should be further investigated, and the column repaired if necessary.

There is a small site retaining wall at the west side of the north elevation. The wall has shifted, and the cap stone is loose. The wall should be repaired.

MECHANICAL ENGINEERING

Heating Plant

The boiler room houses three condensing boilers of which are fired with natural gas of which are approximately five years old. It has been reported that all three boilers are required to heat the building during the coldest weather of the heating season. The existing (original equipment?) cast iron sectional boilers have been abated of asbestos and remain abandoned in the boiler room. The existing breaching from these boilers has been covered, encapsulating the (presumed) asbestos insulation on these existing flue systems. The existing brick stack is being used only to chase up the new flue for the domestic hot water heater. The new HVAC boilers are Camus "DynaForce Series" (2000 MBH input) boilers and are in fine operating condition. These boilers produce hot water for heating the building. The boilers do have the ability to "condense" acids from the flue gases and are fitted with acid neutralization devices to treat the condensate prior to draining. It was observed that on a mild spring day the leaving water temperature of the system was 178 degrees F of which is not cool enough to promote condensation. It is also noted that the cooler the hot water supply temperature (generally designed for 140 degrees F) the more efficient the boilers are. It is unclear why the supply water temperature set-point was set so high on a moderate day.

Air Systems

The classrooms are predominantly served with console unit ventilators or ducted cabinet unit heaters. The unit ventilators entrain the required ventilation air using an adjacent wall louver (units located on exterior walls). The classrooms served with cabinet unit heaters receive the required ventilation air from Energy Recovery Ventilators (ERVs) located in the attic space of the building. These ERV units transfer heat from the exhaust air into the ventilation (outdoor) air prior to tempering the air to room temperature. This air is then ducted to various classrooms using centralized ductwork systems. There are several air handling units which are ducted to interior spaces such as the Administration Wing and the Media Center. All of the air handling units have been replaced approximately five years ago and are in good condition.

Piping Systems

The piping/pumping system has been replaced in its entirety approximately five years ago along with most of the HVAC equipment. The hot water piping system is used to heat the building. The primary and secondary pumps for this system are located in the boiler room. The secondary pumps are fitted with Variable Frequency Drives (VFDs) to allow for energy savings when the building does not require full hot water flow for heating (during the warmer heating season days). The piping system networks out from the boiler room through the crawlspace of the building upfeeding various heating equipment throughout the building. The existing chilled water piping system was replaced with a small piping system located in the attic space of the building serving various air handling equipment.

Air Conditioning

The building is served with a small (20 ton) chiller located on the roof. This chiller is piped to various air handling units serving interior spaces. The chiller is aircooled. The administration wing is served with a dedicated fan coil unit which includes a dedicated roof mounted aircooled condensing unit. This allows the administration wing to cool without turning on the larger chiller thus saving energy when the school administration wing is the only space occupied. A minisplit air conditioning system serves the health wing of the building. All this equipment is approximately five years old and in good operating condition.

Automatic Temperature Controls

The automatic temperature controls for the entire school have been converted to Direct Digital Controls (DDC) five years ago along with all of the HVAC renovations. The control system is a Johnson Controls Metasys platform with a computer located in the custodian's office adjacent to the boiler room. No problems have been reported with this system or HVAC controls operations in general.

ELECTRICAL ENGINEERING

Main Electric Services

The main electric service is rated 208/120V, 800A, three-phase, four-wire. The distribution equipment is primarily manufactured by General Electric. Eversource electric services appear to originate from Verizon street pole number 77/8 along Irving Street. The service route is underground from the street pole to a 150 kVA pad mount transformer (Eversource number PMH21853). The secondary service conductors are installed underground from the pad mount transformer to the main electric service located in the facility maintenance office. Based on the Eversource electric meter number 5063803 and the metering nameplate multiplier of 80, the maximum demand recorded on the date of survey is 104.8 kW.



Power line atop school



Typical lighting in classrooms

Emergency Electric Services

The school does not include an emergency generator.

Emergency lighting throughout the school appears to be provided by local battery pack luminaires. Multiple manufacturers appear to be used for these luminaires. Many exit signs also appear to include battery backup, but could not be confirmed physically for all locations.

Fire Alarm

The fire alarm system is manufactured by Standard Electric Time Company which has not manufactured fire alarms under this name since 1970. This fire alarm system is no longer listed to meet present day requirements. There is a Notifier expansion panel, Model NFW-50, to support the modular classrooms located at the rear of the school. The expansion panel is connected to the existing fire alarm panel. The fire alarm system includes full, but limited, heat detection coverage throughout the school, since no fire protection systems appears evident. Manual initiation and notification devices are installed throughout the school and at most egresses. The fire alarm appears to be connected to a Honeywell dialer assumed to signal the local fire department. There is an original remote annunciator, assumed to be out of service, as well as a newer Notifier remote annunciator located inside the front entrance across the corridor from the principal office with drill switch function. There is a red fire alarm beacon and fire alarm master box located outside the school main entrance.

Lighting and Lighting Controls

Luminaires, primarily fluorescent with a few incandescent, appear to be relatively old in most locations throughout the school. Occupancy sensors are located in many administrative and classroom areas. Gymnasium lighting is manually controlled with low-voltage devices and remote contactors. Exterior lighting appears minimal. No emergency lighting was observed at exterior of building egresses.

Clock System

There appears to be a functional central clock system used in the school. The main clock control panel, located in a storage room, appears to be relatively new and manufactured by American Time and Signal Company, AllSync Master.

Audio-Visual (AV)

Aside from the select intelligent classroom presentation boards, there is a voice communication system throughout the school. A rack receiver and Radio Shack 40 Watt amplifier located in the facility maintenance office appear to be the head end equipment.

Telephones

There was no staff to confirm operation, but telephones appear to be voice over internet protocol (VoIP). This is assumed due to the tracing of the network cabling to voice and data wall outlets.

Security

Access control is provided with the use of Keri Systems hardware and appears relatively new. Unless well hidden, security cameras were not observed. All entrances are monitored with status indicating devices. There is one access keypad observed at the side entrance door. The American Alarm keypad appears to be the operational control connected to the American Alarm panels located in the facility maintenance office.

IT Network

The main distribution frame (MDF) was located in the assistant principal office and not ventilated adequately for this type of equipment. Wireless access points (WAP) were observed and assumed to provide adequate wireless coverage to satisfy occupant needs.

General Conditions

Electrical code clearances and proximity to non-electric systems and components is not met in many locations. Storage of supplies and debris is impeding access to electrical panel boards in many locations throughout the school. There did not appear to be any sign of main electric service equipment testing.

Each accessible battery backup luminaire in the based building and the modular classrooms did not operate when test switch was activated. Spaces associated with daycare, preschool, kindergarten and early childhood education are required to include tamperproof receptacles and none were observed anywhere in the school. Receptacle safety inserts do not meet this requirement. Some sink locations include close proximity receptacles without ground-fault protection or had no receptacle provided.

Exterior egress luminaries do not appear supported with a backup source.

Fire alarm notification devices are audible horns only and include no visual indicators (strobes). Notification devices are also limited in quantity and do not cover all areas adequately. Fire alarm manual initiation devices and notification devices are not installed at ADA required elevations. No emergency lighting or exit signs were located in boiler room. There was no record of fire alarm testing observed.

A rear egress door does not include a fire alarm manual initiation device and a notification device was also not in vicinity.

PLUMBING ENGINEERING

Domestic Water System

A buried 4 inch service, assumed to be connected to the main in Bates Road, enters the Boiler Room from the east. The entry includes full-size iron gate valves and a 4 inch Municipal meter that appears to be original to the building (1966). The condition of existing iron and copper water piping is fair considering its age. Some copper piping appears to have been repaired or replaced. Insulation condition, where visible, varies with age and is showing signs of wear.

Domestic Hot Water Plant

The entire building is served by a 100 gallon, gas-fired storage heater, installed with the heating system upgrade when the buried oil tank was removed and the natural gas service installed. There is a circulator pump, an aquastat and a master mixing valve that appears to be about 20 years old. Hot water delivery at remote fixtures is fair.

Plumbing Fixtures and Fittings

Toilet Room plumbing fixtures and trim are generally in fair to good condition, accessible fixtures were not noted. Casework sinks and fittings are in fair condition; none of those viewed were accessible. Accessibility and fixture counts for students and staff require review.

Natural Gas Service

The gas service enters the Boiler Room from the meter assembly on the south wall, fed from Irving Street. A branch line directly feeds the domestic water heater and the main feeds the gas-fired boiler plant. Gas piping is in very good condition.

Sanitary, Waste and Vent Systems

The exact location of building sanitary exit(s) could not be determined by this survey. Cast iron piping, visible in the Boiler Room and crawl space, appears to be original to the building and is in fair to good condition. A sump pump and basin are buried in the northwest corner of the Boiler Room; exact piping connections could not be determined. Below casework fixture copper drainage piping is in fair condition.

Building Storm Drainage

The location of building storm exit(s) could not be determined by this survey. Visible cast iron piping is in fair to good condition. Insulation is showing signs of wear.

General Condition

The building Plumbing systems are in fair to good condition overall and, according to staff, there have been no recent major problems.

FIRE PROTECTION

There is no water-based fire protection within the building.

DATA/COMMUNICATIONS, TECHNOLOGY

The telephone system is an older WIN 440CT. The systems is wall mounted in the Service Entrance Room. There are several local older RadioShack amplifiers attached to the system, allowing it to connect to corridor and classroom speakers for general announcements. Speakers are of varying makes and manufacturers and many are not functioning. The intercom speakers in corridors and classrooms are in need of replacement. Most classrooms and offices have phones that connect to the WIN system. Clocks are of varying manufacturers. Some are newer American AllSynclplus wireless products. Intercom and telephone systems needs to be updated to newer technology. Any future project should include an upgrade of the phone system to the district standard NEC VoIP and a replacement of the intercom system.

The Gymnasium/Caf has some local audio speakers. The equipment rack for the audio equipment is portable, currently located on the stage. Any future project should include local AV systems for large group gathering and instructional spaces.

Distribution of cabling is achieved with wall mounted racks and patch panels. Cabling is Category 5. A significant amount of the cabling has been run exposed. There are typically three data jacks at the teacher location, 3 for student use, one for a wireless access point. Many classrooms have wireless. Wireless APs are Aruba AP105. Many classrooms are equipment with projectors. The projectors are a combination of Epson 480i and 410W. Some classrooms are equipped with ENO Boards. Teachers are equipped with Dell laptops and port replicators and Lumens DC-170 document cameras. Any future project should include an upgrade of all cabling to the current TAI/EIA standard at the time.

There is no site or exterior video surveillance. There is an access control system and an alarm keypad at the back door of the school. The access control system is a relative new Kerisystem with multiple panels. Any future project should include an integrated security system inclusive of building and site surveillance, intrusion detection and access control.



2.6 | Mystic Elementary School

Landscape Architecture

Civil Architecture

Architecture

Structural Engineering

Mechanical Engineering

Electrical Engineering

Plumbing Engineering

Fire Protection

Data/Communications



Unofficial Property Record Card - Winchester, MA

General Property Data

Parcel ID **6 343 0**
 Prior Parcel ID **-**
 Property Owner **MYSTIC SCHOOL**
 Mailing Address **263 MAIN ST**
 City **WINCHESTER**
 Mailing State **MA** Zip **01890**
 ParcelZoning **SCI**

Account Number
 Property Location **263 MAIN ST**
 Property Use **PSCHOOL**
 Most Recent Sale Date **2/6/1963**
 Legal Reference **N/A**
 Grantor **MYSTIC SCHO**
 Sale Price **0**
 Land Area **2.520 acres**

Current Property Assessment

Card 1 Value	Building Value 11,391,300	Xtra Features Value 0	Land Value 481,500	Total Value 11,872,800
Total Parcel Value	Building Value 12,404,900	Xtra Features Value 0	Land Value 481,500	Total Value 12,886,400

Building Description

Building Style **SCHOOL**
 # of Living Units **3**
 Year Built **1930**
 Building Grade **VERY GOOD**
 Building Condition **Average**
 Finished Area (SF) **27417**
 Number Rooms **11**
 # of 3/4 Baths **0**

Foundation Type **BRK/STN**
 Frame Type **WOOD**
 Roof Structure **GABLE**
 Roof Cover **SLATE**
 Siding **BRICK**
 Interior Walls **PLASTER**
 # of Bedrooms **0**
 # of 1/2 Baths **4**

Flooring Type **HARDWOOD**
 Basement Floor **N/A**
 Heating Type **FORCED HW**
 Heating Fuel **OIL**
 Air Conditioning **0%**
 # of Bsmt Garages **0**
 # of Full Baths **2**
 # of Other Fixtures **5**

Legal Description

Narrative Description of Property

This property contains 2.520 acres of land mainly classified as PSCHOOL with a(n) SCHOOL style building, built about 1930, having BRICK exterior and SLATE roof cover, with 3 unit(s), 11 room(s), 0 bedroom(s), 2 bath(s), 4 half bath(s).

Property Images



Disclaimer: This information is believed to be correct but is subject to change and is not warranted.

Unofficial Property Record Card - Winchester, MA

General Property Data

Parcel ID **6 343 0**
 Prior Parcel ID **-**
 Property Owner **MYSTIC SCHOOL**
 Mailing Address **263 MAIN ST**
 City **WINCHESTER**
 Mailing State **MA** Zip **01890**
 ParcelZoning **SCI**

Account Number
 Property Location **263 MAIN ST**
 Property Use **PSCHOOL**
 Most Recent Sale Date **2/6/1963**
 Legal Reference **N/A**
 Grantor **MYSTIC SCHO**
 Sale Price **0**
 Land Area **0.000 acres**

Current Property Assessment

Card 2 Value	Building Value 1,013,600	Xtra Features Value 0	Land Value 0	Total Value 1,013,600
Total Parcel Value	Building Value 12,404,900	Xtra Features Value 0	Land Value 481,500	Total Value 12,886,400

Building Description

Building Style **SCHOOL**
 # of Living Units **0**
 Year Built **1930**
 Building Grade **VERY GOOD**
 Building Condition **Average**
 Finished Area (SF) **2400**
 Number Rooms **8**
 # of 3/4 Baths **0**

Foundation Type **BRK/STN**
 Frame Type **WOOD**
 Roof Structure **HIP**
 Roof Cover **SLATE**
 Siding **BRICK**
 Interior Walls **PLASTER**
 # of Bedrooms **0**
 # of 1/2 Baths **2**

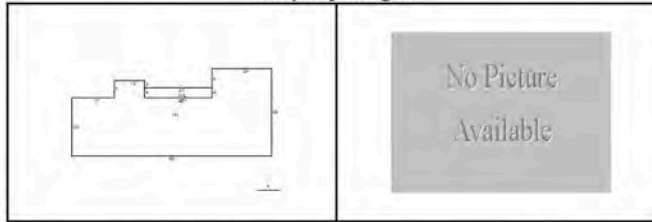
Flooring Type **HARDWOOD**
 Basement Floor **N/A**
 Heating Type **FORCED H/W**
 Heating Fuel **OIL**
 Air Conditioning **0%**
 # of Bsmt Garages **0**
 # of Full Baths **0**
 # of Other Fixtures **12**

Legal Description

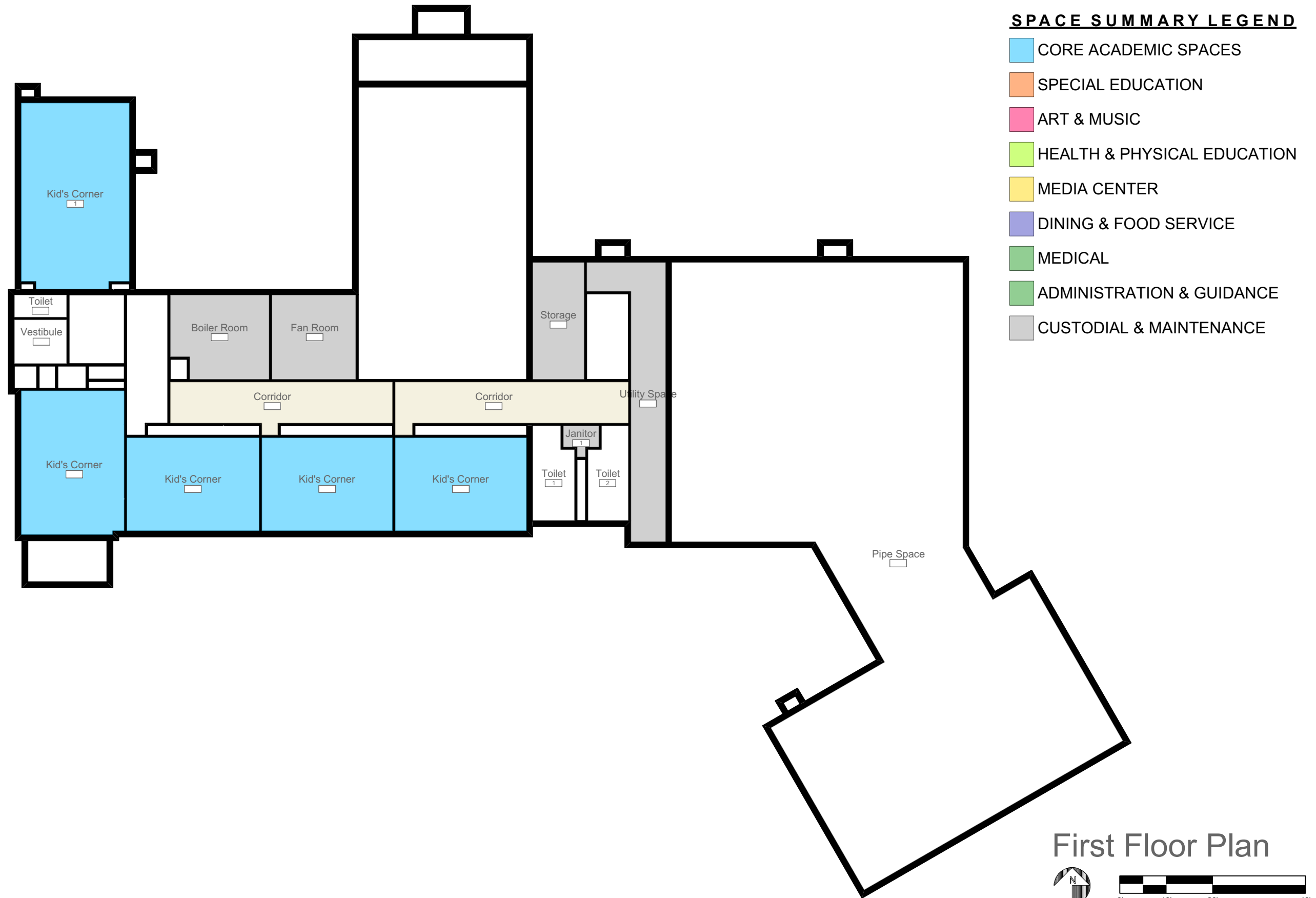
Narrative Description of Property

This property contains 0.000 acres of land mainly classified as PSCHOOL with a(n) SCHOOL style building, built about 1930, having BRICK exterior and SLATE roof cover, with 0 unit(s), 8 room(s), 0 bedroom(s), 0 bath(s), 2 half bath(s).

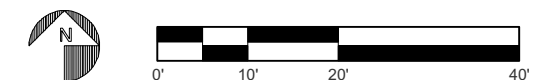
Property Images



Disclaimer: This information is believed to be correct but is subject to change and is not warranted.



First Floor Plan





SPACE SUMMARY			
Room Type	Room NFA	# of Rooms	Area Total
CORE ACADEMIC SPACES			
15	15	11041	15
---	Adult Classes After School	591	1
2	Adult Classes After School	929	1
---	After School	584	1
---	After School	573	1
3	After School Enrichment	947	1
---	Conf. Rm.	242	1
---	Kid's Corner	695	1
1	Kid's Corner	932	1
---	Kid's Corner	577	1
---	Kid's Corner	581	1
---	Kid's Corner	573	1
4	Pre-School After School	968	1
---	Pre-School After School	591	1
1	Pre-School Enrichment	1132	1
2	Pre-School Enrichment	1126	1
SPECIAL EDUCATION			
0	0	0	0
ART & MUSIC			
0	0	0	0
VOCATIONS & TECHNOLOGY			
0	0	0	0
HEALTH & PHYSICAL EDUCATION			
4	4	2471	4
---	Gymnasium	1732	1
---	Stage	561	1
4	Storage	93	1
3	Storage	85	1
MEDIA CENTER			
0	0	0	0
DINING & FOOD SERVICE			
0	0	0	0
MEDICAL			
0	0	0	0
ADMINISTRATION & GUIDANCE			
4	4	796	4
---	Director	177	1
---	Health Dept. & Teach Rm.	371	1
---	Office	209	1
---	Stor.	39	1
CUSTODIAL & MAINTENANCE			
8	8	1904	8
---	Boiler Room	374	1
---	Fan Room	335	1
2	Janitor	82	1
1	Janitor	42	1
7	Storage	68	1
5	Storage	195	1
---	Storage	284	1
---	Utility Space	524	1
OTHER			
0	0	0	0
TOTAL BUILDING GROSS FLOOR AREA			
2	26638	2	
---	Basement	8202	1
---	Floor 1	18436	1

SPACE SUMMARY			
Room Type	Room NFA	# of Rooms	Area Total
CORE ACADEMIC SPACES			
3	7	11041	15
---	Adult Classes After School	1520	2
---	After School	1157	2
3	After School Enrichment	947	1
---	Conf. Rm.	242	1
---	Kid's Corner	3358	5
---	Pre-School After School	1559	2
---	Pre-School Enrichment	2258	2
SPECIAL EDUCATION			
0	0	0	0
ART & MUSIC			
0	0	0	0
VOCATIONS & TECHNOLOGY			
0	0	0	0
HEALTH & PHYSICAL EDUCATION			
2	3	2471	4
---	Gymnasium	1732	1
---	Stage	561	1
---	Storage	178	2
MEDIA CENTER			
0	0	0	0
DINING & FOOD SERVICE			
0	0	0	0
MEDICAL			
0	0	0	0
ADMINISTRATION & GUIDANCE			
4	4	796	4
---	Director	177	1
---	Health Dept. & Teach Rm.	371	1
---	Office	209	1
---	Stor.	39	1
CUSTODIAL & MAINTENANCE			
3	5	1904	8
---	Boiler Room	374	1
---	Fan Room	335	1
---	Janitor	124	2
---	Storage	547	3
---	Utility Space	524	1
OTHER			
0	0	0	0
TOTAL BUILDING GROSS FLOOR AREA			
2	26638	2	
---	Basement	8202	1
---	Floor 1	18436	1

LANDSCAPE ARCHITECTURE

General

The Mystic School is located at one end of a residential block bounded on three sides by Madison Avenue, Main Street and Marshall Road. It houses the Winchester Recreation & Community Education Department, which includes pre-school and a summer K-6 program, and Kids Corner, an independent, parent-operated after school program. Both recreational space and building access for these different programs are separated on the site, which is ringed with mature shade trees.

The site is relatively flat at Main Street and slopes steeply up Madison Avenue. As a result of this change in grade, the building has three levels: the Basement level (occupied by Kids Corner), the Gym level and the Madison Avenue level (second floor).

Vehicular Access & Circulation

While cars have two access points into the site, buses delivering children are relegated to the surrounding streets. Full-size school buses for the after-school program drop off along Main Street. A van for special needs stops along Madison Avenue. Vehicular access into the site includes a large parking lot located off Marshall Road and a second parking area located off Madison Avenue. On mornings during the school year, parents drop off approximately 80 children, mostly at the Marshall Road lot. Pick-up from Kid's Corner also occurs here. The pavement at the drop-off loop is in relatively good condition with cracking in some limited areas.

There are few signs directing visitors clearly to their destination. The Marshall Road parking/drop-off area is at least visible from Main Street. There is a "Kid's Corner" sign on the chain link fence facing Main, but it can only be seen from the south-bound lane and other programs accessible at this point are not listed on the sign. The Winchester Recreation and Community Education sign on Main Street just south of Madison Avenue is visible only from the north-bound lane.

Parking Location, Arrangement, & Quantity

The Marshall Road parking lot is striped for 22 cars plus one handicapped parking space. None of the spaces have signs. Circulation is one-way with a single access point and there is plenty of extra pavement space for cars to line up to pick up or drop off students. Several vehicles do park on the lawn area up against the building, even though there was pavement space available on the day of our visit. Staff and pre-school parents use this lot. Pavement Condition is reasonably good with some areas of cracking and a few low points that hold water. Because there is no curbing, there are no curb cuts; pedestrians walk directly from the parking pavement to the pathways.

On Madison, there is both a paved parking area and a "cut-in" approximately 4 feet wide along the curb for parallel parking. Staff park along Madison in the morning and parents line up at the end of the day for pick-up. The paved area against the building is in very poor condition and mirrors the slope of the road. There are approximately 10 spaces and an additional 2 with handicap parking signs, although the pavement line work is practically illegible. Visitor parking is signed in this area.



Parking & drop-off loop at Marshall Road is one-way



Main Street signage is insufficient to direct visitors

Section 2 | Mystic Elementary School Existing Conditions

Pedestrian Circulation

Pedestrians circulate outdoors via a combination of pathways, stairways and public sidewalks, which makes for some cumbersome routes between spaces and many non-accessible routes (see “Pedestrian Accessibility and Code Compliance” below).

Kid’s Corner has its own pedestrian gates at Main Street and at the Marshall Road and Madison Avenue parking areas. Users of this program normally come and go from Main Street or Marshall Road. The concrete walkaways on this site are flat and generous, although there is some spalling to the surfaces.

Pathways to entrances facing Madison Avenue are all perpendicular to the public sidewalk and generally in poor condition due to surface irregularities or non-compliant slopes. The only other pathway on the site connects the main parking/drop-off loop to the pre-school entrance (Doors #3 & #4), and this consists of worn asphalt leading to a concrete riser and asphalt tread stair, also in worn condition. There are no paved pedestrian routes linking the play area to the basketball court or providing full access into the tot lot.



Worn condition of steps



Accessible path connects to broken pavement



Modern play components over wood mulch surfacing



Toddler play area on packed earth

Pedestrian Accessibility and Code Compliance

With the exception of the flat play space and building access at Kids’ Corner on Main Street, none of the pathways or doorways around the building comply with MAAB or ADA.

The Madison Avenue sidewalk follows existing steep topography that cannot be modified to comply with ADA. There are four access points from this sidewalk to the school. At the highest elevation is the main entrance to the Recreation Department (Door #1). There is a parking space marked with an HP sign here although it does not meet code, and a curb ramp in the concrete sidewalk, also not to code. The concrete path has an excessive cross-slope and there are tree roots from a large oak heaving the concrete walkway slabs, although the doorway itself is flush. The next highest access point is the HP Auditorium door (Door #11). The pathway to this door is steeply sloped from the sidewalk, the combined asphalt and concrete pavement are in poor condition and run-off is directed across the pathway in front of the door, which can be a hazard in winter. The next highest access is to "Recreation and Community" (the gym). This entrance (Door #10) has four steps and is not accessible. And the lowest access point to the building on Madison is off the paved parking area. There is an access door with four steps (Door #8), an adjacent door signed for HP access but with a high threshold, and an egress only door leading to a curbed area with a drain (Door #7), which is also not accessible. The slopes and poor condition of the pavement in this area render it non-compliant.

While on-site circulation from the Madison Avenue side of the building to the Marshall Road side would require one to pass through the Kids' Corner area, pedestrians typically take the public sidewalk on Main Street. There is no sidewalk along Marshall Road and no paved pedestrian access to the site from this direction.

The Kids Corner pathways and pavement are level and in reasonably good condition with some spalling to the concrete surfaces. The ramp leading to the door is to code (has been tested and proven compliant according to staff). The marked HP space in the Marshall Street parking lot is close to this accessible entrance, although it is not the closest available space. It is unknown whether this entrance can be used to access the rest of the building interior.

Pedestrian circulation and doorways on the Marshall Road side of the building are all in violation of ADA and MAAB. The main entrance (Doors #3 and #4) is at the top of a long stairway reached via a steeply sloped asphalt path. The steps are old and uneven and all children in the pre-school must walk up these steps with their wooden handrails. There are no paved paths into the toddler play area by the building or connecting the larger play area to the basketball court, which is at a slightly higher elevation. Another doorway level with the main entrance (Door #2) faces the basketball court and is connected to it via another steep path and stairway.

The single accessible parking space in the main lot is sufficient to meet ADA and lacks only a vertical sign. The two parking spaces at the Madison Avenue lot are non-compliant in slope, surfacing and markings.

Service Areas

The building has no loading dock. Vehicles making deliveries typically park on Madison Avenue and bring goods through the main entrance. Deliveries to Kids Corner are made from the larger parking lot. In most cases, the trucks are smaller box trucks. Rarely is a semi used to make deliveries.

Courtyards / Exterior Student Gathering Spaces

The closest areas to "gathering spaces" are the picnic table areas in front of Kids Corner and the shade structure adjacent to the large play area. The former is in good condition with recently installed materials. The wooden shade structure incorporates seating and is installed over old asphalt pavement. With its raised "floor", it is not accessible.

Recreational Spaces

Play areas, for the younger children who use this building, are located on Main street (by Kids Corner) and on the Marshall Road side of the site.

The Kids Corner play area is a flat space divided about evenly into asphalt pavement and artificial turf. The only play "equipment" is a portable basketball hoop. Free play takes the form of pavement games, kickball and running. Both the pavement and the turf area are in good condition and the entire area is surrounded by chain link fencing and shaded by a massive tree. There is a storage shed for loose equipment in the corner.

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The area adjacent to the parking lot below the main back entrance is occupied by a large play area containing fixed play structures by Gametime, two play houses, a 4-seat arch swing with handicap seat, some smaller climbing equipment, a shade structure and two storage sheds, all on a wood mulch play surface. This type of surface needs to be replenished in order to maintain accessibility compliance and can become uneven with use. There is a toddler-age area adjacent to the building with loose play components, a sandbox, picnic table and a separate storage shed, all shaded by a large flowering cherry. The surfacing here is earth, packed hard and uneven and a fence with gate separates this area from the pathway.

Adjacent to the large play area and slightly uphill is a paved court with two basketball nets, one permanent and one portable. The pavement has cracking throughout.

While the steep topography is subject to erosion, the children make use of it in their play. A run-off channel at the bottom of a roof drain was used as a raceway for tennis balls. In winter, the hill on the east side of the site is used for sledding.



Trees at front of school



Vegetation surrounding playground

Site Lighting

There are over-door façade-mounted fixtures on the Madison Avenue side of the building, over the entrance to Kids' Corner and one façade-mounted light facing the parking on Marshall Road. The remainder of site lighting comes from floods and acorn fixtures mounted on utility poles at the perimeter of Marshall Road and the basketball court.

Site Furnishings

There are limited site furnishings at the Mystic. Two picnic tables flanking the Kids' Corner entrance and two aluminum picnic tables in the larger play area are the only outdoor seating. None of the models is wheelchair accessible. There is a single trash barrel by the drop-off loop and an old, seemingly unused bike rack on the lawn by Main Street. Directional signage is post-mounted, mounted on the chain link fence or mounted on the building façade. Fencing varies in condition with interior fencing (at Kids' Corner and separating the parking from the play area) in better condition than the perimeter fence along Marshall Road. The larger play area, toddler play area and Kids' Corner all have associated storage sheds.

Trees, Planting, and Other Vegetation

A sprinkling of mature trees line the perimeter of the site. At Kids' Corner and by the playground picnic tables, they provide much-needed shade. A large shade trees grows adjacent to the main entrance path on Madison Avenue and the tot play area is shaded by a mature flowering cherry. All appear to be healthy. There are also a few younger shade trees planted more recently on the site. Rhododendrons and yews screen the utility cabinets at the corner of Marshall and Main. The only foundation plantings are along the Kids' Corner façade where mature evergreens occupy mulched beds. Lawns are in reasonably good condition where they are not adjacent to active play areas. But where children play, particularly along the slopes by the large play area, lawns are either heavily eroded or compacted bare earth.

CIVIL ENGINEERING

General Site Conditions

Grass in the play areas is in poor condition and there is significant erosion along the sloped areas of the landscaped play areas. The pavement in the paved play area is in poor condition with severe cracking and uneven settling.

There is no edging in the play structure area and the surfacing is wood mulch. The equipment appears to be in good condition but should be evaluated by a certified playground safety inspector. The small artificial grass play area at the front of the school is in fair condition but is a very hard surface.

The walks, paving and landscaping near the entrances along the Madison Avenue side of the school are generally in poor condition, with uneven/poor pavement and lack of grass coverage. The pre-school entrance is accessed via long set of stairs from the main parking lot.

The areas of the school that see less foot traffic along the rear and upper end of the Madison Avenue sides of the school are in good condition with good grass coverage and positive drainage away from the building.

The school site is not within any flood area there did not appear to be any wetland resources within 200 feet of the site.



Erosion along sloped areas of playarea



Cracking and uneven pavement

Parking and Circulation

The main parking lot is located along the Marshall Road side of the school. Striping in the parking lot indicate a counter clockwise circulation. The one accessible space in the parking area is directly against a fence that restricts movement on that side of the space. The pavement in the main parking area is in good condition with some signs of minor puddling and cracking. There are no lights in the parking area.

Pavement conditions in the small parking area along the Madison Avenue side of the school is in poor condition. The pavement in the accessible parking spot is crumbling and the striping has worn away.

Utilities

There is a closed drainage system on site that the roof downspouts appear to tie into. The site is well drained with little evidence of puddling/drainage issues outside some puddling due to uneven pavement and one doorway along the Madison Avenue side of the school which has been protected with curbing and a trench drain. What appears to be a below grade pump-station with above grade transformer and switch-gear is located in the southwest corner of the site. The pump-station and associated equipment is not enclosed by fencing.

The building is connected to the town sewer system but there is no evidence of an external grease-trap. The gas meter is adjacent to the Main Street entrance in an area not accessible to vehicles.

ARCHITECTURE

Organization

The Mystic School was built in the 1920s and is approximately 26,000 square feet. The Building is entered from Madison Avenue and currently houses the Town’s Recreation Department at the main level within existing room configurations. An after school program occupies the basement level. The basement level has a separate entry from the Main Street side. An addition was added to the original L shaped plan in the 1940s which more than doubled the size of the school.

Circulation

The building is 1 ½ storys with classroom spaces at both levels, accessed only by two stairways. The original auditorium space is on the Madison Avenue side and includes a separate non-ADA entry.

Program and Space Issues

The Mystic School serves the Town as a program space for all ages. The after school program in the basement is a separate program sponsored by parents and licensed by the Department of Early Education and Care. The Recreation Department provides programs year round to all ages, including an after school program, youth clinics, and adult programs. There are 9 classroom spaces of between 650 sf and 900 sf square feet at the upper level and there are five additional classroom spaces at the lower level. Comparisons with current MSBA space standards indicate that classrooms and core academic spaces are undersized. See the chart below.

	Mystic Elementary*	MSBA Standards
Classroom	580 square feet	950 square feet
Music	930 square feet	1,200 square feet
Library	930 square feet	2,020 square feet
Art	695 square feet	1,000 square feet
Gymnasium	1,732 square feet	6,000 square feet

** Only if school becomes accessible*

Physical Conditions of Exterior Envelope - Walls

The building is faced with red brick in a running bond pattern, with cast stone window sills and wood accent trim along the roof edge. The envelope appears to be in good condition. See the charts below.

Representative R-Values	
12" Brick	1.17
3/8" Air Space	1.01
1/2" Plaster	0.32
TOTAL R-VALUE	2.50
<i>1920s: 12" exterior brick, plaster walls</i>	

Typical Exterior Walls - Today's Minimum Requirements	
Face Brick	0.39
Air Space	2.02
Air & Vapor Barrier	0.15
1/2" Gypsum Sheathing	0.45
Insulation	22.00
Vapor Barrier	0.15
Interior Gypsum Board	0.45
TOTAL R-VALUE	25.61
WINDOW TRIPLE PANE R-VALUE	5.00

Physical Conditions of Exterior Envelope - Windows

About half of the windows are replacement windows and the rest are original single glazed windows. Some windows include large sections of glass block above venting units. The glass block areas of the windows tend to be badly damaged with many blocks broken at the outer face. Other than the lack of energy efficiency, the windows appear to be functioning properly.

Physical Conditions of Exterior Envelope - Roof

The roofing is asphalt shingle at the sloping sections with membrane at the high flat areas. Generally, the roofing is in good condition. There are no signs of leaking. The roof edge and gutters also appear to be well maintained. See the charts below.

Mystic Existing Roof Condition	
Asphalt Shingles	0.40
Fiberglass Insulation	13.00
Structure/Ceiling	5.00
TOTAL R-VALUE	12.40

Roof Construction - Today's Minimum Standard	
Rubber/PVC	0.40
4" Polyisocyanurate	30.00
Structure/Ceiling	5.00
TOTAL R-VALUE	35.40

Interior

Finishes are well suited for school use and have been well maintained. Light quality varies throughout the building and is generally good, but could be improved.

Interior Partitions

In general, all interior partitions appear to be in good condition. The type of partition varies throughout the building as follows:

- Painted concrete masonry units
- Painted concrete masonry with glazed block wainscot or ceramic tile
- Painted plaster
- Ceramic tile

Section 2 | Mystic Elementary School Existing Conditions

In a renovation, various masonry walls could be re-framed with steel studs and painted drywall to accommodate new electrical, plumbing and technology systems. Existing plaster walls to remain could be cut open to allow for new systems. All walls should have acoustical batt insulation to improve acoustical performance, however, the closets between the larger spaces and corridors provide additional acoustical separation.

Flooring

In general, all flooring is in fair to good condition. There are a few places where the VCT is broken and should be repaired. Carpet covers much of the classroom spaces and appears well maintained. The type of flooring that exists is as follows:

- Asbestos containing tile (9x9)
- Vinyl Composition tile (12x12)
- Ceramic tile
- Carpeting

Wall Base

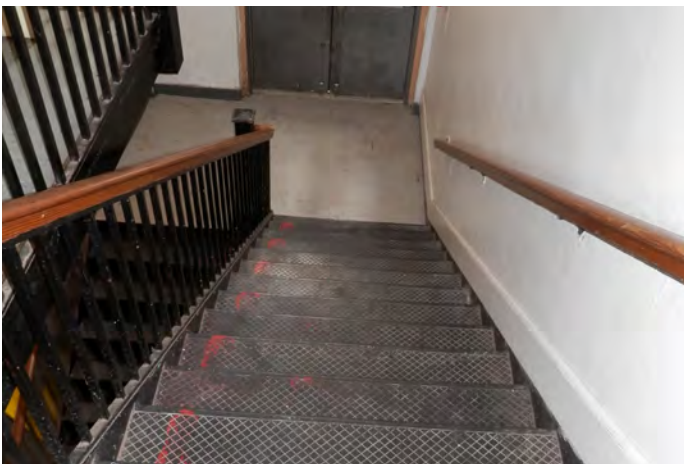
The majority of the wall base is wood of various sizes, although some recent renovation work has installed vinyl base. At the glazed block walls, there is no additional base except the glazed block. All base material appears to be in good condition.



Storage area in classroom



Typical flooring in hallway



Stairway leading to exit



Typical classroom

Ceilings

In general, the ceiling types vary throughout. In some cases, the tile ceilings are secured to the plaster ceiling above. Some suspended ceilings have been installed below the original plaster ceilings. The existing ceilings consist of the following types:

- Suspended acoustical tile
- Painted plaster
- Acoustical tile adhered to plaster ceiling

Doors and Frames

Doors and frames vary in size and type both in metal and wood. The conditions are fair to good. However, most doors still have round knobs which do not meet the ADA requirements. It is recommended that all doors and hardware be replaced to meet compliance with handicapped accessibility requirements. Finish hardware should consist of levers.

Fire Extinguishers

All existing fire extinguishers appear to be operational and certified. Many fire cabinets do not meet ADA requirements. It is recommended to replace all fire extinguishers and cabinets with new ADA compliant cabinets.

Tackboards and Markerboards

All three types of boards exist in various sizes and conditions. Fire code regulations do not allow for tackboards to be within 5 feet of egress doors.

Regulations

The existing facility as a whole is in compliance with the original code, however, this does not mean it meets every standard of the current code. In accordance with the current code, an existing building is presumed to have met the codes and regulations in effect at the time of its construction and is allowed to continue in its use, provided it is maintained per the original code. Current building codes are applicable to any alteration or addition or change in use of the structure in accordance with 780 CMR 34.

Code Classification 780 CMR 302.1

The occupancy of the facility is non-separated mixed use with assembly and educational uses as follows:

Classrooms, Offices	E-Educational
Auditorium	A3-Assemble

Construction Classification

Based upon the definitions in the current code, the minimum classification of the building is as follows:

1920s (Original)	3B Noncombustible
1940s (Addition)	3B Noncombustible

Chapter 34: Repair, Alteration, Addition and Change of Use of Existing Buildings

A renovation project is governed by Chapter 34. This chapter is “intended to maintain or increase public safety, health, and general welfare, without requiring full compliance with the code for new construction.”

- i. Building renovation – For continuation of the same use groups the building shall comply with 780 CMR 3404.0.
- ii. New Building Systems – Any new building system or portion thereof shall conform to 780 CMR for new construction to the fullest extent practical.
- iii. Alterations and Repairs – Alterations of repairs to existing buildings, which maintain or improve the performance of the building may be made with like material, unless required otherwise under 780 CMR 3408 – Structural Requirements for Existing Buildings.
- iv. Number of Means of Egress – Egress for the existing facility is sufficient in accordance with the current building code.

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- v. Capacity of Exits – There is sufficient egress capacity to meet current codes at the doors throughout the facility.
- vi. Length of Access Travel – Shall not exceed 200 feet, in building without a sprinkler system. All areas of the existing building are within 200 feet of an exit.
- vii. Exit Signs and Lights – For notes on the existing system, refer to the Electrical Existing Conditions Report.
- viii. Means of Egress Lighting – Refer to the Electrical Existing Conditions Report.
- ix. Height and Area Limitations – Under Chapter 34, the building is in conformance with applicable height and area limitations, so long as there is no change in use. Additions may be made to the structure.
- x. Fire Protection Systems – Fire protection systems must be provided for existing building that are “substantially” altered or “substantially” renovated where required for the specific use group.
- xi. Enclosure of Stairways – open egress stairways are prohibited. There shall be no minimum fire resistance rating required for an existing enclosure of a stairway.
- xii. Assembly Use Groups – Any alteration within an assembly use group shall comply with the code for new construction. This applies to the cafeteria, auditorium and gymnasium
- xiii. Accessibility for Persons with Disabilities – Accessibility for persons with disabilities shall be provided in accordance with the regulations of the Architectural Access Board.
- xiv. Energy Provisions for Existing Buildings – Alterations to components affecting energy conservation performance shall comply with 780 CMR 13 generally, and 780 CMR 1304.2 or 780 CMR 1304.5 or 780 CMR 1309 specifically. Existing components may remain.
- xv. Evaluation of Existing Building – The structural engineer shall make a structural evaluation of the existing building to determine the adequacy of all structural systems that are affected by alteration or damage to be repaired.
- xvi. Existing Lateral Load Capacity (Refer to Structural Existing Conditions Report for further information) – Alterations shall not be made to elements or systems contributing to the lateral load resistance unless the altered lateral load resisting system conforms to 780 CMR 1611.0 and 1612.0; or there is no reduction in the lateral capacity to the building as a whole. Existing elements of systems may be reinforced or replaced with new elements or systems of equivalent strength and stiffness.
- xvii. Earthquake Loads (Refer to Structural Existing Conditions Report for further information) – For no change in use groups, but alterations exceeding 50% of the assessed valuation of the building, the project is defined as Seismic Hazard Category 2.
- xviii. Earthquake resistance shall comply with the requirements of 780 CMR 3408.3.5
- xix. The provisions of 780 CMR 34 govern Fire Resistant Materials – Fire resistance construction systems.

Interior Finishes 780 CMR 8

Interior trim and finishes altered as a part of a renovation shall conform to the requirements of 780 CMR 801. Flame spread of Interior Finishes for the E and A-3 use groups, shall conform to Table 803.4. Existing finishes are code compliant.

The State Fire Marshall introduced regulations in 2003 restricting display of paper in egress areas. The provisions are as follows:

- i. Paper display in classrooms shall not exceed 20% of the wall area. Measurement of wall area shall include windows and doors.
- ii. Paper display in corridors shall not exceed 10% of the wall area and shall not be placed within 5 feet of an egress door. It shall be applied directly to the wall and shall not be grouped in areas bigger than 6 feet by 12 feet.

Handicap Accessibility

Some improvements have been made over the years to comply with the Massachusetts Architectural Access Board (MAAB) regulations. For the most part the building is not in compliance with the accessibility code. The regulations require that any building undergoing a renovation where the costs exceed 30% of its assessed value must comply with the requirements of the MAAB. It is anticipated that renovation costs will exceed the 30% assessed value and would require the building to be brought up to full compliance with MAAB.

STRUCTURAL ENGINEERING

The Mystic School dates from the 1920's. It is essentially a one story building, with a basement, also built into the side of a hill. Entry off Madison Avenue is to the first floor. Entry off Main Street is to the ground level, basement. Exterior walls are brick masonry, likely built solid with Concrete Masonry Units. For its age, the exterior walls and building envelope appear to be in good overall condition.

Interior basement corridor bearing walls are CMU where not exposed, and glazed masonry units in the classroom areas. Interior walls on the first floor are plastered, possibly over wood studs.

The first floor construction consists of wood floor joists within the classroom areas and office areas, and a concrete slab, which might have had a terrazzo finish, but is now covered with vinyl tiles.

The most noticeable problem with the building appears to be the falling ceiling tiles, particularly where they were glued to the plaster ceiling. There are exposed metal anchors in many classroom and administration areas securing the tiles to the original plaster ceiling.

MECHANICAL ENGINEERING

Heating Plant

The boiler room is located on the lower level and is depressed lower (+/- 10 feet) thus making the boiler room double-height. A single HB Smith 14-section model 28 cast iron sectional boiler serves the building. The boiler is gas-fired and produces low pressure steam to heat the building. The boiler is of indeterminate age but appears to be over 30 years old. The boiler burner is a power flame gas-fired model of which is probably not 30 years old but appears to be approaching 20 years old. Both units are approaching the average service life expectancy. The boiler is vented into a masonry chimney along with the gas-fired domestic hot water heater of which is also located in the boiler room. The condensate receiver/ duplex pump boiler feed unit is leaking and water is pooling on the floor of the boiler room. It has been reported that the boiler is manually operated and does not use the outdoor air temperature to automatically activate the building heating plant. The combustion air fan serving the boiler room was not operating at the time of the survey, status unknown.

Air Systems

The only central air handling system serves the gym. This system was not operating at the time of the survey. This system is located above the stage area of which had recently experienced water damage in the drop ceiling. The cause of the damage was not determined by the survey crew. The gym is also served with cast iron steam radiators located around the perimeter in protective enclosures. The rest of the building is served with console unit ventilators. These units are +/- 50 years old and are past the expected average service life. The unit ventilators appear to be operable but the models present in the building are no longer being manufactured and spare parts would be increasingly more difficult to acquire. Centralized ducted exhaust systems serve the classrooms and toilets and were not operating at the time of the survey, status unknown.



Typical heating system in classroom



Cracking and uneven pavement

Piping Systems

The steam supply and return systems are piped with insulated steel piping. This piping may be original to the building (1932) but has probably been replaced/modified during the history of the building. There were no reported leaks or issues with this piping but it should be regarded as past its average expected service life. The condensate return piping was noisy (one can hear the condensate flowing down the piping) on the lower level hallway. Cast iron steam radiators serve the building spaces of which most have protective covers of various vintages to protect against burning the occupants since most of these radiators are located within reach in the spaces.

Air Conditioning

The gym does have an air-cooled condensing unit located adjacent to the space on grade in one of the parking lots of the school. It was reported that this unit has been inoperable for approximately two years. This unit serves the air handling unit serving the space so the gym does not have an operable air conditioning system. There are a number of wall-mounted air conditioners located along the perimeter of the building serving various office spaces. Two classrooms in the after school

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section of the building have been retrofitted with split-system air conditioning units (mini-splits) and these systems have been reported as operational.

Automatic Temperature Controls

The building is served by an antiquated pneumatic control system. This system is of indeterminate age and status but is probably over 40 years old and past its expected average service life. Uneven space temperature control results in various spaces using the windows to prevent the spaces from overheating in the heating season. The boiler controls are standalone and are fairly rudimentary. A combination of Barber Coleman and Robert Shaw thermostats are present in the various spaces indicative to repairs/modifications that have been performed over the years. Pneumatic control systems are antiquated and have not been installed in buildings for over 20 years.



Recently installed air conditioning unit



Mechanical closet

ELECTRICAL ENGINEERING

Main Electric Services

The main electric service is rated 208/120V, 400A, three-phase, four-wire. The distribution equipment is primarily manufactured by General Electric. Eversource electric services appear to originate from Eversource street pole number 94/2 along Madison Avenue. The service route is overhead from the street pole to a service weather head located on the school. The secondary service conductors enter through a mechanical space and down to the main electric service located in the school boiler mechanical room. Based on the Eversource electric meter number 5063809 and the metering nameplate multiplier of 40, the maximum demand recorded on the date of survey is 16.8 kW.

Emergency Electric Services

The school does not include an emergency generator.

Emergency lighting throughout the school appears to be provided by local battery pack luminaires. Multiple manufacturers appear to be used for these luminaires. Exit signs also appear to include battery backup. Site staff indicated that they are tested routinely and operate properly.

Fire Alarm

The fire alarm system is manufactured by Edwards (EST), 2400 Series, and appears to be in relatively good condition. The fire alarm system includes limited smoke detection or heat detection coverage throughout the school, since no fire protection systems appears evident. Manual initiation and notification devices are installed throughout the school and at all egresses. The fire alarm is connected to an exterior Master Box (#17) assumed to signal the local fire department. An exterior red beacon is located above the Master Box at the administrative entrance. Notification devices are audible only. There are no visual alarm devices inside the school.

Lighting and Lighting Controls

Luminaires and lighting controls appear to be updated in select locations, but overall are less efficient than current luminaire products. Occupancy sensors are located in administrative, classroom and gymnasium areas. Exterior lighting was adequate and appeared to include emergency lighting at exterior of building egresses.

Clock System

The central clock system is not operational according to site personnel feedback.

Audio-Visual (AV)

No visual systems were identified during survey. The school includes a fully operational Rauland MCX 1400 A public address system (circa ~1960) with integrated AM/FM radio and selective area and override controls. Speakers are located throughout the school, including each classroom. Each classroom appears to be equipped with local paging ability via the head end equipment.

Telephones

Based on observation of limited phones in the school, it appeared to include phones only for administrative areas in school and Kids Corner childcare area. Communication services appeared to be from Verizon and from multiple (three) poles along Madison Avenue (Poles 94/2, 94/3, 94/4). Classrooms and common areas rely on the central audio system for internal communications.

Security

Access control is provided with the use of American Alarm and Security Command keypad hardware and appears to operate properly. Security cameras manufactured by Comelit appear to be located only at the exterior of the school administration area entrance and the Kids Corner entrance. Both camera system locations appear to operate independent of each other.

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Perimeter school door alarm status contacts were not observed. It is assumed that motion detection devices detect intrusion(s).

IT Network

The main distribution frame (MDF) was located in an upper level storage room and not ventilated adequately for this type of equipment. Wireless access points (WAP) appeared to be located in some locations. Network cabling is installed in surface plastic raceways or in plain sight throughout the school for all network needs.

General Conditions

Panel boards are generally located in common corridors and not locked.

There did not appear to be any sign of main electric service equipment testing.

Spaces associated with daycare, preschool, kindergarten and early childhood education are required to include tamperproof receptacles and none were observed anywhere in the school.

Some sink locations include close proximity receptacles without ground-fault protection.

Receptacle quantities are inadequate throughout the school.

Gymnasium luminaire lenses appear to be supported in an unorthodox manner.

PLUMBING ENGINEERING

Domestic Water System

A buried 2 inch service, assumed to be connected to the main in Main Street, enters the boiler room through a utility tunnel from the west. The entry includes full-size iron gate valves and a 2 inch municipal meter that appears to be a replacement to the original building (1932). Access to the meter in the tunnel is through a covered and framed opening in the floor of a storage closet. The condition of existing iron and copper water piping is fair considering its age. Some copper piping appears to have been repaired or replaced. Insulation condition, where visible, varies with age and is showing signs of wear.

Domestic Hot Water Plant

The entire building is served by a 40 gallon, gas-fired storage heater, noted to have been installed around 2010. There is a circulator pump and a disconnected aquastat; a master mixing valve is not evident. Hot water delivery at remote fixtures is fair.

Plumbing Fixtures and Fittings

Toilet room plumbing fixtures and trim are generally in fair to good condition, some accessible fixtures were noted in renovated toilet rooms. Casework sinks and fittings are in fair condition; none of those viewed were accessible. The art room sink drain includes what appears to be a neutralizing basin. Accessibility and fixture counts for students and staff require review.



Restroom



Hanging urinals

Natural Gas Service

The gas service enters the boiler room through a utility tunnel from the meter assembly on the west exterior wall and fed from Main Street. A dedicated, submetered line directly feeds the domestic water heater and the main feeds the gas-fired steam boiler. Gas piping is in very good condition.

Sanitary, Waste and Vent Systems

The exact location of building sanitary exit(s) could not be determined by this survey. Cast iron piping, visible in the boiler room, custodial closets and crawl space appears to be original to the building and is in fair to good condition. An inoperable sump pump and basin are buried in the northwest corner of the boiler room; exact below-slab piping connections could not be determined. Below casework fixture copper drainage piping is in fair condition, there is some non-code-compliant PVC sink drainage piping.

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Building Storm Drainage

The location of building interior storm exit(s) could not be determined by this survey. Visible cast iron piping is in fair to good condition, insulation on interior storm piping was not noted. Exterior cast iron downspouts appear to be recent replacements and are in excellent condition.

General Condition

The building plumbing systems are in fair to good condition overall and, according to staff, there have been no recent major problems.

FIRE PROTECTION

There is no water-based fire protection within the building.

DATA/COMMUNICATION, TECHNOLOGY

Mystic School is not equipped with a significant amount of technology. There is a Lucent PBX being used by the Daycare provider using some of the space. The writer assumes that this system is owned by the user and not school property. There are some intercom components in a few areas which are antiquated and non-functional. Any future project should include an upgrade of the phone system to the district standard NEC VoIP and a replacement of the intercom system.

Distribution cabling is Category 5 and 3. Distribution of cabling is achieved with wall mounted racks and patch panels. A significant amount of the cabling has been run exposed. Any future project should include an upgrade of all cabling to the current TAI/EIA standard at the time.

There is no site or exterior video surveillance. There is an alarm keypad at the entrance. The alarm system is DMP Security Command Executive. Any future project should include an integrated security system inclusive of building and site surveillance, intrusion detection and access control.



2.7 | Parkhurst Elementary School

Landscape Architecture

Civil Architecture

Architecture

Structural Engineering

Mechanical Engineering

Electrical Engineering

Plumbing Engineering

Fire Protection

Data/Communications

Section 2 | Parkhurst Elementary School Existing Conditions



Unofficial Property Record Card - Winchester, MA
General Property Data

Parcel ID **21 104 0**
 Prior Parcel ID **-**
 Property Owner **PARKHURST SCHOOL**
 Mailing Address **32 EMERSON RD**
 City **WINCHESTER**
 Mailing State **MA** Zip **01890**
 ParcelZoning **SCI**

Account Number
 Property Location **40 SAMOSET RD**
 Property Use **PSCHOOL**
 Most Recent Sale Date **2/6/1983**
 Legal Reference **N/A**
 Grantor **LEWIS PARKH**
 Sale Price **0**
 Land Area **4.110 acres**

Current Property Assessment

Card 1 Value Building Value **7,325,000** Xtra Features Value **9,400** Land Value **411,000** Total Value **7,745,400**

Building Description

Building Style **SCHOOL**
 # of Living Units **1**
 Year Built **1950**
 Building Grade **VERY GOOD**
 Building Condition **Fair**
 Finished Area (SF) **25008**
 Number Rooms **14**
 # of 3/4 Baths **0**

Foundation Type **BRK/STN**
 Frame Type **WOOD**
 Roof Structure **HIP**
 Roof Cover **ASPHALT**
 Siding **BRICK**
 Interior Walls **PLASTER**
 # of Bedrooms **0**
 # of 1/2 Baths **5**

Flooring Type **LINO/VINYL**
 Basement Floor **N/A**
 Heating Type **STEAM**
 Heating Fuel **OIL**
 Air Conditioning **0%**
 # of Bsmt Garages **0**
 # of Full Baths **0**
 # of Other Fixtures **10**

Legal Description

Narrative Description of Property

This property contains 4.110 acres of land mainly classified as PSCHOOL with a(n) SCHOOL style building, built about 1950, having BRICK exterior and ASPHALT roof cover, with 1 unit(s), 14 room(s), 0 bedroom(s), 0 bath(s), 5 half bath(s).










Property Images



Disclaimer: This information is believed to be correct but is subject to change and is not warranted.

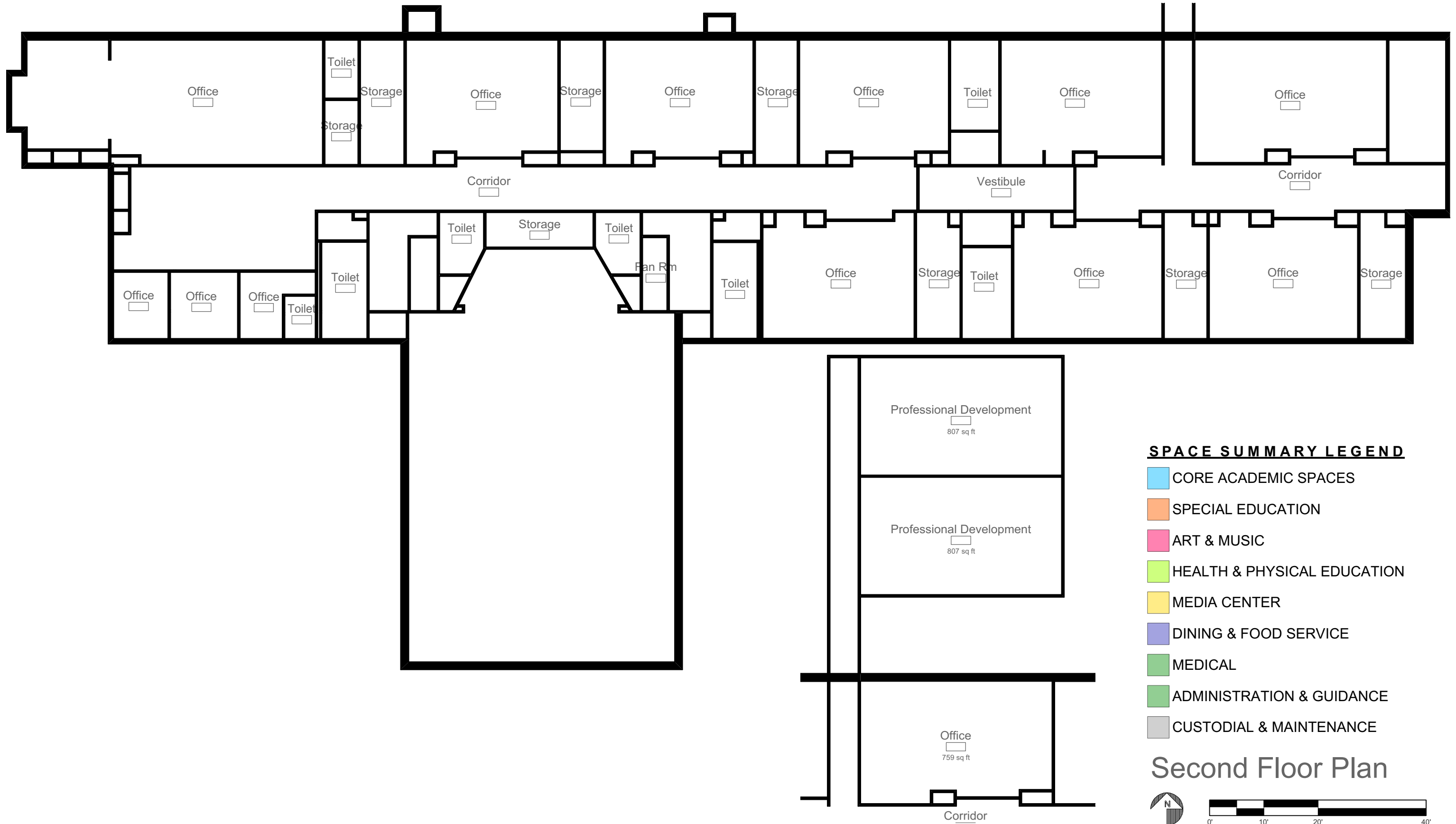


SPACE SUMMARY LEGEND

-  CORE ACADEMIC SPACES
-  SPECIAL EDUCATION
-  ART & MUSIC
-  HEALTH & PHYSICAL EDUCATION
-  MEDIA CENTER
-  DINING & FOOD SERVICE
-  MEDICAL
-  ADMINISTRATION & GUIDANCE
-  CUSTODIAL & MAINTENANCE

First Floor Plan





SPACE SUMMARY			
Room Type	Room NFA	# of Rooms	Area Total
CORE ACADEMIC SPACES			
0	0	0	0
SPECIAL EDUCATION			
0	0	0	0
ART & MUSIC			
0	0	0	0
VOCATIONS & TECHNOLOGY			
0	0	0	0
HEALTH & PHYSICAL EDUCATION			
0	0	0	0
MEDIA CENTER			
0	0	0	0
DINING & FOOD SERVICE			
0	0	0	0
MEDICAL			
0	0	0	0
ADMINISTRATION & GUIDANCE			
0	0	0	0
CUSTODIAL & MAINTENANCE			
0	0	0	0
OTHER			
58	58	27914	58
Corridor	311	1	1
Storage	805	1	1
Toilet	146	1	1
Passage	306	1	1
Storage	300	1	1
Storage	370	1	1
Storage	956	1	1
Storage	794	1	1
Toilet	94	1	1
Storage	601	1	1
Corridor	1785	1	1
Storage	865	1	1
Storage	948	1	1
Custodial	640	1	1
Boiler Room	534	1	1
Toilet	136	1	1
Stage	463	1	1
Gymnasium	3011	1	1
Storage	654	1	1
Storage	603	1	1
Storage	173	1	1
Storage	177	1	1
Toilet	147	1	1
Toilet	67	1	1
Office	611	1	1
Storage	180	1	1
Office	586	1	1
Office	651	1	1
Corridor	755	1	1
Toilet	148	1	1
Office	588	1	1
Vestibule	229	1	1
Corridor	1629	1	1
Toilet	87	1	1
Toilet	87	1	1
Storage	127	1	1
Office	583	1	1
Storage	163	1	1
Office	599	1	1
Storage	186	1	1
Toilet	66	1	1
Office	1225	1	1
Office	124	1	1
Office	153	1	1
Office	121	1	1
Toilet	44	1	1
Toilet	145	1	1
Toilet	148	1	1
Storage	178	1	1
Fan Rm	61	1	1
Office	593	1	1
Office	759	1	1
Storage	177	1	1
Storage	185	1	1
Toilet	153	1	1
Storage	73	1	1
Professional Development	807	1	1
Professional Development	807	1	1
TOTAL BUILDING GROSS FLOOR AREA			
	2	37653	2
Floor 1		17925	1
Floor 1		19728	1

SPACE SUMMARY			
Room Type	Room NFA	# of Rooms	Area Total
CORE ACADEMIC SPACES			
0	0	0	0
SPECIAL EDUCATION			
0	0	0	0
ART & MUSIC			
0	0	0	0
VOCATIONS & TECHNOLOGY			
0	0	0	0
HEALTH & PHYSICAL EDUCATION			
0	0	0	0
MEDIA CENTER			
0	0	0	0
DINING & FOOD SERVICE			
0	0	0	0
MEDICAL			
0	0	0	0
ADMINISTRATION & GUIDANCE			
0	0	0	0
CUSTODIAL & MAINTENANCE			
0	0	0	0
OTHER			
12	12	27914	58
Boiler Room	534	1	1
Corridor	4480	4	4
Custodial	640	1	1
Fan Rm	61	1	1
Gymnasium	3011	1	1
Office	6593	12	12
Passage	306	1	1
Professional Development	1614	2	2
Stage	463	1	1
Storage	8515	20	20
Toilet	1468	13	13
Vestibule	229	1	1
TOTAL BUILDING GROSS FLOOR AREA			
	2	37653	2
Floor 1		17925	1
Floor 1		19728	1

LANDSCAPE ARCHITECTURE

General

The Parkhurst School is located on a steeply sloped hill within a residential neighborhood and sits adjacent to the Mount Pisgah conservation area. Mount Pisgah, also known as Andrews Hill, is the highest point in the Town of Winchester and portions of this site offer spectacular views to the Middlesex Fells and beyond.

The facility no longer functions as a school, but serves as the Central Administration building for the School Department, housing Human Resources, Special Ed, and offices of the Superintendent and Assistant Superintendent, among others. Approximately fourteen people work in the building. Professional Development classes are held after school, and Winchester School Committee meetings are held at night in the modular classrooms structure. The building recently served as a swing space while the Vinson-Owen School was being renovated. The bottom floor of the building is currently not used. A playing field and playground behind the building are used by the Recreation Department and by neighbors.

Vehicular Access & Circulation

There are two vehicular access points to the site. A drop-off loop and parking area are located off Andrews Road where circulation is one-way with separate entry and exit points. There is no signage at the entrance to the parking area but there is a sign identifying the building off Andrews Road. A steep driveway from Samoset Road leads uphill to the lower parking and service area. The sign here reads "Gym Access". There is no vehicular circulation around the building. In an emergency, an ambulance or fire truck would likely come to the Andrews Road loop.



Handicap parking at service area with pedestrian ramp to door



Drop-off at parking loop leading to modular classrooms doorway

Parking Location, Arrangement & Quantity

The main parking lot is incorporated into the one-way drop-off loop and includes 28 lined spaces and two handicap spaces, as required by MAAB. Spaces closest to the building entrance are signed for staff members or marked for handicap use. There is a marked cross-walk from the handicap spaces with a curb cut at the front path. The pavement is in reasonably good condition and the line paint is clear. A second area for parking is designated at the lower, service lot where there are two regular parking spaces and one handicap space. For larger events such as field games or night classes, cars often park along Andrews Road.

Pedestrian Circulation

Circulation into the site from the surrounding neighborhood is a challenge, due to the steep slopes. There are sidewalks on Samoset only to the intersection with Emerson Road and up Andrews Road only as far as the parking lot entrance. These are all in poor condition.

Although the lower level of the school facing Samoset Road is not currently used except for service, the service area connects to a second paved area via a narrow path around the gym. This second area once faced a series of schoolrooms and was used for outdoor exercise. The pedestrian way dead-ends at the north end of the building where slopes are too steep to fit a pathway.

Most of the pedestrian pavement is asphalt (bituminous concrete), and the drop-off loop has asphalt curbing. The walkways around the loop are in moderate to poor condition, with patching, cracks and degraded edges. This pavement extends along the west side of the building, connecting to the modular classrooms entrance and the play area where it dead-ends at the end of the modular classroom structure.

Pedestrian Accessibility & Code Compliance

The two primary entrances – the main door at the end of the building facing Andrews Street and the doorway to the modular classrooms– have both been made accessible, the first by ramping the asphalt path up to the concrete door stoop and the second, by use of a wooden ramp with steel handrails. The asphalt pavement leading from the drop-off loop to these two doorways is in variable condition. Some of it is patched and broken, and does not meet the requirements of a compliant walking surface. While Door #15, the service door, has an accessible concrete ramp, most other doorways (Doors #2-5 facing the drop-off loop, Doors #9-12 at the lower paved area, Doors #15 and 16 at the gym and service area) have at least one concrete step and high thresholds.



Pavement games on cracked asphalt by drop-off



Abandoned lower courtyard

There are three concrete curb cuts with ADA tiles that seem to have been recently installed around the curbed drop-off loop. While these are in good condition, the asphalt pavement around the concrete is settling and this differential creates a lip that makes the surface uneven and therefore, not to code.

The steep site makes movement from one area to another difficult. There is no accessible route from the lower parking level of the site to the upper parking level or from the upper parking level to the field level. The sidewalk starting at the Andrews parking lot and looping around Samoset Road is in poor condition and must follow the steep topography. There is no sidewalk or walkway leading into the fields from Andrews Road and access from the school requires walking across lawn to a set of concrete stairs, one of several on the site. With the exception of the stair closest to the main entry, there are no handrails at any of the exterior stairs, including the stairs to the gym.

The number of accessible parking spaces is adequate for the size of the parking lot. They are located and signed correctly and are in good condition. The play area with its uneven wood mulch surfacing is inaccessible and would require either a ramp down into the loose surfacing area or resilient surfacing paths to the structures.

Section 2 | Parkhurst Elementary School Existing Conditions



Lighting at modular classrooms



Playground



Worn turf



Healthy field turf contrasts with worn turf at sloping embankment

Service Areas

The service area, accessible from Samoset Road, has no loading dock. Pallets are dropped off on the pavement and supplies carried in through normal doorways. Small dumpsters are also serviced here. Trailers rarely deliver to this building. There is adequate room for vehicles to turn within the space and to drive out forward. The pavement and concrete retaining wall are in good condition.

Courtyards/Exterior Gathering Spaces

There are currently no visually appealing or truly functional outdoor gathering spaces at the site. The inaccessible, abandoned “lower courtyard” is paved with broken asphalt, but has potential as a “terrace” with great views to the Middlesex Fells if some of the adjacent vegetation is cleared and the doorways are made accessible.

On the west side of the building along the drop-off loop, there is potential to create a gathering space with access to the main building and Annex doorways, the play area and the parking lot. But this space is poorly paved and has no plantings or furnishings such as benches or other amenities. The surroundings include an unsightly, poorly-screened oil tank close to the play area.

Recreation Spaces

A playground is located behind the building, accessible by the asphalt sidewalk. Two fairly new structures by Playworld Systems offer age-appropriate play. For older children, there are overhead components and a shaded “hang-out” space; for younger children, a structure with slides, easy climbers and play panels. The surfacing is wood mulch and very uneven with

no containing edge. This area is used by children from the neighborhood and by younger children whose older siblings are using the field, but it does not get much use.

There is a basketball pole nearby but the surrounding pavement is cracked and buckled.

The playing field, adjacent to and roughly four and a half feet in elevation above the playground and parking area, includes a skinned softball infield, the infield area of dirt, and backstop. The Recreation Department uses this field for softball, soccer, T-ball and archery, but it is not extensively used. Access to the field is either from along Andrews Road, a dead-end street which has no sidewalk, or via the concrete steps behind the playground. There is no pathway to these steps. The backstop is in good condition but the bench is a wooden, make-shift model. The infield was full of dead weeds on the day of our visit, but maybe had not yet been maintained for the season. It's unclear whether the right field space is adequate for league play as the edges of the field slope steeply up to the adjacent conservation land. There are several catch basins in back of the left field line along the top of the embankment. The "abandoned" pavement outside the first level of the school shows signs of having once been used for activities, primarily pavement games and tetherball. This entire area is in very poor condition and lacks code-compliant access.

Site Lighting

The main parking lot and adjacent play area are lit by floodlights mounted on utility poles. The field is un-lit. Building-mounted lights are located on the façade of the Annex structure.

Site Furnishings

There are few furnishings on this site. They are limited to the flagpole, located halfway up the slope along Andrew's Road, an identifying sign (illustrated above under "Vehicular Access"), a wooden players' bench at the softball backstop and chain link fencing along the paved service and "courtyard" spaces outside the building's first floor. There are no other benches, nor are there trash receptacles or bike racks on the site.

Trees, Planting & Other Vegetation

There are a number of impressive mature pines and shade trees along the slopes on the east side of this site, all of which are in need of pruning. While trees are dotted along the slope at the south end of the building (by the main entrance), they are clustered more heavily along the edges of the first floor paved spaces, just outside the chain link fence. Several of the larger trees are dead and at least one has already fallen over. The over-growth surrounding the trees on the slopes that face Emerson Road is badly in need of maintenance. Erosion on these steep slopes is kept in check by the dense planting, but there are half-fallen trees and other detritus (including an abandoned concrete stairway) in this area. In contrast to the east side of the building, the west side has no trees at all. With the exception of a couple of evergreen shrubs by the main doorway, there are no foundation plantings anywhere around the building.

The lawns are in variable condition with some erosion along the steeper slopes. Turf at the playing field is in reasonably good condition.

CIVIL ENGINEERING

General Site Conditions

The site is located at the top of a hill with the play fields located behind the building. The grass in the playfield area is in good condition although the grading in the field appears somewhat uneven. The play structure appears current but there is no defined edge or curbing to the play structure area and the surface is primarily a mix of stone, dirt and mulch.

There are signs of water damage along the base of the modular classrooms, possibly the result of accumulation of leaves not allowing for water to flow away from the structure. A large above-grade steel oil tank sits adjacent to the modular classrooms. The tank was behind a chain link fence but there were no bollards protecting the tank from vehicles.

There are no flood plains on the site and there does not appear to be any wetland resource areas within 200 feet of the site. The site fencing is in poor conditions and many of the large trees on the site have visible damage and appear to be in decline.

Parking and Circulation

The primary parking area is accessed off of Andrews Road with a small semi-circular drive with some striped parking along the sides. The pavement in the parking area is in good condition and there is one light in the parking lot. Portions of the rear of the site appear to have been recently repaved. Paving in the remainder of the site is in generally poor condition with extensive cracking and numerous patching. Concrete curb cuts have been installed in several locations to provide an accessible path from the parking area to the school.

Utilities

There is a closed drainage system on site that serves the rear of the school and the main parking area and includes a large sub-surface infiltration area under the parking lot. The roof drains at the rear of the school are tied into this system. Roof drains for the rest of school generally consist of downspouts discharging at grade. The school is tied into the town's sanitary sewer system and there is no external grease trap.

ARCHITECTURE

Organization

The Parkhurst School was built in the late 1940s and is approximately 25,800 square feet. The building currently houses the School Department Central Office at the main level within existing classroom configurations. It was recently upgraded with accessible hardware, signage and repainting when it was used as swing space for the Vinson Owen school project.

Circulation

The building is two levels. The main school classroom level and a basement level housing the auditorium/gym and a few classroom spaces. There is no elevator to the lower level and the lower level is now used only for storage.

Program and Space Issues

There are 9 classroom spaces at the upper level including two classrooms in a modular addition, and three original classrooms at the lower level, of approximately 700 square feet. The two classroom, modular addition is currently used for conference rooms. Comparisons with current MSBA space standards indicate that classrooms and core academic spaces are undersized. See the chart below.

	Parkhurst Elementary*	MSBA Standards
Classroom	600 square feet	950 square feet
Music	950 square feet	1,200 square feet
Library	1,225 square feet	2,020 square feet
Art	950 square feet	1,000 square feet
Gymnasium	3,011 square feet	6,000 square feet

* Only if school becomes accessible

Physical Conditions of Exterior Envelope - Walls

The building is faced with red brick with cast stone window sills and has a low slope gabled roof. The large steel window units have been modified with plywood and plaster panels used to cover original existing glass block sections. The envelope appears to be in good condition considering the age of the structure. The modular addition at the north side of the school is wrapped with vinyl siding and appears to be in good condition. See the charts below.

<i>Representative R-Values</i>	
12" Brick	1.17
3/8" Air Space	1.01
1/2" Plaster	0.32
TOTAL R-VALUE	2.50
<i>1940s: 12" exterior brick, plaster walls</i>	

<i>Typical Exterior Walls - Today's Minimum Requirements</i>	
Face Brick	0.39
Air Space	2.02
Air & Vapor Barrier	0.15
1/2" Gypsum Sheathing	0.45
Insulation	22.00
Vapor Barrier	0.15
Interior Gypsum Board	0.45
TOTAL R-VALUE	25.61
WINDOW TRIPLE PANE R-VALUE	5.00

Physical Conditions of Exterior Envelope - Windows

The metal windows are all original. Most of the windows are of the type that have a large glass block upper section with venting lower sections. Most of the glass block areas have been covered over, however the units in the rear of the school are not covered and many of the glass blocks are damaged. Other than the lack of energy efficiency, the windows appear to be functioning properly.

Physical Conditions of Exterior Envelope - Roof

The roofing is currently rubber membrane on a sloping surface. The roof edge has been damaged at the auditorium section. The gutter, edge and trim have been ripped open. This is something that should be addressed right away to prevent water infiltration into the building. The rubber membrane replaced asphalt shingles. The rubber does not hold snow the way asphalt does and it appears that ice dams and icicles formed on these edges during the winter are responsible for the damage at the auditorium roof edge. The copper downspouts have been replaced with PVC pipe. See the charts below.

<i>Parkhurst Existing Roof Condition</i>	
Asphalt Shingles	0.40
Fiberglass Insulation	13.00
Structure/Ceiling	5.00
TOTAL R-VALUE	12.40

<i>Roof Construction - Today's Minimum Standard</i>	
Rubber/PVC	0.40
4" Polyisocyanurate	30.00
Structure/Ceiling	5.00
TOTAL R-VALUE	35.40

Interior

Finishes are well suited for school use and are well maintained. There was a minor renovation recently when the school was used for swing space for the Vinson-Owen project. Light quality varies throughout the building and is generally good, but could be improved.

Interior Partitions

In general, all interior partitions appear to be in good condition. The partitions are plaster with some areas of drywall and all original wood trim.

In a renovation, to accommodate new electrical, plumbing and technology systems the plaster and drywall walls could be cut open. All walls should have acoustical batt insulation to improve acoustical performance.

Flooring

The floors are all covered with carpet, except in the toilet areas which are terrazzo. They are generally in good condition.

Wall Base

The majority of the wall base is wood of various sizes, although some recent renovation work has installed vinyl base. All base material appears to be in good condition.

Ceilings

The ceiling types vary, but the majority of the ceilings are 12x12 acoustical tiles secured in place with wood battens. Some spaces have plaster ceilings.

Doors and Frames

Doors and frames vary in size and type both in metal and wood. The conditions are good and all have been upgraded to lever hardware.

Fire Extinguishers

All fire extinguishers appear to be operational and certified.

Tackboards and Makerboards

All boards appear to be in good condition. Fire code regulations do not allow for tackboards to be within 5 feet of egress doors.

Regulations

The existing facility as a whole is in compliance with the original code, however, this does not mean it meets every standard of the current code. In accordance with the current code, an existing building is presumed to have met the codes and regulations in effect at the time of its construction and is allowed to continue in its use, provided it is maintained per the original code. Current building codes are applicable to any alteration or addition or change in use of the structure in accordance with 780 CMR 34.



Typical flooring in school hallways



Handicap accessibility ramp

Section 2 | Parkhurst Elementary School Existing Conditions



Recently repaved parking lot



Signs of water damage along the base of the modulars



Steel oil tank adjacent to modulars



Classroom chalkboards

Code Classification 780 CMR 302.1

The occupancy of the facility is non-separated mixed use with assembly and educational uses as follows:

Classrooms, Offices	E-Educational
Auditorium	A3-Assemble

Construction Classification

Based upon the definitions in the current code, the minimum classification of the building is as follows:

1940s (Original)	3B Noncombustible
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Chapter 34: Repair, Alteration, Addition and Change of Use of Existing Buildings

A renovation project is governed by Chapter 34. This chapter is "intended to maintain or increase public safety, health, and general welfare, without requiring full compliance with the code for new construction."

- i. Building renovation – For continuation of the same use groups the building shall comply with 780 CMR 3404.0.
- ii. New Building Systems – Any new building system or portion thereof shall conform to 780 CMR for new construction to the fullest extent practical.
- iii. Alterations and Repairs – Alterations of repairs to existing buildings, which maintain or improve the performance of the building may be made with like material, unless required otherwise under 780 CMR 3408 – Structural Requirements for Existing Buildings.

- iv. Number of Means of Egress – Egress for the existing facility is sufficient in accordance with the current building code.
- v. Capacity of Exits – There is sufficient egress capacity to meet current codes at the doors throughout the facility.
- vi. Length of Access Travel – Shall not exceed 200 feet, in building without a sprinkler system. All areas of the existing building are within 200 feet of an exit.
- vii. Exit Signs and Lights – For notes on the existing system, refer to the Electrical Existing Conditions Report.
- viii. Means of Egress Lighting – Refer to the Electrical Existing Conditions Report.
- ix. Height and Area Limitations – Under Chapter 34, the building is in conformance with applicable height and area limitations, so long as there is no change in use. Additions may be made to the structure.
- x. Fire Protection Systems – Fire protections systems must be provided for existing building that are “substantially” altered or “substantially” renovated where required for the specific use group.
- xi. Enclosure of Stairways – open egress stairways are prohibited. There shall be no minimum fire resistance rating required for an existing enclosure of a stairway.
- xii. Assembly Use Groups – Any alteration within an assembly use group shall comply with the code for new construction. This applies to the cafeteria, auditorium and gymnasium
- xiii. Accessibility for Persons with Disabilities – Accessibility for persons with disabilities shall be provided in accordance with the regulations of the Architectural Access Board.
- xiv. Energy Provisions for Existing Buildings – Alterations to components affecting energy conservation performance shall comply with 780 CMR 13 generally, and 780 CMR 1304.2 or 780 CMR 1304.5 or 780 CMR 1309 specifically. Existing components may remain.
- xv. Evaluation of Existing Building – The structural engineer shall make a structural evaluation of the existing building to determine the adequacy of all structural systems that are affected by alteration or damage to be repaired.
- xvi. Existing Lateral Load Capacity (Refer to Structural Existing Conditions Report for further information) – Alterations shall not be make to elements or systems contributing to the lateral load resistance unless the altered lateral load resisting system conforms to 780 CMR 1611.0 and 1612.0; or there is no reduction in the lateral capacity to the building as a whole. Existing elements of systems may be reinforced or replaced with new elements or systems of equivalent strength and stiffness.
- xvii. Earthquake Loads (Refer to Structural Existing Conditions Report for further information) – For no change in use groups, but alterations exceeding 50% of the assessed valuation of the building, the project is defined as Seismic Hazard Category 2.
- xviii. Earthquake resistance shall comply with the requirements of 780 CMR 3408.3.5
- xix. The provisions of 780 CMR 34 govern Fire Resistant Materials – Fire resistance construction systems.

Interior Finishes 780 CMR 8

Interior trim and finishes altered as a part of a renovation shall conform to the requirements of 780 CMR 801. Flame spread of Interior Finishes for the E and A-3 use Groups, shall conform to Table 803.4. Existing finishes are code compliant.

The State Fire Marshall introduced regulations in 2003 restricting display of paper in egress areas. The provisions are as follows:

- i. Paper display in classrooms shall not exceed 20% of the wall area. Measurement of wall area shall include windows and doors.
- ii. Paper display in corridors shall not exceed 10% of the wall area and shall not be placed within 5 feet of an egress door. It shall be applied directly to the wall and shall not be grouped in areas bigger than 6 feet by 12 feet.

Handicap Accessibility

Some improvements have been made over the years to comply with the Massachusetts Architectural Access Board (MAAB) regulations. For the most part the building is not in compliance with the accessibility code. The regulations require that any building undergoing a renovation where the costs exceed 30% of its assessed value must comply with the requirements of the MAAB. It is anticipated that renovation costs will exceed the 30% assessed value and would require the building to be brought up to full compliance with MAAB.

STRUCTURAL ENGINEERING

The Parkhurst School is currently used for School Administration. The building is a one story brick building, with a gable roof, built into the side of a hill. The building reportedly dates from the 1940's. Outside grade is at the first floor level on the west and south elevations, dropping sharply to the east. On the east side, there is a 2 story high auditorium at the basement level. The auditorium seems to be used for storage now due to accessibility issues.

The first floor is framed with 4x14 wood joists in the classroom areas, and 2x14 joists in the corridor. The floor framing appears adequate for classroom and business use. The roof is likely framed with wood rafters or trusses. Structurally, the building appears to be in good condition.

There are modular classrooms on the west side. They also appear in good condition, with some wear on the corridor floor.

The building has been re-roofed with an EPDM roof on all the gable roofs. This has created a problem on the auditorium roof where sliding snow has ripped off the gutter. This is likely to happen at other locations as well, as the smooth EPDM offers no resistance to sliding snow. The damaged roof area should be repaired to prevent damage from wind lifting the membrane.

MECHANICAL ENGINEERING

Heating Plant

The boiler room is located on the lower level and of which the boiler room is depressed lower (+/- 8 feet) thus making the boiler room double-height. A single HB Smith 10-section model 450 Mills cast iron sectional boiler serves the building. The boiler is gas-fired and produces low-pressure steam to heat the building. The boiler is of indeterminate age but appears to be over 40 years old. The boiler burner is an Industrial Combustion gas-fired model (of which had its motor replaced recently) and appears to be 20 to 30 years old. Both units are approaching, if not exceeding, the average service life expectancy. The boiler is vented into the masonry stack with fairly new breeching. We speculate that the original system was abated of asbestos and replaced. The boiler is served with a duplex condensate receiver/pump unit of indeterminate age. It has been reported that the boiler is manually operated and does not use the outdoor air temperature to automatically actuate the building heating plant. It is noted that a fairly new, above-ground double-walled fuel oil storage tank (approximately 5000 gallons) has been locate adjacent to the modular building extension. It has been reported that the system was never filled with heating oil and, since the boiler is gas-fired, its purpose for being at the site is unknown.

Air Systems

The only central air handling system serves the gym. This system was not operational at the time of the survey. This system is located in the back of the gym, elevated above the ceiling. The gym is also served with recessed cabinet unit heaters located around the perimeter. The rest of the building is served with console unit ventilators. These units are +/- 50 years old and are past the expected average service life. The Unit Ventilators appear to be operable but the models present in the building are no longer being manufactured and spare parts would be increasing more difficult to acquire. Centralized ducted exhaust systems serve the classrooms and bathrooms the roof mounted exhaust fans are objectionably noisy from both the interior and exterior of the building. A two-classroom modular building is attached to the school. These classrooms are conditioned using self-contained, exterior wall-hung gas-fired HVAC units of which are ducted in the ceiling cavity serving these spaces. The modular building extension appears to be less than 5 years old and is in good operational condition.

Piping Systems

The steam piping system is insulated steel and is routed throughout the building where a good deal of the condensate return system is located in a crawlspace off of the boiler room. This piping may be original to the building (1940's vintage) but has probably been replaced/repaired/modified during the history of the building. There were no reported leaks or issues with this piping but it should be regarded as past its average expected service life. Cast iron radiators and convectors serve the building spaces with some of the protective enclosures missing and some of these units disconnected completely.

Air Conditioning

The building perimeter has wall-mounted air conditioners in most of the spaces. These residential units include localized manual controls. The building is presently used as an administration building where the school administration offices populate the building. The modular building extension includes self-contained air conditioning units that also provide the building heat. These units include modern programmable thermostats enabling precise temperature control of these spaces. The school department IT server system appears to be located in one of the lower level spaces (former classroom) and it was not determined if the space overheats due to this equipment since no air-conditioning systems were observed serving this space.

ELECTRICAL ENGINEERING

Main Electric Services

One main electric service to the modular classroom spaces is rated 120/240V, 200A, single-phase, three-wire. The service load center for the modular classroom spaces is manufactured by Cutler-Hammer. Eversource electric services appear to originate from Eversource street pole number 345/2 along Andrews Road. The service route is overhead from the street pole to a main service mast mounted to the modular classroom structure. The second service (original) is installed underground from Eversource street pole number 345/1 along Andrews Road to the main electric service located in the lower level of the main school building. The second (original) service is rated 120/240V, 400A, single-phase, three-wire. The quantity of pole service conductors and panel board nameplates throughout the school indicate single-phase service, but the main (original) service disconnect nameplate indicates three-phase. Based on the Eversource electric meter (base building, not portable classrooms) number 5058162 and the metering nameplate multiplier of 40, the maximum demand recorded on the date of survey is 19.2 kW. The school appears to be used only for administrative purposes at the time of survey and is not employed for school functions other than the periodic school committee meetings.

Emergency Electric Services

The school does not include an emergency generator. Emergency lighting throughout the school appears to be provided by local battery pack luminaires. Multiple manufacturers appear to be used for these luminaires. Many exit signs also appear to include battery backup.



Modular classrooms



Generator for modular classrooms

Fire Alarm

The fire alarm system is manufactured by Mircom, Model FX-2000. The panel also supports the fire alarm devices and functions in the modular classrooms. The fire alarm system includes full, but limited, smoke and heat detection coverage throughout the school, since no fire protection systems appears evident. Manual initiation and notification devices are installed throughout the school and at most egresses. Individual classroom egresses do not include manual initiation devices at exterior egress doors. The fire alarm appears to be connected to a Digitize panel (#15) assumed to signal the local fire department. There is a red fire alarm beacon located outside the school main entrance.

Lighting and Lighting Controls

Luminaires, primarily fluorescent with a few incandescent, appear to be very old in most locations throughout the school. Occupancy sensors are located in many administrative and classroom areas. Gymnasium lighting is manually controlled. Exterior lighting appears minimal. No emergency lighting was observed at exterior of building egresses.

Clock System

There appears to be a functional central clock system in the school. The main clock control panel was not identified during survey.

Audio-Visual (AV)

There is no AV equipment in any classrooms or function rooms in the original school spaces. One of the portable classrooms includes three cameras and sound equipment for public cable television access to the school committee meetings.

Telephones

There was no staff to confirm type of operation, but telephones appear to be integrated services digital network (ISDN) based on observed communications circuiting and research of WIN Communications Corporation. Communications appears to be connected to Eversource street pole number 345/2 along Andrews Road for the portable classrooms and Verizon street pole number 11 along Emerson Road.

Security

Access control is provided with the use of Security Command products and hardware and appears operational based on occupant feedback. Unless well hidden, security cameras were not observed. Building entrances do not appear to include alarm status indications, but motion sensor devices are strategically located within the school. There was one access control keypad observed at the main entrance door.

IT Network

The main distribution frame (MDF) was located in the lower level, adjacent to the main (original) electric service equipment, and not ventilated adequately for this type of equipment. Wireless access points (WAP) were not observed. Other than communications network distribution, there did not appear to be any data network distribution, or limited at best.

General Conditions

Electrical code clearances and proximity to non-electric systems and components is not met in many locations. Storage of supplies and debris is impeding access to electrical panel boards in many locations throughout the school.

There did not appear to be any sign of main electric service equipment testing.

Very few battery backup luminaires in the base building and the modular classrooms operated when the test switch was activated.

Spaces associated with daycare, preschool, kindergarten and early childhood education are required to include tamper proof receptacles and none were observed anywhere in the school. Receptacle safety inserts do not meet this requirement.

Exterior egress luminaires do not appear supported with a backup source.

Many sink locations do not include a ground-fault protection receptacle. There were no receptacles at these locations.

There are inadequate quantities of convenience receptacles throughout the school.

There was no record of fire alarm testing observed.

Smoke detection appeared to be limited only to common corridor areas. Full smoke detection coverage is required for buildings with no fire protection system.

Main electric service grounding electrode conductor did not appear to be connected at the main water entrance. It appeared to be connected to local building water pipe distribution.

PLUMBING ENGINEERING

Domestic Water System

The buried 3 inch service indicated on the original design drawings (1942) was not accessible at the time of our visit. The line, assumed to be connected to the main in Emerson Road, enters the boiler room through a utility tunnel from the east. The condition of existing iron and copper water piping inside the boiler room is fair considering its age. Some copper piping appears to have been repaired or replaced. Insulation condition, where visible, varies with age and is showing signs of wear.

Domestic Hot Water Plant

The entire building is served by a 60 gallon, gas-fired storage heater with a manufacture date of May 2011. There is a circulator pump and a master mixing valve on the system. Hot water delivery at remote fixtures is adequate.

Plumbing Fixtures and Fittings

Toilet room plumbing fixtures and trim are generally in fair to good condition, accessible fixtures were noted in recently renovated toilet rooms (2011). Casework sinks and fittings are in fair condition; none of those viewed were accessible. Accessibility and fixture counts for students and staff require review.

Natural Gas Service

The gas service enters the boiler room from the meter assembly directly outside the boiler room on the west exterior wall; the main appears to be in Andrews Road. The main line feeds the boiler and the domestic water heater; a 1-1/2 inch branch run on the building exterior to feed an exterior, wall unit on the temporary classrooms. Gas piping is in good condition.

Sanitary, Waste and Vent Systems

The exact location of building sanitary exit(s) could not be determined by this survey. Cast iron piping, visible in the Boiler Room and utility tunnel, appears to be original to the building and is in fair to good condition. A sump pump and basin are buried in the corner of the Boiler Room; exact below-slab piping connections could not be determined. Below casework fixture copper drainage piping is in fair condition, there is some non-code compliant PVC sink drainage piping.

Building Storm Drainage

The location of building interior storm exit(s) could not be determined by this survey. Visible cast iron piping is in fair to good condition, insulation on interior storm piping was not noted. Exterior downspouts appear to be recent replacements and are fabricated with PVC electrical conduit.

General Condition

The building plumbing systems are in fair to good condition overall and, according to staff, there have been no recent major problems.

FIRE PROTECTION

There is no water-based fire protection within the building.

DATA/COMMUNICATIONS, TECHNOLOGY

Parkhurst is currently being used as District Offices. It is equipped with a new NEC 8300 VoIP phone systems. The system is redundant to the new system at Vinson Owen Elementary School. There are IP handset at all desk locations. There is an antiquated Simplex intercom system that does not appear to be in working order. Sapling clocks are in working order but do not appear to be synchronized. Any future project should include a replacement of the intercom system.

Distribution of cabling is achieved with a free standing rack and patch panels in the basement. Cabling is Category 5 and 3. A significant amount of the cabling has been run exposed. There are typically either two or three data jacks in the general vicinity of each workspace location. Any future project should include an upgrade of all cabling to the current TAI/EIA standard at the time.

There is no site or exterior video surveillance. There is an access control system and an alarm keypad at the entrance. The alarm system is DMP Security Command Executive. Any future project should include an integrated security system inclusive of building and site surveillance, intrusion detection and access control.

Section 3 | Enrollments Projections

WINCHESTER PUBLIC SCHOOLS

Fifteen Year Enrollment History & Five/Ten Year Projections

Prepared: October 15, 2015

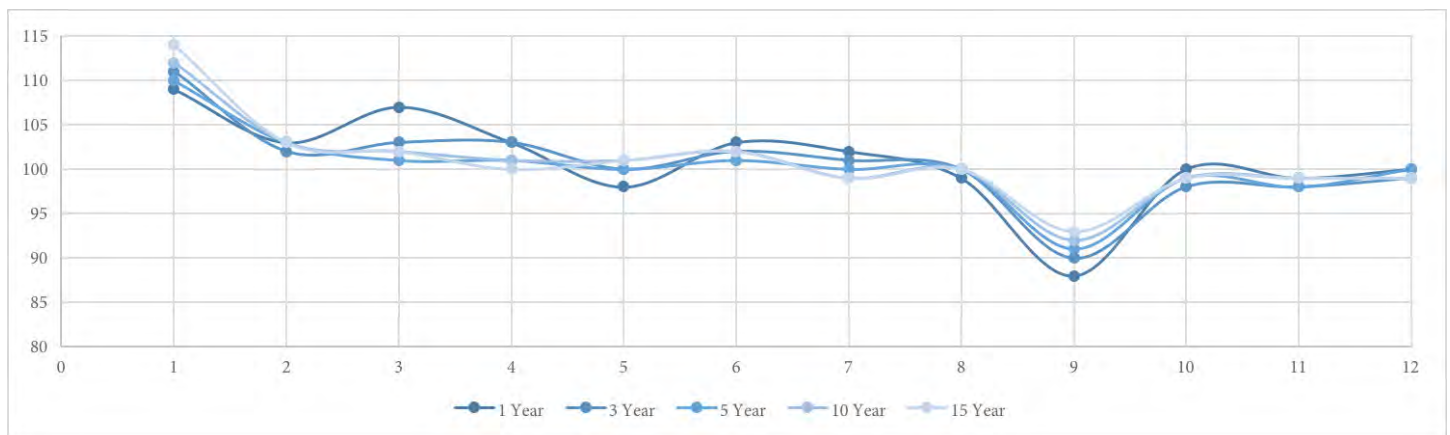
Census Projection Model for Kindergarten Projections

Year	K	1	2	3	4	5	6	7	8	9	10	11	12	Total	9-12	6-8	K-5
2001-02	243	285	268	277	280	280	311	270	258	230	227	229	220	3378	906	839	1633
2002-03	252	282	301	268	276	285	285	308	274	239	227	231	220	3448	917	867	1664
2003-04	274	298	286	311	266	281	282	278	308	272	233	213	222	3524	940	868	1716
2004-05	270	326	300	286	302	262	290	279	280	305	267	234	205	3606	1011	849	1746
2005-06	307	306	336	313	288	311	267	295	282	264	294	264	234	3761	1056	844	1861
2006-07	289	349	314	346	310	294	315	266	294	275	266	296	258	3872	1095	875	1902
2007-08	259	324	357	318	345	309	309	309	271	282	276	266	277	3902	1101	889	1912
2008-09	314	310	331	364	320	356	318	306	315	264	280	270	267	4015	1081	939	1995
2009-10	298	368	335	345	381	324	368	308	310	280	256	270	266	4109	1072	986	2051
2010-11	345	336	371	352	330	379	325	361	307	274	282	255	279	4196	1090	993	2113
2011-12	331	378	351	372	351	337	374	316	357	284	275	274	259	4259	1092	1047	2120
2012-13	303	352	389	342	367	352	339	378	318	330	282	278	277	4307	1167	1035	2105
2013-14	324	338	358	391	354	371	359	335	377	392	319	271	268	4357	1150	1071	2136
2014-15	318	361	342	367	398	354	373	365	335	336	282	316	275	4422	1209	1073	2140
2015-16	328	347	373	365	377	391	363	381	362	294	335	279	315	4510	1223	1106	2181

1 Year Rate	109%	103%	107%	103%	98%	103%	102%	99%	88%	100%	99%	100%
3 Year Rate	111%	102%	103%	103%	100%	102%	101%	100%	90%	98%	98%	99%
5 Year Rate	110%	103%	101%	101%	100%	101%	100%	100%	91%	98%	98%	100%
10 Year Rate	112%	103%	102%	101%	101%	102%	99%	100%	92%	99%	99%	99%
15 Year Rate	114%	103%	102%	100%	101%	102%	99%	100%	93%	99%	99%	99%

Year	K	1	2	3	4	5	6	7	8	9	10	11	12	Total	9-12	6-8	K-5
2016-17	328	363	354	385	375	376	398	366	380	324	287	328	277	4541	1216	1143	2181
2017-18	325	363	371	366	395	374	383	401	365	340	317	281	326	4606	1264	1148	2194
2018-19	325	360	371	383	375	395	380	386	400	327	332	310	279	4622	1248	1166	2208
2019-20	325	360	367	383	393	375	401	384	384	358	319	325	308	4682	1310	1169	2202
2020-21	325	360	367	379	393	392	381	405	382	344	350	313	323	4714	1330	1168	2216
2021-22	325	360	367	379	389	392	399	384	403	342	336	343	310	4730	1332	1186	2212
2022-23	325	360	367	379	389	388	399	402	383	361	334	330	340	4758	1365	1184	2209
2023-24	325	360	367	379	389	388	395	402	401	343	353	328	327	4757	1350	1198	2209
2024-25	325	360	367	379	389	388	395	398	401	359	335	346	325	4768	1365	1194	2209
2025-26	325	360	367	379	389	388	395	398	397	359	350	328	343	4780	1381	1190	2209
Average	325	360	367	379	388	386	392	393	390	346	331	323	316	4696	1316	1175	2205
Inc./Dec.	-3	13	-6	14	11	-5	29	12	28	52	-4	44	1	186	93	69	24

WINCHESTER PUBLIC SCHOOLS Fifteen Year Enrollment History & Five/Ten Year Projections Prepared: October 15, 2015 Census Projection Model for Kindergarten Projections													
Year	1	2	3	4	5	6	7	8	9	10	11	12	Avg.
2001-02													
2002-03	116%	106%	100%	100%	102%	102%	99%	101%	93%	99%	102%	96%	2.07%
2003-04	118%	101%	103%	99%	102%	99%	98%	100%	99%	97%	94%	96%	2.20%
2004-05	119%	101%	100%	97%	98%	103%	99%	101%	99%	98%	100%	96%	2.33%
2005-06	113%	103%	104%	101%	103%	102%	102%	101%	94%	96%	99%	100%	4.30%
2006-07	114%	103%	103%	99%	102%	101%	100%	100%	98%	101%	101%	98%	2.95%
2007-08	112%	102%	101%	100%	100%	105%	98%	102%	96%	100%	100%	94%	0.77%
2008-09	120%	102%	102%	101%	103%	103%	99%	102%	97%	99%	98%	100%	2.90%
2009-10	117%	108%	104%	105%	101%	103%	97%	101%	89%	97%	96%	99%	2.34%
2010-11	113%	101%	105%	96%	99%	100%	98%	100%	88%	101%	100%	103%	2.12%
2011-12	110%	104%	100%	100%	102%	99%	97%	99%	93%	100%	97%	102%	1.50%
2012-13	106%	103%	97%	99%	100%	101%	101%	101%	92%	99%	101%	101%	1.13%
2013-14	112%	102%	101%	104%	101%	102%	99%	100%	92%	97%	96%	96%	1.16%
2014-15	111%	101%	103%	102%	100%	101%	102%	100%	89%	97%	99%	101%	1.49%
2015-16	109%	103%	107%	103%	98%	103%	102%	99%	88%	100%	99%	100%	1.99%
1 Year	109%	103%	107%	103%	98%	103%	102%	99%	88%	100%	99%	100%	1.99%
3 Years	111%	102%	103%	103%	100%	102%	101%	100%	90%	98%	98%	99%	1.55%
5 Years	110%	103%	101%	101%	100%	101%	100%	100%	91%	99%	98%	100%	1.45%
10 Years	112%	103%	102%	101%	101%	102%	99%	100%	92%	99%	99%	99%	1.84%
15 Years	114%	103%	102%	100%	101%	102%	99%	100%	93%	99%	99%	99%	2.09%

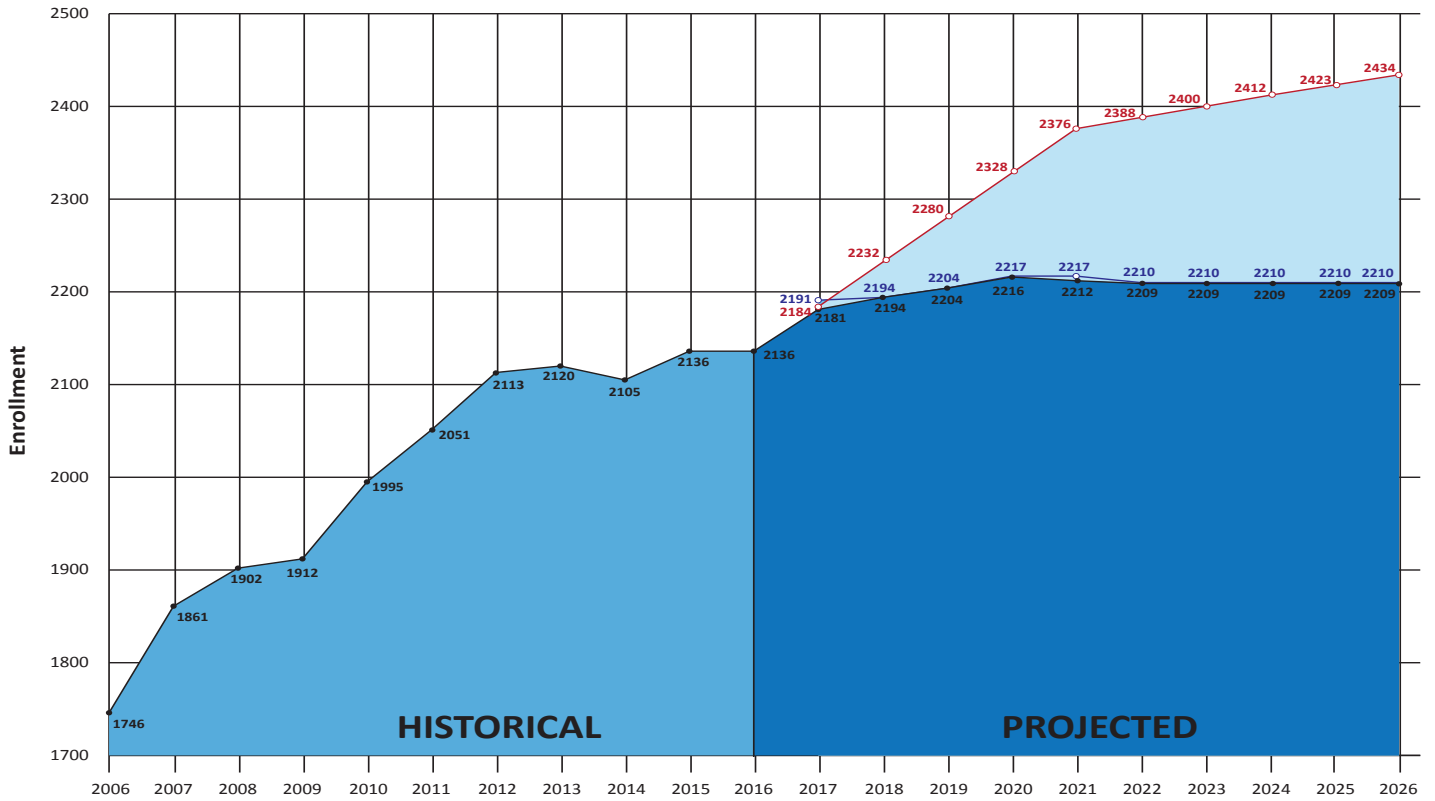


WINCHESTER PUBLIC SCHOOLS DISTRICT ENROLLMENT

Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	SP	Oth.	Tot.
Winchester Public	5	3	1	1	1	1	2	10	2	4	4	10	10	3	6	0	63
Lincoln Elem.	0	75	64	75	71	49	76	0	0	0	0	0	0	0	0	0	410
Lynch Elem.	89	76	86	63	87	72	76	0	0	0	0	0	0	0	0	0	549
Vison-Owen	0	48	64	67	87	82	74	0	0	0	0	0	0	0	0	0	422
Muraco Elem.	0	63	58	65	68	70	80	0	0	0	0	0	0	0	0	0	404
Ambrose Elem.	0	50	69	82	77	84	78	0	0	0	0	0	0	0	0	0	440
McCall Middle	0	0	0	0	0	0	0	387	365	382	0	0	0	0	0	0	1134
Winchester High	0	0	0	0	0	0	0	0	0	0	359	297	333	277	0	0	1266
Totals	94	315	342	353	391	358	386	397	367	386	363	307	343	280	6	0	4688

PREK	Existing 5 Classrooms at 94 students (FTE = 89) Proposed 5 Classrooms at 96 students (FTE=80)
GRADES K-5	Existing 106 classrooms at 2,136 students at 110 sections Currently 110 sections - 106 classrooms = 4 classrooms needed Proposed 113 classrooms at 2,217 students at 113 sections 2,717 proposed - 2,139 existing = 78 students at 3 classrooms Grades K-5 classroom needs = 113 proposed - 106 current = 7 classrooms needed
GRADES 6-8	Existing 52 classrooms at 1,150 students Proposed 56 classrooms at 1,232 students 56 proposed classrooms - 52 existing classrooms = 4 classrooms required
GRADES 9-12	Existing 1,292 students Proposed 1,370 students *New high school designed for 1,370 students

Grades K-5 Ten Year Projected Enrollments

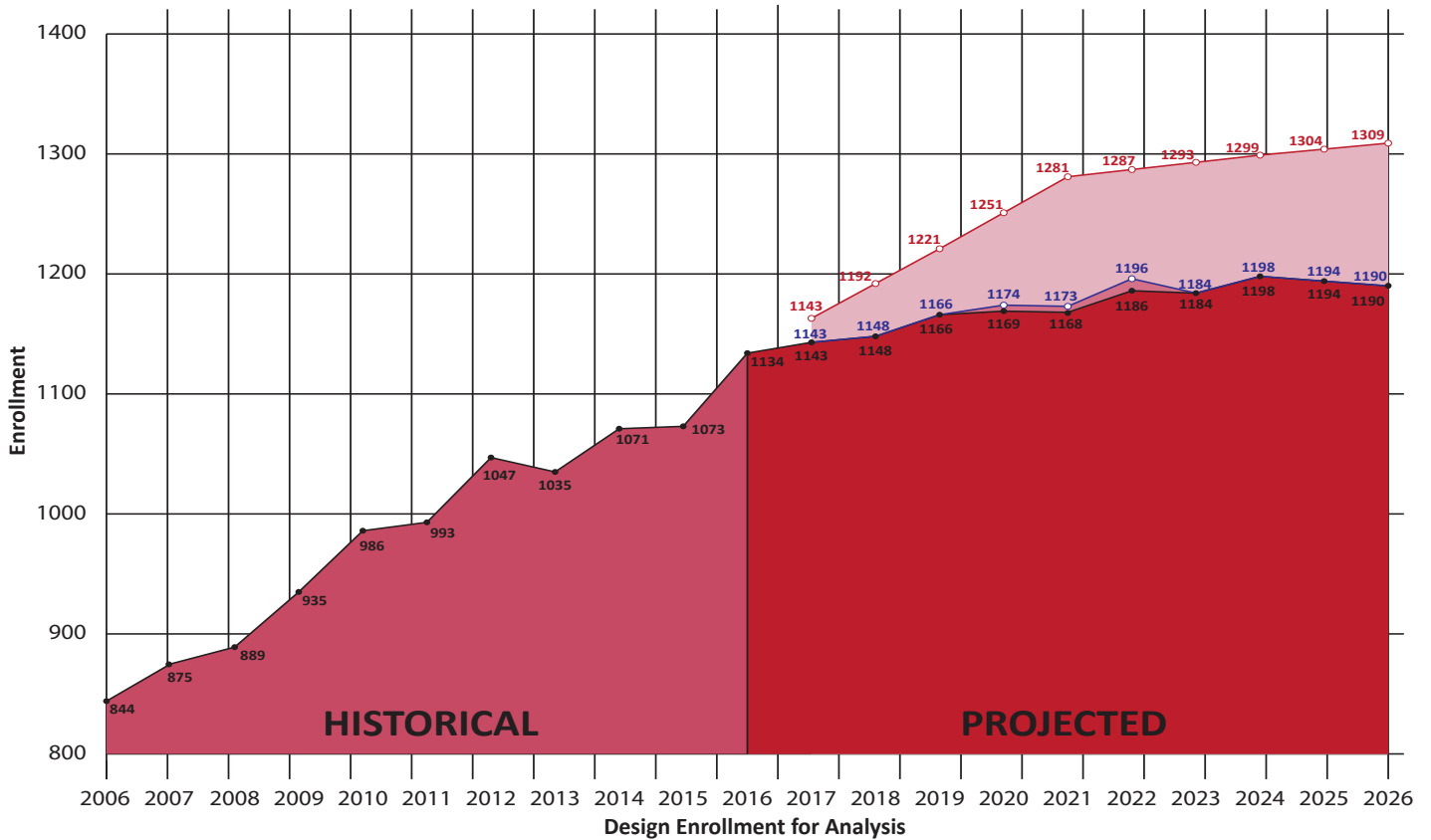


Design Enrollment for Analysis

2021-2022 School Year at 2,217 Elementary School Students

School Year	School Department	Growth with Developments School Dept. Numbers (2007)	Growth with Developments New Projected Numbers (2017)
2006	1746	-	-
2007	1861	-	-
2008	1902	-	-
2009	1912	-	-
2010	1995	-	-
2011	2051	-	-
2012	2113	-	-
2013	2120	-	-
2014	2105	-	-
2015	2136	-	-
2016	2136	-	-
2017	2181	2191	2184
2018	2194	2194	2232
2019	2204	2204	2280
2020	2216	2217	2328
2021	2212	2217	2376
2022	2209	2210	2388
2023	2209	2210	2400
2024	2209	2210	2412
2025	2209	2210	2423
2026	2209	2210	2434

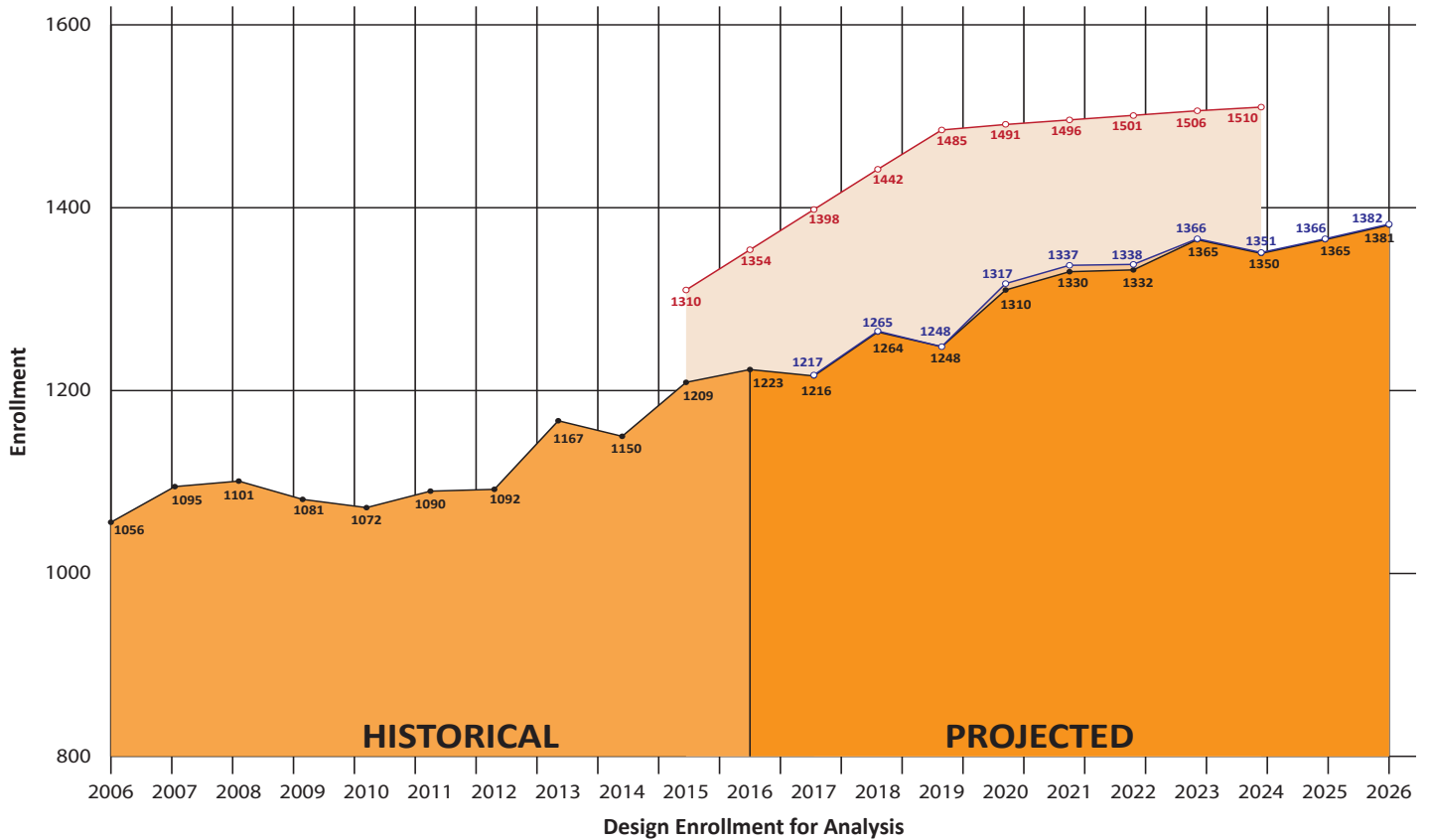
Grades 6-8 Ten Year Projected Enrollments



2021-2022 School Year at 1,196 Middle School Students

School Year	School Department	Growth with Developments School Dept. Numbers (2007)	Growth with Developments New Projected Numbers (2017)
2006	844	-	-
2007	875	-	-
2008	889	-	-
2009	935	-	-
2010	986	-	-
2011	993	-	-
2012	1047	-	-
2013	1035	-	-
2014	1071	-	-
2015	1073	-	-
2016	1134	-	-
2017	1143	1143	1163
2018	1148	1148	1192
2019	1166	1166	1221
2020	1169	1174	1251
2021	1168	1173	1281
2022	1186	1196	1287
2023	1184	1184	1293
2024	1198	1198	1299
2025	1194	1194	1304
2026	1190	1190	1309

Grades 9-12 Ten Year Projected Enrollments



**Design Enrollment for Analysis
2025-2026 School Year at 1,381 High School Students**

School Year	School Department	Growth with Developments School Dept. Numbers (2007)	Growth with Developments New Projected Numbers (2017)
2006	1056	-	-
2007	1095	-	-
2008	1101	-	-
2009	1081	-	-
2010	1072	-	-
2011	1090	-	-
2012	1092	-	-
2013	1167	-	-
2014	1150	-	-
2015	1209	-	1310
2016	1223	-	1354
2017	1216	1217	1398
2018	1264	1265	1442
2019	1248	1248	1485
2020	1310	1317	1491
2021	1330	1337	1496
2022	1332	1338	1501
2023	1365	1366	1506
2024	1350	1351	1510
2025	1365	1366	-
2026	1381	1382	-

Flansburgh Architects

August 9, 2016

Mr. Richard Howard
Town Manager
71 Mt. Vernon Street
Winchester, MA 01890

RE: Proposed 40B Project at Forest Ridge

Dear Mr. Howard:


Based on the number of units outlined in the Forest Ridge Residences Site Approval application date June 2016 that includes 29 three bedroom units, 119 two bedroom units, 119 one bedroom units, and 29 zero bedroom units. We offer the following analysis:

1. The Forest Ridge Residences project will impact the school system with a potential increase of 118 students system wide.
2. 9-12 grade students: 60
6-8 grade students: 45
K-5 grade students: 15
3. Assuming occupancy starting in 2025 and completion by 2027, the potential impact is as follows:
Three (3) additional classrooms and support spaces at the high school
Two (2) additional classrooms and support spaces at the middle school
One (1) additional classroom at Muraco School

In conclusion, the School Department will need to renovate and add on to the above referenced school to add a total of six (6) classrooms plus support spaces by the anticipated occupancy of 2025.

If you have any questions or need additional information, please feel free to contact me at 617-367-3970.

Sincerely,



Jorge M. Cruz, AIA
Executive Vice President

MEMORANDUM

To: School Committee, Superintendent Evans
From: Christian Nixon & Susan Verdicchio
Subject: Revisiting Classroom Targets as means to express capacity in Master Plan
Date: 11 October 2016
cc: Jennifer Elineema, John Danizio, file

At the Master Plan Working Group meeting on September 28, questions about overall capacity came up along with interest in using some expression and understanding of capacity as a metric in evaluating various Master Plan options-- particularly given the variations in costs associated with different renovation and constructions options. While the School Committee stopped short of declaring specific student capacities at our elementary schools during redistricting in 2012, we did establish the Classroom Target concept and voted this figure for each school-- with the further understanding that multiplying this figure by twenty [20] students yields a target enrollment for a fully-occupied building. With renewed interest in some expression of capacity (or some similar concept such as *design enrollment*) and with the passage of time since the Committee's vote in 2012, the Chair and I believe it is appropriate to:

- a) Use the SC-voted Classroom Targets [for existing/remaining elementary schools depending on development options] multiplied by twenty for a "WPS Design Enrollment" figure, expressly and clearly noted as being derived from the Classroom Targets and our average K-5 class size guidelines. Further, have Flansburgh develop new/renovation options using the WPS 20 students/classroom guideline (this will drive a modest increase in classrooms, as the MSBA uses 24/room as a standard).

- b) Revisit the Classroom Targets originally voted by the Committee for all the elementary buildings and adjust as necessary. With more than three years since WPS redistricting, there have been some key program changes in primary education in Winchester, most notably the redistribution of specialized learning centers/programs to four of five elementary schools and the expansion of the co-teach/tri-teach model. It is an appropriate time to review program changes against our understanding of a "general education core classroom" and confirm our expectations. There have also been physical plant modifications, such as the fit up of lower-level shell space this past summer at Vinson-Owen.

Classroom Target Background

In August of 2012 the Committee voted to establish the following Classroom Targets (spaces intended, appropriately sized and configured for general education classrooms) for our elementary schools. For context, the number of sections in each school at the time of the vote is given as well as today's October '16 figures. Note that at 110 sections, we are two over our 108 target which means impact on some program spaces:

	<u>Spring '12</u>	Target	<u>Today</u>
Ambrose Elementary School	25 sections	23 (460)	23 (440)
Lincoln Elementary School	23 sections	21 (420)	22 (410)
Lynch Elementary School	19 sections	22 (440)	24 (460)
Muraco Elementary School	24 sections	21 (420)	20 (404)
Vinson-Owen Elementary School	<u>15 sections</u>	21 (420)	<u>21 (422)</u>
	<i>106 sections</i>	<i>108 (2160)</i>	<i>110 (2136 actual)</i>

Supporting the 2012 Committee discussion and vote was the WPS Elementary Schools Space Summary for 2013-14 (v2.1), attached for reference. Committee members may recall that spaces "taken" for general education classrooms were identified for recapture post-redistricting. For instance, Ambrose was using its Music Room as a general ed classroom and Lincoln was doing the same, in addition to using its Computer Lab. While redistricting helped to relieve some of these pressure points the Committee acknowledged at the time that shifts in philosophy over instructional spaces and instructional methods would require a periodic reevaluation of space program, including specialty/support spaces.

Elementary Space Today

With the help of Mr. Danizio and the elementary principals, this week we reviewed key changes in space utilization. Major changes are summarized below, but drive a series of questions for School Committee discussion and possible action (see page 5):

Ambrose

Originally housing 25 sections in the spring of 2012, including the Music Room and a Special Education resource room, Ambrose was able to recapture these spaces post-redistricting and is operating at 23 sections-- the Classroom Target voted by the Committee. The target assumed four (4) Kindergarten classroom and 19 grade 1-5 rooms. Principal Leigh Petrowski noted this week that the building is "on target" only because of the three (3) Kindergarten sections this year, which accommodates twenty grade 1-5 classrooms. When asked what moves must be considered next year if we register four K sections, Ms. Petrowski identified both the Music Room and the Computer Lab. While she is reluctant to see the Computer Lab go-- noting the frequency of use among K-2 students-- she is more concerned about a return to Music on a Cart. She notes that Ambrose is full

right now with no additional space available. For Ambrose-- and the other four schools-- a transition to All Day Kingergarten [ADK] and a potential 8% increase in K enrollment may well be a tipping point in K-room space needs.

Specialized Learning Center- Ambrose houses the Cognitive Program SLC which has grown each year it has been housed at Ambrose (beginning post-redistricting). It is important for the School Committee to note that while we originally dedicated a 600sf space for this program (see 8/12 Space Summary for 2013-14), the growth in enrollment has dictated a second space be made available for these students-- in this case the 160sf PT/OT Room has been repurposed. With continued growth in this SLC, it appears that there is no expansion space and therefore specialty program such as the Computer Lab and/or Music Room are vulnerable.

Lincoln

Originally housing 23 sections in the spring of 2012, including the Music Room, Computer Lab and a basement-level resource room, Lincoln recaptured some space-- but not all-- after redistricting. Today Lincoln houses 22 sections. After some discussion in 2012, the Committee voted Lincoln's Classroom Target at 21 rather than 20. It is important to recall that Lincoln has twenty general ed classrooms (4 K + 16 grades 1-5) but-- as noted in the 2007 Master Plan-- the Music Room has been used as a grade 1-5 classroom for some time due to space needs. At the time of redistricting, it was felt by Administration that this use was 'acceptable' given the adjacent Auditorium space which is used for music instruction. The Computer Lab was moved into the Lincoln Library, a condition that exists today and is readily accepted as a good fit. Today Lincoln Elementary uses both the Music Room and Computer Lab as general ed classrooms. Only the basement-level resource room is still being used for its intended purpose.

Music Room- With a revised Master Plan in the works, it is appropriate for the Committee to reconsider the future of the Music Room at Lincoln. Mr. Schindelman has noted that this space is specifically configured for music instruction: at nearly 1000sf, it is larger than a general ed classroom and has risers built into the space. Principal Kelly Clough acknowledges some of the difficulties inherent in using the auditorium for instructional space and would welcome the Music Room back in the future.

Computer Lab- Although the space has been in use as a general ed classroom space for at least the the last five years, Ms. Clough is reluctant to formally reclassify this as such. While there is agreement that the traditional role of the lab is going the way of the dinosaur, she is hopeful for an alternative use such as a Maker Space or similar STEM-supportive program.

Lynch

Originally housing 19 sections in 2012, available classroom space at Lynch was expanded with the Central Office move to Parkhurst. The School Committee voted an increase of three rooms for a Classroom Target of 22. As the Committee is aware, there has been significant enrollment growth post-redistricting and today Lynch is running 24 sections (4 K + 20 grades 1-5). Enrollment growth has been accommodated through repurposing a Pre-K room on the main level (with trickle-down program impact downstairs though it has been well-accommodated), a large SPED Resource Room (over 700sf) and the Computer Lab (over 1000sf).

Specialized Learning Center- Lynch houses the Autism Spectrum Program, which is housed in multiple spaces. It is important for the Committee to understand that-- at 24 sections-- Lynch is exhausted of space and has repurposed (or 'lost') key program space that had Committee support in 2012, including the Computer Lab.

Muraco

Originally housing 24 sections in the spring of 2012-- including the Computer Lab (divided in half for two smaller classrooms) and the 820sf Reading Room-- Muraco recaptured some of this space with a Classroom Target of 21 post-redistricting. Today Muraco houses 20 sections (3 K + 17 grades 1-5), however this does not mean that spaces are left unused or unassigned. As you will see below, Muraco is actually now full-- similar to Ambrose-- without space for an additional section with impacting specialists space.

Specialized Learning Center- Muraco houses the Behavioral/Partnership program which was originally located at Ambrose. At the time of redistricting, the Superintendent made clear the intent to distribute the four SLC's to Ambrose, Lynch, Muraco and V-O. While specific accommodation was made for these programs at Lynch and V-O in the form of two classrooms, Muraco did not have any such space designated (perhaps due to the limited enrollment). In the years since redistricting the Partnership Program at Muraco has taken the former Music Room (now relocated to a general ed classroom) and shares an additional general education classroom space.

Therefore, while Muraco is housing only 20 sections today there are no additional available classrooms. It is worth noting that while the Committee chose not to include in the Classroom Target the two spaces created by dividing the Computer Lab (never used due to rising enrollment), one of these spaces is in use today as a 5th grade classroom.

Vinson-Owen

V-O is an easy summary! Originally housing 15 sections at Parkhurst during construction, the School Committee voted a Classroom Target of 21 for the new building (3 K + 18 grades 1-5) and this is exactly how the school operates today.

Specialized Learning Center- V-O houses the LBLD program which has just seen an expansion in program space. The school was designed with two SPED/LBLD classroom spaces (900sf) and these have been in use. The program has expanded, however, and Grant Smith reports that the specialist room included in this summer's shell space fit-up project is now used for 4th graders in the LBLD program. *Note- even though we planned two classrooms for this program as recently as 2012, it has expanded.* The three new classrooms are not permanently assigned, though there is interest in creating a Maker Space in one. When asked about accommodating future enrollment growth that may take these new spaces, Mr. Smith notes an interest in the potential to transition the Computer Lab (2nd floor) to a STEM/Maker Space-type program.

Key Questions for School Committee and Administration

Specialized Learning Centers

If the the SLCs continue to grow in enrollment (as we would hope), what space needs can we/should we reasonably predict? How does this/should this impact our 2012 voted Classroom Targets? If V-O and Lynch were planned to house SLCs with at least two classroom spaces (and these were therefore not included in the Classroom Target figures) should Muraco and Ambrose Classroom Targets not be revisited?

Computer Lab/Maker Space

Understanding that in 2012 the School Committee chose not to absorb Computer Lab space as general ed classrooms, should we revisit the Classroom Target for Lincoln? Given the space shortage at Lynch and the taking of the Computer Lab, what is the future utilization of the three new classrooms at Vinson-Owen and what are Administration's thoughts on the location of SLCs?

Music Room

With dedicated Music Rooms in our other four elementary schools should Lincoln's Classroom Target be revisited to recapture this space?

Vinson-Owen Construction

Given all the above, what number of the three new classrooms-- if any-- should be added to V-O's Classroom Target?

Action Item

After discussion over the the questions above, it is recommended that the School Committee revise and re-vote adjusted Classroom Targets for our Master Plan team's use in expressing "WPS Design Enrollment".

Section 4 | Space Needs

ES-5A Lynch Elementary - 540 Enrollment: Renovation/Addition

PROGRAM	
Core Academic	25,000
Special Education	6,040
Art & Music	5,000
Health & Physical Education	6,300
Media Center	3,280
Dining & Food Service	7,870
Medical	610
Administration & Guidance	2,445
Custodial & Maintenance	2,180
SUBTOTAL NSF	58,725 NSF
GROSSING FACTOR	1.46
TOTAL GSF	85,455 GSF

ES-5B Lynch Elementary - 540 Enrollment: New Construction

PROGRAM

Core Academic	25,000
Special Education	6,040
Art & Music	5,000
Health & Physical Education	6,300
Media Center	3,280
Dining & Food Service	7,870
Medical	610
Administration & Guidance	2,445
Custodial & Maintenance	2,180
SUBTOTAL NSF	58,725 NSF
GROSSING FACTOR	1.46
TOTAL GSF	85,455 GSF

ES-5D Lynch Elementary - 540 Enrollment + 90 PreK: New Construction

PROGRAM	
Core Academic	26,900
Special Education	7,550
Art & Music	5,000
Health & Physical Education	6,300
Media Center	3,505
Dining & Food Service	8,320
Medical	610
Administration & Guidance	2,165
Custodial & Maintenance	2,230
SUBTOTAL NSF	63,030 NSF
GROSSING FACTOR	1.45
TOTAL GSF	81,350 GSF

ES-6A: Muraco Elementary - 520 Enrollment: Renovation/Addition

PROGRAM

Core Academic	20,000
Special Education	5,540
Art & Music	2,575
Health & Physical Education	6,300
Media Center	2,740
Dining & Food Service	6,780
Medical	510
Administration & Guidance	2,325
Custodial & Maintenance	2,060
SUBTOTAL NSF	48,830 NSF
GROSSING FACTOR	1.52
TOTAL GSF	74,215 GSF

ES-6A: Muraco Elementary - 460 Enrollment: New Construction

PROGRAM	
Core Academic	20,000
Special Education	5,540
Art & Music	2,575
Health & Physical Education	6,300
Media Center	2,740
Dining & Food Service	6,778
Medical	510
Administration & Guidance	2,325
Custodial & Maintenance	2,060
SUBTOTAL NSF	48,828 NSF
GROSSING FACTOR	1.52
TOTAL GSF	74,213 GSF

ES-6A: Muraco Elementary - 520 Enrollment: New Construction

PROGRAM

Core Academic	22,850
Special Education	6,040
Art & Music	3,725
Health & Physical Education	6,300
Media Center	3,010
Dining & Food Service	7,325
Medical	610
Administration & Guidance	2,325
Custodial & Maintenance	2,120
SUBTOTAL NSF	52,365 NSF
GROSSING FACTOR	1.48
TOTAL GSF	80,225 GSF

ES-6A: Vinson-Owen Elementary - 580 Enrollment: New Addition

PROGRAM

Core Academic

Special Education

Art & Music

Health & Physical Education

Media Center

Dining & Food Service

Medical

Administration & Guidance

Custodial & Maintenance

SUBTOTAL NSF

GROSSING FACTOR

TOTAL GSF

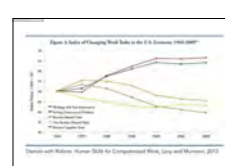
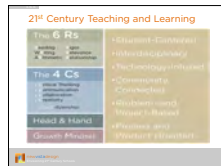
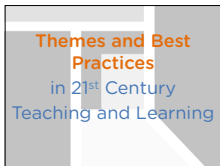
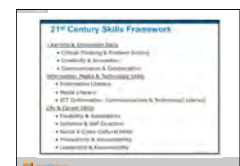
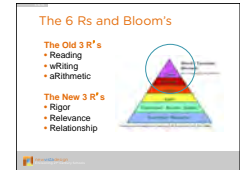
Section 5 | Presentations & Meeting Notes

Section 5 | Presentations & Meeting Notes

Presentation 1 - June 16, 2016

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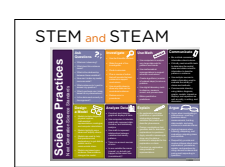
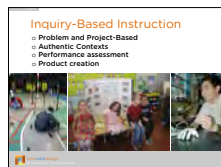
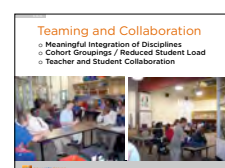
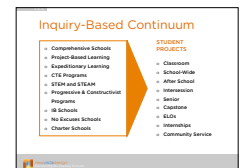
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Design Thinking

- o Problem Solving
- o Creativity
- o Collaboration
- o Empathy
- o Persistence

Career Tech Education

- o Vocational/Academic Integration
- o Broad based transferable skills building
- o Career Pathways

Global Connections

- o International Collaborations
- o Sister Classrooms
- o Travel Studies

Learning from Best Practices

- o Forward-thinking programs and facilities
- o Key spaces and important adjacencies
- o Lessons learned

Internships and Field Studies

- o Adult world connections and mentoring
- o Authentic projects and contexts for learning
- o Writing and reflection

Deeper Learning

- Mastery of Core Academic Content
- Critical Thinking and Problem Solving
- Collaboration
- Effective Communication
- Self-Directed Learning
- An "Academic/Growth Mindset"

Project-Based Learning

... the ONLY way to teach 21st century and independent learning skills

The 6 A's of Powerful Project-Based Learning

Academic/Growth Mindset

... Grit, perseverance and a passion for long term goals...

Community Partnerships

- o Permeable School Walls
- o Adult-World Connections / Internships
- o Leveraged Resources

The 6 A's of Powerful Projects

- Academic Rigor
- Authenticity
- Applied Learning
- Active Exploration
- Adult Connections
- Assessment Practices

4th Grade STEAM

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21st Century Skills Activity

What 21st Century Skills Are Most Important to Winchester Public Schools?

Our mission is to provide all students with an outstanding education in a learning and challenging environment that fosters students' achievement, healthy mind and emotional development, enthusiasm for education and a lifelong love for learning.

Visible Learning and Transparency

Distributed Resources

New School Design Patterns

- o Facilitate inquiry-based learning and the 4 C's
- o Allow for flexible seating, meeting, and high performance environment
- o Provide seamless technology integration

Greeting and Gossiping

Community Access

Cafeteriums Multi-Purpose Space

Wayfinding and Streetscapes

Gathering Spaces Learning Hubs

Cafeteriums Multi-Purpose Space

Cafeteriums Multi-Purpose Space

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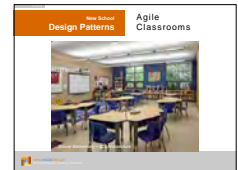
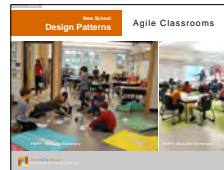
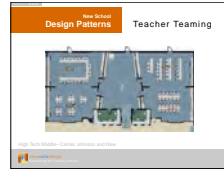
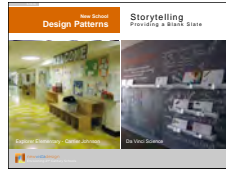
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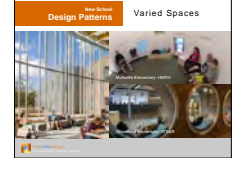
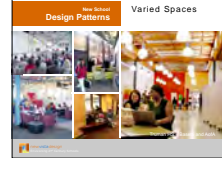
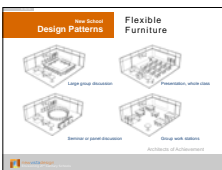
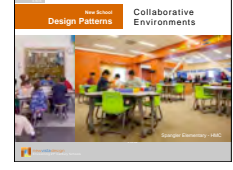
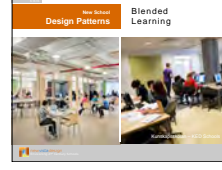
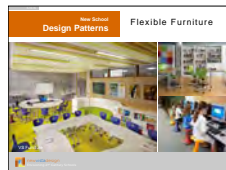
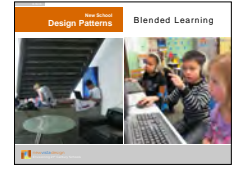
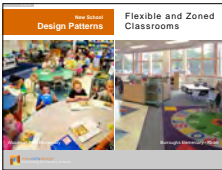
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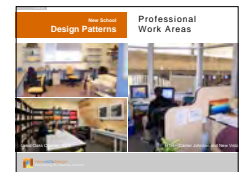
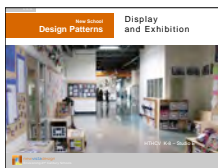
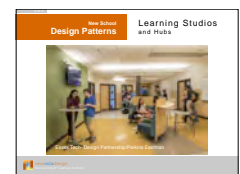
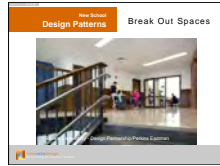
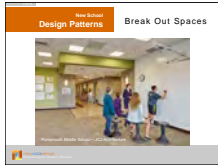
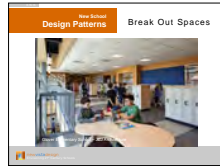
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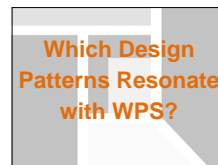
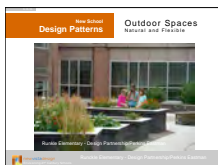
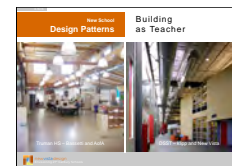
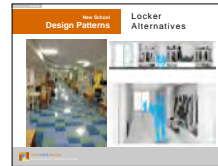
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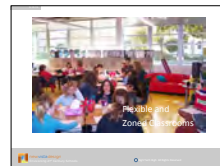
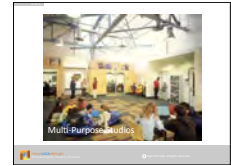
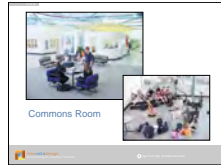
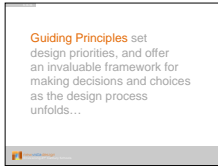
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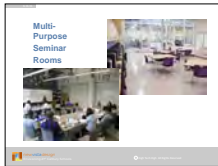
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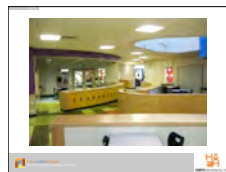
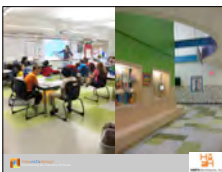
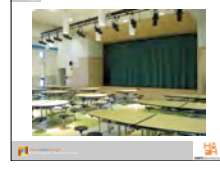
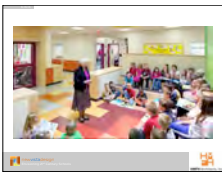
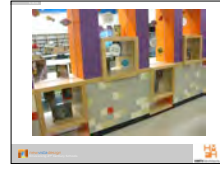
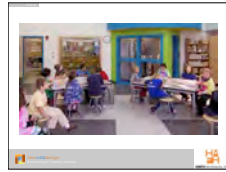
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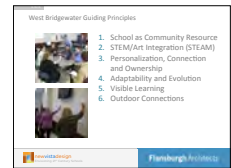
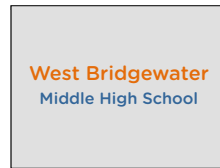
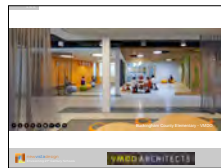
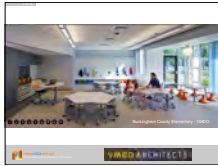
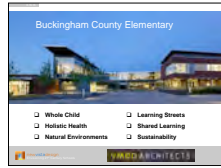
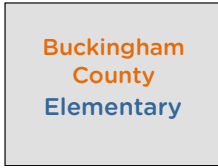
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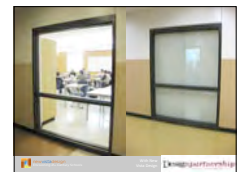
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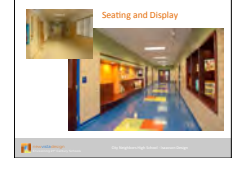
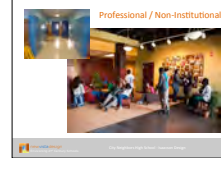
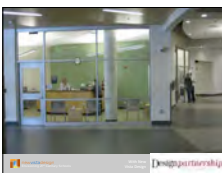
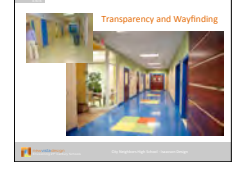
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6/17/16



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Section 5 | Presentations & Meeting Notes

6/17/16

6/17/16



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Which Guiding Principles Resonate with WPS?



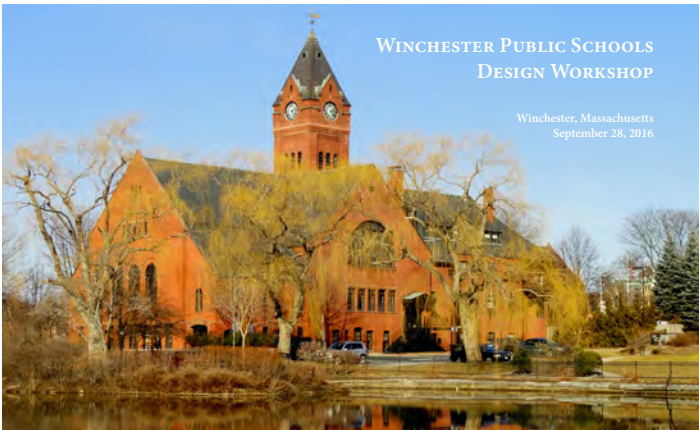
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Presentation 2 - September 28, 2016



WINCHESTER PUBLIC SCHOOLS
DESIGN WORKSHOP

Winchester, Massachusetts
September 28, 2016

Prepared By

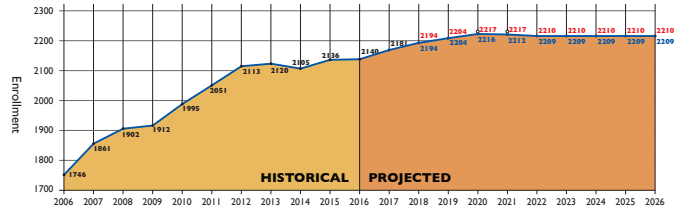
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1

10-Year Projected Enrollments

K-5 - Projected Enrollment

School Department
40B/416 Cambridge St.



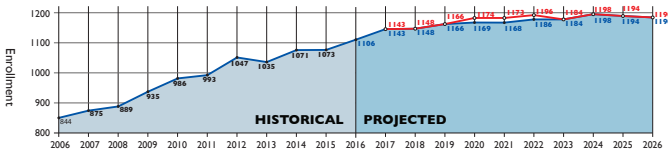
Design Enrollment for Analysis
2021 - 2022 School Year @ 2217 / K-5 Students

2

10-Year Projected Enrollments

6-8 - Projected Enrollment

School Department
40B/416 Cambridge St.



Design Enrollment for Analysis
2021 - 2022 School Year @ 1196 / 6-8 Students

3

PREK - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR

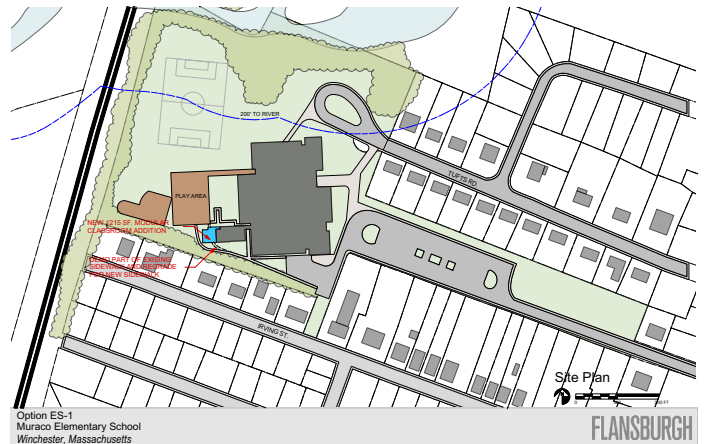
	Option ES-1 Three Modular Classrooms	Option ES-2 Move PK & K to Parkhurst, Renovation/ Addition	Option ES-3 Move PreK & K to Parkhurst, New Construction	Option ES-4 Muraco/Lynch Combined School	Option ES-5 Muraco/Lynch Renovation/ Addition	Option ES-6 Muraco/Lynch New Construction
Ambrose	No change	Two classrooms available	Two classrooms available	No change	No change	No change
Lincoln	No change	Four classrooms available	Four classrooms available	No change	No change	No change
Lynch	Add two modular classrooms	Four classrooms available	Nine classrooms available	Closed for develop- ment	Renovation/addi- tion for 624 stu- dents	New construction for 624 students
Muraco	Add one modular classroom	Three classrooms available	Three classrooms available	New school for 1,030 students	Renovation/ addition for 484 students	New construction for 484 students
Vinson-Owen	No change	Three classrooms available	Three classrooms available	No change	No change	No change
Parkhurst	No change	Renovation/ addition for 411 students	New construction for 411 students	No change	No change	No change
Project Budget	\$2,663,000	\$27,235,000	\$28,105,353	\$74,902,000	\$76,000,000	\$85,678,000

4

ES-1 Muraco Elementary - 484 enrollment - K-5: Modular Classroom

PROGRAM	GRADES K-5 (New)
Core Academic	20,950
Special Education	5,540
Art & Music	2,575
Health & Physical Education	6,300
Media Center	2,850
Dining & Food Service	6,995
Medical	510
Administration & Guidance	2,350
Custodial & Maintenance	2,085
Subtotal NSF	50,155 NSF
Grossing Factor	1.53
Total GSF	76,730 GSF

* When Vinson Owen is at capacity the overflow of students move to Lynch & Muraco.



Option ES-1
Muraco Elementary School
Winchester, Massachusetts

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ES-1 Lynch Elementary - 624 enrollment - PK-5 : Modular Classroom

PROGRAM	GRADES K-5
Core Academic	26,900
Special Education	7,550
Art & Music	5,000
Health & Physical Education	6,300
Media Center	3,480
Dining & Food Service	8,270
Medical	610
Administration & Guidance	2,610
Custodial & Maintenance	2,225
Subtotal NSF	62,940 NSF
Grossing Factor	1.44
Total GSF	90,480 GSF

* When Vinson Owen is at capacity the overflow of students move to Lynch & Muraco.

Lynch Elementary School Winchester, MA

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Option ES-1
Muraco Elementary School
Winchester, Massachusetts

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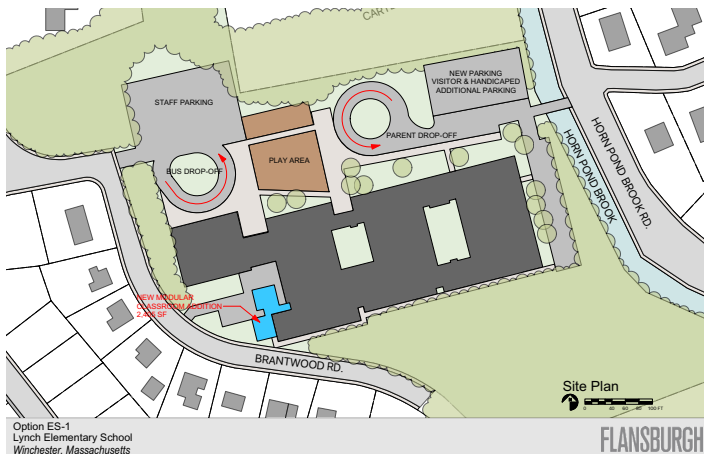
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Option ES-1
Lynch Elementary School
Winchester, Massachusetts

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Option ES-1
Lynch Elementary School
Winchester, Massachusetts

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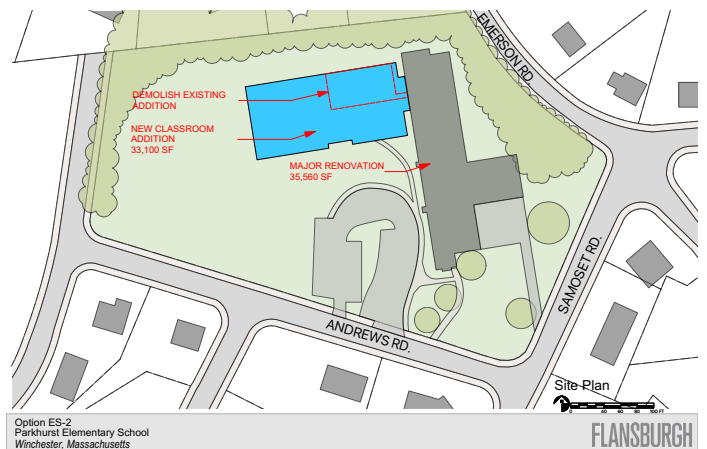
ES-2 Parkhurst Elementary - 411 enrollment : Renovation / Addition

PROGRAM	GRADES PreK-K
Core Academic	17,850
Special Education	4,350
Art & Music	2,575
Health & Physical Education	6,300
Media Center	2,520
Dining & Food Service	6,335
Medical	510
Administration & Guidance	2,125
Custodial & Maintenance	2,010
Subtotal NSF	44,755 NSF
Grossing Factor	1.53
Total GSF	68,660 GSF

Parkhurst Elementary School Winchester, MA

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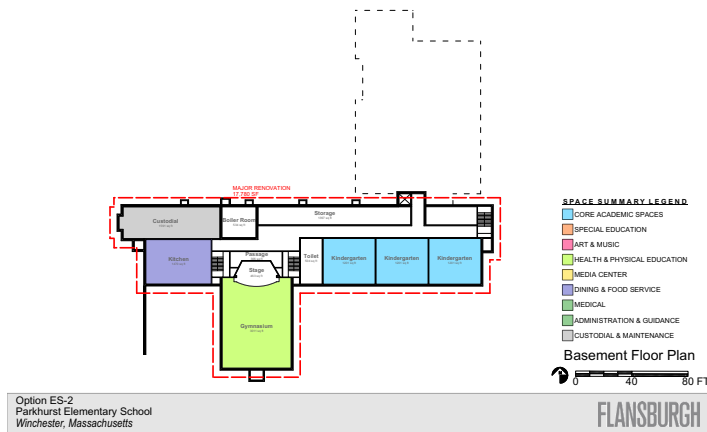


Option ES-2
Parkhurst Elementary School
Winchester, Massachusetts

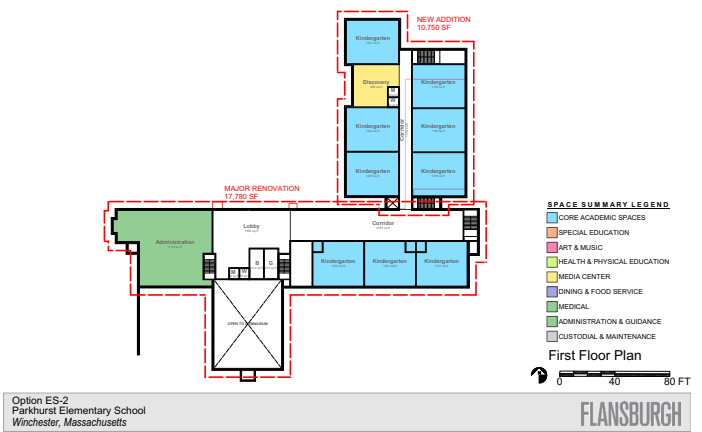
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Section 5 | Presentations & Meeting Notes



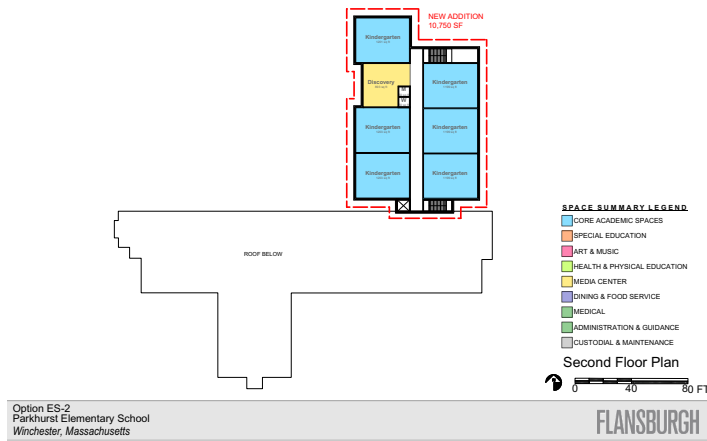
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ES-3 Parkhurst Elementary - 411 enrollment : New Construction

PROGRAM	GRADES PreK-K
Core Academic	17,850
Special Education	4,350
Art & Music	2,575
Health & Physical Education	6,300
Media Center	2,520
Dining & Food Service	6,335
Medical	510
Administration & Guidance	2,125
Custodial & Maintenance	2,010
Subtotal NSF	44,755 NSF
Grossing Factor	1.53
Total GSF	68,660 GSF

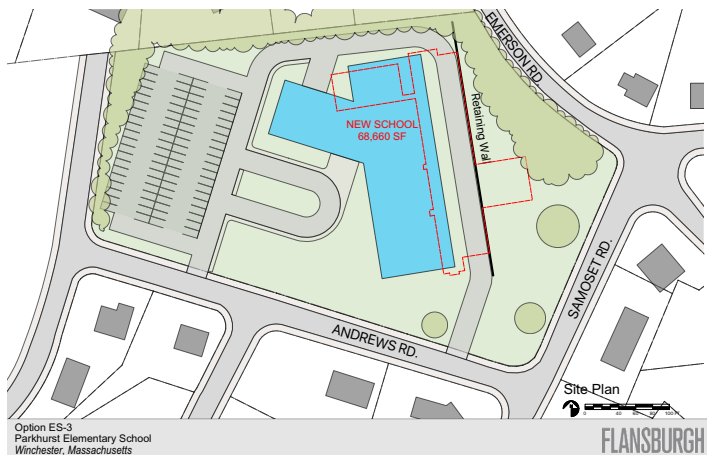


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Parkhurst Elementary School Winchester, MA

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ES-4 Muraco / Lynch Elementary - 1030 enrollment : New Construction K-5

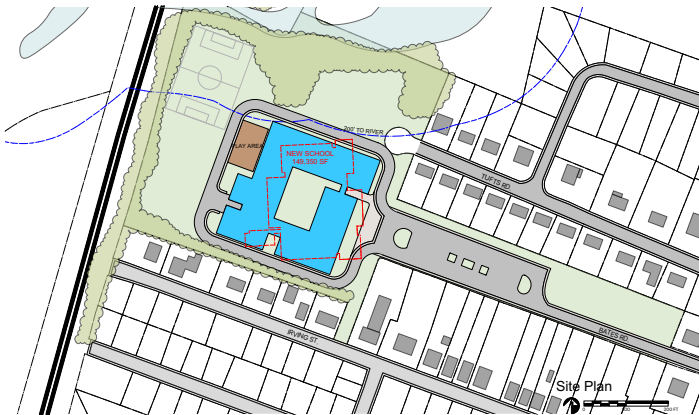
PROGRAM	GRADES K-5 *
Core Academic	44,750
Special Education	11,070
Art & Music	7,575
Health & Physical Education	6,300
Media Center	5,305
Dining & Food Service	11,956
Medical	810
Administration & Guidance	3,165
Custodial & Maintenance	2,630
Subtotal NSF	93,561 NSF
Grossing Factor	1.60
Total GSF	149,350 GSF



Option ES-3
Parkhurst Elementary School
Winchester, Massachusetts

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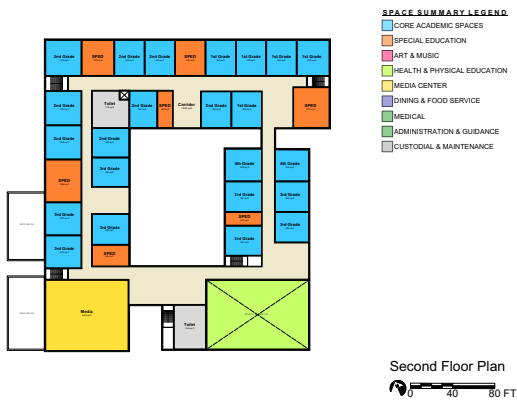
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Option ES-4
Lynch Elementary School
Winchester, Massachusetts

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Option ES-4
Muraco Elementary School
Winchester, Massachusetts

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Lynch / Muraco Elementary School Winchester, MA

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Option ES-4
Muraco Elementary School
Winchester, Massachusetts

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Option ES-4
Muraco Elementary School
Winchester, Massachusetts

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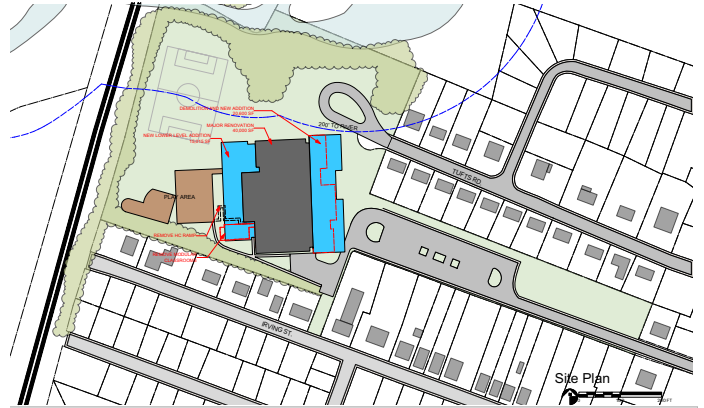
24

Section 5 | Presentations & Meeting Notes

ES-5 Muraco / Lynch Elementary - K-5 : Renovation / Addition
 Muraco Renovation/Addition Lynch Renovation/Addition

PROGRAM	RENOVATION	ADDITION	RENOVATION	ADDITION
Core Academic	14,210	7,430	20,905	4,635
Special Education	2,390	925	5,305	1,020
Art & Music	2,630		5,035	
Health & Physical Education		6,290	7,040	
Media Center	3,065		3,400	
Dining & Food Service		7,045	7,085	
Medical	570		625	
Administration & Guidance	975	2,160		2,040
Custodial & Maintenance		2,300		3,550
Subtotal NSF	23,840 NSF	26,150 NSF	54,700 NSF	11,240 NSF
Grossing Factor		1.51		1.51
Total GSF	41,115 SF	35,615 SF	79,745 SF	11,030 SF
		76,730 GSF		90,775 GSF

* Parkhurst utilized for Muraco and Lynch students during phased construction.



Option ES-5
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Muraco / Lynch Elementary School Winchester, MA

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Option ES-5
 Muraco Elementary School
 Winchester, Massachusetts

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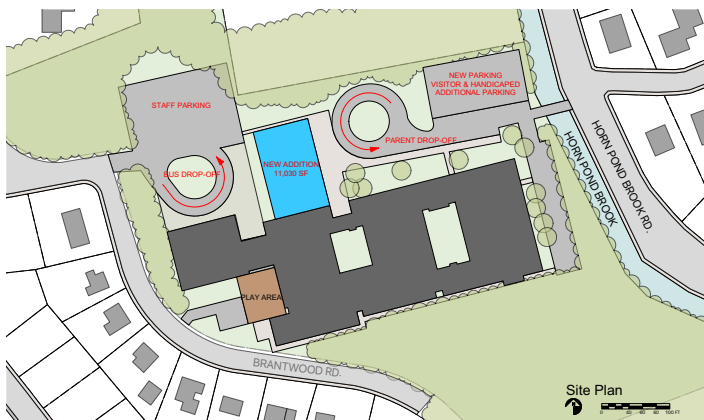
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Option ES-5
 Muraco Elementary School
 Winchester, Massachusetts

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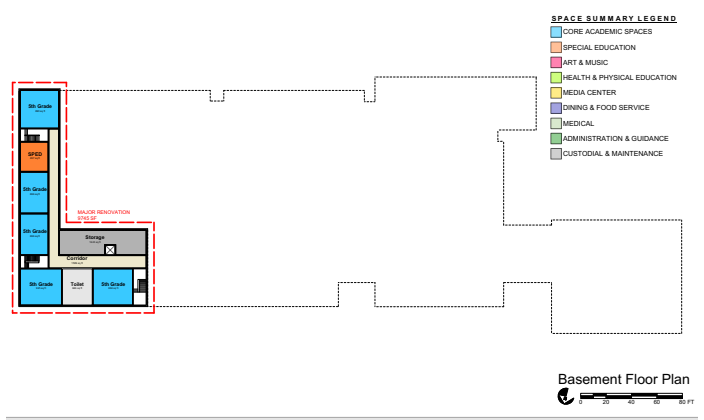
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Option ES-5
 Lynch Elementary School
 Winchester, Massachusetts

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Option ES-5
 Lynch Elementary School
 Winchester, Massachusetts

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ES-6 Muraco/Lynch Elementary - PK-5 : New Construction

PROGRAM	NEW*	
	Muraco New Construction	Lynch New Construction
Core Academic	20,950	26,900
Special Education	5,540	7,550
Art & Music	2,575	5,000
Health & Physical Education	6,300	6,300
Media Center	2,848	3,450
Dining & Food Service	6,996	8,270
Medical	510	610
Administration & Guidance	2,349	2,610
Custodial & Maintenance	2,084	2,225
Subtotal NSF	50,152 NSF	62,940 NSF
Grossing Factor	1.53	1.44
Total GSF	76,730 GSF	90,480 GSF

* Based on MSBA Space Summary.

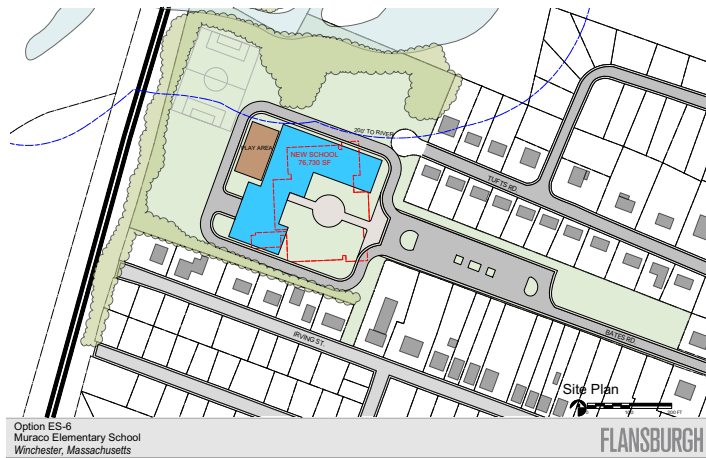
** Parkhurst utilized for Muraco & Lynch students during construction.



Option ES-5
Lynch Elementary School
Winchester, Massachusetts

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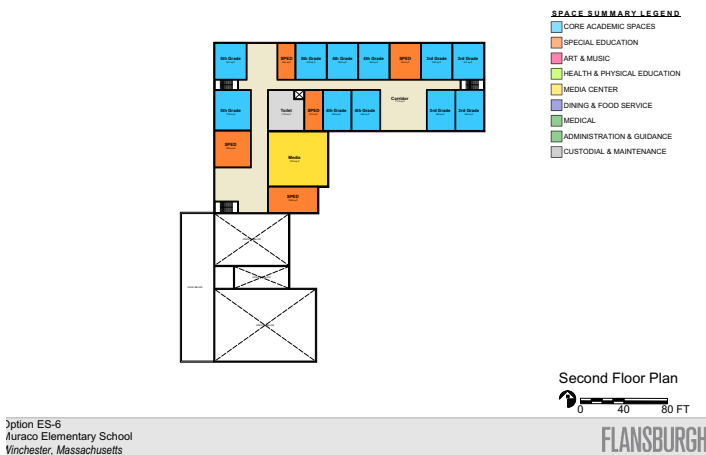
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Option ES-6
Muraco Elementary School
Winchester, Massachusetts

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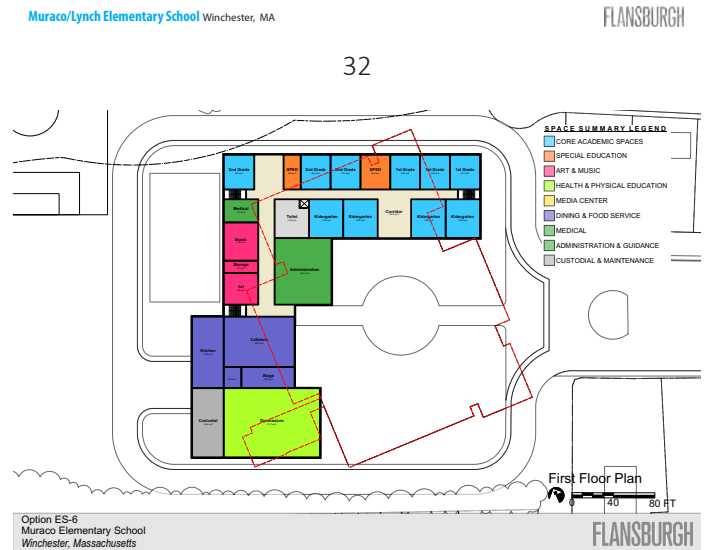
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Option ES-6
Muraco Elementary School
Winchester, Massachusetts

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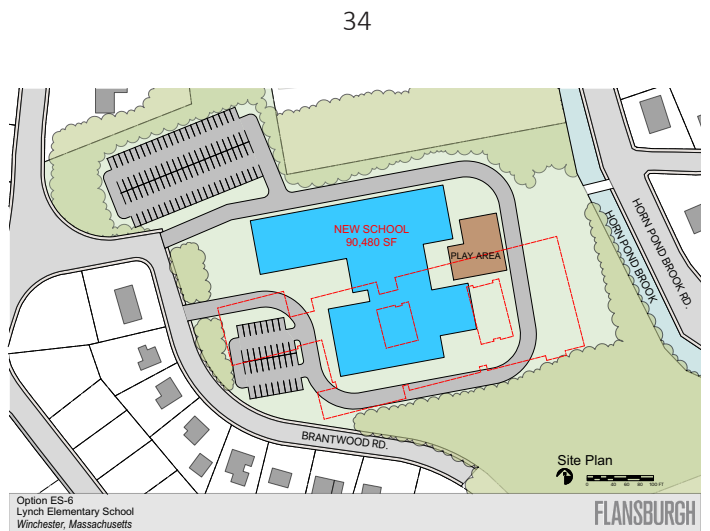
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Option ES-6
Muraco Elementary School
Winchester, Massachusetts

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Option ES-6
Lynch Elementary School
Winchester, Massachusetts

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Section 5 | Presentations & Meeting Notes



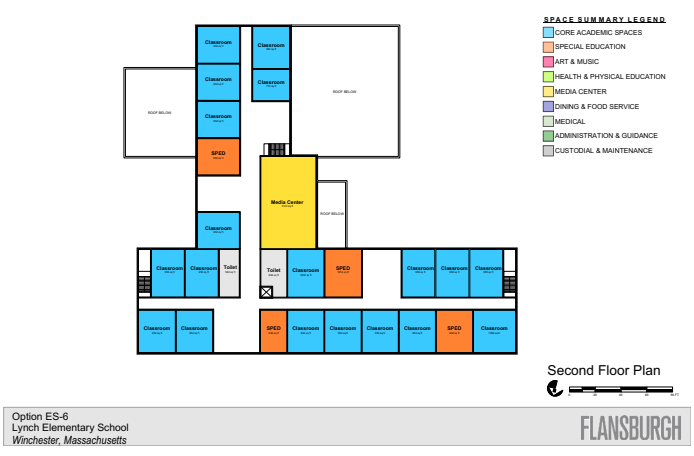
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6-8 OPTIONS FOR 2021 - 2022 SCHOOL YEAR					
Current Enrollment:	1,105 Students				
2021-2022 Enrollment:	1,196 Students				
Enrollment Increase:	+91 Students				
	Option MS-1 Youth Center Renovation	Option MS-2 New Addition	Option MS-3 6th Grade Academy	Option MS-4 6th Grade at Muraco	Option MS-4a 6th Grade at Muraco
McCall Middle	Add elevator and renovated Youth Center (four classrooms)	Add a four permanent classroom addition	Twelve classrooms available	Twelve classrooms available	Twelve classrooms available
Ambrose	No change	No change	No change	No change	No change
Lincoln	No change	No change	No change	Sixth Grade moves in	Sixth Grade moves in
Lynch	No change	No change	No change	No change	Closed for development
Muraco	No change	No change	No change	New school for 884 students	New school for 1,430 students
Vinson-Owen	No change	No change	No change	No change	No change
Parkhurst	No change	No change	New school	No change	No change
Project Budget	\$2,574,000	\$4,012,000	\$28,106,000	\$63,618,438	\$97,208,000

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PROGRAM	GRADES 6-8 (EXISTING)
Core Academic	29,140
Special Education	5,795
Art & Music	6,875
Vocations & Technology	5,450
Health & Physical Education	12,905
Media Center	4,500
Dining & Food Service	8,235
Medical	520
Administration & Guidance	2,290
Custodial & Maintenance	6,340
Subtotal NSF	73,905 NSF
Grossing Factor	1.85
Total GSF	136,955 GSF

McCall Middle School Winchester, MA

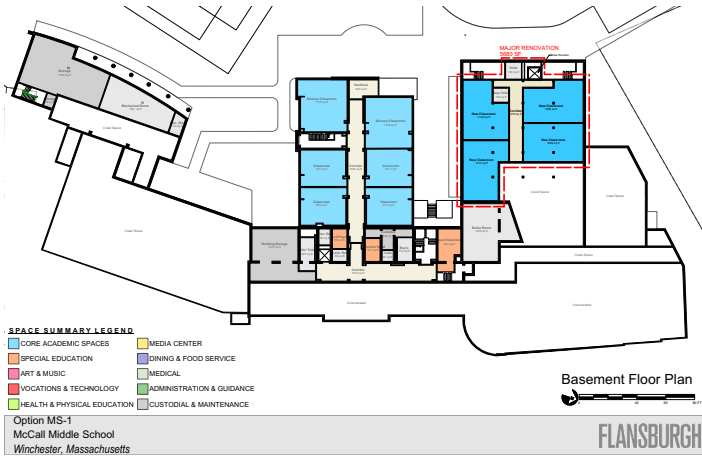
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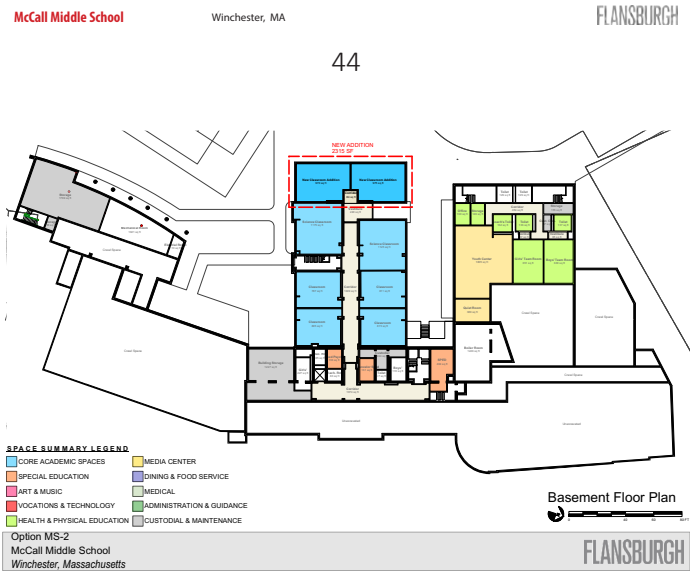
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MS-2 McCall Middle School - 1,105 enrollment - New Addition

PROGRAM	GRADES 6-8 (EXISTING)
Core Academic	28,630
Special Education	5,795
Art & Music	6,875
Vocations & Technology	5,450
Health & Physical Education	12,905
Media Center	4,500
Dining & Food Service	8,235
Medical	520
Administration & Guidance	2,290
Custodial & Maintenance	6,340
Subtotal NSF	73,905 NSF
Grossing Factor	1.85
Total GSF	132,280 SF EXISTING 4,675 SF ADDITION 136,955 GSF



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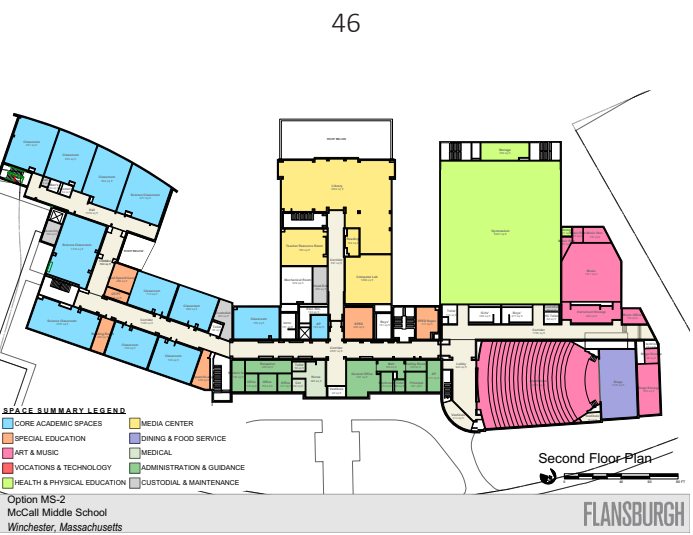
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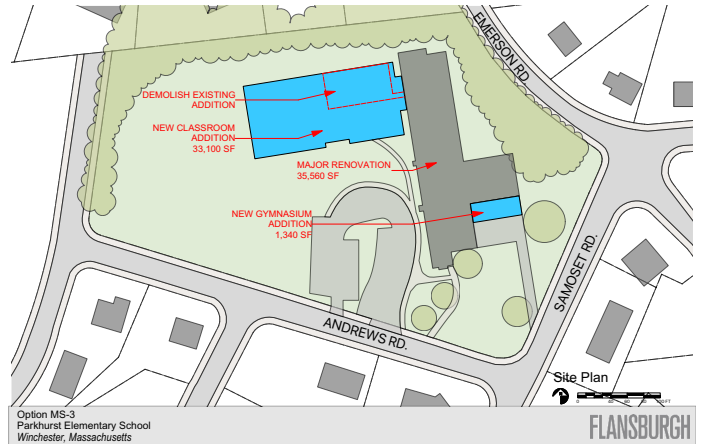


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Section 5 | Presentations & Meeting Notes

MS-3 Parkhurst 6th Grade Academy - 400 Enrollment

PROGRAM	6 th GRADE ACADEMY
Core Academic	18,920
Special Education	4,530
Art & Music	3,050
Activity	8,400
Discovery	2,680
Dining & Food Service	6,835
Medical	510
Administration & Guidance	2,750
Custodial & Maintenance	1,875
Subtotal NSF	49,550 NSF
Grossing Factor	1.53
Total GSF	76,000 GSF



Parkhurst Elementary School Winchester, MA

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MS-4 - Muraco / Lincoln Elementary - 884 enrollment - New Construction

PROGRAM	GRADES K-5 *
Core Academic	37,850
Special Education	9,060
Art & Music	6,300
Health & Physical Education	6,300
Media Center	4,650
Dining & Food Service	10,630
Medical	710
Administration & Guidance	3,010
Custodial & Maintenance	2,485
Subtotal NSF	81,000 NSF
Grossing Factor	1.58
Total GSF	128,180 GSF

* Based on MSBA Space Summary.

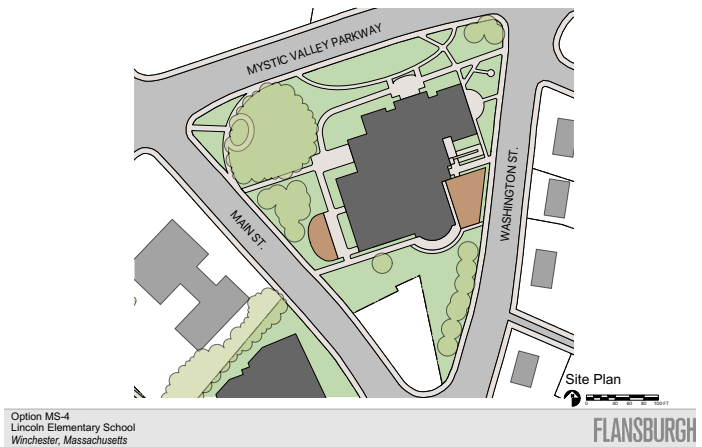
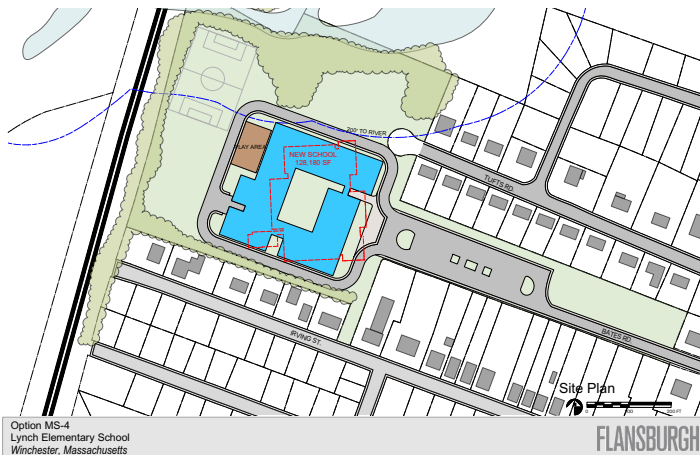
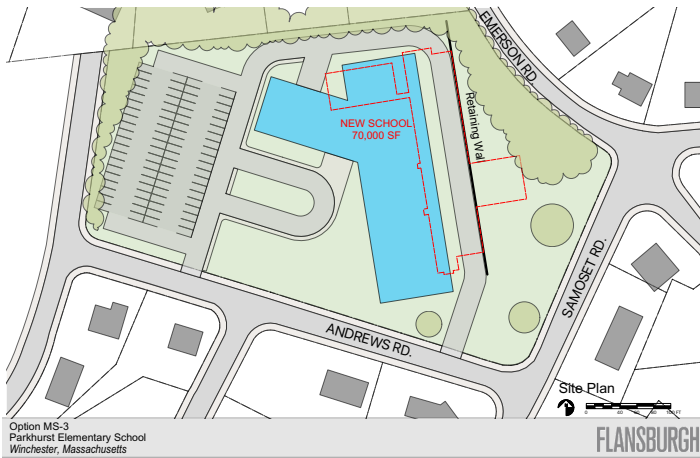
** Parkhurst utilized for Muraco & Lincoln students during construction.

Muraco Elementary School Winchester, MA

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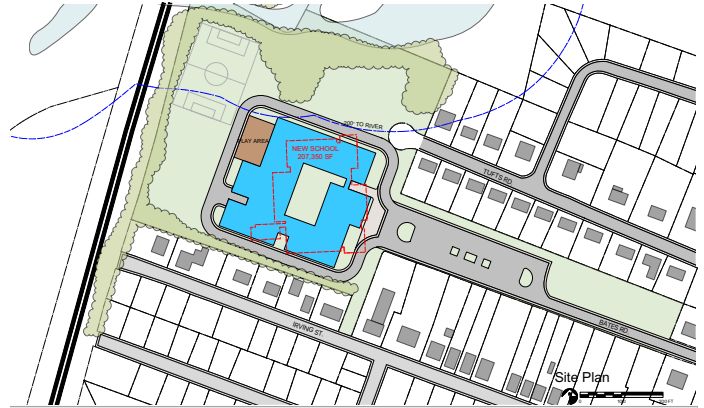
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MS-4a Muraco/Lynch/Lincoln Elementary - 1430 enrollment : New Construction

PROGRAM	PreK-5
Core Academic	61,650
Special Education	15,600
Art & Music	10,150
Health & Physical Education	6,300
Media Center	7,105
Dining & Food Service	15,589
Medical	910
Administration & Guidance	3,985
Custodial & Maintenance	3,030
Subtotal NSF	124,319 NSF
Grossing Factor	1.67
Total GSF	207,350 GSF

* Based on MSBA Space Summary

** Parkhurst utilized for Muraco, Lynch, & Lincoln students during construction.



Option MS-4a
Muraco Elementary School
Winchester, Massachusetts

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Muraco Elementary School Winchester, MA

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Option MS-4a
Muraco Elementary School
Winchester, Massachusetts

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Option MS-4a
Muraco Elementary School
Winchester, Massachusetts

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Option MS-4a
Muraco Elementary School
Winchester, Massachusetts

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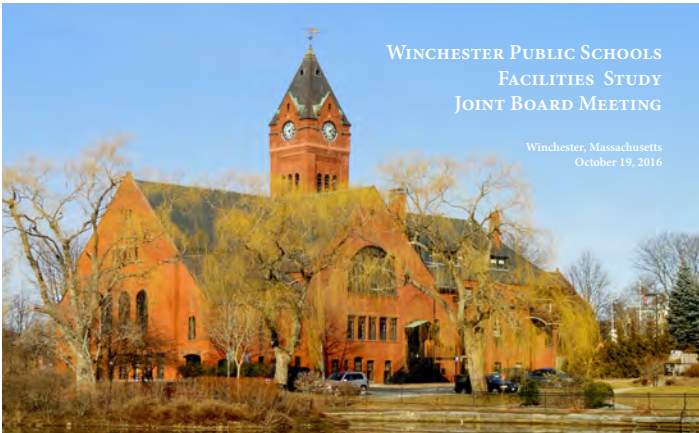
Option MS-4a
Muraco Elementary School
Winchester, Massachusetts

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Presentation 3 - October 19, 2016



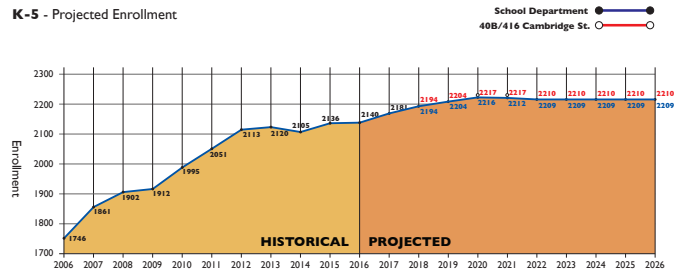
Draft Report Prepared By

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10-Year Projected Enrollments

K-5 - Projected Enrollment

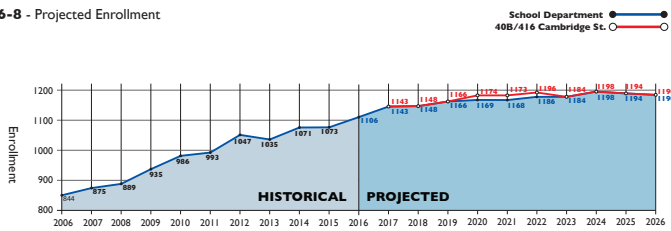


Design Enrollment for Analysis
2021 - 2022 School Year @ 2217 / K-5 Students

2

10-Year Projected Enrollments

6-8 - Projected Enrollment



Design Enrollment for Analysis
2021 - 2022 School Year @ 1196 / 6-8 Students

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6-8 OPTIONS FOR 2021 - 2022 SCHOOL YEAR

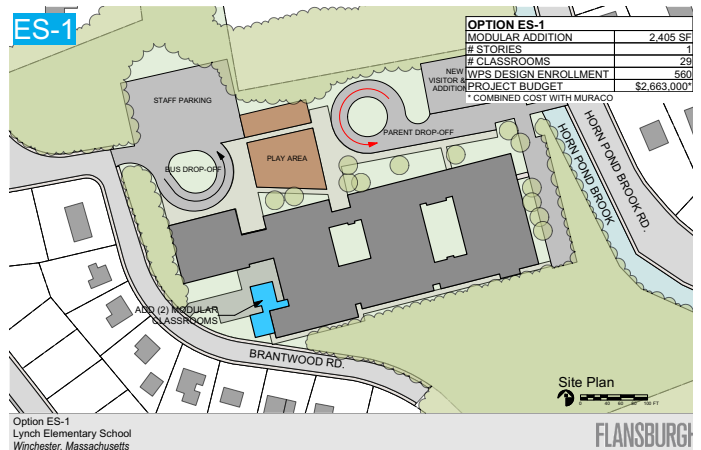
	Option MS-1 Youth Center Renovation	Option MS-2 New Addition	Option MS-3 6th Grade at Parkhurst	Option MS-4 6th Grade to Lincoln
McCall Middle	Add elevator and renovated Youth Center (four classrooms)	Add a six permanent classroom addition & renovated Youth Center (Innovation Space)	Twelve classrooms available	Twelve classrooms available
Current Enrollment	1,132	1,132	745	745
WPS Design Enrollment	1,232	1,276	1,122	1,122
# Classrooms	56	58	51	51
Ambrose	No change	No change	No change	No change
Current Enrollment	439	439	439	439
WPS Design Enrollment	460	460	460	460
# Classrooms	23	23	23	23
Lincoln	No change	No change	No change	Sixth Grade moves in
Current Enrollment	402	402	402	252
WPS Design Enrollment	440	440	440	440
# Classrooms	22	22	22	22
Lynch with PreK	No change	No change	No change	No change
Current Enrollment	521	521	521	521
WPS Design Enrollment	560	560	560	560
# Classrooms	27	27	27	27
Muraco	No change	No change	No change	New school for 926 Lincoln, Muraco, & future students
Current Enrollment	387	387	387	789
WPS Design Enrollment	420	420	420	926
# Classrooms	21	21	21	46
Vinson-Owen	No change	No change	No change	No change
Current Enrollment	421	421	421	421
WPS Design Enrollment	420	420	420	420
# Classrooms	21	21	21	21
Parkhurst	No change	No change	New construction for 374 students	No change
Current Enrollment	0	0	362	0
WPS Design Enrollment	0	0	374	0
# Classrooms	0	0	17	0
Project Budget	\$2,574,000	\$6,586,000	\$28,106,000	\$63,618,400

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PREK - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR

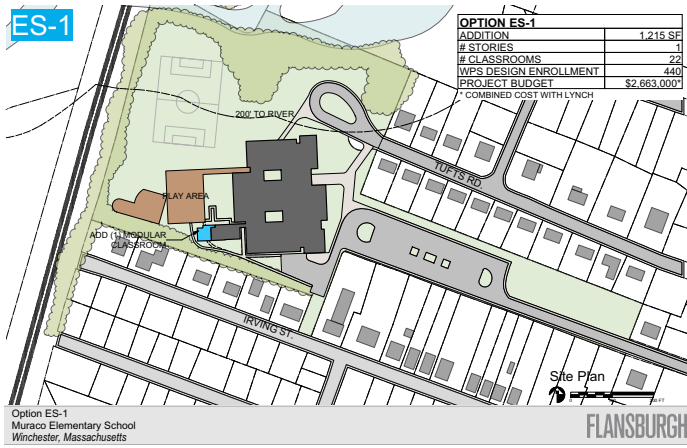
	Option ES-1 Three Modular Classrooms	Option ES-2 Move PreK & K to Parkhurst, Renovations/ Additions	Option ES-3 Move PreK & K to Parkhurst, New Construction	Option ES-4 Muraco/Lynch Combined School (1,000 Students)	Option ES-5 Muraco/Lynch Renovations/ Addition (1,000 Students)	Option ES-6 Muraco/Lynch New Construction (1,000 Students)
Ambrose	No change	Two classrooms available	Two classrooms available	No change	No change	No change
Current Enrollment	439	388	388	439	439	439
WPS Design Enrollment	460	460	460	460	460	460
# Classrooms	23	23	23	23	23	23
Lincoln	No change	Four classrooms available	Four classrooms available	No change	No change	No change
Current Enrollment	402	330	330	402	402	402
WPS Design Enrollment	440	440	440	440	440	440
# Classrooms	22	22	22	22	22	22
Lynch w/ PreK	Add two modular classrooms	Nine classrooms available	Nine classrooms available	Closed for development	Renovation/addition for 560 students	New construction for 560 students
Current Enrollment	521	370	370	0	521	521
WPS Design Enrollment	560	440	440	0	560	560
# Classrooms	29	27	27	0	29	29
Muraco	Add one modular classroom	Three classrooms available	Three classrooms available	New school for 1,000 students	Renovation/addition for 440 students	New construction for 440 students
Current Enrollment	387	329	329	908	387	387
WPS Design Enrollment	440	420	420	1000	440	440
# Classrooms	22	21	21	51	22	22
Vinson-Owen	No change	Three classrooms available	Three classrooms available	No change	No change	No change
Current Enrollment	421	372	372	421	421	421
WPS Design Enrollment	420	420	420	420	420	420
# Classrooms	21	21	21	21	21	21
Parkhurst	No change	Renovation/addition for 420 students	New construction for 420 students	No change	No change	No change
Current Enrollment	0	381	381	0	0	0
WPS Design Enrollment	0	420	420	0	0	0
# Classrooms	0	22	22	0	0	0
Project Budget	\$2,663,000	\$27,235,000	\$28,105,353	\$74,902,000	\$76,000,000	\$85,678,000

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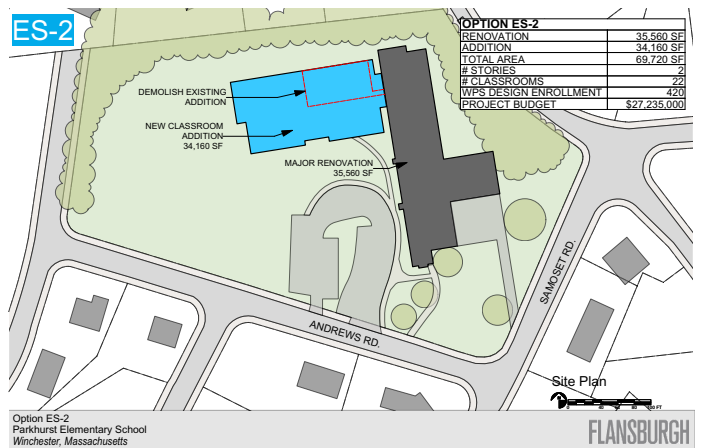


Option ES-1 Lynch Elementary School
Winchester, Massachusetts
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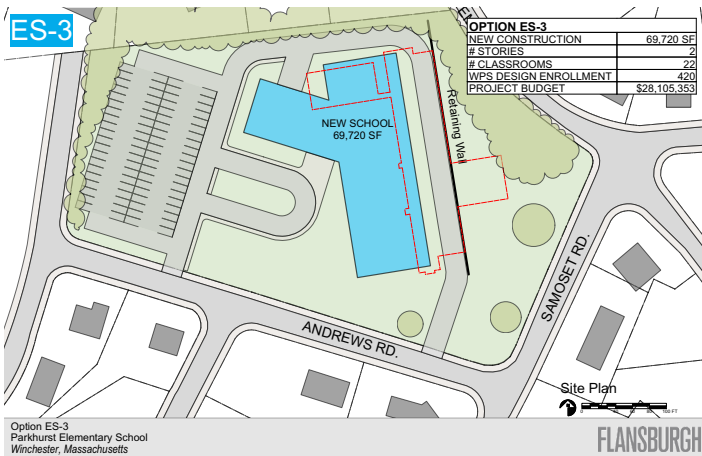
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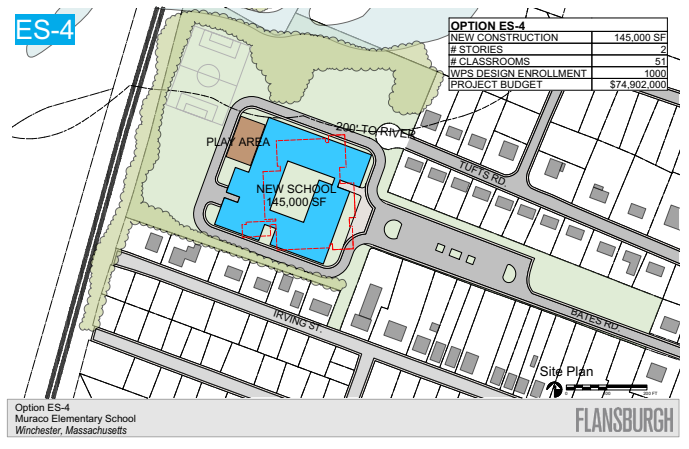
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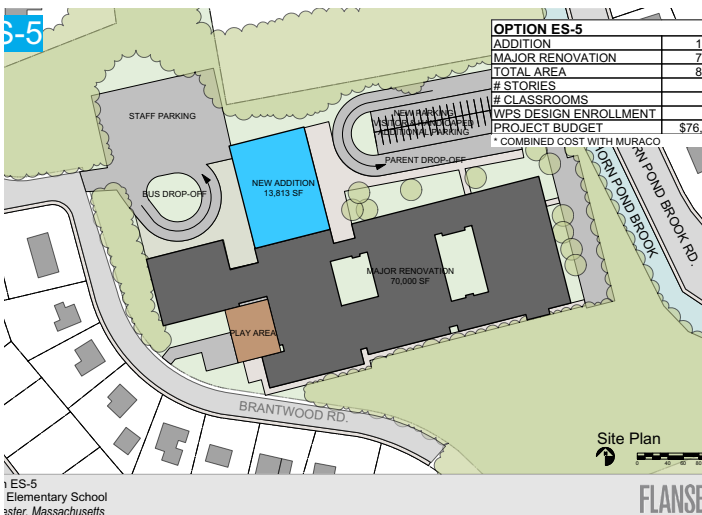
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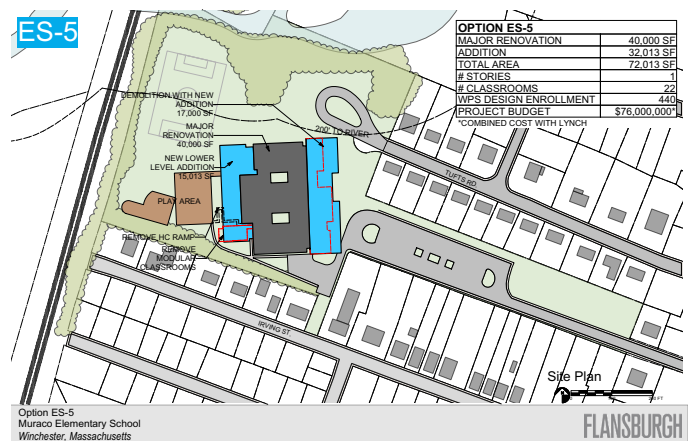
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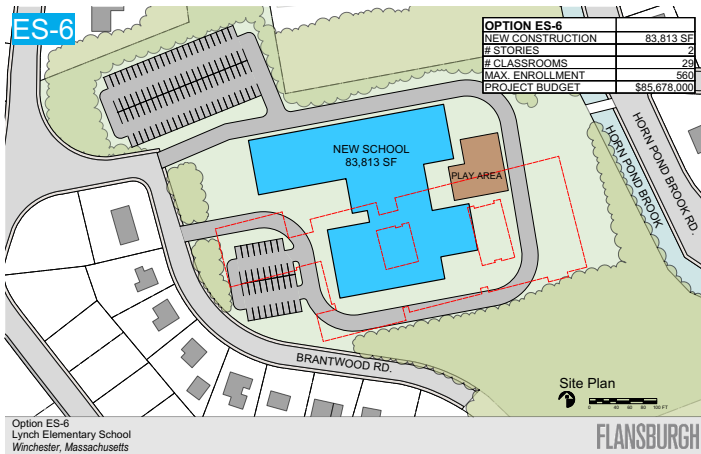


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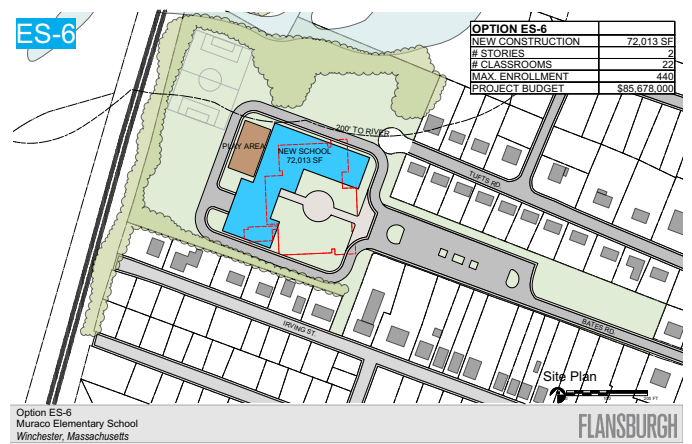


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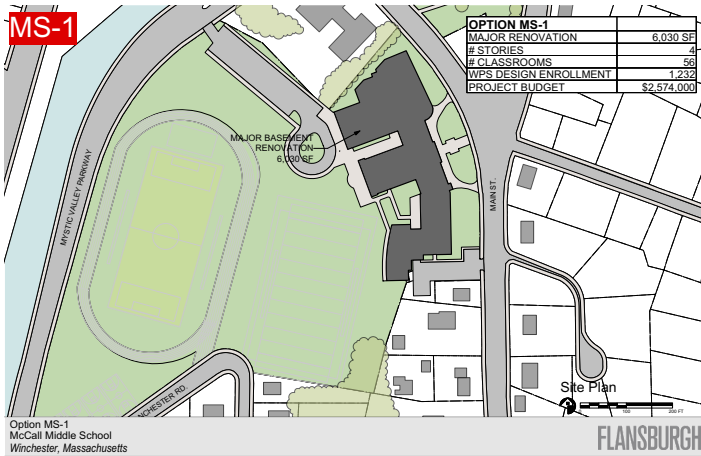
Section 5 | Presentations & Meeting Notes



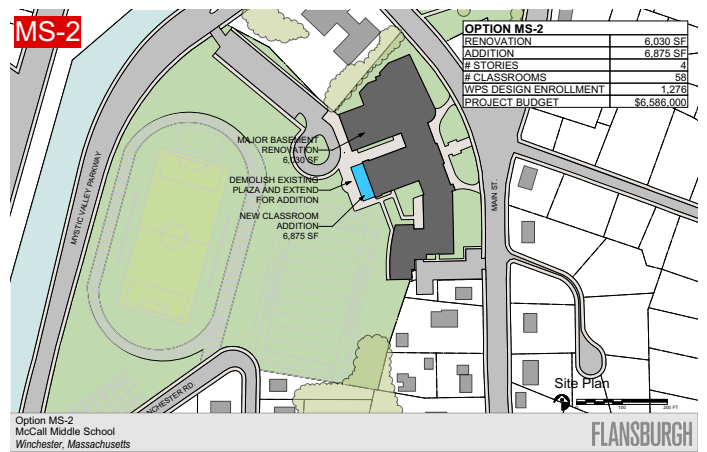
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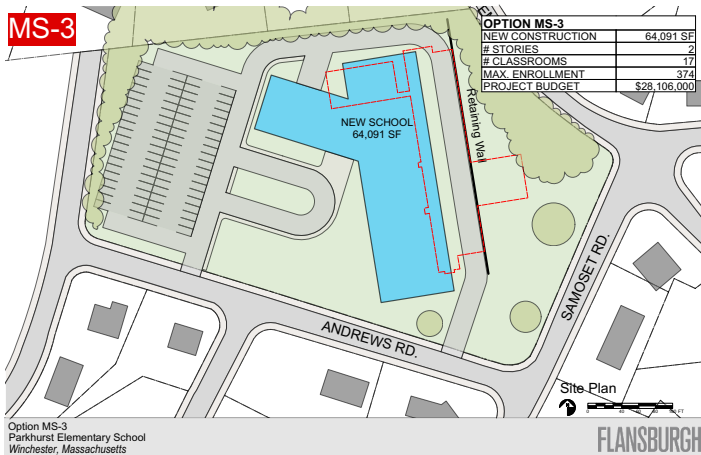
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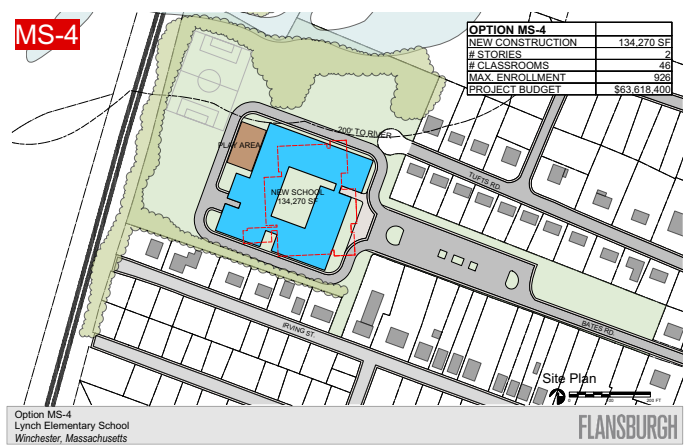
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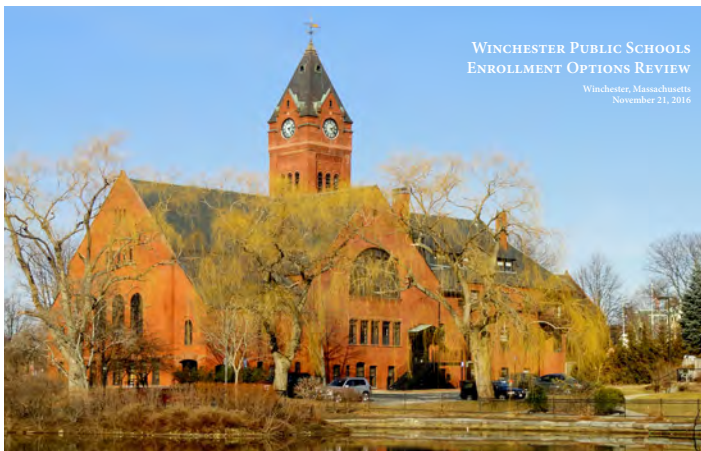


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Presentation 4 - November 21, 2016



Prepared By
FLANSBURGH

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ENROLLMENT OPTIONS REVIEW

Focus on 21st Century Skills

- The six R's and the four C's
- Proactive, life long, continuous learning
- Critical thinking
- Communication
- Collaboration
- Creativity
- Citizenship
- Academic mindset



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ENROLLMENT OPTIONS REVIEW

21st Century Design Patterns



Ubiquitous Technology

- Tablets
- Smart Boards



Indoor / Outdoor Learning

- Play Area
- Expanded Learning Experience



Media Centers

- Virtual Learning
- Flexible Layouts



Collaborative Learning Clusters

- Varied Spaces Sizes
- Group Presentation Spaces



Varied / Flexible Spaces

- Moveable Walls
- Small Group Learning



Streetscapes

- Displays
- Informal Gathering Areas

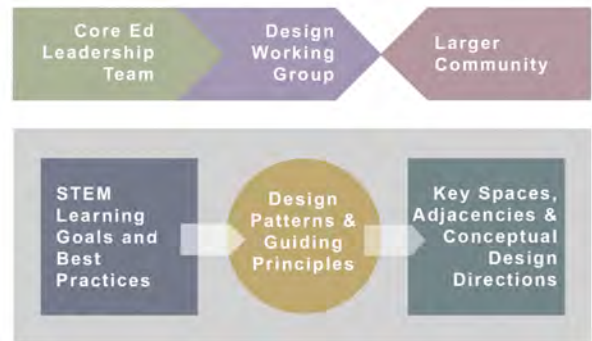
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The Visioning Process

ENROLLMENT OPTIONS REVIEW



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Focus on Learning

- High-performance work environments
- Varied and collaborative
- Flexible and agile



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Guiding Principles & Priorities

- Understanding of district's current initiatives
- Analysis of opportunities and goals
- Translation of goals into architectural priorities



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Section 5 | Presentations & Meeting Notes

ENROLLMENT OPTIONS REVIEW

6-8 OPTIONS FOR 2021 - 2022 SCHOOL YEAR					
Current Enrollment: 2021-2022 Enrollment: Enrollment Increase:	1,105 Students 1,136 Students +31 Students	Option MS-1 Youth Center Renovation	Option MS-2 New Addition	Option MS-3 6th Grade at Parkhurst	Option MS-4 6th Grade to Lincoln
McCall Middle	Add elevator and renovated Youth Center (four classrooms)	Add a six permanent classroom addition & renovated Youth Center (renovation/Space)	Twelve classrooms available	Twelve classrooms available	
Current Enrollment	1,132	1,132	745	745	
WPS Design Enrollment	1,232	1,276	1,122	1,122	
# Classrooms	56	58	21	21	
Maroon	No change	No change	No change	No change	
Current Enrollment	439	439	439	439	
WPS Design Enrollment	460	460	460	460	
# Classrooms	23	23	23	23	
Lincoln	No change	No change	No change	Sixth Grade moves in	
Current Enrollment	402	402	402	252	
WPS Design Enrollment	440	440	440	440	
# Classrooms	22	22	22	22	
Lyons with PreK	No change	No change	No change	No change	
Current Enrollment	521	521	521	521	
WPS Design Enrollment	560	560	560	560	
# Classrooms	27	27	27	27	
Maroon	No change	No change	No change	New school for 928 Lincoln, Maroon, & future students	
Current Enrollment	387	387	387	789	
WPS Design Enrollment	420	420	420	928	
# Classrooms	21	21	21	46	
Union Owen	No change	No change	No change	No change	
WPS Design Enrollment	421	421	421	421	
Max Enrollment	420	420	420	420	
# Classrooms	21	21	21	21	
Parkhurst	No change	No change	New construction for 374 students	No change	
Current Enrollment	0	0	362	0	
WPS Design Enrollment	0	0	374	0	
# Classrooms	0	0	17	0	
Project Budget	\$2,574,000	\$6,586,000	\$28,106,000	\$63,618,400	

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ENROLLMENT OPTIONS REVIEW

PRE-K - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR							
Current Enrollment: 2021-2022 Enrollment: Enrollment Increase:	2,140 Students 2,412 Students +272 Students	Option ES-1 Three Modular Classrooms	Option ES-2 Merge PK & K to Parkhurst/ Renovation/ Addition	Option ES-3 Merge PreK & K to Parkhurst/ New Construction	Option ES-4 Maroon/Lyons Combined School (1,000 Students)	Option ES-5 Maroon/Lyons Renovation/ Addition (1,000 Students)	Option ES-6 Maroon/Lyons New Construction (1,000 Students)
Andrew	No change	Two classrooms available	Two classrooms available	No change	No change	No change	No change
Current Enrollment	439	388	388	439	439	439	439
WPS Design Enrollment	460	460	460	460	460	460	460
# Classrooms	23	23	23	23	23	23	23
Lincoln	No change	Four classrooms available	Four classrooms available	No change	No change	No change	No change
Current Enrollment	402	330	330	402	402	402	402
WPS Design Enrollment	440	440	440	440	440	440	440
# Classrooms	22	22	22	22	22	22	22
Lyons w/ PreK	Add two modular classrooms	Nine classrooms available	Nine classrooms available	Class for development	Renovation/addition for 560 students	New construction for 560 students	
Current Enrollment	521	370	370	0	511	511	
WPS Design Enrollment	560	440	440	0	560	560	
# Classrooms	29	27	27	0	29	29	
Maroon	Add one modular classroom	Three classrooms available	Three classrooms available	New school for 1,000 students	Renovation/addition for 440 students	New construction for 440 students	
Current Enrollment	387	329	329	968	387	387	
WPS Design Enrollment	440	420	420	1000	440	440	
# Classrooms	22	21	21	41	22	22	
Union Owen	No change	Three classrooms available	Three classrooms available	No change	No change	No change	
Current Enrollment	421	372	372	421	421	421	
WPS Design Enrollment	420	420	420	420	420	420	
# Classrooms	21	21	21	21	21	21	
Parkhurst	No change	Renovation/addition for 420 students	New construction for 420 students	No change	No change	No change	
Current Enrollment	0	361	361	0	0	0	
WPS Design Enrollment	0	420	420	0	0	0	
# Classrooms	0	22	22	0	0	0	
Project Budget	\$2,663,000	\$27,235,000	\$28,105,353	\$74,902,000	\$76,000,000	\$85,678,000	

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ENROLLMENT OPTIONS REVIEW

WINCHESTER PUBLIC SCHOOLS DISTRICT ENROLLMENT																	
Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	SP	Other	Total
WINCHESTER PUBLIC	5	3	1	1	1	1	2	10	2	4	4	10	10	3	6	0	63
LINCOLN ELEMENTARY	0	75	64	75	71	49	76	0	0	0	0	0	0	0	0	0	410
LYONS ELEMENTARY	89	76	86	63	87	72	76	0	0	0	0	0	0	0	0	0	549
UNION-OWEN	0	48	64	67	87	82	74	0	0	0	0	0	0	0	0	0	422
MAROON ELEMENTARY	0	63	58	65	68	70	80	0	0	0	0	0	0	0	0	0	404
AMBROSE ELEMENTARY	0	50	69	82	77	84	78	0	0	0	0	0	0	0	0	0	440
MCCALL MIDDLE SCHOOL	0	0	0	0	0	0	0	387	365	382	0	0	0	0	0	0	1134
WINCHESTER HIGH SCHOOL	0	0	0	0	0	0	0	0	0	0	359	297	333	277	0	0	1266
Totals	94	315	342	353	391	358	397	367	386	363	307	343	280	6	0	4688	

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ENROLLMENT OPTIONS REVIEW

PRE-KINDERGARTEN
Existing 5 Classrooms at 94 students (FTE = 89)
Proposed 5 Classrooms at 96 students (FTE=80)

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ENROLLMENT OPTIONS REVIEW

GRADES K-5
Existing 106 classrooms at 2,139 students at 110 sections
Currently 110 sections - 106 classrooms = 4 classrooms needed
Proposed 113 classrooms at 2,217 students at 113 sections
2,717 proposed - 2,139 existing = 578 students at 3 classrooms
Grades K-5 classroom needs = 113 proposed - 106 current = 7 classrooms needed

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ENROLLMENT OPTIONS REVIEW

GRADES 6-8
Existing 52 classrooms at 1,150 students
Proposed 56 classrooms at 1,232 students
56 proposed classrooms - 52 existing classrooms = 4 classrooms required

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GRADES 9-12

Existing 1,292 students
Proposed 1,370 students
*New high school designed for 1,370 students

McCall Middle School - Classroom Reconfiguration and Elevator Addition

EXTENT OF RENOVATED AREA

- New Elevator
- Four Classrooms
- Toilets

EXTENT OF RENOVATED AREA

- New Elevator Connection

PROJECT SUMMARY:
The lower level area, currently utilized for the "Youth Center Program", will be reconfigured to accommodate four classrooms and a new elevator. Classrooms will have natural light with views to the exterior. A new elevator will connect the lower level to the first floor in the area adjacent to the existing egress stair.

EXTENSIVE RENOVATION
Lower Level Area: 3,500 square feet
First Floor Area: 300 square feet
Total Area: 3,800 square feet

McCall Middle School
KEYPLAN

Option MS-1 (Classrooms Only)
McCall Middle School
Winchester, Massachusetts

McCall Middle School - Classroom Reconfiguration and Elevator Addition

EXTENT OF RENOVATED AREA

- New Elevator
- Tech Lab & Maker Space
- Toilets Remain

EXTENT OF RENOVATED AREA

- New Elevator Connection

PROJECT SUMMARY:
The lower level area, currently utilized for the "Youth Center Program", will be reconfigured to accommodate four classrooms and a new elevator. Classrooms will have natural light with views to the exterior. A new elevator will connect the lower level to the first floor in the area adjacent to the existing egress stair.

EXTENSIVE RENOVATION
Lower Level Area: 3,500 square feet
First Floor Area: 3,000 square feet
Total Area: 6,500 square feet

McCall Middle School
KEYPLAN

Option MS-1 (Maker Space with First Floor Classroom Conversion)
McCall Middle School
Winchester, Massachusetts

6-8 OPTIONS FOR 2021 - 2022 SCHOOL YEAR			
Current Enrollment: 1,105 Students			
2021-2022 Enrollment: 1,155 Students			
Enrollment Increase: +50 Students			
	Option MS-1 Youth Center Renovation Phase I	Option MS-2 New Addition Phase II	
	Add elevate and renovated Youth Center (four classrooms)		Add a six permanent classroom addition
McCall Middle			
Current Enrollment	1,132	1,132	1,132
WPS Design Enrollment	1,132	1,276	1,276
# Classrooms	56	58	58
Arbush	No change	No change	No change
Current Enrollment	439	439	439
WPS Design Enrollment	460	460	460
# Classrooms	23	23	23
Lincoln	No change	No change	No change
Current Enrollment	402	402	402
WPS Design Enrollment	440	440	440
# Classrooms	22	22	22
Lyons with Pre-K	No change	No change	No change
Current Enrollment	521	521	521
WPS Design Enrollment	560	560	560
# Classrooms	27	27	27
Moraco	No change	No change	No change
Current Enrollment	367	367	367
WPS Design Enrollment	420	420	420
# Classrooms	21	21	21
Yesson-Owen	No change	No change	No change
WPS Design Enrollment	421	421	421
Max. Enrollment	420	420	420
# Classrooms	21	21	21
Parkhurst	No change	No change	No change
Current Enrollment	0	0	0
WPS Design Enrollment	0	0	0
# Classrooms	0	0	0
Project Budget	\$ 2,574,000	\$ 4,213,000	

McCall Middle School - Classroom Reconfiguration and Elevator Addition

EXTENT OF RENOVATED AREA

- New Elevator
- Three Classrooms at 745 sq ft
- Toilets Remain

EXTENT OF RENOVATED AREA

- New Elevator Connection

PROJECT SUMMARY:
The lower level area, currently utilized for the "Youth Center Program", will be reconfigured to accommodate four classrooms and a new elevator. Classrooms will have natural light with views to the exterior. A new elevator will connect the lower level to the first floor in the area adjacent to the existing egress stair.

EXTENSIVE RENOVATION
Lower Level Area: 3,500 square feet
First Floor Area: 300 square feet
Total Area: 3,800 square feet

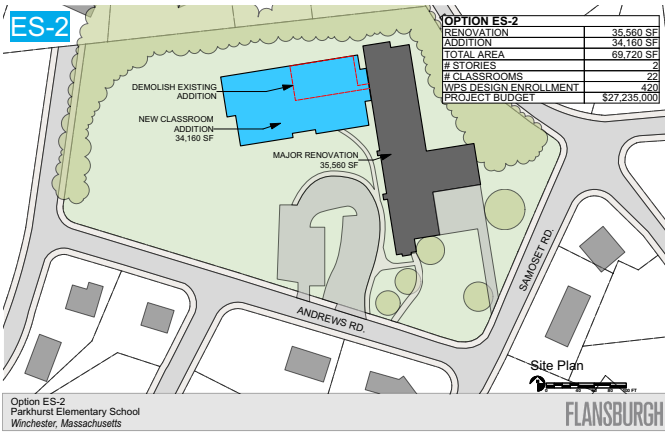
McCall Middle School
KEYPLAN

Option MS-1 (Classrooms with Existing Lockers to Remain)
McCall Middle School
Winchester, Massachusetts

PRE-K - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR							
Current Enrollment: 2,459 Students							
2021-2022 Enrollment: 2,412 Students							
Enrollment Increase: +47 Students							
	Option ES-2 Grade Shift Pre-K to Parkhurst, Renovation/ Addition	Option ES-3 Grade Shift Pre-K to Parkhurst, New Construction	Option ES-2/Grade Shift 5th to Parkhurst, Renovation/ Addition	Option ES-3A Grade Shift 5th to Parkhurst, New Construction	Option ES-5 Moraco/Lynch Renovation/ Addition	Option ES-4 Moraco/Lynch New Construction	
	Pre-K Enrollment: 94 students						
Arbush	Three classrooms available	Three classrooms available	Three classrooms available	Three classrooms available	No change	No change	
Current Enrollment	390	390	362	362	440	440	
WPS Design Enrollment	460	460	460	460	460	460	
# Classrooms	23	23	23	23	23	23	
Lincoln	Four classrooms available	Four classrooms available	Four classrooms available	Four classrooms available	No change	No change	
Current Enrollment	335	335	334	334	410	410	
WPS Design Enrollment	440	440	440	440	440	440	
# Classrooms	21	21	21	21	21	21	
Lyons with Pre-K	Nine classrooms available	Nine classrooms available	Nine classrooms available	Nine classrooms available	Renovation/addition for 580 students (PK-5)	New construction for 580 students (PK-5)	
Current Enrollment	384	384	473	473	549	549	
WPS Design Enrollment	540	540	540	540	580	580	
# Classrooms	27	27	27	27	29	29	
Moraco	Three classrooms available	Three classrooms available	Three classrooms available	Three classrooms available	Renovation/addition for 460 students (K-5)	New construction for 460 students (K-5)	
Current Enrollment	341	341	324	324	404	404	
WPS Design Enrollment	420	420	420	420	460	460	
# Classrooms	21	21	21	21	23	23	
Yesson-Owen	Three classrooms available	Three classrooms available	Three classrooms available	Three classrooms available	No change	No change	
Current Enrollment	374	374	384	384	422	422	
WPS Design Enrollment	480	480	480	480	480	480	
# Classrooms	24	24	24	24	24	24	
Parkhurst	Renovation/addition for 420 students (PK-5)	New construction for 420 students (PK-5)	Renovation/addition for 420 students (PK-5)	New construction for 420 students (PK-5)	No change	No change	
Current Enrollment	409	409	386	386	0	0	
WPS Design Enrollment	420	420	400	400	0	0	
# Classrooms	22	22	20	20	0	0	
Project Budget	\$ 27,235,000	\$ 28,105,353	\$ 27,235,000	\$ 28,105,353	\$ 41,125,000 (Lyons)	\$ 46,362,000 (Lyons)	
					\$ 34,675,000 (Moraco)	\$ 39,317,000 (Moraco)	

Section 5 | Presentations & Meeting Notes

ENROLLMENT OPTIONS REVIEW

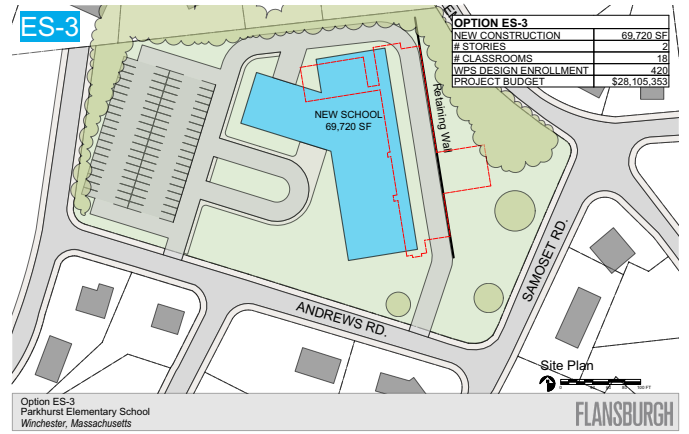


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ENROLLMENT OPTIONS REVIEW

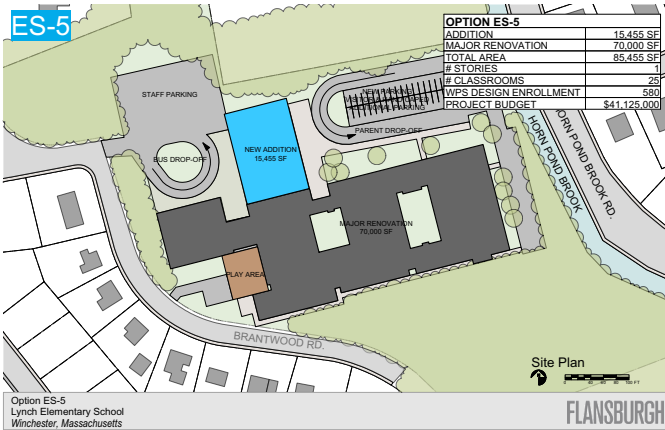


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ENROLLMENT OPTIONS REVIEW

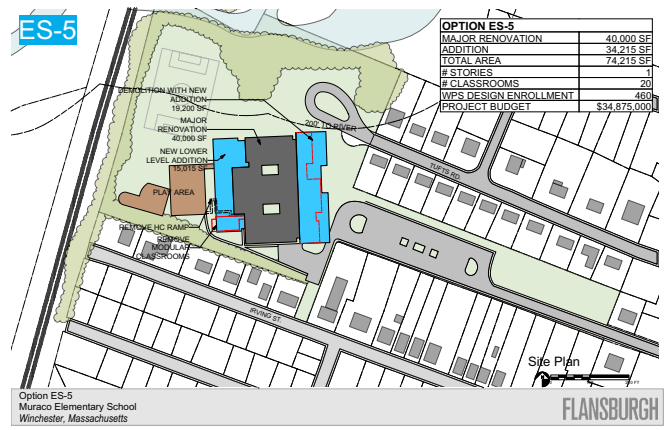


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ENROLLMENT OPTIONS REVIEW

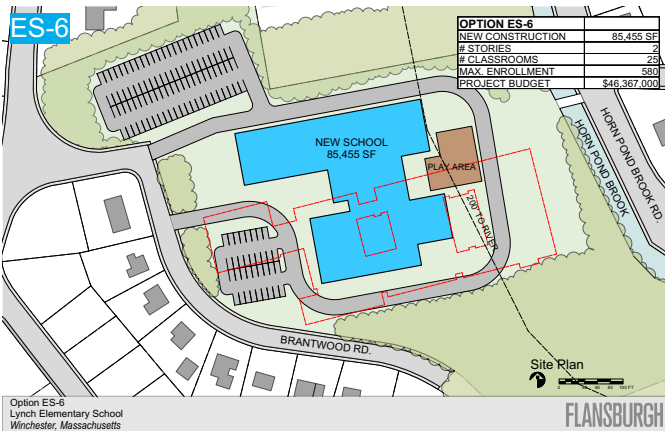


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ENROLLMENT OPTIONS REVIEW

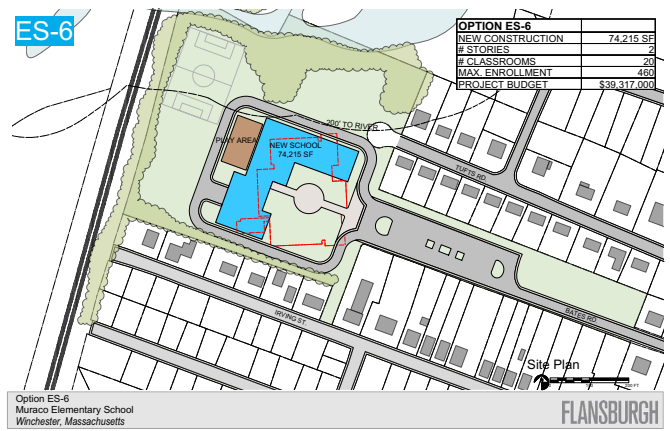


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ENROLLMENT OPTIONS REVIEW



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Presentation 5 - November 28, 2016



WINCHESTER PUBLIC SCHOOLS
FACILITIES MASTER PLAN
Winchester, Massachusetts

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1

What is a Master Plan?

The Facilities Master Plan is a vision for the support, expansion, consolidation, or transformation of district facilities that provides flexibility to accommodate changes in enrollment, educational goals and programming.

Definition

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A Master Plan DOES:

- align with WPS educational programming and planning.
- plan for growth (enrollment, staff, and physical plants).
- plan for best use of facilities & lands (fields).
- develop short- and long-term recommendations.
- develop preliminary cost, phasing and scheduling options.
- meet local planning and MSBA guidelines.
- assist in procurement of funds

A Master Plan DOES NOT:

- align with WPS educational programming and planning.
- plan for growth (enrollment, staff, and physical plants).
- plan for best use of facilities & lands (fields).
- develop short- and long-term recommendations.
- develop preliminary cost, phasing and scheduling options.
- meet local planning and MSBA guidelines.
- assist in procurement of funds
- Does not define a financial plan for implementation.
- Does not design new buildings or additions.
- Does not directly fund implementation or construction.

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4

Why now? ...it's out of date - 2007

SHORT TERM (5-year)

- Ambrose & Muraco modulars
- McCall E-Wing addition
- Winchester High School

LONG TERM (10-year)

- Vinson-Owen reconstruction
- Muraco renovation & addition
- Lynch renovation

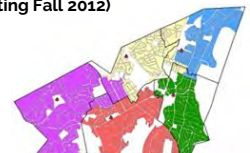


Why now? We're also out of space

3.5% K-5 Enrollment Growth (post-redistricting Fall 2012)

2012-13: 2105
2013-14: 2136
2014-15: 2140
2015-16: 2179 = 74 more K-5 students

197 more K-12 students



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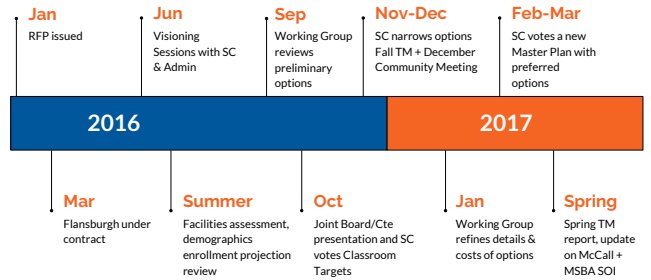
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Why now? We're also out of space!

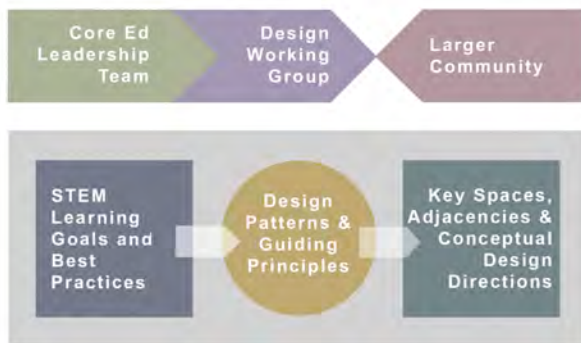
Enrollment Growth is only one component of our K-5 space crunch...

2012 K-5 Classroom Target:	108
2016 K-5 Classroom Target:	106
2016-17 K-5 sections:	110
Inventory shortfall (today):	4 classrooms

Process & Timeline



The Visioning Process



Focus on Learning

- High-performance work environments
- Varied and collaborative
- Flexible and agile



Focus on 21st Century Skills

- The six R's and the four C's
- Proactive, life long, continuous learning
- Critical thinking
- Communication
- Collaboration
- Creativity
- Citizenship
- Academic mindset



21st Century Design Patterns



Ubiquitous Technology

- Tablets
- Smart Boards



Indoor / Outdoor Learning

- Play Area
- Expanded Learning Experience



Media Centers

- Virtual Learning
- Flexible Layouts



Collaborative Learning Clusters

- Varied Spaces Sizes
- Group Presentation Spaces



Varied / Flexible Spaces

- Moveable Walls
- Small Group Learning



Streetscapes

- Displays
- Informal Gathering Areas

McCall Middle School

The McCall Middle School is exhausted of space today, with the library now partitioned to provide two instructional spaces.

The Schedule Committee (CBA) may find efficiencies in space utilization-- but not to the extent to meet space needs.

Early Options

McCall Middle School

- Repurpose WYC space below gymnasium
- multi-story addition behind library wing
- 6th Grade Academy relocated to Lincoln
- 6th Grade Academy relocated to Parkhurst

3 - 4 classrooms
4 classrooms *

Note: multi-story McCall addition includes potential for two additional specialized instructional/support spaces adjacent to library

Early Options

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Elementary Schools

- **Modular Classroom Additions** (multiple) 7 classrooms
- **PK & K to Renovated or New Parkhurst** 420 students
- **New or Renovated/Expanded Muraco & Lynch** 1000 students (M & L)
- **Combination School** (Lynch + Muraco) 1000 students
- **Combination School** (Lynch, Muraco, Lincoln) 1460 students

Early Options

Working Group - Scrubs the options

REPRESENTATION

- School Committee (2)
- Superintendent
- WPS Dir of Finance
- Town Manager
- EFPBC (2)
- Finance Committee (2)
- Dept of Public Works (2)
- Engineering & Planning

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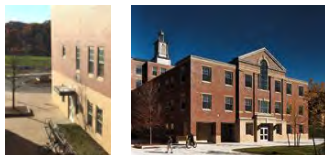
16

School Committee VOTE - Nov 3rd

McCall Middle School
Pursue a 2-phase project:

1. Reconfigured WYC space and
2. 2-story library wing addition

6th Grade Academy no longer under consideration.



Phase 1 - Article 10 / Motion 3

Preferred Options

School Committee VOTE - Nov 3rd

McCall Middle School

- Pursue a 2-phase project:
1. Reconfigured WYC space and
 2. 2-story library wing addition

6th Grade Academy no longer under consideration.

PK & Elementary Students

- Pursue separate development of new or renovated Muraco & Lynch. Consider Parkhurst "Grade-Shift" option.

Modulars & Combination School no longer under consideration.

Preferred Options

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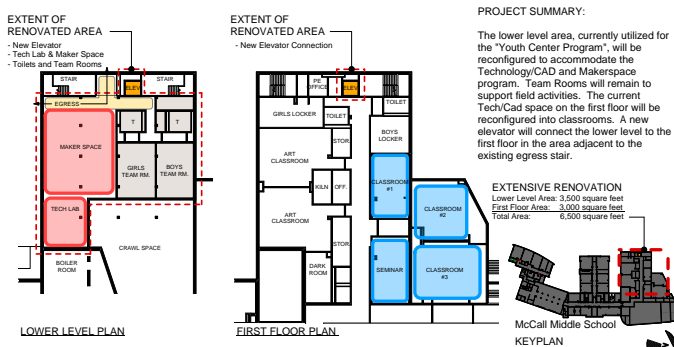
Section 5 | Presentations & Meeting Notes

2021 - 2022 5-YEAR K-5 ENROLLMENT				
	ENROLLMENT	CLASS SECTIONS	CLASSROOMS	SHORTFALL
SCHOOL YEAR 2016-2017	2,136 actual	110 actual	106 available	4 classrooms
SCHOOL YEAR 2021-2022	2,217 proposed	113 required	113 required	113-106 = 7 classrooms

2021 - 2022 5-YEAR 6-8 ENROLLMENT			
	ENROLLMENT	CLASSROOMS	SHORTFALL
SCHOOL YEAR 2016-2017	1,150 actual	52 available	0 classrooms
SCHOOL YEAR 2021-2022	1,196 proposed	56 required	56-52 = 4 classrooms

SHORT TERM & MID TERM OPTIONS FOR GRADES 6-8		
	PHASE I Youth Center Renovation 3-4 Classrooms	PHASE II New Addition Up to 6 Classrooms
McCall Middle	Add elevator and renovated Youth Center	Newclassroom addition
Current Enrollment	1,150	1,150
WPS Design Enrollment	1,196	1,196
# Classrooms	55-56	Up to 6 classrooms
Project Budget	\$ 2,500,000 - \$3,000,000	\$4,200,000 - \$4,800,000

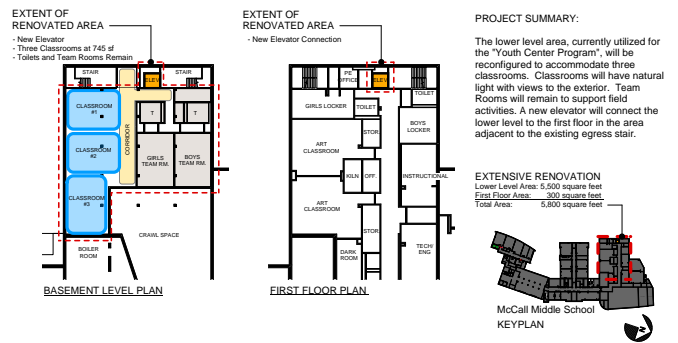
McCall Middle School - Tech/Makerspace and Classroom Reconfiguration - Option B



Phase I - Option B
McCall Middle School
Winchester, Massachusetts



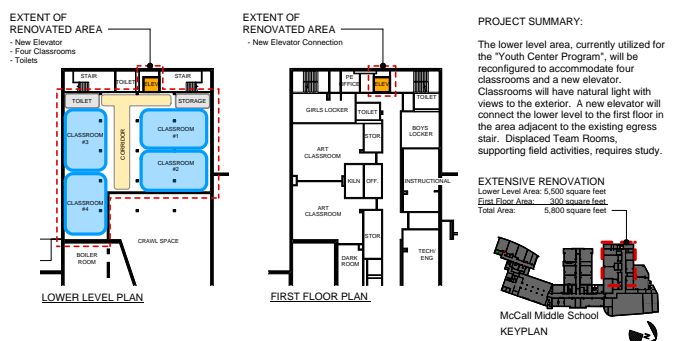
McCall Middle School - Classroom Reconfiguration - Option A



Phase I - Option A
McCall Middle School
Winchester, Massachusetts



McCall Middle School - Classroom Reconfiguration - Option C



Phase I - Option C
McCall Middle School
Winchester, Massachusetts

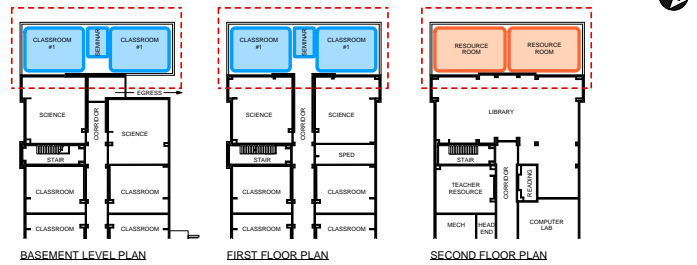
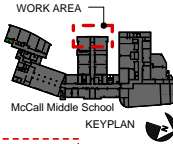


McCall Middle School - Building Addition

PROJECT SUMMARY:

A new building addition will be located on the west side of the existing school. The new addition will accommodate two classrooms per floor on the lower and first floors. The library will have additional support with two new resource rooms on the second floor.

Areas by Floor
 Lower Level Area: 2,400 square feet
 First Floor Area: 2,400 square feet
 Second Floor Area: 2,400 square feet
 Total Area: 7,200 square feet



Phase II - New Building Addition
 McCall Middle School
 Winchester, Massachusetts

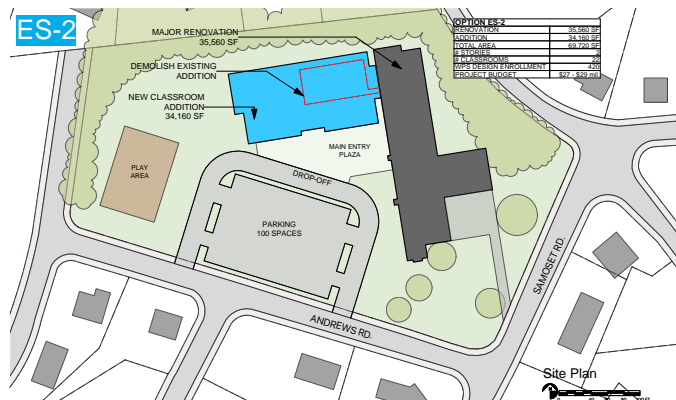
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PREK - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR		
	Option ES-2 Grade Shift Parkhurst, Renovation/Addition	Option ES-3 Grade Shift Parkhurst, New Construction
Ambrose	Three classrooms available	Three classrooms available
Current Enrollment	390	390
WPS Design Enrollment	460	460
# Classrooms	23	23
Lincoln	Four classrooms available	Four classrooms available
Current Enrollment	335	335
WPS Design Enrollment	440	440
# Classrooms	21	21
Lynch w/PreK	Nine classrooms available	Nine classrooms available
Current Enrollment	384	384
WPS Design Enrollment	540	540
# Classrooms	27	27
Muraco	Three classrooms available	Three classrooms available
Current Enrollment	341	341
WPS Design Enrollment	420	420
# Classrooms	21	21
Vision-Owen	Three classrooms available	Three classrooms available
Current Enrollment	374	374
WPS Design Enrollment	480	480
# Classrooms	24	24
Parkhurst	Renovation/addition for 420 students	New construction for 420 students
Current Enrollment	409	409
WPS Design Enrollment	420	420
# Classrooms	22	22
Project Budget	\$ 27,000,000 - \$ 29,000,000	\$ 28,000,000 - \$ 30,000,000

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Option ES-2
 Parkhurst Elementary School
 Winchester, Massachusetts

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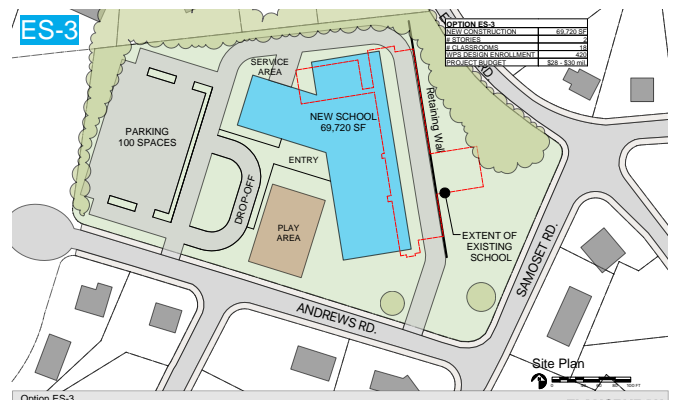
PREK - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR		
	Option ES-5A Lynch Renovations/Addition, PreK - K	Option ES-5B Muraco/Lynch New Construction, PreK - K
Ambrose	No change	No change
Current Enrollment	440	440
WPS Design Enrollment	460	460
# Classrooms	23	23
Lincoln	No change	No change
Current Enrollment	410	410
WPS Design Enrollment	440	440
# Classrooms	21	21
Lynch w/PreK	Renovation/addition for 580 students (PK-5)	New construction for 580 students (PK-5)
Current Enrollment	549	549
WPS Design Enrollment	580	580
# Classrooms	29	29
Muraco	No change	No change
Current Enrollment	404	404
WPS Design Enrollment	420	420
# Classrooms	21	21
Vision-Owen	No change	No change
Current Enrollment	422	422
WPS Design Enrollment	480	480
# Classrooms	24	24
Parkhurst	No change	No change
Current Enrollment	0	0
WPS Design Enrollment	0	0
# Classrooms	0	0
Project Budget	\$ 41,000,000 - \$ 43,000,000	\$ 46,000,000 - \$ 48,000,000

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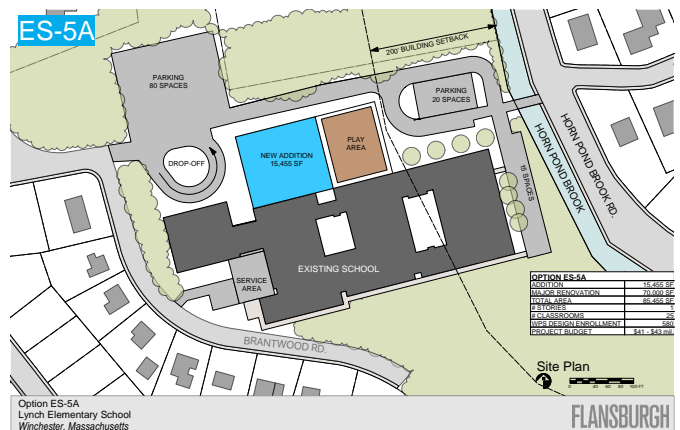
Option ES-3
 Parkhurst Elementary School
 Winchester, Massachusetts

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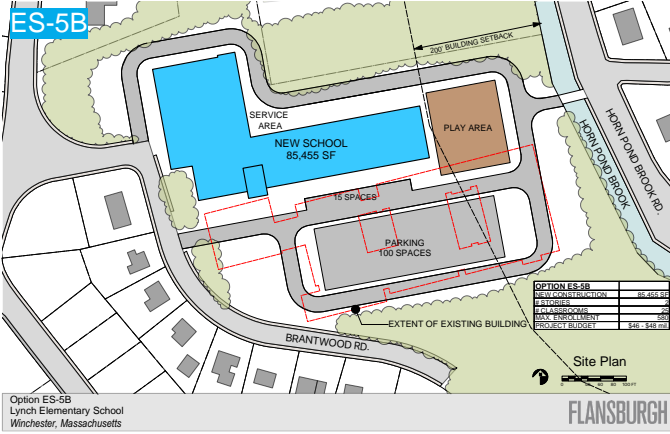
Option ES-5A
 Lynch Elementary School
 Winchester, Massachusetts

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Option ES-5B
Lynch Elementary School
Winchester, Massachusetts

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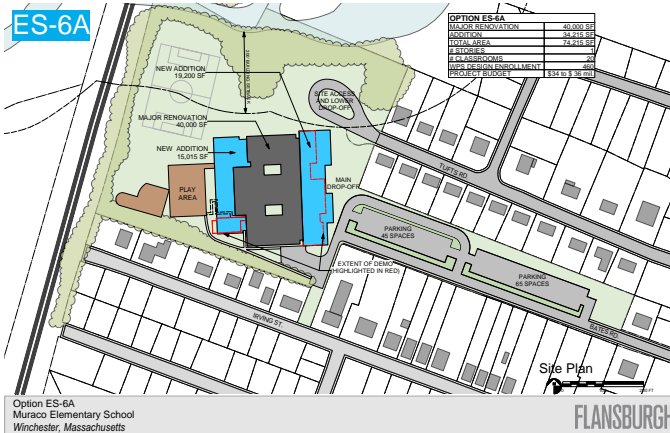
31

PREK - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR		
	Option ES-6A Muraco Renovations/Addition, PreK - 5	Option ES-6B Muraco New Construction, PreK - 5
Current Enrollment	2,196 Students	2,196 Students
2021-2022 Enrollment	2,212 Students	2,212 Students
Enrollment Increase	16 Students	16 Students
Andrus	No change	No change
Current Enrollment	440	440
WPS Design Enrollment	460	460
# Classrooms	23	23
Lincoln	No change	No change
Current Enrollment	410	410
WPS Design Enrollment	440	440
# Classrooms	21	21
Lynch w/ PreK	No change	No change
Current Enrollment	549	549
WPS Design Enrollment	540	540
# Classrooms	27	27
Muraco	Renovations/addition for 460 students (PK-5)	New construction for 460 students (PK-5)
Current Enrollment	404	404
WPS Design Enrollment	540	540
# Classrooms	28	28
Vision-Owen	No change	No change
Current Enrollment	422	422
WPS Design Enrollment	480	480
# Classrooms	24	24
Parham	No change	No change
Current Enrollment	0	0
WPS Design Enrollment	0	0
# Classrooms	0	0
Project Budget	\$ 34,000,000 - \$ 36,000,000	\$ 43,000,000 - \$ 45,000,000

Winchester Public Schools | Winchester, MA

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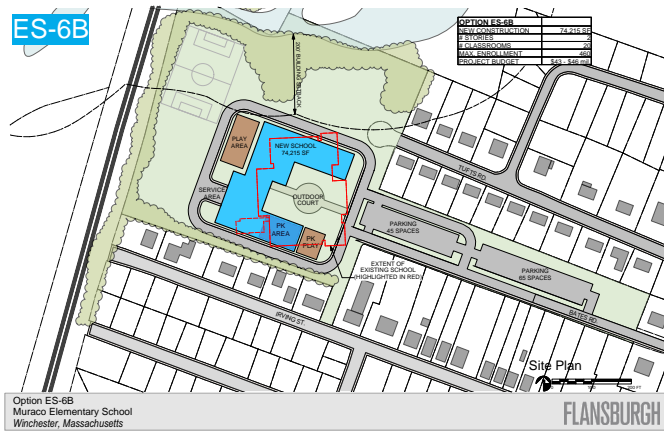


Option ES-6A
Muraco Elementary School
Winchester, Massachusetts

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Option ES-6B
Muraco Elementary School
Winchester, Massachusetts

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Question & Comments

Winchester Public Schools | Winchester, MA

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Presentation 6 - January 11, 2017



MASTER PLAN
WORKING GROUP
MEETING

WINCHESTER PUBLIC SCHOOLS
FACILITIES MASTER PLAN

Winchester, Massachusetts | January 11, 2017

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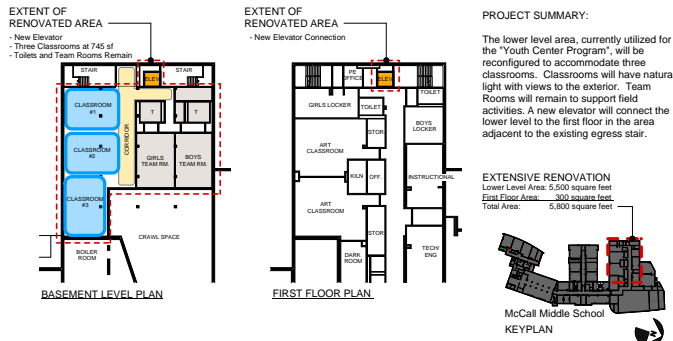
2021 - 2022 5-YEAR K-5 ENROLLMENT				
SCHOOL YEAR	ENROLLMENT	CLASS SECTIONS	CLASSROOMS	SHORTFALL
SCHOOL YEAR 2016-2017	2,136 <i>actual</i>	110 <i>actual</i>	106 <i>available</i>	4 <i>classrooms</i>
SCHOOL YEAR 2021-2022	2,217 <i>proposed</i>	113 <i>required</i>	113 <i>required</i>	113-106 = 7 <i>classrooms</i>

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McCall Middle School - Classroom Reconfiguration - Option A



Phase I - Option A
McCall Middle School
Winchester, Massachusetts

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2021 - 2022 5-YEAR 6-8 ENROLLMENT			
SCHOOL YEAR	ENROLLMENT	CLASSROOMS	SHORTFALL
SCHOOL YEAR 2016-2017	1,150 <i>actual</i>	50 <i>available</i>	2 <i>classrooms</i>
SCHOOL YEAR 2021-2022	1,196 <i>proposed</i>	56 <i>required</i>	56-50 = 6 <i>classrooms</i>

Winchester Public Schools | Winchester, MA

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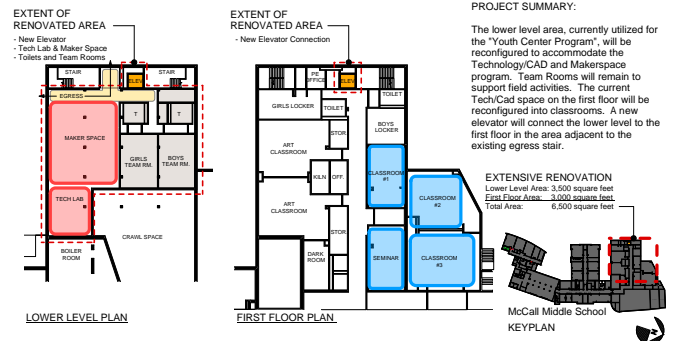
SHORT TERM & MID TERM OPTIONS FOR GRADES 6-8		
	PHASE I Lower Level Renovation 3-4 Classrooms	PHASE II New Addition Up to 6 Classrooms
McCall Middle	Add elevator and renovated Youth Center	Newclassroom addition
Current Enrollment	1,150	1,150
WPS Design Enrollment	1,196	1,196
# Classrooms	55-56	Up to 6 classrooms

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McCall Middle School - Tech/Makerspace and Classroom Reconfiguration - Option B



Phase I - Option B
McCall Middle School
Winchester, Massachusetts

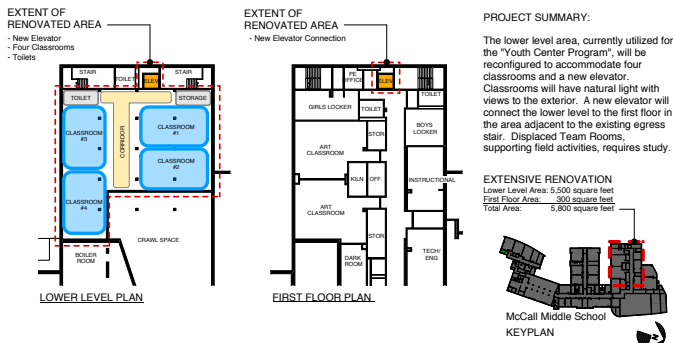
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6

McCall Middle School - Classroom Reconfiguration - Option C



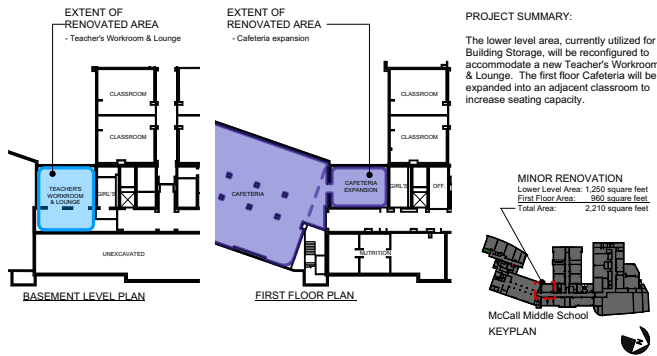
Phase I - Option C
 McCall Middle School
 Winchester, Massachusetts
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7

McCall Middle School - Teacher's Workroom & Cafeteria Expansion

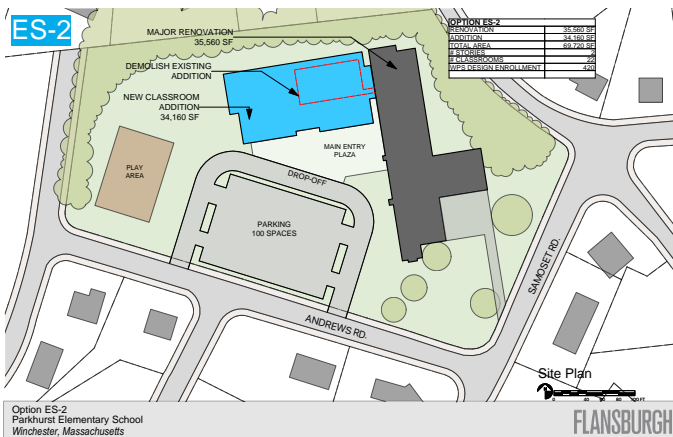


Phase II - Option A
 McCall Middle School
 Winchester, Massachusetts
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McCall Middle School - Building Addition



Phase II - New Building Addition
 McCall Middle School
 Winchester, Massachusetts
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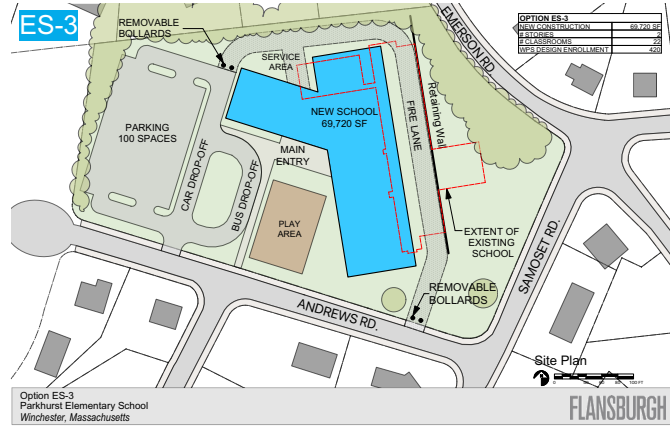
8

PRE-K - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR		
Current Enrollment: 2,118 Students 2021-2022 Enrollment: #22,300-22,600 Enrollment Increase: +117 Students	Option ES-2 Grade Shift Parkhurst, Renovation/Addition	Option ES-3 Grade Shift Parkhurst, New Construction
Ambrose	Three classrooms available	Three classrooms available
Current Enrollment	390	390
WPS Design Enrollment	460	460
# Classrooms	23	23
Lincoln	Four classrooms available	Four classrooms available
Current Enrollment	335	335
WPS Design Enrollment	440	440
# Classrooms	21	21
Lynch w/ Pre-K	Nine classrooms available	Nine classrooms available
Current Enrollment	384	384
WPS Design Enrollment	540	540
# Classrooms	27	27
Maraco	Three classrooms available	Three classrooms available
Current Enrollment	341	341
WPS Design Enrollment	420	420
# Classrooms	21	21
Vinson Owen	Three classrooms available	Three classrooms available
Current Enrollment	374	374
WPS Design Enrollment	480	480
# Classrooms	24	24
Parkhurst	Renovation/addition for 420 students	New construction for 420 students
Current Enrollment	409	409
WPS Design Enrollment	420	420
# Classrooms	22	22
Project Budget	\$ 27,000,000 - \$ 29,000,000	\$ 28,000,000 - \$ 30,000,000

Winchester Public Schools | Winchester, MA

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Winchester Public Schools | Winchester, MA

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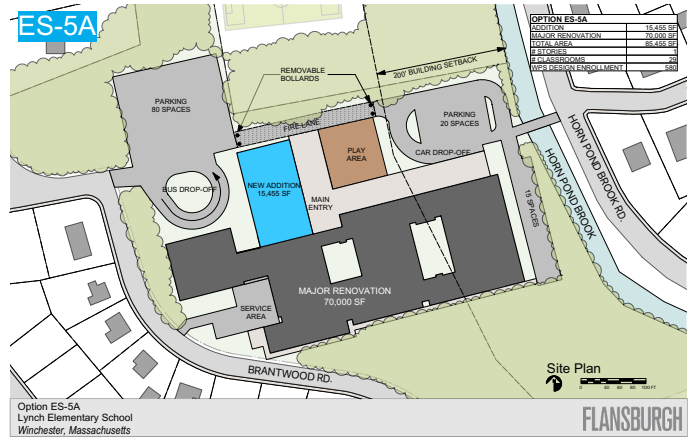
12

PREK - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR		
Current Enrollment:	2,136 Students	
2021-2022 Enrollment:	2,212 Students	
Enrollment Increase:	78 Students	
	Option ES-5A Lynch Renovations/Addition, PreK - K	Option ES-5B Lynch New Construction, PreK - K
Amherst	No change	No change
Current Enrollment	440	440
WPS Design Enrollment	460	460
# Classrooms	23	23
Lincoln	No change	No change
Current Enrollment	410	410
WPS Design Enrollment	440	440
# Classrooms	21	21
Lynch w/ PreK	Renovation/addition for 580 students (PK-5)	New construction for 580 students (PK-5)
Current Enrollment	549	549
WPS Design Enrollment	580	580
# Classrooms	29	29
Marian	No change	No change
Current Enrollment	404	404
WPS Design Enrollment	420	420
# Classrooms	21	21
Vinson-Owen	No change	No change
Current Enrollment	422	422
WPS Design Enrollment	480	480
# Classrooms	24	24
Parkhurst	No change	No change
Current Enrollment	0	0
WPS Design Enrollment	0	0
# Classrooms	0	0
Project Budget	\$ 41,000,000 - \$ 43,000,000	\$ 46,000,000 - \$ 48,000,000

Winchester Public Schools | Winchester, MA

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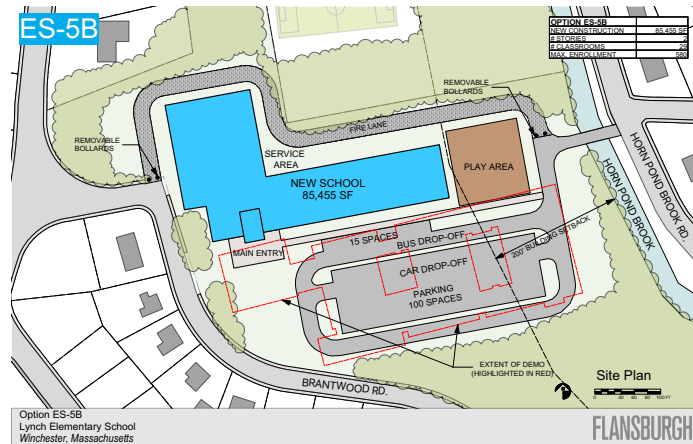
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Winchester Public Schools | Winchester, MA

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Winchester Public Schools | Winchester, MA

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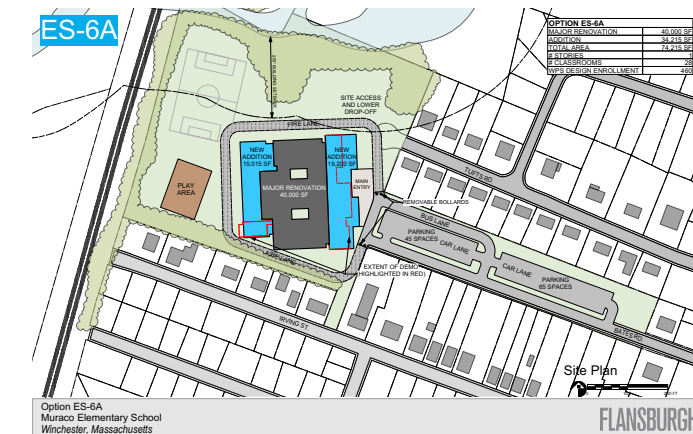
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PREK - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR		
Current Enrollment:	2,136 Students	
2021-2022 Enrollment:	2,212 Students	
Enrollment Increase:	78 Students	
	Option ES-6A Muraco Renovations/Addition, PreK - 5	Option ES-6B Muraco New Construction, PreK - 5
Amherst	No change	No change
Current Enrollment	440	440
WPS Design Enrollment	460	460
# Classrooms	23	23
Lincoln	No change	No change
Current Enrollment	410	410
WPS Design Enrollment	440	440
# Classrooms	21	21
Lynch w/ PreK	No change	No change
Current Enrollment	549	549
WPS Design Enrollment	540	540
# Classrooms	27	27
Marian	Renovation/addition for 460 students (PK-5)	New construction for 460 students (PK-5)
Current Enrollment	404	404
WPS Design Enrollment	540	540
# Classrooms	28	28
Vinson-Owen	No change	No change
Current Enrollment	422	422
WPS Design Enrollment	480	480
# Classrooms	24	24
Parkhurst	No change	No change
Current Enrollment	0	0
WPS Design Enrollment	0	0
# Classrooms	0	0
Project Budget	\$ 34,000,000 - \$ 36,000,000	\$ 43,000,000 - \$ 45,000,000

Winchester Public Schools | Winchester, MA

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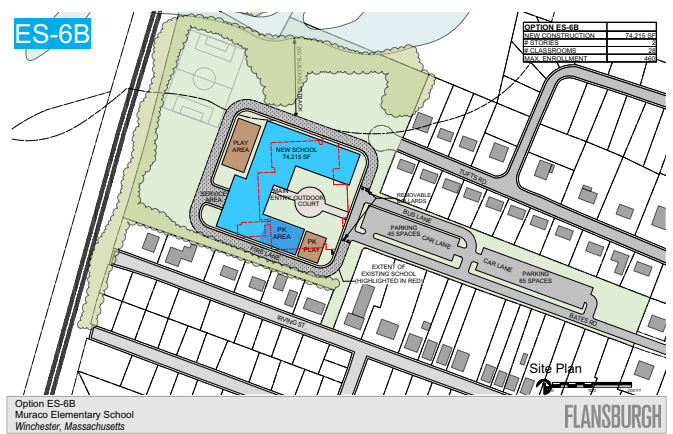
16



Winchester Public Schools | Winchester, MA

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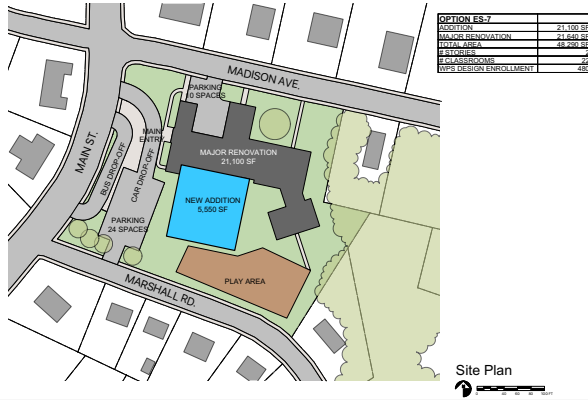
Winchester Public Schools | Winchester, MA

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Section 5 | Presentations & Meeting Notes

ES-7



Option ES-7
Mystic Elementary School
Winchester, Massachusetts

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PREK - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR	
Current Enrollment	2,136 Students
2021-2022 Enrollment	2,472 Students
Enrollment Increase	161 Students

Option ES-7 Mystic Renovations/Addition, Grade Shift	
Cost of Construction	\$19,600,000 to \$20,580,000
Construction Contingency	\$196,000 to \$205,000
Soft Cost	\$5,939,000 to \$6,235,000
Probable Cost Range	\$25,735,000 to \$27,020,000

Winchester Public Schools | Winchester, MA

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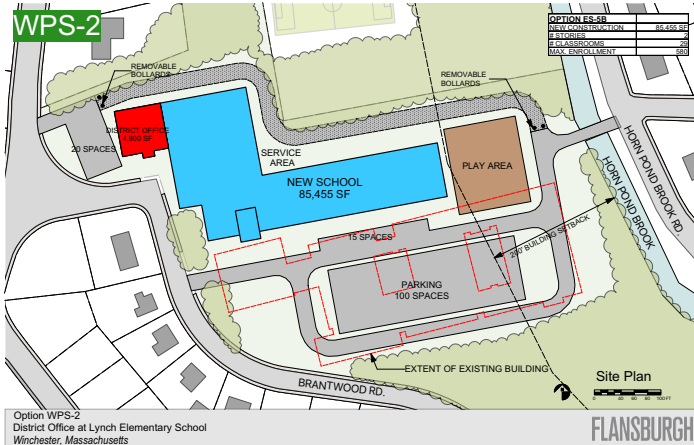
19

WINCHESTER DISTRICT OFFICE	
Space	Square Footage
Vestibule	80-s.f.
Men's	60-s.f.
Women's	60-s.f.
Waiting	60-s.f.
Office	125-s.f.
Office	125-s.f.
Office	125-s.f.
Office	125-s.f.
Office	125-s.f.
Office	125-s.f.
Office	300-s.f.
Office	300-s.f.
Office	300-s.f.
Break Room	80-s.f.
Reception	450-s.f.
Administration	250-s.f.
Corridor	300-s.f.
Storage	500-s.f.
Mail/Copy	300-s.f.
Conference Room	350-s.f.
TOTAL	4,140-s.f.

Winchester Public Schools | Winchester, MA

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Option WPS-2
District Office at Lynch Elementary School
Winchester, Massachusetts

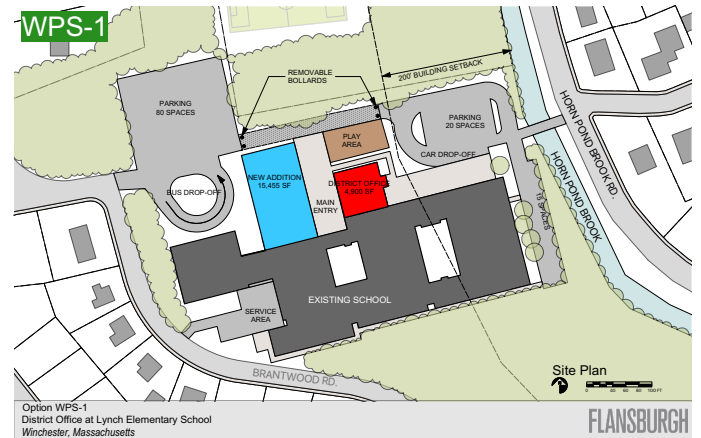
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Winchester Public Schools | Winchester, MA

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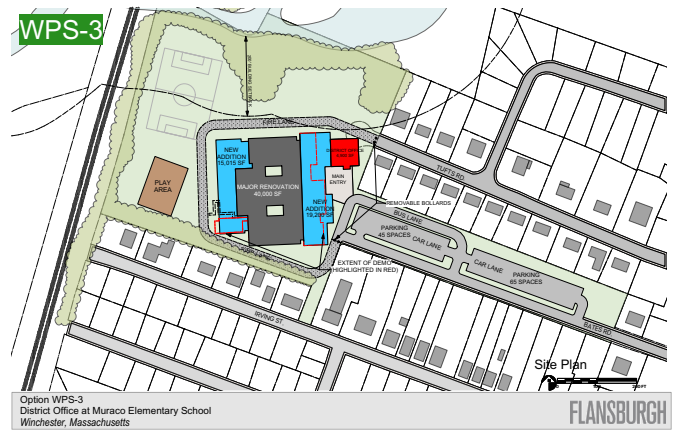
Option WPS-1
District Office at Lynch Elementary School
Winchester, Massachusetts

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Winchester Public Schools | Winchester, MA

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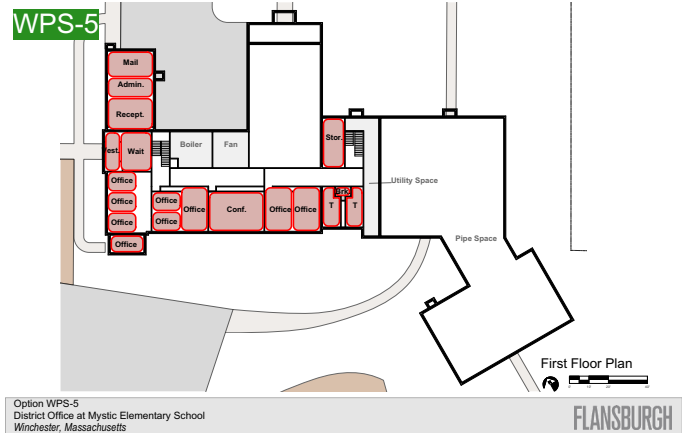
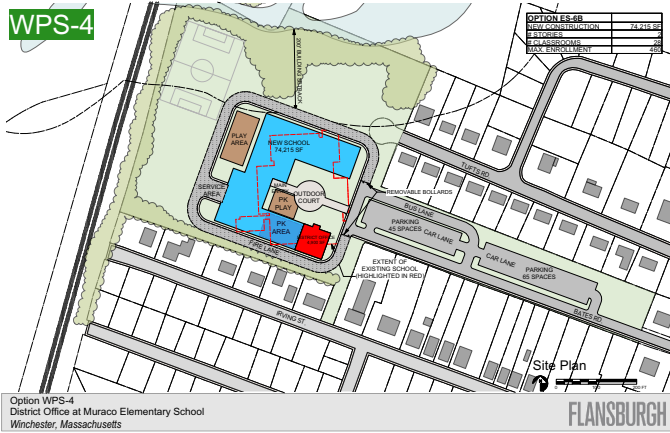
Option WPS-3
District Office at Muraco Elementary School
Winchester, Massachusetts

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Winchester Public Schools | Winchester, MA

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Presentation 7 - March 16, 2017



WINCHESTER MASTER PLAN
WORKING GROUP MEETING

WINCHESTER PUBLIC SCHOOLS
FACILITIES MASTER PLAN
Winchester, Massachusetts | March 16, 2017

Winchester Public Schools

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WINCHESTER PUBLIC SCHOOLS

6-8 DESIGN ENROLLMENT OPTIONS

McCall Middle School

Winchester Public Schools

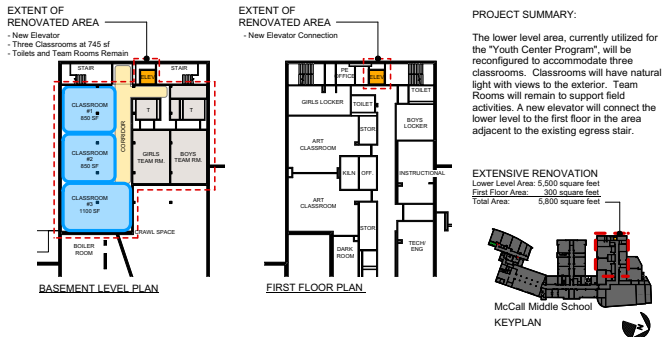
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6-8 DESIGN ENROLLMENT OPTIONS

WINCHESTER PUBLIC SCHOOLS

McCall Middle School - Classroom Reconfiguration and Elevator Addition



Phase I - Option A
McCall Middle School
Winchester, Massachusetts

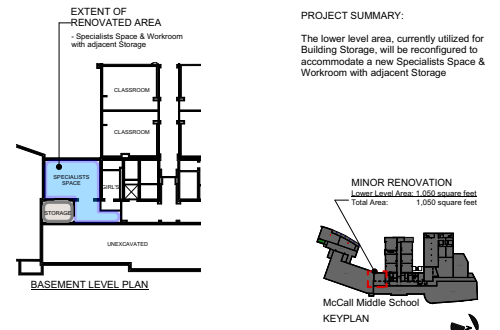
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3

WINCHESTER PUBLIC SCHOOLS

6-8 DESIGN ENROLLMENT OPTIONS

McCall Middle School - Specialists Space & Workroom with adjacent Storage



Phase I
McCall Middle School
Winchester, Massachusetts

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6-8 DESIGN ENROLLMENT OPTIONS

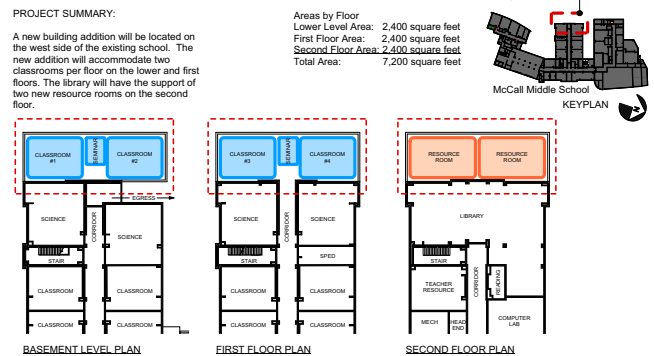
WINCHESTER PUBLIC SCHOOLS

GRADES 6-8 OPTIONS FOR 2021 - 2022 SCHOOL YEAR

Current Enrollment:	1,150 Students
2021-2022 Enrollment:	1,286 Students
Enrollment Increase:	+ 46 Students
PHASE I McCall Middle School Space Reconfiguration	
McCall Classroom Reconfiguration	
Cost of Construction	\$3,800,000 to \$4,000,000
Construction Contingency	\$380,000 to \$400,000
Soft Cost	\$1,250,000 to \$1,320,000
Probable Cost Range	\$5,430,000 to \$5,720,000
Specialists Space & Workroom	
Cost of Construction	\$375,000 to \$394,000
Construction Contingency	\$37,000 to \$39,000
Soft Cost	\$124,000 to \$130,000
Probable Cost Range	\$536,000 to \$563,000

5

McCall Middle School - Classroom Addition



Phase II - New Building Addition
McCall Middle School
Winchester, Massachusetts

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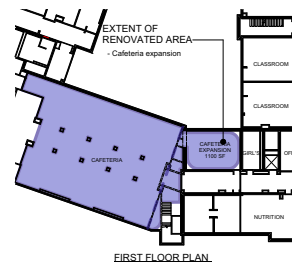
6-8 DESIGN ENROLLMENT OPTIONS

WINCHESTER PUBLIC SCHOOLS

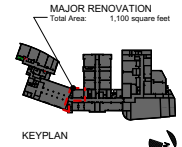
GRADES 6-8 OPTIONS FOR 2021 - 2022 SCHOOL YEAR	
Current Enrollment:	1,150 Students
2021-2022 Enrollment:	1,126 Students
Enrollment Increase:	+46 Students
PHASE II McCall Middle School New Classroom Addition	
Cost of Construction	\$1,950,000 to \$2,100,000
Construction Contingency	\$195,000 to \$210,000
Soft Cost	\$643,000 to \$693,000
Probable Cost Range	\$2,788,000 to \$3,003,000

7

McCall Middle School - Cafeteria Expansion
Option 1



PROJECT SUMMARY:
The first floor plan expands the cafeteria into an adjacent classroom.

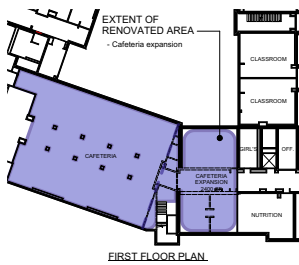


Phase II
McCall Middle School
Winchester, Massachusetts

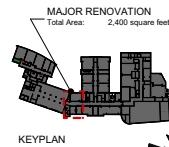
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8

McCall Middle School - Cafeteria Expansion
Option 2



PROJECT SUMMARY:
The first floor plan expands the cafeteria into two adjacent classrooms, eliminating one and reducing the Nutrition class by half.

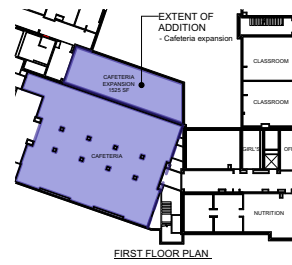


Phase II
McCall Middle School
Winchester, Massachusetts

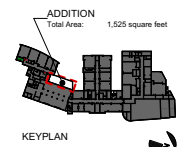
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9

McCall Middle School - Cafeteria Expansion
Option 3



PROJECT SUMMARY:
The first floor plan expands the cafeteria onto the exterior terrace.



Phase II
McCall Middle School
Winchester, Massachusetts

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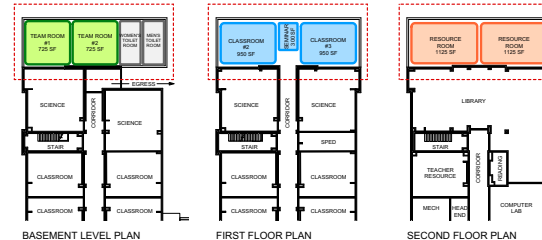
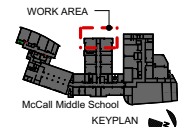
GRADES 6-8 OPTIONS FOR 2021 - 2022 SCHOOL YEAR	
Current Enrollment:	1,150 Students
2021-2022 Enrollment:	1,126 Students
Enrollment Increase:	+46 Students
PHASE II McCall Middle School Cafeteria Expansion	
Option 1	
Cost of Construction	\$130,000 to \$143,000
Construction Contingency	\$13,000 to \$14,300
Soft Cost	\$43,000 to \$47,00
Probable Cost Range	\$186,000 to \$204,000
Option 2	
Cost of Construction	\$343,000 to \$377,000
Construction Contingency	\$34,300 to \$37,700
Soft Cost	\$113,200 to \$124,500
Probable Cost Range	\$490,500 to \$539,200
Option 3	
Cost of Construction	\$1,134,300 to \$1,248,000
Construction Contingency	\$113,400 to \$124,800
Soft Cost	\$374,300 to \$411,800
Probable Cost Range	\$1,622,000 to \$1,784,600

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McCall Middle School - Classroom Addition

PROJECT SUMMARY:
A new building addition will be located on the west side of the existing school. The new addition will accommodate two team rooms and toilet rooms on the lower floor and two classrooms on the first floor. The library will have the support of two new resource rooms on the second floor.

Areas by Floor
Lower Level Area: 2,400 square feet
First Floor Area: 2,400 square feet
Second Floor Area: 2,400 square feet
Total Area: 7,200 square feet



Phase IIA
McCall Middle School
Winchester, Massachusetts

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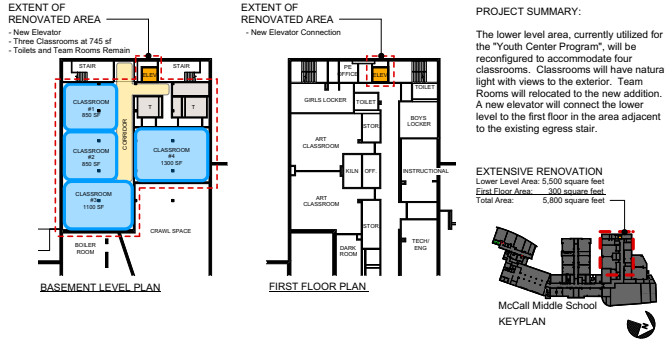
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Section 5 | Presentations & Meeting Notes

WINCHESTER PUBLIC SCHOOLS

6-8 DESIGN ENROLLMENT OPTIONS

McCall Middle School - Classroom Reconfiguration and Elevator Addition



Grades PreK-5

Phase IIA
McCall Middle School
Winchester, Massachusetts

Winchester Public Schools

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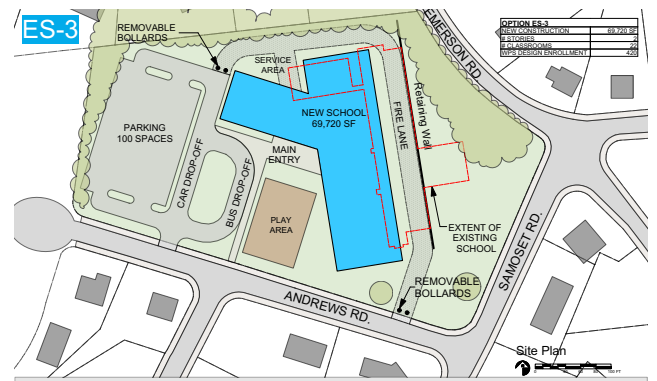
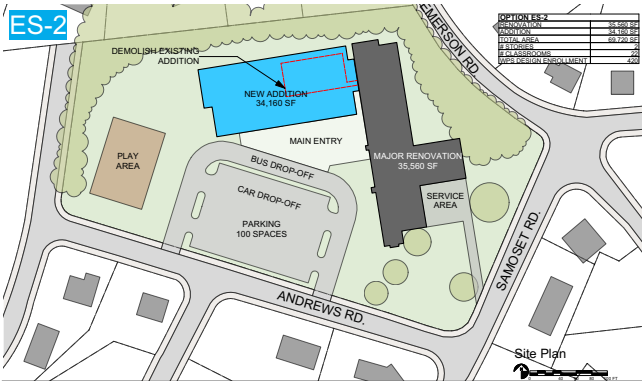
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WINCHESTER PUBLIC SCHOOLS PRE-K-5 DESIGN ENROLLMENT OPTIONS

PRE-K-5 DESIGN ENROLLMENT OPTIONS

WINCHESTER PUBLIC SCHOOLS



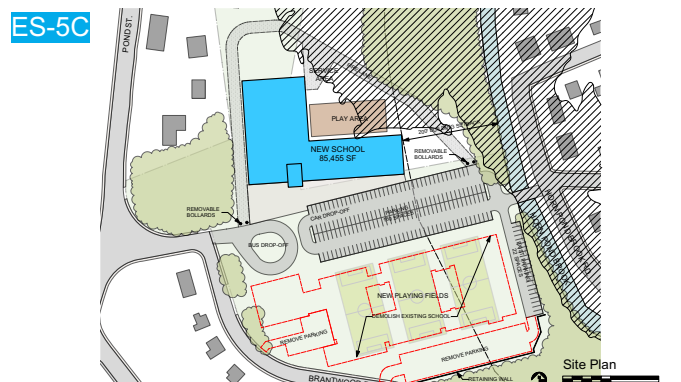
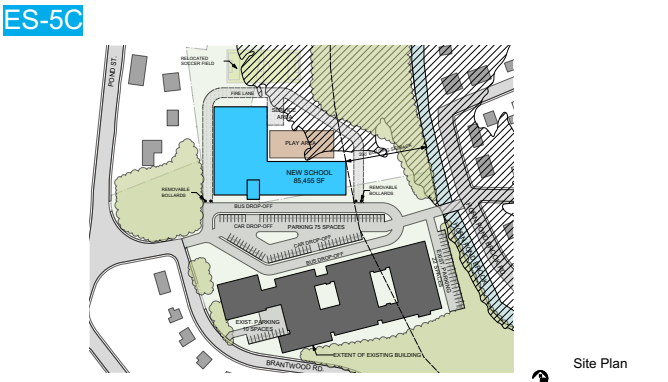
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WINCHESTER PUBLIC SCHOOLS PRE-K-5 DESIGN ENROLLMENT OPTIONS

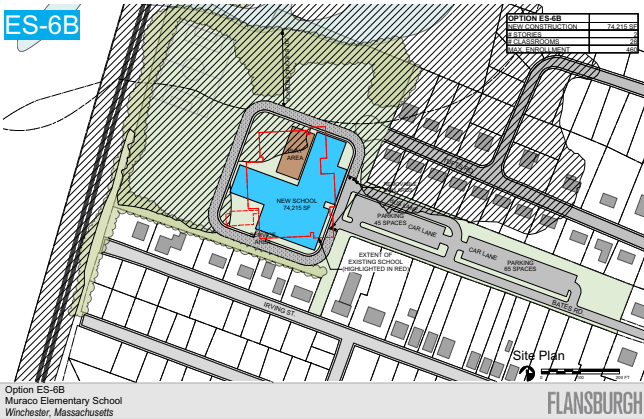
PRE-K-5 DESIGN ENROLLMENT OPTIONS

WINCHESTER PUBLIC SCHOOLS



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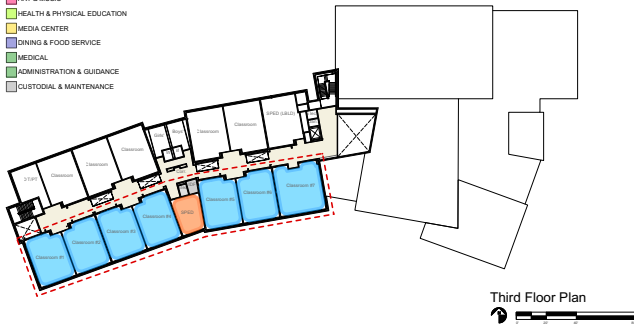


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PRE-K - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR		
Current Enrollment:	2,136 Students	
2021 - 2022 Enrollment:	4,212 Students	
Enrollment Increase:	+2,076 Students	
	Option ES-2: Grade Shift Parkhurst, Renovation/Addition	Option ES-3: Grade Shift Parkhurst, New Construction
Cost of Construction	\$25,000,000 to \$26,250,000	\$26,700,000 to \$28,000,000
Construction Contingency	\$25,000,000 to \$26,250,000	\$26,700,000 to \$28,000,000
Soft Cost	\$8,250,000 to \$8,670,000	\$8,800,000 to \$9,240,000
Probable Cost Range	\$35,750,000 to \$37,570,000	\$38,170,000 to \$40,000,000
	Option ES-5C: New Lynch with Old Lynch Occupied	Option ES-6B: New Muraco with Old Lynch Occupied
Cost of Construction	\$34,658,000 to \$38,124,000	\$30,326,000 to \$33,359,000
Construction Contingency	\$3,466,000 to \$3,812,000	\$3,033,000 to \$3,366,000
Soft Cost	\$10,397,000 to \$11,437,000	\$9,098,000 to \$10,008,000
Probable Cost Range	\$48,521,000 to \$53,373,000	\$44,457,000 to \$46,703,000

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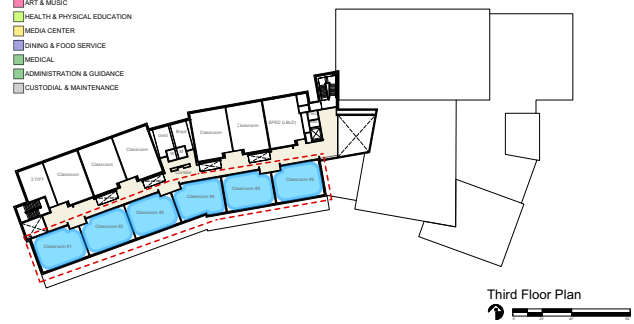
- SPACE SUMMARY LEGEND**
- CORE ACADEMIC SPACES
 - SPECIAL EDUCATION
 - ART & MUSIC
 - HEALTH & PHYSICAL EDUCATION
 - MEDIA CENTER
 - DINING & FOOD SERVICE
 - MEDICAL
 - ADMINISTRATION & GUIDANCE
 - CUSTODIAL & MAINTENANCE



Third Floor Addition
Vinson-Owen Elementary School
Winchester, Massachusetts

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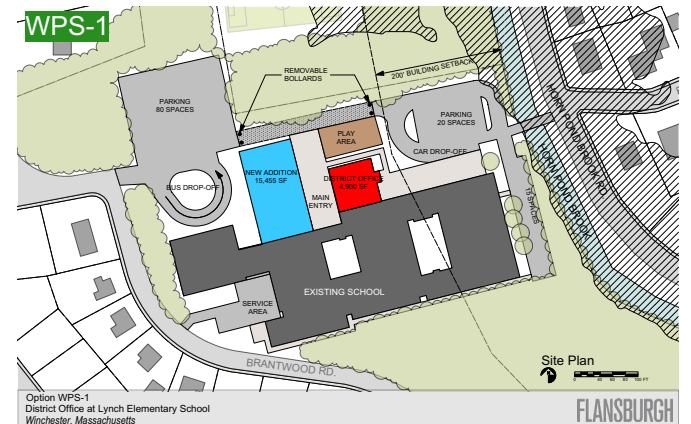
- SPACE SUMMARY LEGEND**
- CORE ACADEMIC SPACES
 - SPECIAL EDUCATION
 - ART & MUSIC
 - HEALTH & PHYSICAL EDUCATION
 - MEDIA CENTER
 - DINING & FOOD SERVICE
 - MEDICAL
 - ADMINISTRATION & GUIDANCE
 - CUSTODIAL & MAINTENANCE



Third Floor Addition
Vinson-Owen Elementary School
Winchester, Massachusetts

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District Office



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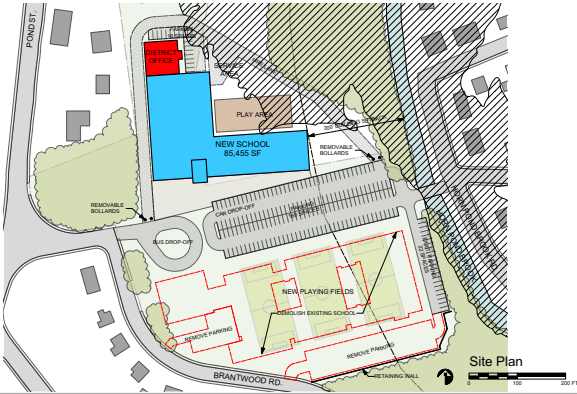
24

Section 5 | Presentations & Meeting Notes

WINCHESTER PUBLIC SCHOOLS

DISTRICT OFFICE RELOCATION OPTIONS

WPS-2



Option WPS-2
District Office at Lynch Elementary School
Winchester, Massachusetts

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DISTRICT OFFICE RELOCATION OPTIONS

WINCHESTER PUBLIC SCHOOLS

WPS-3



Option WPS-3
District Office at Muraco Elementary School
Winchester, Massachusetts

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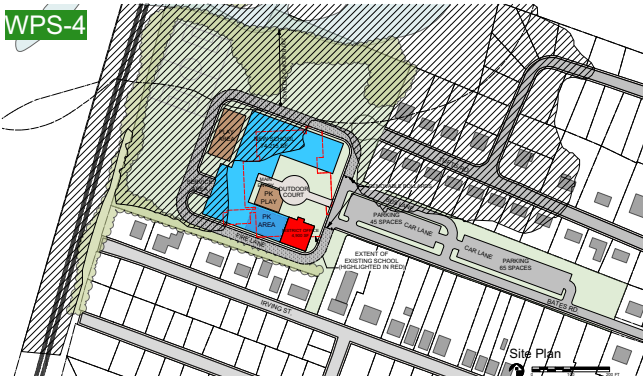
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WINCHESTER PUBLIC SCHOOLS

DISTRICT OFFICE RELOCATION OPTIONS

WPS-4



Option WPS-4
District Office at Muraco Elementary School
Winchester, Massachusetts

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DISTRICT OFFICE RELOCATION OPTIONS

WINCHESTER PUBLIC SCHOOLS

WPS-5



Option WPS-5
District Office at Mystic Elementary School
Winchester, Massachusetts

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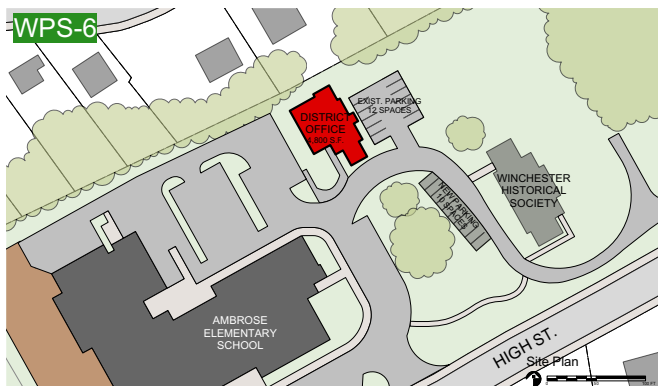
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WINCHESTER PUBLIC SCHOOLS

DISTRICT OFFICE RELOCATION OPTIONS

WPS-6



Option WPS-6
District Office in the Carriage House at Ambrose Elementary School
Winchester, Massachusetts

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DISTRICT OFFICE RELOCATION OPTIONS

WINCHESTER PUBLIC SCHOOLS

DISTRICT OFFICE RELOCATION		
	WPS-1	WPS-2
Cost of Construction	\$1,821,000 to \$2,003,000	\$1,691,000 to \$1,860,000
Construction Contingency	\$182,000 to \$200,000	\$169,000 to \$186,000
Soft Cost	\$601,000 to \$661,000	\$558,000 to \$614,000
Probable Cost Range <i>*Does not include phasing cost</i>	\$2,604,000 to \$2,864,000	\$2,418,000 to \$2,660,000
	WPS-3	WPS-4
Cost of Construction	\$1,664,000 to \$1,830,000	\$1,691,000 to \$1,860,000
Construction Contingency	\$166,000 to \$183,000	\$169,000 to \$186,000
Soft Cost	\$549,000 to \$604,000	\$558,000 to \$614,000
Probable Cost Range <i>*Does not include phasing cost</i>	\$2,604,000 to \$2,864,000	\$2,418,000 to \$2,660,000
	WPS-5	WPS-6
Cost of Construction	\$1,004,000 to \$1,104,000	\$1,990,000 to \$2,189,000
Construction Contingency	\$100,000 to \$140,000	\$199,000 to \$219,000
Soft Cost	\$331,000 to \$364,000	\$657,000 to \$722,000
Probable Cost Range <i>*Does not include phasing cost</i>	\$1,335,000 to \$1,578,000	\$2,846,000 to \$3,130,000

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ENROLLMENT IMPACTS	
<i>Impacting Factor</i>	<i>Student Impacted</i>
Cambridge Street Development	160 Students
<i>New Impacts on Enrollment</i>	<i>Student Impacted</i>
2016 Single Family Housing Bedroom Increase	40 Students
Holton Street Development	120 Students
Total Combined Impacts	320 Students
<i>Other Potential Impacts (If Developed)</i>	<i>Units</i>
Forest Ridge	(300 Units, on hold)
Krafts	(12 Single Family Houses + 20 Townhouses)
Main Street North	(40 Units)
Highland Avenue	(40 Units)
Mahoney's	(40 Units)
Waterfield Street	(40 Units)
2017 - 2026 Single Family Housing Bedroom Increase	TBD

Presentation 8 - March 30, 2017



WINCHESTER MASTER PLAN
WORKING GROUP MEETING

WINCHESTER PUBLIC SCHOOLS
FACILITIES MASTER PLAN
Winchester, Massachusetts | March 16, 2017

Winchester Public Schools

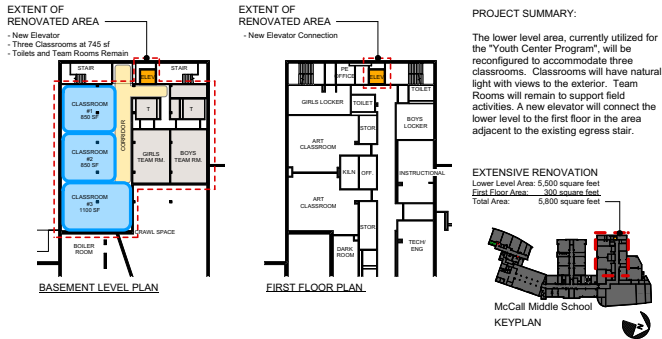
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WINCHESTER PUBLIC SCHOOLS

6-8 DESIGN ENROLLMENT OPTIONS

McCall Middle School - Classroom Reconfiguration and Elevator Addition



Phase I - Option A
McCall Middle School
Winchester, Massachusetts

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WINCHESTER PUBLIC SCHOOLS

6-8 DESIGN ENROLLMENT OPTIONS

GRADES 6-8 OPTIONS FOR 2021 - 2022 SCHOOL YEAR

PHASE I McCall Middle School Space Reconfiguration	
McCall Classroom Reconfiguration	
Cost of Construction	\$759,000 to \$834,900
Construction Contingency	\$75,900 to \$83,490
Soft Cost	\$227,700 to \$250,470
Probable Cost Range	\$1,062,600 to \$1,168,860
Specialists Space & Workroom	
Cost of Construction	\$375,000 to \$394,000
Construction Contingency	\$37,000 to \$39,000
Soft Cost	\$124,000 to \$130,000
Probable Cost Range	\$536,000 to \$563,000

Winchester Public Schools

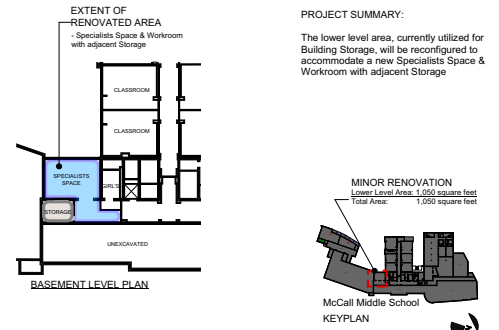
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6-8 DESIGN ENROLLMENT OPTIONS

WINCHESTER PUBLIC SCHOOLS

McCall Middle School - Specialists Space & Workroom with adjacent Storage



Phase I
McCall Middle School
Winchester, Massachusetts

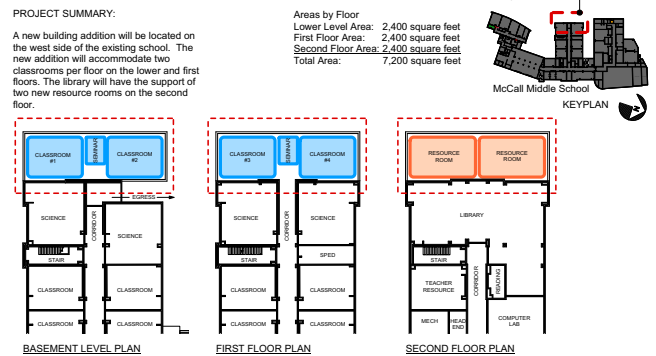
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6-8 DESIGN ENROLLMENT OPTIONS

WINCHESTER PUBLIC SCHOOLS

McCall Middle School - Classroom Addition



Phase II - New Building Addition
McCall Middle School
Winchester, Massachusetts

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6-8 DESIGN ENROLLMENT OPTIONS

WINCHESTER PUBLIC SCHOOLS

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WINCHESTER PUBLIC SCHOOLS

6-8 DESIGN ENROLLMENT OPTIONS

McCall Middle School - Team Room & Toilets at Playing Field

PROJECT SUMMARY:
The lower level area, currently utilized for Building Storage, will be reconfigured to accommodate new Team Rooms and toilets rooms with access to the adjacent playing field.

MINOR RENOVATION
Lower Level Area: 1,770 square feet
Total Area: 1,770 square feet

BASEMENT LEVEL PLAN

Phase II
McCall Middle School
Winchester, Massachusetts

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McCall Middle School - Cafeteria Expansion

Option 1

PROJECT SUMMARY:
The first floor plan expands the cafeteria into an adjacent classroom.

MAJOR RENOVATION
Total Area: 1,100 square feet

FIRST FLOOR PLAN

Phase II
McCall Middle School
Winchester, Massachusetts

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McCall Middle School - Cafeteria Expansion

Option 3

PROJECT SUMMARY:
The first floor plan expands the cafeteria onto the exterior terrace.

ADDITION
Total Area: 1,525 square feet

FIRST FLOOR PLAN

Phase II
McCall Middle School
Winchester, Massachusetts

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GRADES 6-8 OPTIONS FOR 2021 - 2022 SCHOOL YEAR	
PHASE II McCall Middle School New Classroom Addition	
Cost of Construction	\$1,950,000 to \$2,100,000
Construction Contingency	\$195,000 to \$210,000
Soft Cost	\$643,000 to \$693,000
Probable Cost Range	\$2,788,000 to \$3,003,000
PHASE II McCall Middle School Team Room Conversion at E Wing	
Cost of Construction	\$553,000 to \$608,300
Construction Contingency	\$55,300 to \$60,830
Soft Cost	\$165,900 to \$182,490
Probable Cost Range	\$774,200 to \$851,620

8

McCall Middle School - Cafeteria Expansion

Option 2

PROJECT SUMMARY:
The first floor plan expands the cafeteria into two adjacent classrooms, eliminating one and reducing the Nutrition class by half.

MAJOR RENOVATION
Total Area: 2,400 square feet

FIRST FLOOR PLAN

Phase II
McCall Middle School
Winchester, Massachusetts

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GRADES 6-8 OPTIONS FOR 2021 - 2022 SCHOOL YEAR	
PHASE II McCall Middle School Cafeteria Expansion	
Option 1	
Cost of Construction	\$130,000 to \$143,000
Construction Contingency	\$13,000 to \$14,300
Soft Cost	\$43,000 to \$47,000
Probable Cost Range	\$186,000 to \$204,000
Option 2	
Cost of Construction	\$343,000 to \$377,000
Construction Contingency	\$34,300 to \$37,700
Soft Cost	\$113,200 to \$124,500
Probable Cost Range	\$490,500 to \$539,200
Option 3	
Cost of Construction	\$1,134,300 to \$1,248,000
Construction Contingency	\$113,430 to \$124,800
Soft Cost	\$374,300 to \$411,800
Probable Cost Range	\$1,622,000 to \$1,784,600

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Section 5 | Presentations & Meeting Notes

WINCHESTER PUBLIC SCHOOLS

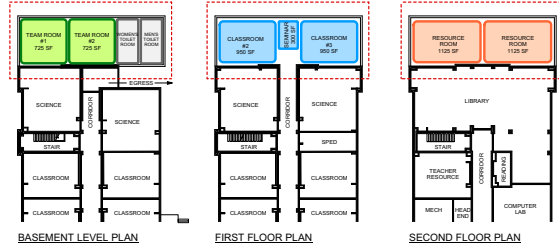
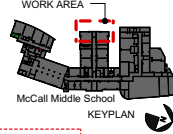
6-8 DESIGN ENROLLMENT OPTIONS

McCall Middle School - Classroom Addition

PROJECT SUMMARY:

A new building addition will be located on the west side of the existing school. The new addition will accommodate two team rooms and toilet rooms on the lower floor and two classrooms on the first floor. The library will have the support of two new resource rooms on the second floor.

Areas by Floor
 Lower Level Area: 2,400 square feet
 First Floor Area: 2,400 square feet
 Second Floor Area: 2,400 square feet
 Total Area: 7,200 square feet



Phase IIA
 McCall Middle School
 Winchester, Massachusetts

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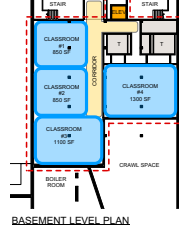
6-8 DESIGN ENROLLMENT OPTIONS

WINCHESTER PUBLIC SCHOOLS

McCall Middle School - Classroom Reconfiguration and Elevator Addition

EXTENT OF RENOVATED AREA

- New Elevator
- Three Classrooms at 745 SF
- Toilets and Team Rooms Remain



BASEMENT LEVEL PLAN

EXTENT OF RENOVATED AREA

- New Elevator Connection

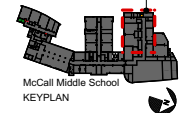


FIRST FLOOR PLAN

PROJECT SUMMARY:

The lower level area, currently utilized for the "Youth Center Program", will be reconfigured to accommodate four classrooms. Classrooms will have natural light with views to the exterior. Team Rooms will be relocated to the new addition. A new elevator will connect the lower level to the first floor in the area adjacent to the existing egress stair.

EXTENSIVE RENOVATION
 Lower Level Area: 5,500 square feet
 First Floor Area: ~300 square feet
 Total Area: 5,800 square feet



McCall Middle School
 KEYPLAN

Phase IIA
 McCall Middle School
 Winchester, Massachusetts

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Grades PreK-5

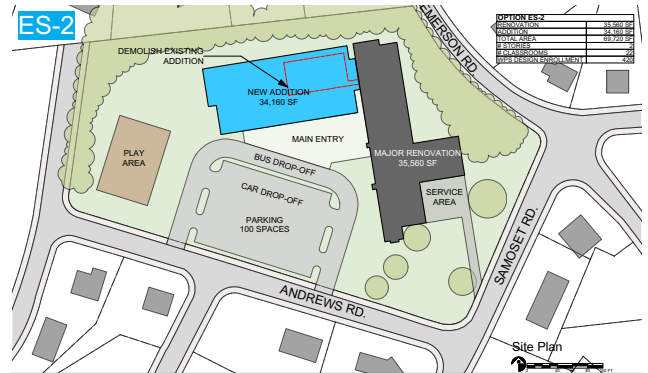
Winchester Public Schools

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PRE-K-5 DESIGN ENROLLMENT OPTIONS

WINCHESTER PUBLIC SCHOOLS



Option ES-2
 Parkhurst Elementary School
 Winchester, Massachusetts

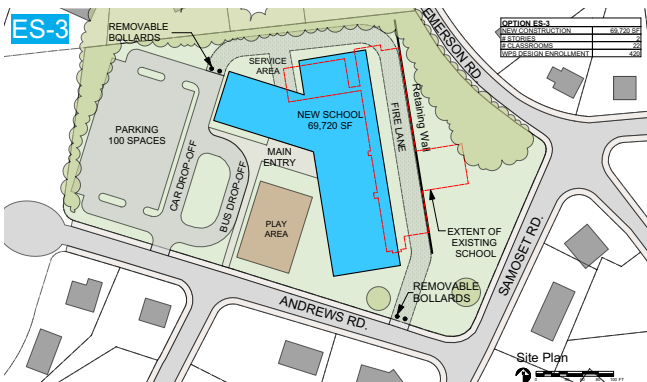
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WINCHESTER PUBLIC SCHOOLS

PRE-K-5 DESIGN ENROLLMENT OPTIONS



Option ES-3
 Parkhurst Elementary School
 Winchester, Massachusetts

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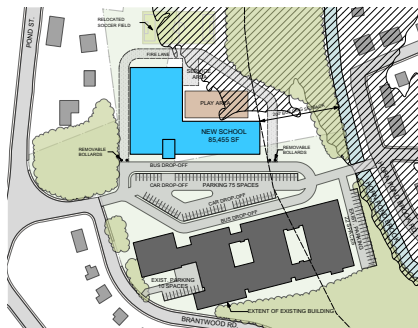
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PRE-K-5 DESIGN ENROLLMENT OPTIONS

WINCHESTER PUBLIC SCHOOLS

ES-5C

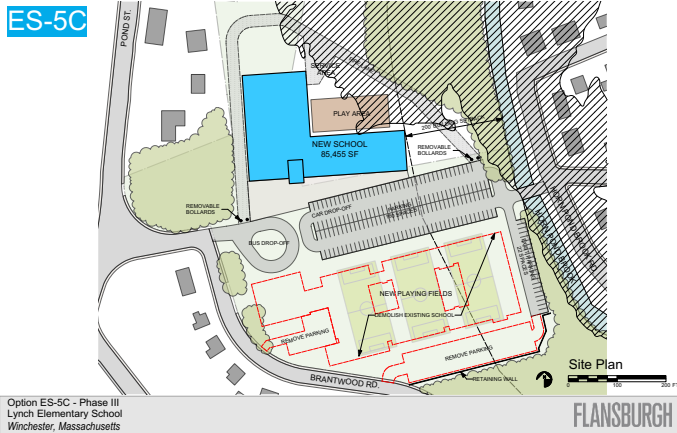


Option ES-5C
 Lynch Elementary School
 Winchester, Massachusetts

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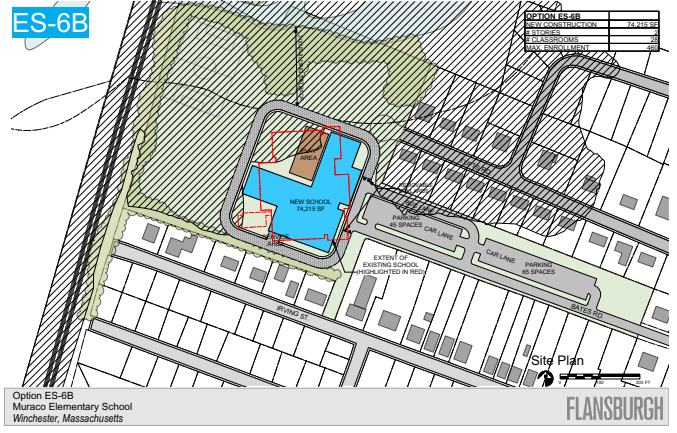
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Option ES-5C - Phase III Lynch Elementary School Winchester, Massachusetts

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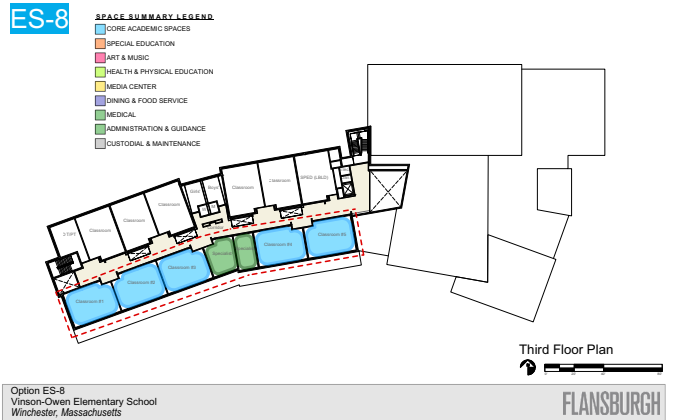
Option ES-6B Muraco Elementary School Winchester, Massachusetts

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PREK - 5 OPTIONS FOR 2021 - 2022 SCHOOL YEAR			
	Option ES-2: Grade Shift Parkhurst, Renovation/Addition	Option ES-3: Grade Shift Parkhurst, New Construction	
Cost of Construction	\$25,000,000 to \$26,250,000	\$26,700,000 to \$28,000,000	
Construction Contingency	\$25,000,000 to \$26,250,000	\$26,700,000 to \$28,000,000	
Soft Cost	\$8,250,000 to \$8,670,000	\$8,800,000 to \$9,240,000	
Probable Cost Range	\$33,550,000 to \$37,570,000	\$38,170,000 to \$40,000,000	
	Option ES-5C: New Lynch with Old Lynch Occupied	Option ES-6B: New Maraca with Old Lynch Occupied	
Cost of Construction	\$34,658,000 to \$38,124,000	\$30,326,000 to \$33,359,000	
Construction Contingency	\$3,466,000 to \$3,812,000	\$3,033,000 to \$3,366,000	
Soft Cost	\$10,397,000 to \$11,437,000	\$9,098,000 to \$10,008,000	
Probable Cost Range	\$48,521,000 to \$53,373,000	\$442,457,000 to \$46,703,000	

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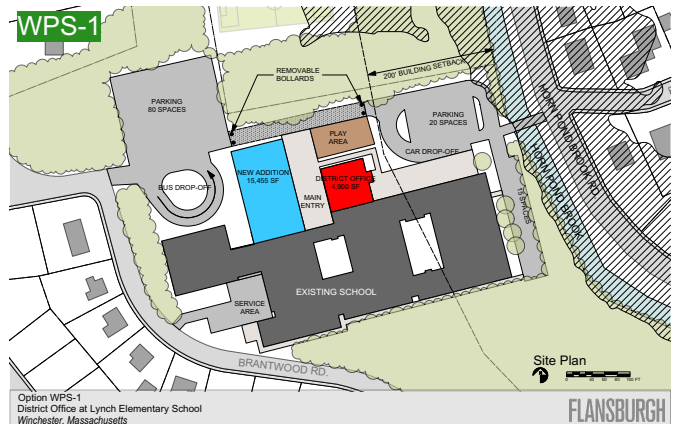


Option ES-8 Winsor-Owen Elementary School Winchester, Massachusetts

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District Office



Option WPS-1 District Office at Lynch Elementary School Winchester, Massachusetts

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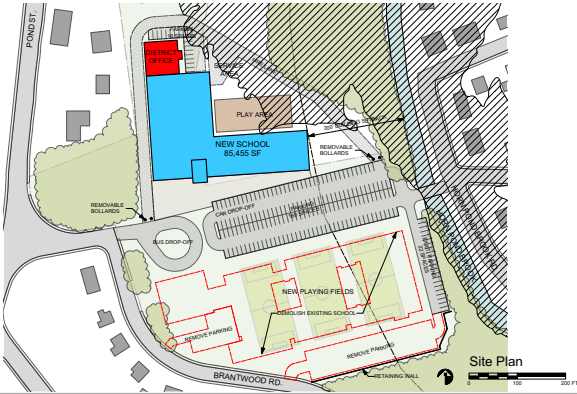
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Section 5 | Presentations & Meeting Notes

WINCHESTER PUBLIC SCHOOLS

DISTRICT OFFICE RELOCATION OPTIONS

WPS-2



Option WPS-2
District Office at Lynch Elementary School
Winchester, Massachusetts

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DISTRICT OFFICE RELOCATION OPTIONS

WINCHESTER PUBLIC SCHOOLS

WPS-3



Option WPS-3
District Office at Muraco Elementary School
Winchester, Massachusetts

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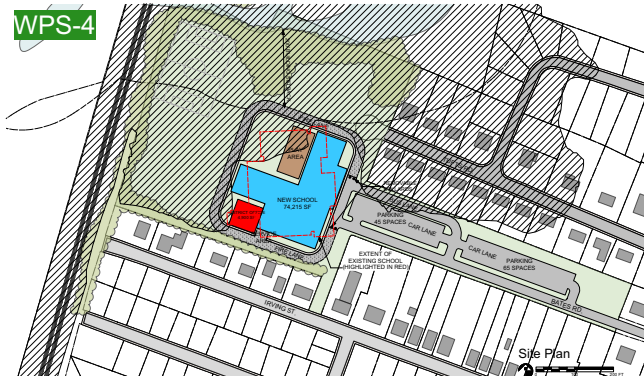
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WINCHESTER PUBLIC SCHOOLS

DISTRICT OFFICE RELOCATION OPTIONS

WPS-4



Option WPS-4
District Office at Muraco Elementary School
Winchester, Massachusetts

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DISTRICT OFFICE RELOCATION OPTIONS

WINCHESTER PUBLIC SCHOOLS

WPS-5



Option WPS-5
District Office at Mystic Elementary School
Winchester, Massachusetts

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WINCHESTER PUBLIC SCHOOLS

DISTRICT OFFICE RELOCATION OPTIONS

WPS-6



Option WPS-6
District Office in the Carriage House at Ambrose Elementary School
Winchester, Massachusetts

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DISTRICT OFFICE RELOCATION OPTIONS

WINCHESTER PUBLIC SCHOOLS

DISTRICT OFFICE RELOCATION		
	WPS-1	WPS-2
Cost of Construction	\$1,821,000 to \$2,003,000	\$1,691,000 to \$1,860,000
Construction Contingency	\$182,000 to \$200,000	\$169,000 to \$186,000
Soft Cost	\$601,000 to \$661,000	\$558,000 to \$614,000
Probable Cost Range <i>*Does not include phasing cost</i>	\$2,604,000 to \$2,864,000	\$2,418,000 to \$2,660,000
	WPS-3	WPS-4
Cost of Construction	\$1,664,000 to \$1,830,000	\$1,691,000 to \$1,860,000
Construction Contingency	\$166,000 to \$183,000	\$169,000 to \$186,000
Soft Cost	\$549,000 to \$604,000	\$558,000 to \$614,000
Probable Cost Range <i>*Does not include phasing cost</i>	\$2,604,000 to \$2,864,000	\$2,418,000 to \$2,660,000
	WPS-5	WPS-6
Cost of Construction	\$1,004,000 to \$1,104,000	\$1,990,000 to \$2,189,000
Construction Contingency	\$100,000 to \$140,000	\$199,000 to \$219,000
Soft Cost	\$331,000 to \$364,000	\$657,000 to \$722,000
Probable Cost Range <i>*Does not include phasing cost</i>	\$1,335,000 to \$1,578,000	\$2,846,000 to \$3,130,000

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ENROLLMENT IMPACTS	
<i>Impacting Factor</i>	<i>Student Impacted</i>
Cambridge Street Development	160 Students
<i>New Impacts on Enrollment</i>	<i>Student Impacted</i>
2016 Single Family Housing Bedroom Increase	40 Students
Holton Street Development	120 Students
Total Combined Impacts	320 Students
<i>Other Potential Impacts (If Developed)</i>	<i>Units</i>
Forest Ridge	(300 Units, on hold)
Krafts	(12 Single Family Houses + 20 Townhouses)
Main Street North	(40 Units)
Highland Avenue	(40 Units)
Mahoney's	(40 Units)
Waterfield Street	(40 Units)
2017 - 2026 Single Family Housing Bedroom Increase	TBD

Presentation 9 - May 16, 2017



WINCHESTER PUBLIC SCHOOLS
FACILITIES MASTER PLAN
Winchester, Massachusetts | May 16, 2017

K-5 Design Options

2026- 2027 Ten Year K-5 Enrollment				
	ENROLLMENT	CLASS SECTIONS	CLASSROOMS	SHORTFALL
SCHOOL YEAR 2016-2017	2,136 actual	110 actual	106 available	4 classrooms
SCHOOL YEAR 2026-2027	2,440 proposed	122 required	122 required	121-106+ 15 classrooms

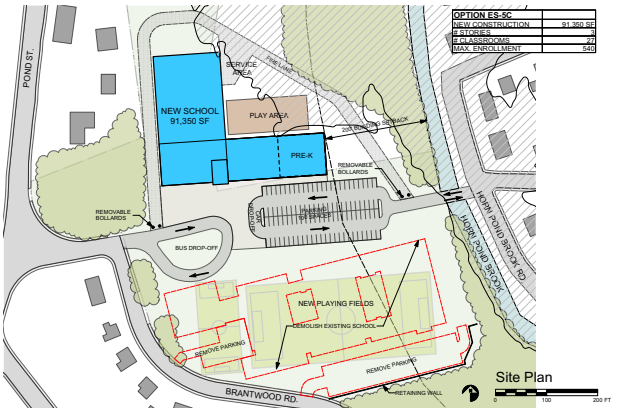
Winchester Public Schools

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K-5 Design Options

OPTION ES-5C - Lynch Elementary School



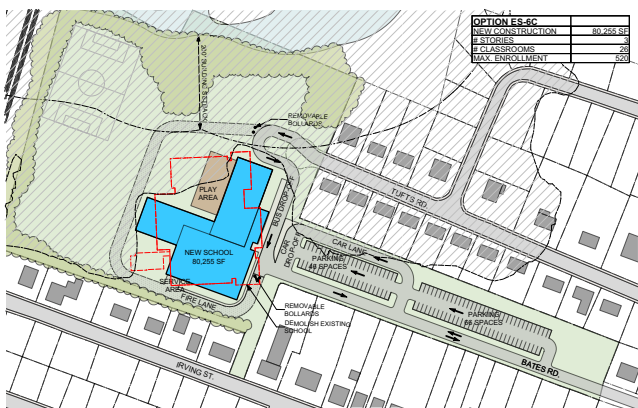
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K-5 Design Options

OPTION ES-6C - Muraco Elementary School



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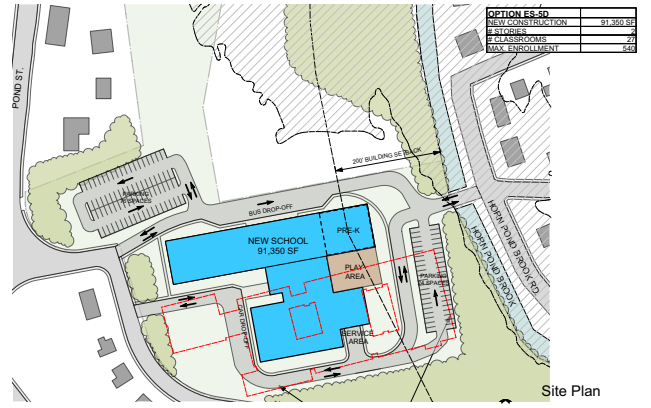
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K-5 Design Options

OPTION ES-5D - Lynch Elementary School



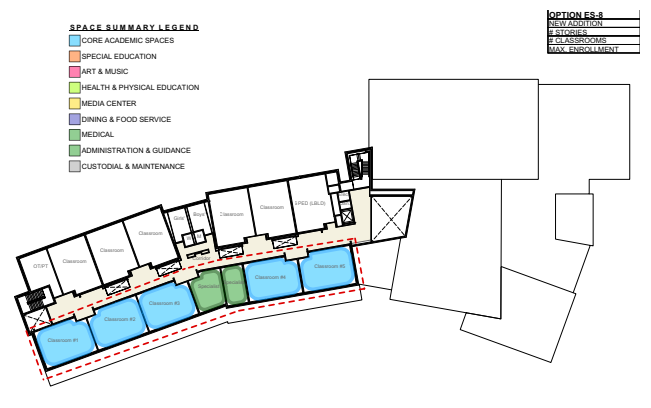
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K-5 Design Options

OPTION ES-8 - Vinson-Owen Elementary School



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K-5 Design Options

6-8 Design Options

Grades K-5 Options for 2026-2027 School Year

	Lynch Elementary School	Muraco Elementary School	Vinson-Owen Elementary School
Cost of Construction	\$36,540,000 to \$38,124,000	\$32,102,000 to \$33,359,000	\$2,280,000 to \$2,400,000
Construction Contingency	\$3,654,000 to \$3,812,000	\$3,210,200 to \$3,366,000	\$228,000 to \$240,000
Soft Cost	\$10,962,000 to \$11,437,000	\$9,630,600 to \$10,008,000	\$684,000 to \$720,000
Probable Cost Range	\$51,156,000 to \$53,373,000	\$44,924,800 to \$46,733,000	\$3,192,000 to \$3,360,000

Based on Enrollment Numbers
 Current Enrollment: 1,134 Students
 2026-2027 Enrollment: 1,309 Students
 Enrollment Increase: +175 Students

Grades 6-8 Options for 2026-2027 School Year

	Phase I: Youth Center Renovation, 3 Classrooms & Specialist's Space	Phase II: (6) New Classrooms, Cafeteria Expansion, Team Room Fit-Out
Current Enrollment	1,134	1,150
Projected Enrollment	1,309	1,196
Current Classrooms	51 Classrooms	54 Classrooms
Required Classrooms	Three (3) Additional	Five (5) Additional

Based on Enrollment Numbers
 Current Enrollment: 1,134 Students
 2026-2027 Enrollment: 1,309 Students
 Enrollment Increase: +175 Students
 Classrooms Required: 8 Total

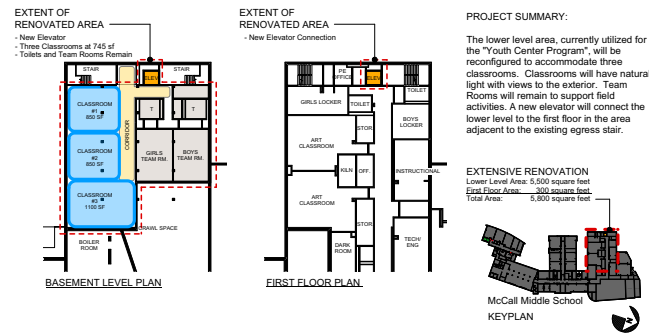
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6-8 Design Options

McCALL MIDDLE SCHOOL - Phase I



Winchester Public Schools

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6-8 Design Options

Grades 6-8 Options for 2026-2027 School Year

	Phase I Youth Center Renovation, 3 Classrooms & Specialist's Space
Cost of Construction	\$873,900 to \$921,000
Construction Contingency	\$83,790 to \$92,100
Soft Cost	\$251,370 to \$276,300
Probable Cost Range	\$1,173,060 to \$1,289,400

Based on Enrollment Numbers
 Current Enrollment: 1,134 Students
 2026-2027 Enrollment: 1,309 Students
 Enrollment Increase: +175 Students

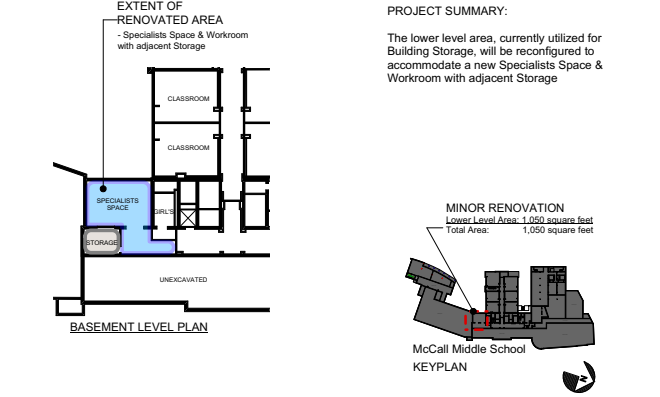
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6-8 Design Options

McCALL MIDDLE SCHOOL - Phase I



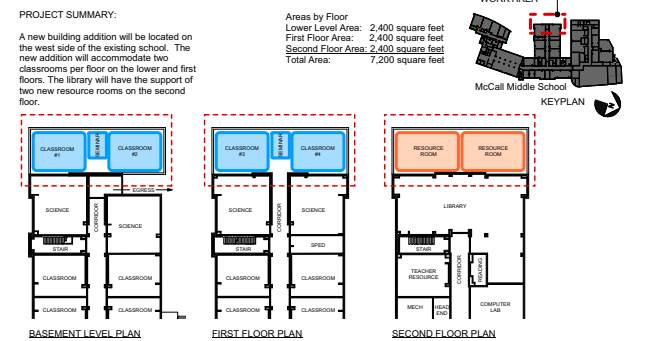
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6-8 Design Options

McCALL MIDDLE SCHOOL - Phase II



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6-8 Design Options

6-8 Design Options

6-8 Design Options

McCALL MIDDLE SCHOOL - Phase II

McCALL MIDDLE SCHOOL - Phase II

PROJECT SUMMARY:
The first floor plan expands the cafeteria onto the exterior terrace.

EXTENT OF ADDITION
- Cafeteria expansion
- Cafeteria expansion 1525 SF

ADDITION
Total Area: 1,525 square feet

FIRST FLOOR PLAN

KEYPLAN

PROJECT SUMMARY:
The lower level area, currently utilized for Building Storage, will be reconfigured to accommodate new Team Rooms and toilets rooms with access to the adjacent playing field.

EXTENT OF RENOVATED AREA
- Team Rooms and Toilets

MINOR RENOVATION
Lower Level Area: 1,770 square feet
Total Area: 1,770 square feet

BASEMENT LEVEL PLAN

KEYPLAN

Winchester Public Schools

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Winchester Public Schools

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6-8 Design Options

District Office Relocation

Grades 6-8 Options for 2026-2027 School Year

Phase II New Classrooms, Cafeteria Expansion, Team Room Fit-Out	
Cost of Construction	\$3,637,300 to \$3,956,300
Construction Contingency	\$363,700 to \$395,630
Soft Cost	\$1,182,000 to \$1,287,290
Probable Cost Range	\$5,183,300 to \$5,639,220

McCall Classroom Reconfiguration

Based on Enrollment Numbers

Current Enrollment: 1,134 Students
2026-2027 Enrollment: 1,309 Students
Enrollment Increase: +175 Students

District Office Relocation

Makes swing space available for...

- Students from Lynch or Muraco construction relocated to Parkhurst;
- Upper grades from Lynch or Muraco to Vinson-Owen after classroom expansion;
if required
- Aside from swing space, relocating Central Office makes space available for sudden/sharp student growth should it be required before expanded/renovated facilities are complete.

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District Office Relocation

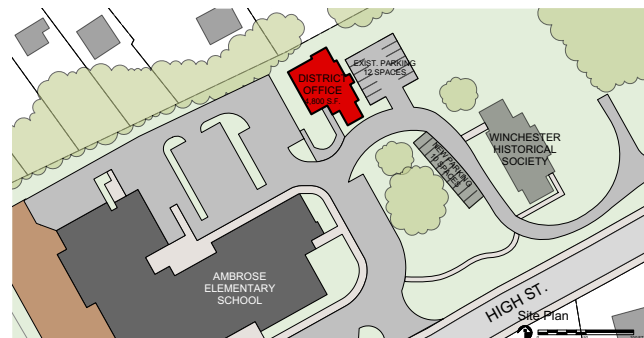
District Office Relocation

WPS-6 - District Office in the Carriage House at Ambrose Elementary School

District Office Relocation

WPS-6	
Cost of Construction	\$1,990,000 to \$2,189,000
Construction Contingency	\$199,000 to \$219,000
Soft Cost	\$657,000 to \$722,000
Probable Cost Range*	\$2,846,000 to \$3,130,000

*Does not include phasing cost



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Meeting Notes - June 16, 2016

Winchester Public Schools



Educational Working Group

Master Planning Workshop Notes June 16, 2016

Priority Goals for Master Planning

The following list of priority goals for the Winchester Public School's Master Planning effort was recorded during the participant introduction section of the June 16, 2016 Master Planning Workshop, with each participant offering one or more priority goals. The 12-person group included administrative leadership from WPS and school principals.



Priorities for the Master Planning

- Being able to provide facilities that match the needs of their learners
- Collaborative and adequate space - windows / access:
 - o Universal Access
 - o Hearing impaired students
 - o Furniture
- Facilities match models that we have
 - o One floor elementary schools are desirable
- Student centered - real world stations – GOOGLE
- Project Based Learning (PBL)- we do it well in early childhood - FLEX design patterns
- SAFETY
 - o Embedded within the school
 - o Integrate senior citizens / community
- Social emotional health
- Authentic learning
- Continue to inspire teachers to be the best they can be
- Students learning all the time
 - o Flex workspace
 - o Collaboration - multi-age classrooms
 - o Quiet spaces
 - o Library

Priority Goals for Master Planning (continued)

- Differentiated Programming
 - o Find programs that work for you
 - o Permeable
 - o Access to professionals
 - o Continuous learning
 - o Cost effective - value added
 - o Space & Time - scheduling movement
- Classrooms & Spaces
- De-escalation rooms
- Hubs
 - o Consider distributed dining arrangements
 - o Collaboration spaces
 - o Data room
- Consider differentiated clusters of spaces and adjacencies
- Maximize older school spaces
 - o Thinking outside of the box
 - o Green space - sustainability
 - o Invite more ways for kids to be active
- School as community resource
 - o Encourage community use

Winchester Public Schools



Visioning Workshop One Notes June 16, 2016

SCOG Analysis

The following SCOG Analysis of WPS's current strengths, challenges, opportunities and goals with regard to its academic programs and facilities was recorded during the June 16, 2016 Master Planning Workshop. The 12-person group included administrative leadership from WPS and school principals.



STRENGTHS

- Proactive and not reactive
- Focus on getting the biggest bang for the buck
- All elementary schools have perception of equity
- Neighborhood schools - walker
- Engaged parents (also a challenge)
- Great kids – they want to be at school
 - o Respectful / kind
 - o Great background/enrichment experiences outside of school
- Pride in schools
- Educators / teachers - committed
 - o Talented / caring
- Community support
 - o Teacher Autonomy (also a challenge)
- Generous ED Foundation
 - o Tech funding
 - o Past Successes (also a challenge)
 - o Spawn risk-taking
- Professional Development - Opportunities
- Space to bring people together
- Leadership team - always looking at big and small picture
- Relocation companies sending families/kids to Winchester
 - o Growing international diversity
- Strong investment demand (also a challenge)
- Older students working with younger students and seniors
 - o Spanish classes



CHALLENGES

- Going from really good to great
 - o No urgency
- Rooms with no ventilation / windows
- Tension between transitional families and town folks
 - o Plays out in many ways
 - o Funding
 - o High cost of real estate (purchasing vs. investing in the community)
- Historical funding of buildings but not programming (overrides)
 - o Funding places not people
- Decision making based on aesthetics not quality programming - learning mismatch
- Perception is important (testing) makes changing practice harder
- Maintaining focus on essential vs. "outer ring" concerns

- Teacher autonomy - reluctance to collaborate or innovate
- Stress that families and students feel
 - o Staff members stressed and pressured
- Sharp reduction in family and community engagement in some schools
- How to better prioritize investments and goals
 - o Bring varied (floating) organizations together to prioritize
 - o Create a more cohesive community



OPPORTUNITIES AND GOALS

- How to meld /work with Rec Department to offer in-house before and after school programming
- New HS renovation
 - o Learning commons
 - o Maker space
- Cross grade / school interactions
 - o After school programs that students can get involved in before and after school
- Lynch / Muraco Elementary Schools
 - o Within walking distance of HS
 - o Geography lends itself to being more engaged
- World Languages - non Western
- Put more resources into special needs programs and students
 - o More efficiency - space / resources
- Lots of talent in district
 - o Use most effectively
 - o Making sure all are included
 - o Break down walls (co-teaching)
- Shifting mindset:
 - o Thinking outside of the box
 - o Being creative
- Creating good / healthy people
 - o Kind, helpful, supportive (few disciplinary incidents - but still there)
- Extraordinarily strong programming
 - o Library / Media
 - o Co-curricular
 - o Art / Music / Tech
 - o Build on that
 - o Technology
 - o PE
- Become less departmentalized
 - o Now in silos
- Better prioritize investments and goals
 - o Bring varied (floating) organizations together to prioritize
 - o Create a more cohesive community
- Capture resources of collective community for benefit of entire town
- Identify shared spaces as community resources
 - o Provide access to community groups in thoughtful ways
- Town-wide early childhood building?
- Extended day programming
- Before school too
- Minimally adult supervised play
 - o Promote autonomy

Winchester Public Schools



Visioning Workshop One
Notes June 16, 2016

21st Century Learning Goals

The following comments about "21st Century Learning Goals" for Winchester Public School students were recorded at the June 16, 2016 workshop. Participants expressed the desire to take the time to step back and look at their district vision and mission. The skills and learning goals that rose to the top as being of most importance to Winchester Public Schools are

- **Empathy and Humility**
 - Coalition of Essential Schools
- **Social Emotional Development**
 - Ruler Program out of Yale
- **Resiliency**
- **Adaptability**
 - Begins with us
 - All starts with adults giving up control
 - Look at how we live it
 - Start with adults



Winchester Public Schools



Visioning Workshop One
Notes June 16, 2016

21st Century Design Patterns

The following set of priority "21st Century Design Patterns" for the Winchester Public Schools Master Planning process was recorded during the June 16, 2016 Master Planning Workshop. The 12-person group included administrative leadership from WPS and school principals.

- GREETING AND GATEKEEPING**
 - Concierge - Hotel
 - Welcoming
 - "Double buzz"
 - Secure but welcoming
 - Avoid "blind" entrances
- CLASSROOM NEIGHBORHOODS**
 - Distributed services / adults
- AGILE CLASSROOMS**
 - Kids seeking out private spaces and supervised
 - Does every kid need to have a desk
- FLEXIBILITY**
 - Co-teaching
 - Tri-teach model - working as a model - some flexible walls
 - Flexibility allows changes in ED model
- PROFESSIONAL WORKSPACES**
 - Collaboration
 - Comfortable
 - Getting out of classroom
 - Real world
 - Teacher resource / meeting
 - Free up classroom



- LIBRARY / MEDIA**
 - Opportunities on elementary level
 - Multi-purpose
 - Books dispersed
 - Maker space / tech
 - K-2 Library?
 - 3-5 Library?
 - Gen resource materials
 - Media specialists are key
 - Heart of school
 - Movable stacks
 - Low stacks
- DISTRIBUTED DINING**
 - Smaller scale
 - Since don't cook on site - can look at distributing dining / food
- INDOOR/OUTDOOR CONNECTIONS**
 - Natural light
 - Different learning environment
 - Caveat: provide some shelter
 - Avoid large expanses of paving
 - Connect to nature /
 - Commitment to walking, biking, green space (paths, trans/access)
 - Winchester trail
 - WIFFY (ED Foundation) gardens
- LOCKER ALTERNATIVES**
 - How much do we really need?
 - Many students don't use them - more digital
 - Most kids have digital devices
 - Flexible storage
 - In MS - use them for backpacks
 - Phones
 - Charging stations
 - Flex storage in classrooms
- FLEXIBLE STORAGE**
 - In Learning Commons
 - Classrooms
 - At elementary - its about storage boxes / cubbies

- ELEMENTARY**
 - Shelving / recyclables
 - One stop shop (Discovery Museum in Acton)
- MAKER SPACES**
 - Within library / media
 - How do we schedule librarians
 - Fab Lab at
- INNOVATION LAB**
 - Heavy/light
 - Clean / dirty
 - Woodshop / metal
 - Robotics
 - CNC /CAD



Winchester Public Schools



Visioning Workshop One
Notes June 16, 2016

Guiding Design Principles

Guiding Design Principles offer a framework of educational and facility related priorities that prove invaluable in helping stakeholders and design team members to set design goals and focus their work.

The following set of priority Guiding Design Principles for the Winchester Public Schools Master Planning process was recorded during the June 16, 2016 Master Planning Workshop. The 12-person group included administrative leadership from WPS and school principals.

- 1. Adaptable and Flexible**
- 2. Community Resource**
 - Community Access
- 3. Inquiry-Based Learning**
 - Authentic Learning
 - Interdisciplinary Space
 - Empowering Independent Learners
- 4. Professional & Collaborative**
- 5. Personalized & Differentiated**
 - Small School Feel, Large School Setting
 - Collaborative Not Competitive
 - Comfortable and Inviting

Winchester Public Schools



Educational Working Group

Visioning Workshop

June 16, 2016

Agenda

EXPECTED OUTCOMES: By the end of the session we will have begun to...	
<ul style="list-style-type: none"> Share Priority Goals for Winchester Public School's master planning process Discuss 21st century teaching and learning and identify 21st Century Learning Goals and initiatives for Winchester Public Schools Assess Winchester Public School's Strengths, Challenges, Opportunities, and Goals with regard to the development of its academic programs and school facilities Explore and prioritize a range of architectural Design Patterns that will best support 21st century teaching and learning within Winchester Public Schools Create a set of Guiding Principles and priorities for Winchester Public School's master planning process Articulate Blue Sky Ideas for the master planning effort Discuss Next Steps for master planning 	

Time	Activity	Purpose
8:30 - 9:15	Workshop Goals and Introductions <ul style="list-style-type: none"> Workshop overview Introductions <ul style="list-style-type: none"> Priority Goals for the master planning process 	Introduce participants, and clarify agenda and desired outcomes for this workshop. Share some of our priority goals for the master planning process.
9:15 - 10:15	21st Century Schools and Learning Goals <ul style="list-style-type: none"> Interactive Presentation: 21st Century Teaching and Learning Videos and discussion Prioritization of 21st Century Learning Goals 	Identify and discuss elements of 21 st century teaching and learning as connected to Winchester Public School's approach to its educational programming.
10:15 - 10:30	BREAK	

10:30 - 11:15	Winchester Public Schools SCOG Analysis <ul style="list-style-type: none"> Brainstorm of Winchester Public School's Strengths, Challenges, Opportunities, and Goals 	Identify what is presently working well within Winchester Public Schools, what is challenging, and what opportunities and goals exist with regard to the master planning process.
11:15 - 12:30	21st Century School Facility Design Patterns <ul style="list-style-type: none"> Presentation and Q&A Design Patterns for Winchester Public Schools <ul style="list-style-type: none"> Small group review of assorted Facility Design Patterns Creation of priority listings Large group prioritization 	Ground our thinking about design guidelines and desired building features in a discussion and exploration of new school Design Patterns. Identify priority Design Patterns for Winchester Public Schools.
12:30 - 1:00	LUNCH	
1:30 - 2:30	Guiding Principles for Design <ul style="list-style-type: none"> Presentation and Q&A Small group review of assorted Guiding Principles and creation of priority listings Large group sharing and prioritization 	Explore the connections between Guiding Principles and school design solutions. Translate our Desired Design Patterns into a listing of priority Guiding Principles for the master planning process.
2:30 - 2:50	Blue Sky Ideas <ul style="list-style-type: none"> Individual reflection: What no-holds-barred, over-the-top, budget-is-no-issue idea(s) and/or space(s) would you like to see take shape in WPS master plan? Large group flash debrief 	Explore creative and aspirational ideas for the master planning process.
2:50 - 3:00	Closing and Next Steps <ul style="list-style-type: none"> Next Steps review and Q&A 	Hear from participants about their questions and thoughts. Review next steps for the master planning process.

Exploring Learning Goals for the 21st Century

The following learning goals listings represent the attempts of a variety of thoughtful and successful schools, school networks, and educational organizations to identify the learning goals and skills that are most important for preparing today's students for success in life, work and post-secondary study. As you look through them, think about which 21st century learning goals you find most meaningful for your students and why.

Bloom's Taxonomy

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Partnership for 21st Century Skills

- Critical Thinking
- Communication
- Collaboration
- Creativity



NCREL - North Central Regional Education Laboratory

- Digital Age Literacy
 - Basic, scientific, economic and technological literacy
 - Visual literacy and information literacy
 - Multicultural literacy and global awareness
- Inventive Thinking
 - Adaptability and managing complexity
 - Self-direction
 - Curiosity, creativity, and risk taking
 - Higher-order thinking and sound reasoning
- Effective Communication
 - Teaming, collaboration and interpersonal skills
 - Self-direction
 - Personal, social, and civic responsibility
 - Interactive communication
- High Productivity
 - Prioritizing, planning and managing for results
 - Effective use of real world tools
 - Ability to produce relevant, high-quality products

Wagner: Seven 21st Century Skills

- Critical Thinking and problem solving
- Collaboration and leadership
- Agility and adaptability
- Initiative and entrepreneurship
- Effective written and oral communication
- Assessing and analyzing information
- Curiosity and imagination

New Tech Network

- Technology Literacy
- Citizenship and Ethics
- Critical Thinking
- Career Preparation
- Collaboration
- Written Communication
- Oral Communication
- Curricular Literacy

Coalition of Essential Schools Habits of Mind

- Perspective
- Analysis
- Imagination
- Empathy
- Communication
- Commitment
- Humility
- Joy

National Association for Independent Schools

- Analytical and creative thinking and problem solving
- Complex communication - oral and written
- Leadership and teamwork
- Digital and quantitative literacy
- Global perspective
- Adaptability, initiative and risk-taking
- Integrity and ethical decision making



Exploring Learning Goals for the 21st Century

The following learning goals listings represent the attempts of a variety of thoughtful and successful schools, school networks, and educational organizations to identify the learning goals and skills that are most important for preparing today's students for success in life, work and post-secondary study. As you look through them, think about which 21st century learning goals you find most meaningful for your students and why.

The MET Technical School

- Communication
 - How do I take in and express ideas?
- Empirical Reasoning
 - How do I prove it?
- Personal Qualities
 - What do I bring to this process?
- Quantitative Reasoning
 - How do I measure, compare, or represent it?
- Social Reasoning
 - What are other peoples perspectives on this?

Key Competencies for Lifelong Learning

- European Reference Framework
- Communication in the mother tongue
 - Communication in foreign languages
 - Mathematical competence
 - Basic competences in science and technology
 - Digital competence
 - Learning to learn
 - Social and civic competences
 - Sense of initiative and entrepreneurship
 - Cultural awareness and expression

Expeditionary Learning

- The primacy of self-discovery
- The having of wonderful ideas
- The responsibility for learning
- Empathy and caring
- Success and failure
- Collaboration and competition
- Diversity and inclusion
- The natural world
- Solitude and reflection
- Service and compassion

The Four Pillars of Education UNESCO (1996)

- Learning to know
- Learning to do
- Learning to live together
- Learning to be

Pink: Skills for Whole Brain Thinking

- Design
- Story
- Symphony
- Empathy
- Play

Howard Gardner 5 Minds

- Disciplined Mind
- Synthesizing Mind
- Creative Mind
- Respectful Mind
- Ethical Mind

Deeper Learning Network/ EL Schools

- Mastery of Core Academic Content
- Critical Thinking and Problem Solving
- Collaboration
- Effective Communication
- Self-Directed Learning
- An "Academic Mindset"

21st Century Employability and College Prep Skills (CTE)

- Work in teams
- Ask good questions
- Consider multiple perspectives in the workplace
- Ask how things are connected
- Take big picture views



Meeting Notes - August 9, 2016



Meeting Notes

DATE: August 9, 2016
PROJECT: Winchester Public Schools Facilities Master Plan
PROJECT NO: 1603.00
PRESENT: Judy Evans, Chris Nixon, John Danzio, Bob Deering, Maraget White, Kent Kovacs, Jorge Cruz, Vince Dubé, Town of Winchester Superintendent of Schools, Town of Winchester School Committee, Town of Winchester Director of Finance, Town of Winchester EFBC Chair, Town of Winchester Special Projects Engineer, Flansburgh Architects, Flansburgh Architects, Flansburgh Architects
DISTRIBUTION: All attendees

- The Forest Ridge project is not included in the projected enrollment numbers.
- Potential 3 classrooms at the high school, 2 at the middle school and 1 at Muraco.
- It would be 2025 before the new additional students would be enrolling.
- Various options of PK-5 based on projected enrollments were reviewed.
- Muraco site would be considered for a new school site.
- The pre-schools often identify special needs students early on in the educational process.
- It is difficult and expensive to run a Pre-K program for towns due to teacher's salaries.
- CN - noted 11% - 13% special needs in population - does town need more space to allow more students to attend rather than provide other arrangements?
- Computer Lab spaces - can this be future "found" space to be used for something else? Potentially for innovation space in elementary school? No computer labs currently in elementary schools.
- FAI will do a graphic for each option then do a cost estimate for each.
- Specialty spaces in performing arts, language, etc. innovations, science rooms.
- JE - Lincoln School potential for a second middle school or as a 6th grade academy.
- CN - Parkhurst could be swing space without the elevator for a short term new project option as was done for Vinson Owens School.
- Vinson Owens currently has 3 extra classrooms, plus a potential room in the computer lab.



- One option is to replace Muraco and Lynch or renovate one significantly or combined into 1 new school on one of the sites. Will need to show this on the study.
- 6, 7 and 8 grade middle school will require possibly using the Lincoln School.
- More intense need for space is at the middle school level, not at the PK-5 level.
- Will need another workshop in September (mid-September)
- Price up options for the workshop meeting
- November 7th is the town meeting
- Need a draft study by Mid-October.

Meeting Notes - September 28, 2016



Meeting Notes

DATE: September 28, 2016 – Parkhurst School

PROJECT: Winchester Public Schools Facilities Master Plan

PROJECT NO: 1603.00

PRESENT:

Pete Lawson	Town of Winchester DPW Facilities
Judy Evans	Town of Winchester Superintendent of Schools
Chris Nixon	Town of Winchester School Committee
Jennifer Elineema	Town of Winchester Assistant Superintendent
John Danzio	Town of Winchester
Susan Verdicchio	Town of Winchester School Committee
Shelly Walsh	Town of Winchester EFPC
Jessica Lohnes	Town of Winchester EFPC
Samantha Allison	Town of Winchester Finance Committee Vice Chair
Roger Michelson	Town of Winchester Finance Committee Chair
Jorge Cruz	Flansburgh Architects
Kent Kovacs	Flansburgh Architects
Vincent Dubé	Flansburgh Architects

DISTRIBUTION: All attendees

The members wanted to know how many classrooms are in each school

The student populations are as follows:

Ambrose	443 students
Lincoln	410 students
Lynch	460 students + 89 Pre-K
Murco	404 students
<u>Vinson Owens</u>	<u>413 students</u>
	2,130 students

What is the capacity of each school, based on number of classrooms each classroom at the Winchester preferred of 20 students per classroom and the MSBA 24 students per classroom.

If new total becomes 2,200 students how many classrooms will this require.

The value of a larger school is that the specialty teachers can be hired full time rather than using part time teachers.

Look at adding a link between the McCall center classroom bar corridor connecting to the youth center floor to reduce adding a new elevator cost.

Remove Option MS-4a since the 1430 size school is unrealistic for Winchester. The HS is only 1200 students.



Add a new Option MS-2a which combines the Youth Center Renovation (4 classroom) and the new classroom addition (4 classrooms) plus add a third floor to the addition at the library level and add either 2 new classrooms and include a large team space. A total of 10 new gross classrooms, but only 8 net classrooms.

Better to plan for a few extra classrooms on any addition or new school.

Include or clarify the escalation used for the estimates. Currently 1yr.

CHANGE ES-2 Lynch note to "Nine Classrooms available".

There will be a similar larger meeting on October 19 at maybe 6:30 or 7 pm at the High School media center.

Meeting Notes - November 28, 2016



Meeting Notes

DATE:	November 28, 2016	
PROJECT:	Winchester Public Schools Facilities Master Plan	
PROJECT NO.:	1603.00	
PRESENT:	Judy Evans Chris Nixon Jorge Cruz	Town of Winchester Superintendent of Schools Town of Winchester School Committee Flansburgh Architects

The following meeting notes summarize the minutes of the Community Update held November 28, 2016 at Winchester High School:

Winchester School Committee Presentation:

- Winchester School Committee always has a comprehensive Master Plan in place instead of updating each school one at a time
 - Last Master Plan completed by Flansburgh in 2007
- Master Plans support the educational program and school mission and evaluate the existing school facilities
 - Plan for growth
 - Reference point for procurement of funds
 - Winchester should ideally update their Master Plan every ten years
- Since the last Master Plan study, Vinson-Owen and Winchester High School have been updated with new construction
 - State enrollment also fell by 3.5% while Winchester's enrollment grew by more than 30%
- The District considers certain spaces in elementary schools (i.e., music, reading, media, etc.) essential; it is important to maintain these spaces for the students to grow creatively
- Between January and February of 2017, Winchester expects to make a recommendation for options
 - In the Spring of 2017, the final Facilities Report should be ready
- "School is not just a space to educate students," Superintendent Judy Evans
 - Schools need to meet the challenge of 21st century
 - Each building should reflect the vision of the particular school and community
 - 21st century schools not focused on content but traits (i.e. critical thinking, communication, etc.)
 - Leadership Team recommends flexible spaces, spaces that fit into the environment, indoor/outdoor learning, integrated technology, displays of students' artwork (display encourages student support); would like elementary schools to meet these standards in the next ten years

Flansburgh Architects Presentation:

- McCall Middle School:
 - Enrollment growth at the elementary level affects middle school's ability to absorb the increase in population
 - General classrooms are in spaces that are not ideal for learning
 - 3 to 6 additional classes are anticipated to satisfy enrollment
 - The increase student population may affect other spaces as well

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supportive of what ever direction the School Building Committee makes, but we must remember what an asset the Youth Program is to the community

- "If the Youth Center goes to the high school, what will the protocol on security be for weekend events?"
 - The current high school is designed to accommodate community events and programs like the Youth Center after school hours and the accessibility and security can be updated to reflect that
 - The Youth Center is not going away, McCall does not have extra space to appropriately fit the program's needs; all spaces available should be considered for academic, purpose first
- "How would we pay for these options?"
 - "These are major capital projects" – Chris Nixon; District would need to submit SDs to the MSBA to get some help with funding
 - PreK going to Muraco means that space at Lynch would be free for general education programs and other uses
- "I like the welcoming feel at Lynch. We don't want to lose the look and feel of the school. There is heavy community participation at Lynch; the other schools have a black box feel, and it's hard to navigate the pick-up/drop-off route at these other schools as well" – Winchester resident
- "What are your thoughts on accommodations for future development other than Cambridge Street?"
 - Forest Ridge is ten years out and was not factored in to the current enrollment
 - If not Forest Ridge, something else will contribute to enrollment growth in the future and will be reviewed at that time
- "PreK and K in one school (Parkhurst). The location does not seem like the greatest choice because of it's location, it's not a centrally located."
 - School Building Committee: Redistricting is something that was done when Vinson-Owen was completed, it is something we can look into if we settle on this option
 - "Why not move to another school like Mystic?"
 - More central and easy to get to
 - "Where would the tenants renting the space at the school go?" (Kid Connections, Rec. Center could be relocated)
 - It's an idea we're exploring for this project; the available land at Parkhurst site for PreK – K accommodates this grade population
 - We are evaluating including PreK – K grades at Mystic and will advise the committee
- "Is there any way of approaching the MSBA to get the appropriate funding for one of these projects?"
 - Completion of Ten Year Master Plan a good start
- MSBA Guidelines: Enrollment increase will need to be reviewed
 - Opportunities to work with MSBA on a future project
- "The Lynch option seems to cut through traffic on the main road and disrupts traffic flow"
 - The intention here is not to have a cut through but allow for separation of bus and car traffic while also providing full fire apparatus
- "Nine classrooms seems like a lot of classrooms for Lynch"
 - The Lynch School community has twenty-seven (27) classrooms for PreK – 5 students and the enrollment increase would require twenty-nine (29) total
- "What about the fields behind Lynch?"
 - We anticipate that the playfield would remain as is

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- Classroom options have two phases: the first focuses on utilizing the lower level after school program area while the second phase recommends adding to the library wing of the existing school building
 - **Option A:** The lower level space is renovated into three (3) general classrooms while the locker rooms remain untouched. The installation of a two story elevator is required to meet the accessibility code.
 - **Option B:** The lower level space is renovated to accommodate the existing maker space and technology lab currently located on the first floor. This would also require the renovation of the first floor space into three (3) classrooms and a seminar room. The elevated is required similar to Option A.
 - **Option C:** The lower level space is completely renovated including displacing the existing locker rooms to create four (4) large general classrooms. The elevator is required similar to Options A and B. The locker room replacement will be evaluated if accepted; there will be an opportunity to use space below the E-Wing addition of the school
 - **Phase II Option:** The Center Wing of the existing school has land available between the bus loop and the existing building to accommodate a 7,200-s.f. addition. This addition would consist of six (6) classrooms with two classrooms per floor totaling three stories. The lower level classrooms can be accessed directly from the existing corridors while the top level classrooms can be accessed from the library.
- K-5 Options:
 - The increased enrollment at the K-5 grade level will impact the 110 class sections approved by the District. There are currently only 106 classrooms available giving the District a four (4) classroom deficit. Overlaying the increased enrollment figures on the current class sections would suggest 113 class sections needed. This will result in a total need of seven (7) classrooms in the K-5 inventory of spaces.
 - **Options ES-2 and ES-3:** Create a grade shift school that could accommodate increased enrollment to free up classrooms at the existing elementary schools. The existing Parkhurst School could be renovated an added on to or replaced with a new facility. This would allow for a school of up to twenty-two (22) classrooms would could accommodate any grade size in the near future.
 - **Lynch School Options ES-5A and ES-5B:** The Lynch School could absorb the increased enrollment from the proposed Cambridge Street Development by adding two general classrooms to the existing twenty-seven (27) classrooms for a total of twenty-nine (29) classrooms for PreK-5 students. The school can be renovated and added on to to accommodate a new population of 500 students. The site is also large enough to construct a new school on the same site while the existing school remains occupied.
 - **Muraco School Options ES-6A and ES-6B:** The Muraco School can be redesigned to accommodate the increased enrollment. The PreK program can be moved from Lynch to Muraco. This result would be to increase Muraco's general classroom count from twenty-one (21) to twenty-eight (28). The existing school can be reconfigured with renovations and additions to meet the need of twenty-eight (28) classrooms for a population of 460 students. A new school on this site would require the demolition of the existing school.

Community Questions about McCall Middle School:

- "Which is the leading option?"
 - School Building Committee is still considering all options
 - The least expensive option is the renovation to the Youth Center
 - The addition to the Center Wing addresses current need of two classrooms as well as two classrooms for additional enrichment programs
- "What are your considerations for the Youth Center?"
 - Space at high school is being considered for a possible relocation
 - Youth Center Director stated leadership skills are being learned at the Youth Center; they are

Meeting Notes - March 31, 2017

MEMORANDUM

To: Board of Selectmen
 From: Christian Nixon, School Committee Vice Chair
 Subject: Statements of Interest for the Lynch & Muraco Elementary Schools
 Date: 31 March 2017
 cc: School Committee, Dr. Evans, Mr. Howard, EFPBC, CPC, Working Group, Ms. White

Informed substantially by our on-going *Facilities Master Plan* update project and with a deadline of April 7th for application, the School Committee voted last night to submit two Statements of Interest [SOIs] to the Massachusetts School Building Authority [MSBA] for the renovation or reconstruction of the Lynch and Muraco Elementary Schools. The key eligible criteria cited (as noted in the MSBA-required motion language voted by the SC and before you for action on Monday) are: existing overcrowding, future enrollment growth/further overcrowding and the condition/age of existing facilities. Our vote last night (and the vote of the Board of Selectmen) is a requirement for submission/consideration by the MSBA. It is important to note that in submitting an SOI we are not approving or submitting a project, but-- rather-- requesting the MSBA partner with us to explore our options in a Feasibility Study. As you will note in the motion language, this submission does not obligate the Town, district or MSBA in any way.

This memo briefly summarizes our current enrollment/space shortage as well as our 5-year and 10-year projections (I have included grades 6-8 for your information, as well).

As much of the Board is aware, the 2007 Master Plan called for the renovation/reconstruction and expansion of the Muraco and Lynch Elementary Schools. Based on our work to date on the new Master Plan, the Working Group concurs with the 2007 recommendation and last night the School Committee took the first of two steps required to apply to partner with the MSBA in exploring solutions to our physical plant and enrollment challenges. As the second step, we ask for your support and vote on the SOIs for these two schools. We expect some response from MSBA by the fall. It is important to underscore that voting an SOI is not the submission of a building plan, building site or even building size, but-- rather-- simply a request for partnership with MSBA to evaluate the district's needs and opportunities, including the opportunity for substantial state funding through reimbursement in a major capital project. Submitting the SOIs in no way obligates the District, Town or the MSBA to any costs.

Enrollment/ Growth Background 2003-2012

During the MSBA Feasibility Study stage of Winchester's Vinson-Owen Elementary School in 2010, the district struggled to keep up with extraordinary enrollment growth of over 25% in a decade that saw statewide enrollment fall by 3% [2003-2012]. Winchester was one of a handful of districts seeing such double-digit growth which-- in no small part-- contributed to the MSBA's decision to partner with the Town again on the renovation and expansion of Winchester High School while we were still in the construction of the Vinson-Owen school. (The 3-phase WHS project is on budget and on schedule for fall 2017 completion).

The Vinson-Owen project (opened fall 2013) did much more than replace an aged, deteriorating and inaccessible 1950s physical plant-- it increased the number of general education core classrooms on the site from 15 to 21. The move of WPS Central Office Administration from the Lynch Elementary School to

Parkhurst (the former Vinson-Owen swing space) freed up an additional three classrooms at Lynch for a total net increase of nine (9) elementary classrooms in the district.

In the fall of 2012 and in concert with the pending opening of the new and larger Vinson-Owen school, the Winchester School Committee voted to redistrict the Town's five (5) elementary districts or boundaries to 'rebalance' enrollment with the district's five elementary schools and their associated capacities or 'classroom targets' as defined by the the School Committee. The classroom target for each of the five schools was understood to exclude spaces which had been taken to accommodate enrollment growth over the decade including music classrooms, art classrooms, computer labs, libraries, specialist workspaces, etc.

The Redistricting Advisory Committee [RAC] which developed the map ultimately recommended by the Superintendent and voted by the School Committee noted three key priorities:

- a) equitably distribute students across town to meet capacity,
- b) reclaim specialist space equitably at every building, and
- c) anticipate and plan for future enrollment dynamics.

The RAC further noted, *"Any recommended plan must further the district's goal of providing the best physical learning environment possible by uniform and equitable utilization of facilities..."* and second-- with an understanding of the means by which increased enrollment has been addressed-- *"[Protect or provide] specialist space such as art, music, technology, and library"*.

Simultaneous with the vote on a new elementary district map effective fall 2013, the School Committee also established the following "Classroom Targets" (spaces intended, appropriately sized and configured for general education classrooms) at the district's elementary schools. This figure represented the maximum number of classrooms to be occupied without taking away other instructional spaces (Music, Art, Specialist Space, Computer Lab, Library, etc.):

Fall 2012 vote by School Committee establishing maximum classroom targets per school building

Ambrose Elementary:	23 gen ed classrooms
Lincoln Elementary:	21 gen ed classrooms
Lynch Elementary:	22 gen ed classrooms
Muraco Elementary:	21 gen ed classrooms
<u>Vinson-Owen Elementary:</u>	<u>21 gen ed classrooms</u>
Total classroom 'capacity':	108 classrooms [total rooms available without sacrificing other space/s]

2013 to present day 2016-17 school year

Since the School Committee's restricting vote in the fall of 2012 and the opening of the new Vinson-Owen school in the fall of 2013, Winchester's elementary schools are once again exhausted of space for two primary reasons: enrollment growth and the success of our Specialized Learning Centers

Enrollment Growth

In the four years from FY13 (redistricting vote) to FY17 (present), Winchester's K-12 enrollment is up 5.2% from 4,396 to 4,623 students. Enrollment growth at the elementary level has been a more modest 2.3% from 2,105 to 2,135 students; however, this rate of growth has been met with a net reduction in instructional spaces, due in part to the success of the WPS' Specialized Learning Center programs.

Specialized Learning Centers [SLCs]

Recognizing nearly a decade ago that our out-of-district [OOD] placements rate was increasing, with significant budgetary consequences, and with a desire shared by the district and families to educate students in-district to the greatest degree possible, the Winchester Public Schools developed so-called Specialized Learning Centers at two (2) of our five elementary schools. By the fall of 2012 when the School Committee voted the new elementary district map, the Superintendent had further established two additional SLCs. These centers are equipped and staffed (with specific staff expertise and training) to educate students with specific needs and have proven successful -- with significant growth in student enrollment and requisite space needs:

<i>Partnership Program</i>	[behavioral program]	at Muraco Elementary School
<i>Spectrum Program</i>	[Autism Spectrum]	at Lynch Elementary School
<i>LBLD Program</i>	[language based LD]	at Vinson-Owen School
<i>Cognitive Program</i>	[cognition focused]	at Ambrose Elementary School

In 2012, the Spectrum Program at Lynch was limited to one classroom and has since expanded to two. The Cognitive Program at Ambrose has similarly expanded from one small space to two larger spaces today. The LBLD Program at Vinson-Owen has grown significantly and now requires three instructional spaces and at Muraco, the Partnership Program which was 'designated' to be based at the school in the fall of 2013 with an unknown-- but presumed small-- enrollment has now grown to require 1.5 classrooms, including the school's original Music Room.

The School Committee, administration and community all see the growth of these district-based programs as a strong success. The consequence is that spaces have once again been 'taken' to accommodate the students. In October of 2016, the School Committee revisited the 'Classroom Targets' last voted in the fall of 2012. Backing out the space/s required for the SLCs as well as seeking to recapture the Music Instruction Room at Lincoln Elementary School, the targets were revised as follows.

	<u>SC vote - Fall 2012</u>	<u>SC vote - Fall 2017</u>
Ambrose Elementary:	23 gen ed classrooms	22 gen ed classrooms recommended
Lincoln Elementary:	21 gen ed classrooms	20 gen ed classrooms recommended
Lynch Elementary:	22 gen ed classrooms	21 gen ed classrooms recommended
Muraco Elementary:	21 gen ed classrooms	19 gen ed classrooms recommended
Vinson-Owen Elementary:	21 gen ed classrooms	24 gen ed classrooms recommended
Total gen ed 'capacity':	108 classrooms	106 classrooms target <i>VOTED 10/2017</i>

Although the district completed the construction of 'shell space' at the lower level of Vinson-Owen in 2016, providing an additional three (3) classrooms [note V-O's classroom target number increased from 21 to 24, above], the School Committee has determined that the district reasonably has 106 K-5 general education classrooms available. This year we are running, 110 sections of K-5 and are therefore four (4) classrooms short. It is the projected 5-year and 10-year growth that has the School Committee especially concerned for the sustainability of our educational space.

The Coming Wave-- Five year and Ten year K-6 Enrollment Projections

With our early concern in the fall over the potential for a large-scale 40B project off of Forest Circle in the Muraco District [Forest Ridge] diminished by understandings that the project was facing significant hurdles in the regulatory/approval process, we collectively breathed a sigh of relief-- until word came in

January of another potential large scale 40B on the Muraco-Lynch line [Holton Street]. The Working Group agreed to pause and reevaluate our enrollment projection methodology to ensure that we were capturing the full potential of land development across the town -- and with it, students.

With the meaningful insight and help of the Town Manager, Town Planner, Town Engineer and the Chair & Vice Chair of the Board of Selectmen, our Working Group and Flansburgh have identified a number of land development projects which we feel are likely to be completed in the 5-year and 10-year timeframe (see 5-year 2021/22 and 10-year 2026/27 growth charts, provided). Each of these development opportunities had to pass a series of questions to be counted:

1. "Is it possible that this area/parcel could be developed for housing?" [Y/N]
2. "If Yes, is it probable that the development will occur" [Y/N]
3. "If Yes, is it more probable than not that the development will occur in the next 5/10 years?"
4. "If Yes, what is the zoning and/or scale of development reasonably expected?"

With these answers in hand, Flansburgh has updated our 5-year and 10-year K-6 enrollment as shown in your attachments (in detail) and summarized below:

	<u>5-year 2021-22 [FY22]</u>	<u>10-year 2026-27 [FY27]</u>
K-5:	+240 students (11.2%)	+58 students (13.9% cumulative to year 10)
6-8:	+147 students (12.9%)	+28 students (15.4% cumulative to year 10)

To accommodate this rate of enrollment growth, the Master Plan Working Group and Flansburgh have determined a need for 19 additional K-5 classrooms (4 today, 12 by the 2021-22 school year and 3 by the 2026-27 school year) [see attachments for more detail as to drivers of projected enrollment growth]

Physical Plant Condition & Capital Project Needs

The third priority recognized by the MSBA as an eligible SOI criteria is the state/age of a school’s physical plant and needed capital projects. A summary of the key anticipated capital projects for both Lynch and Muraco are summarized, below. These costs come from our *Capital Improvement Program* summary sheets which are reviewed by the Capital Planning Committee [CPC] each summer for recommendation to the Town Manager and Town Meeting.

Lynch Elementary School Capital Projects	estimate	work year
Replacement of Heating & Domestic Hot Water piping systems:	\$555,000*	FY18
Replacement of Boiler Equipment w/ mod high-efficiency units:	\$800,000	TBD
Design & Specs for Window Replacement	\$150,000	FY18
Selected flooring/carpet replacement in classroom areas	\$100,000	FY19
Window replacement (existing single pane/steel frame)	\$3.4M	FY20
Replace Gym Flooring	\$350,000	FY21
Replace aging master clock/bell system	\$35,000	FY22

*Heat/DHW orig est \$300K. Actual SD & cost estimate = \$555K. \$5.39M over 4 years

Like the Heating/DHW and Boiler project noted above, the other key capital projects at Lynch are being carried on the School Committee’s multi-year Capital Planning Worksheet. As the BOS and Management are well-aware, the costs carried for these projects-- as well as other Town department projects-- are informed best guesses with input from our VFA database and contemporary market understandings. Given the limitations of the Building and Capital Stabilization Funds, the practice of the Capital Planning

Committee [CPC] for some years now has been to vote priorities for an early Schematic Design package, yielding a more detailed understanding of scope and cost. This has been a helpful change in practice and-- generally speaking-- we tend to find that the cost to complete the project is higher than originally anticipated in the earliest planning phases (3-4 years out). An example of this is the Lynch Elementary School’s Heating/DHW replacement project. Originally estimated at \$300K, the recently completed design study pegs the work at \$555,000-- an 85% increase over our earliest estimates. One component of this is ambiguity is the true complexity of the required work (only known once fully investigated) and another is our [CPC’s] cost escalation practices which may not track true market conditions.

Why does this matter? Simply put, while the \$1.36M cost to replace Lynch’s Heating/DHW and boilers is a much more realistic figure (for bidding this year), the remaining projects are most likely similarly underestimated and/or under-escalated. It should also be noted that the ‘plan’ to carry out expensive projects at Lynch each consecutive year is ambitious given the pressing capital needs of DPW, WPD, WFD and other Town departments. It therefore suggested that the \$4M+ worth of capital projects beyond the Heating/DHW/Boiler work is likely in the \$5.25M to \$6.75M range when stretched over a more “practical” six to seven years yielding a total anticipated Lynch Capital Projects burden of \$6,600,000 to \$8,100,000.

Muraco Elementary School Capital Projects	estimate	work year
Replacement of Fire Alarm System:	\$165,000*	FY18
Design & Specs for window replacement:	\$140,000	FY18
Window Replacement Project - Phase II (classrooms)	\$200,000	FY18
Design & Specs for replacement of electrical system:	\$100,000	FY18
Replacement of rusting classroom sink cabinets	\$100,000	FY18
Replacement of flooring/carpet:	\$300,000	FY19
Window Replacement Project - Phase III (clerestory,courtyard)	\$225,000	FY19
Replace Electrical System:	\$500,000	FY19
Design & Specs for Heat/DHW replacement:	\$37,500	FY20
Replacement of Heat/DHW system:	\$212,500	FY21
Design & Specs Roof Replacement:	\$225,000	FY21
Roof Replacement:	\$1.28M	FY22
Gym Addition + 3 Classrooms	\$3.34M	FY21
	\$6.825M	over 4 years

Given that the only Muraco project actually designed with a detailed cost estimate is the Fire Alarm replacement project (\$165K), it is fair to project the actual cost of Muraco’s capital needs at between \$8.8M and \$10.2M. Noting that this includes the Gymnasium addition (as carried in the Capital Improvement Program, we can pull this expansion project out for a more apples-to-apples comparison against Lynch’s capital needs and costs, yielding a current projection of \$3.5M (over an unrealistic four years) or a more probable \$4.5M to \$5.2M.

On behalf of the School Committee and WPS Administration, Ms. Verdicchio, Dr. Evans, Mr. Danizio and I look forward to discussing this with you Monday evening. We appreciate your support of our SOIs for the Muraco and Lynch schools to follow our Master Plan guidance, keep pace with significant enrollment growth and provide the facilities & resources necessary to support our students.

CN/cn

FLANSBURGH

WINCHESTER BUILD OUTS

3.30.17

K-5 CLASSROOMS 10 YR. BUILD OUT

19 CLASSROOMS REQUIRED (15 FOR ENROLLMENT GROWTH + 4 FOR FY 17 SHORTAGE)

CLASSROOM TARGETS BASED ON SCHOOL COMMITTEE MEMO DATED 10/11/16

TARGET CLASSROOM/ENROLLMENTS (PRESENT DAY)

AMBROSE	22 (440)
LINCOLN	20 (400)
LYNCH	21 (420)
MURACO	19 (380)
VINSON OWEN	24 (480)
TARGET	106 (2120)

CURRENT 110 SECTIONS – 106 CLASSROOMS AVAILABLE = 4 CLASSROOMS SHORT

106 X 20 STUDENTS = 2120

PROPOSED 125 X 20 STUDENTS = 2500

2500 -2120 = 380 STUDENTS

SPLIT 380 STUDENTS TO LYNCH, MURACO AND VINSON OWEN (VO LARGEST)

AMBROSE	22 (440)
LINCOLN	20 (400)
LYNCH	27 (540)
MURACO	27 (540)
VINSON OWEN	29 (580) W/ 5 CLASSROOM ADDITION

SPLIT 380 STUDENTS TO LYNCH, MURACO AND VINSON OWEN (VO AND LYNCH LARGEST)

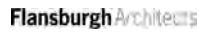
AMBROSE	22 (440)
LINCOLN	20 (400)
LYNCH	28 (560)
MURACO	27 (540)
VINSON OWEN	28 (560) W/ 4 CLASSROOM ADDITION

SPLIT 380 STUDENTS TO LYNCH & MURACO (LYNCH LARGEST)

AMBROSE	22 (440)
LINCOLN	20 (400)
LYNCH	30 (600)
MURACO	29 (580)
VINSON OWEN	24 (480)

*PRE-SCHOOL EITHER AT LYNCH OR MURACO DEPENDING ON WHICH IS BUILT FIRST

Meeting Notes - May 16, 2017



Meeting Notes

DATE: May 16, 2017
 PROJECT: Winchester Public Schools
 PROJECT NO: Winchester Master Plan – 1603.00
 PRESENT: Judy Evans – Superintendent, Winchester Public Schools
 Chris Nixon – Winchester School Committee
 Meg White – Winchester Engineering and Planning
 Vincent Dubé – Flansburgh Architects
 Jorge Cruz – Flansburgh Architects
 DISTRIBUTION: Attendees

Presentation of Master Plan Study status to Town Board Members.
 Current Master Plan needs some updating.
 Focus for vision for 10-15 -25 years out from now.
 Need flexible spaces to provide multiuse options.
 Spaces designed using visioning sessions, and space planning using MSBA templates. MSBA templates are used so the new school spaces meet the guidelines for potential reimbursement if MSBA funds the school.
 There are 40b projects that are likely to be built. All likely projects are being considered in the study enrollment projections, not just permitted projects.
 In 5-years the Cambridge Street project plus Holten Street, Kraft, Forest Street and North Main Street development is all likely to occur.
 In 10-years Waterfield Street, Highland Ave more Kraft and more North Main Street development is likely to occur.
 McCall needs 8 classrooms which can be built from the Youth Center in the basement (3 CRs) and five more in a new addition off the library. Where will the Youth Center students go? Possibly the high school can accommodate since most students using it are older anyway. Can class sizes be increased to 25 versus 22.

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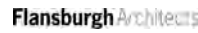
1



The high school is designed for 1370 students. Current enrollment this year is 1268 which is a 102-student float. Anticipate +85 student increase next year, but a potential for 218 student increase within five years, plus 26 additional students by year 10. There are 110 of these students already enrolled in the system.
 At the high school level, the total enrollments can be more easily accommodate due to scheduling of classes and room availability. It's more about fitting the students to the spaces. Only 80 -85% occupancy at any time.
 In 20 years, the methods of teaching at high schools is likely to change with more flexible times at the school and more time in the community doing work/study or online learning, etc. Class sizes average about 18 – 19 students (some classes are larger) which could grow as well. HS is not like the lower grades which is a 1:1 ration of classrooms to student numbers.
 Comfortable that the additional 244 students in 10 years at the high school level can be easily accommodated without an addition.
 [Modify the blue background on slides to make it easier to read from a distance.]
 Mystic School is in a good location in town, why not renovate this school. The site is well located, but small, and fitting a new school or significant renovation/addition would be very limited.
 24 sessions at Lynch now, but Lincoln could not grow to that size due to a tight bounded site.
 A 600-student school is better for efficiency with staff. Schools at 400 – 450 often have part-time specialists (gym teacher, nurse, etc.), but 600 student school can afford the bring this staff on full-time. It is harder to keep part-time staff since they typically want full-time positions.
 Priority for school department is to replace Lynch and Muraco.
 MSBA will require the town to hold title to a property to consider the location for a school option.
 School department policy is to place students where space is available.
 Holten Street development is considering 300 – 330 units, with 10% of units being affordable to meet the town's Housing Plan. (and state requirement). 50 units per year progress towards the Housing Production Plan is the goal. 10% of total units in town to be affordable.
 Can 40b development provide financial assistance to town for school. Sometimes the developer will provide a donation to the town to spend as they wish.
 Impact fees can't be assessed.

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3



The McCall cafeteria needs to be expanded to accommodate the increased enrollment. It is already undersized for the current enrollment.
 Elementary School options include:
 Lynch: 540 students
 Muraco: 540 -560 students
 V.O.: expanded to 540 – 560 students
 Ambrose: expanded to 540 students
 Lincoln: 400-420 students
 What is the value of not using the MSBA? Net cost: Self-fund for smaller projects but partner with MSBA for large projects (new school or major renovations).

Lynch built in 1960, Muraco in 1966
 Analysis of the town facilities needs requests (VFA database) suggest a potential for \$32.5 million R&R (removal and replacement) over 10 years at Lynch with \$6.6 million to \$8.1 million within 6–8 years. At Muraco the numbers are slightly less but still significant - \$22.7 million in 10 years and \$4.5 million - \$5.2 million within 6-8 years.
 The PFA estimates tend to be inflated for the 10-year period, so be careful when suggesting those as values to Town Meeting requests.
 Lynch roof was replaced 4 years ago.
 Muraco roof may need to be replaced within 5 years.
 V.O. has two options for expansion: at the lower level and roof. V.O. currently at 420 students, plus three classrooms at lower level (+60) increases to 480 students and 5 classrooms on roof floor increases another 100 students for a potential enrollment of 580 students at V.O.
 Ambrose school modular are currently 10-years old and eventually will need to be replaced. An addition at the end of the modular wing offers a potential for 6 classrooms (minus the two modular classrooms) nets 4 classrooms. (+40 students).
 Central Offices are short term at Parkhurst. Options being considered are new buildouts at a new Lynch or Muraco or at the Carriage House at Ambrose.
 Analysis of renting space for the Central Offices over a 20-year period suggests that the costs approximate renovating the Carriage House costs. (using 4 (5-yr) lease periods at 2.8% bond costs will require only 18 additional months of renting to equal the estimate for renovating the Carriage House) this analysis does not include buildout of raw rental space or renovating other rental space if available.
 Renovating the Carriage House frees up Parkhurst to be sold. (?)

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2

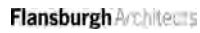


V.O. could use modular for additional classrooms. Third floor classrooms are too hot now. Plan would be to include A/C for the rooftop addition.
 Lincoln is the only school now with A/C throughout.
 New schools will be designed with A/C or likely displacement which is a "tite" version of A/C.
 New schools are likely to be used 12 months of the year. Most are now with summer programs etc.
 Can't fund large projects through the school stabilization fund. Tried once with the school modular upgrades several years ago and still hasn't recovered yet. Taxes already increasing 5% - 6% per year which is hurting the elderly home owner.
 Will a new school increase enrollment through attractiveness? Potential 20% increase from a new school. However, be careful since future events could slow enrollment due to interest rate increases, slows housing starts, slow approval process for development, slow economy, etc.
 Need to include these options in Master Plan study.
 Parkhurst can be used for any spike in enrollment if necessary.
 Include a potential for future growth in new school options.
 Use Gant Chart to show sequence of proposed improvements.
 Community presentation on May 22.

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4

Meeting Notes - May 22, 2017



Meeting Notes

DATE: May 22, 2017

PROJECT: Winchester Public Schools

PROJECT NO: Winchester Master Plan – 1603.00

PRESENT: Judy Evans – Superintendent, Winchester Public Schools
Chris Nixon – Winchester School Committee
Meg White – Winchester Engineering and Planning
Vincent Dubé – Flansburgh Architects
Jorge Cruz – Flansburgh Architects

DISTRIBUTION: Attendees

Presentation of Master Plan Study status to Community. (see meeting notes from 5/16/17)

Enrollment for the middle school

3 yr to 5 yr typical developments includes 200 additional K-12 students, with 74 at the elementary school level.

Vinson Owen currently 24 classrooms after recent 3 classroom addition.

2-story school as well as a 3-story option.

State (MSBA) does not reimburse Central Office or swing space

10th 8th graders go to private or vocational schools – it's not 100% go on to Winchester High School.

From 2003 – 2012, while the state lost (-) 3 ½% population, Winchester saw a 27% growth.

Questions from Audience:

What is the plan for Mystic School? Response: Mystic was looked at, but the site is constricted.

Lynch and Muraco R&R show \$12 - \$13 million. Response: No, that amount has not been spent on those schools. \$160,000 for the Muraco fire alarm will be spent to update it.

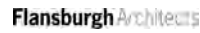


The trend is that schools (mostly in other states) are being regionalized to centralize administration to larger districts. (reduces administrative costs). In Winchester over the last 20 years the EFPBC has been diligent at watching every dollar is spent wisely on projects.

At McCall, there is unit ventilator work that needs attention immediately. Will this work be part of the new classroom project? Response: This work is not currently in the project.

Could the road between McCall and Lincoln be closed to provide more useable space at the site? Response: This has been suggested before, but the issue is that the road is a state road and cannot be easily closed. This must be approved by the state.

If McCall has two phases proposed, wouldn't it be more efficient to do both t the same time? Also, why only build 5 classrooms at V.O. instead of the full potential of 7 classrooms? At VO the addition was to not maximize space, but to respect the exterior wall envelope and create a more aesthetic addition.



Lynch and Muraco are priorities – has there been thoughts to phase Muraco or build on Leonard Field? What other sites are being considered? Response: A new school can only be built on property owned by town. Options did not presume to build on land other than land owned by the school. At Lynch the field belong to the school the Muraco site is limited.

During an MSBA project, the MSBA will require options on various sites to find the most cost effective location.

How was enrollment distributed? Response: The new students were distributed by percentages. The state allows the district to redistribute students if it has new residential developments.

Preschool programs are eligible for reimbursement from the state which is why a new pre-K would be included in either a new Lynch or Muraco option. A preschool expansion is not anticipated. The preschool is not a business for the town. 105 students have been identified by age 3 as requiring special needs. These programs need special spaces such as OT/PT and ST.

Lincoln School projections suggest the enrollment will go down next year, but it has been steady over the years.

During a renovation students would typically be dispersed to other schools, but the Winchester schools are at or above capacity. Would an increase in class size be needed to avoid procuring swing space? Class size recommendation set by the state at 24.

V.O. rooftop expansion not a priority as high as the new Lynch or new Muraco, with Lynch as the priority.

Cost estimates include 3% inflation for one year but also a 10% contingency which could over an additional 3years of inflation. Estimates would reflect building four years out for a 2021 occupancy.

The presentation was well received. Mystic School is a small site. The potential for expansion was reviewed as far back as the 1994 Master Plan and it was rejected then as well. It was preferred to have one on each side of Rte. 3.

Was there thought to using Lynch as swing space if a new Lynch built first? Response: Yes. It was considered. It might be that the Lynch kids would not get to use the new school if the Muraco kids move in first.

How have the financial costs been considered? Is there a risk of funding not being available due to potential changes at the federal level? It is not expected that the funding would not be there due to federal changes since the MSBA gets funding from state sales tax. The school's budget might be affect by federal changes, but even so, Winchester has historically been a low taker of state funds.

A copy of all presentations and meeting notes will be provided with an electronic version of this report.

Section 6 | Appendix

Cost Estimates



Feasibility Design Estimate

**Winchester Schools
RENOVATIONS + ADDITIONS**

Winchester, MA

PM&C LLC
20 Downer Avenue, Suite 1c
Hingham, MA 02043
(T) 781-740-8007
(F) 781-740-1012

Prepared for:

Flansburgh Architects

September 26, 2016



Winchester Schools
 RENOVATIONS + ADDITIONS
 Winchester, MA

26-Sep-16

Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
ADDITION TO LYNCH ELEMENTARY SCHOOL				
RENOVATE EXISTING SCHOOL				Not Required
ADDITION		1,505	\$358.83	\$540,040
SITework				\$50,000
SUB-TOTAL	Jun-17	1,505	\$392.05	\$590,040
ESCALATION TO START - (assumed 4% PA)	5.3%			\$31,272
DESIGN AND PRICING CONTINGENCY	12%			\$70,805
SUB-TOTAL		1,505	\$459.88	\$692,117
GENERAL CONDITIONS				\$69,212
BONDS	1.00%			\$6,921
INSURANCE	2.00%			\$13,842
PERMIT				NIC
OVERHEAD AND FEE	5.00%			\$34,606
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	1,505	\$542.66	\$816,698



Winchester Schools
 RENOVATIONS + ADDITIONS
 Winchester, MA

26-Sep-16

Feasibility Design Estimate

ADDITION and MAJOR RENOVATION TO LYNCH ELEMENTARY SCHOOL

RENOVATE EXISTING SCHOOL		79,745	\$220.00	\$17,543,900
HAZMAT REMOVALS		79,745	\$15.00	\$1,196,175
ADDITION		11,030	\$252.65	\$2,786,721
SITework - (10% of building costs)				\$2,033,062
SUB-TOTAL	Jun-17	90,775	\$259.54	\$23,559,858
ESCALATION TO START - (assumed 4% PA)	5.3%			\$1,248,672
DESIGN AND PRICING CONTINGENCY	12%			\$2,827,183
SUB-TOTAL		90,775	\$304.44	\$27,635,713
GENERAL CONDITIONS				\$2,210,857
BONDS	1.00%			\$276,357
INSURANCE	2.00%			\$552,714
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$829,071
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	90,775	\$347.06	\$31,504,712



Winchester Schools
RENOVATIONS + ADDITIONS
Winchester, MA

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Feasibility Design Estimate

NEW LYNCH ELEMENTARY SCHOOL

DEMOLISH EXISTING SCHOOL		90,500	\$8.00	\$724,000
HAZMAT REMOVALS		90,500	\$15.00	\$1,357,500
NEW SCHOOL		90,480	\$256.00	\$23,162,880
SITework - (10% of building costs)				\$2,388,688
SUB-TOTAL	Jun-17	90,480	\$305.41	\$27,633,068
ESCALATION TO START - (assumed 4% PA)	5.3%			\$1,464,553
DESIGN AND PRICING CONTINGENCY	12%			\$3,315,968
SUB-TOTAL		90,480	\$358.24	\$32,413,589
GENERAL CONDITIONS				\$2,593,087
BONDS	1.00%			\$324,136
INSURANCE	2.00%			\$648,272
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$972,408
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	90,480	\$408.39	\$36,951,492



Winchester Schools
RENOVATIONS + ADDITIONS
Winchester, MA

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Feasibility Design Estimate

**MODULAR ADDITION + MINOR RENOVATION TO
VINSON-OWEN ELEMENTARY SCHOOL**

RENOVATE EXISTING SCHOOL		950	\$97.79	\$92,901
MODULAR ADDITION		2,260	\$200.00	\$452,000
SITework - (Connections and Resurface Play Area)				\$180,000
SUB-TOTAL	Jun-17	3,210	\$225.83	\$724,901
ESCALATION TO START - (assumed 4% PA)	5.3%			\$38,420
DESIGN AND PRICING CONTINGENCY	12%			\$86,988
SUB-TOTAL		3,210	\$264.89	\$850,309
GENERAL CONDITIONS				\$85,031
BONDS	1.00%			\$8,503
INSURANCE	2.00%			\$17,006
PERMIT				NIC
OVERHEAD AND FEE	5.00%			\$42,515
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	3,210	\$312.57	<u><u>\$1,003,364</u></u>



Winchester Schools
 RENOVATIONS + ADDITIONS
 Winchester, MA

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Feasibility Design Estimate

ADDITION and MAJOR RENOVATION TO MURACO ELEMENTARY SCHOOL

RENOVATE EXISTING SCHOOL		40,000	\$220.00	\$8,800,000
HAZMAT REMOVALS		90,500	\$15.00	\$1,357,500
PARTIAL DEMO TO EXISTING SCHOOL		20,600	\$10.00	\$206,000
LOWER LEVEL ADDITION		15,015	\$238.03	\$3,574,068
FRONT ADDITION		20,600	\$297.14	\$6,121,043
SITework - (minor work)				\$100,000
SUB-TOTAL	Jun-17	75,615	\$266.60	\$20,158,611
ESCALATION TO START - (assumed 4% PA)	5.3%			\$1,068,406
DESIGN AND PRICING CONTINGENCY	12%			\$2,419,033
SUB-TOTAL		75,615	\$312.72	\$23,646,050
GENERAL CONDITIONS				\$1,891,684
BONDS	1.00%			\$236,461
INSURANCE	2.00%			\$472,921
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$709,382
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	75,615	\$356.50	\$26,956,498



Winchester Schools
RENOVATIONS + ADDITIONS
Winchester, MA

26-Sep-16

Feasibility Design Estimate

NEW MURACO ELEMENTARY SCHOOL - ES 2

DEMOLISH EXISTING SCHOOL		55,415	\$8.00	\$443,320
HAZMAT REMOVALS		55,415	\$15.00	\$831,225
NEW SCHOOL		76,730	\$256.54	\$19,684,309
SITework - (Allowance of 10% of Building)				\$1,968,431
SUB-TOTAL	Jun-17	76,730	\$282.19	\$21,652,740
ESCALATION TO START - (assumed 4% PA)	5.3%			\$1,147,595
DESIGN AND PRICING CONTINGENCY	12%			\$2,598,329
SUB-TOTAL		76,730	\$331.01	\$25,398,664
GENERAL CONDITIONS				\$2,031,893
BONDS	1.00%			\$253,987
INSURANCE	2.00%			\$507,973
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$761,960
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	76,730	\$377.36	\$28,954,477



Winchester Schools
RENOVATIONS + ADDITIONS
Winchester, MA

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Feasibility Design Estimate

NEW MURACO ELEMENTARY SCHOOL - ES 4a

DEMOLISH EXISTING SCHOOL		55,415	\$8.00	\$443,320
HAZMAT REMOVALS		55,415	\$15.00	\$831,225
NEW SCHOOL		149,350	\$251.78	\$37,603,186
SITework - (Allowance of 10% of Building)				\$3,760,319
SUB-TOTAL	Jun-17	149,350	\$285.49	\$42,638,050
ESCALATION TO START - (assumed 4% PA)	5.3%			\$2,259,817
DESIGN AND PRICING CONTINGENCY	12%			\$5,116,566
SUB-TOTAL		149,350	\$334.88	\$50,014,433
GENERAL CONDITIONS				\$4,001,155
BONDS	1.00%			\$500,144
INSURANCE	2.00%			\$1,000,289
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$1,500,433
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	149,350	\$381.76	\$57,016,454



Winchester Schools
 RENOVATIONS + ADDITIONS
 Winchester, MA

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Feasibility Design Estimate

NEW MURACO ELEMENTARY SCHOOL - ES 4

DEMOLISH EXISTING SCHOOL		55,415	\$8.00	\$443,320
HAZMAT REMOVALS		55,415	\$15.00	\$831,225
NEW SCHOOL		207,350	\$245.16	\$50,834,825
SITework - (Allowance of 10% of Building)				\$5,083,483
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SUB-TOTAL	Jun-17	207,350	\$269.68	\$55,918,308
ESCALATION TO START - (assumed 4% PA)	5.3%			\$2,963,670
DESIGN AND PRICING CONTINGENCY	12%			\$6,710,197
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SUB-TOTAL		207,350	\$316.34	\$65,592,175
GENERAL CONDITIONS				\$5,247,374
BONDS	1.00%			\$655,922
INSURANCE	2.00%			\$1,311,844
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$1,967,765
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	207,350	\$360.62	\$74,775,080
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Winchester Schools
 RENOVATIONS + ADDITIONS
 Winchester, MA

26-Sep-16

Feasibility Design Estimate

MODULAR ADDITION TO MURACO ELEMENTARY SCHOOL

RENOVATE EXISTING SCHOOL				Not Required
MODULAR ADDITION		1,215	\$200.00	\$243,000
SITework - (Connections and Site modifications)				\$57,000
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SUB-TOTAL	Jun-17	1,215	\$246.91	\$300,000
ESCALATION TO START - (assumed 4% PA)	5.3%			\$15,900
DESIGN AND PRICING CONTINGENCY	12%			\$36,000
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SUB-TOTAL		1,215	\$289.63	\$351,900
GENERAL CONDITIONS				\$35,190
BONDS	1.00%			\$3,519
INSURANCE	2.00%			\$7,038
PERMIT				NIC
OVERHEAD AND FEE	5.00%			\$17,595
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	1,215	\$341.76	\$415,242
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Winchester Schools
RENOVATIONS + ADDITIONS
Winchester, MA

26-Sep-16

Feasibility Design Estimate

**MINOR RENOVATION + ADDITIONS TO McCALL
MIDDLE SCHOOL**

RENOVATE EXISTING SCHOOL		5,600	\$142.28	\$796,766
ADDITION		4,675	\$285.01	\$1,332,427
SITework				\$100,000
SUB-TOTAL	Jun-17	10,275	\$216.95	\$2,229,193
ESCALATION TO START - (assumed 4% PA)	5.3%			\$118,147
DESIGN AND PRICING CONTINGENCY	12%			\$267,503
SUB-TOTAL		10,275	\$254.49	\$2,614,843
GENERAL CONDITIONS				\$261,484
BONDS	1.00%			\$26,148
INSURANCE	2.00%			\$52,297
PERMIT				NIC
OVERHEAD AND FEE	5.00%			\$130,742
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	10,275	\$300.29	\$3,085,514



Winchester Schools
 RENOVATIONS + ADDITIONS
 Winchester, MA

26-Sep-16

Feasibility Design Estimate

NEW PARKHURST ELEMENTARY SCHOOL - ES6

DEMOLISH EXISTING SCHOOL		37,650	\$8.00	\$301,200
HAZMAT REMOVALS		37,650	\$15.00	\$564,750
NEW SCHOOL		57,413	\$256.00	\$14,697,728
SITework - (Allowance of 10% of Building)				\$1,469,773
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SUB-TOTAL	Jun-17	57,413	\$281.60	\$16,167,501
ESCALATION TO START - (assumed 4% PA)	5.3%			\$856,878
DESIGN AND PRICING CONTINGENCY	12%			\$1,940,100
<hr/>				
SUB-TOTAL		57,413	\$330.32	\$18,964,479
GENERAL CONDITIONS				\$1,517,158
BONDS	1.00%			\$189,645
INSURANCE	2.00%			\$379,290
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$568,934
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	57,413	\$376.56	\$21,619,506



Winchester Schools
 RENOVATIONS + ADDITIONS
 Winchester, MA

26-Sep-16

Feasibility Design Estimate

**ADDITION and MAJOR RENOVATION TO PARKHURST
 ELEMENTARY SCHOOL**

RENOVATE EXISTING SCHOOL		35,560	\$220.00	\$7,823,200
PARTIAL DEMO EXISTING SCHOOL		2,090	\$10.00	\$20,900
ADDITION		21,500	\$273.81	\$5,886,888
HAZMAT REMOVALS		37,650	\$15.00	\$564,750
SITework - (Allowance of 10% of Building)				\$1,371,009
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SUB-TOTAL	Jun-17	57,060	\$274.57	\$15,666,747
ESCALATION TO START - (assumed 4% PA)	5.3%			\$830,338
DESIGN AND PRICING CONTINGENCY	12%			\$1,880,010
<hr/>				
SUB-TOTAL		57,060	\$322.07	\$18,377,095
GENERAL CONDITIONS				\$1,470,168
BONDS	1.00%			\$183,771
INSURANCE	2.00%			\$367,542
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$551,313
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-17	57,060	\$367.16	<u><u>\$20,949,889</u></u>



Winchester Schools
RENOVATIONS + ADDITIONS
Winchester, MA

26-Sep-16

Feasibility Design Estimate

This Feasibility Design cost estimate was produced from preliminary drawings prepared by Flansburgh Architects Inc. and their design team dated September 16, 2016. 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, general contractor's overhead, fee 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:

- Land acquisition, feasibility, and financing costs
- All professional fees and insurance
- Site or existing conditions surveys investigations costs, including to determine subsoil conditions
- 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 as indicated in the estimate
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)
- Construction contingency



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION TO LYNCH ES				
A10 FOUNDATIONS				
A1010 Standard Foundations	\$76,418			
A1020 Special Foundations	\$0			
A1030 Lowest Floor Construction	\$20,889	\$97,307	\$64.66	18.0%
A20 BASEMENT CONSTRUCTION				
A2010 Basement Excavation	\$0			
A2020 Basement Walls	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE				
B1010 Upper Floor Construction	\$0			
B1020 Roof Construction	\$48,535	\$48,535	\$32.25	9.0%
B20 EXTERIOR CLOSURE				
B2010 Exterior Walls	\$78,357			
B2020 Windows	\$68,074			
B2030 Exterior Doors	\$16,520	\$162,951	\$108.27	30.2%
B30 ROOFING				
B3010 Roof Coverings	\$46,967			
B3020 Roof Openings	\$0	\$46,967	\$31.21	8.7%
C10 INTERIOR CONSTRUCTION				
C1010 Partitions	\$17,544			
C1020 Interior Doors	\$10,900			
C1030 Specialties/Millwork	\$8,608	\$37,052	\$24.62	6.9%
C20 STAIRCASES				
C2010 Stair Construction	\$0			
C2020 Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES				
C3010 Wall Finishes	\$10,743			
C3020 Floor Finishes	\$12,040			
C3030 Ceiling Finishes	\$9,030	\$31,813	\$21.14	5.9%
D10 CONVEYING SYSTEMS				
D1010 Elevator	\$0	\$0	\$0.00	0.0%
D20 PLUMBING				
D20 Plumbing	\$5,000	\$5,000	\$3.32	0.9%



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION TO LYNCH ES					
D30 HVAC					
D30 HVAC		\$48,160	\$48,160	\$32.00	8.9%
D40 FIRE PROTECTION					
D40 Fire Protection		\$6,773	\$6,773	\$4.50	1.3%
D50 ELECTRICAL					
D5010 Complete System		\$30,100	\$30,100	\$20.00	5.6%
E10 EQUIPMENT					
E10 Equipment		\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010 Fixed Furnishings		\$15,382			
E2020 Movable Furnishings		NIC	\$15,382	\$10.22	2.8%
F10 SPECIAL CONSTRUCTION					
F10 Special Construction		\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010 Building Elements Demolition		\$10,000			
F2020 Hazardous Components Abatement		\$0	\$10,000	\$6.64	1.9%
TOTAL DIRECT COST (Trade Costs)			\$540,040	\$358.83	100.0%



Feasibility Design Estimate

GFA 1,505

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION TO LYNCH ES

GROSS FLOOR AREA CALCULATION

First Floor 1,505

TOTAL GROSS FLOOR AREA (GFA)	1,505 sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	143	cy	20.00	2,860
Store on site for reuse	143	cy	14.00	2,002
Backfill with existing fill	133	cy	16.00	2,128
Remove surplus fill off site	10	cy	25.00	250
Formwork	258	sf	12.00	3,096
Re-bar, 10#/lf	1,290	lbs	1.20	1,548
Concrete material; 3,000 psi	10	cy	125.00	1,250
Placing concrete	10	cy	55.00	550

Foundation walls at exterior - 14" thick

Formwork	1,032	sf	14.00	14,448
Re-bar, 4.5#/sf	2,322	lbs	1.20	2,786
Concrete material; 4,000 psi	23	cy	135.00	3,105
Placing concrete	23	cy	65.00	1,495
Dampproofing foundation wall and footing	774	sf	1.90	NIC
Insulation to foundation walls; 2" thick	516	sf	2.50	1,290
Form shelf	129	lf	8.00	1,032

Column footings, typical, 5' x 5' x 2'-0"

Excavation	86	cy	20.00	1,720
Store on site for reuse	86	cy	14.00	1,204
Backfill with new fill	68	cy	16.00	1,088
Remove surplus fill off site	18	cy	20.00	360
Formwork	360	sf	11.00	3,960
Re-bar	5,040	lbs	1.20	6,048
Concrete material; 3,000 psi	18	cy	125.00	2,250
Placing concrete	18	cy	55.00	990
Set anchor bolts grout plates	9	ea	150.00	1,350

Interior pilasters

Formwork	264	sf	11.00	2,904
Re-bar	1,620	lbs	1.20	1,944
Concrete material; 3,000 psi	5	cy	125.00	625
Placing concrete	5	cy	55.00	275
Foundations against existing building	77	lf	180.00	13,860

SUBTOTAL

76,418

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick

Structural gravel fill, 8"	37	cy	30.00	1,110
Base course, 8" gravel	37	cy	40.00	1,480
Rigid insulation	1,505	sf	2.25	3,386
Vapor barrier	1,505	sf	1.00	1,505
Mesh reinforcing 15% lap	1,731	sf	0.80	1,385



Feasibility Design Estimate

GFA

1,505

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION TO LYNCH ES

57	Concrete - 5" thick	25	cy	125.00	3,125		
58	Placing concrete	25	cy	45.00	1,125		
59	Finishing and curing concrete	1,505	sf	4.00	6,020		
60	Control joints - saw cut	1,505	sf	0.50	753		
61	<u>Miscellaneous</u>						
62	Dewatering	1	ea	1,000.00	1,000		
63	SUBTOTAL					20,889	

TOTAL - FOUNDATIONS

\$97,307

A20 BASEMENT CONSTRUCTION

A2010 BASEMENT EXCAVATION

No items in this section

SUBTOTAL

-

A2020 BASEMENT WALLS

No items in this section

SUBTOTAL

-

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

13 lbs/sf

B1010 FLOOR CONSTRUCTION

10 tns

No Work in this section

SUBTOTAL

-

B1020 ROOF CONSTRUCTION

Roof Structure - Steel:

Steel beams/Joists; 13#/SF

10 tns 3,800.00 38,000

Roof Structure

1-1/2" Metal floor Deck @ roof

1,505 sf 3.00 4,515

Miscellaneous

Roof screen framing - allow

NIC

Fire proofing to columns, beams and deck

1,505 sf 4.00 6,020

SUBTOTAL

48,535

TOTAL - SUPERSTRUCTURE

\$48,535

B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS; 60% solid/40% glass

1,084 sf

Interior skin

6" metal stud backup

1,084 sf 7.50 8,130

Batt insulation in stud

1,084 sf 2.25 2,439

2 1/2" Rigid Insulation

1,084 sf 3.00 3,252

Air barrier

1,084 sf 6.00 6,504

Air barrier/flashing at windows

238 lf 7.00 1,666

Gypsum Sheathing

1,084 sf 2.75 2,981

Drywall lining to interior face of stud backup

1,084 sf 3.00 3,252

Exterior skin



Feasibility Design Estimate

GFA

1,505

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
ADDITION TO LYNCH ES								
112	Brick veneer; 75% of exterior wall	813	sf	35.00	28,455			
113	Metal panels; 25% of exterior wall	271	sf	60.00	16,260			
114	<u>Miscellaneous</u>							
115	Staging to exterior wall	1,806	sf	3.00	5,418			
116	SUBTOTAL					78,357		
117								
118	B2020 WINDOWS	722	sf					
119	Premium for sunscreen and light shelf elements	1	ls		NIC			
120	Windows/storefront	722	sf	90.00	64,980			
121	Backer rod & double sealant	238	lf	9.00	2,142			
122	Wood blocking at openings	238	lf	4.00	952			
123	SUBTOTAL					68,074		
124								
125	B2030 EXTERIOR DOORS							
126	Glazed entrance doors including frame and hardware; double door at corridor exit	2	pr	8,000.00	16,000			
127	Backer rod & double sealant	40	lf	9.00	360			
128	Wood blocking at openings	40	lf	4.00	160			
129	SUBTOTAL					16,520		
130								
131	TOTAL - EXTERIOR CLOSURE							\$162,951
132								
133								
134	B30 ROOFING							
135								
136	B3010 ROOF COVERINGS							
137	<u>Flat roofing</u>							
138	PVC roof membrane fully adhered	1,505	sf	14.00	21,070			
139	Insulation	1,505	sf	7.00	10,535			
140	1/2" dens-deck protection board	1,505	sf	2.00	3,010			
141	Reinforced vapor barrier	1,505	sf	1.50	2,258			
142	Rough blocking	824	lf	6.00	4,944			
143	<u>Miscellaneous Roofing</u>							
144	Roof screens - allow				NIC			
145	Roof fascia/cornice	206	lf	25.00	5,150			
146	SUBTOTAL					46,967		
147								
148	B3020 ROOF OPENINGS							
149	Skylights, allow				NIC			
150	Roof hatch				NIC			
151	SUBTOTAL					-		
152								
153	TOTAL - ROOFING							\$46,967
154								
155								
156	C10 INTERIOR CONSTRUCTION							
157								
158	C1010 PARTITIONS							
159	GWB furred wall at existing exterior wall	930	sf	12.00	11,160			
160	Corridors; GWB with 2 lyrs corridor side	300	sf	15.55	4,665			
161	Sealants & caulking at partitions	300	sf	0.50	150			
162	Rough blocking to partitions	23	lf	3.00	69			
163	Glazed partitions/borrowed lights - allowance	1	ls	1,500.00	1,500			
164	SUBTOTAL					17,544		
165								
166	C1020 INTERIOR DOORS							
167	Corridor glazed doors	1	pr	8,000.00	8,000			
168	Classroom door with sidelight	1	ea	2,900.00	2,900			



Feasibility Design Estimate

GFA

1,505

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION TO LYNCH ES

169 SUBTOTAL 10,900

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C1030 SPECIALTIES / MILLWORK

Marker boards/tackboards in classroom	128	sf	24.00	3,072	
Room Signs	1	ea	150.00	150	
Lockers				Not Required	
Expansion joints	1	ls	2,000.00	2,000	
Miscellaneous metals throughout building	1,505	sf	1.25	1,881	
Miscellaneous sealants throughout building	1,505	sf	1.00	1,505	
SUBTOTAL					8,608

TOTAL - INTERIOR CONSTRUCTION	\$37,052
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C20 STAIRCASES

C2010 STAIR CONSTRUCTION

No Work in this section

SUBTOTAL

C2020 STAIR FINISHES

No Work in this section

SUBTOTAL

TOTAL - STAIRCASES	
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C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to GWB	1,530	sf	1.50	2,295	
Ceramic Tile to corridor	352	sf	24.00	8,448	

SUBTOTAL

10,743

C3020 FLOOR FINISHES

Resilient floor finishes	1,505	sf	8.00	12,040	
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SUBTOTAL

12,040

C3030 CEILING FINISHES

Allowance for ceiling finishes; 2 x 2 ACT	1,505	sf	6.00	9,030	
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SUBTOTAL

9,030

TOTAL - INTERIOR FINISHES	\$31,813
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D10 CONVEYING SYSTEMS

D1010 ELEVATOR

No Work in this section

SUBTOTAL

TOTAL - CONVEYING SYSTEMS	
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D20 PLUMBING

D20 PLUMBING, GENERALLY

New sink in classrooms	1	loc	5,000.00	5,000	
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SUBTOTAL

5,000

TOTAL - PLUMBING	\$5,000
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D30 HVAC



Feasibility Design Estimate

GFA 1,505

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION TO LYNCH ES

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D30	HVAC, GENERALLY							
	HVAC complete system	1,505	gsf	32.00	48,160			
	SUBTOTAL					48,160		
TOTAL - HVAC								\$48,160

D40 FIRE PROTECTION

D40	FIRE PROTECTION, GENERALLY							
	Sprinkler system	1,505	gsf	4.50	6,773			
	SUBTOTAL					6,773		
TOTAL - FIRE PROTECTION								\$6,773

D50 ELECTRICAL

D5010	COMPLETE ELECTRICAL SYSTEM							
	Electrical system; complete	1,505	gsf	20.00	30,100			
	SUBTOTAL					30,100		
TOTAL - ELECTRICAL								\$30,100

E10 EQUIPMENT

E10	EQUIPMENT, GENERALLY							
	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)					FF+E		
	SUBTOTAL					-		
TOTAL - EQUIPMENT								

E20 FURNISHINGS

E2010	FIXED FURNISHINGS							
	Entry mats & frames - recessed with carpet/rubber strips	50	sf	45.00	2,250			
	Manual operated roller shades	722	sf	6.00	4,332			
	Counters, base cabinets, tall storage in classrooms and other rooms	1	ls	8,800.00	8,800			
	SUBTOTAL					15,382		
E2020	MOVABLE FURNISHINGS							
	All movable furnishings to be provided and installed by owner							
	SUBTOTAL						NIC	
TOTAL - FURNISHINGS								\$15,382

F10 SPECIAL CONSTRUCTION

F10	SPECIAL CONSTRUCTION							
	No Work in this section							
	SUBTOTAL							
TOTAL - SPECIAL CONSTRUCTION								

F20 SELECTIVE BUILDING DEMOLITION

F2010 BUILDING ELEMENTS DEMOLITION



Feasibility Design Estimate

GFA 1,505

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
ADDITION TO LYNCH ES								
296	Create openings to existing façade for new connections	1	loc	10,000.00	10,000			
297	SUBTOTAL					10,000		
298								
299	F2020 HAZARDOUS COMPONENTS ABATEMENT							
300	None Included							
301	SUBTOTAL							
302								
303	TOTAL - SELECTIVE BUILDING DEMOLITION							\$10,000



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION TO LYNCH ES3				
A10 FOUNDATIONS				
A1010 Standard Foundations	\$183,965			
A1020 Special Foundations	\$0			
A1030 Lowest Floor Construction	\$146,271	\$330,236	\$29.94	11.9%
A20 BASEMENT CONSTRUCTION				
A2010 Basement Excavation	\$0			
A2020 Basement Walls	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE				
B1010 Upper Floor Construction	\$0			
B1020 Roof Construction	\$350,810	\$350,810	\$31.81	12.6%
B20 EXTERIOR CLOSURE				
B2010 Exterior Walls	\$227,120			
B2020 Windows	\$197,443			
B2030 Exterior Doors	\$16,520	\$441,083	\$39.99	15.8%
B30 ROOFING				
B3010 Roof Coverings	\$288,561			
B3020 Roof Openings	\$0	\$288,561	\$26.16	10.4%
C10 INTERIOR CONSTRUCTION				
C1010 Partitions	\$180,191			
C1020 Interior Doors	\$37,000			
C1030 Specialties/Millwork	\$85,511	\$302,702	\$27.44	10.9%
C20 STAIRCASES				
C2010 Stair Construction	\$0			
C2020 Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES				
C3010 Wall Finishes	\$70,740			
C3020 Floor Finishes	\$88,240			
C3030 Ceiling Finishes	\$66,180	\$225,160	\$20.41	8.1%
D10 CONVEYING SYSTEMS				
D1010 Elevator	\$0	\$0	\$0.00	0.0%
D20 PLUMBING				
D20 Plumbing	\$132,360	\$132,360	\$12.00	4.7%



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION TO LYNCH ES3					
D30 HVAC					
D30	HVAC	\$352,960	\$352,960	\$32.00	12.7%
D40 FIRE PROTECTION					
D40	Fire Protection	\$49,635	\$49,635	\$4.50	1.8%
D50 ELECTRICAL					
D5010	Complete System	\$220,600	\$220,600	\$20.00	7.9%
E10 EQUIPMENT					
E10	Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$67,614			
E2020	Movable Furnishings	NIC	\$67,614	\$6.13	2.4%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$25,000			
F2020	Hazardous Components Abatement	\$0	\$25,000	\$2.27	0.9%
TOTAL DIRECT COST (Trade Costs)			\$2,786,721	\$252.65	100.0%



Feasibility Design Estimate

GFA 11,030

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION TO LYNCH ES3

GROSS FLOOR AREA CALCULATION

First Floor 11,030

TOTAL GROSS FLOOR AREA (GFA)					11,030	sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	416	cy	20.00	8,320
Store on site for reuse	416	cy	14.00	5,824
Backfill with existing fill	387	cy	16.00	6,192
Remove surplus fill off site	29	cy	25.00	725
Formwork	748	sf	12.00	8,976
Re-bar, 10#/lf	3,740	lbs	1.20	4,488
Concrete material; 3,000 psi	29	cy	125.00	3,625
Placing concrete	29	cy	55.00	1,595

Foundation walls at exterior - 14" thick

Formwork	2,992	sf	14.00	41,888
Re-bar, 4.5#/sf	6,732	lbs	1.20	8,078
Concrete material; 4,000 psi	68	cy	135.00	9,180
Placing concrete	68	cy	65.00	4,420
Dampproofing foundation wall and footing	2,244	sf	1.90	NIC
Insulation to foundation walls; 2" thick	1,496	sf	2.50	3,740
Form shelf	374	lf	8.00	2,992

Column footings, typical, 5' x 5' x 2'-0"

Excavation	190	cy	20.00	3,800
Store on site for reuse	190	cy	14.00	2,660
Backfill with new fill	151	cy	16.00	2,416
Remove surplus fill off site	39	cy	20.00	780
Formwork	800	sf	11.00	8,800
Re-bar	11,200	lbs	1.20	13,440
Concrete material; 3,000 psi	39	cy	125.00	4,875
Placing concrete	39	cy	55.00	2,145
Set anchor bolts grout plates	20	ea	150.00	3,000

Interior pilasters

Formwork	586	sf	11.00	6,446
Re-bar	3,600	lbs	1.20	4,320
Concrete material; 3,000 psi	10	cy	125.00	1,250
Placing concrete	10	cy	55.00	550
Foundations against existing building	108	lf	180.00	19,440

SUBTOTAL

183,965

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick

Structural gravel fill, 8"	272	cy	30.00	8,160
Base course, 8" gravel	272	cy	40.00	10,880
Rigid insulation	11,030	sf	2.25	24,818
Vapor barrier	11,030	sf	1.00	11,030
Mesh reinforcing 15% lap	12,685	sf	0.80	10,148



Feasibility Design Estimate

GFA

11,030

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
ADDITION TO LYNCH ES3							
57	Concrete - 5" thick	180	cy	125.00	22,500		
58	Placing concrete	180	cy	45.00	8,100		
59	Finishing and curing concrete	11,030	sf	4.00	44,120		
60	Control joints - saw cut	11,030	sf	0.50	5,515		
61	<u>Miscellaneous</u>						
62	Dewatering	1	ea	1,000.00	1,000		
63	SUBTOTAL					146,271	
TOTAL - FOUNDATIONS							\$330,236
A20 BASEMENT CONSTRUCTION							
A2010 BASEMENT EXCAVATION							
	No items in this section						
	SUBTOTAL						-
A2020 BASEMENT WALLS							
	No items in this section						
	SUBTOTAL						-
TOTAL - BASEMENT CONSTRUCTION							
B10 SUPERSTRUCTURE							
		13	lbs/sf				
B1010 FLOOR CONSTRUCTION							
	No Work in this section	72	tns				
	SUBTOTAL						-
B1020 ROOF CONSTRUCTION							
	<u>Roof Structure - Steel:</u>						
	Steel beams/Joists; 13#/SF	72	tns	3,800.00	273,600		
	<u>Roof Structure</u>						
	1-1/2" Metal floor Deck @ roof	11,030	sf	3.00	33,090		
	<u>Miscellaneous</u>						
	Roof screen framing - allow					NIC	
	Fire proofing to columns, beams and deck	11,030	sf	4.00	44,120		
	SUBTOTAL					350,810	
TOTAL - SUPERSTRUCTURE							\$350,810
B20 EXTERIOR CLOSURE							
B2010 EXTERIOR WALLS; 60% solid/40% glass							
	<u>Interior skin</u>	3,142	sf				
	6" metal stud backup	3,142	sf	7.50	23,565		
	Batt insulation in stud	3,142	sf	2.25	7,070		
	2 1/2" Rigid Insulation	3,142	sf	3.00	9,426		
	Air barrier	3,142	sf	6.00	18,852		
	Air barrier/flashing at windows	691	lf	7.00	4,837		
	Gypsum Sheathing	3,142	sf	2.75	8,641		
	Drywall lining to interior face of stud backup	3,142	sf	3.00	9,426		
	<u>Exterior skin</u>						



Feasibility Design Estimate

GFA

11,030

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
ADDITION TO LYNCH ES3								
112	Brick veneer; 75% of exterior wall	2,357	sf	35.00	82,495			
113	Metal panels; 25% of exterior wall	785	sf	60.00	47,100			
114	<u>Miscellaneous</u>							
115	Staging to exterior wall	5,236	sf	3.00	15,708			
116	SUBTOTAL					227,120		
117								
118	B2020 WINDOWS	2,094	sf					
119	Premium for sunscreen and light shelf elements	1	ls		NIC			
120	Windows/storefront	2,094	sf	90.00	188,460			
121	Backer rod & double sealant	691	lf	9.00	6,219			
122	Wood blocking at openings	691	lf	4.00	2,764			
123	SUBTOTAL					197,443		
124								
125	B2030 EXTERIOR DOORS							
126	Glazed entrance doors including frame and hardware; double door at corridor exit	2	pr	8,000.00	16,000			
127	Backer rod & double sealant	40	lf	9.00	360			
128	Wood blocking at openings	40	lf	4.00	160			
129	SUBTOTAL					16,520		
130								
131	TOTAL - EXTERIOR CLOSURE							\$441,083
132								
133								
134	B30 ROOFING							
135								
136	B3010 ROOF COVERINGS							
137	<u>Flat roofing</u>							
138	PVC roof membrane fully adhered	11,030	sf	14.00	154,420			
139	Insulation	11,030	sf	7.00	77,210			
140	1/2" dens-deck protection board	11,030	sf	2.00	22,060			
141	Reinforced vapor barrier	11,030	sf	1.50	16,545			
142	Rough blocking	1,496	lf	6.00	8,976			
143	<u>Miscellaneous Roofing</u>							
144	Roof screens - allow				NIC			
145	Roof fascia/cornice	374	lf	25.00	9,350			
146	SUBTOTAL					288,561		
147								
148	B3020 ROOF OPENINGS							
149	Skylights, allow				NIC			
150	Roof hatch				NIC			
151	SUBTOTAL					-		
152								
153	TOTAL - ROOFING							\$288,561
154								
155								
156	C10 INTERIOR CONSTRUCTION							
157								
158	C1010 PARTITIONS							
159	GWB furred wall at existing exterior wall	1,500	sf	12.00	18,000			
160	Corridors; GWB with 2 lyrs corridor side	9,870	sf	15.55	153,479			
161	Sealants & caulking at partitions	9,870	sf	0.50	4,935			
162	Rough blocking to partitions	759	lf	3.00	2,277			
163	Glazed partitions/borrowed lights - allowance	1	ls	1,500.00	1,500			
164	SUBTOTAL					180,191		
165								
166	C1020 INTERIOR DOORS							
167	Corridor glazed doors	1	pr	8,000.00	8,000			
168	Classroom door with sidelight	10	ea	2,900.00	29,000			



Feasibility Design Estimate

GFA

11,030

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
ADDITION TO LYNCH ES3								
169	SUBTOTAL					37,000		
170								
171	C1030 SPECIALTIES / MILLWORK							
172	Marker boards/tackboards in classroom	768	sf	24.00	18,432			
173	Toilet partitions and accessories	11,030	gfa	0.75	8,273			
174	Room Signs	11,030	gfa	0.25	2,758			
175	Wood paneling/benches/display cases etc.	11,030	gfa	1.50	16,545			
176	Lockers	11,030	sf	1.15	12,685			
177	Expansion joints	1	ls	2,000.00	2,000			
178	Miscellaneous metals throughout building	11,030	sf	1.25	13,788			
179	Miscellaneous sealants throughout building	11,030	sf	1.00	11,030			
180	SUBTOTAL					85,511		
181								
182	TOTAL - INTERIOR CONSTRUCTION						\$302,702	
183								
184								
185	C20 STAIRCASES							
186								
187	C2010 STAIR CONSTRUCTION							
188	No Work in this section							
189	SUBTOTAL					-		
190								
191	C2020 STAIR FINISHES							
192	No Work in this section							
193	SUBTOTAL					-		
194								
195	TOTAL - STAIRCASES							
196								
197								
198	C30 INTERIOR FINISHES							
199								
200	C3010 WALL FINISHES							
201	Paint to GWB	21,240	sf	1.50	31,860			
202	Ceramic Tile to corridor	1,620	sf	24.00	38,880			
203	SUBTOTAL					70,740		
204								
205	C3020 FLOOR FINISHES							
206	Resilient floor finishes	11,030	sf	8.00	88,240			
207	SUBTOTAL					88,240		
208								
209	C3030 CEILING FINISHES							
210	Allowance for ceiling finishes; 2 x 2 ACT	11,030	sf	6.00	66,180			
211	SUBTOTAL					66,180		
212								
213	TOTAL - INTERIOR FINISHES						\$225,160	
214								
215								
216	D10 CONVEYING SYSTEMS							
217								
218	D1010 ELEVATOR							
219	No Work in this section							
220	SUBTOTAL					-		
221								
222	TOTAL - CONVEYING SYSTEMS							
223								
224								
225	D20 PLUMBING							
226								
227	D20 PLUMBING, GENERALLY							
228	New sink in classrooms	11,030	sf	12.00	132,360			
229	SUBTOTAL					132,360		
230								
231	TOTAL - PLUMBING						\$132,360	



Feasibility Design Estimate

GFA

11,030

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION TO LYNCH ES3

D30 HVAC

D30 HVAC, GENERALLY
 HVAC complete system
 SUBTOTAL

11,030 gsf 32.00 352,960 352,960

TOTAL - HVAC

\$352,960

D40 FIRE PROTECTION

D40 FIRE PROTECTION, GENERALLY
 Sprinkler system
 SUBTOTAL

11,030 gsf 4.50 49,635 49,635

TOTAL - FIRE PROTECTION

\$49,635

D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEM
 Electrical system; complete
 SUBTOTAL

11,030 gsf 20.00 220,600 220,600

TOTAL - ELECTRICAL

\$220,600

E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY
 AV Equipment (including Smartboards, Projectors,
 LED monitors, Digital information displays etc.)
 SUBTOTAL

FF+E

-

TOTAL - EQUIPMENT

E20 FURNISHINGS

E2010 FIXED FURNISHINGS
 Entry mats & frames - recessed with carpet/rubber strips
 Manual operated roller shades
 Counters, base cabinets, tall storage in classrooms and other rooms
 SUBTOTAL

50 sf 45.00 2,250
 2,094 sf 6.00 12,564
 6 rms 8,800.00 52,800

67,614

E2020 MOVABLE FURNISHINGS
 All movable furnishings to be provided and installed by owner
 SUBTOTAL

NIC

TOTAL - FURNISHINGS

\$67,614

F10 SPECIAL CONSTRUCTION

F10 SPECIAL CONSTRUCTION
 No Work in this section
 SUBTOTAL

TOTAL - SPECIAL CONSTRUCTION

F20 SELECTIVE BUILDING DEMOLITION



Feasibility Design Estimate

GFA 11,030

<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>	
ADDITION TO LYNCH ES3								
296								
297	F2010 BUILDING ELEMENTS DEMOLITION							
298	Create openings to existing façade for new connections	1	loc	25,000.00	25,000			
299	SUBTOTAL					25,000		
300								
301	F2020 HAZARDOUS COMPONENTS ABATEMENT							
302	None Included							
303	SUBTOTAL							
304								
305	TOTAL - SELECTIVE BUILDING DEMOLITION						\$25,000	



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO EXISTING VINSON-OWENS ES					
A10 FOUNDATIONS					
A1010	Standard Foundations	\$0			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE					
B1010	Upper Floor Construction	\$0			
B1020	Roof Construction	\$0	\$0	\$0.00	0.0%
B20 EXTERIOR CLOSURE					
B2010	Exterior Walls	\$0			
B2020	Windows/Curtainwall	\$0			
B2030	Exterior Doors	\$0	\$0	\$0.00	0.0%
B30 ROOFING					
B3010	Roof Coverings	\$0			
B3020	Roof Openings	\$0	\$0	\$0.00	0.0%
C10 INTERIOR CONSTRUCTION					
C1010	Partitions	\$16,576			
C1020	Interior Doors	\$10,900			
C1030	Specialties/Millwork	\$625	\$28,101	\$29.58	30.2%
C20 STAIRCASES					
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES					
C3010	Wall Finishes	\$3,400			
C3020	Floor Finishes	\$9,500			
C3030	Ceiling Finishes	\$5,750	\$18,650	\$19.63	20.1%
D10 CONVEYING SYSTEMS					
D1010	Elevator	\$0	\$0	\$0.00	0.0%
D20 PLUMBING					
D20	Plumbing	\$0	\$0	\$0.00	0.0%
D30 HVAC					
D30	HVAC	\$14,250	\$14,250	\$15.00	15.3%
D40 FIRE PROTECTION					
D40	Fire Protection	\$1,900	\$1,900	\$2.00	2.0%
D50 ELECTRICAL					
D5010	Electrical Systems	\$14,250	\$14,250	\$15.00	15.3%
E10 EQUIPMENT					



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO EXISTING VINSON-OWENS ES					
E10	Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$0			
E2020	Movable Furnishings	NIC	\$0	\$0.00	0.0%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 SELECTIVE BUILDING DEMOLITION					
F2010	Building Elements Demolition	\$15,750			
F2020	Hazardous Components Abatement	\$0	\$15,750	\$16.58	17.0%
TOTAL DIRECT COST (Trade Costs)			\$92,901	\$97.79	100.0%



Feasibility Design Estimate

GFA

950

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO EXISTING VINSON-OWENS ES

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TOTAL RENOVATED AREA (GFA)					950	GSF	
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

No work in this section
 SUBTOTAL

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A1020 SPECIAL FOUNDATIONS

No work in this section
 SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

No work in this section
 SUBTOTAL

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TOTAL - FOUNDATIONS						
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B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

No work in this section
 SUBTOTAL

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B1020 ROOF CONSTRUCTION

No work in this section
 SUBTOTAL

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TOTAL - SUPERSTRUCTURE						
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B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS

No work assumed to existing exterior
 SUBTOTAL

-

B2020 WINDOWS/CURTAINWALL

No work assumed to existing exterior
 SUBTOTAL

-

B2030 EXTERIOR DOORS

No work assumed to existing exterior
 SUBTOTAL

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TOTAL - EXTERIOR CLOSURE						
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B30 ROOFING

B3010 ROOF COVERINGS

No work assumed to existing exterior
 SUBTOTAL

-

B3020 ROOF OPENINGS

No work in this section
 SUBTOTAL

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TOTAL - ROOFING						
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Feasibility Design Estimate

GFA

950

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO EXISTING VINSON-OWENS ES

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C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

New walls	1,036	sf	16.00	16,576		
SUBTOTAL						16,576

C1020 INTERIOR DOORS

Corridor glazed doors	1	pr	8,000.00	8,000		
Classroom door with sidelight	1	ea	2,900.00	2,900		
SUBTOTAL						10,900

C1030 SPECIALTIES / MILLWORK

Room Signs	1	loc	150.00	150		
Miscellaneous sealants throughout building	950	sf	0.50	475		
SUBTOTAL						625

TOTAL - INTERIOR CONSTRUCTION \$28,101

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

No work in this section						
SUBTOTAL						-

C2020 STAIR FINISHES

No work in this section						
SUBTOTAL						-

TOTAL - STAIRCASES

C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to walls etc.	950	sf	2.00	1,900		
Patch existing walls	1	ls	1,500.00	1,500		
SUBTOTAL						3,400

C3020 FLOOR FINISHES

New resilient flooring	950	sf	8.00	7,600		
Floor prep	950	sf	2.00	1,900		
SUBTOTAL						9,500

C3030 CEILING FINISHES

ACT, 2x2	950	sf	5.00	4,750		
Patch existing flooring	1	ls	1,000.00	1,000		
SUBTOTAL						5,750

TOTAL - INTERIOR FINISHES \$18,650

D10 CONVEYING SYSTEMS

No work in this section						
SUBTOTAL						-

TOTAL - CONVEYING SYSTEMS

D20 PLUMBING



Feasibility Design Estimate

GFA

950

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO EXISTING VINSON-OWENS ES

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D20 PLUMBING, GENERALLY

No work in this section

SUBTOTAL

-

TOTAL - PLUMBING

D30 HVAC

D30 HVAC, GENERALLY

HVAC modifications

950

sf

15.00

14,250

SUBTOTAL

14,250

TOTAL - HVAC

\$14,250

D40 FIRE PROTECTION

D40 FIRE PROTECTION, GENERALLY

Sprinkler system modifications

950

sf

2.00

1,900

SUBTOTAL

1,900

TOTAL - FIRE PROTECTION

\$1,900

D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEMS

Lighting, power and Tele/Data modifications

950

sf

15.00

14,250

SUBTOTAL

14,250

TOTAL - ELECTRICAL

\$14,250

E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY

No work in this section

SUBTOTAL

-

TOTAL - EQUIPMENT

E20 FURNISHINGS

E2010 FIXED FURNISHINGS

No work in this section

SUBTOTAL

-

E2020 MOVABLE FURNISHINGS

All movable furnishings to be provided and installed by owner

SUBTOTAL

NIC

TOTAL - FURNISHINGS

F10 SPECIAL CONSTRUCTION

F10 SPECIAL CONSTRUCTION

No items in this section

SUBTOTAL



Feasibility Design Estimate

GFA 950

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO EXISTING VINSON-OWENS ES

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TOTAL - SPECIAL CONSTRUCTION							
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F20	SELECTIVE BUILDING DEMOLITION
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F2010 BUILDING ELEMENTS DEMOLITION

Remove existing GWB walls	1	ls	1,000.00	1,000		
Remove floor finishes	950	sf	2.00	1,900		
Remove ceilings	950	sf	1.00	950		
Form opening in exterior wall for connection to modular addition	1	ls	10,000.00	10,000		
Miscellaneous demo/protection	950	gfa	2.00	1,900		
SUBTOTAL						15,750

F2020 HAZARDOUS COMPONENTS ABATEMENT

None Included
 SUBTOTAL

TOTAL - SELECTIVE BUILDING DEMOLITION							\$15,750
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CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO EXISTING McCALL MS					
A10 FOUNDATIONS					
A1010	Standard Foundations	\$30,000			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$10,000	\$40,000	\$7.14	5.0%
B10 SUPERSTRUCTURE					
B1010	Upper Floor Construction	\$15,000			
B1020	Roof Construction	\$0	\$15,000	\$2.68	1.9%
B20 EXTERIOR CLOSURE					
B2010	Exterior Walls	\$10,000			
B2020	Windows/Curtainwall	\$0			
B2030	Exterior Doors	\$0	\$10,000	\$1.79	1.3%
B30 ROOFING					
B3010	Roof Coverings	\$0			
B3020	Roof Openings	\$0	\$0	\$0.00	0.0%
C10 INTERIOR CONSTRUCTION					
C1010	Partitions	\$96,016			
C1020	Interior Doors	\$11,600			
C1030	Specialties/Millwork	\$2,950	\$110,566	\$19.74	13.9%
C20 STAIRCASES					
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES					
C3010	Wall Finishes	\$21,800			
C3020	Floor Finishes	\$56,000			
C3030	Ceiling Finishes	\$31,000	\$108,800	\$19.43	13.7%
D10 CONVEYING SYSTEMS					
D1010	Elevator	\$100,000	\$100,000	\$17.86	12.6%
D20 PLUMBING					
D20	Plumbing	\$0	\$0	\$0.00	0.0%
D30 HVAC					
D30	HVAC	\$179,200	\$179,200	\$32.00	22.5%
D40 FIRE PROTECTION					
D40	Fire Protection	\$11,200	\$11,200	\$2.00	1.4%
D50 ELECTRICAL					
D5010	Electrical Systems	\$132,000	\$132,000	\$23.57	16.6%
E10 EQUIPMENT					



Winchester Schools
 RENOVATIONS + ADDITIONS
 Winchester, MA

26-Sep-16

Feasibility Design Estimate

GFA 5,600

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO EXISTING McCALL MS					
E10	Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$35,200			
E2020	Movable Furnishings	NIC	\$35,200	\$6.29	4.4%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 SELECTIVE BUILDING DEMOLITION					
F2010	Building Elements Demolition	\$54,800			
F2020	Hazardous Components Abatement	\$0	\$54,800	\$9.79	6.9%
TOTAL DIRECT COST (Trade Costs)			\$796,766	\$142.28	100.0%



Feasibility Design Estimate

GFA 5,600

DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO EXISTING McCALL MS

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TOTAL RENOVATED AREA (GFA)				5,600	GSF	
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

New elevator pit	1	loc	30,000.00	30,000	
SUBTOTAL					30,000

A1020 SPECIAL FOUNDATIONS

No work in this section					
SUBTOTAL					

A1030 LOWEST FLOOR CONSTRUCTION

Patch existing slab	1	loc	10,000.00	10,000	
SUBTOTAL					10,000

TOTAL - FOUNDATIONS						\$40,000
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B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

Create floor opening for new elevator	1	loc	15,000.00	15,000	
SUBTOTAL					15,000

B1020 ROOF CONSTRUCTION

SUBTOTAL					-
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TOTAL - SUPERSTRUCTURE						\$15,000
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B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS

New elevator vent	1	ls	10,000.00	10,000	
SUBTOTAL					10,000

B2020 WINDOWS/CURTAINWALL

No work assumed to existing exterior					
SUBTOTAL					-

B2030 EXTERIOR DOORS

No work assumed to existing exterior					
SUBTOTAL					-

TOTAL - EXTERIOR CLOSURE						\$10,000
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B30 ROOFING

B3010 ROOF COVERINGS

No work assumed to existing exterior					
SUBTOTAL					-

B3020 ROOF OPENINGS

No work in this section					
SUBTOTAL					-

TOTAL - ROOFING						-
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Feasibility Design Estimate

GFA 5,600

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
RENOVATION TO EXISTING McCALL MS							
	C10 INTERIOR CONSTRUCTION						
	C1010 PARTITIONS						
	New elevator shaft assumed CMU	1,120	sf	30.00	33,600		
	New walls	3,276	sf	16.00	52,416		
	Patch existing walls	1	ls	10,000.00	10,000		
	SUBTOTAL					96,016	
	C1020 INTERIOR DOORS						
	Classroom door with sidelight	4	ea	2,900.00	11,600		
	SUBTOTAL					11,600	
	C1030 SPECIALTIES / MILLWORK						
	Room Signs	1	loc	150.00	150		
	Miscellaneous sealants throughout building	5,600	sf	0.50	2,800		
	SUBTOTAL					2,950	
	TOTAL - INTERIOR CONSTRUCTION						\$110,566
	C20 STAIRCASES						
	C2010 STAIR CONSTRUCTION						
	No work in this section						
	SUBTOTAL					-	
	C2020 STAIR FINISHES						
	No work in this section						
	SUBTOTAL					-	
	TOTAL - STAIRCASES						
	C30 INTERIOR FINISHES						
	C3010 WALL FINISHES						
	Paint to walls etc.	5,600	gsf	3.00	16,800		
	Patch existing walls	1	ls	5,000.00	5,000		
	SUBTOTAL					21,800	
	C3020 FLOOR FINISHES						
	New resilient flooring	5,600	sf	8.00	44,800		
	Floor prep	5,600	sf	2.00	11,200		
	SUBTOTAL					56,000	
	C3030 CEILING FINISHES						
	ACT, 2x2	5,600	sf	5.00	28,000		
	Patch existing flooring	1	ls	3,000.00	3,000		
	SUBTOTAL					31,000	
	TOTAL - INTERIOR FINISHES						\$108,800
	D10 CONVEYING SYSTEMS						
	New two stop elevator	1	ls	100,000.00	100,000		
	SUBTOTAL					100,000	
	TOTAL - CONVEYING SYSTEMS						\$100,000



Feasibility Design Estimate

GFA 5,600

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO EXISTING McCALL MS

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D20 PLUMBING

D20 PLUMBING, GENERALLY
 No work in this section
 SUBTOTAL

-

TOTAL - PLUMBING

D30 HVAC

D30 HVAC, GENERALLY
 HVAC modifications
 SUBTOTAL

5,600 sf 32.00 179,200
 179,200

TOTAL - HVAC \$179,200

D40 FIRE PROTECTION

D40 FIRE PROTECTION, GENERALLY
 Sprinkler system modifications
 SUBTOTAL

5,600 sf 2.00 11,200
 11,200

TOTAL - FIRE PROTECTION \$11,200

D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEMS

Feeders to elevator
 Lighting, power and Tele/Data modifications
 SUBTOTAL

1 ls 20,000.00 20,000
 5,600 sf 20.00 112,000
 132,000

TOTAL - ELECTRICAL \$132,000

E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY
 No work in this section
 SUBTOTAL

-

TOTAL - EQUIPMENT

E20 FURNISHINGS

E2010 FIXED FURNISHINGS

Counters, base cabinets, tall storage in classrooms and other rooms
 SUBTOTAL

4 rms 8,800.00 35,200
 35,200

E2020 MOVABLE FURNISHINGS

All movable furnishings to be provided and installed by owner
 SUBTOTAL

NIC

TOTAL - FURNISHINGS \$35,200

F10 SPECIAL CONSTRUCTION



Feasibility Design Estimate

GFA 5,600

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO EXISTING McCALL MS

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F10 SPECIAL CONSTRUCTION

No items in this section

SUBTOTAL

TOTAL - SPECIAL CONSTRUCTION

F20 SELECTIVE BUILDING DEMOLITION

F2010 BUILDING ELEMENTS DEMOLITION

Gut demolition	5,600	sf	6.00	33,600	
Form openings in slab/structure for elevator	2	loc	5,000.00	10,000	
Miscellaneous demo/protection	5,600	gfa	2.00	11,200	
SUBTOTAL					54,800

F2020 HAZARDOUS COMPONENTS ABATEMENT

None Included

SUBTOTAL

TOTAL - SELECTIVE BUILDING DEMOLITION	\$54,800
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CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION TO McCALL MS				
A10 FOUNDATIONS				
A1010 Standard Foundations	\$104,324			
A1020 Special Foundations	\$0			
A1030 Lowest Floor Construction	\$32,151	\$136,475	\$29.19	10.2%
A20 BASEMENT CONSTRUCTION				
A2010 Basement Excavation	\$0			
A2020 Basement Walls	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE				
B1010 Upper Floor Construction	\$85,831			
B1020 Roof Construction	\$73,520	\$159,351	\$34.09	12.0%
B20 EXTERIOR CLOSURE				
B2010 Exterior Walls	\$218,603			
B2020 Windows	\$190,085			
B2030 Exterior Doors	\$16,520	\$425,208	\$90.95	31.9%
B30 ROOFING				
B3010 Roof Coverings	\$65,170			
B3020 Roof Openings	\$0	\$65,170	\$13.94	4.9%
C10 INTERIOR CONSTRUCTION				
C1010 Partitions	\$53,124			
C1020 Interior Doors	\$27,600			
C1030 Specialties/Millwork	\$25,407	\$106,131	\$22.70	8.0%
C20 STAIRCASES				
C2010 Stair Construction	\$0			
C2020 Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES				
C3010 Wall Finishes	\$20,958			
C3020 Floor Finishes	\$37,400			
C3030 Ceiling Finishes	\$28,050	\$86,408	\$18.48	6.5%
D10 CONVEYING SYSTEMS				
D1010 Elevator	\$0	\$0	\$0.00	0.0%
D20 PLUMBING				
D20 Plumbing	\$20,000	\$20,000	\$4.28	1.5%



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION TO McCALL MS					
D30 HVAC					
D30	HVAC	\$149,600	\$149,600	\$32.00	11.2%
D40 FIRE PROTECTION					
D40	Fire Protection	\$21,038	\$21,038	\$4.50	1.6%
D50 ELECTRICAL					
D5010	Complete System	\$93,500	\$93,500	\$20.00	7.0%
E10 EQUIPMENT					
E10	Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$49,546			
E2020	Movable Furnishings	NIC	\$49,546	\$10.60	3.7%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$20,000			
F2020	Hazardous Components Abatement	\$0	\$20,000	\$4.28	1.5%
TOTAL DIRECT COST (Trade Costs)			\$1,332,427	\$285.01	100.0%



Feasibility Design Estimate

GFA 4,675

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION TO McCALL MS

GROSS FLOOR AREA CALCULATION

Basement	2,315
First Floor	2,360

TOTAL GROSS FLOOR AREA (GFA)	4,675 sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 4'-0" x 1'-0"

Excavation	258	cy	20.00	5,160
Store on site for reuse	258	cy	14.00	3,612
Backfill with existing fill	231	cy	16.00	3,696
Remove surplus fill off site	27	cy	25.00	675
Formwork	348	sf	12.00	4,176
Re-bar, 10#/lf	1,740	lbs	1.20	2,088
Concrete material; 3,000 psi	27	cy	125.00	3,375
Placing concrete	27	cy	55.00	1,485

Foundation walls at exterior - 14" thick

Formwork	1,740	sf	14.00	24,360
Re-bar, 4.5#/sf	3,915	lbs	1.20	4,698
Concrete material; 4,000 psi	39	cy	135.00	5,265
Placing concrete	39	cy	65.00	2,535
Waterproofing foundation wall and footing	870	sf	8.00	6,960
Insulation to foundation walls; 2" thick	696	sf	2.50	1,740
Form shelf	174	lf	8.00	1,392

Column footings, typical, 5' x 5' x 2'-0"

Excavation	67	cy	20.00	1,340
Store on site for reuse	67	cy	14.00	938
Backfill with new fill	53	cy	16.00	848
Remove surplus fill off site	14	cy	20.00	280
Formwork	280	sf	11.00	3,080
Re-bar	3,920	lbs	1.20	4,704
Concrete material; 3,000 psi	14	cy	125.00	1,750
Placing concrete	14	cy	55.00	770
Set anchor bolts grout plates	7	ea	150.00	1,050

Interior pilasters

Formwork	205	sf	11.00	2,255
Re-bar	1,260	lbs	1.20	1,512
Concrete material; 3,000 psi	4	cy	125.00	500
Placing concrete	4	cy	55.00	220
Foundations against existing building	77	lf	180.00	13,860

SUBTOTAL

104,324

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick

Structural gravel fill, 8"	58	cy	30.00	1,740
Base course, 8" gravel	58	cy	40.00	2,320
Rigid insulation	2,360	sf	2.25	5,310
Vapor barrier	2,360	sf	1.00	2,360



Feasibility Design Estimate

GFA

4,675

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
ADDITION TO McCALL MS							
29	Mesh reinforcing 15% lap	2,714	sf	0.80	2,171		
30	Concrete - 5" thick	39	cy	125.00	4,875		
30	Placing concrete	39	cy	45.00	1,755		
31	Finishing and curing concrete	2,360	sf	4.00	9,440		
31	Control joints - saw cut	2,360	sf	0.50	1,180		
32	<u>Miscellaneous</u>						
32	Dewatering	1	ea	1,000.00	1,000		
33	SUBTOTAL					32,151	
TOTAL - FOUNDATIONS							\$136,475
A20 BASEMENT CONSTRUCTION							
A2010 BASEMENT EXCAVATION							
	SUBTOTAL					-	
A2020 BASEMENT WALLS							
	SUBTOTAL					-	
TOTAL - BASEMENT CONSTRUCTION							
B10 SUPERSTRUCTURE							
		13	lbs/sf				
B1010 FLOOR CONSTRUCTION							
	<u>Floor Structure - Steel:</u>	30	tns				
	Steel beams and columns; 13 lbs per SF	15	tns	3,500.00	52,500		
	Shear studs	463	ea	2.50	1,158		
	<u>Floor Structure</u>						
	3" 18 Ga. Metal galvanized floor Deck	2,315	sf	4.00	9,260		
	WWF reinforcement	2,662	sf	0.85	2,263		
	Concrete Fill to metal deck; 6-1/2" thick; Light Weight	43	cy	160.00	6,880		
	Place and finish concrete	2,315	sf	2.00	4,630		
	Rebar to decks	695	lbs	1.00	695		
	<u>Miscellaneous</u>						
	Fireproofing to columns and beams	2,315	sf	3.00	6,945		
	Fire stopping floors	1	ls	1,500.00	1,500		
	SUBTOTAL					85,831	
B1020 ROOF CONSTRUCTION							
	<u>Roof Structure - Steel:</u>						
	Steel beams/Joists; 13#/SF	15	tns	3,800.00	57,000		
	<u>Roof Structure</u>						
	1-1/2" Metal floor Deck @ roof	2,360	sf	3.00	7,080		
	<u>Miscellaneous</u>						
	Roof screen framing - allow					NIC	
	Fire proofing to columns, beams and deck	2,360	sf	4.00	9,440		
	SUBTOTAL					73,520	
TOTAL - SUPERSTRUCTURE							\$159,351
B20 EXTERIOR CLOSURE							
	B2010 EXTERIOR WALLS; 60% solid/40% glass	3,024	sf				



Feasibility Design Estimate

GFA

4,675

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION TO McCALL MS

57	<u>Interior skin</u>							
58	6" metal stud backup	3,024	sf	7.50	22,680			
58	Batt insulation in stud	3,024	sf	2.25	6,804			
59	2 1/2" Rigid Insulation	3,024	sf	3.00	9,072			
59	Air barrier	3,024	sf	6.00	18,144			
60	Air barrier/flashing at windows	665	lf	7.00	4,655			
60	Gypsum Sheathing	3,024	sf	2.75	8,316			
61	Drywall lining to interior face of stud backup	3,024	sf	3.00	9,072			
61	<u>Exterior skin</u>							
62	Brick veneer; 75% of exterior wall	2,268	sf	35.00	79,380			
62	Metal panels; 25% of exterior wall	756	sf	60.00	45,360			
63	<u>Miscellaneous</u>							
63	Staging to exterior wall	5,040	sf	3.00	15,120			
64	SUBTOTAL						218,603	
65	B2020 WINDOWS	2,016	sf					
65	Premium for sunscreen and light shelf elements	1	ls			NIC		
66	Windows/storefront	2,016	sf	90.00	181,440			
66	Backer rod & double sealant	665	lf	9.00	5,985			
67	Wood blocking at openings	665	lf	4.00	2,660			
67	SUBTOTAL						190,085	
68	B2030 EXTERIOR DOORS							
69	Glazed entrance doors including frame and hardware; double door at corridor exit	2	pr	8,000.00	16,000			
69	Backer rod & double sealant	40	lf	9.00	360			
70	Wood blocking at openings	40	lf	4.00	160			
70	SUBTOTAL						16,520	
71	TOTAL - EXTERIOR CLOSURE							\$425,208

B30 ROOFING

74	B3010 ROOF COVERINGS							
74	<u>Flat roofing</u>							
75	PVC roof membrane fully adhered	2,360	sf	14.00	33,040			
75	Insulation	2,360	sf	7.00	16,520			
76	1/2" dens-deck protection board	2,360	sf	2.00	4,720			
76	Reinforced vapor barrier	2,360	sf	1.50	3,540			
77	Rough blocking	600	lf	6.00	3,600			
77	<u>Miscellaneous Roofing</u>							
78	Roof screens - allow					NIC		
78	Roof fascia/cornice	150	lf	25.00	3,750			
79	SUBTOTAL						65,170	
80	B3020 ROOF OPENINGS							
80	Skylights, allow					NIC		
81	Roof hatch					NIC		
81	SUBTOTAL						-	
82	TOTAL - ROOFING							\$65,170

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS



Feasibility Design Estimate

GFA

4,675

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
ADDITION TO McCALL MS							
85	GWB furred wall at existing exterior wall	1,860	sf	12.00	22,320		
86	Corridors; GWB with 2 lyrs corridor side	1,800	sf	15.55	27,990		
86	Sealants & caulking at partitions	1,800	sf	0.50	900		
87	Rough blocking to partitions	138	lf	3.00	414		
87	Glazed partitions/borrowed lights - allowance	1	ls	1,500.00	1,500		
88	SUBTOTAL					53,124	
89	C1020 INTERIOR DOORS						
89	Corridor glazed doors	2	pr	8,000.00	16,000		
90	Classroom door with sidelight	4	ea	2,900.00	11,600		
90	SUBTOTAL					27,600	
91	C1030 SPECIALTIES / MILLWORK						
92	Marker boards/tackboards in classroom	512	sf	24.00	12,288		
92	Room Signs	4	ea	150.00	600		
93	Lockers				Not Required		
93	Expansion joints	1	ls	2,000.00	2,000		
94	Miscellaneous metals throughout building	4,675	sf	1.25	5,844		
94	Miscellaneous sealants throughout building	4,675	sf	1.00	4,675		
95	SUBTOTAL					25,407	
TOTAL - INTERIOR CONSTRUCTION							\$106,131
C20 STAIRCASES							
C2010 STAIR CONSTRUCTION							
No Work in this section							
SUBTOTAL							-
C2020 STAIR FINISHES							
No Work in this section							
SUBTOTAL							-
TOTAL - STAIRCASES							
C30 INTERIOR FINISHES							
C3010 WALL FINISHES							
105	Paint to GWB	5,460	sf	1.50	8,190		
106	Ceramic Tile to corridor	532	sf	24.00	12,768		
106	SUBTOTAL					20,958	
107	C3020 FLOOR FINISHES						
108	Resilient floor finishes	4,675	sf	8.00	37,400		
108	SUBTOTAL					37,400	
109	C3030 CEILING FINISHES						
110	Allowance for ceiling finishes; 2 x 2 ACT	4,675	sf	6.00	28,050		
110	SUBTOTAL					28,050	
TOTAL - INTERIOR FINISHES							\$86,408
D10 CONVEYING SYSTEMS							
D1010 ELEVATOR							
No Work in this section							
SUBTOTAL							-
TOTAL - CONVEYING SYSTEMS							



Feasibility Design Estimate

GFA

4,675

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION TO McCALL MS

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D20 PLUMBING

D20 PLUMBING, GENERALLY
 New sink in classrooms
 SUBTOTAL

4 loc 5,000.00 20,000
 20,000

TOTAL - PLUMBING							\$20,000
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D30 HVAC

D30 HVAC, GENERALLY
 HVAC complete system
 SUBTOTAL

4,675 gsf 32.00 149,600
 149,600

TOTAL - HVAC							\$149,600
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D40 FIRE PROTECTION

D40 FIRE PROTECTION, GENERALLY
 Sprinkler system
 SUBTOTAL

4,675 gsf 4.50 21,038
 21,038

TOTAL - FIRE PROTECTION							\$21,038
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D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEM
 Electrical system; complete
 SUBTOTAL

4,675 gsf 20.00 93,500
 93,500

TOTAL - ELECTRICAL							\$93,500
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E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY
 AV Equipment (including Smartboards, Projectors,
 LED monitors, Digital information displays etc.)
 SUBTOTAL

FF+E
 -

TOTAL - EQUIPMENT							
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E20 FURNISHINGS

E2010 FIXED FURNISHINGS
 Entry mats & frames - recessed with carpet/rubber
 strips
 Manual operated roller shades
 Counters, base cabinets, tall storage in classrooms
 and other rooms
 SUBTOTAL

50 sf 45.00 2,250
 2,016 sf 6.00 12,096
 4 rms 8,800.00 35,200
 49,546

E2020 MOVABLE FURNISHINGS
 All movable furnishings to be provided and installed
 by owner
 SUBTOTAL

NIC

TOTAL - FURNISHINGS							\$49,546
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Feasibility Design Estimate

GFA 4,675

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
ADDITION TO McCALL MS							
F10	SPECIAL CONSTRUCTION						
	F10 SPECIAL CONSTRUCTION						
	No Work in this section						
	SUBTOTAL						
TOTAL - SPECIAL CONSTRUCTION							
F20	SELECTIVE BUILDING DEMOLITION						
	F2010 BUILDING ELEMENTS DEMOLITION						
	Create openings to existing façade for new connections	2	loc	10,000.00	20,000		
	SUBTOTAL					20,000	
	F2020 HAZARDOUS COMPONENTS ABATEMENT						
	None Included						
	SUBTOTAL						
TOTAL - SELECTIVE BUILDING DEMOLITION							\$20,000



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
LOWER LEVEL ADDITION TO MURACO ES				
A10 FOUNDATIONS				
A1010 Standard Foundations	\$265,285			
A1020 Special Foundations	\$0			
A1030 Lowest Floor Construction	\$202,801	\$468,086	\$31.17	13.1%
A20 BASEMENT CONSTRUCTION				
A2010 Basement Excavation	\$0			
A2020 Basement Walls	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE				
B1010 Upper Floor Construction	\$0			
B1020 Roof Construction	\$477,505	\$477,505	\$31.80	13.4%
B20 EXTERIOR CLOSURE				
B2010 Exterior Walls	\$230,748			
B2020 Windows	\$200,646			
B2030 Exterior Doors	\$16,520	\$447,914	\$29.83	12.5%
B30 ROOFING				
B3010 Roof Coverings	\$377,962			
B3020 Roof Openings	\$0	\$377,962	\$25.17	10.6%
C10 INTERIOR CONSTRUCTION				
C1010 Partitions	\$212,145			
C1020 Interior Doors	\$47,900			
C1030 Specialties/Millwork	\$98,097	\$358,142	\$23.85	10.0%
C20 STAIRCASES				
C2010 Stair Construction	\$0			
C2020 Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES				
C3010 Wall Finishes	\$91,503			
C3020 Floor Finishes	\$120,120			
C3030 Ceiling Finishes	\$90,090	\$301,713	\$20.09	8.4%
D10 CONVEYING SYSTEMS				
D1010 Elevator	\$0	\$0	\$0.00	0.0%
D20 PLUMBING				
D20 Plumbing	\$180,180	\$180,180	\$12.00	5.0%



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
LOWER LEVEL ADDITION TO MURACO ES					
D30 HVAC					
D30 HVAC		\$480,480	\$480,480	\$32.00	13.4%
D40 FIRE PROTECTION					
D40 Fire Protection		\$67,568	\$67,568	\$4.50	1.9%
D50 ELECTRICAL					
D5010 Complete System		\$300,300	\$300,300	\$20.00	8.4%
E10 EQUIPMENT					
E10 Equipment		\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010 Fixed Furnishings		\$94,218			
E2020 Movable Furnishings		NIC	\$94,218	\$6.27	2.6%
F10 SPECIAL CONSTRUCTION					
F10 Special Construction		\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010 Building Elements Demolition		\$20,000			
F2020 Hazardous Components Abatement		\$0	\$20,000	\$1.33	0.6%
TOTAL DIRECT COST (Trade Costs)			\$3,574,068	\$238.03	100.0%



Feasibility Design Estimate

GFA

15,015

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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LOWER LEVEL ADDITION TO MURACO ES

GROSS FLOOR AREA CALCULATION

First Floor 15,015

TOTAL GROSS FLOOR AREA (GFA)					15,015	sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	422	cy	20.00	8,440
Store on site for reuse	422	cy	14.00	5,908
Backfill with existing fill	392	cy	16.00	6,272
Remove surplus fill off site	30	cy	25.00	750
Formwork	760	sf	12.00	9,120
Re-bar, 10#/lf	3,800	lbs	1.20	4,560
Concrete material; 3,000 psi	30	cy	125.00	3,750
Placing concrete	30	cy	55.00	1,650

Foundation walls at exterior - 14" thick

Formwork	3,040	sf	14.00	42,560
Re-bar, 4.5#/sf	6,840	lbs	1.20	8,208
Concrete material; 4,000 psi	69	cy	135.00	9,315
Placing concrete	69	cy	65.00	4,485
Dampproofing foundation wall and footing	2,280	sf	1.90	NIC
Insulation to foundation walls; 2" thick	1,520	sf	2.50	3,800
Form shelf	380	lf	8.00	3,040

Column footings, typical, 5' x 5' x 2'-0"

Excavation	352	cy	20.00	7,040
Store on site for reuse	352	cy	14.00	4,928
Backfill with new fill	280	cy	16.00	4,480
Remove surplus fill off site	72	cy	20.00	1,440
Formwork	1,480	sf	11.00	16,280
Re-bar	20,720	lbs	1.20	24,864
Concrete material; 3,000 psi	72	cy	125.00	9,000
Placing concrete	72	cy	55.00	3,960
Set anchor bolts grout plates	37	ea	150.00	5,550

Interior pilasters

Formwork	1,083	sf	11.00	11,913
Re-bar	6,660	lbs	1.20	7,992
Concrete material; 3,000 psi	19	cy	125.00	2,375
Placing concrete	19	cy	55.00	1,045
Foundations against existing building	292	lf	180.00	52,560

SUBTOTAL

265,285

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick

Structural gravel fill, 8"	371	cy	30.00	11,130
Base course, 8" gravel	371	cy	40.00	14,840
Rigid insulation	15,015	sf	2.25	33,784
Vapor barrier	15,015	sf	1.00	15,015
Mesh reinforcing 15% lap	17,267	sf	0.80	13,814



Feasibility Design Estimate

GFA

15,015

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
LOWER LEVEL ADDITION TO MURACO ES							
57	Concrete - 5" thick	245	cy	125.00	30,625		
58	Placing concrete	245	cy	45.00	11,025		
59	Finishing and curing concrete	15,015	sf	4.00	60,060		
60	Control joints - saw cut	15,015	sf	0.50	7,508		
61	<u>Miscellaneous</u>						
62	Dewatering	1	ea	5,000.00	5,000		
63	SUBTOTAL					202,801	
TOTAL - FOUNDATIONS							\$468,086
A20 BASEMENT CONSTRUCTION							
A2010 BASEMENT EXCAVATION							
	No items in this section						
	SUBTOTAL						-
A2020 BASEMENT WALLS							
	No items in this section						
	SUBTOTAL						-
TOTAL - BASEMENT CONSTRUCTION							
B10 SUPERSTRUCTURE							
		13	lbs/sf				
B1010 FLOOR CONSTRUCTION							
	No Work in this section	98	tns				
	SUBTOTAL						-
B1020 ROOF CONSTRUCTION							
	<u>Roof Structure - Steel:</u>						
	Steel beams/Joists; 13#/SF	98	tns	3,800.00	372,400		
	<u>Roof Structure</u>						
	1-1/2" Metal floor Deck @ roof	15,015	sf	3.00	45,045		
	<u>Miscellaneous</u>						
	Roof screen framing - allow					NIC	
	Fire proofing to columns, beams and deck	15,015	sf	4.00	60,060		
	SUBTOTAL					477,505	
TOTAL - SUPERSTRUCTURE							\$477,505
B20 EXTERIOR CLOSURE							
B2010 EXTERIOR WALLS; 60% solid/40% glass							
	<u>Interior skin</u>	3,192	sf				
	6" metal stud backup	3,192	sf	7.50	23,940		
	Batt insulation in stud	3,192	sf	2.25	7,182		
	2 1/2" Rigid Insulation	3,192	sf	3.00	9,576		
	Air barrier	3,192	sf	6.00	19,152		
	Air barrier/flashing at windows	702	lf	7.00	4,914		
	Gypsum Sheathing	3,192	sf	2.75	8,778		
	Drywall lining to interior face of stud backup	3,192	sf	3.00	9,576		
	<u>Exterior skin</u>						



Feasibility Design Estimate

GFA

15,015

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
LOWER LEVEL ADDITION TO MURACO ES								
112	Brick veneer; 75% of exterior wall	2,394	sf	35.00	83,790			
113	Metal panels; 25% of exterior wall	798	sf	60.00	47,880			
114	<u>Miscellaneous</u>							
115	Staging to exterior wall	5,320	sf	3.00	15,960			
116	SUBTOTAL					230,748		
117								
118	B2020 WINDOWS	2,128	sf					
119	Premium for sunscreen and light shelf elements	1	ls		NIC			
120	Windows/storefront	2,128	sf	90.00	191,520			
121	Backer rod & double sealant	702	lf	9.00	6,318			
122	Wood blocking at openings	702	lf	4.00	2,808			
123	SUBTOTAL					200,646		
124								
125	B2030 EXTERIOR DOORS							
126	Glazed entrance doors including frame and hardware; double door at corridor exit	2	pr	8,000.00	16,000			
127	Backer rod & double sealant	40	lf	9.00	360			
128	Wood blocking at openings	40	lf	4.00	160			
129	SUBTOTAL					16,520		
130								
131	TOTAL - EXTERIOR CLOSURE							\$447,914
132								
133								
134	B30 ROOFING							
135								
136	B3010 ROOF COVERINGS							
137	<u>Flat roofing</u>							
138	PVC roof membrane fully adhered	15,015	sf	14.00	210,210			
139	Insulation	15,015	sf	7.00	105,105			
140	1/2" dens-deck protection board	15,015	sf	2.00	30,030			
141	Reinforced vapor barrier	15,015	sf	1.50	22,523			
142	Rough blocking	824	lf	6.00	4,944			
143	<u>Miscellaneous Roofing</u>							
144	Roof screens - allow				NIC			
145	Roof fascia/cornice	206	lf	25.00	5,150			
146	SUBTOTAL					377,962		
147								
148	B3020 ROOF OPENINGS							
149	Skylights, allow				NIC			
150	Roof hatch				NIC			
151	SUBTOTAL							
152								
153	TOTAL - ROOFING							\$377,962
154								
155								
156	C10 INTERIOR CONSTRUCTION							
157								
158	C1010 PARTITIONS							
159	GWB furred wall at existing exterior wall	4,380	sf	12.00	52,560			
160	Interior partitions	9,495	sf	15.55	147,647			
161	Sealants & caulking at partitions	9,495	sf	0.50	4,748			
162	Rough blocking to partitions	730	lf	3.00	2,190			
163	Glazed partitions/borrowed lights - allowance	1	ls	5,000.00	5,000			
164	SUBTOTAL					212,145		
165								
166	C1020 INTERIOR DOORS							
167	Corridor glazed doors	2	pr	8,000.00	16,000			
168	Classroom door with sidelight	11	ea	2,900.00	31,900			



Feasibility Design Estimate

GFA

15,015

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
LOWER LEVEL ADDITION TO MURACO ES								
169	SUBTOTAL					47,900		
170								
171	C1030 SPECIALTIES / MILLWORK							
172	Marker boards/tackboards in classroom	1,152	sf	24.00	27,648			
172	Toilet partitions and accessories	2	rms	9,000.00	18,000			
173	Room Signs	11	ea	150.00	1,650			
174	Lockers				Not Required			
175	Expansion joints	1	ls	2,000.00	2,000			
175	Lockers	15,015	sf	1.00	15,015			
176	Miscellaneous metals throughout building	15,015	sf	1.25	18,769			
177	Miscellaneous sealants throughout building	15,015	sf	1.00	15,015			
178	SUBTOTAL					98,097		
179								
180	TOTAL - INTERIOR CONSTRUCTION							\$358,142
181								
182								
183	C20 STAIRCASES							
184								
185	C2010 STAIR CONSTRUCTION							
186	No Work in this section							
187	SUBTOTAL					-		
188								
189	C2020 STAIR FINISHES							
190	No Work in this section							
191	SUBTOTAL					-		
192								
193	TOTAL - STAIRCASES							
194								
195								
196	C30 INTERIOR FINISHES							
197								
198	C3010 WALL FINISHES							
199	Paint to GWB	23,370	sf	1.50	35,055			
200	Ceramic Tile to corridor	2,352	sf	24.00	56,448			
201	SUBTOTAL					91,503		
202								
203	C3020 FLOOR FINISHES							
204	Resilient floor finishes	15,015	sf	8.00	120,120			
205	SUBTOTAL					120,120		
206								
207	C3030 CEILING FINISHES							
208	Allowance for ceiling finishes; 2 x 2 ACT	15,015	sf	6.00	90,090			
209	SUBTOTAL					90,090		
210								
211	TOTAL - INTERIOR FINISHES							\$301,713
212								
213								
214	D10 CONVEYING SYSTEMS							
215								
216	D1010 ELEVATOR							
217	No Work in this section							
218	SUBTOTAL					-		
219								
220	TOTAL - CONVEYING SYSTEMS							
221								
222								
223	D20 PLUMBING							
224								
225	D20 PLUMBING, GENERALLY							
226	Plumbing allowance	15,015	gsf	12.00	180,180			
227	SUBTOTAL					180,180		
228								
229	TOTAL - PLUMBING							\$180,180



Feasibility Design Estimate

GFA

15,015

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
LOWER LEVEL ADDITION TO MURACO ES							
D30 HVAC							
D30	HVAC, GENERALLY						
	HVAC complete system	15,015	gsf	32.00	480,480		
	SUBTOTAL					480,480	
TOTAL - HVAC							\$480,480
D40 FIRE PROTECTION							
D40	FIRE PROTECTION, GENERALLY						
	Sprinkler system	15,015	gsf	4.50	67,568		
	SUBTOTAL					67,568	
TOTAL - FIRE PROTECTION							\$67,568
D50 ELECTRICAL							
D5010	COMPLETE ELECTRICAL SYSTEM						
	Electrical system; complete	15,015	gsf	20.00	300,300		
	SUBTOTAL					300,300	
TOTAL - ELECTRICAL							\$300,300
E10 EQUIPMENT							
E10	EQUIPMENT, GENERALLY						
	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)					FF+E	
	SUBTOTAL					-	
TOTAL - EQUIPMENT							
E20 FURNISHINGS							
E2010	FIXED FURNISHINGS						
	Entry mats & frames - recessed with carpet/rubber strips	50	sf	45.00	2,250		
	Manual operated roller shades	2,128	sf	6.00	12,768		
	Counters, base cabinets, tall storage in classrooms and other rooms	9	rms	8,800.00	79,200		
	SUBTOTAL					94,218	
E2020	MOVABLE FURNISHINGS						
	All movable furnishings to be provided and installed by owner						
	SUBTOTAL						NIC
TOTAL - FURNISHINGS							\$94,218
F10 SPECIAL CONSTRUCTION							
F10	SPECIAL CONSTRUCTION						
	No Work in this section						
	SUBTOTAL						
TOTAL - SPECIAL CONSTRUCTION							
F20 SELECTIVE BUILDING DEMOLITION							



Feasibility Design Estimate

GFA 15,015

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
LOWER LEVEL ADDITION TO MURACO ES								
294								
295	F2010 BUILDING ELEMENTS DEMOLITION							
296	Create openings to existing façade for new connections	2	loc	10,000.00	20,000			
297	SUBTOTAL					20,000		
298								
299	F2020 HAZARDOUS COMPONENTS ABATEMENT							
300	None Included							
301	SUBTOTAL							
302								
303	TOTAL - SELECTIVE BUILDING DEMOLITION						\$20,000	



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
FRONT ADDITION TO MURACO ES				
A10 FOUNDATIONS				
A1010 Standard Foundations	\$316,729			
A1020 Special Foundations	\$0			
A1030 Lowest Floor Construction	\$276,352	\$593,081	\$28.79	9.7%
A20 BASEMENT CONSTRUCTION				
A2010 Basement Excavation	\$0			
A2020 Basement Walls	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE				
B1010 Upper Floor Construction	\$0			
B1020 Roof Construction	\$653,400	\$653,400	\$31.72	10.7%
B20 EXTERIOR CLOSURE				
B2010 Exterior Walls	\$620,671			
B2020 Windows	\$539,717			
B2030 Exterior Doors	\$16,520	\$1,176,908	\$57.13	19.2%
B30 ROOFING				
B3010 Roof Coverings	\$528,073			
B3020 Roof Openings	\$0	\$528,073	\$25.63	8.6%
C10 INTERIOR CONSTRUCTION				
C1010 Partitions	\$264,272			
C1020 Interior Doors	\$103,000			
C1030 Specialties/Millwork	\$164,740	\$532,012	\$25.83	8.7%
C20 STAIRCASES				
C2010 Stair Construction	\$0			
C2020 Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES				
C3010 Wall Finishes	\$92,700			
C3020 Floor Finishes	\$247,200			
C3030 Ceiling Finishes	\$123,600	\$463,500	\$22.50	7.6%
D10 CONVEYING SYSTEMS				
D1010 Elevator	\$0	\$0	\$0.00	0.0%
D20 PLUMBING				
D20 Plumbing	\$247,200	\$247,200	\$12.00	4.0%



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
FRONT ADDITION TO MURACO ES				
D30 HVAC				
D30 HVAC	\$782,800	\$782,800	\$38.00	12.8%
D40 FIRE PROTECTION				
D40 Fire Protection	\$92,700	\$92,700	\$4.50	1.5%
D50 ELECTRICAL				
D5010 Complete System	\$700,400	\$700,400	\$34.00	11.4%
E10 EQUIPMENT				
E10 Equipment	\$137,100	\$137,100	\$6.66	2.2%
E20 FURNISHINGS				
E2010 Fixed Furnishings	\$118,994			
E2020 Movable Furnishings	NIC	\$118,994	\$5.78	1.9%
F10 SPECIAL CONSTRUCTION				
F10 Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS				
F2010 Building Elements Demolition	\$94,875			
F2020 Hazardous Components Abatement	\$0	\$94,875	\$4.61	1.5%
TOTAL DIRECT COST (Trade Costs)		\$6,121,043	\$297.14	100.0%



Feasibility Design Estimate

GFA 20,600

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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FRONT ADDITION TO MURACO ES

GROSS FLOOR AREA CALCULATION

First Floor 20,600

TOTAL GROSS FLOOR AREA (GFA)	20,600 sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	530	cy	20.00	10,600
Store on site for reuse	530	cy	14.00	7,420
Backfill with existing fill	493	cy	16.00	7,888
Remove surplus fill off site	37	cy	25.00	925
Formwork	954	sf	12.00	11,448
Re-bar, 10#/lf	4,770	lbs	1.20	5,724
Concrete material; 3,000 psi	37	cy	125.00	4,625
Placing concrete	37	cy	55.00	2,035

Foundation walls at exterior - 14" thick

Formwork	3,816	sf	14.00	53,424
Re-bar, 4.5#/sf	8,586	lbs	1.20	10,303
Concrete material; 4,000 psi	87	cy	135.00	11,745
Placing concrete	87	cy	65.00	5,655
Dampproofing foundation wall and footing	2,862	sf	1.90	NIC
Insulation to foundation walls; 2" thick	1,908	sf	2.50	4,770
Form shelf	477	lf	8.00	3,816

Column footings, typical, 5' x 5' x 2'-0"

Excavation	456	cy	20.00	9,120
Store on site for reuse	456	cy	14.00	6,384
Backfill with new fill	363	cy	16.00	5,808
Remove surplus fill off site	93	cy	20.00	1,860
Formwork	1,920	sf	11.00	21,120
Re-bar	26,880	lbs	1.20	32,256
Concrete material; 3,000 psi	93	cy	125.00	11,625
Placing concrete	93	cy	55.00	5,115
Set anchor bolts grout plates	48	ea	150.00	7,200

Interior pilasters

Formwork	1,405	sf	11.00	15,455
Re-bar	8,640	lbs	1.20	10,368
Concrete material; 3,000 psi	25	cy	125.00	3,125
Placing concrete	25	cy	55.00	1,375
Foundations against existing building	253	lf	180.00	45,540

SUBTOTAL

316,729

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick

Structural gravel fill, 8"	509	cy	30.00	15,270
Base course, 8" gravel	509	cy	40.00	20,360
Rigid insulation	20,600	sf	2.25	46,350
Vapor barrier	20,600	sf	1.00	20,600
Mesh reinforcing 15% lap	23,690	sf	0.80	18,952



Feasibility Design Estimate

GFA 20,600

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
FRONT ADDITION TO MURACO ES							
57	Concrete - 5" thick	336	cy	125.00	42,000		
58	Placing concrete	336	cy	45.00	15,120		
59	Finishing and curing concrete	20,600	sf	4.00	82,400		
60	Control joints - saw cut	20,600	sf	0.50	10,300		
61	<u>Miscellaneous</u>						
62	Dewatering	1	ea	5,000.00	5,000		
63	SUBTOTAL					276,352	
TOTAL - FOUNDATIONS							\$593,081
A20 BASEMENT CONSTRUCTION							
A2010 BASEMENT EXCAVATION							
No items in this section							
SUBTOTAL							-
A2020 BASEMENT WALLS							
No items in this section							
SUBTOTAL							-
TOTAL - BASEMENT CONSTRUCTION							
B10 SUPERSTRUCTURE							
13 lbs/sf							
B1010 FLOOR CONSTRUCTION							
134 tns							
No Work in this section							
SUBTOTAL							-
B1020 ROOF CONSTRUCTION							
<u>Roof Structure - Steel:</u>							
89	Steel beams/Joists; 13#/SF	134	tns	3,800.00	509,200		
<u>Roof Structure</u>							
91	1-1/2" Metal floor Deck @ roof	20,600	sf	3.00	61,800		
<u>Miscellaneous</u>							
93	Roof screen framing - allow					NIC	
94	Fire proofing to columns, beams and deck	20,600	sf	4.00	82,400		
95	SUBTOTAL					653,400	
TOTAL - SUPERSTRUCTURE							\$653,400
B20 EXTERIOR CLOSURE							
B2010 EXTERIOR WALLS; 60% solid/40% glass							
<u>Interior skin</u>							
104	6" metal stud backup	8,586	sf	7.50	64,395		
105	Batt insulation in stud	8,586	sf	2.25	19,319		
106	2 1/2" Rigid Insulation	8,586	sf	3.00	25,758		
107	Air barrier	8,586	sf	6.00	51,516		
108	Air barrier/flashing at windows	1,889	lf	7.00	13,223		
109	Gypsum Sheathing	8,586	sf	2.75	23,612		
110	Drywall lining to interior face of stud backup	8,586	sf	3.00	25,758		
<u>Exterior skin</u>							



Feasibility Design Estimate

GFA 20,600

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
FRONT ADDITION TO MURACO ES								
112	Brick veneer; 75% of exterior wall	6,440	sf	35.00	225,400			
113	Metal panels; 25% of exterior wall	2,146	sf	60.00	128,760			
114	<u>Miscellaneous</u>							
115	Staging to exterior wall	14,310	sf	3.00	42,930			
116	SUBTOTAL					620,671		
117								
118	B2020 WINDOWS	5,724	sf					
119	Premium for sunscreen and light shelf elements	1	ls		NIC			
120	Windows/storefront	5,724	sf	90.00	515,160			
121	Backer rod & double sealant	1,889	lf	9.00	17,001			
122	Wood blocking at openings	1,889	lf	4.00	7,556			
123	SUBTOTAL					539,717		
124								
125	B2030 EXTERIOR DOORS							
126	Glazed entrance doors including frame and hardware; double door at corridor exit	2	pr	8,000.00	16,000			
127	Backer rod & double sealant	40	lf	9.00	360			
128	Wood blocking at openings	40	lf	4.00	160			
129	SUBTOTAL					16,520		
130								
131	TOTAL - EXTERIOR CLOSURE						\$1,176,908	
132								
133								
134	B30 ROOFING							
135								
136	B3010 ROOF COVERINGS							
137	<u>Flat roofing</u>							
138	PVC roof membrane fully adhered	20,600	sf	14.00	288,400			
139	Insulation	20,600	sf	7.00	144,200			
140	1/2" dens-deck protection board	20,600	sf	2.00	41,200			
141	Reinforced vapor barrier	20,600	sf	1.50	30,900			
142	Rough blocking	1,908	lf	6.00	11,448			
143	<u>Miscellaneous Roofing</u>							
144	Roof screens - allow				NIC			
145	Roof fascia/cornice	477	lf	25.00	11,925			
146	SUBTOTAL					528,073		
147								
148	B3020 ROOF OPENINGS							
149	Skylights, allow				NIC			
150	Roof hatch				NIC			
151	SUBTOTAL					-		
152								
153	TOTAL - ROOFING						\$528,073	
154								
155								
156	C10 INTERIOR CONSTRUCTION							
157								
158	C1010 PARTITIONS							
159	Interior partitions	15,925	sf	15.55	247,634			
160	Sealants & caulking at partitions	15,925	sf	0.50	7,963			
161	Rough blocking to partitions	1,225	lf	3.00	3,675			
162	Glazed partitions/borrowed lights - allowance	1	ls	5,000.00	5,000			
163	SUBTOTAL					264,272		
164								
165	C1020 INTERIOR DOORS							
166	Doors, frames and hardware	20,600	sf	5.00	103,000			
167	SUBTOTAL					103,000		
168								



Feasibility Design Estimate

GFA 20,600

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
FRONT ADDITION TO MURACO ES							
169	C1030 SPECIALTIES / MILLWORK						
170	Marker boards/tackboards in classroom	20,600	gfa	1.15	23,690		
171	Toilet partitions and accessories	20,600	gfa	0.75	15,450		
172	Room Signs	20,600	gfa	0.25	5,150		
173	Wood paneling/benches/display cases etc.	20,600	gfa	1.50	30,900		
174	Lockers	20,600	sf	1.00	20,600		
175	Expansion joints	1	ls	2,000.00	2,000		
176	Lockers	20,600	sf	1.00	20,600		
177	Miscellaneous metals throughout building	20,600	sf	1.25	25,750		
178	Miscellaneous sealants throughout building	20,600	sf	1.00	20,600		
179	SUBTOTAL					164,740	
TOTAL - INTERIOR CONSTRUCTION							\$532,012
C20 STAIRCASES							
C2010 STAIR CONSTRUCTION							
No Work in this section							
SUBTOTAL							-
C2020 STAIR FINISHES							
No Work in this section							
SUBTOTAL							-
TOTAL - STAIRCASES							
C30 INTERIOR FINISHES							
C3010 WALL FINISHES							
	Wall finishes	20,600	gfa	4.50	92,700		
SUBTOTAL							92,700
C3020 FLOOR FINISHES							
	Floor finishes	20,600	sf	12.00	247,200		
SUBTOTAL							247,200
C3030 CEILING FINISHES							
	Ceiling finishes	20,600	sf	6.00	123,600		
SUBTOTAL							123,600
TOTAL - INTERIOR FINISHES							\$463,500
D10 CONVEYING SYSTEMS							
D1010 ELEVATOR							
No Work in this section							
SUBTOTAL							-
TOTAL - CONVEYING SYSTEMS							
D20 PLUMBING							
D20 PLUMBING, GENERALLY							
	Plumbing allowance	20,600	gsf	12.00	247,200		
SUBTOTAL							247,200
TOTAL - PLUMBING							\$247,200



Feasibility Design Estimate

GFA 20,600

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
FRONT ADDITION TO MURACO ES							
D30 HVAC							
D30	HVAC, GENERALLY						
	HVAC complete system	20,600	gsf	38.00	782,800		
	SUBTOTAL					782,800	
TOTAL - HVAC							\$782,800
D40 FIRE PROTECTION							
D40	FIRE PROTECTION, GENERALLY						
	Sprinkler system	20,600	gsf	4.50	92,700		
	SUBTOTAL					92,700	
TOTAL - FIRE PROTECTION							\$92,700
D50 ELECTRICAL							
D5010	COMPLETE ELECTRICAL SYSTEM						
	Electrical system; complete	20,600	gsf	34.00	700,400		
	SUBTOTAL					700,400	
TOTAL - ELECTRICAL							\$700,400
E10 EQUIPMENT							
E10	EQUIPMENT, GENERALLY						
11500	Gym wall pads	1	ls	10,000.00	10,000		
11500	Basketball backstops; swing up; electric operated	2	ea	9,800.00	19,600		
11500	Gymnasium dividing net; electrically operated	1	loc	45,000.00	45,000		
11500	Volleyball net and standards	1	ea	2,000.00	2,000		
11500	Telescoping bleachers	1	ls	25,000.00	25,000		
11500	Cubicle curtain & track at nurse area	1	loc	500.00	500		
11970	Platform curtains, rigging and controls	1	ls	35,000.00	35,000		
	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)					FF+E	
	SUBTOTAL						137,100
TOTAL - EQUIPMENT							\$137,100
E20 FURNISHINGS							
E2010	FIXED FURNISHINGS						
	Entry mats & frames - recessed with carpet/rubber strips	50	sf	45.00	2,250		
	Manual operated roller shades	5,724	sf	6.00	34,344		
	Counters, base cabinets, tall storage in classrooms and other rooms	20,600	gfa	4.00	82,400		
	SUBTOTAL						118,994
E2020	MOVABLE FURNISHINGS						
	All movable furnishings to be provided and installed by owner						
	SUBTOTAL						NIC
TOTAL - FURNISHINGS							\$118,994
F10 SPECIAL CONSTRUCTION							



Feasibility Design Estimate

GFA 20,600

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
FRONT ADDITION TO MURACO ES								
293	F10 SPECIAL CONSTRUCTION							
294	No Work in this section							
295	SUBTOTAL							
296								
297	TOTAL - SPECIAL CONSTRUCTION							
298								
299								
300	F20 SELECTIVE BUILDING DEMOLITION							
301								
302	F2010 BUILDING ELEMENTS DEMOLITION							
303	Demolish existing exterior wall	6,325	sf	15.00	94,875			
304	SUBTOTAL					94,875		
305								
306	F2020 HAZARDOUS COMPONENTS ABATEMENT							
307	None Included							
308	SUBTOTAL							
309								
310	TOTAL - SELECTIVE BUILDING DEMOLITION							\$94,875



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT MURACO ES 2				
A10 FOUNDATIONS				
A1010 Standard Foundations	\$614,098			
A1020 Special Foundations	\$0			
A1030 Lowest Floor Construction	\$729,491	\$1,343,589	\$17.51	6.8%
A20 BASEMENT CONSTRUCTION				
A2010 Basement Excavation	\$0			
A2020 Basement Walls	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE				
B1010 Upper Floor Construction	\$1,050,175			
B1020 Roof Construction	\$1,570,812	\$2,620,987	\$34.16	13.3%
B20 EXTERIOR CLOSURE				
B2010 Exterior Walls	\$1,527,916			
B2020 Windows	\$1,276,504			
B2030 Exterior Doors	\$43,040	\$2,847,460	\$37.11	14.5%
B30 ROOFING				
B3010 Roof Coverings	\$1,298,906			
B3020 Roof Openings	\$5,000	\$1,303,906	\$16.99	6.6%
C10 INTERIOR CONSTRUCTION				
C1010 Partitions	\$1,534,600			
C1020 Interior Doors	\$383,650			
C1030 Specialties/Millwork	\$529,439	\$2,447,689	\$31.90	12.4%
C20 STAIRCASES				
C2010 Stair Construction	\$78,000			
C2020 Stair Finishes	\$20,550	\$98,550	\$1.28	0.5%
C30 INTERIOR FINISHES				
C3010 Wall Finishes	\$345,285			
C3020 Floor Finishes	\$537,110			
C3030 Ceiling Finishes	\$460,380	\$1,342,775	\$17.50	6.8%
D10 CONVEYING SYSTEMS				
D1010 Elevator	\$100,000	\$100,000	\$1.30	0.5%
D20 PLUMBING				
D20 Plumbing	\$920,760	\$920,760	\$12.00	4.7%



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT MURACO ES 2					
D30 HVAC					
D30	HVAC	\$2,915,740	\$2,915,740	\$38.00	14.8%
D40 FIRE PROTECTION					
D40	Fire Protection	\$345,285	\$345,285	\$4.50	1.8%
D50 ELECTRICAL					
D5010	Complete System	\$2,608,820	\$2,608,820	\$34.00	13.3%
E10 EQUIPMENT					
E10	Equipment	\$396,100	\$396,100	\$5.16	2.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$392,648			
E2020	Movable Furnishings	NIC	\$392,648	\$5.12	2.0%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$0			
F2020	Hazardous Components Abatement	\$0	\$0	\$0.00	0.0%
TOTAL DIRECT COST (Trade Costs)			\$19,684,309	\$256.54	100.0%



Feasibility Design Estimate

GFA 76,730

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 2

GROSS FLOOR AREA CALCULATION

First Floor	48,916
Second Floor	27,814

TOTAL GROSS FLOOR AREA (GFA)	76,730 sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	1,329	cy	20.00	26,580
Store on site for reuse	1,329	cy	14.00	18,606
Backfill with existing fill	1,236	cy	16.00	19,776
Remove surplus fill off site	93	cy	25.00	2,325
Formwork	2,392	sf	12.00	28,704
Re-bar, 10#/lf	11,960	lbs	1.20	14,352
Concrete material; 3,000 psi	93	cy	125.00	11,625
Placing concrete	93	cy	55.00	5,115

Foundation walls at exterior - 14" thick

Formwork	9,568	sf	14.00	133,952
Re-bar, 4.5#/sf	21,528	lbs	1.20	25,834
Concrete material; 4,000 psi	218	cy	135.00	29,430
Placing concrete	218	cy	65.00	14,170
Dampproofing foundation wall and footing	7,176	sf	1.90	NIC
Insulation to foundation walls; 2" thick	4,784	sf	2.50	11,960
Form shelf	1,196	lf	8.00	9,568

Column footings, typical, 6' x 6' x 2'-0"

Excavation	998	cy	20.00	19,960
Store on site for reuse	998	cy	14.00	13,972
Backfill with new fill	760	cy	16.00	12,160
Remove surplus fill off site	238	cy	20.00	4,760
Formwork	4,080	sf	11.00	44,880
Re-bar	47,600	lbs	1.20	57,120
Concrete material; 3,000 psi	238	cy	125.00	29,750
Placing concrete	238	cy	55.00	13,090
Set anchor bolts grout plates	85	ea	150.00	12,750

Interior pilasters

Formwork	2,489	sf	11.00	27,379
Re-bar	15,300	lbs	1.20	18,360
Concrete material; 3,000 psi	44	cy	125.00	5,500
Placing concrete	44	cy	55.00	2,420

SUBTOTAL

614,098

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick

Structural gravel fill, 8"	1,208	cy	30.00	36,240
Base course, 8" gravel	1,208	cy	40.00	48,320
Rigid insulation	48,916	sf	2.25	110,061
Vapor barrier	48,916	sf	1.00	48,916
Mesh reinforcing 15% lap	56,253	sf	0.80	45,002



Feasibility Design Estimate

GFA 76,730

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW SCHOOL AT MURACO ES 2							
56	Concrete - 5" thick	799	cy	125.00	99,875		
57	Placing concrete	799	cy	45.00	35,955		
58	Finishing and curing concrete	48,916	sf	4.00	195,664		
59	Control joints - saw cut	48,916	sf	0.50	24,458		
60	<u>Miscellaneous</u>						
61	Backfill existing foundations/basement	1	ea	50,000.00	50,000		
62	Elevator pit	1	ea	30,000.00	30,000		
63	Dewatering	1	ea	5,000.00	5,000		
64	SUBTOTAL					729,491	
TOTAL - FOUNDATIONS							\$1,343,589
A20 BASEMENT CONSTRUCTION							
A2010 BASEMENT EXCAVATION							
No items in this section							
SUBTOTAL							-
A2020 BASEMENT WALLS							
No items in this section							
SUBTOTAL							-
TOTAL - BASEMENT CONSTRUCTION							
B10 SUPERSTRUCTURE							
8 lbs/sf							
B1010 FLOOR CONSTRUCTION							
318 tns							
<u>Floor Structure - Steel:</u>							
86	Steel beams and columns; 13/SF	181	tns	3,500.00	633,500		
87	Shear studs	5,563	ea	2.50	13,908		
<u>Floor Structure</u>							
89	2" Metal floor Deck	27,814	sf	4.20	116,819		
90	WWF reinforcement	31,986	sf	0.80	25,589		
91	Concrete Fill to metal deck; 5" normal weight	443	cy	125.00	55,375		
92	Place and finish concrete	27,814	sf	2.00	55,628		
93	Misc. perimeter angles	1,196	lf	25.00	29,900		
<u>Miscellaneous</u>							
95	Barrier one at slab	443	cy	65.00	28,795		
96	Fire proofing to columns and beams	27,814	sf	2.90	80,661		
97	Fire stopping floors	2	flrs	5,000.00	10,000		
98	SUBTOTAL					1,050,175	
B1020 ROOF CONSTRUCTION							
<u>Roof Structure - Steel:</u>							
102	Steel beams/Joists; 13#/SF	318	tns	3,800.00	1,208,400		
<u>Roof Structure</u>							
104	1-1/2" Metal floor Deck @ roof	48,916	sf	3.00	146,748		
<u>Miscellaneous</u>							
106	Roof screen framing - allow	1	ls	20,000.00	20,000		
107	Fire proofing to columns, beams and deck	48,916	sf	4.00	195,664		
108	SUBTOTAL					1,570,812	



CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 2

TOTAL - SUPERSTRUCTURE							\$2,620,987
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B20 EXTERIOR CLOSURE

113	B2010 EXTERIOR WALLS; 60% solid/40% glass	20,306	sf				
114	<u>Interior skin</u>						
115	6" metal stud backup	20,306	sf	7.50	152,295		
116	Batt insulation in stud	20,306	sf	2.25	45,689		
117	2 1/2" Rigid Insulation	20,306	sf	3.00	60,918		
118	Air barrier	20,306	sf	6.00	121,836		
119	Air barrier/flashing at windows	4,468	lf	7.00	31,276		
120	Gypsum Sheathing	20,306	sf	2.75	55,842		
121	Drywall lining to interior face of stud backup	20,306	sf	3.00	60,918		
122	<u>Exterior skin</u>						
123	Brick veneer; 75% of exterior wall	15,230	sf	35.00	533,050		
124	Metal panels; 25% of exterior wall	5,076	sf	60.00	304,560		
125	<u>Miscellaneous</u>						
126	Roof screens - allow	1	ls	60,000.00	60,000		
127	Staging to exterior wall	33,844	sf	3.00	101,532		
128	SUBTOTAL					1,527,916	

129	B2020 WINDOWS	13,538	sf				
130	Premium for sunscreen and light shelf elements	1	ls		NIC		
131	Windows/storefront	13,538	sf	90.00	1,218,420		
132	Backer rod & double sealant	4,468	lf	9.00	40,212		
133	Wood blocking at openings	4,468	lf	4.00	17,872		
134	SUBTOTAL					1,276,504	

135	B2030 EXTERIOR DOORS						
136	Glazed entrance doors including frame and hardware; double door at corridor exit	4	pr	8,000.00	32,000		
137	Other doors	1	ls	10,000.00	10,000		
138	Backer rod & double sealant	80	lf	9.00	720		
139	Wood blocking at openings	80	lf	4.00	320		
140	SUBTOTAL					43,040	

TOTAL - EXTERIOR CLOSURE							\$2,847,460
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B30 ROOFING

149	B3010 ROOF COVERINGS						
150	<u>Flat roofing</u>						
151	PVC roof membrane fully adhered	48,916	sf	14.00	684,824		
152	Insulation	48,916	sf	7.00	342,412		
153	1/2" dens-deck protection board	48,916	sf	2.00	97,832		
154	Reinforced vapor barrier	48,916	sf	1.50	73,374		
155	Rough blocking	4,784	lf	6.00	28,704		
156	<u>Miscellaneous Roofing</u>						
157	Roof screens - allow				NIC		
158	Roof fascia/cornice	1,196	lf	60.00	71,760		
159	SUBTOTAL					1,298,906	
160	B3020 ROOF OPENINGS						
161	Skylights, allow				NIC		
162	Roof hatch	1	ea	5,000.00	5,000		



Feasibility Design Estimate

GFA 76,730

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW SCHOOL AT MURACO ES 2							
	SUBTOTAL					5,000	
TOTAL - ROOFING							\$1,303,906
C10 INTERIOR CONSTRUCTION							
C1010 PARTITIONS							
	Allowance for interior walls/glazed partitions etc.	76,730	gfa	20.00	1,534,600		
	SUBTOTAL					1,534,600	
C1020 INTERIOR DOORS							
	Interior doors, frames and hardware	76,730	gfa	5.00	383,650		
	SUBTOTAL					383,650	
C1030 SPECIALTIES / MILLWORK							
	Marker boards/tackboards in classroom	76,730	gfa	1.15	88,240		
	Toilet partitions and accessories	76,730	gfa	0.75	57,548		
	Room Signs	76,730	gfa	0.25	19,183		
	Wood paneling/benches/display cases etc.	76,730	gfa	1.50	115,095		
	Lockers	76,730	sf	1.00	76,730		
	Miscellaneous metals throughout building	76,730	sf	1.25	95,913		
	Miscellaneous sealants throughout building	76,730	sf	1.00	76,730		
	SUBTOTAL					529,439	
TOTAL - INTERIOR CONSTRUCTION							\$2,447,689
C20 STAIRCASES							
C2010 STAIR CONSTRUCTION							
55100	Metal pan stair; egress stair	3	flt	24,000.00	72,000		
33000	Concrete fill to stairs	3	flt	2,000.00	6,000		
	SUBTOTAL					78,000	
C2020 STAIR FINISHES							
90009	High performance coating to stairs including all railings etc.	3	flt	3,000.00	9,000		
90006	Rubber tile at stairs - landings	330	sf	12.00	3,960		
90006	Rubber tile at stairs - treads & risers	345	lft	22.00	7,590		
	SUBTOTAL					20,550	
TOTAL - STAIRCASES							\$98,550
C30 INTERIOR FINISHES							
C3010 WALL FINISHES							
	Wall finishes	76,730	gfa	4.50	345,285		
	SUBTOTAL					345,285	
C3020 FLOOR FINISHES							
	Floor finishes	76,730	sf	7.00	537,110		
	SUBTOTAL					537,110	
C3030 CEILING FINISHES							
	Ceiling finishes	76,730	sf	6.00	460,380		
	SUBTOTAL					460,380	
TOTAL - INTERIOR FINISHES							\$1,342,775



Feasibility Design Estimate

GFA 76,730

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW SCHOOL AT MURACO ES 2							
D10 CONVEYING SYSTEMS							
	D1010 ELEVATOR						
93000	Passenger elevator; 2 stop, 3500 lbs	1	ea	100,000.00	100,000		
	SUBTOTAL					100,000	
TOTAL - CONVEYING SYSTEMS							\$100,000
D20 PLUMBING							
	D20 PLUMBING, GENERALLY						
	Plumbing allowance	76,730	gsf	12.00	920,760		
	SUBTOTAL					920,760	
TOTAL - PLUMBING							\$920,760
D30 HVAC							
	D30 HVAC, GENERALLY						
	HVAC complete system	76,730	gsf	38.00	2,915,740		
	SUBTOTAL					2,915,740	
TOTAL - HVAC							\$2,915,740
D40 FIRE PROTECTION							
	D40 FIRE PROTECTION, GENERALLY						
	Sprinkler system	76,730	gsf	4.50	345,285		
	SUBTOTAL					345,285	
TOTAL - FIRE PROTECTION							\$345,285
D50 ELECTRICAL							
	D5010 COMPLETE ELECTRICAL SYSTEM						
	Electrical system; complete	76,730	gsf	34.00	2,608,820		
	SUBTOTAL					2,608,820	
TOTAL - ELECTRICAL							\$2,608,820
E10 EQUIPMENT							
	E10 EQUIPMENT, GENERALLY						
11500	Gym wall pads	1	ls	10,000.00	10,000		
11500	Basketball backstops; swing up; electric operated	2	ea	9,800.00	19,600		
11500	Gymnasium dividing net; electrically operated	1	loc	45,000.00	45,000		
11500	Volleyball net and standards	1	ea	2,000.00	2,000		
11500	Telescoping bleachers	1	ls	25,000.00	25,000		
11500	Cubicle curtain & track at nurse area	1	loc	500.00	500		
11970	Platform curtains, rigging and controls	1	ls	35,000.00	35,000		
	AV Equipment at Caf�/Gym/ Learning					F,F&E	
11400	Food Service equipment	1	ls	225,000.00	225,000		
11500	Allowance for loading dock equipment	1	ls	10,000.00	10,000		
11400	Refrigerator/Freezer	1	ea	1,000.00	1,000		
11400	Kiln	1	ea	3,000.00	3,000		
10999	Electrically operated projection screens in gym & cafeteria	2	loc	10,000.00	20,000		



Feasibility Design Estimate

GFA 76,730

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
NEW SCHOOL AT MURACO ES 2								
289	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)					FF+E		
290	SUBTOTAL						396,100	
291								
292	TOTAL - EQUIPMENT							\$396,100
293								
294								
295	E20 FURNISHINGS							
296								
297	E2010 FIXED FURNISHINGS							
298	Entry mats & frames - recessed with carpet/rubber strips	100	sf	45.00	4,500			
299	Manual operated roller shades	13,538	sf	6.00	81,228			
300	Counters, base cabinets, tall storage in classrooms and other rooms	76,730	gfa	4.00	306,920			
301	SUBTOTAL						392,648	
302								
303	E2020 MOVABLE FURNISHINGS							
304	All movable furnishings to be provided and installed by owner							
305	SUBTOTAL						NIC	
306								
307	TOTAL - FURNISHINGS							\$392,648
308								
309								
310	F10 SPECIAL CONSTRUCTION							
311								
312	F10 SPECIAL CONSTRUCTION							
313	No Work in this section							
314	SUBTOTAL							
315								
316	TOTAL - SPECIAL CONSTRUCTION							
317								
318								
319	F20 SELECTIVE BUILDING DEMOLITION							
320								
321	F2010 BUILDING ELEMENTS DEMOLITION							
322	SUBTOTAL						-	
323								
324	F2020 HAZARDOUS COMPONENTS ABATEMENT							
325	None Included							
326	SUBTOTAL							
327								
328	TOTAL - SELECTIVE BUILDING DEMOLITION							



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT MURACO ES 4a				
A10 FOUNDATIONS				
A1010 Standard Foundations	\$925,558			
A1020 Special Foundations	\$0			
A1030 Lowest Floor Construction	\$1,333,747	\$2,259,305	\$15.13	6.0%
A20 BASEMENT CONSTRUCTION				
A2010 Basement Excavation	\$0			
A2020 Basement Walls	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE				
B1010 Upper Floor Construction	\$2,040,410			
B1020 Roof Construction	\$3,044,239	\$5,084,649	\$34.05	13.5%
B20 EXTERIOR CLOSURE				
B2010 Exterior Walls	\$3,020,741			
B2020 Windows	\$2,539,707			
B2030 Exterior Doors	\$64,560	\$5,625,008	\$37.66	15.0%
B30 ROOFING				
B3010 Roof Coverings	\$2,484,997			
B3020 Roof Openings	\$5,000	\$2,489,997	\$16.67	6.6%
C10 INTERIOR CONSTRUCTION				
C1010 Partitions	\$2,987,000			
C1020 Interior Doors	\$746,750			
C1030 Specialties/Millwork	\$1,030,517	\$4,764,267	\$31.90	12.7%
C20 STAIRCASES				
C2010 Stair Construction	\$130,000			
C2020 Stair Finishes	\$34,250	\$164,250	\$1.10	0.4%
C30 INTERIOR FINISHES				
C3010 Wall Finishes	\$672,075			
C3020 Floor Finishes	\$1,045,450			
C3030 Ceiling Finishes	\$896,100	\$2,613,625	\$17.50	7.0%
D10 CONVEYING SYSTEMS				
D1010 Elevator	\$100,000	\$100,000	\$0.67	0.3%
D20 PLUMBING				
D20 Plumbing	\$1,792,200	\$1,792,200	\$12.00	4.8%



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT MURACO ES 4a					
D30 HVAC					
D30 HVAC		\$5,675,300	\$5,675,300	\$38.00	15.1%
D40 FIRE PROTECTION					
D40 Fire Protection		\$672,075	\$672,075	\$4.50	1.8%
D50 ELECTRICAL					
D5010 Complete System		\$5,077,900	\$5,077,900	\$34.00	13.5%
E10 EQUIPMENT					
E10 Equipment		\$521,100	\$521,100	\$3.49	1.4%
E20 FURNISHINGS					
E2010 Fixed Furnishings		\$763,510			
E2020 Movable Furnishings		NIC	\$763,510	\$5.11	2.0%
F10 SPECIAL CONSTRUCTION					
F10 Special Construction		\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010 Building Elements Demolition		\$0			
F2020 Hazardous Components Abatement		\$0	\$0	\$0.00	0.0%
TOTAL DIRECT COST (Trade Costs)			\$37,603,186	\$251.78	100.0%



Feasibility Design Estimate

GFA 149,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 4a

GROSS FLOOR AREA CALCULATION

First Floor	94,777
Second Floor	54,573

TOTAL GROSS FLOOR AREA (GFA)	149,350 sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	2,156	cy	20.00	43,120
Store on site for reuse	2,156	cy	14.00	30,184
Backfill with existing fill	2,005	cy	16.00	32,080
Remove surplus fill off site	151	cy	25.00	3,775
Formwork	3,880	sf	12.00	46,560
Re-bar, 10#/lf	19,400	lbs	1.20	23,280
Concrete material; 3,000 psi	151	cy	125.00	18,875
Placing concrete	151	cy	55.00	8,305

Foundation walls at exterior - 14" thick

Formwork	15,520	sf	14.00	217,280
Re-bar, 4.5#/sf	34,920	lbs	1.20	41,904
Concrete material; 4,000 psi	353	cy	135.00	47,655
Placing concrete	353	cy	65.00	22,945
Dampproofing foundation wall and footing	11,640	sf	1.90	NIC
Insulation to foundation walls; 2" thick	7,760	sf	2.50	19,400
Form shelf	1,940	lf	8.00	15,520

Column footings, typical, 6' x 6' x 2'-0"

Excavation	1,350	cy	20.00	27,000
Store on site for reuse	1,350	cy	14.00	18,900
Backfill with new fill	1,028	cy	16.00	16,448
Remove surplus fill off site	322	cy	20.00	6,440
Formwork	5,520	sf	11.00	60,720
Re-bar	64,400	lbs	1.20	77,280
Concrete material; 3,000 psi	322	cy	125.00	40,250
Placing concrete	322	cy	55.00	17,710
Set anchor bolts grout plates	115	ea	150.00	17,250

Interior pilasters

Formwork	3,367	sf	11.00	37,037
Re-bar	20,700	lbs	1.20	24,840
Concrete material; 3,000 psi	60	cy	125.00	7,500
Placing concrete	60	cy	55.00	3,300

925,558

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick

Structural gravel fill, 8"	2,341	cy	30.00	70,230
Base course, 8" gravel	2,341	cy	40.00	93,640
Rigid insulation	94,777	sf	2.25	213,248
Vapor barrier	94,777	sf	1.00	94,777
Mesh reinforcing 15% lap	108,994	sf	0.80	87,195



Feasibility Design Estimate

GFA 149,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW SCHOOL AT MURACO ES 4a							
56	Concrete - 5" thick	1,548	cy	125.00	193,500		
57	Placing concrete	1,548	cy	45.00	69,660		
58	Finishing and curing concrete	94,777	sf	4.00	379,108		
59	Control joints - saw cut	94,777	sf	0.50	47,389		
60	<u>Miscellaneous</u>						
61	Backfill existing foundations/basement	1	ea	50,000.00	50,000		
62	Elevator pit	1	ea	30,000.00	30,000		
63	Dewatering	1	ea	5,000.00	5,000		
64	SUBTOTAL					1,333,747	
TOTAL - FOUNDATIONS							\$2,259,305
A20 BASEMENT CONSTRUCTION							
A2010 BASEMENT EXCAVATION							
No items in this section							
SUBTOTAL							-
A2020 BASEMENT WALLS							
No items in this section							
SUBTOTAL							-
TOTAL - BASEMENT CONSTRUCTION							
B10 SUPERSTRUCTURE							
B1010 FLOOR CONSTRUCTION							
		8	lbs/sf				
		616	tns				
<u>Floor Structure - Steel:</u>							
Steel beams and columns; 13/SF		355	tns	3,500.00	1,242,500		
Shear studs		10,915	ea	2.50	27,288		
<u>Floor Structure</u>							
2" Metal floor Deck		54,573	sf	4.20	229,207		
WWF reinforcement		62,759	sf	0.80	50,207		
Concrete Fill to metal deck; 5" normal weight		870	cy	125.00	108,750		
Place and finish concrete		54,573	sf	2.00	109,146		
Misc. perimeter angles		1,940	lf	25.00	48,500		
<u>Miscellaneous</u>							
Barrier one at slab		870	cy	65.00	56,550		
Fire proofing to columns and beams		54,573	sf	2.90	158,262		
Fire stopping floors		2	flrs	5,000.00	10,000		
SUBTOTAL							2,040,410
B1020 ROOF CONSTRUCTION							
<u>Roof Structure - Steel:</u>							
Steel beams/Joists; 13#/SF		616	tns	3,800.00	2,340,800		
<u>Roof Structure</u>							
1-1/2" Metal floor Deck @ roof		94,777	sf	3.00	284,331		
<u>Miscellaneous</u>							
Roof screen framing - allow		1	ls	40,000.00	40,000		
Fire proofing to columns, beams and deck		94,777	sf	4.00	379,108		
SUBTOTAL							3,044,239



CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 4a

TOTAL - SUPERSTRUCTURE							\$5,084,649
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110
111
112

B20 EXTERIOR CLOSURE

113

B2010 EXTERIOR WALLS; 60% solid/40% glass

114

Interior skin 40,403 sf

115

6" metal stud backup 40,403 sf 7.50 303,023

116

Batt insulation in stud 40,403 sf 2.25 90,907

117

2 1/2" Rigid Insulation 40,403 sf 3.00 121,209

118

Air barrier 40,403 sf 6.00 242,418

119

Air barrier/flashing at windows 8,889 lf 7.00 62,223

120

Gypsum Sheathing 40,403 sf 2.75 111,108

121

Drywall lining to interior face of stud backup 40,403 sf 3.00 121,209

122

Exterior skin

123

Brick veneer; 75% of exterior wall 30,302 sf 35.00 1,060,570

124

Metal panels; 25% of exterior wall 10,101 sf 60.00 606,060

125

Miscellaneous

126

Roof screens - allow 1 ls 100,000.00 100,000

127

Staging to exterior wall 67,338 sf 3.00 202,014

128

SUBTOTAL 3,020,741

129

130

131

B2020 WINDOWS

132

Premium for sunscreen and light shelf elements 1 ls NIC

133

Windows/storefront 26,935 sf 90.00 2,424,150

134

Backer rod & double sealant 8,889 lf 9.00 80,001

135

Wood blocking at openings 8,889 lf 4.00 35,556

136

SUBTOTAL 2,539,707

137

138

B2030 EXTERIOR DOORS

139

Glazed entrance doors including frame and hardware; 6 pr 8,000.00 48,000

140

double door at corridor exit

141

Other doors 1 ls 15,000.00 15,000

142

Backer rod & double sealant 120 lf 9.00 1,080

143

Wood blocking at openings 120 lf 4.00 480

144

SUBTOTAL 64,560

145

146

TOTAL - EXTERIOR CLOSURE							\$5,625,008
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147

148

B30 ROOFING

149

B3010 ROOF COVERINGS

150

Flat roofing

151

PVC roof membrane fully adhered 94,777 sf 14.00 1,326,878

152

Insulation 94,777 sf 7.00 663,439

153

1/2" dens-deck protection board 94,777 sf 2.00 189,554

154

Reinforced vapor barrier 94,777 sf 1.50 142,166

155

Rough blocking 7,760 lf 6.00 46,560

156

Miscellaneous Roofing

157

Roof screens - allow 1 ls 100,000.00 100,000

158

Roof fascia/cornice 1,940 lf 60.00 116,400

159

SUBTOTAL 2,484,997

160

161

B3020 ROOF OPENINGS

162

Skylights, allow 1 ea 5,000.00 5,000

163

Roof hatch 1 ea 5,000.00 5,000

164

165



Feasibility Design Estimate

GFA 149,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 4a

166	SUBTOTAL					5,000		
167	TOTAL - ROOFING							\$2,489,997

C10 INTERIOR CONSTRUCTION

172	C1010 PARTITIONS							
174	Allowance for interior walls/glazed partitions etc.	149,350	gfa	20.00	2,987,000			
175	SUBTOTAL					2,987,000		
177	C1020 INTERIOR DOORS							
178	Interior doors, frames and hardware	149,350	gfa	5.00	746,750			
179	SUBTOTAL					746,750		
181	C1030 SPECIALTIES / MILLWORK							
182	Marker boards/tackboards in classroom	149,350	gfa	1.15	171,753			
183	Toilet partitions and accessories	149,350	gfa	0.75	112,013			
184	Room Signs	149,350	gfa	0.25	37,338			
185	Wood paneling/benches/display cases etc.	149,350	gfa	1.50	224,025			
186	Lockers	149,350	sf	1.00	149,350			
187	Miscellaneous metals throughout building	149,350	sf	1.25	186,688			
188	Miscellaneous sealants throughout building	149,350	sf	1.00	149,350			
189	SUBTOTAL					1,030,517		
191	TOTAL - INTERIOR CONSTRUCTION							\$4,764,267

C20 STAIRCASES

196	C2010 STAIR CONSTRUCTION							
197	55100 Metal pan stair; egress stair	5	flt	24,000.00	120,000			
198	33000 Concrete fill to stairs	5	flt	2,000.00	10,000			
199	SUBTOTAL					130,000		
201	C2020 STAIR FINISHES							
202	90009 High performance coating to stairs including all railings etc.	5	flt	3,000.00	15,000			
203	90006 Rubber tile at stairs - landings	550	sf	12.00	6,600			
204	90006 Rubber tile at stairs - treads & risers	575	lft	22.00	12,650			
205	SUBTOTAL					34,250		
207	TOTAL - STAIRCASES							\$164,250

C30 INTERIOR FINISHES

212	C3010 WALL FINISHES							
213	Wall finishes	149,350	gfa	4.50	672,075			
214	SUBTOTAL					672,075		
216	C3020 FLOOR FINISHES							
217	Floor finishes	149,350	sf	7.00	1,045,450			
218	SUBTOTAL					1,045,450		
220	C3030 CEILING FINISHES							
221	Ceiling finishes	149,350	sf	6.00	896,100			
222	SUBTOTAL					896,100		
224	TOTAL - INTERIOR FINISHES							\$2,613,625



Feasibility Design Estimate

GFA 149,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW SCHOOL AT MURACO ES 4a							
D10 CONVEYING SYSTEMS							
	D1010 ELEVATOR						
93000	Passenger elevator; 2 stop, 3500 lbs	1	ea	100,000.00	100,000		
	SUBTOTAL					100,000	
TOTAL - CONVEYING SYSTEMS						\$100,000	
D20 PLUMBING							
	D20 PLUMBING, GENERALLY						
	Plumbing allowance	149,350	gsf	12.00	1,792,200		
	SUBTOTAL					1,792,200	
TOTAL - PLUMBING						\$1,792,200	
D30 HVAC							
	D30 HVAC, GENERALLY						
	HVAC complete system	149,350	gsf	38.00	5,675,300		
	SUBTOTAL					5,675,300	
TOTAL - HVAC						\$5,675,300	
D40 FIRE PROTECTION							
	D40 FIRE PROTECTION, GENERALLY						
	Sprinkler system	149,350	gsf	4.50	672,075		
	SUBTOTAL					672,075	
TOTAL - FIRE PROTECTION						\$672,075	
D50 ELECTRICAL							
	D5010 COMPLETE ELECTRICAL SYSTEM						
	Electrical system; complete	149,350	gsf	34.00	5,077,900		
	SUBTOTAL					5,077,900	
TOTAL - ELECTRICAL						\$5,077,900	
E10 EQUIPMENT							
	E10 EQUIPMENT, GENERALLY						
11500	Gym wall pads	1	ls	10,000.00	10,000		
11500	Basketball backstops; swing up; electric operated	2	ea	9,800.00	19,600		
11500	Gymnasium dividing net; electrically operated	1	loc	45,000.00	45,000		
11500	Volleyball net and standards	1	ea	2,000.00	2,000		
11500	Telescoping bleachers	1	ls	25,000.00	25,000		
11500	Cubicle curtain & track at nurse area	1	loc	500.00	500		
11970	Platform curtains, rigging and controls	1	ls	35,000.00	35,000		
	AV Equipment at Caf�/Gym/ Learning					F,F&E	
11400	Food Service equipment	1	ls	350,000.00	350,000		
11500	Allowance for loading dock equipment	1	ls	10,000.00	10,000		
11400	Refrigerator/Freezer	1	ea	1,000.00	1,000		
11400	Kiln	1	ea	3,000.00	3,000		
10999	Electrically operated projection screens in gym & cafeteria	2	loc	10,000.00	20,000		



Feasibility Design Estimate

GFA 149,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW SCHOOL AT MURACO ES 4a							
289	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)					FF+E	
290	SUBTOTAL						521,100
TOTAL - EQUIPMENT							\$521,100
E20 FURNISHINGS							
E2010 FIXED FURNISHINGS							
298	Entry mats & frames - recessed with carpet/rubber strips	100	sf	45.00	4,500		
299	Manual operated roller shades	26,935	sf	6.00	161,610		
300	Counters, base cabinets, tall storage in classrooms and other rooms	149,350	gfa	4.00	597,400		
301	SUBTOTAL						763,510
E2020 MOVABLE FURNISHINGS							
304	All movable furnishings to be provided and installed by owner						
305	SUBTOTAL						NIC
TOTAL - FURNISHINGS							\$763,510
F10 SPECIAL CONSTRUCTION							
F10 SPECIAL CONSTRUCTION							
313	No Work in this section						
314	SUBTOTAL						
TOTAL - SPECIAL CONSTRUCTION							
F20 SELECTIVE BUILDING DEMOLITION							
F2010 BUILDING ELEMENTS DEMOLITION							
322	SUBTOTAL						-
F2020 HAZARDOUS COMPONENTS ABATEMENT							
325	None Included						
326	SUBTOTAL						
TOTAL - SELECTIVE BUILDING DEMOLITION							



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT MURACO ES 4				
A10 FOUNDATIONS				
A1010 Standard Foundations	\$934,626			
A1020 Special Foundations	\$0			
A1030 Lowest Floor Construction	\$992,753	\$1,927,379	\$9.30	3.8%
A20 BASEMENT CONSTRUCTION				
A2010 Basement Excavation	\$0			
A2020 Basement Walls	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE				
B1010 Upper Floor Construction	\$5,094,514			
B1020 Roof Construction	\$2,244,700	\$7,339,214	\$35.40	14.4%
B20 EXTERIOR CLOSURE				
B2010 Exterior Walls	\$4,810,328			
B2020 Windows	\$4,052,399			
B2030 Exterior Doors	\$64,560	\$8,927,287	\$43.05	17.6%
B30 ROOFING				
B3010 Roof Coverings	\$1,851,010			
B3020 Roof Openings	\$5,000	\$1,856,010	\$8.95	3.7%
C10 INTERIOR CONSTRUCTION				
C1010 Partitions	\$4,147,000			
C1020 Interior Doors	\$1,036,750			
C1030 Specialties/Millwork	\$1,430,717	\$6,614,467	\$31.90	13.0%
C20 STAIRCASES				
C2010 Stair Construction	\$260,000			
C2020 Stair Finishes	\$68,500	\$328,500	\$1.58	0.6%
C30 INTERIOR FINISHES				
C3010 Wall Finishes	\$933,075			
C3020 Floor Finishes	\$1,451,450			
C3030 Ceiling Finishes	\$1,244,100	\$3,628,625	\$17.50	7.1%
D10 CONVEYING SYSTEMS				
D1010 Elevator	\$200,000	\$200,000	\$0.96	0.4%
D20 PLUMBING				
D20 Plumbing	\$2,488,200	\$2,488,200	\$12.00	4.9%



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT MURACO ES 4					
D30 HVAC					
D30 HVAC		\$7,879,300	\$7,879,300	\$38.00	15.5%
D40 FIRE PROTECTION					
D40 Fire Protection		\$933,075	\$933,075	\$4.50	1.8%
D50 ELECTRICAL					
D5010 Complete System		\$7,049,900	\$7,049,900	\$34.00	13.9%
E10 EQUIPMENT					
E10 Equipment		\$571,100	\$571,100	\$2.75	1.1%
E20 FURNISHINGS					
E2010 Fixed Furnishings		\$1,091,768			
E2020 Movable Furnishings		NIC	\$1,091,768	\$5.27	2.1%
F10 SPECIAL CONSTRUCTION					
F10 Special Construction		\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010 Building Elements Demolition		\$0			
F2020 Hazardous Components Abatement		\$0	\$0	\$0.00	0.0%
TOTAL DIRECT COST (Trade Costs)			\$50,834,825	\$245.16	100.0%



Feasibility Design Estimate

GFA 207,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 4

GROSS FLOOR AREA CALCULATION

First Floor	68,900
Second Floor	51,932
Third Floor	43,259
Fourth Floor	43,259

TOTAL GROSS FLOOR AREA (GFA)	207,350 sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	2,156	cy	20.00	43,120
Store on site for reuse	2,156	cy	14.00	30,184
Backfill with existing fill	2,005	cy	16.00	32,080
Remove surplus fill off site	151	cy	25.00	3,775
Formwork	3,880	sf	12.00	46,560
Re-bar, 10#/lf	19,400	lbs	1.20	23,280
Concrete material; 3,000 psi	151	cy	125.00	18,875
Placing concrete	151	cy	55.00	8,305

Foundation walls at exterior - 14" thick

Formwork	15,520	sf	14.00	217,280
Re-bar, 4.5#/sf	34,920	lbs	1.20	41,904
Concrete material; 4,000 psi	353	cy	135.00	47,655
Placing concrete	353	cy	65.00	22,945
Dampproofing foundation wall and footing	11,640	sf	1.90	NIC
Insulation to foundation walls; 2" thick	7,760	sf	2.50	19,400
Form shelf	1,940	lf	8.00	15,520

Column footings, typical, 6' x 6' x 2'-0"

Excavation	1,385	cy	20.00	27,700
Store on site for reuse	1,385	cy	14.00	19,390
Backfill with new fill	1,055	cy	16.00	16,880
Remove surplus fill off site	330	cy	20.00	6,600
Formwork	5,664	sf	11.00	62,304
Re-bar	66,080	lbs	1.20	79,296
Concrete material; 3,000 psi	330	cy	125.00	41,250
Placing concrete	330	cy	55.00	18,150
Set anchor bolts grout plates	118	ea	150.00	17,700

Interior pilasters

Formwork	3,455	sf	11.00	38,005
Re-bar	21,240	lbs	1.20	25,488
Concrete material; 3,000 psi	61	cy	125.00	7,625
Placing concrete	61	cy	55.00	3,355

SUBTOTAL 934,626

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick

Structural gravel fill, 8"	1,702	cy	30.00	51,060
Base course, 8" gravel	1,702	cy	40.00	68,080
Rigid insulation	68,900	sf	2.25	155,025



Feasibility Design Estimate

GFA 207,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW SCHOOL AT MURACO ES 4							
54	Vapor barrier	68,900	sf	1.00	68,900		
55	Mesh reinforcing 15% lap	79,235	sf	0.80	63,388		
56	Concrete - 5" thick	1,125	cy	125.00	140,625		
57	Placing concrete	1,125	cy	45.00	50,625		
58	Finishing and curing concrete	68,900	sf	4.00	275,600		
59	Control joints - saw cut	68,900	sf	0.50	34,450		
60	<u>Miscellaneous</u>						
61	Backfill existing foundations/basement	1	ea	50,000.00	50,000		
62	Elevator pit	1	ea	30,000.00	30,000		
63	Dewatering	1	ea	5,000.00	5,000		
64	SUBTOTAL					992,753	
TOTAL - FOUNDATIONS							\$1,927,379
A20 BASEMENT CONSTRUCTION							
A2010 BASEMENT EXCAVATION							
No items in this section							
SUBTOTAL							-
A2020 BASEMENT WALLS							
No items in this section							
SUBTOTAL							-
TOTAL - BASEMENT CONSTRUCTION							
B10 SUPERSTRUCTURE							
4 lbs/sf							
B1010 FLOOR CONSTRUCTION							
448 tns							
<u>Floor Structure - Steel:</u>							
Steel beams and columns; 13/SF							
86		900	tns	3,500.00	3,150,000		
87	Shear studs	27,690	ea	2.50	69,225		
<u>Floor Structure</u>							
89	2" Metal floor Deck	138,450	sf	4.20	581,490		
90	WWF reinforcement	159,218	sf	0.80	127,374		
91	Concrete Fill to metal deck; 5" normal weight	2,208	cy	125.00	276,000		
92	Place and finish concrete	138,450	sf	2.00	276,900		
93	Misc. perimeter angles	1,940	lf	25.00	48,500		
<u>Miscellaneous</u>							
95	Barrier one at slab	2,208	cy	65.00	143,520		
96	Fire proofing to columns and beams	138,450	sf	2.90	401,505		
97	Fire stopping floors	4	flrs	5,000.00	20,000		
98	SUBTOTAL					5,094,514	
B1020 ROOF CONSTRUCTION							
<u>Roof Structure - Steel:</u>							
102	Steel beams/Joists; 13#/SF	448	tns	3,800.00	1,702,400		
<u>Roof Structure</u>							
104	1-1/2" Metal floor Deck @ roof	68,900	sf	3.00	206,700		
<u>Miscellaneous</u>							
106	Roof screen framing - allow	1	ls	60,000.00	60,000		
107	Fire proofing to columns, beams and deck	68,900	sf	4.00	275,600		



Feasibility Design Estimate

GFA 207,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 4

SUBTOTAL 2,244,700

TOTAL - SUPERSTRUCTURE \$7,339,214

B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS; 60% solid/40% glass

Interior skin

6" metal stud backup	64,467	sf	7.50	483,503
Batt insulation in stud	64,467	sf	2.25	145,051
2 1/2" Rigid Insulation	64,467	sf	3.00	193,401
Air barrier	64,467	sf	6.00	386,802
Air barrier/flashing at windows	14,183	lf	7.00	99,281
Gypsum Sheathing	64,467	sf	2.75	177,284
Drywall lining to interior face of stud backup	64,467	sf	3.00	193,401

Exterior skin

Brick veneer; 75% of exterior wall	48,350	sf	35.00	1,692,250
Metal panels; 25% of exterior wall	16,117	sf	60.00	967,020

Miscellaneous

Roof screens - allow	1	ls	150,000.00	150,000
Staging to exterior wall	107,445	sf	3.00	322,335

SUBTOTAL 4,810,328

B2020 WINDOWS

Premium for sunscreen and light shelf elements	1	ls		NIC
Windows/storefront	42,978	sf	90.00	3,868,020
Backer rod & double sealant	14,183	lf	9.00	127,647
Wood blocking at openings	14,183	lf	4.00	56,732

SUBTOTAL 4,052,399

B2030 EXTERIOR DOORS

Glazed entrance doors including frame and hardware; double door at corridor exit	6	pr	8,000.00	48,000
Other doors	1	ls	15,000.00	15,000
Backer rod & double sealant	120	lf	9.00	1,080
Wood blocking at openings	120	lf	4.00	480

SUBTOTAL 64,560

TOTAL - EXTERIOR CLOSURE \$8,927,287

B30 ROOFING

B3010 ROOF COVERINGS

Flat roofing

PVC roof membrane fully adhered	68,900	sf	14.00	964,600
Insulation	68,900	sf	7.00	482,300
1/2" dens-deck protection board	68,900	sf	2.00	137,800
Reinforced vapor barrier	68,900	sf	1.50	103,350
Rough blocking	7,760	lf	6.00	46,560

Miscellaneous Roofing

Roof screens - allow				NIC
Roof fascia/cornice	1,940	lf	60.00	116,400

SUBTOTAL 1,851,010

B3020 ROOF OPENINGS



Feasibility Design Estimate

GFA 207,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW SCHOOL AT MURACO ES 4							
164	Skylights, allow				NIC		
165	Roof hatch	1	ea	5,000.00	5,000		
166	SUBTOTAL					5,000	
TOTAL - ROOFING							\$1,856,010
C10 INTERIOR CONSTRUCTION							
C1010 PARTITIONS							
174	Allowance for interior walls/glazed partitions etc.	207,350	gfa	20.00	4,147,000		
175	SUBTOTAL					4,147,000	
C1020 INTERIOR DOORS							
178	Interior doors, frames and hardware	207,350	gfa	5.00	1,036,750		
179	SUBTOTAL					1,036,750	
C1030 SPECIALTIES / MILLWORK							
182	Marker boards/tackboards in classroom	207,350	gfa	1.15	238,453		
183	Toilet partitions and accessories	207,350	gfa	0.75	155,513		
184	Room Signs	207,350	gfa	0.25	51,838		
185	Wood paneling/benches/display cases etc.	207,350	gfa	1.50	311,025		
186	Lockers	207,350	sf	1.00	207,350		
187	Miscellaneous metals throughout building	207,350	sf	1.25	259,188		
188	Miscellaneous sealants throughout building	207,350	sf	1.00	207,350		
189	SUBTOTAL					1,430,717	
TOTAL - INTERIOR CONSTRUCTION							\$6,614,467
C20 STAIRCASES							
C2010 STAIR CONSTRUCTION							
197	55100 Metal pan stair; egress stair	10	flt	24,000.00	240,000		
198	33000 Concrete fill to stairs	10	flt	2,000.00	20,000		
199	SUBTOTAL					260,000	
C2020 STAIR FINISHES							
202	90009 High performance coating to stairs including all railings etc.	10	flt	3,000.00	30,000		
203	90006 Rubber tile at stairs - landings	1,100	sf	12.00	13,200		
204	90006 Rubber tile at stairs - treads & risers	1,150	lft	22.00	25,300		
205	SUBTOTAL					68,500	
TOTAL - STAIRCASES							\$328,500
C30 INTERIOR FINISHES							
C3010 WALL FINISHES							
213	Wall finishes	207,350	gfa	4.50	933,075		
214	SUBTOTAL					933,075	
C3020 FLOOR FINISHES							
217	Floor finishes	207,350	sf	7.00	1,451,450		
218	SUBTOTAL					1,451,450	
C3030 CEILING FINISHES							
221	Ceiling finishes	207,350	sf	6.00	1,244,100		
222	SUBTOTAL					1,244,100	



Feasibility Design Estimate

GFA 207,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW SCHOOL AT MURACO ES 4							
TOTAL - INTERIOR FINISHES							\$3,628,625
D10 CONVEYING SYSTEMS							
D1010 ELEVATOR							
93000	Passenger elevator; 4 stop, 3500 lbs	1	ea	200,000.00	200,000		
	SUBTOTAL					200,000	
TOTAL - CONVEYING SYSTEMS							\$200,000
D20 PLUMBING							
D20 PLUMBING, GENERALLY							
	Plumbing allowance	207,350	gsf	12.00	2,488,200		
	SUBTOTAL					2,488,200	
TOTAL - PLUMBING							\$2,488,200
D30 HVAC							
D30 HVAC, GENERALLY							
	HVAC complete system	207,350	gsf	38.00	7,879,300		
	SUBTOTAL					7,879,300	
TOTAL - HVAC							\$7,879,300
D40 FIRE PROTECTION							
D40 FIRE PROTECTION, GENERALLY							
	Sprinkler system	207,350	gsf	4.50	933,075		
	SUBTOTAL					933,075	
TOTAL - FIRE PROTECTION							\$933,075
D50 ELECTRICAL							
D5010 COMPLETE ELECTRICAL SYSTEM							
	Electrical system; complete	207,350	gsf	34.00	7,049,900		
	SUBTOTAL					7,049,900	
TOTAL - ELECTRICAL							\$7,049,900
E10 EQUIPMENT							
E10 EQUIPMENT, GENERALLY							
11500	Gym wall pads	1	ls	10,000.00	10,000		
11500	Basketball backstops; swing up; electric operated	2	ea	9,800.00	19,600		
11500	Gymnasium dividing net; electrically operated	1	loc	45,000.00	45,000		
11500	Volleyball net and standards	1	ea	2,000.00	2,000		
11500	Telescoping bleachers	1	ls	25,000.00	25,000		
11500	Cubicle curtain & track at nurse area	1	loc	500.00	500		
11970	Platform curtains, rigging and controls	1	ls	35,000.00	35,000		
	AV Equipment at Caf�/Gym/ Learning					F,F&E	
11400	Food Service equipment	1	ls	400,000.00	400,000		
11500	Allowance for loading dock equipment	1	ls	10,000.00	10,000		
11400	Refrigerator/Freezer	1	ea	1,000.00	1,000		
11400	Kiln	1	ea	3,000.00	3,000		



Feasibility Design Estimate

GFA 207,350

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
NEW SCHOOL AT MURACO ES 4								
288	10999 Electrically operated projection screens in gym & cafeteria	2	loc	10,000.00	20,000			
289	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)				FF+E			
290	SUBTOTAL					571,100		
291								
292	TOTAL - EQUIPMENT							\$571,100
293								
294								
295	E20 FURNISHINGS							
296								
297	E2010 FIXED FURNISHINGS							
298	Entry mats & frames - recessed with carpet/rubber strips	100	sf	45.00	4,500			
299	Manual operated roller shades	42,978	sf	6.00	257,868			
300	Counters, base cabinets, tall storage in classrooms and other rooms	207,350	gfa	4.00	829,400			
301	SUBTOTAL					1,091,768		
302								
303	E2020 MOVABLE FURNISHINGS							
304	All movable furnishings to be provided and installed by owner							
305	SUBTOTAL					NIC		
306								
307	TOTAL - FURNISHINGS							\$1,091,768
308								
309								
310	F10 SPECIAL CONSTRUCTION							
311								
312	F10 SPECIAL CONSTRUCTION							
313	No Work in this section							
314	SUBTOTAL							
315								
316	TOTAL - SPECIAL CONSTRUCTION							
317								
318								
319	F20 SELECTIVE BUILDING DEMOLITION							
320								
321	F2010 BUILDING ELEMENTS DEMOLITION							
322	SUBTOTAL					-		
323								
324	F2020 HAZARDOUS COMPONENTS ABATEMENT							
325	None Included							
326	SUBTOTAL							
327								
328	TOTAL - SELECTIVE BUILDING DEMOLITION							



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION AT PARKHURSRT ES 5					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$208,066			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$226,743	\$434,809	\$20.22	7.4%
A20	BASEMENT CONSTRUCTION				
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$411,180			
B1020	Roof Construction	\$361,250	\$772,430	\$35.93	13.1%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$593,341			
B2020	Windows	\$463,719			
B2030	Exterior Doors	\$43,040	\$1,100,100	\$51.17	18.7%
B30	ROOFING				
B3010	Roof Coverings	\$298,991			
B3020	Roof Openings	\$5,000	\$303,991	\$14.14	5.2%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$430,000			
C1020	Interior Doors	\$107,500			
C1030	Specialties/Millwork	\$148,350	\$685,850	\$31.90	11.7%
C20	STAIRCASES				
C2010	Stair Construction	\$52,000			
C2020	Stair Finishes	\$13,700	\$65,700	\$3.06	1.1%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$96,750			
C3020	Floor Finishes	\$150,500			
C3030	Ceiling Finishes	\$129,000	\$376,250	\$17.50	6.4%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$100,000	\$100,000	\$4.65	1.7%
D20	PLUMBING				
D20	Plumbing	\$258,000	\$258,000	\$12.00	4.4%



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION AT PARKHURSRT ES 5				
D30 HVAC				
D30 HVAC	\$817,000	\$817,000	\$38.00	13.9%
D40 FIRE PROTECTION				
D40 Fire Protection	\$96,750	\$96,750	\$4.50	1.6%
D50 ELECTRICAL				
D5010 Complete System	\$731,000	\$731,000	\$34.00	12.4%
E10 EQUIPMENT				
E10 Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS				
E2010 Fixed Furnishings	\$120,008			
E2020 Movable Furnishings	NIC	\$120,008	\$5.58	2.0%
F10 SPECIAL CONSTRUCTION				
F10 Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS				
F2010 Building Elements Demolition	\$25,000			
F2020 Hazardous Components Abatement	\$0	\$25,000	\$1.16	0.4%
TOTAL DIRECT COST (Trade Costs)		\$5,886,888	\$273.81	100.0%



Feasibility Design Estimate

GFA 21,500

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT PARKHURSRT ES 5

GROSS FLOOR AREA CALCULATION

First Floor	10,750
Second Floor	10,750

TOTAL GROSS FLOOR AREA (GFA)	21,500 sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	471	cy	20.00	9,420
Store on site for reuse	471	cy	14.00	6,594
Backfill with existing fill	438	cy	16.00	7,008
Remove surplus fill off site	33	cy	25.00	825
Formwork	848	sf	12.00	10,176
Re-bar, 10#/lf	4,240	lbs	1.20	5,088
Concrete material; 3,000 psi	33	cy	125.00	4,125
Placing concrete	33	cy	55.00	1,815

Foundation walls at exterior - 14" thick

Formwork	3,392	sf	14.00	47,488
Re-bar, 4.5#/sf	7,632	lbs	1.20	9,158
Concrete material; 4,000 psi	77	cy	135.00	10,395
Placing concrete	77	cy	65.00	5,005
Dampproofing foundation wall and footing	2,544	sf	1.90	NIC
Insulation to foundation walls; 2" thick	1,696	sf	2.50	4,240
Form shelf	424	lf	8.00	3,392

Column footings, typical, 6' x 6' x 2'-0"

Excavation	317	cy	20.00	6,340
Store on site for reuse	317	cy	14.00	4,438
Backfill with new fill	241	cy	16.00	3,856
Remove surplus fill off site	76	cy	20.00	1,520
Formwork	1,296	sf	11.00	14,256
Re-bar	15,120	lbs	1.20	18,144
Concrete material; 3,000 psi	76	cy	125.00	9,500
Placing concrete	76	cy	55.00	4,180
Set anchor bolts grout plates	27	ea	150.00	4,050

Interior pilasters

Formwork	791	sf	11.00	8,701
Re-bar	4,860	lbs	1.20	5,832
Concrete material; 3,000 psi	14	cy	125.00	1,750
Placing concrete	14	cy	55.00	770

208,066

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick

Structural gravel fill, 8"	266	cy	30.00	7,980
Base course, 8" gravel	266	cy	40.00	10,640
Rigid insulation	10,750	sf	2.25	24,188
Vapor barrier	10,750	sf	1.00	10,750
Mesh reinforcing 15% lap	12,363	sf	0.80	9,890



Feasibility Design Estimate

GFA 21,500

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
ADDITION AT PARKHURSRT ES 5							
29	Concrete - 5" thick	176	cy	125.00	22,000		
30	Placing concrete	176	cy	45.00	7,920		
30	Finishing and curing concrete	10,750	sf	4.00	43,000		
31	Control joints - saw cut	10,750	sf	0.50	5,375		
31	<u>Miscellaneous</u>						
32	Backfill existing foundations/basement	1	ea	50,000.00	50,000		
32	Elevator pit	1	ea	30,000.00	30,000		
33	Dewatering	1	ea	5,000.00	5,000		
33	SUBTOTAL					226,743	
TOTAL - FOUNDATIONS							\$434,809
A20 BASEMENT CONSTRUCTION							
A2010 BASEMENT EXCAVATION							
No items in this section							
SUBTOTAL							-
A2020 BASEMENT WALLS							
No items in this section							
SUBTOTAL							-
TOTAL - BASEMENT CONSTRUCTION							
B10 SUPERSTRUCTURE							
B1010 FLOOR CONSTRUCTION							
<u>Floor Structure - Steel:</u>							
	Steel beams and columns; 13/SF	70	tns	3,500.00	245,000		
	Shear studs	2,150	ea	2.50	5,375		
<u>Floor Structure</u>							
	2" Metal floor Deck	10,750	sf	4.20	45,150		
	WWF reinforcement	12,363	sf	0.80	9,890		
	Concrete Fill to metal deck; 5" normal weight	171	cy	125.00	21,375		
	Place and finish concrete	10,750	sf	2.00	21,500		
	Misc. perimeter angles	424	lf	25.00	10,600		
<u>Miscellaneous</u>							
	Barrier one at slab	171	cy	65.00	11,115		
	Fire proofing to columns and beams	10,750	sf	2.90	31,175		
	Fire stopping floors	2	flrs	5,000.00	10,000		
SUBTOTAL							411,180
B1020 ROOF CONSTRUCTION							
<u>Roof Structure - Steel:</u>							
	Steel beams/Joists; 13#/SF	70	tns	3,800.00	266,000		
<u>Roof Structure</u>							
	1-1/2" Metal floor Deck @ roof	10,750	sf	3.00	32,250		
<u>Miscellaneous</u>							
	Roof screen framing - allow	1	ls	20,000.00	20,000		
	Fire proofing to columns, beams and deck	10,750	sf	4.00	43,000		
SUBTOTAL							361,250



Feasibility Design Estimate

GFA 21,500

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT PARKHURSRT ES 5

TOTAL - SUPERSTRUCTURE							\$772,430
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56

B20 EXTERIOR CLOSURE

58	B2010 EXTERIOR WALLS; 60% solid/40% glass	7,378	sf				
59	<u>Interior skin</u>						
60	6" metal stud backup	7,378	sf	7.50	55,335		
60	Batt insulation in stud	7,378	sf	2.25	16,601		
61	2 1/2" Rigid Insulation	7,378	sf	3.00	22,134		
61	Air barrier	7,378	sf	6.00	44,268		
62	Air barrier/flashing at windows	1,623	lf	7.00	11,361		
62	Gypsum Sheathing	7,378	sf	2.75	20,290		
63	Drywall lining to interior face of stud backup	7,378	sf	3.00	22,134		
63	<u>Exterior skin</u>						
64	Brick veneer; 75% of exterior wall	5,534	sf	35.00	193,690		
64	Metal panels; 25% of exterior wall	1,844	sf	60.00	110,640		
65	<u>Miscellaneous</u>						
65	Roof screens - allow	1	ls	60,000.00	60,000		
66	Staging to exterior wall	12,296	sf	3.00	36,888		
66	SUBTOTAL					593,341	

67	B2020 WINDOWS	4,918	sf				
68	Premium for sunscreen and light shelf elements	1	ls		NIC		
68	Windows/storefront	4,918	sf	90.00	442,620		
69	Backer rod & double sealant	1,623	lf	9.00	14,607		
69	Wood blocking at openings	1,623	lf	4.00	6,492		
70	SUBTOTAL					463,719	

71	B2030 EXTERIOR DOORS						
71	Glazed entrance doors including frame and hardware; double door at corridor exit	4	pr	8,000.00	32,000		
72	Other doors	1	ls	10,000.00	10,000		
72	Backer rod & double sealant	80	lf	9.00	720		
73	Wood blocking at openings	80	lf	4.00	320		
73	SUBTOTAL					43,040	

TOTAL - EXTERIOR CLOSURE							\$1,100,100
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B30 ROOFING

77	B3010 ROOF COVERINGS						
77	<u>Flat roofing</u>						
78	PVC roof membrane fully adhered	10,750	sf	14.00	150,500		
78	Insulation	10,750	sf	7.00	75,250		
79	1/2" dens-deck protection board	10,750	sf	2.00	21,500		
79	Reinforced vapor barrier	10,750	sf	1.50	16,125		
80	Rough blocking	1,696	lf	6.00	10,176		
80	<u>Miscellaneous Roofing</u>						
81	Roof screens - allow				NIC		
81	Roof fascia/cornice	424	lf	60.00	25,440		
82	SUBTOTAL					298,991	
83	B3020 ROOF OPENINGS						
83	Skylights, allow				NIC		
84	Roof hatch	1	ea	5,000.00	5,000		



Feasibility Design Estimate

GFA 21,500

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT PARKHURSRT ES 5

84 SUBTOTAL 5,000

TOTAL - ROOFING							\$303,991
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C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

88 Allowance for interior walls/glazed partitions etc. 21,500 gfa 20.00 430,000
 89 SUBTOTAL 430,000

C1020 INTERIOR DOORS

90 Interior doors, frames and hardware 21,500 gfa 5.00 107,500
 91 SUBTOTAL 107,500

C1030 SPECIALTIES / MILLWORK

92 Marker boards/tackboards in classroom 21,500 gfa 1.15 24,725
 93 Toilet partitions and accessories 21,500 gfa 0.75 16,125
 93 Room Signs 21,500 gfa 0.25 5,375
 94 Wood paneling/benches/display cases etc. 21,500 gfa 1.50 32,250
 94 Lockers 21,500 sf 1.00 21,500
 95 Miscellaneous metals throughout building 21,500 sf 1.25 26,875
 95 Miscellaneous sealants throughout building 21,500 sf 1.00 21,500
 96 SUBTOTAL 148,350

TOTAL - INTERIOR CONSTRUCTION							\$685,850
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C20 STAIRCASES

C2010 STAIR CONSTRUCTION

100 55100 Metal pan stair; egress stair 2 flt 24,000.00 48,000
 100 33000 Concrete fill to stairs 2 flt 2,000.00 4,000
 101 SUBTOTAL 52,000

C2020 STAIR FINISHES

102 90009 High performance coating to stairs including all railings etc. 2 flt 3,000.00 6,000
 103 90006 Rubber tile at stairs - landings 220 sf 12.00 2,640
 103 90006 Rubber tile at stairs - treads & risers 230 lft 22.00 5,060
 104 SUBTOTAL 13,700

TOTAL - STAIRCASES							\$65,700
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C30 INTERIOR FINISHES

C3010 WALL FINISHES

108 Wall finishes 21,500 gfa 4.50 96,750
 108 SUBTOTAL 96,750

C3020 FLOOR FINISHES

110 Floor finishes 21,500 sf 7.00 150,500
 110 SUBTOTAL 150,500

C3030 CEILING FINISHES

112 Ceiling finishes 21,500 sf 6.00 129,000
 112 SUBTOTAL 129,000

TOTAL - INTERIOR FINISHES							\$376,250
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Feasibility Design Estimate

GFA 21,500

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
ADDITION AT PARKHURSRT ES 5							
D10 CONVEYING SYSTEMS							
	D1010 ELEVATOR						
93000	Passenger elevator; 2 stop, 3500 lbs	1	ea	100,000.00	100,000		
	SUBTOTAL					100,000	
TOTAL - CONVEYING SYSTEMS							\$100,000
D20 PLUMBING							
	D20 PLUMBING, GENERALLY						
	Plumbing allowance	21,500	gsf	12.00	258,000		
	SUBTOTAL					258,000	
TOTAL - PLUMBING							\$258,000
D30 HVAC							
	D30 HVAC, GENERALLY						
	HVAC complete system	21,500	gsf	38.00	817,000		
	SUBTOTAL					817,000	
TOTAL - HVAC							\$817,000
D40 FIRE PROTECTION							
	D40 FIRE PROTECTION, GENERALLY						
	Sprinkler system	21,500	gsf	4.50	96,750		
	SUBTOTAL					96,750	
TOTAL - FIRE PROTECTION							\$96,750
D50 ELECTRICAL							
	D5010 COMPLETE ELECTRICAL SYSTEM						
	Electrical system; complete	21,500	gsf	34.00	731,000		
	SUBTOTAL					731,000	
TOTAL - ELECTRICAL							\$731,000
E10 EQUIPMENT							
	E10 EQUIPMENT, GENERALLY						
	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)				FF+E		
	SUBTOTAL					-	
TOTAL - EQUIPMENT							
E20 FURNISHINGS							
	E2010 FIXED FURNISHINGS						
	Entry mats & frames - recessed with carpet/rubber strips	100	sf	45.00	4,500		
	Manual operated roller shades	4,918	sf	6.00	29,508		
	Counters, base cabinets, tall storage in classrooms and other rooms	21,500	gfa	4.00	86,000		
	SUBTOTAL					120,008	
	E2020 MOVABLE FURNISHINGS						



Feasibility Design Estimate

GFA 21,500

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT PARKHURSRT ES 5

147	All movable furnishings to be provided and installed by owner							
147	SUBTOTAL					NIC		
148	TOTAL - FURNISHINGS							\$120,008

F10 SPECIAL CONSTRUCTION

150	F10 SPECIAL CONSTRUCTION						
151	No Work in this section						
152	SUBTOTAL						
153	TOTAL - SPECIAL CONSTRUCTION						

F20 SELECTIVE BUILDING DEMOLITION

155	F2010 BUILDING ELEMENTS DEMOLITION							
156	Create openings to existing façade for new connections	1	loc	25,000.00	25,000			
156	SUBTOTAL						25,000	
157	F2020 HAZARDOUS COMPONENTS ABATEMENT							
158	None Included							
159	SUBTOTAL							
161	TOTAL - SELECTIVE BUILDING DEMOLITION							\$25,000



Feasibility Design Estimate

Winchester Schools CAFETERIA + DISTRICT OFFICE EXPANSION

Winchester, MA

PM&C LLC
20 Downer Avenue, Suite 1c
Hingham, MA 02043
(T) 781-740-8007
(F) 781-740-1012

Prepared for:
Flansburgh Architects

February 7, 2017



Winchester Schools
CAFETERIA + DISTRICT OFFICE EXPANSION
Winchester, MA

07-Feb-17

Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
RENOVATION TO McCALL MS - CAFETERIA OPTION 1				
CAFETERIA EXPANSION		1,100	\$76.63	\$84,298
<hr/>				
SUB-TOTAL	Jun-18	1,100	\$76.63	\$84,298
ESCALATION TO START - (assumed 4% PA)	5.7%			\$4,805
DESIGN AND PRICING CONTINGENCY	15%			\$12,645
<hr/>				
SUB-TOTAL		1,100	\$92.50	\$101,748
GENERAL CONDITIONS				\$15,262
BONDS	1.00%			\$1,017
INSURANCE	2.00%			\$2,035
PERMIT				NIC
OVERHEAD AND FEE	10.00%			\$10,175
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	1,100	\$118.40	\$130,237



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

07-Feb-17

Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
RENOVATION TO McCALL MS - CAFETERIA OPTION 2				
CAFETERIA EXPANSION		2,400	\$92.36	\$221,660
<hr/>				
SUB-TOTAL	Jun-18	2,400	\$92.36	\$221,660
ESCALATION TO START - (assumed 4% PA)	5.7%			\$12,635
DESIGN AND PRICING CONTINGENCY	15%			\$33,249
<hr/>				
SUB-TOTAL		2,400	\$111.48	\$267,544
GENERAL CONDITIONS				\$40,132
BONDS	1.00%			\$2,675
INSURANCE	2.00%			\$5,351
PERMIT				NIC
OVERHEAD AND FEE	10.00%			\$26,754
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	2,400	\$142.69	\$342,456



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

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Feasibility Design Estimate

ADDITION AT CAFETERIA - OPTION 3

ADDITION		1,525	\$517.84	\$789,704
<hr/>				
SUB-TOTAL	Jun-18	1,525	\$517.84	\$789,704
ESCALATION TO START - (assumed 4% PA)	5.7%			\$45,013
DESIGN AND PRICING CONTINGENCY	15%			\$118,456
<hr/>				
SUB-TOTAL		1,525	\$625.03	\$953,173
GENERAL CONDITIONS				\$76,254
BONDS	1.00%			\$9,532
INSURANCE	2.00%			\$19,063
PERMIT				NIC
OVERHEAD AND FEE	8.00%			\$76,254
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	1,525	\$743.79	\$1,134,276
<hr/> <hr/>				

NEW TEACHERS WORKROOM

WORKROOM RENOVATION		1,250	\$37.90	\$47,370
<hr/>				
SUB-TOTAL	Jun-18	1,250	\$37.90	\$47,370
ESCALATION TO START - (assumed 4% PA)	5.7%			\$2,700
DESIGN AND PRICING CONTINGENCY	15%			\$7,106
<hr/>				
SUB-TOTAL		1,250	\$45.74	\$57,176
GENERAL CONDITIONS				\$11,435
BONDS	1.00%			\$572
INSURANCE	2.00%			\$1,144
PERMIT				NIC
OVERHEAD AND FEE	15.00%			\$8,576
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	1,250	\$63.12	\$78,903
<hr/> <hr/>				



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

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Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1				
DISTRICT OFFICE ADDITION		4,900	\$281.81	\$1,380,878
<hr/>				
SUB-TOTAL	Jun-18	4,900	\$281.81	\$1,380,878
ESCALATION TO START - (assumed 4% PA)	5.7%			\$78,710
DESIGN AND PRICING CONTINGENCY	10%			\$138,088
<hr/>				
SUB-TOTAL		4,900	\$326.06	\$1,597,676
GENERAL CONDITIONS				\$127,814
BONDS	1.00%			\$15,977
INSURANCE	2.00%			\$31,954
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$47,930
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	4,900	\$371.70	\$1,821,351



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
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Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2				
DISTRICT OFFICE ADDITION		4,900	\$261.63	\$1,281,982
<hr/>				
SUB-TOTAL	Jun-18	4,900	\$261.63	\$1,281,982
ESCALATION TO START - (assumed 4% PA)	5.7%			\$73,073
DESIGN AND PRICING CONTINGENCY	10%			\$128,198
<hr/>				
SUB-TOTAL		4,900	\$302.70	\$1,483,253
GENERAL CONDITIONS				\$118,660
BONDS	1.00%			\$14,833
INSURANCE	2.00%			\$29,665
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$44,498
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	4,900	\$345.08	\$1,690,909



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
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Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-3				
DISTRICT OFFICE ADDITION		4,900	\$257.55	\$1,261,982
<hr/>				
SUB-TOTAL	Jun-18	4,900	\$257.55	\$1,261,982
ESCALATION TO START - (assumed 4% PA)	5.7%			\$71,933
DESIGN AND PRICING CONTINGENCY	10%			\$126,198
<hr/>				
SUB-TOTAL		4,900	\$297.98	\$1,460,113
GENERAL CONDITIONS				\$116,809
BONDS	1.00%			\$14,601
INSURANCE	2.00%			\$29,202
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$43,803
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	4,900	\$339.70	\$1,664,528



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

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Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-4				
DISTRICT OFFICE ADDITION		4,900	\$261.63	\$1,281,982
<hr/>				
SUB-TOTAL	Jun-18	4,900	\$261.63	\$1,281,982
ESCALATION TO START - (assumed 4% PA)	5.7%			\$73,073
DESIGN AND PRICING CONTINGENCY	10%			\$128,198
<hr/>				
SUB-TOTAL		4,900	\$302.70	\$1,483,253
GENERAL CONDITIONS				\$118,660
BONDS	1.00%			\$14,833
INSURANCE	2.00%			\$29,665
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$44,498
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	4,900	\$345.08	\$1,690,909



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

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Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5				
DISTRICT OFFICE RENOVATION		4,900	\$150.05	\$735,225
<hr/>				
SUB-TOTAL	Jun-18	4,900	\$150.05	\$735,225
ESCALATION TO START - (assumed 4% PA)	5.7%			\$41,908
DESIGN AND PRICING CONTINGENCY	10%			\$73,523
<hr/>				
SUB-TOTAL		4,900	\$173.60	\$850,656
GENERAL CONDITIONS				\$85,066
BONDS	1.00%			\$8,507
INSURANCE	2.00%			\$17,013
PERMIT				NIC
OVERHEAD AND FEE	5.00%			\$42,533
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	4,900	\$204.85	\$1,003,775



Winchester Schools
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Feasibility Design Estimate

This Feasibility Design cost estimate was produced from preliminary drawings prepared by Flansburgh Architects Inc. and their design team dated February 2, 2017. 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, general contractor's overhead, fee 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:

- Land acquisition, feasibility, and financing costs
- All professional fees and insurance
- Site or existing conditions surveys investigations costs, including to determine subsoil conditions
- 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 as indicated in the estimate
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)
- Construction contingency



CONSTRUCTION COST SUMMARY

BUILDING SYSTEM		SUB-TOTAL	TOTAL	\$/SF	%
RENOVATION TO McCALL MS - CAFETERIA OPTION 1					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$0			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$2,750	\$2,750	\$2.50	3.3%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$0			
B1020	Roof Construction	\$0	\$0	\$0.00	0.0%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$0			
B2020	Windows/Curtainwall	\$0			
B2030	Exterior Doors	\$0	\$0	\$0.00	0.0%
B30	ROOFING				
B3010	Roof Coverings	\$0			
B3020	Roof Openings	\$0	\$0	\$0.00	0.0%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$6,648			
C1020	Interior Doors	\$0			
C1030	Specialties/Millwork	\$700	\$7,348	\$6.68	8.7%
C20	STAIRCASES				
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$5,300			
C3020	Floor Finishes	\$13,000			
C3030	Ceiling Finishes	\$10,200	\$28,500	\$25.91	33.8%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$0	\$0	\$0.00	0.0%
D20	PLUMBING				
D20	Plumbing	\$0	\$0	\$0.00	0.0%
D30	HVAC				
D30	HVAC	\$11,000	\$11,000	\$10.00	13.0%
D40	FIRE PROTECTION				
D40	Fire Protection	\$2,200	\$2,200	\$2.00	2.6%



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
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Feasibility Design Estimate

GFA 1,100

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO McCALL MS - CAFETERIA OPTION 1					
D50 ELECTRICAL					
D5010	Electrical Systems	\$16,500	\$16,500	\$15.00	19.6%
E10 EQUIPMENT					
E10	Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$0			
E2020	Movable Furnishings	NIC	\$0	\$0.00	0.0%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 SELECTIVE BUILDING DEMOLITION					
F2010	Building Elements Demolition	\$16,000			
F2020	Hazardous Components Abatement	\$0	\$16,000	\$14.55	19.0%
TOTAL DIRECT COST (Trade Costs)			\$84,298	\$76.63	100.0%



Feasibility Design Estimate

GFA

1,100

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - CAFETERIA OPTION 1

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TOTAL RENOVATED AREA (GFA)				1,100	GSF		
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

No work in this section

SUBTOTAL

-

A1020 SPECIAL FOUNDATIONS

No work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

Patch existing slab

1,100

sf

2.50

2,750

SUBTOTAL

2,750

TOTAL - FOUNDATIONS							\$2,750
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B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

No work in this section

SUBTOTAL

-

B1020 ROOF CONSTRUCTION

SUBTOTAL

-

TOTAL - SUPERSTRUCTURE							
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B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS

No work assumed to existing exterior

SUBTOTAL

-

B2020 WINDOWS/CURTAINWALL

No work assumed to existing exterior

SUBTOTAL

-

B2030 EXTERIOR DOORS

No work assumed to existing exterior

SUBTOTAL

-

TOTAL - EXTERIOR CLOSURE							
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B30 ROOFING

B3010 ROOF COVERINGS

No work assumed to existing exterior

SUBTOTAL

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Feasibility Design Estimate

GFA

1,100

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - CAFETERIA OPTION 1

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B3020 ROOF OPENINGS

No work in this section

SUBTOTAL

-

TOTAL - ROOFING

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

Patch existing walls

1,716

sf

3.00

5,148

Infill door opening; single door

1

loc

1,500.00

1,500

SUBTOTAL

6,648

C1020 INTERIOR DOORS

No work in this section

SUBTOTAL

-

C1030 SPECIALTIES / MILLWORK

Room Signs

1

loc

150.00

150

Miscellaneous sealants

1,100

sf

0.50

550

SUBTOTAL

700

TOTAL - INTERIOR CONSTRUCTION \$7,348

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

No work in this section

SUBTOTAL

-

C2020 STAIR FINISHES

No work in this section

SUBTOTAL

-

TOTAL - STAIRCASES

C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to walls etc.

1,100

gsf

3.00

3,300

Patch/paint existing walls

1

ls

2,000.00

2,000

SUBTOTAL

5,300

C3020 FLOOR FINISHES

New resilient flooring

1,100

sf

8.00

8,800

Patch existing floor at removed walls

100

lf

20.00

2,000

Floor prep

1,100

sf

2.00

2,200

SUBTOTAL

13,000



Feasibility Design Estimate

GFA 1,100

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
RENOVATION TO McCALL MS - CAFETERIA OPTION 1								
109	C3030 CEILING FINISHES							
110	ACT, 2x2	1,100	sf	7.00	7,700			
111	Patch existing floor at removed walls	100	lf	25.00	2,500			
112	SUBTOTAL					10,200		
113								
114	TOTAL - INTERIOR FINISHES							\$28,500
115								
116								
117	D10 CONVEYING SYSTEMS							
118								
119	No work in this section							
120	SUBTOTAL					-		
121								
122	TOTAL - CONVEYING SYSTEMS							
123								
124								
125	D20 PLUMBING							
126								
127	D20 PLUMBING, GENERALLY							
128	No work in this section							
129	SUBTOTAL					-		
130								
131	TOTAL - PLUMBING							
132								
133								
134	D30 HVAC							
135								
136	D30 HVAC, GENERALLY							
137	HVAC modifications	1,100	sf	10.00	11,000			
138	SUBTOTAL					11,000		
139								
140	TOTAL - HVAC							
141							\$11,000	
142								
143	D40 FIRE PROTECTION							
144								
145	D40 FIRE PROTECTION, GENERALLY							
146	Sprinkler system modifications	1,100	sf	2.00	2,200			
147	SUBTOTAL					2,200		
148								
149	TOTAL - FIRE PROTECTION							
150							\$2,200	
151								
152	D50 ELECTRICAL							
153								
154	D5010 COMPLETE ELECTRICAL SYSTEMS							
155	Lighting, power and Tele/Data modifications	1,100	sf	15.00	16,500			
156	SUBTOTAL					16,500		
157								
158	TOTAL - ELECTRICAL							
159							\$16,500	
160								
161	E10 EQUIPMENT							
162								
163	E10 EQUIPMENT, GENERALLY							



Feasibility Design Estimate

GFA

1,100

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	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
RENOVATION TO McCALL MS - CAFETERIA OPTION 1							
	No work in this section						
	SUBTOTAL					-	
TOTAL - EQUIPMENT							
E20 FURNISHINGS							
	E2010 FIXED FURNISHINGS						
	No work in this section						
	SUBTOTAL					-	
	E2020 MOVABLE FURNISHINGS						
	All movable furnishings to be provided and installed by owner						
	SUBTOTAL					NIC	
TOTAL - FURNISHINGS							
F10 SPECIAL CONSTRUCTION							
	F10 SPECIAL CONSTRUCTION						
	No items in this section						
	SUBTOTAL						
TOTAL - SPECIAL CONSTRUCTION							
F20 SELECTIVE BUILDING DEMOLITION							
	F2010 BUILDING ELEMENTS DEMOLITION						
	Gut demolition; finishes and casework	1,100	sf	6.00	6,600		
	Create opening in bearing wall	1	ls	3,000.00	3,000		
	Remove walls	1,400	sf	3.00	4,200		
	Miscellaneous demo/protection	1,100	gfa	2.00	2,200		
	SUBTOTAL					16,000	
	F2020 HAZARDOUS COMPONENTS ABATEMENT						
	None Included						
	SUBTOTAL						
TOTAL - SELECTIVE BUILDING DEMOLITION							\$16,000



CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO McCALL MS - CAFETERIA OPTION 2				
A10 FOUNDATIONS				
A1010 Standard Foundations	\$0			
A1020 Special Foundations	\$0			
A1030 Lowest Floor Construction	\$6,000	\$6,000	\$2.50	2.7%
B10 SUPERSTRUCTURE				
B1010 Upper Floor Construction	\$24,000			
B1020 Roof Construction	\$0	\$24,000	\$10.00	10.8%
B20 EXTERIOR CLOSURE				
B2010 Exterior Walls	\$0			
B2020 Windows/Curtainwall	\$0			
B2030 Exterior Doors	\$0	\$0	\$0.00	0.0%
B30 ROOFING				
B3010 Roof Coverings	\$0			
B3020 Roof Openings	\$0	\$0	\$0.00	0.0%
C10 INTERIOR CONSTRUCTION				
C1010 Partitions	\$19,600			
C1020 Interior Doors	\$0			
C1030 Specialties/Millwork	\$1,350	\$20,950	\$8.73	9.5%
C20 STAIRCASES				
C2010 Stair Construction	\$0			
C2020 Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES				
C3010 Wall Finishes	\$11,200			
C3020 Floor Finishes	\$28,100			
C3030 Ceiling Finishes	\$19,300	\$58,600	\$24.42	26.4%
D10 CONVEYING SYSTEMS				
D1010 Elevator	\$0	\$0	\$0.00	0.0%
D20 PLUMBING				
D20 Plumbing	\$0	\$0	\$0.00	0.0%
D30 HVAC				
D30 HVAC	\$24,000	\$24,000	\$10.00	10.8%
D40 FIRE PROTECTION				
D40 Fire Protection	\$4,800	\$4,800	\$2.00	2.2%



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

07-Feb-17

Feasibility Design Estimate

GFA 2,400

CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO McCALL MS - CAFETERIA OPTION 2				
D50 ELECTRICAL				
D5010 Electrical Systems	\$36,000	\$36,000	\$15.00	16.2%
E10 EQUIPMENT				
E10 Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS				
E2010 Fixed Furnishings	\$0			
E2020 Movable Furnishings	NIC	\$0	\$0.00	0.0%
F10 SPECIAL CONSTRUCTION				
F10 Special Construction	\$0	\$0	\$0.00	0.0%
F20 SELECTIVE BUILDING DEMOLITION				
F2010 Building Elements Demolition	\$47,310			
F2020 Hazardous Components Abatement	\$0	\$47,310	\$19.71	21.3%
TOTAL DIRECT COST (Trade Costs)		\$221,660	\$92.36	100.0%



Feasibility Design Estimate

GFA

2,400

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - CAFETERIA OPTION 2

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B3020 ROOF OPENINGS
 No work in this section
 SUBTOTAL

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TOTAL - ROOFING

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

Patch existing walls	3,024	sf	3.00	9,072	
New partition	658	sf	16.00	10,528	
SUBTOTAL					19,600

C1020 INTERIOR DOORS

No work in this section
 SUBTOTAL

-

C1030 SPECIALTIES / MILLWORK

Room Signs	1	loc	150.00	150	
Miscellaneous sealants	2,400	sf	0.50	1,200	
SUBTOTAL					1,350

TOTAL - INTERIOR CONSTRUCTION \$20,950

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

No work in this section
 SUBTOTAL

-

C2020 STAIR FINISHES

No work in this section
 SUBTOTAL

-

TOTAL - STAIRCASES

C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to walls etc.	2,400	gsf	3.00	7,200	
Patch/paint existing walls	1	ls	4,000.00	4,000	
SUBTOTAL					11,200

C3020 FLOOR FINISHES

New resilient flooring	2,400	sf	8.00	19,200	
Patch existing floor at removed walls	205	lf	20.00	4,100	
Floor prep	2,400	sf	2.00	4,800	
SUBTOTAL					28,100



Feasibility Design Estimate

GFA 2,400

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - CAFETERIA OPTION 2

109	C3030 CEILING FINISHES						
110	ACT, 2x2	2,400	sf	7.00	16,800		
111	Patch existing floor at removed walls	100	lf	25.00	2,500		
112	SUBTOTAL					19,300	

TOTAL - INTERIOR FINISHES							\$58,600
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D10 CONVEYING SYSTEMS

119	No work in this section						
120	SUBTOTAL					-	

TOTAL - CONVEYING SYSTEMS							
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D20 PLUMBING

127	D20 PLUMBING, GENERALLY						
128	No work in this section						
129	SUBTOTAL					-	

TOTAL - PLUMBING							
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D30 HVAC

136	D30 HVAC, GENERALLY						
137	HVAC modifications	2,400	sf	10.00	24,000		
138	SUBTOTAL					24,000	

TOTAL - HVAC							\$24,000
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D40 FIRE PROTECTION

145	D40 FIRE PROTECTION, GENERALLY						
146	Sprinkler system modifications	2,400	sf	2.00	4,800		
147	SUBTOTAL					4,800	

TOTAL - FIRE PROTECTION							\$4,800
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D50 ELECTRICAL

154	D5010 COMPLETE ELECTRICAL SYSTEMS						
155	Lighting, power and Tele/Data modifications	2,400	sf	15.00	36,000		
156	SUBTOTAL					36,000	

TOTAL - ELECTRICAL							\$36,000
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E10 EQUIPMENT

163	E10 EQUIPMENT, GENERALLY						
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Feasibility Design Estimate

GFA 2,400

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - CAFETERIA OPTION 2

164	No work in this section						
165	SUBTOTAL					-	

TOTAL - EQUIPMENT

E20 FURNISHINGS

172	E2010 FIXED FURNISHINGS						
173	No work in this section						
174	SUBTOTAL					-	

176	E2020 MOVABLE FURNISHINGS						
177	All movable furnishings to be provided and installed by owner						
178	SUBTOTAL					NIC	

TOTAL - FURNISHINGS

F10 SPECIAL CONSTRUCTION

185	F10 SPECIAL CONSTRUCTION						
186	No items in this section						
187	SUBTOTAL						

TOTAL - SPECIAL CONSTRUCTION

F20 SELECTIVE BUILDING DEMOLITION

194	F2010 BUILDING ELEMENTS DEMOLITION						
195	Gut demolition; finishes and casework	2,400	sf	6.00	14,400		
196	Create opening in bearing wall	1	ls	4,500.00	4,500		
196	Remove walls	2,870	sf	3.00	8,610		
197	Remove stair flight and patch/new finishes	1	ls	15,000.00	15,000		
198	Miscellaneous demo/protection	2,400	gfa	2.00	4,800		
199	SUBTOTAL					47,310	

201	F2020 HAZARDOUS COMPONENTS ABATEMENT						
202	None Included						
203	SUBTOTAL						

TOTAL - SELECTIVE BUILDING DEMOLITION \$47,310



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION AT CAFETERIA - OPTION 3					
A10 FOUNDATIONS					
A1010	Standard Foundations	\$184,721			
A1020	Special Foundations	\$54,250			
A1030	Lowest Floor Construction	\$56,272	\$295,243	\$193.60	37.4%
A20 BASEMENT CONSTRUCTION					
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE					
B1010	Upper Floor Construction	\$0			
B1020	Roof Construction	\$55,675	\$55,675	\$36.51	7.1%
B20 EXTERIOR CLOSURE					
B2010	Exterior Walls	\$0			
B2020	Windows	\$181,213			
B2030	Exterior Doors	\$0	\$181,213	\$118.83	22.9%
B30 ROOFING					
B3010	Roof Coverings	\$34,933			
B3020	Roof Openings	\$0	\$34,933	\$22.91	4.4%
C10 INTERIOR CONSTRUCTION					
C1010	Partitions	\$0			
C1020	Interior Doors	\$0			
C1030	Specialties/Millwork	\$3,431	\$3,431	\$2.25	0.4%
C20 STAIRCASES					
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES					
C3010	Wall Finishes	\$6,863			
C3020	Floor Finishes	\$13,725			
C3030	Ceiling Finishes	\$10,675	\$31,263	\$20.50	4.0%
D10 CONVEYING SYSTEMS					
D1010	Elevator	\$0	\$0	\$0.00	0.0%
D20 PLUMBING					
D20	Plumbing	\$7,625	\$7,625	\$5.00	1.0%



Feasibility Design Estimate

GFA 1,525

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION AT CAFETERIA - OPTION 3					
D30 HVAC					
D30 HVAC		\$68,625	\$68,625	\$45.00	8.7%
D40 FIRE PROTECTION					
D40 Fire Protection		\$6,863	\$6,863	\$4.50	0.9%
D50 ELECTRICAL					
D5010 Complete System		\$38,125	\$38,125	\$25.00	4.8%
E10 EQUIPMENT					
E10 Equipment		\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010 Fixed Furnishings		\$8,748			
E2020 Movable Furnishings		NIC	\$8,748	\$5.74	1.1%
F10 SPECIAL CONSTRUCTION					
F10 Special Construction		\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010 Building Elements Demolition		\$57,960			
F2020 Hazardous Components Abatement		\$0	\$57,960	\$38.01	7.3%
TOTAL DIRECT COST (Trade Costs)			\$789,704	\$517.84	100.0%



Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT CAFETERIA - OPTION 3

GROSS FLOOR AREA CALCULATION

First Floor 1,525

TOTAL GROSS FLOOR AREA (GFA)					1,525	sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 8'-0" x 1'-6"

Excavation	178	cy	35.00	6,230
Store on site for reuse	178	cy	14.00	2,492
Backfill with existing fill	141	cy	16.00	2,256
Remove surplus fill off site	37	cy	25.00	925
Formwork	240	sf	12.00	2,880
Re-bar	4,440	lbs	1.20	5,328
Concrete material; 3,000 psi	37	cy	125.00	4,625
Placing concrete	37	cy	55.00	2,035

Foundation walls at exterior - 14" thick

Formwork	3,200	sf	16.00	51,200
Re-bar, 4.5#/sf	7,200	lbs	1.20	8,640
Concrete material; 4,000 psi	73	cy	135.00	9,855
Placing concrete	73	cy	65.00	4,745
Waterproofing foundation wall and footing	1,600	sf	7.00	11,200
Insulation to foundation walls; 2" thick	320	sf	2.50	800
Form shelf	80	lf	8.00	640

Column footings, typical, 6' x 6' x 2'-0"

Excavation	94	cy	20.00	1,880
Store on site for reuse	94	cy	14.00	1,316
Backfill with new fill	72	cy	16.00	1,152
Remove surplus fill off site	22	cy	20.00	440
Formwork	384	sf	11.00	4,224
Re-bar	4,480	lbs	1.20	5,376
Concrete material; 3,000 psi	22	cy	125.00	2,750
Placing concrete	22	cy	55.00	1,210
Set anchor bolts grout plates	8	ea	150.00	1,200

Interior pilasters

Formwork	234	sf	11.00	2,574
Re-bar	1,440	lbs	1.20	1,728
Concrete material; 3,000 psi	4	cy	125.00	500
Placing concrete	4	cy	55.00	220

Work around existing utilities	1	ls	10,000.00	10,000
Foundations against face of existing building	33	lf	1,100.00	36,300

SUBTOTAL 184,721

A1020 SPECIAL FOUNDATIONS

Sheeting and shoring allowance	1,085	sf	50.00	54,250
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Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT CAFETERIA - OPTION 3

50	SUBTOTAL					54,250	
51	A1030 LOWEST FLOOR CONSTRUCTION						
52	<u>New Slab on grade, 5" thick</u>						
54	Structural gravel fill	960	cy	30.00	28,800		
55	Rigid insulation	1,525	sf	2.25	3,431		
56	Vapor barrier	1,525	sf	1.00	1,525		
57	Mesh reinforcing 15% lap	1,754	sf	0.80	1,403		
58	Concrete - 5" thick	25	cy	125.00	3,125		
59	Placing concrete	25	cy	45.00	1,125		
60	Finishing and curing concrete	1,525	sf	4.00	6,100		
61	Control joints - saw cut	1,525	sf	0.50	763		
62	<u>Miscellaneous</u>						
63	Dewatering	1	ea	10,000.00	10,000		
64	SUBTOTAL					56,272	

TOTAL - FOUNDATIONS	\$295,243
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A20 BASEMENT CONSTRUCTION

71	A2010 BASEMENT EXCAVATION						
72	No items in this section						
73	SUBTOTAL					-	
75	A2020 BASEMENT WALLS						
76	No items in this section						
77	SUBTOTAL					-	

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

84	B1010 FLOOR CONSTRUCTION						
85	No items in this section						
86	SUBTOTAL					-	
88	B1020 ROOF CONSTRUCTION						
89	<u>Roof Structure - Steel:</u>						
90	Steel beams/Joists; 13#/SF	10	tns	4,500.00	45,000		
91	<u>Roof Structure</u>						
92	1-1/2" Metal floor Deck @ roof	1,525	sf	3.00	4,575		
93	<u>Miscellaneous</u>						
94	Fire proofing to columns, beams and deck	1,525	sf	4.00	6,100		
95	SUBTOTAL					55,675	

TOTAL - SUPERSTRUCTURE	\$55,675
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Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT CAFETERIA - OPTION 3

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B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS

No items in this section

SUBTOTAL

B2020 WINDOWS

Curtainwall 1,458 sf 120.00 174,960

Backer rod & double sealant 481 lf 9.00 4,329

Wood blocking at openings 481 lf 4.00 1,924

SUBTOTAL 181,213

B2030 EXTERIOR DOORS

No items in this section

SUBTOTAL

TOTAL - EXTERIOR CLOSURE \$181,213

B30 ROOFING

B3010 ROOF COVERINGS

Flat roofing

PVC roof membrane fully adhered 1,525 sf 8.00 12,200

Insulation 1,525 sf 7.00 10,675

1/2" dens-deck protection board 1,525 sf 2.00 3,050

Reinforced vapor barrier 1,525 sf 1.50 2,288

Rough blocking 320 lf 6.00 1,920

Miscellaneous Roofing

Roof fascia/cornice 80 lf 60.00 4,800

SUBTOTAL 34,933

B3020 ROOF OPENINGS

Skylights, allow NIC

SUBTOTAL

TOTAL - ROOFING \$34,933

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

No items in this section

SUBTOTAL

C1020 INTERIOR DOORS

No items in this section

SUBTOTAL

C1030 SPECIALTIES / MILLWORK

Miscellaneous metals throughout building 1,525 sf 1.25 1,906

Miscellaneous sealants throughout building 1,525 sf 1.00 1,525



Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT CAFETERIA - OPTION 3

152						3,431		
153								
154	TOTAL - INTERIOR CONSTRUCTION						\$3,431	
155								
156								
157	C20 STAIRCASES							
158								
159	C2010 STAIR CONSTRUCTION							
160	No items in this section							
161	SUBTOTAL					-		
162								
163	C2020 STAIR FINISHES							
164	No items in this section							
165	SUBTOTAL					-		
166								
167	TOTAL - STAIRCASES							
168								
169								
170	C30 INTERIOR FINISHES							
171								
172	C3010 WALL FINISHES							
173	Wall finishes	1,525	gfa	4.50	6,863			
174	SUBTOTAL					6,863		
175								
176	C3020 FLOOR FINISHES							
177	Floor finishes	1,525	sf	9.00	13,725			
178	SUBTOTAL					13,725		
179								
180	C3030 CEILING FINISHES							
181	Ceiling finishes	1,525	sf	7.00	10,675			
182	SUBTOTAL					10,675		
183								
184	TOTAL - INTERIOR FINISHES						\$31,263	
185								
186								
187	D10 CONVEYING SYSTEMS							
188								
189	D1010 ELEVATOR							
190	No items in this section							
191	SUBTOTAL					-		
192								
193	TOTAL - CONVEYING SYSTEMS							
194								
195								
196	D20 PLUMBING							
197								
198	D20 PLUMBING, GENERALLY							
199	Plumbing allowance	1,525	gsf	5.00	7,625			
200	SUBTOTAL					7,625		
201								
202	TOTAL - PLUMBING						\$7,625	
203								
204								
205	D30 HVAC							
206								
207	D30 HVAC, GENERALLY							
208	HVAC complete system	1,525	gsf	45.00	68,625			



Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT CAFETERIA - OPTION 3

209						68,625		
	SUBTOTAL						68,625	
210	TOTAL - HVAC							\$68,625
211								
212								
213								
214	D40 FIRE PROTECTION							
215								
216	D40 FIRE PROTECTION, GENERALLY							
217	Sprinkler system	1,525	gsf	4.50	6,863			
218	SUBTOTAL						6,863	
219								
220	TOTAL - FIRE PROTECTION							\$6,863
221								
222								
223	D50 ELECTRICAL							
224								
225	D5010 COMPLETE ELECTRICAL SYSTEM							
226	Electrical system; complete	1,525	gsf	25.00	38,125			
227	SUBTOTAL						38,125	
228								
229								
230	TOTAL - ELECTRICAL							\$38,125
231								
232								
233	E10 EQUIPMENT							
234								
235	E10 EQUIPMENT, GENERALLY							
236	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)				FF+E			
237	SUBTOTAL						-	
238								
239	TOTAL - EQUIPMENT							
240								
241								
242	E20 FURNISHINGS							
243								
244	E2010 FIXED FURNISHINGS							
245	Manual operated roller shades	1,458	sf	6.00	8,748			
246	SUBTOTAL						8,748	
247								
248	E2020 MOVABLE FURNISHINGS							
249	All movable furnishings to be provided and installed by owner							
250	SUBTOTAL						NIC	
251								
252	TOTAL - FURNISHINGS							\$8,748
253								
254								
255	F10 SPECIAL CONSTRUCTION							
256								
257	F10 SPECIAL CONSTRUCTION							
258	No Work in this section							
259	SUBTOTAL							
260								
261	TOTAL - SPECIAL CONSTRUCTION							
262								
263								
264	F20 SELECTIVE BUILDING DEMOLITION							
265								



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

07-Feb-17

Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
ADDITION AT CAFETERIA - OPTION 3								
266	F2010 BUILDING ELEMENTS DEMOLITION							
267	Create openings to existing façade for new connections	864	sf	15.00	12,960			
268	Demolish existing patio and steps	1	ls	20,000.00	20,000			
269	Relocate existing utilities	1	ls	15,000.00	15,000			
270	Restore/new landscaping	1	ls	10,000.00	10,000			
271	SUBTOTAL					57,960		
272								
273	F2020 HAZARDOUS COMPONENTS ABATEMENT							
274	None Included							
275	SUBTOTAL							
276								
277	TOTAL - SELECTIVE BUILDING DEMOLITION							\$57,960



Feasibility Design Estimate

GFA

1,250

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - TEACHERS ROOM

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TOTAL RENOVATED AREA (GFA)					1,250	GSF	
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C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

New walls at storage area	403	sf	15.00	6,045	
SUBTOTAL					6,045

C1020 INTERIOR DOORS

New single door	1	ea	1,800.00	1,800	
SUBTOTAL					1,800

C1030 SPECIALTIES / MILLWORK

Room Signs	1	loc	150.00	150	
Miscellaneous sealants	1,250	sf	0.50	625	
SUBTOTAL					775

TOTAL - INTERIOR CONSTRUCTION							\$8,620
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C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to walls etc.	1,250	gsf	3.00	3,750	
SUBTOTAL					3,750

C3020 FLOOR FINISHES

New resilient flooring	1,250	sf	8.00	10,000	
Floor prep	1,250	sf	2.00	2,500	
SUBTOTAL					12,500

C3030 CEILING FINISHES

No items in this section					
SUBTOTAL					-

TOTAL - INTERIOR FINISHES							\$16,250
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D30 HVAC

D30 HVAC, GENERALLY

No items in this section					
SUBTOTAL					-

TOTAL - HVAC							
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D40 FIRE PROTECTION

D40 FIRE PROTECTION, GENERALLY

Sprinkler system modifications	1,250	sf	2.00	2,500	
SUBTOTAL					2,500



Feasibility Design Estimate

GFA 1,250

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - TEACHERS ROOM

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TOTAL - FIRE PROTECTION							\$2,500
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D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEMS

Lighting, power and Tele/Data modifications 1,250 sf 15.00 18,750

SUBTOTAL 18,750

TOTAL - ELECTRICAL							\$18,750
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E20 FURNISHINGS

E2010 FIXED FURNISHINGS

No work in this section

SUBTOTAL -

E2020 MOVABLE FURNISHINGS

All movable furnishings to be provided and installed by owner

SUBTOTAL NIC

TOTAL - FURNISHINGS							
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F20 SELECTIVE BUILDING DEMOLITION

F2010 BUILDING ELEMENTS DEMOLITION

Gut demolition; floor finishes 1,250 sf 1.00 1,250

SUBTOTAL 1,250

F2020 HAZARDOUS COMPONENTS ABATEMENT

None Included

SUBTOTAL

TOTAL - SELECTIVE BUILDING DEMOLITION							\$1,250
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TOTAL - TEACHERS ROOM							\$47,370
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CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$148,669			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$65,553	\$214,222	\$43.72	15.5%
A20	BASEMENT CONSTRUCTION				
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$0			
B1020	Roof Construction	\$144,500	\$144,500	\$29.49	10.5%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$133,595			
B2020	Windows	\$110,011			
B2030	Exterior Doors	\$16,520	\$260,126	\$53.09	18.8%
B30	ROOFING				
B3010	Roof Coverings	\$106,330			
B3020	Roof Openings	\$0	\$106,330	\$21.70	7.7%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$139,838			
C1020	Interior Doors	\$66,000			
C1030	Specialties/Millwork	\$20,297	\$226,135	\$46.15	16.4%
C20	STAIRCASES				
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$29,646			
C3020	Floor Finishes	\$32,437			
C3030	Ceiling Finishes	\$23,540	\$85,623	\$17.47	6.2%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$0	\$0	\$0.00	0.0%
D20	PLUMBING				
D20	Plumbing	\$30,000	\$30,000	\$6.12	2.2%



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

07-Feb-17

Feasibility Design Estimate

GFA 4,900

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1					
D30 HVAC					
D30	HVAC	\$137,200	\$137,200	\$28.00	9.9%
D40 FIRE PROTECTION					
D40	Fire Protection	\$19,600	\$19,600	\$4.00	1.4%
D50 ELECTRICAL					
D5010	Complete System	\$107,800	\$107,800	\$22.00	7.8%
E10 EQUIPMENT					
E10	Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$24,342			
E2020	Movable Furnishings	NIC	\$24,342	\$4.97	1.8%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$25,000			
F2020	Hazardous Components Abatement	\$0	\$25,000	\$5.10	1.8%
TOTAL DIRECT COST (Trade Costs)			\$1,380,878	\$281.81	100.0%



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1

GROSS FLOOR AREA CALCULATION

First Floor 4,900

TOTAL GROSS FLOOR AREA (GFA) 4,900 sf

A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	244	cy	20.00	4,880
Store on site for reuse	244	cy	14.00	3,416
Backfill with existing fill	227	cy	16.00	3,632
Remove surplus fill off site	17	cy	25.00	425
Formwork	440	sf	12.00	5,280
Re-bar, 10#/lf	2,200	lbs	1.20	2,640
Concrete material; 3,000 psi	17	cy	125.00	2,125
Placing concrete	17	cy	55.00	935

Foundation walls at exterior - 14" thick

Formwork	1,760	sf	14.00	24,640
Re-bar, 4.5#/sf	3,960	lbs	1.20	4,752
Concrete material; 4,000 psi	40	cy	135.00	5,400
Placing concrete	40	cy	65.00	2,600
Dampproofing foundation wall and footing	1,320	sf	1.90	NIC
Insulation to foundation walls; 2" thick	880	sf	2.50	2,200
Form shelf	220	lf	8.00	1,760

Column footings, typical, 5' x 5' x 2'-0"

Excavation	285	cy	20.00	5,700
Store on site for reuse	285	cy	14.00	3,990
Backfill with new fill	227	cy	16.00	3,632
Remove surplus fill off site	58	cy	20.00	1,160
Formwork	1,200	sf	11.00	13,200
Re-bar	8,120	lbs	1.20	9,744
Concrete material; 3,000 psi	58	cy	125.00	7,250
Placing concrete	58	cy	55.00	3,190
Set anchor bolts grout plates	30	ea	150.00	4,500

Interior pilasters

Formwork	878	sf	11.00	9,658
Re-bar	5,400	lbs	1.20	6,480
Concrete material; 3,000 psi	16	cy	125.00	2,000
Placing concrete	16	cy	55.00	880
Foundations against existing building	70	lf	180.00	12,600

SUBTOTAL

148,669

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1

51	<u>New Slab on grade, 5" thick</u>							
52	Structural gravel fill, 8"	121	cy	30.00	3,630			
53	Base course, 8" gravel	121	cy	40.00	4,840			
54	Rigid insulation	4,900	sf	2.25	11,025			
55	Vapor barrier	4,900	sf	1.00	4,900			
56	Mesh reinforcing 15% lap	5,635	sf	0.80	4,508			
57	Concrete - 5" thick	80	cy	125.00	10,000			
58	Placing concrete	80	cy	45.00	3,600			
59	Finishing and curing concrete	4,900	sf	4.00	19,600			
60	Control joints - saw cut	4,900	sf	0.50	2,450			
61	<u>Miscellaneous</u>							
62	Dewatering	1	ea	1,000.00	1,000			
63	SUBTOTAL					65,553		
64								
65	TOTAL - FOUNDATIONS							\$214,222

A20 BASEMENT CONSTRUCTION

A2010 BASEMENT EXCAVATION

No items in this section

SUBTOTAL

-

A2020 BASEMENT WALLS

No items in this section

SUBTOTAL

-

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

12 lbs/sf

B1010 FLOOR CONSTRUCTION

29 tns

No Work in this section

SUBTOTAL

-

B1020 ROOF CONSTRUCTION

Roof Structure - Steel:

Steel beams/Joists; 12#/SF

29 tns 3,800.00 110,200

Roof Structure

1-1/2" Metal floor Deck @ roof

4,900 sf 3.00 14,700

Miscellaneous

Roof screen framing - allow

NIC

Fire proofing to columns, beams and deck

4,900 sf 4.00 19,600

SUBTOTAL

144,500

TOTAL - SUPERSTRUCTURE

\$144,500



Feasibility Design Estimate

GFA

4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1

99

B20 EXTERIOR CLOSURE

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B2010	EXTERIOR WALLS; 60% solid/40% glass	1,848	sf				
	<u>Interior skin</u>						
	6" metal stud backup	1,848	sf	7.50	13,860		
	Batt insulation in stud	1,848	sf	2.25	4,158		
	2 1/2" Rigid Insulation	1,848	sf	3.00	5,544		
	Air barrier	1,848	sf	6.00	11,088		
	Air barrier/flashing at windows	407	lf	7.00	2,849		
	Gypsum Sheathing	1,848	sf	2.75	5,082		
	Drywall lining to interior face of stud backup	1,848	sf	3.00	5,544		
	<u>Exterior skin</u>						
	Brick veneer; 75% of exterior wall	1,386	sf	35.00	48,510		
	Metal panels; 25% of exterior wall	462	sf	60.00	27,720		
	<u>Miscellaneous</u>						
	Staging to exterior wall	3,080	sf	3.00	9,240		
	SUBTOTAL					133,595	
B2020	WINDOWS	1,232	sf				
	Premium for sunscreen and light shelf elements	1	ls		NIC		
	Windows/storefront	1,232	sf	85.00	104,720		
	Backer rod & double sealant	407	lf	9.00	3,663		
	Wood blocking at openings	407	lf	4.00	1,628		
	SUBTOTAL					110,011	
B2030	EXTERIOR DOORS						
	Glazed entrance doors including frame and hardware; double door at corridor exit	2	pr	8,000.00	16,000		
	Backer rod & double sealant	40	lf	9.00	360		
	Wood blocking at openings	40	lf	4.00	160		
	SUBTOTAL					16,520	
TOTAL - EXTERIOR CLOSURE							\$260,126

B30 ROOFING

B3010	ROOF COVERINGS						
	<u>Flat roofing</u>						
	PVC roof membrane fully adhered	4,900	sf	9.00	44,100		
	Insulation	4,900	sf	7.00	34,300		
	1/2" dens-deck protection board	4,900	sf	2.00	9,800		
	Reinforced vapor barrier	4,900	sf	1.50	7,350		
	Rough blocking	880	lf	6.00	5,280		
	<u>Miscellaneous Roofing</u>						
	Roof screens - allow				NIC		
	Roof fascia/cornice	220	lf	25.00	5,500		
	SUBTOTAL					106,330	



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1

148	B3020 ROOF OPENINGS							
149	Skylights, allow					NIC		
150	Roof hatch					NIC		
151	SUBTOTAL						-	
152								
153	TOTAL - ROOFING							\$106,330

C10 INTERIOR CONSTRUCTION

156	C10 INTERIOR CONSTRUCTION							
157								
158	C1010 PARTITIONS							
159	GWB furred wall at existing exterior wall	1,050	sf	12.00	12,600			
160	Corridors; GWB with 2 lysr corridor side	4,860	sf	15.55	75,573			
161	General Walls; GWB with 1 lysr each side	3,390	sf	13.75	46,613			
162	Sealants & caulking at partitions	4,860	sf	0.50	2,430			
163	Rough blocking to partitions	374	lf	3.00	1,122			
164	Glazed partitions/borrowed lights - allowance	1	ls	1,500.00	1,500			
165	SUBTOTAL						139,838	
166								
167	C1020 INTERIOR DOORS							
168	Corridor glazed doors	1	pr	8,000.00	8,000			
169	Single door with sidelight	20	ea	2,900.00	58,000			
170	SUBTOTAL						66,000	
171								
172	C1030 SPECIALTIES / MILLWORK							
173	Marker boards/tackboards in conference room	128	sf	24.00	3,072			
174	Toilet partitions and accessories	2	rooms	2,000.00	4,000			
175	Room Signs	20	loc	110.00	2,200			
176	Miscellaneous metals throughout building	4,900	sf	1.25	6,125			
177	Miscellaneous sealants throughout building	4,900	sf	1.00	4,900			
178	SUBTOTAL						20,297	
179								
180	TOTAL - INTERIOR CONSTRUCTION							\$226,135

C20 STAIRCASES

184	C2010 STAIR CONSTRUCTION							
185	No Work in this section							
186	SUBTOTAL						-	
187								
188	C2020 STAIR FINISHES							
189	No Work in this section							
190	SUBTOTAL						-	
191								
192								
193	TOTAL - STAIRCASES							

C30 INTERIOR FINISHES

196	C3010 WALL FINISHES						
197							
198	Paint to GWB	17,550	sf	1.00	17,550		
199	Ceramic Tile to toilets	504	sf	24.00	12,096		
200							



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1								
201	SUBTOTAL					29,646		
202								
203	C3020 FLOOR FINISHES							
204	Carpet floor finishes	2,675	sf	5.00	13,375			
205	Resilient floor	1,913	sf	6.50	12,435			
206	Ceramic Tile to toilets	120	sf	25.00	3,000			
207	Rubber base	1,319	lf	2.75	3,627			
208	SUBTOTAL					32,437		
209								
210	C3030 CEILING FINISHES							
211	Allowance for ceiling finishes; 2 x 2 ACT	4,708	sf	5.00	23,540			
212	SUBTOTAL					23,540		
213								
214	TOTAL - INTERIOR FINISHES						\$85,623	
215								
216								
217	D10 CONVEYING SYSTEMS							
218								
219	D1010 ELEVATOR							
220	No Work in this section							
221	SUBTOTAL					-		
222								
223	TOTAL - CONVEYING SYSTEMS							
224								
225								
226	D20 PLUMBING							
227								
228	D20 PLUMBING, GENERALLY							
229	New fixtures	6	ftx	5,000.00	30,000			
230	SUBTOTAL					30,000		
231								
232	TOTAL - PLUMBING						\$30,000	
233								
234								
235	D30 HVAC							
236								
237	D30 HVAC, GENERALLY							
238	HVAC complete system	4,900	gsf	28.00	137,200			
239	SUBTOTAL					137,200		
240								
241	TOTAL - HVAC						\$137,200	
242								
243								
244	D40 FIRE PROTECTION							
245								
246	D40 FIRE PROTECTION, GENERALLY							
247	Sprinkler system	4,900	gsf	4.00	19,600			
248	SUBTOTAL					19,600		
249								
250	TOTAL - FIRE PROTECTION						\$19,600	
251								
252								
253	D50 ELECTRICAL							
254								
255	D5010 COMPLETE ELECTRICAL SYSTEM							
256	Electrical system; complete	4,900	gsf	22.00	107,800			
257	SUBTOTAL					107,800		
258								



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1

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TOTAL - ELECTRICAL							\$107,800
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E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY

AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.) FF+E
SUBTOTAL -

TOTAL - EQUIPMENT							
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E20 FURNISHINGS

E2010 FIXED FURNISHINGS

Entry mats & frames - recessed with carpet/rubber strips	50	sf	45.00	2,250		
Manual operated roller shades	1,232	sf	6.00	7,392		
Miscellaneous casework	4,900	gsf	3.00	14,700		
SUBTOTAL						24,342

E2020 MOVABLE FURNISHINGS

All movable furnishings to be provided and installed by owner
SUBTOTAL NIC

TOTAL - FURNISHINGS							\$24,342
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F10 SPECIAL CONSTRUCTION

F10 SPECIAL CONSTRUCTION

No Work in this section
SUBTOTAL

TOTAL - SPECIAL CONSTRUCTION							
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F20 SELECTIVE BUILDING DEMOLITION

F2010 BUILDING ELEMENTS DEMOLITION

Create openings to existing façade for new connections	1	loc	25,000.00	25,000		
SUBTOTAL						25,000

F2020 HAZARDOUS COMPONENTS ABATEMENT

None Included
SUBTOTAL

TOTAL - SELECTIVE BUILDING DEMOLITION							\$25,000
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CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$136,069			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$65,553	\$201,622	\$41.15	15.7%
A20	BASEMENT CONSTRUCTION				
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$0			
B1020	Roof Construction	\$135,800	\$135,800	\$27.71	10.6%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$92,308			
B2020	Windows	\$75,988			
B2030	Exterior Doors	\$16,520	\$184,816	\$37.72	14.4%
B30	ROOFING				
B3010	Roof Coverings	\$106,330			
B3020	Roof Openings	\$0	\$106,330	\$21.70	8.3%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$139,838			
C1020	Interior Doors	\$66,000			
C1030	Specialties/Millwork	\$20,297	\$226,135	\$46.15	17.6%
C20	STAIRCASES				
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$29,646			
C3020	Floor Finishes	\$32,437			
C3030	Ceiling Finishes	\$23,540	\$85,623	\$17.47	6.7%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$0	\$0	\$0.00	0.0%
D20	PLUMBING				
D20	Plumbing	\$30,000	\$30,000	\$6.12	2.3%



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

07-Feb-17

Feasibility Design Estimate

GFA 4,900

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2					
D30 HVAC					
D30 HVAC		\$137,200	\$137,200	\$28.00	10.7%
D40 FIRE PROTECTION					
D40 Fire Protection		\$19,600	\$19,600	\$4.00	1.5%
D50 ELECTRICAL					
D5010 Complete System		\$107,800	\$107,800	\$22.00	8.4%
E10 EQUIPMENT					
E10 Equipment		\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010 Fixed Furnishings		\$22,056			
E2020 Movable Furnishings		NIC	\$22,056	\$4.50	1.7%
F10 SPECIAL CONSTRUCTION					
F10 Special Construction		\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010 Building Elements Demolition		\$25,000			
F2020 Hazardous Components Abatement		\$0	\$25,000	\$5.10	2.0%
TOTAL DIRECT COST (Trade Costs)			\$1,281,982	\$261.63	100.0%



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

GROSS FLOOR AREA CALCULATION

First Floor 4,900

TOTAL GROSS FLOOR AREA (GFA) 4,900 sf

A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	244	cy	20.00	4,880
Store on site for reuse	244	cy	14.00	3,416
Backfill with existing fill	227	cy	16.00	3,632
Remove surplus fill off site	17	cy	25.00	425
Formwork	440	sf	12.00	5,280
Re-bar, 10#/lf	2,200	lbs	1.20	2,640
Concrete material; 3,000 psi	17	cy	125.00	2,125
Placing concrete	17	cy	55.00	935

Foundation walls at exterior - 14" thick

Formwork	1,760	sf	14.00	24,640
Re-bar, 4.5#/sf	3,960	lbs	1.20	4,752
Concrete material; 4,000 psi	40	cy	135.00	5,400
Placing concrete	40	cy	65.00	2,600
Dampproofing foundation wall and footing	1,320	sf	1.90	NIC
Insulation to foundation walls; 2" thick	880	sf	2.50	2,200
Form shelf	220	lf	8.00	1,760

Column footings, typical, 5' x 5' x 2'-0"

Excavation	285	cy	20.00	5,700
Store on site for reuse	285	cy	14.00	3,990
Backfill with new fill	227	cy	16.00	3,632
Remove surplus fill off site	58	cy	20.00	1,160
Formwork	1,200	sf	11.00	13,200
Re-bar	8,120	lbs	1.20	9,744
Concrete material; 3,000 psi	58	cy	125.00	7,250
Placing concrete	58	cy	55.00	3,190
Set anchor bolts grout plates	30	ea	150.00	4,500

Interior pilasters

Formwork	878	sf	11.00	9,658
Re-bar	5,400	lbs	1.20	6,480
Concrete material; 3,000 psi	16	cy	125.00	2,000
Placing concrete	16	cy	55.00	880

SUBTOTAL

136,069

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

51	Structural gravel fill, 8"	121	cy	30.00	3,630			
52	Base course, 8" gravel	121	cy	40.00	4,840			
53	Rigid insulation	4,900	sf	2.25	11,025			
54	Vapor barrier	4,900	sf	1.00	4,900			
55	Mesh reinforcing 15% lap	5,635	sf	0.80	4,508			
56	Concrete - 5" thick	80	cy	125.00	10,000			
57	Placing concrete	80	cy	45.00	3,600			
58	Finishing and curing concrete	4,900	sf	4.00	19,600			
59	Control joints - saw cut	4,900	sf	0.50	2,450			
60	<u>Miscellaneous</u>							
61	Dewatering	1	ea	1,000.00	1,000			
62	SUBTOTAL					65,553		
63								
64	TOTAL - FOUNDATIONS							\$201,622

A20 BASEMENT CONSTRUCTION

A2010 BASEMENT EXCAVATION

No items in this section

SUBTOTAL

-

A2020 BASEMENT WALLS

No items in this section

SUBTOTAL

-

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

No Work in this section

SUBTOTAL

-

B1020 ROOF CONSTRUCTION

Roof Structure - Steel:

Steel beams/Joists; 12#/SF

12 lbs/sf

29 tns

29

tns

3,500.00

101,500

Roof Structure

1-1/2" Metal floor Deck @ roof

4,900

sf

3.00

14,700

Miscellaneous

Roof screen framing - allow

NIC

Fire proofing to columns, beams and deck

4,900

sf

4.00

19,600

SUBTOTAL

135,800

TOTAL - SUPERSTRUCTURE \$135,800



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

99	B20 EXTERIOR CLOSURE							
100								
101	B2010 EXTERIOR WALLS; 60% solid/40% glass	1,277	sf					
102	<u>Interior skin</u>							
103	6" metal stud backup	1,277	sf	7.50	9,578			
104	Batt insulation in stud	1,277	sf	2.25	2,873			
105	2 1/2" Rigid Insulation	1,277	sf	3.00	3,831			
106	Air barrier	1,277	sf	6.00	7,662			
107	Air barrier/flashing at windows	281	lf	7.00	1,967			
108	Gypsum Sheathing	1,277	sf	2.75	3,512			
109	Drywall lining to interior face of stud backup	1,277	sf	3.00	3,831			
110	<u>Exterior skin</u>							
111	Brick veneer; 75% of exterior wall	958	sf	35.00	33,530			
112	Metal panels; 25% of exterior wall	319	sf	60.00	19,140			
113	<u>Miscellaneous</u>							
114	Staging to exterior wall	2,128	sf	3.00	6,384			
115	SUBTOTAL					92,308		
116								
117	B2020 WINDOWS	851	sf					
118	Premium for sunscreen and light shelf elements	1	ls		NIC			
119	Windows/storefront	851	sf	85.00	72,335			
120	Backer rod & double sealant	281	lf	9.00	2,529			
121	Wood blocking at openings	281	lf	4.00	1,124			
122	SUBTOTAL					75,988		
123								
124	B2030 EXTERIOR DOORS							
125	Glazed entrance doors including frame and hardware; double door at corridor exit	2	pr	8,000.00	16,000			
126	Backer rod & double sealant	40	lf	9.00	360			
127	Wood blocking at openings	40	lf	4.00	160			
128	SUBTOTAL					16,520		
129								
130	TOTAL - EXTERIOR CLOSURE						\$184,816	

131							
132							
133	B30 ROOFING						
134							
135	B3010 ROOF COVERINGS						
136	<u>Flat roofing</u>						
137	PVC roof membrane fully adhered	4,900	sf	9.00	44,100		
138	Insulation	4,900	sf	7.00	34,300		
139	1/2" dens-deck protection board	4,900	sf	2.00	9,800		
140	Reinforced vapor barrier	4,900	sf	1.50	7,350		
141	Rough blocking	880	lf	6.00	5,280		
142	<u>Miscellaneous Roofing</u>						
143	Roof screens - allow				NIC		
144	Roof fascia/cornice	220	lf	25.00	5,500		
145	SUBTOTAL					106,330	
146							
147	B3020 ROOF OPENINGS						



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

148	Skylights, allow					NIC	
149	Roof hatch					NIC	
150	SUBTOTAL						-
TOTAL - ROOFING							\$106,330

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

158	GWB furred wall at existing exterior wall	1,050	sf	12.00	12,600		
159	Corridors; GWB with 2 lysr corridor side	4,860	sf	15.55	75,573		
160	General Walls; GWB with 1 lysr each side	3,390	sf	13.75	46,613		
161	Sealants & caulking at partitions	4,860	sf	0.50	2,430		
162	Rough blocking to partitions	374	lf	3.00	1,122		
163	Glazed partitions/borrowed lights - allowance	1	ls	1,500.00	1,500		
164	SUBTOTAL						139,838

C1020 INTERIOR DOORS

167	Corridor glazed doors	1	pr	8,000.00	8,000		
168	Single door with sidelight	20	ea	2,900.00	58,000		
169	SUBTOTAL						66,000

C1030 SPECIALTIES / MILLWORK

172	Marker boards/tackboards in conference room	128	sf	24.00	3,072		
173	Toilet partitions and accessories	2	rooms	2,000.00	4,000		
174	Room Signs	20	loc	110.00	2,200		
175	Miscellaneous metals throughout building	4,900	sf	1.25	6,125		
176	Miscellaneous sealants throughout building	4,900	sf	1.00	4,900		
177	SUBTOTAL						20,297

TOTAL - INTERIOR CONSTRUCTION \$226,135

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

No Work in this section

186	SUBTOTAL						-
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C2020 STAIR FINISHES

No Work in this section

190	SUBTOTAL						-
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TOTAL - STAIRCASES

C30 INTERIOR FINISHES

C3010 WALL FINISHES

198	Paint to GWB	17,550	sf	1.00	17,550		
199	Ceramic Tile to toilets	504	sf	24.00	12,096		
200	SUBTOTAL						29,646



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

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C3020 FLOOR FINISHES

Carpet floor finishes	2,675	sf	5.00	13,375		
Resilient floor	1,913	sf	6.50	12,435		
Ceramic Tile to toilets	120	sf	25.00	3,000		
Rubber base	1,319	lf	2.75	3,627		
SUBTOTAL						32,437

C3030 CEILING FINISHES

Allowance for ceiling finishes; 2 x 2 ACT	4,708	sf	5.00	23,540		
SUBTOTAL						23,540

TOTAL - INTERIOR FINISHES						\$85,623
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D10 CONVEYING SYSTEMS

D1010 ELEVATOR

No Work in this section						
SUBTOTAL						-

TOTAL - CONVEYING SYSTEMS						
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D20 PLUMBING

D20 PLUMBING, GENERALLY

New fixtures	6	ftx	5,000.00	30,000		
SUBTOTAL						30,000

TOTAL - PLUMBING						\$30,000
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D30 HVAC

D30 HVAC, GENERALLY

HVAC complete system	4,900	gsf	28.00	137,200		
SUBTOTAL						137,200

TOTAL - HVAC						\$137,200
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D40 FIRE PROTECTION

D40 FIRE PROTECTION, GENERALLY

Sprinkler system	4,900	gsf	4.00	19,600		
SUBTOTAL						19,600

TOTAL - FIRE PROTECTION						\$19,600
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D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEM

Electrical system; complete	4,900	gsf	22.00	107,800		
SUBTOTAL						107,800



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

259	TOTAL - ELECTRICAL						\$107,800
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262	E10 EQUIPMENT						
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264	E10 EQUIPMENT, GENERALLY						
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265	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)				FF+E		
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CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$0			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$19,600	\$19,600	\$4.00	2.7%
A20	BASEMENT CONSTRUCTION				
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$0			
B1020	Roof Construction	\$0	\$0	\$0.00	0.0%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$53,760			
B2020	Windows	\$0			
B2030	Exterior Doors	\$16,520	\$70,280	\$14.34	9.6%
B30	ROOFING				
B3010	Roof Coverings	\$0			
B3020	Roof Openings	\$0	\$0	\$0.00	0.0%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$114,825			
C1020	Interior Doors	\$66,000			
C1030	Specialties/Millwork	\$20,297	\$201,122	\$41.05	27.4%
C20	STAIRCASES				
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$27,696			
C3020	Floor Finishes	\$32,437			
C3030	Ceiling Finishes	\$23,540	\$83,673	\$17.08	11.4%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$0	\$0	\$0.00	0.0%
D20	PLUMBING				
D20	Plumbing	\$30,000	\$30,000	\$6.12	4.1%



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5					
D30 HVAC					
D30	HVAC	\$137,200	\$137,200	\$28.00	18.7%
D40 FIRE PROTECTION					
D40	Fire Protection	\$19,600	\$19,600	\$4.00	2.7%
D50 ELECTRICAL					
D5010	Complete System	\$107,800	\$107,800	\$22.00	14.7%
E10 EQUIPMENT					
E10	Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$16,950			
E2020	Movable Furnishings	NIC	\$16,950	\$3.46	2.3%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$49,000			
F2020	Hazardous Components Abatement	\$0	\$49,000	\$10.00	6.7%
TOTAL DIRECT COST (Trade Costs)			\$735,225	\$150.05	100.0%



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5

1	GROSS FLOOR AREA CALCULATION						
2							
3		First Floor			4,900		
4							
5	TOTAL GROSS FLOOR AREA (GFA)						4,900 sf
6							
7							
8	A10 FOUNDATIONS						
9							
10	A1010	STANDARD FOUNDATIONS					
11		SUBTOTAL					-
12							
13	A1020	SPECIAL FOUNDATIONS					
14		No Work in this section					
15		SUBTOTAL					-
16							
17	A1030	LOWEST FLOOR CONSTRUCTION					
18		Patch existing slab	4,900	sf	4.00	19,600	
19		SUBTOTAL					19,600
20							
21	TOTAL - FOUNDATIONS						\$19,600
22							
23							
24	A20 BASEMENT CONSTRUCTION						
25							
26	A2010	BASEMENT EXCAVATION					
27		No items in this section					
28		SUBTOTAL					-
29							
30	A2020	BASEMENT WALLS					
31		No items in this section					
32		SUBTOTAL					-
33							
34	TOTAL - BASEMENT CONSTRUCTION						
35							
36							
37	B10 SUPERSTRUCTURE						
38							
39	B1010	FLOOR CONSTRUCTION					
40		No Work in this section					
41		SUBTOTAL					-
42							
43	B1020	ROOF CONSTRUCTION					
44		No Work in this section					
45		SUBTOTAL					-
46							
47	TOTAL - SUPERSTRUCTURE						
48							
49							
50	B20 EXTERIOR CLOSURE						
51							
52	B2010	EXTERIOR WALLS					
53		Interior skin					



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5

54	Insulate inside face of perimeter wall; includes furring and GWB	4,480	sf	12.00	53,760			
55	<u>Exterior skin</u>							
56	Assumed no work to existing exterior closure							
57	SUBTOTAL					53,760		
58								
59	B2020 WINDOWS							
60	Assumed no work to existing windows							
61	SUBTOTAL					-		
62								
63	B2030 EXTERIOR DOORS							
64	Glazed entrance doors including frame and hardware; double door at corridor exit	2	pr	8,000.00	16,000			
65	Backer rod & double sealant	40	lf	9.00	360			
66	Wood blocking at openings	40	lf	4.00	160			
67	SUBTOTAL					16,520		
68								
69	TOTAL - EXTERIOR CLOSURE							\$70,280

B30 ROOFING

74	B3010 ROOF COVERINGS							
75	Assumed no work to existing roof							
76	SUBTOTAL					-		
77								
78	B3020 ROOF OPENINGS							
79	Skylights, allow					NIC		
80	Roof hatch					NIC		
81	SUBTOTAL					-		
82								
83	TOTAL - ROOFING							

C10 INTERIOR CONSTRUCTION

88	C1010 PARTITIONS						
89	Corridors; GWB with 2 lysr corridor side	2,400	sf	15.55	37,320		
90	General Walls; GWB with 1 lysr each side	5,400	sf	13.75	74,250		
91	Sealants & caulking at partitions	2,400	sf	0.50	1,200		
92	Rough blocking to partitions	185	lf	3.00	555		
93	Glazed partitions/borrowed lights - allowance	1	ls	1,500.00	1,500		
94	SUBTOTAL					114,825	
95							
96	C1020 INTERIOR DOORS						
97	Corridor glazed doors	1	pr	8,000.00	8,000		
98	Single door with sidelight	20	ea	2,900.00	58,000		
99	SUBTOTAL					66,000	
100							
101	C1030 SPECIALTIES / MILLWORK						
102	Marker boards/tackboards in conference room	128	sf	24.00	3,072		
103	Toilet partitions and accessories	2	rooms	2,000.00	4,000		



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5

104	Room Signs	20	loc	110.00	2,200		
105	Miscellaneous metals throughout building	4,900	sf	1.25	6,125		
106	Miscellaneous sealants throughout building	4,900	sf	1.00	4,900		
107	SUBTOTAL					20,297	

TOTAL - INTERIOR CONSTRUCTION						\$201,122
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C20 STAIRCASES

C2010 STAIR CONSTRUCTION

No Work in this section

SUBTOTAL

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C2020 STAIR FINISHES

No Work in this section

SUBTOTAL

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TOTAL - STAIRCASES						
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C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to GWB

15,600 sf 1.00 15,600

Ceramic Tile to toilets

504 sf 24.00 12,096

SUBTOTAL

27,696

C3020 FLOOR FINISHES

Carpet floor finishes

2,675 sf 5.00 13,375

Resilient floor

1,913 sf 6.50 12,435

Ceramic Tile to toilets

120 sf 25.00 3,000

Rubber base

1,319 lf 2.75 3,627

SUBTOTAL

32,437

C3030 CEILING FINISHES

Allowance for ceiling finishes; 2 x 2 ACT

4,708 sf 5.00 23,540

SUBTOTAL

23,540

TOTAL - INTERIOR FINISHES						\$83,673
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D10 CONVEYING SYSTEMS

D1010 ELEVATOR

No Work in this section

SUBTOTAL

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TOTAL - CONVEYING SYSTEMS						
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D20 PLUMBING

D20 PLUMBING, GENERALLY

New fixtures

6 fxt 5,000.00 30,000

SUBTOTAL

30,000



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5

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TOTAL - PLUMBING							\$30,000
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D30 HVAC

D30 HVAC, GENERALLY							
HVAC complete system	4,900	gsf	28.00	137,200			
SUBTOTAL						137,200	

TOTAL - HVAC							\$137,200
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D40 FIRE PROTECTION

D40 FIRE PROTECTION, GENERALLY							
Sprinkler system	4,900	gsf	4.00	19,600			
SUBTOTAL						19,600	

TOTAL - FIRE PROTECTION							\$19,600
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D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEM							
Electrical system; complete	4,900	gsf	22.00	107,800			
SUBTOTAL						107,800	

TOTAL - ELECTRICAL							\$107,800
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E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY							
AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)					FF+E		
SUBTOTAL						-	

TOTAL - EQUIPMENT							
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E20 FURNISHINGS

E2010 FIXED FURNISHINGS							
Entry mats & frames - recessed with carpet/rubber strips	50	sf	45.00	2,250			
Miscellaneous casework	4,900	gsf	3.00	14,700			
SUBTOTAL						16,950	

E2020 MOVABLE FURNISHINGS							
All movable furnishings to be provided and installed by owner							NIC
SUBTOTAL							

TOTAL - FURNISHINGS							\$16,950
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F10 SPECIAL CONSTRUCTION



Feasibility Design Estimate

Winchester Schools CAFETERIA + DISTRICT OFFICE EXPANSION

Winchester, MA

PM&C LLC
20 Downer Avenue, Suite 1c
Hingham, MA 02043
(T) 781-740-8007
(F) 781-740-1012

Prepared for:

Flansburgh Architects

February 14, 2017



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

14-Feb-17

Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
RENOVATION TO McCALL MS - CAFETERIA OPTION 1				
CAFETERIA EXPANSION		1,100	\$76.63	\$84,298
<hr/>				
SUB-TOTAL	Jun-18	1,100	\$76.63	\$84,298
ESCALATION TO START - (assumed 4% PA)	5.7%			\$4,805
DESIGN AND PRICING CONTINGENCY	15%			\$12,645
<hr/>				
SUB-TOTAL		1,100	\$92.50	\$101,748
GENERAL CONDITIONS				\$15,262
BONDS	1.00%			\$1,017
INSURANCE	2.00%			\$2,035
PERMIT				NIC
OVERHEAD AND FEE	10.00%			\$10,175
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	1,100	\$118.40	\$130,237



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

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Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
RENOVATION TO McCALL MS - CAFETERIA OPTION 2				
CAFETERIA EXPANSION		2,400	\$92.36	\$221,660
<hr/>				
SUB-TOTAL	Jun-18	2,400	\$92.36	\$221,660
ESCALATION TO START - (assumed 4% PA)	5.7%			\$12,635
DESIGN AND PRICING CONTINGENCY	15%			\$33,249
<hr/>				
SUB-TOTAL		2,400	\$111.48	\$267,544
GENERAL CONDITIONS				\$40,132
BONDS	1.00%			\$2,675
INSURANCE	2.00%			\$5,351
PERMIT				NIC
OVERHEAD AND FEE	10.00%			\$26,754
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	2,400	\$142.69	\$342,456



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

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Feasibility Design Estimate

ADDITION AT CAFETERIA - OPTION 3

ADDITION		1,525	\$517.84	\$789,704
<hr/>				
SUB-TOTAL	Jun-18	1,525	\$517.84	\$789,704
ESCALATION TO START - (assumed 4% PA)	5.7%			\$45,013
DESIGN AND PRICING CONTINGENCY	15%			\$118,456
<hr/>				
SUB-TOTAL		1,525	\$625.03	\$953,173
GENERAL CONDITIONS				\$76,254
BONDS	1.00%			\$9,532
INSURANCE	2.00%			\$19,063
PERMIT				NIC
OVERHEAD AND FEE	8.00%			\$76,254
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	1,525	\$743.79	\$1,134,276
<hr/> <hr/>				

NEW TEACHERS WORKROOM

WORKROOM RENOVATION		1,250	\$37.90	\$47,370
<hr/>				
SUB-TOTAL	Jun-18	1,250	\$37.90	\$47,370
ESCALATION TO START - (assumed 4% PA)	5.7%			\$2,700
DESIGN AND PRICING CONTINGENCY	15%			\$7,106
<hr/>				
SUB-TOTAL		1,250	\$45.74	\$57,176
GENERAL CONDITIONS				\$11,435
BONDS	1.00%			\$572
INSURANCE	2.00%			\$1,144
PERMIT				NIC
OVERHEAD AND FEE	15.00%			\$8,576
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	1,250	\$63.12	\$78,903
<hr/> <hr/>				



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
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Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1				
DISTRICT OFFICE ADDITION		4,900	\$281.81	\$1,380,878
<hr/>				
SUB-TOTAL	Jun-18	4,900	\$281.81	\$1,380,878
ESCALATION TO START - (assumed 4% PA)	5.7%			\$78,710
DESIGN AND PRICING CONTINGENCY	10%			\$138,088
<hr/>				
SUB-TOTAL		4,900	\$326.06	\$1,597,676
GENERAL CONDITIONS				\$127,814
BONDS	1.00%			\$15,977
INSURANCE	2.00%			\$31,954
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$47,930
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	4,900	\$371.70	\$1,821,351



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
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Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2				
DISTRICT OFFICE ADDITION		4,900	\$261.63	\$1,281,982
<hr/>				
SUB-TOTAL	Jun-18	4,900	\$261.63	\$1,281,982
ESCALATION TO START - (assumed 4% PA)	5.7%			\$73,073
DESIGN AND PRICING CONTINGENCY	10%			\$128,198
<hr/>				
SUB-TOTAL		4,900	\$302.70	\$1,483,253
GENERAL CONDITIONS				\$118,660
BONDS	1.00%			\$14,833
INSURANCE	2.00%			\$29,665
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$44,498
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	4,900	\$345.08	\$1,690,909



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
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Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-3				
DISTRICT OFFICE ADDITION		4,900	\$257.55	\$1,261,982
<hr/>				
SUB-TOTAL	Jun-18	4,900	\$257.55	\$1,261,982
ESCALATION TO START - (assumed 4% PA)	5.7%			\$71,933
DESIGN AND PRICING CONTINGENCY	10%			\$126,198
<hr/>				
SUB-TOTAL		4,900	\$297.98	\$1,460,113
GENERAL CONDITIONS				\$116,809
BONDS	1.00%			\$14,601
INSURANCE	2.00%			\$29,202
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$43,803
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	4,900	\$339.70	\$1,664,528



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

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Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-4				
DISTRICT OFFICE ADDITION		4,900	\$261.63	\$1,281,982
<hr/>				
SUB-TOTAL	Jun-18	4,900	\$261.63	\$1,281,982
ESCALATION TO START - (assumed 4% PA)	5.7%			\$73,073
DESIGN AND PRICING CONTINGENCY	10%			\$128,198
<hr/>				
SUB-TOTAL		4,900	\$302.70	\$1,483,253
GENERAL CONDITIONS				\$118,660
BONDS	1.00%			\$14,833
INSURANCE	2.00%			\$29,665
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$44,498
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	4,900	\$345.08	\$1,690,909



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

14-Feb-17

Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5				
DISTRICT OFFICE RENOVATION		4,900	\$150.05	\$735,225
<hr/>				
SUB-TOTAL	Jun-18	4,900	\$150.05	\$735,225
ESCALATION TO START - (assumed 4% PA)	5.7%			\$41,908
DESIGN AND PRICING CONTINGENCY	10%			\$73,523
<hr/>				
SUB-TOTAL		4,900	\$173.60	\$850,656
GENERAL CONDITIONS				\$85,066
BONDS	1.00%			\$8,507
INSURANCE	2.00%			\$17,013
PERMIT				NIC
OVERHEAD AND FEE	5.00%			\$42,533
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	4,900	\$204.85	\$1,003,775



Winchester Schools
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Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
DISTRICT OFFICE RENOVATION AT CARRIAGE HOUSE OPTION WPS-6				
DISTRICT OFFICE RENOVATION		5,151	\$269.38	\$1,387,598
SITework ALLOWANCE				\$69,380
SUB-TOTAL	Jun-18	5,151	\$282.85	\$1,456,978
ESCALATION TO START - (assumed 4% PA)	5.7%			\$83,048
DESIGN AND PRICING CONTINGENCY	10%			\$145,698
SUB-TOTAL		5,151	\$327.26	\$1,685,724
GENERAL CONDITIONS				\$168,572
BONDS	1.00%			\$16,857
INSURANCE	2.00%			\$33,714
PERMIT				NIC
OVERHEAD AND FEE	5.00%			\$84,286
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	5,151	\$386.17	\$1,989,153



Winchester Schools
CAFETERIA + DISTRICT OFFICE EXPANSION
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Feasibility Design Estimate

This Feasibility Design cost estimate was produced from preliminary drawings prepared by Flansburgh Architects Inc. and their design team dated February 2, 2017. 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, general contractor's overhead, fee 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:

- Land acquisition, feasibility, and financing costs
- All professional fees and insurance
- Site or existing conditions surveys investigations costs, including to determine subsoil conditions
- 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 as indicated in the estimate
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)
- Construction contingency



CONSTRUCTION COST SUMMARY

BUILDING SYSTEM		SUB-TOTAL	TOTAL	\$/SF	%
RENOVATION TO McCALL MS - CAFETERIA OPTION 1					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$0			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$2,750	\$2,750	\$2.50	3.3%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$0			
B1020	Roof Construction	\$0	\$0	\$0.00	0.0%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$0			
B2020	Windows/Curtainwall	\$0			
B2030	Exterior Doors	\$0	\$0	\$0.00	0.0%
B30	ROOFING				
B3010	Roof Coverings	\$0			
B3020	Roof Openings	\$0	\$0	\$0.00	0.0%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$6,648			
C1020	Interior Doors	\$0			
C1030	Specialties/Millwork	\$700	\$7,348	\$6.68	8.7%
C20	STAIRCASES				
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$5,300			
C3020	Floor Finishes	\$13,000			
C3030	Ceiling Finishes	\$10,200	\$28,500	\$25.91	33.8%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$0	\$0	\$0.00	0.0%
D20	PLUMBING				
D20	Plumbing	\$0	\$0	\$0.00	0.0%
D30	HVAC				
D30	HVAC	\$11,000	\$11,000	\$10.00	13.0%
D40	FIRE PROTECTION				
D40	Fire Protection	\$2,200	\$2,200	\$2.00	2.6%



Winchester Schools
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Feasibility Design Estimate

GFA 1,100

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO McCALL MS - CAFETERIA OPTION 1					
D50 ELECTRICAL					
D5010	Electrical Systems	\$16,500	\$16,500	\$15.00	19.6%
E10 EQUIPMENT					
E10	Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$0			
E2020	Movable Furnishings	NIC	\$0	\$0.00	0.0%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 SELECTIVE BUILDING DEMOLITION					
F2010	Building Elements Demolition	\$16,000			
F2020	Hazardous Components Abatement	\$0	\$16,000	\$14.55	19.0%
TOTAL DIRECT COST (Trade Costs)			\$84,298	\$76.63	100.0%



Feasibility Design Estimate

GFA

1,100

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - CAFETERIA OPTION 1

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TOTAL RENOVATED AREA (GFA)				1,100	GSF		
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

No work in this section

SUBTOTAL

-

A1020 SPECIAL FOUNDATIONS

No work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

Patch existing slab

1,100

sf

2.50

2,750

SUBTOTAL

2,750

TOTAL - FOUNDATIONS							\$2,750
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B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

No work in this section

SUBTOTAL

-

B1020 ROOF CONSTRUCTION

SUBTOTAL

-

TOTAL - SUPERSTRUCTURE							
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B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS

No work assumed to existing exterior

SUBTOTAL

-

B2020 WINDOWS/CURTAINWALL

No work assumed to existing exterior

SUBTOTAL

-

B2030 EXTERIOR DOORS

No work assumed to existing exterior

SUBTOTAL

-

TOTAL - EXTERIOR CLOSURE							
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B30 ROOFING

B3010 ROOF COVERINGS

No work assumed to existing exterior

SUBTOTAL

-



Feasibility Design Estimate

GFA 1,100

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - CAFETERIA OPTION 1

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B3020 ROOF OPENINGS

No work in this section

SUBTOTAL

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TOTAL - ROOFING

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

Patch existing walls

1,716 sf 3.00 5,148

Infill door opening; single door

1 loc 1,500.00 1,500

SUBTOTAL

6,648

C1020 INTERIOR DOORS

No work in this section

SUBTOTAL

-

C1030 SPECIALTIES / MILLWORK

Room Signs

1 loc 150.00 150

Miscellaneous sealants

1,100 sf 0.50 550

SUBTOTAL

700

TOTAL - INTERIOR CONSTRUCTION \$7,348

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

No work in this section

SUBTOTAL

-

C2020 STAIR FINISHES

No work in this section

SUBTOTAL

-

TOTAL - STAIRCASES

C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to walls etc.

1,100 gsf 3.00 3,300

Patch/paint existing walls

1 ls 2,000.00 2,000

SUBTOTAL

5,300

C3020 FLOOR FINISHES

New resilient flooring

1,100 sf 8.00 8,800

Patch existing floor at removed walls

100 lf 20.00 2,000

Floor prep

1,100 sf 2.00 2,200

SUBTOTAL

13,000



Feasibility Design Estimate

GFA 1,100

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
RENOVATION TO McCALL MS - CAFETERIA OPTION 1								
109	C3030 CEILING FINISHES							
110	ACT, 2x2	1,100	sf	7.00	7,700			
111	Patch existing floor at removed walls	100	lf	25.00	2,500			
112	SUBTOTAL					10,200		
113								
114	TOTAL - INTERIOR FINISHES							\$28,500
115								
116								
117	D10 CONVEYING SYSTEMS							
118								
119	No work in this section							
120	SUBTOTAL					-		
121								
122	TOTAL - CONVEYING SYSTEMS							
123								
124								
125	D20 PLUMBING							
126								
127	D20 PLUMBING, GENERALLY							
128	No work in this section							
129	SUBTOTAL					-		
130								
131	TOTAL - PLUMBING							
132								
133								
134	D30 HVAC							
135								
136	D30 HVAC, GENERALLY							
137	HVAC modifications	1,100	sf	10.00	11,000			
138	SUBTOTAL					11,000		
139								
140	TOTAL - HVAC							
141							\$11,000	
142								
143	D40 FIRE PROTECTION							
144								
145	D40 FIRE PROTECTION, GENERALLY							
146	Sprinkler system modifications	1,100	sf	2.00	2,200			
147	SUBTOTAL					2,200		
148								
149	TOTAL - FIRE PROTECTION							
150							\$2,200	
151								
152	D50 ELECTRICAL							
153								
154	D5010 COMPLETE ELECTRICAL SYSTEMS							
155	Lighting, power and Tele/Data modifications	1,100	sf	15.00	16,500			
156	SUBTOTAL					16,500		
157								
158	TOTAL - ELECTRICAL							
159							\$16,500	
160								
161	E10 EQUIPMENT							
162								
163	E10 EQUIPMENT, GENERALLY							



Feasibility Design Estimate

GFA

1,100

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	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
RENOVATION TO McCALL MS - CAFETERIA OPTION 1							
	No work in this section						
	SUBTOTAL					-	
TOTAL - EQUIPMENT							
E20 FURNISHINGS							
	E2010 FIXED FURNISHINGS						
	No work in this section						
	SUBTOTAL					-	
	E2020 MOVABLE FURNISHINGS						
	All movable furnishings to be provided and installed by owner						
	SUBTOTAL					NIC	
TOTAL - FURNISHINGS							
F10 SPECIAL CONSTRUCTION							
	F10 SPECIAL CONSTRUCTION						
	No items in this section						
	SUBTOTAL						
TOTAL - SPECIAL CONSTRUCTION							
F20 SELECTIVE BUILDING DEMOLITION							
	F2010 BUILDING ELEMENTS DEMOLITION						
	Gut demolition; finishes and casework	1,100	sf	6.00	6,600		
	Create opening in bearing wall	1	ls	3,000.00	3,000		
	Remove walls	1,400	sf	3.00	4,200		
	Miscellaneous demo/protection	1,100	gfa	2.00	2,200		
	SUBTOTAL					16,000	
	F2020 HAZARDOUS COMPONENTS ABATEMENT						
	None Included						
	SUBTOTAL						
TOTAL - SELECTIVE BUILDING DEMOLITION							\$16,000



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
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Feasibility Design Estimate

GFA 2,400

CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO McCALL MS - CAFETERIA OPTION 2				
A10 FOUNDATIONS				
A1010 Standard Foundations	\$0			
A1020 Special Foundations	\$0			
A1030 Lowest Floor Construction	\$6,000	\$6,000	\$2.50	2.7%
B10 SUPERSTRUCTURE				
B1010 Upper Floor Construction	\$24,000			
B1020 Roof Construction	\$0	\$24,000	\$10.00	10.8%
B20 EXTERIOR CLOSURE				
B2010 Exterior Walls	\$0			
B2020 Windows/Curtainwall	\$0			
B2030 Exterior Doors	\$0	\$0	\$0.00	0.0%
B30 ROOFING				
B3010 Roof Coverings	\$0			
B3020 Roof Openings	\$0	\$0	\$0.00	0.0%
C10 INTERIOR CONSTRUCTION				
C1010 Partitions	\$19,600			
C1020 Interior Doors	\$0			
C1030 Specialties/Millwork	\$1,350	\$20,950	\$8.73	9.5%
C20 STAIRCASES				
C2010 Stair Construction	\$0			
C2020 Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES				
C3010 Wall Finishes	\$11,200			
C3020 Floor Finishes	\$28,100			
C3030 Ceiling Finishes	\$19,300	\$58,600	\$24.42	26.4%
D10 CONVEYING SYSTEMS				
D1010 Elevator	\$0	\$0	\$0.00	0.0%
D20 PLUMBING				
D20 Plumbing	\$0	\$0	\$0.00	0.0%
D30 HVAC				
D30 HVAC	\$24,000	\$24,000	\$10.00	10.8%
D40 FIRE PROTECTION				
D40 Fire Protection	\$4,800	\$4,800	\$2.00	2.2%



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

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Feasibility Design Estimate

GFA 2,400

CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO McCALL MS - CAFETERIA OPTION 2				
D50 ELECTRICAL				
D5010 Electrical Systems	\$36,000	\$36,000	\$15.00	16.2%
E10 EQUIPMENT				
E10 Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS				
E2010 Fixed Furnishings	\$0			
E2020 Movable Furnishings	NIC	\$0	\$0.00	0.0%
F10 SPECIAL CONSTRUCTION				
F10 Special Construction	\$0	\$0	\$0.00	0.0%
F20 SELECTIVE BUILDING DEMOLITION				
F2010 Building Elements Demolition	\$47,310			
F2020 Hazardous Components Abatement	\$0	\$47,310	\$19.71	21.3%
TOTAL DIRECT COST (Trade Costs)		\$221,660	\$92.36	100.0%



Feasibility Design Estimate

GFA 2,400

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - CAFETERIA OPTION 2

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TOTAL RENOVATED AREA (GFA)				2,400	GSF		
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

No work in this section

SUBTOTAL

-

A1020 SPECIAL FOUNDATIONS

No work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

Patch existing slab

2,400

sf

2.50

6,000

SUBTOTAL

6,000

TOTAL - FOUNDATIONS							\$6,000
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B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

Infill floor structure at removed stair

800

sf

30.00

24,000

SUBTOTAL

24,000

B1020 ROOF CONSTRUCTION

SUBTOTAL

-

TOTAL - SUPERSTRUCTURE							\$24,000
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B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS

No work assumed to existing exterior

SUBTOTAL

-

B2020 WINDOWS/CURTAINWALL

No work assumed to existing exterior

SUBTOTAL

-

B2030 EXTERIOR DOORS

No work assumed to existing exterior

SUBTOTAL

-

TOTAL - EXTERIOR CLOSURE							
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B30 ROOFING

B3010 ROOF COVERINGS

No work assumed to existing exterior

SUBTOTAL

-



Feasibility Design Estimate

GFA 2,400

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - CAFETERIA OPTION 2

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B3020 ROOF OPENINGS
 No work in this section
 SUBTOTAL

-

TOTAL - ROOFING

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

Patch existing walls	3,024	sf	3.00	9,072	
New partition	658	sf	16.00	10,528	
SUBTOTAL					19,600

C1020 INTERIOR DOORS

No work in this section
 SUBTOTAL

-

C1030 SPECIALTIES / MILLWORK

Room Signs	1	loc	150.00	150	
Miscellaneous sealants	2,400	sf	0.50	1,200	
SUBTOTAL					1,350

TOTAL - INTERIOR CONSTRUCTION \$20,950

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

No work in this section
 SUBTOTAL

-

C2020 STAIR FINISHES

No work in this section
 SUBTOTAL

-

TOTAL - STAIRCASES

C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to walls etc.	2,400	gsf	3.00	7,200	
Patch/paint existing walls	1	ls	4,000.00	4,000	
SUBTOTAL					11,200

C3020 FLOOR FINISHES

New resilient flooring	2,400	sf	8.00	19,200	
Patch existing floor at removed walls	205	lf	20.00	4,100	
Floor prep	2,400	sf	2.00	4,800	
SUBTOTAL					28,100



Feasibility Design Estimate

GFA 2,400

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - CAFETERIA OPTION 2

109	C3030 CEILING FINISHES							
110	ACT, 2x2	2,400	sf	7.00	16,800			
111	Patch existing floor at removed walls	100	lf	25.00	2,500			
112	SUBTOTAL					19,300		
113								
114	TOTAL - INTERIOR FINISHES							\$58,600
115								
116								
117	D10 CONVEYING SYSTEMS							
118								
119	No work in this section							
120	SUBTOTAL					-		
121								
122	TOTAL - CONVEYING SYSTEMS							
123								
124								
125	D20 PLUMBING							
126								
127	D20 PLUMBING, GENERALLY							
128	No work in this section							
129	SUBTOTAL					-		
130								
131	TOTAL - PLUMBING							
132								
133								
134	D30 HVAC							
135								
136	D30 HVAC, GENERALLY							
137	HVAC modifications	2,400	sf	10.00	24,000			
138	SUBTOTAL					24,000		
139								
140	TOTAL - HVAC							\$24,000
141								
142								
143	D40 FIRE PROTECTION							
144								
145	D40 FIRE PROTECTION, GENERALLY							
146	Sprinkler system modifications	2,400	sf	2.00	4,800			
147	SUBTOTAL					4,800		
148								
149	TOTAL - FIRE PROTECTION							\$4,800
150								
151								
152	D50 ELECTRICAL							
153								
154	D5010 COMPLETE ELECTRICAL SYSTEMS							
155	Lighting, power and Tele/Data modifications	2,400	sf	15.00	36,000			
156	SUBTOTAL					36,000		
157								
158	TOTAL - ELECTRICAL							\$36,000
159								
160								
161	E10 EQUIPMENT							
162								
163	E10 EQUIPMENT, GENERALLY							



Feasibility Design Estimate

GFA

2,400

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - CAFETERIA OPTION 2

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No work in this section
 SUBTOTAL

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TOTAL - EQUIPMENT

E20 FURNISHINGS

E2010 FIXED FURNISHINGS

No work in this section
 SUBTOTAL

-

E2020 MOVABLE FURNISHINGS

All movable furnishings to be provided and installed
 by owner
 SUBTOTAL

NIC

TOTAL - FURNISHINGS

F10 SPECIAL CONSTRUCTION

F10 SPECIAL CONSTRUCTION

No items in this section
 SUBTOTAL

TOTAL - SPECIAL CONSTRUCTION

F20 SELECTIVE BUILDING DEMOLITION

F2010 BUILDING ELEMENTS DEMOLITION

Gut demolition; finishes and casework	2,400	sf	6.00	14,400	
Create opening in bearing wall	1	ls	4,500.00	4,500	
Remove walls	2,870	sf	3.00	8,610	
Remove stair flight and patch/new finishes	1	ls	15,000.00	15,000	
Miscellaneous demo/protection	2,400	gfa	2.00	4,800	
SUBTOTAL					47,310

F2020 HAZARDOUS COMPONENTS ABATEMENT

None Included
 SUBTOTAL

TOTAL - SELECTIVE BUILDING DEMOLITION **\$47,310**



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

14-Feb-17

Feasibility Design Estimate

GFA 1,525

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION AT CAFETERIA - OPTION 3					
A10 FOUNDATIONS					
A1010	Standard Foundations	\$184,721			
A1020	Special Foundations	\$54,250			
A1030	Lowest Floor Construction	\$56,272	\$295,243	\$193.60	37.4%
A20 BASEMENT CONSTRUCTION					
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE					
B1010	Upper Floor Construction	\$0			
B1020	Roof Construction	\$55,675	\$55,675	\$36.51	7.1%
B20 EXTERIOR CLOSURE					
B2010	Exterior Walls	\$0			
B2020	Windows	\$181,213			
B2030	Exterior Doors	\$0	\$181,213	\$118.83	22.9%
B30 ROOFING					
B3010	Roof Coverings	\$34,933			
B3020	Roof Openings	\$0	\$34,933	\$22.91	4.4%
C10 INTERIOR CONSTRUCTION					
C1010	Partitions	\$0			
C1020	Interior Doors	\$0			
C1030	Specialties/Millwork	\$3,431	\$3,431	\$2.25	0.4%
C20 STAIRCASES					
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES					
C3010	Wall Finishes	\$6,863			
C3020	Floor Finishes	\$13,725			
C3030	Ceiling Finishes	\$10,675	\$31,263	\$20.50	4.0%
D10 CONVEYING SYSTEMS					
D1010	Elevator	\$0	\$0	\$0.00	0.0%
D20 PLUMBING					
D20	Plumbing	\$7,625	\$7,625	\$5.00	1.0%



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

14-Feb-17

Feasibility Design Estimate

GFA 1,525

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
ADDITION AT CAFETERIA - OPTION 3					
D30 HVAC					
D30 HVAC		\$68,625	\$68,625	\$45.00	8.7%
D40 FIRE PROTECTION					
D40 Fire Protection		\$6,863	\$6,863	\$4.50	0.9%
D50 ELECTRICAL					
D5010 Complete System		\$38,125	\$38,125	\$25.00	4.8%
E10 EQUIPMENT					
E10 Equipment		\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010 Fixed Furnishings		\$8,748			
E2020 Movable Furnishings		NIC	\$8,748	\$5.74	1.1%
F10 SPECIAL CONSTRUCTION					
F10 Special Construction		\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010 Building Elements Demolition		\$57,960			
F2020 Hazardous Components Abatement		\$0	\$57,960	\$38.01	7.3%
TOTAL DIRECT COST (Trade Costs)			\$789,704	\$517.84	100.0%



Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT CAFETERIA - OPTION 3

GROSS FLOOR AREA CALCULATION

First Floor 1,525

TOTAL GROSS FLOOR AREA (GFA)					1,525	sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 8'-0" x 1'-6"

Excavation	178	cy	35.00	6,230
Store on site for reuse	178	cy	14.00	2,492
Backfill with existing fill	141	cy	16.00	2,256
Remove surplus fill off site	37	cy	25.00	925
Formwork	240	sf	12.00	2,880
Re-bar	4,440	lbs	1.20	5,328
Concrete material; 3,000 psi	37	cy	125.00	4,625
Placing concrete	37	cy	55.00	2,035

Foundation walls at exterior - 14" thick

Formwork	3,200	sf	16.00	51,200
Re-bar, 4.5#/sf	7,200	lbs	1.20	8,640
Concrete material; 4,000 psi	73	cy	135.00	9,855
Placing concrete	73	cy	65.00	4,745
Waterproofing foundation wall and footing	1,600	sf	7.00	11,200
Insulation to foundation walls; 2" thick	320	sf	2.50	800
Form shelf	80	lf	8.00	640

Column footings, typical, 6' x 6' x 2'-0"

Excavation	94	cy	20.00	1,880
Store on site for reuse	94	cy	14.00	1,316
Backfill with new fill	72	cy	16.00	1,152
Remove surplus fill off site	22	cy	20.00	440
Formwork	384	sf	11.00	4,224
Re-bar	4,480	lbs	1.20	5,376
Concrete material; 3,000 psi	22	cy	125.00	2,750
Placing concrete	22	cy	55.00	1,210
Set anchor bolts grout plates	8	ea	150.00	1,200

Interior pilasters

Formwork	234	sf	11.00	2,574
Re-bar	1,440	lbs	1.20	1,728
Concrete material; 3,000 psi	4	cy	125.00	500
Placing concrete	4	cy	55.00	220

Work around existing utilities	1	ls	10,000.00	10,000
Foundations against face of existing building	33	lf	1,100.00	36,300

SUBTOTAL 184,721

A1020 SPECIAL FOUNDATIONS

Sheeting and shoring allowance	1,085	sf	50.00	54,250
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Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT CAFETERIA - OPTION 3

50	SUBTOTAL					54,250	
51	A1030 LOWEST FLOOR CONSTRUCTION						
52	<u>New Slab on grade, 5" thick</u>						
54	Structural gravel fill	960	cy	30.00	28,800		
55	Rigid insulation	1,525	sf	2.25	3,431		
56	Vapor barrier	1,525	sf	1.00	1,525		
57	Mesh reinforcing 15% lap	1,754	sf	0.80	1,403		
58	Concrete - 5" thick	25	cy	125.00	3,125		
59	Placing concrete	25	cy	45.00	1,125		
60	Finishing and curing concrete	1,525	sf	4.00	6,100		
61	Control joints - saw cut	1,525	sf	0.50	763		
62	<u>Miscellaneous</u>						
63	Dewatering	1	ea	10,000.00	10,000		
64	SUBTOTAL					56,272	

TOTAL - FOUNDATIONS	\$295,243
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A20 BASEMENT CONSTRUCTION

71	A2010 BASEMENT EXCAVATION						
72	No items in this section						
73	SUBTOTAL					-	
75	A2020 BASEMENT WALLS						
76	No items in this section						
77	SUBTOTAL					-	

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

84	B1010 FLOOR CONSTRUCTION						
85	No items in this section						
86	SUBTOTAL					-	
88	B1020 ROOF CONSTRUCTION						
89	<u>Roof Structure - Steel:</u>						
90	Steel beams/Joists; 13#/SF	10	tns	4,500.00	45,000		
91	<u>Roof Structure</u>						
92	1-1/2" Metal floor Deck @ roof	1,525	sf	3.00	4,575		
93	<u>Miscellaneous</u>						
94	Fire proofing to columns, beams and deck	1,525	sf	4.00	6,100		
95	SUBTOTAL					55,675	

TOTAL - SUPERSTRUCTURE	\$55,675
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Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT CAFETERIA - OPTION 3

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B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS
 No items in this section
 SUBTOTAL

B2020 WINDOWS

Curtainwall	1,458	sf	120.00	174,960	
Backer rod & double sealant	481	lf	9.00	4,329	
Wood blocking at openings	481	lf	4.00	1,924	
SUBTOTAL					181,213

B2030 EXTERIOR DOORS
 No items in this section
 SUBTOTAL

TOTAL - EXTERIOR CLOSURE \$181,213

B30 ROOFING

B3010 ROOF COVERINGS
Flat roofing

PVC roof membrane fully adhered	1,525	sf	8.00	12,200	
Insulation	1,525	sf	7.00	10,675	
1/2" dens-deck protection board	1,525	sf	2.00	3,050	
Reinforced vapor barrier	1,525	sf	1.50	2,288	
Rough blocking	320	lf	6.00	1,920	
<u>Miscellaneous Roofing</u>					
Roof fascia/cornice	80	lf	60.00	4,800	
SUBTOTAL					34,933

B3020 ROOF OPENINGS
 Skylights, allow NIC
 SUBTOTAL

TOTAL - ROOFING \$34,933

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS
 No items in this section
 SUBTOTAL

C1020 INTERIOR DOORS
 No items in this section
 SUBTOTAL

C1030 SPECIALTIES / MILLWORK

Miscellaneous metals throughout building	1,525	sf	1.25	1,906	
Miscellaneous sealants throughout building	1,525	sf	1.00	1,525	



Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT CAFETERIA - OPTION 3

152						3,431		
153								
154	TOTAL - INTERIOR CONSTRUCTION						\$3,431	
155								
156								
157	C20 STAIRCASES							
158								
159	C2010 STAIR CONSTRUCTION							
160	No items in this section							
161	SUBTOTAL					-		
162								
163	C2020 STAIR FINISHES							
164	No items in this section							
165	SUBTOTAL					-		
166								
167	TOTAL - STAIRCASES							
168								
169								
170	C30 INTERIOR FINISHES							
171								
172	C3010 WALL FINISHES							
173	Wall finishes	1,525	gfa	4.50	6,863			
174	SUBTOTAL					6,863		
175								
176	C3020 FLOOR FINISHES							
177	Floor finishes	1,525	sf	9.00	13,725			
178	SUBTOTAL					13,725		
179								
180	C3030 CEILING FINISHES							
181	Ceiling finishes	1,525	sf	7.00	10,675			
182	SUBTOTAL					10,675		
183								
184	TOTAL - INTERIOR FINISHES						\$31,263	
185								
186								
187	D10 CONVEYING SYSTEMS							
188								
189	D1010 ELEVATOR							
190	No items in this section							
191	SUBTOTAL					-		
192								
193	TOTAL - CONVEYING SYSTEMS							
194								
195								
196	D20 PLUMBING							
197								
198	D20 PLUMBING, GENERALLY							
199	Plumbing allowance	1,525	gsf	5.00	7,625			
200	SUBTOTAL					7,625		
201								
202	TOTAL - PLUMBING						\$7,625	
203								
204								
205	D30 HVAC							
206								
207	D30 HVAC, GENERALLY							
208	HVAC complete system	1,525	gsf	45.00	68,625			



Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT CAFETERIA - OPTION 3

209						68,625		
	SUBTOTAL							
210	TOTAL - HVAC							\$68,625
211								
212								
213								
214	D40 FIRE PROTECTION							
215								
216	D40 FIRE PROTECTION, GENERALLY							
217	Sprinkler system	1,525	gsf	4.50	6,863			
218	SUBTOTAL						6,863	
219								
220	TOTAL - FIRE PROTECTION							\$6,863
221								
222								
223	D50 ELECTRICAL							
224								
225	D5010 COMPLETE ELECTRICAL SYSTEM							
226	Electrical system; complete	1,525	gsf	25.00	38,125			
227	SUBTOTAL						38,125	
228								
229								
230	TOTAL - ELECTRICAL							\$38,125
231								
232								
233	E10 EQUIPMENT							
234								
235	E10 EQUIPMENT, GENERALLY							
236	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)				FF+E			
237	SUBTOTAL						-	
238								
239	TOTAL - EQUIPMENT							
240								
241								
242	E20 FURNISHINGS							
243								
244	E2010 FIXED FURNISHINGS							
245	Manual operated roller shades	1,458	sf	6.00	8,748			
246	SUBTOTAL						8,748	
247								
248	E2020 MOVABLE FURNISHINGS							
249	All movable furnishings to be provided and installed by owner							
250	SUBTOTAL						NIC	
251								
252	TOTAL - FURNISHINGS							\$8,748
253								
254								
255	F10 SPECIAL CONSTRUCTION							
256								
257	F10 SPECIAL CONSTRUCTION							
258	No Work in this section							
259	SUBTOTAL							
260								
261	TOTAL - SPECIAL CONSTRUCTION							
262								
263								
264	F20 SELECTIVE BUILDING DEMOLITION							
265								



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

14-Feb-17

Feasibility Design Estimate

GFA 1,525

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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ADDITION AT CAFETERIA - OPTION 3

266	F2010 BUILDING ELEMENTS DEMOLITION						
267	Create openings to existing façade for new connections	864	sf	15.00	12,960		
268	Demolish existing patio and steps	1	ls	20,000.00	20,000		
269	Relocate existing utilities	1	ls	15,000.00	15,000		
270	Restore/new landscaping	1	ls	10,000.00	10,000		
271	SUBTOTAL					57,960	
272							
273	F2020 HAZARDOUS COMPONENTS ABATEMENT						
274	None Included						
275	SUBTOTAL						
276							
277	TOTAL - SELECTIVE BUILDING DEMOLITION						\$57,960



Feasibility Design Estimate

GFA 1,250

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - TEACHERS ROOM

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TOTAL RENOVATED AREA (GFA)					1,250	GSF	
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C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

New walls at storage area	403	sf	15.00	6,045	
SUBTOTAL					6,045

C1020 INTERIOR DOORS

New single door	1	ea	1,800.00	1,800	
SUBTOTAL					1,800

C1030 SPECIALTIES / MILLWORK

Room Signs	1	loc	150.00	150	
Miscellaneous sealants	1,250	sf	0.50	625	
SUBTOTAL					775

TOTAL - INTERIOR CONSTRUCTION							\$8,620
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C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to walls etc.	1,250	gsf	3.00	3,750	
SUBTOTAL					3,750

C3020 FLOOR FINISHES

New resilient flooring	1,250	sf	8.00	10,000	
Floor prep	1,250	sf	2.00	2,500	
SUBTOTAL					12,500

C3030 CEILING FINISHES

No items in this section					
SUBTOTAL					-

TOTAL - INTERIOR FINISHES							\$16,250
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D30 HVAC

D30 HVAC, GENERALLY

No items in this section					
SUBTOTAL					-

TOTAL - HVAC							
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D40 FIRE PROTECTION

D40 FIRE PROTECTION, GENERALLY

Sprinkler system modifications	1,250	sf	2.00	2,500	
SUBTOTAL					2,500



Feasibility Design Estimate

GFA

1,250

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - TEACHERS ROOM

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TOTAL - FIRE PROTECTION							\$2,500
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D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEMS

Lighting, power and Tele/Data modifications **1,250** sf 15.00 18,750

SUBTOTAL 18,750

TOTAL - ELECTRICAL							\$18,750
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E20 FURNISHINGS

E2010 FIXED FURNISHINGS

No work in this section

SUBTOTAL -

E2020 MOVABLE FURNISHINGS

All movable furnishings to be provided and installed
 by owner

SUBTOTAL NIC

TOTAL - FURNISHINGS							
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F20 SELECTIVE BUILDING DEMOLITION

F2010 BUILDING ELEMENTS DEMOLITION

Gut demolition; floor finishes **1,250** sf 1.00 1,250

SUBTOTAL 1,250

F2020 HAZARDOUS COMPONENTS ABATEMENT

None Included

SUBTOTAL

TOTAL - SELECTIVE BUILDING DEMOLITION							\$1,250
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TOTAL - TEACHERS ROOM							\$47,370
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Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

14-Feb-17

Feasibility Design Estimate

GFA 4,900

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$148,669			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$65,553	\$214,222	\$43.72	15.5%
A20	BASEMENT CONSTRUCTION				
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$0			
B1020	Roof Construction	\$144,500	\$144,500	\$29.49	10.5%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$133,595			
B2020	Windows	\$110,011			
B2030	Exterior Doors	\$16,520	\$260,126	\$53.09	18.8%
B30	ROOFING				
B3010	Roof Coverings	\$106,330			
B3020	Roof Openings	\$0	\$106,330	\$21.70	7.7%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$139,838			
C1020	Interior Doors	\$66,000			
C1030	Specialties/Millwork	\$20,297	\$226,135	\$46.15	16.4%
C20	STAIRCASES				
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$29,646			
C3020	Floor Finishes	\$32,437			
C3030	Ceiling Finishes	\$23,540	\$85,623	\$17.47	6.2%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$0	\$0	\$0.00	0.0%
D20	PLUMBING				
D20	Plumbing	\$30,000	\$30,000	\$6.12	2.2%



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

14-Feb-17

Feasibility Design Estimate

GFA 4,900

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1					
D30 HVAC					
D30	HVAC	\$137,200	\$137,200	\$28.00	9.9%
D40 FIRE PROTECTION					
D40	Fire Protection	\$19,600	\$19,600	\$4.00	1.4%
D50 ELECTRICAL					
D5010	Complete System	\$107,800	\$107,800	\$22.00	7.8%
E10 EQUIPMENT					
E10	Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$24,342			
E2020	Movable Furnishings	NIC	\$24,342	\$4.97	1.8%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$25,000			
F2020	Hazardous Components Abatement	\$0	\$25,000	\$5.10	1.8%
TOTAL DIRECT COST (Trade Costs)			\$1,380,878	\$281.81	100.0%



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1

GROSS FLOOR AREA CALCULATION

First Floor 4,900

TOTAL GROSS FLOOR AREA (GFA) 4,900 sf

A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	244	cy	20.00	4,880
Store on site for reuse	244	cy	14.00	3,416
Backfill with existing fill	227	cy	16.00	3,632
Remove surplus fill off site	17	cy	25.00	425
Formwork	440	sf	12.00	5,280
Re-bar, 10#/lf	2,200	lbs	1.20	2,640
Concrete material; 3,000 psi	17	cy	125.00	2,125
Placing concrete	17	cy	55.00	935

Foundation walls at exterior - 14" thick

Formwork	1,760	sf	14.00	24,640
Re-bar, 4.5#/sf	3,960	lbs	1.20	4,752
Concrete material; 4,000 psi	40	cy	135.00	5,400
Placing concrete	40	cy	65.00	2,600
Dampproofing foundation wall and footing	1,320	sf	1.90	NIC
Insulation to foundation walls; 2" thick	880	sf	2.50	2,200
Form shelf	220	lf	8.00	1,760

Column footings, typical, 5' x 5' x 2'-0"

Excavation	285	cy	20.00	5,700
Store on site for reuse	285	cy	14.00	3,990
Backfill with new fill	227	cy	16.00	3,632
Remove surplus fill off site	58	cy	20.00	1,160
Formwork	1,200	sf	11.00	13,200
Re-bar	8,120	lbs	1.20	9,744
Concrete material; 3,000 psi	58	cy	125.00	7,250
Placing concrete	58	cy	55.00	3,190
Set anchor bolts grout plates	30	ea	150.00	4,500

Interior pilasters

Formwork	878	sf	11.00	9,658
Re-bar	5,400	lbs	1.20	6,480
Concrete material; 3,000 psi	16	cy	125.00	2,000
Placing concrete	16	cy	55.00	880
Foundations against existing building	70	lf	180.00	12,600

SUBTOTAL

148,669

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1

51	<u>New Slab on grade, 5" thick</u>							
52	Structural gravel fill, 8"	121	cy	30.00	3,630			
53	Base course, 8" gravel	121	cy	40.00	4,840			
54	Rigid insulation	4,900	sf	2.25	11,025			
55	Vapor barrier	4,900	sf	1.00	4,900			
56	Mesh reinforcing 15% lap	5,635	sf	0.80	4,508			
57	Concrete - 5" thick	80	cy	125.00	10,000			
58	Placing concrete	80	cy	45.00	3,600			
59	Finishing and curing concrete	4,900	sf	4.00	19,600			
60	Control joints - saw cut	4,900	sf	0.50	2,450			
61	<u>Miscellaneous</u>							
62	Dewatering	1	ea	1,000.00	1,000			
63	SUBTOTAL					65,553		
64								
65	TOTAL - FOUNDATIONS							\$214,222

A20 BASEMENT CONSTRUCTION

A2010 BASEMENT EXCAVATION

No items in this section

SUBTOTAL

-

A2020 BASEMENT WALLS

No items in this section

SUBTOTAL

-

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

12 lbs/sf

B1010 FLOOR CONSTRUCTION

29 tns

No Work in this section

SUBTOTAL

-

B1020 ROOF CONSTRUCTION

Roof Structure - Steel:

Steel beams/Joists; 12#/SF

29 tns 3,800.00 110,200

Roof Structure

1-1/2" Metal floor Deck @ roof

4,900 sf 3.00 14,700

Miscellaneous

Roof screen framing - allow

NIC

Fire proofing to columns, beams and deck

4,900 sf 4.00 19,600

SUBTOTAL

144,500

TOTAL - SUPERSTRUCTURE

\$144,500



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1

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B20 EXTERIOR CLOSURE

B2010	EXTERIOR WALLS; 60% solid/40% glass	1,848	sf				
	<u>Interior skin</u>						
	6" metal stud backup	1,848	sf	7.50	13,860		
	Batt insulation in stud	1,848	sf	2.25	4,158		
	2 1/2" Rigid Insulation	1,848	sf	3.00	5,544		
	Air barrier	1,848	sf	6.00	11,088		
	Air barrier/flashing at windows	407	lf	7.00	2,849		
	Gypsum Sheathing	1,848	sf	2.75	5,082		
	Drywall lining to interior face of stud backup	1,848	sf	3.00	5,544		
	<u>Exterior skin</u>						
	Brick veneer; 75% of exterior wall	1,386	sf	35.00	48,510		
	Metal panels; 25% of exterior wall	462	sf	60.00	27,720		
	<u>Miscellaneous</u>						
	Staging to exterior wall	3,080	sf	3.00	9,240		
	SUBTOTAL					133,595	
B2020	WINDOWS	1,232	sf				
	Premium for sunscreen and light shelf elements	1	ls		NIC		
	Windows/storefront	1,232	sf	85.00	104,720		
	Backer rod & double sealant	407	lf	9.00	3,663		
	Wood blocking at openings	407	lf	4.00	1,628		
	SUBTOTAL					110,011	
B2030	EXTERIOR DOORS						
	Glazed entrance doors including frame and hardware; double door at corridor exit	2	pr	8,000.00	16,000		
	Backer rod & double sealant	40	lf	9.00	360		
	Wood blocking at openings	40	lf	4.00	160		
	SUBTOTAL					16,520	
TOTAL - EXTERIOR CLOSURE							\$260,126

B30 ROOFING

B3010	ROOF COVERINGS						
	<u>Flat roofing</u>						
	PVC roof membrane fully adhered	4,900	sf	9.00	44,100		
	Insulation	4,900	sf	7.00	34,300		
	1/2" dens-deck protection board	4,900	sf	2.00	9,800		
	Reinforced vapor barrier	4,900	sf	1.50	7,350		
	Rough blocking	880	lf	6.00	5,280		
	<u>Miscellaneous Roofing</u>						
	Roof screens - allow				NIC		
	Roof fascia/cornice	220	lf	25.00	5,500		
	SUBTOTAL					106,330	



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1

148	B3020 ROOF OPENINGS							
149	Skylights, allow					NIC		
150	Roof hatch					NIC		
151	SUBTOTAL						-	
152								
153	TOTAL - ROOFING							\$106,330

C10 INTERIOR CONSTRUCTION

156	C10 INTERIOR CONSTRUCTION							
157								
158	C1010 PARTITIONS							
159	GWB furred wall at existing exterior wall	1,050	sf	12.00	12,600			
160	Corridors; GWB with 2 lysr corridor side	4,860	sf	15.55	75,573			
161	General Walls; GWB with 1 lysr each side	3,390	sf	13.75	46,613			
162	Sealants & caulking at partitions	4,860	sf	0.50	2,430			
163	Rough blocking to partitions	374	lf	3.00	1,122			
164	Glazed partitions/borrowed lights - allowance	1	ls	1,500.00	1,500			
165	SUBTOTAL						139,838	
166								
167	C1020 INTERIOR DOORS							
168	Corridor glazed doors	1	pr	8,000.00	8,000			
169	Single door with sidelight	20	ea	2,900.00	58,000			
170	SUBTOTAL						66,000	
171								
172	C1030 SPECIALTIES / MILLWORK							
173	Marker boards/tackboards in conference room	128	sf	24.00	3,072			
174	Toilet partitions and accessories	2	rooms	2,000.00	4,000			
175	Room Signs	20	loc	110.00	2,200			
176	Miscellaneous metals throughout building	4,900	sf	1.25	6,125			
177	Miscellaneous sealants throughout building	4,900	sf	1.00	4,900			
178	SUBTOTAL						20,297	
179								
180	TOTAL - INTERIOR CONSTRUCTION							\$226,135

C20 STAIRCASES

184	C2010 STAIR CONSTRUCTION							
185	No Work in this section							
186	SUBTOTAL						-	
187								
188	C2020 STAIR FINISHES							
189	No Work in this section							
190	SUBTOTAL						-	
191								
192								
193	TOTAL - STAIRCASES							

C30 INTERIOR FINISHES

196	C3010 WALL FINISHES						
197							
198	Paint to GWB	17,550	sf	1.00	17,550		
199	Ceramic Tile to toilets	504	sf	24.00	12,096		
200							



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1								
201	SUBTOTAL					29,646		
202								
203	C3020 FLOOR FINISHES							
204	Carpet floor finishes	2,675	sf	5.00	13,375			
205	Resilient floor	1,913	sf	6.50	12,435			
206	Ceramic Tile to toilets	120	sf	25.00	3,000			
207	Rubber base	1,319	lf	2.75	3,627			
208	SUBTOTAL					32,437		
209								
210	C3030 CEILING FINISHES							
211	Allowance for ceiling finishes; 2 x 2 ACT	4,708	sf	5.00	23,540			
212	SUBTOTAL					23,540		
213								
214	TOTAL - INTERIOR FINISHES						\$85,623	
215								
216								
217	D10 CONVEYING SYSTEMS							
218								
219	D1010 ELEVATOR							
220	No Work in this section							
221	SUBTOTAL					-		
222								
223	TOTAL - CONVEYING SYSTEMS							
224								
225								
226	D20 PLUMBING							
227								
228	D20 PLUMBING, GENERALLY							
229	New fixtures	6	ftx	5,000.00	30,000			
230	SUBTOTAL					30,000		
231								
232	TOTAL - PLUMBING							
233							\$30,000	
234								
235	D30 HVAC							
236								
237	D30 HVAC, GENERALLY							
238	HVAC complete system	4,900	gsf	28.00	137,200			
239	SUBTOTAL					137,200		
240								
241	TOTAL - HVAC							
242							\$137,200	
243								
244	D40 FIRE PROTECTION							
245								
246	D40 FIRE PROTECTION, GENERALLY							
247	Sprinkler system	4,900	gsf	4.00	19,600			
248	SUBTOTAL					19,600		
249								
250	TOTAL - FIRE PROTECTION							
251							\$19,600	
252								
253	D50 ELECTRICAL							
254								
255	D5010 COMPLETE ELECTRICAL SYSTEM							
256	Electrical system; complete	4,900	gsf	22.00	107,800			
257	SUBTOTAL					107,800		
258								



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO LYNCH OPTION WPS-1

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TOTAL - ELECTRICAL							\$107,800
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E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY

AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)

FF+E

SUBTOTAL

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TOTAL - EQUIPMENT							
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E20 FURNISHINGS

E2010 FIXED FURNISHINGS

Entry mats & frames - recessed with carpet/rubber strips

50 sf

45.00

2,250

Manual operated roller shades

1,232 sf

6.00

7,392

Miscellaneous casework

4,900 gsf

3.00

14,700

SUBTOTAL

24,342

E2020 MOVABLE FURNISHINGS

All movable furnishings to be provided and installed by owner

SUBTOTAL

NIC

TOTAL - FURNISHINGS							\$24,342
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F10 SPECIAL CONSTRUCTION

F10 SPECIAL CONSTRUCTION

No Work in this section

SUBTOTAL

TOTAL - SPECIAL CONSTRUCTION							
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F20 SELECTIVE BUILDING DEMOLITION

F2010 BUILDING ELEMENTS DEMOLITION

Create openings to existing façade for new connections

1 loc

25,000.00

25,000

SUBTOTAL

25,000

F2020 HAZARDOUS COMPONENTS ABATEMENT

None Included

SUBTOTAL

TOTAL - SELECTIVE BUILDING DEMOLITION							\$25,000
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CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$136,069			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$65,553	\$201,622	\$41.15	15.7%
A20	BASEMENT CONSTRUCTION				
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$0			
B1020	Roof Construction	\$135,800	\$135,800	\$27.71	10.6%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$92,308			
B2020	Windows	\$75,988			
B2030	Exterior Doors	\$16,520	\$184,816	\$37.72	14.4%
B30	ROOFING				
B3010	Roof Coverings	\$106,330			
B3020	Roof Openings	\$0	\$106,330	\$21.70	8.3%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$139,838			
C1020	Interior Doors	\$66,000			
C1030	Specialties/Millwork	\$20,297	\$226,135	\$46.15	17.6%
C20	STAIRCASES				
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$29,646			
C3020	Floor Finishes	\$32,437			
C3030	Ceiling Finishes	\$23,540	\$85,623	\$17.47	6.7%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$0	\$0	\$0.00	0.0%
D20	PLUMBING				
D20	Plumbing	\$30,000	\$30,000	\$6.12	2.3%



Feasibility Design Estimate

GFA 4,900

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2					
D30 HVAC					
D30	HVAC	\$137,200	\$137,200	\$28.00	10.7%
D40 FIRE PROTECTION					
D40	Fire Protection	\$19,600	\$19,600	\$4.00	1.5%
D50 ELECTRICAL					
D5010	Complete System	\$107,800	\$107,800	\$22.00	8.4%
E10 EQUIPMENT					
E10	Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$22,056			
E2020	Movable Furnishings	NIC	\$22,056	\$4.50	1.7%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$25,000			
F2020	Hazardous Components Abatement	\$0	\$25,000	\$5.10	2.0%
TOTAL DIRECT COST (Trade Costs)			\$1,281,982	\$261.63	100.0%



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

GROSS FLOOR AREA CALCULATION

First Floor 4,900

TOTAL GROSS FLOOR AREA (GFA) 4,900 sf

A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	244	cy	20.00	4,880
Store on site for reuse	244	cy	14.00	3,416
Backfill with existing fill	227	cy	16.00	3,632
Remove surplus fill off site	17	cy	25.00	425
Formwork	440	sf	12.00	5,280
Re-bar, 10#/lf	2,200	lbs	1.20	2,640
Concrete material; 3,000 psi	17	cy	125.00	2,125
Placing concrete	17	cy	55.00	935

Foundation walls at exterior - 14" thick

Formwork	1,760	sf	14.00	24,640
Re-bar, 4.5#/sf	3,960	lbs	1.20	4,752
Concrete material; 4,000 psi	40	cy	135.00	5,400
Placing concrete	40	cy	65.00	2,600
Dampproofing foundation wall and footing	1,320	sf	1.90	NIC
Insulation to foundation walls; 2" thick	880	sf	2.50	2,200
Form shelf	220	lf	8.00	1,760

Column footings, typical, 5' x 5' x 2'-0"

Excavation	285	cy	20.00	5,700
Store on site for reuse	285	cy	14.00	3,990
Backfill with new fill	227	cy	16.00	3,632
Remove surplus fill off site	58	cy	20.00	1,160
Formwork	1,200	sf	11.00	13,200
Re-bar	8,120	lbs	1.20	9,744
Concrete material; 3,000 psi	58	cy	125.00	7,250
Placing concrete	58	cy	55.00	3,190
Set anchor bolts grout plates	30	ea	150.00	4,500

Interior pilasters

Formwork	878	sf	11.00	9,658
Re-bar	5,400	lbs	1.20	6,480
Concrete material; 3,000 psi	16	cy	125.00	2,000
Placing concrete	16	cy	55.00	880

SUBTOTAL

136,069

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

51	Structural gravel fill, 8"	121	cy	30.00	3,630			
52	Base course, 8" gravel	121	cy	40.00	4,840			
53	Rigid insulation	4,900	sf	2.25	11,025			
54	Vapor barrier	4,900	sf	1.00	4,900			
55	Mesh reinforcing 15% lap	5,635	sf	0.80	4,508			
56	Concrete - 5" thick	80	cy	125.00	10,000			
57	Placing concrete	80	cy	45.00	3,600			
58	Finishing and curing concrete	4,900	sf	4.00	19,600			
59	Control joints - saw cut	4,900	sf	0.50	2,450			
60	<u>Miscellaneous</u>							
61	Dewatering	1	ea	1,000.00	1,000			
62	SUBTOTAL					65,553		
63								
64	TOTAL - FOUNDATIONS							\$201,622

A20 BASEMENT CONSTRUCTION

A2010 BASEMENT EXCAVATION

No items in this section

SUBTOTAL

-

A2020 BASEMENT WALLS

No items in this section

SUBTOTAL

-

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

No Work in this section

SUBTOTAL

12 lbs/sf

29 tns

-

B1020 ROOF CONSTRUCTION

Roof Structure - Steel:

Steel beams/Joists; 12#/SF

29 tns 3,500.00 101,500

Roof Structure

1-1/2" Metal floor Deck @ roof

4,900 sf 3.00 14,700

Miscellaneous

Roof screen framing - allow

NIC

Fire proofing to columns, beams and deck

4,900 sf 4.00 19,600

SUBTOTAL

135,800

TOTAL - SUPERSTRUCTURE \$135,800



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

99	B20 EXTERIOR CLOSURE							
100								
101	B2010 EXTERIOR WALLS; 60% solid/40% glass	1,277	sf					
102	<u>Interior skin</u>							
103	6" metal stud backup	1,277	sf	7.50	9,578			
104	Batt insulation in stud	1,277	sf	2.25	2,873			
105	2 1/2" Rigid Insulation	1,277	sf	3.00	3,831			
106	Air barrier	1,277	sf	6.00	7,662			
107	Air barrier/flashing at windows	281	lf	7.00	1,967			
108	Gypsum Sheathing	1,277	sf	2.75	3,512			
109	Drywall lining to interior face of stud backup	1,277	sf	3.00	3,831			
110	<u>Exterior skin</u>							
111	Brick veneer; 75% of exterior wall	958	sf	35.00	33,530			
112	Metal panels; 25% of exterior wall	319	sf	60.00	19,140			
113	<u>Miscellaneous</u>							
114	Staging to exterior wall	2,128	sf	3.00	6,384			
115	SUBTOTAL					92,308		
116								
117	B2020 WINDOWS	851	sf					
118	Premium for sunscreen and light shelf elements	1	ls		NIC			
119	Windows/storefront	851	sf	85.00	72,335			
120	Backer rod & double sealant	281	lf	9.00	2,529			
121	Wood blocking at openings	281	lf	4.00	1,124			
122	SUBTOTAL					75,988		
123								
124	B2030 EXTERIOR DOORS							
125	Glazed entrance doors including frame and hardware; double door at corridor exit	2	pr	8,000.00	16,000			
126	Backer rod & double sealant	40	lf	9.00	360			
127	Wood blocking at openings	40	lf	4.00	160			
128	SUBTOTAL					16,520		
129								
130	TOTAL - EXTERIOR CLOSURE						\$184,816	

132							
133	B30 ROOFING						
134							
135	B3010 ROOF COVERINGS						
136	<u>Flat roofing</u>						
137	PVC roof membrane fully adhered	4,900	sf	9.00	44,100		
138	Insulation	4,900	sf	7.00	34,300		
139	1/2" dens-deck protection board	4,900	sf	2.00	9,800		
140	Reinforced vapor barrier	4,900	sf	1.50	7,350		
141	Rough blocking	880	lf	6.00	5,280		
142	<u>Miscellaneous Roofing</u>						
143	Roof screens - allow				NIC		
144	Roof fascia/cornice	220	lf	25.00	5,500		
145	SUBTOTAL					106,330	
146							
147	B3020 ROOF OPENINGS						



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

148	Skylights, allow					NIC	
149	Roof hatch					NIC	
150	SUBTOTAL						-
TOTAL - ROOFING							\$106,330

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

158	GWB furred wall at existing exterior wall	1,050	sf	12.00	12,600		
159	Corridors; GWB with 2 lysr corridor side	4,860	sf	15.55	75,573		
160	General Walls; GWB with 1 lysr each side	3,390	sf	13.75	46,613		
161	Sealants & caulking at partitions	4,860	sf	0.50	2,430		
162	Rough blocking to partitions	374	lf	3.00	1,122		
163	Glazed partitions/borrowed lights - allowance	1	ls	1,500.00	1,500		
164	SUBTOTAL						139,838

C1020 INTERIOR DOORS

167	Corridor glazed doors	1	pr	8,000.00	8,000		
168	Single door with sidelight	20	ea	2,900.00	58,000		
169	SUBTOTAL						66,000

C1030 SPECIALTIES / MILLWORK

172	Marker boards/tackboards in conference room	128	sf	24.00	3,072		
173	Toilet partitions and accessories	2	rooms	2,000.00	4,000		
174	Room Signs	20	loc	110.00	2,200		
175	Miscellaneous metals throughout building	4,900	sf	1.25	6,125		
176	Miscellaneous sealants throughout building	4,900	sf	1.00	4,900		
177	SUBTOTAL						20,297

TOTAL - INTERIOR CONSTRUCTION \$226,135

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

No Work in this section

186	SUBTOTAL						-
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C2020 STAIR FINISHES

No Work in this section

190	SUBTOTAL						-
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TOTAL - STAIRCASES

C30 INTERIOR FINISHES

C3010 WALL FINISHES

198	Paint to GWB	17,550	sf	1.00	17,550		
199	Ceramic Tile to toilets	504	sf	24.00	12,096		
200	SUBTOTAL						29,646



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

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C3020 FLOOR FINISHES

Carpet floor finishes	2,675	sf	5.00	13,375		
Resilient floor	1,913	sf	6.50	12,435		
Ceramic Tile to toilets	120	sf	25.00	3,000		
Rubber base	1,319	lf	2.75	3,627		
SUBTOTAL						32,437

C3030 CEILING FINISHES

Allowance for ceiling finishes; 2 x 2 ACT	4,708	sf	5.00	23,540		
SUBTOTAL						23,540

TOTAL - INTERIOR FINISHES						\$85,623
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D10 CONVEYING SYSTEMS

D1010 ELEVATOR

No Work in this section						
SUBTOTAL						-

TOTAL - CONVEYING SYSTEMS						
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D20 PLUMBING

D20 PLUMBING, GENERALLY

New fixtures	6	ftx	5,000.00	30,000		
SUBTOTAL						30,000

TOTAL - PLUMBING						\$30,000
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D30 HVAC

D30 HVAC, GENERALLY

HVAC complete system	4,900	gsf	28.00	137,200		
SUBTOTAL						137,200

TOTAL - HVAC						\$137,200
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D40 FIRE PROTECTION

D40 FIRE PROTECTION, GENERALLY

Sprinkler system	4,900	gsf	4.00	19,600		
SUBTOTAL						19,600

TOTAL - FIRE PROTECTION						\$19,600
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D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEM

Electrical system; complete	4,900	gsf	22.00	107,800		
SUBTOTAL						107,800



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE ADDITION TO NEW LYNCH OPTION WPS-2

259	TOTAL - ELECTRICAL						\$107,800
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262	E10 EQUIPMENT						
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264	E10 EQUIPMENT, GENERALLY						
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265	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)					FF+E	
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266	SUBTOTAL						-
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268	TOTAL - EQUIPMENT						
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271	E20 FURNISHINGS						
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273	E2010 FIXED FURNISHINGS						
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274	Entry mats & frames - recessed with carpet/rubber strips	50	sf	45.00	2,250		
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275	Manual operated roller shades	851	sf	6.00	5,106		
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276	Miscellaneous casework	4,900	gsf	3.00	14,700		
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277	SUBTOTAL						22,056
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279	E2020 MOVABLE FURNISHINGS						
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280	All movable furnishings to be provided and installed by owner						
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281	SUBTOTAL						NIC
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283	TOTAL - FURNISHINGS						
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284							\$22,056
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285							
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286	F10 SPECIAL CONSTRUCTION						
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288	F10 SPECIAL CONSTRUCTION						
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289	No Work in this section						
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290	SUBTOTAL						
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292	TOTAL - SPECIAL CONSTRUCTION						
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295	F20 SELECTIVE BUILDING DEMOLITION						
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297	F2010 BUILDING ELEMENTS DEMOLITION						
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298	Create openings to existing façade for new connections	1	loc	25,000.00	25,000		
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299	SUBTOTAL						25,000
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300							
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301	F2020 HAZARDOUS COMPONENTS ABATEMENT						
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302	None Included						
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303	SUBTOTAL						
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304							
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305	TOTAL - SELECTIVE BUILDING DEMOLITION						
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						\$25,000
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CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$0			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$19,600	\$19,600	\$4.00	2.7%
A20	BASEMENT CONSTRUCTION				
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$0			
B1020	Roof Construction	\$0	\$0	\$0.00	0.0%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$53,760			
B2020	Windows	\$0			
B2030	Exterior Doors	\$16,520	\$70,280	\$14.34	9.6%
B30	ROOFING				
B3010	Roof Coverings	\$0			
B3020	Roof Openings	\$0	\$0	\$0.00	0.0%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$114,825			
C1020	Interior Doors	\$66,000			
C1030	Specialties/Millwork	\$20,297	\$201,122	\$41.05	27.4%
C20	STAIRCASES				
C2010	Stair Construction	\$0			
C2020	Stair Finishes	\$0	\$0	\$0.00	0.0%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$27,696			
C3020	Floor Finishes	\$32,437			
C3030	Ceiling Finishes	\$23,540	\$83,673	\$17.08	11.4%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$0	\$0	\$0.00	0.0%
D20	PLUMBING				
D20	Plumbing	\$30,000	\$30,000	\$6.12	4.1%



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

14-Feb-17

Feasibility Design Estimate

GFA 4,900

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5					
D30 HVAC					
D30 HVAC		\$137,200	\$137,200	\$28.00	18.7%
D40 FIRE PROTECTION					
D40 Fire Protection		\$19,600	\$19,600	\$4.00	2.7%
D50 ELECTRICAL					
D5010 Complete System		\$107,800	\$107,800	\$22.00	14.7%
E10 EQUIPMENT					
E10 Equipment		\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010 Fixed Furnishings		\$16,950			
E2020 Movable Furnishings		NIC	\$16,950	\$3.46	2.3%
F10 SPECIAL CONSTRUCTION					
F10 Special Construction		\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010 Building Elements Demolition		\$49,000			
F2020 Hazardous Components Abatement		\$0	\$49,000	\$10.00	6.7%
TOTAL DIRECT COST (Trade Costs)			\$735,225	\$150.05	100.0%



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5

1	GROSS FLOOR AREA CALCULATION						
2							
3		First Floor			4,900		
4							
5	TOTAL GROSS FLOOR AREA (GFA)						4,900 sf
6							
7							
8	A10 FOUNDATIONS						
9							
10	A1010	STANDARD FOUNDATIONS					
11		SUBTOTAL					-
12							
13	A1020	SPECIAL FOUNDATIONS					
14		No Work in this section					
15		SUBTOTAL					-
16							
17	A1030	LOWEST FLOOR CONSTRUCTION					
18		Patch existing slab	4,900	sf	4.00	19,600	
19		SUBTOTAL					19,600
20							
21	TOTAL - FOUNDATIONS						\$19,600
22							
23							
24	A20 BASEMENT CONSTRUCTION						
25							
26	A2010	BASEMENT EXCAVATION					
27		No items in this section					
28		SUBTOTAL					-
29							
30	A2020	BASEMENT WALLS					
31		No items in this section					
32		SUBTOTAL					-
33							
34	TOTAL - BASEMENT CONSTRUCTION						
35							
36							
37	B10 SUPERSTRUCTURE						
38							
39	B1010	FLOOR CONSTRUCTION					
40		No Work in this section					
41		SUBTOTAL					-
42							
43	B1020	ROOF CONSTRUCTION					
44		No Work in this section					
45		SUBTOTAL					-
46							
47	TOTAL - SUPERSTRUCTURE						
48							
49							
50	B20 EXTERIOR CLOSURE						
51							
52	B2010	EXTERIOR WALLS					
53		Interior skin					



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5

54	Insulate inside face of perimeter wall; includes furring and GWB	4,480	sf	12.00	53,760			
55	<u>Exterior skin</u>							
56	Assumed no work to existing exterior closure							
57	SUBTOTAL					53,760		
58								
59	B2020 WINDOWS							
60	Assumed no work to existing windows							
61	SUBTOTAL					-		
62								
63	B2030 EXTERIOR DOORS							
64	Glazed entrance doors including frame and hardware; double door at corridor exit	2	pr	8,000.00	16,000			
65	Backer rod & double sealant	40	lf	9.00	360			
66	Wood blocking at openings	40	lf	4.00	160			
67	SUBTOTAL					16,520		
68								
69	TOTAL - EXTERIOR CLOSURE							\$70,280

B30 ROOFING

74	B3010 ROOF COVERINGS							
75	Assumed no work to existing roof							
76	SUBTOTAL					-		
77								
78	B3020 ROOF OPENINGS							
79	Skylights, allow					NIC		
80	Roof hatch					NIC		
81	SUBTOTAL					-		
82								
83	TOTAL - ROOFING							

C10 INTERIOR CONSTRUCTION

88	C1010 PARTITIONS						
89	Corridors; GWB with 2 lysr corridor side	2,400	sf	15.55	37,320		
90	General Walls; GWB with 1 lysr each side	5,400	sf	13.75	74,250		
91	Sealants & caulking at partitions	2,400	sf	0.50	1,200		
92	Rough blocking to partitions	185	lf	3.00	555		
93	Glazed partitions/borrowed lights - allowance	1	ls	1,500.00	1,500		
94	SUBTOTAL					114,825	
95							
96	C1020 INTERIOR DOORS						
97	Corridor glazed doors	1	pr	8,000.00	8,000		
98	Single door with sidelight	20	ea	2,900.00	58,000		
99	SUBTOTAL					66,000	
100							
101	C1030 SPECIALTIES / MILLWORK						
102	Marker boards/tackboards in conference room	128	sf	24.00	3,072		
103	Toilet partitions and accessories	2	rooms	2,000.00	4,000		



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5

104	Room Signs	20	loc	110.00	2,200		
105	Miscellaneous metals throughout building	4,900	sf	1.25	6,125		
106	Miscellaneous sealants throughout building	4,900	sf	1.00	4,900		
107	SUBTOTAL					20,297	
TOTAL - INTERIOR CONSTRUCTION							\$201,122

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

No Work in this section

SUBTOTAL

C2020 STAIR FINISHES

No Work in this section

SUBTOTAL

TOTAL - STAIRCASES

C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to GWB

15,600 sf 1.00 15,600

Ceramic Tile to toilets

504 sf 24.00 12,096

SUBTOTAL

27,696

C3020 FLOOR FINISHES

Carpet floor finishes

2,675 sf 5.00 13,375

Resilient floor

1,913 sf 6.50 12,435

Ceramic Tile to toilets

120 sf 25.00 3,000

Rubber base

1,319 lf 2.75 3,627

SUBTOTAL

32,437

C3030 CEILING FINISHES

Allowance for ceiling finishes; 2 x 2 ACT

4,708 sf 5.00 23,540

SUBTOTAL

23,540

TOTAL - INTERIOR FINISHES \$83,673

D10 CONVEYING SYSTEMS

D1010 ELEVATOR

No Work in this section

SUBTOTAL

TOTAL - CONVEYING SYSTEMS

D20 PLUMBING

D20 PLUMBING, GENERALLY

New fixtures

6 fxt 5,000.00 30,000

SUBTOTAL

30,000



Feasibility Design Estimate

GFA 4,900

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION TO MYSTIC ES OPTION WPS-5

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TOTAL - PLUMBING							\$30,000
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D30 HVAC

D30 HVAC, GENERALLY							
HVAC complete system	4,900	gsf	28.00	137,200			
SUBTOTAL						137,200	

TOTAL - HVAC							\$137,200
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D40 FIRE PROTECTION

D40 FIRE PROTECTION, GENERALLY							
Sprinkler system	4,900	gsf	4.00	19,600			
SUBTOTAL						19,600	

TOTAL - FIRE PROTECTION							\$19,600
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D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEM							
Electrical system; complete	4,900	gsf	22.00	107,800			
SUBTOTAL						107,800	

TOTAL - ELECTRICAL							\$107,800
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E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY							
AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)					FF+E		
SUBTOTAL						-	

TOTAL - EQUIPMENT							
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E20 FURNISHINGS

E2010 FIXED FURNISHINGS							
Entry mats & frames - recessed with carpet/rubber strips	50	sf	45.00	2,250			
Miscellaneous casework	4,900	gsf	3.00	14,700			
SUBTOTAL						16,950	

E2020 MOVABLE FURNISHINGS							
All movable furnishings to be provided and installed by owner							NIC
SUBTOTAL							

TOTAL - FURNISHINGS							\$16,950
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F10 SPECIAL CONSTRUCTION



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE RENOVATION AT CARRIAGE HOUSE OPTION WPS-6					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$30,000			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$16,420	\$46,420	\$9.01	3.3%
A20	BASEMENT CONSTRUCTION				
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$15,170			
B1020	Roof Construction	\$10,000	\$25,170	\$4.89	1.8%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$133,995			
B2020	Windows	\$209,728			
B2030	Exterior Doors	\$16,520	\$360,243	\$69.94	26.0%
B30	ROOFING				
B3010	Roof Coverings	\$77,611			
B3020	Roof Openings	\$0	\$77,611	\$15.07	5.6%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$136,067			
C1020	Interior Doors	\$98,700			
C1030	Specialties/Millwork	\$21,192	\$255,959	\$49.69	18.4%
C20	STAIRCASES				
C2010	Stair Construction	\$60,000			
C2020	Stair Finishes	\$8,000	\$68,000	\$13.20	4.9%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$30,599			
C3020	Floor Finishes	\$31,771			
C3030	Ceiling Finishes	\$23,750	\$86,120	\$16.72	6.2%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$90,000	\$90,000	\$17.47	6.5%
D20	PLUMBING				
D20	Plumbing	\$30,000	\$30,000	\$5.82	2.2%



Winchester Schools
 CAFETERIA + DISTRICT OFFICE EXPANSION
 Winchester, MA

14-Feb-17

Feasibility Design Estimate

GFA 5,151

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
DISTRICT OFFICE RENOVATION AT CARRIAGE HOUSE OPTION WPS-6					
D30 HVAC					
D30	HVAC	\$144,228	\$144,228	\$28.00	10.4%
D40 FIRE PROTECTION					
D40	Fire Protection	\$20,604	\$20,604	\$4.00	1.5%
D50 ELECTRICAL					
D5010	Complete System	\$113,322	\$113,322	\$22.00	8.2%
E10 EQUIPMENT					
E10	Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$28,713			
E2020	Movable Furnishings	NIC	\$28,713	\$5.57	2.1%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$41,208			
F2020	Hazardous Components Abatement	\$0	\$41,208	\$8.00	3.0%
TOTAL DIRECT COST (Trade Costs)			\$1,387,598	\$269.38	100.0%



Feasibility Design Estimate

GFA 5,151

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION AT CARRIAGE HOUSE OPTION WPS-6

GROSS FLOOR AREA CALCULATION

1							
2							
3			Basement		350		
4			First Floor		3,284		
5			Second Floor		1,517		

TOTAL GROSS FLOOR AREA (GFA) 5,151 sf

A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

13			New elevator pit	1	ea	30,000.00	30,000	
14			SUBTOTAL					30,000

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

21			Patch/repair existing slab	3,284	sf	5.00	16,420	
22			SUBTOTAL					16,420

TOTAL - FOUNDATIONS \$46,420

A20 BASEMENT CONSTRUCTION

A2010 BASEMENT EXCAVATION

No items in this section

SUBTOTAL

A2020 BASEMENT WALLS

No items in this section

SUBTOTAL

TOTAL - BASEMENT CONSTRUCTION

B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

43			Patch/repair existing floor	1,517	sf	10.00	15,170	
44			SUBTOTAL					15,170

B1020 ROOF CONSTRUCTION

Miscellaneous

48			New override for elevator PH	1	ls	10,000.00	10,000	
49			SUBTOTAL					10,000

TOTAL - SUPERSTRUCTURE \$25,170



Feasibility Design Estimate

GFA 5,151

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION AT CARRIAGE HOUSE OPTION WPS-6

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B20 EXTERIOR CLOSURE

B2010	EXTERIOR WALLS; 70% solid/30% glass <u>Interior skin: insulate perimeter</u>	4,283	sf				
	Stud furring	4,283	sf	6.00	25,698		
	2 1/2" Rigid Insulation	4,283	sf	3.00	12,849		
	Drywall lining to interior face of stud backup	4,283	sf	3.00	12,849		
	<u>Exterior skin</u>						
	Repair and paint existing siding	4,283	sf	15.00	64,245		
	<u>Miscellaneous</u>						
	Staging to exterior wall	6,118	sf	3.00	18,354		
	SUBTOTAL						133,995
B2020	WINDOWS	1,835	sf				
	Replace existing windows	1,835	sf	110.00	201,850		
	Backer rod & double sealant	606	lf	9.00	5,454		
	Wood blocking at openings	606	lf	4.00	2,424		
	SUBTOTAL						209,728
B2030	EXTERIOR DOORS						
	Glazed entrance doors including frame and hardware; double door	2	pr	8,000.00	16,000		
	Backer rod & double sealant	40	lf	9.00	360		
	Wood blocking at openings	40	lf	4.00	160		
	SUBTOTAL						16,520
TOTAL - EXTERIOR CLOSURE							\$360,243

B30 ROOFING

B3010	ROOF COVERINGS						
	<u>Flat roofing</u>						
	PVC roof membrane fully adhered	3,284	sf	9.00	29,556		
	Insulation	3,284	sf	7.00	22,988		
	1/2" dens-deck protection board	3,284	sf	2.00	6,568		
	Reinforced vapor barrier	3,284	sf	1.50	4,926		
	Rough blocking	1,108	lf	6.00	6,648		
	<u>Miscellaneous Roofing</u>						
	Roof screens - allow						NIC
	Roof fascia/cornice	277	lf	25.00	6,925		
	SUBTOTAL						77,611
B3020	ROOF OPENINGS						
	Skylights, allow						NIC
	Roof hatch						NIC
	SUBTOTAL						-

TOTAL - ROOFING \$77,611



Feasibility Design Estimate

GFA 5,151

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION AT CARRIAGE HOUSE OPTION WPS-6

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C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

Corridors; GWB with 2 lyrs corridor side	4,560	sf	15.55	70,908	
General Walls; GWB with 1 lyrs each side	2,550	sf	13.75	35,063	
CMU elevator walls	780	sf	30.00	23,400	
Sealants & caulking at partitions	7,110	sf	0.50	3,555	
Rough blocking to partitions	547	lf	3.00	1,641	
Glazed partitions/borrowed lights - allowance	1	ls	1,500.00	1,500	
SUBTOTAL					136,067

C1020 INTERIOR DOORS

Corridor glazed doors	4	pr	8,000.00	32,000	
Single door with sidelight	23	ea	2,900.00	66,700	
SUBTOTAL					98,700

C1030 SPECIALTIES / MILLWORK

Marker boards/tackboards in conference room	128	sf	24.00	3,072	
Toilet partitions and accessories	2	rooms	2,000.00	4,000	
Room Signs	23	loc	110.00	2,530	
Miscellaneous metals throughout building	5,151	sf	1.25	6,439	
Miscellaneous sealants throughout building	5,151	sf	1.00	5,151	
SUBTOTAL					21,192

TOTAL - INTERIOR CONSTRUCTION \$255,959

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

New staircase; complete	2	flt	30,000.00	60,000	
SUBTOTAL					60,000

C2020 STAIR FINISHES

New staircase finishes	2	flt	4,000.00	8,000	
SUBTOTAL					8,000

TOTAL - STAIRCASES \$68,000

C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to GWB	18,503	sf	1.00	18,503	
Ceramic Tile to toilets	504	sf	24.00	12,096	
SUBTOTAL					30,599

C3020 FLOOR FINISHES

Carpet floor finishes	3,440	sf	5.00	17,200	
Resilient floor	1,178	sf	6.50	7,657	
Ceramic Tile to toilets	132	sf	25.00	3,300	



Feasibility Design Estimate

GFA 5,151

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION AT CARRIAGE HOUSE OPTION WPS-6

155	Rubber base	1,314	lf	2.75	3,614			
156	SUBTOTAL					31,771		
157								
158	C3030 CEILING FINISHES							
159	Allowance for ceiling finishes; 2 x 2 ACT	4,750	sf	5.00	23,750			
160	SUBTOTAL					23,750		
161								
162	TOTAL - INTERIOR FINISHES						\$86,120	

D10 CONVEYING SYSTEMS

167	D1010 ELEVATOR							
168	New two stop elevator	1	ls	90,000.00	90,000			
169	SUBTOTAL					90,000		
170								
171	TOTAL - CONVEYING SYSTEMS						\$90,000	

D20 PLUMBING

176	D20 PLUMBING, GENERALLY							
177	New fixtures	6	ftx	5,000.00	30,000			
178	SUBTOTAL					30,000		
179								
180	TOTAL - PLUMBING						\$30,000	

D30 HVAC

186	D30 HVAC, GENERALLY							
187	HVAC complete system	5,151	gsf	28.00	144,228			
188	SUBTOTAL					144,228		
189								
190	TOTAL - HVAC						\$144,228	

D40 FIRE PROTECTION

194	D40 FIRE PROTECTION, GENERALLY							
195	Sprinkler system	5,151	gsf	4.00	20,604			
196	SUBTOTAL					20,604		
197								
198	TOTAL - FIRE PROTECTION						\$20,604	

D50 ELECTRICAL

203	D5010 COMPLETE ELECTRICAL SYSTEM							
204	Electrical system; complete	5,151	gsf	22.00	113,322			
205	SUBTOTAL					113,322		
206								
207								
208	TOTAL - ELECTRICAL						\$113,322	

E10 EQUIPMENT

212	E10 EQUIPMENT, GENERALLY						
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Feasibility Design Estimate

GFA 5,151

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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DISTRICT OFFICE RENOVATION AT CARRIAGE HOUSE OPTION WPS-6

214	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)					FF+E	
215	SUBTOTAL						-

TOTAL - EQUIPMENT

E20 FURNISHINGS

222	E2010 FIXED FURNISHINGS						
223	Entry mats & frames - recessed with carpet/rubber strips	50	sf	45.00	2,250		
224	Manual operated roller shades	1,835	sf	6.00	11,010		
225	Miscellaneous casework	5,151	gsf	3.00	15,453		
226	SUBTOTAL						28,713

E2020 MOVABLE FURNISHINGS

229	All movable furnishings to be provided and installed by owner						
230	SUBTOTAL						NIC

TOTAL - FURNISHINGS \$28,713

F10 SPECIAL CONSTRUCTION

237	F10 SPECIAL CONSTRUCTION						
238	No Work in this section						
239	SUBTOTAL						

TOTAL - SPECIAL CONSTRUCTION

F20 SELECTIVE BUILDING DEMOLITION

246	F2010 BUILDING ELEMENTS DEMOLITION						
247	Gut demolition	5,151	gsf	8.00	41,208		
248	SUBTOTAL						41,208

F2020 HAZARDOUS COMPONENTS ABATEMENT

251	None Included						
252	SUBTOTAL						

TOTAL - SELECTIVE BUILDING DEMOLITION \$41,208

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Feasibility Design Estimate

**Winchester Schools
NEW MURACO + LYNCH COMBINED**

Winchester, MA

PM&C LLC
20 Downer Avenue, Suite 1c
Hingham, MA 02043
(T) 781-740-8007
(F) 781-740-1012

Prepared for:
Flansburgh Architects

March 1, 2017



Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

01-Mar-17

Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
OPTION ES-5C - NEW LYNCH ELEMENTARY SCHOOL				
DEMOLISH EXISTING SCHOOL		79,745	\$8.00	\$637,960
HAZMAT REMOVALS		79,745	\$15.00	\$1,196,175
NEW SCHOOL		85,455	\$242.66	\$20,736,632
SITework				\$2,828,458
SUB-TOTAL	Mar-18	85,455	\$297.22	\$25,399,225
ESCALATION TO START - (assumed 3% PA)	6.0%			\$1,523,954
DESIGN AND PRICING CONTINGENCY	12%			\$3,047,907
SUB-TOTAL		85,455	\$350.72	\$29,971,086
GENERAL CONDITIONS				\$2,397,687
BONDS	1.00%			\$299,711
INSURANCE	2.00%			\$599,422
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$899,133
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Mar-18	85,455	\$399.82	\$34,167,039



Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

01-Mar-17

Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
OPTION ES-5C - NEW MURACO ELEMENTARY SCHOOL				
DEMOLISH EXISTING SCHOOL		55,415	\$8.00	\$443,320
HAZMAT REMOVALS		55,415	\$15.00	\$831,225
NEW SCHOOL		74,215	\$258.09	\$19,154,294
SITework - (Allowance of 12% of Building)				\$2,298,515
SUB-TOTAL	Mar-20	74,215	\$289.06	\$21,452,809
ESCALATION TO START - (assumed 4% PA)	12.0%			\$2,574,337
DESIGN AND PRICING CONTINGENCY	12%			\$2,574,337
SUB-TOTAL		74,215	\$358.44	\$26,601,483
GENERAL CONDITIONS				\$2,128,119
BONDS	1.00%			\$266,015
INSURANCE	2.00%			\$532,030
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$798,044
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Mar-20	74,215	\$408.62	\$30,325,691



Winchester Schools
NEW MURACO + LYNCH COMBINED
Winchester, MA

01-Mar-17

Feasibility Design Estimate

This Feasibility Design cost estimate was produced from preliminary drawings prepared by Flansburgh Architects Inc. and their design team dated February 28, 2017. 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, general contractor's overhead, fee 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:

- Land acquisition, feasibility, and financing costs
- All professional fees and insurance
- Site or existing conditions surveys investigations costs, including to determine subsoil conditions
- 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 as indicated in the estimate
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)
- Construction contingency



Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

01-Mar-17

Feasibility Design Estimate

GFA 74,215

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT MURACO ES 5C					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$614,098			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$696,377	\$1,310,475	\$17.66	6.8%
A20	BASEMENT CONSTRUCTION				
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$1,050,175			
B1020	Roof Construction	\$1,492,407	\$2,542,582	\$34.26	13.3%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$1,527,916			
B2020	Windows	\$1,276,504			
B2030	Exterior Doors	\$43,040	\$2,847,460	\$38.37	14.9%
B30	ROOFING				
B3010	Roof Coverings	\$1,237,289			
B3020	Roof Openings	\$5,000	\$1,242,289	\$16.74	6.5%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$1,484,300			
C1020	Interior Doors	\$371,075			
C1030	Specialties/Millwork	\$512,084	\$2,367,459	\$31.90	12.4%
C20	STAIRCASES				
C2010	Stair Construction	\$78,000			
C2020	Stair Finishes	\$20,550	\$98,550	\$1.33	0.5%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$333,968			
C3020	Floor Finishes	\$519,505			
C3030	Ceiling Finishes	\$445,290	\$1,298,763	\$17.50	6.8%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$100,000	\$100,000	\$1.35	0.5%
D20	PLUMBING				
D20	Plumbing	\$890,580	\$890,580	\$12.00	4.6%



Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

01-Mar-17

Feasibility Design Estimate

GFA 74,215

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT MURACO ES 5C					
D30 HVAC					
D30	HVAC	\$2,820,170	\$2,820,170	\$38.00	14.7%
D40 FIRE PROTECTION					
D40	Fire Protection	\$333,968	\$333,968	\$4.50	1.7%
D50 ELECTRICAL					
D5010	Complete System	\$2,523,310	\$2,523,310	\$34.00	13.2%
E10 EQUIPMENT					
E10	Equipment	\$396,100	\$396,100	\$5.34	2.1%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$382,588			
E2020	Movable Furnishings	NIC	\$382,588	\$5.16	2.0%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$0			
F2020	Hazardous Components Abatement	\$0	\$0	\$0.00	0.0%
TOTAL DIRECT COST (Trade Costs)			\$19,154,294	\$258.09	100.0%



Feasibility Design Estimate

GFA

74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 5C

GROSS FLOOR AREA CALCULATION

First Floor	46,401
Second Floor	27,814

TOTAL GROSS FLOOR AREA (GFA)	74,215 sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	1,329	cy	20.00	26,580
Store on site for reuse	1,329	cy	14.00	18,606
Backfill with existing fill	1,236	cy	16.00	19,776
Remove surplus fill off site	93	cy	25.00	2,325
Formwork	2,392	sf	12.00	28,704
Re-bar, 10#/lf	11,960	lbs	1.20	14,352
Concrete material; 3,000 psi	93	cy	125.00	11,625
Placing concrete	93	cy	55.00	5,115

Foundation walls at exterior - 14" thick

Formwork	9,568	sf	14.00	133,952
Re-bar, 4.5#/sf	21,528	lbs	1.20	25,834
Concrete material; 4,000 psi	218	cy	135.00	29,430
Placing concrete	218	cy	65.00	14,170
Dampproofing foundation wall and footing	7,176	sf	1.90	NIC
Insulation to foundation walls; 2" thick	4,784	sf	2.50	11,960
Form shelf	1,196	lf	8.00	9,568

Column footings, typical, 6' x 6' x 2'-0"

Excavation	998	cy	20.00	19,960
Store on site for reuse	998	cy	14.00	13,972
Backfill with new fill	760	cy	16.00	12,160
Remove surplus fill off site	238	cy	20.00	4,760
Formwork	4,080	sf	11.00	44,880
Re-bar	47,600	lbs	1.20	57,120
Concrete material; 3,000 psi	238	cy	125.00	29,750
Placing concrete	238	cy	55.00	13,090
Set anchor bolts grout plates	85	ea	150.00	12,750

Interior pilasters

Formwork	2,489	sf	11.00	27,379
Re-bar	15,300	lbs	1.20	18,360
Concrete material; 3,000 psi	44	cy	125.00	5,500
Placing concrete	44	cy	55.00	2,420

SUBTOTAL

614,098

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New Slab on grade, 5" thick



Feasibility Design Estimate

GFA

74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
NEW SCHOOL AT MURACO ES 5C								
51	Structural gravel fill, 8"	1,146	cy	30.00	34,380			
52	Base course, 8" gravel	1,146	cy	40.00	45,840			
53	Rigid insulation	46,401	sf	2.25	104,402			
54	Vapor barrier	46,401	sf	1.00	46,401			
55	Mesh reinforcing 15% lap	53,361	sf	0.80	42,689			
56	Concrete - 5" thick	758	cy	125.00	94,750			
57	Placing concrete	758	cy	45.00	34,110			
58	Finishing and curing concrete	46,401	sf	4.00	185,604			
59	Control joints - saw cut	46,401	sf	0.50	23,201			
60	<u>Miscellaneous</u>							
61	Backfill existing foundations/basement	1	ea	50,000.00	50,000			
62	Elevator pit	1	ea	30,000.00	30,000			
63	Dewatering	1	ea	5,000.00	5,000			
64	SUBTOTAL					696,377		
65								
66	TOTAL - FOUNDATIONS							\$1,310,475
67								
68								
69	A20 BASEMENT CONSTRUCTION							
70								
71	A2010 BASEMENT EXCAVATION							
72	No items in this section							
73	SUBTOTAL							
74								
75	A2020 BASEMENT WALLS							
76	No items in this section							
77	SUBTOTAL							
78								
79	TOTAL - BASEMENT CONSTRUCTION							
80								
81								
82	B10 SUPERSTRUCTURE							
83								
84	B1010 FLOOR CONSTRUCTION							
85	<u>Floor Structure - Steel:</u>							
86	Steel beams and columns; 13/SF	181	tns	3,500.00	633,500			
87	Shear studs	5,563	ea	2.50	13,908			
88	<u>Floor Structure</u>							
89	2" Metal floor Deck	27,814	sf	4.20	116,819			
90	WWF reinforcement	31,986	sf	0.80	25,589			
91	Concrete Fill to metal deck; 5" normal weight	443	cy	125.00	55,375			
92	Place and finish concrete	27,814	sf	2.00	55,628			
93	Misc. perimeter angles	1,196	lf	25.00	29,900			
94	<u>Miscellaneous</u>							
95	Barrier one at slab	443	cy	65.00	28,795			
96	Fire proofing to columns and beams	27,814	sf	2.90	80,661			
97	Fire stopping floors	2	flrs	5,000.00	10,000			
98	SUBTOTAL					1,050,175		
99								



Feasibility Design Estimate

GFA

74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
NEW SCHOOL AT MURACO ES 5C								
100	B1020 ROOF CONSTRUCTION							
101	<u>Roof Structure - Steel:</u>							
102	Steel beams/Joists; 13#/SF	302	tns	3,800.00	1,147,600			
103	<u>Roof Structure</u>							
104	1-1/2" Metal floor Deck @ roof	46,401	sf	3.00	139,203			
105	<u>Miscellaneous</u>							
106	Roof screen framing - allow	1	ls	20,000.00	20,000			
107	Fire proofing to columns, beams and deck	46,401	sf	4.00	185,604			
108	SUBTOTAL					1,492,407		
109								
110	TOTAL - SUPERSTRUCTURE							\$2,542,582
111								
112								
113	B20 EXTERIOR CLOSURE							
114								
115	B2010 EXTERIOR WALLS; 60% solid/40% glass	20,306	sf					
116	<u>Interior skin</u>							
117	6" metal stud backup	20,306	sf	7.50	152,295			
118	Batt insulation in stud	20,306	sf	2.25	45,689			
119	2 1/2" Rigid Insulation	20,306	sf	3.00	60,918			
120	Air barrier	20,306	sf	6.00	121,836			
121	Air barrier/flashing at windows	4,468	lf	7.00	31,276			
122	Gypsum Sheathing	20,306	sf	2.75	55,842			
123	Drywall lining to interior face of stud backup	20,306	sf	3.00	60,918			
124	<u>Exterior skin</u>							
125	Brick veneer; 75% of exterior wall	15,230	sf	35.00	533,050			
126	Metal panels; 25% of exterior wall	5,076	sf	60.00	304,560			
127	<u>Miscellaneous</u>							
128	Roof screens - allow	1	ls	60,000.00	60,000			
129	Staging to exterior wall	33,844	sf	3.00	101,532			
130	SUBTOTAL					1,527,916		
131								
132	B2020 WINDOWS	13,538	sf					
133	Premium for sunscreen and light shelf elements	1	ls		NIC			
134	Windows/storefront	13,538	sf	90.00	1,218,420			
135	Backer rod & double sealant	4,468	lf	9.00	40,212			
136	Wood blocking at openings	4,468	lf	4.00	17,872			
137	SUBTOTAL					1,276,504		
138								
139	B2030 EXTERIOR DOORS							
140	Glazed entrance doors including frame and hardware; double door at corridor exit	4	pr	8,000.00	32,000			
141	Other doors	1	ls	10,000.00	10,000			
142	Backer rod & double sealant	80	lf	9.00	720			
143	Wood blocking at openings	80	lf	4.00	320			
144	SUBTOTAL					43,040		
145								
146	TOTAL - EXTERIOR CLOSURE							\$2,847,460
147								
148								



Feasibility Design Estimate

GFA

74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 5C

149	B30 ROOFING						
150							
151	B3010 ROOF COVERINGS						
152	<u>Flat roofing</u>						
153	PVC roof membrane fully adhered	46,401	sf	14.00	649,614		
154	Insulation	46,401	sf	7.00	324,807		
155	1/2" dens-deck protection board	46,401	sf	2.00	92,802		
156	Reinforced vapor barrier	46,401	sf	1.50	69,602		
157	Rough blocking	4,784	lf	6.00	28,704		
158	<u>Miscellaneous Roofing</u>						
159	Roof screens - allow				NIC		
160	Roof fascia/cornice	1,196	lf	60.00	71,760		
161	SUBTOTAL					1,237,289	
162							
163	B3020 ROOF OPENINGS						
164	Skylights, allow				NIC		
165	Roof hatch	1	ea	5,000.00	5,000		
166	SUBTOTAL					5,000	
167							
168	TOTAL - ROOFING						\$1,242,289

170							
171	C10 INTERIOR CONSTRUCTION						
172							
173	C1010 PARTITIONS						
174	Allowance for interior walls/glazed partitions etc.	74,215	gfa	20.00	1,484,300		
175	SUBTOTAL					1,484,300	
176							
177	C1020 INTERIOR DOORS						
178	Interior doors, frames and hardware	74,215	gfa	5.00	371,075		
179	SUBTOTAL					371,075	
180							
181	C1030 SPECIALTIES / MILLWORK						
182	Marker boards/tackboards in classroom	74,215	gfa	1.15	85,347		
183	Toilet partitions and accessories	74,215	gfa	0.75	55,661		
184	Room Signs	74,215	gfa	0.25	18,554		
185	Wood paneling/benches/display cases etc.	74,215	gfa	1.50	111,323		
186	Lockers	74,215	sf	1.00	74,215		
187	Miscellaneous metals throughout building	74,215	sf	1.25	92,769		
188	Miscellaneous sealants throughout building	74,215	sf	1.00	74,215		
189	SUBTOTAL					512,084	
190							
191	TOTAL - INTERIOR CONSTRUCTION						\$2,367,459

192							
193							
194	C20 STAIRCASES						
195							
196	C2010 STAIR CONSTRUCTION						
197	55100	Metal pan stair; egress stair	3	flt	24,000.00	72,000	
198	33000	Concrete fill to stairs	3	flt	2,000.00	6,000	
199		SUBTOTAL				78,000	
200							
201	C2020 STAIR FINISHES						



Feasibility Design Estimate

GFA 74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW SCHOOL AT MURACO ES 5C							
202	90009 High performance coating to stairs including all railings etc.	3	ft	3,000.00	9,000		
203	90006 Rubber tile at stairs - landings	330	sf	12.00	3,960		
204	90006 Rubber tile at stairs - treads & risers	345	lft	22.00	7,590		
205	SUBTOTAL					20,550	
TOTAL - STAIRCASES							\$98,550
C30 INTERIOR FINISHES							
C3010 WALL FINISHES							
	Wall finishes	74,215	gfa	4.50	333,968		
	SUBTOTAL					333,968	
C3020 FLOOR FINISHES							
	Floor finishes	74,215	sf	7.00	519,505		
	SUBTOTAL					519,505	
C3030 CEILING FINISHES							
	Ceiling finishes	74,215	sf	6.00	445,290		
	SUBTOTAL					445,290	
TOTAL - INTERIOR FINISHES							\$1,298,763
D10 CONVEYING SYSTEMS							
D1010 ELEVATOR							
230	93000 Passenger elevator; 2 stop, 3500 lbs	1	ea	100,000.00	100,000		
	SUBTOTAL					100,000	
TOTAL - CONVEYING SYSTEMS							\$100,000
D20 PLUMBING							
D20 PLUMBING, GENERALLY							
	Plumbing allowance	74,215	gsf	12.00	890,580		
	SUBTOTAL					890,580	
TOTAL - PLUMBING							\$890,580
D30 HVAC							
D30 HVAC, GENERALLY							
	HVAC complete system	74,215	gsf	38.00	2,820,170		
	SUBTOTAL					2,820,170	
TOTAL - HVAC							\$2,820,170
D40 FIRE PROTECTION							
D40 FIRE PROTECTION, GENERALLY							
	Sprinkler system	74,215	gsf	4.50	333,968		
	SUBTOTAL					333,968	



Feasibility Design Estimate

GFA

74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 5C

260	TOTAL - FIRE PROTECTION						\$333,968
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261							
262							
263	D50 ELECTRICAL						
264							

265	D5010 COMPLETE ELECTRICAL SYSTEM						
266	Electrical system; complete	74,215	gsf	34.00	2,523,310		
267	SUBTOTAL					2,523,310	

270	TOTAL - ELECTRICAL						\$2,523,310
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273	E10 EQUIPMENT						
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275	E10 EQUIPMENT, GENERALLY						
276	11500 Gym wall pads	1	ls	10,000.00	10,000		
277	11500 Basketball backstops; swing up; electric operated	2	ea	9,800.00	19,600		
278	11500 Gymnasium dividing net; electrically operated	1	loc	45,000.00	45,000		
279	11500 Volleyball net and standards	1	ea	2,000.00	2,000		
280	11500 Telescoping bleachers	1	ls	25,000.00	25,000		
281	11500 Cubicle curtain & track at nurse area	1	loc	500.00	500		
282	11970 Platform curtains, rigging and controls	1	ls	35,000.00	35,000		
283	AV Equipment at Caf�/Gym/ Learning					F,F&E	
284	11400 Food Service equipment	1	ls	225,000.00	225,000		
285	11500 Allowance for loading dock equipment	1	ls	10,000.00	10,000		
286	11400 Refrigerator/Freezer	1	ea	1,000.00	1,000		
287	11400 Kiln	1	ea	3,000.00	3,000		
288	10999 Electrically operated projection screens in gym & cafeteria	2	loc	10,000.00	20,000		
289	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)					FF+E	
290	SUBTOTAL					396,100	

292	TOTAL - EQUIPMENT						\$396,100
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295	E20 FURNISHINGS						
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297	E2010 FIXED FURNISHINGS						
298	Entry mats & frames - recessed with carpet/rubber strips	100	sf	45.00	4,500		
299	Manual operated roller shades	13,538	sf	6.00	81,228		
300	Counters, base cabinets, tall storage in classrooms and other rooms	74,215	gfa	4.00	296,860		
301	SUBTOTAL					382,588	

303	E2020 MOVABLE FURNISHINGS						
304	All movable furnishings to be provided and installed by owner						
305	SUBTOTAL					NIC	

307	TOTAL - FURNISHINGS						\$382,588
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310	F10 SPECIAL CONSTRUCTION						
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Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

01-Mar-17

Feasibility Design Estimate

GFA

74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 5C

312 **F10 SPECIAL CONSTRUCTION**
 313 **No Work in this section**
 314 SUBTOTAL

TOTAL - SPECIAL CONSTRUCTION							
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F20 SELECTIVE BUILDING DEMOLITION							
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321 **F2010 BUILDING ELEMENTS DEMOLITION**
 322 SUBTOTAL

324 **F2020 HAZARDOUS COMPONENTS ABATEMENT**
 325 None Included
 326 SUBTOTAL

TOTAL - SELECTIVE BUILDING DEMOLITION							
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Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

01-Mar-17

Feasibility Design Estimate

GFA 85,455

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT LYNCH ES 5C					
A10	FOUNDATIONS				
A1010	Standard Foundations	\$483,746			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$620,592	\$1,104,338	\$12.92	5.3%
A20	BASEMENT CONSTRUCTION				
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10	SUPERSTRUCTURE				
B1010	Upper Floor Construction	\$1,527,694			
B1020	Roof Construction	\$1,429,294	\$2,956,988	\$34.60	14.3%
B20	EXTERIOR CLOSURE				
B2010	Exterior Walls	\$1,442,406			
B2020	Windows	\$1,202,011			
B2030	Exterior Doors	\$43,040	\$2,687,457	\$31.45	13.0%
B30	ROOFING				
B3010	Roof Coverings	\$1,181,145			
B3020	Roof Openings	\$5,000	\$1,186,145	\$13.88	5.7%
C10	INTERIOR CONSTRUCTION				
C1010	Partitions	\$1,709,100			
C1020	Interior Doors	\$427,275			
C1030	Specialties/Millwork	\$589,640	\$2,726,015	\$31.90	13.1%
C20	STAIRCASES				
C2010	Stair Construction	\$78,000			
C2020	Stair Finishes	\$20,550	\$98,550	\$1.15	0.5%
C30	INTERIOR FINISHES				
C3010	Wall Finishes	\$384,548			
C3020	Floor Finishes	\$598,185			
C3030	Ceiling Finishes	\$512,730	\$1,495,463	\$17.50	7.2%
D10	CONVEYING SYSTEMS				
D1010	Elevator	\$100,000	\$100,000	\$1.17	0.5%
D20	PLUMBING				
D20	Plumbing	\$1,025,460	\$1,025,460	\$12.00	4.9%



Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

01-Mar-17

Feasibility Design Estimate

GFA 85,455

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT LYNCH ES 5C					
D30 HVAC					
D30	HVAC	\$3,247,290	\$3,247,290	\$38.00	15.7%
D40 FIRE PROTECTION					
D40	Fire Protection	\$384,548	\$384,548	\$4.50	1.9%
D50 ELECTRICAL					
D5010	Complete System	\$2,905,470	\$2,905,470	\$34.00	14.0%
E10 EQUIPMENT					
E10	Equipment	\$396,100	\$396,100	\$4.64	1.9%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$422,808			
E2020	Movable Furnishings	NIC	\$422,808	\$4.95	2.0%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$0			
F2020	Hazardous Components Abatement	\$0	\$0	\$0.00	0.0%
TOTAL DIRECT COST (Trade Costs)			\$20,736,632	\$242.66	100.0%



Feasibility Design Estimate

GFA

85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

GROSS FLOOR AREA CALCULATION

First Floor	44,442
Second Floor	41,013

TOTAL GROSS FLOOR AREA (GFA)	85,455 sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	1,221	cy	20.00	24,420
Store on site for reuse	1,221	cy	14.00	17,094
Backfill with existing fill	1,136	cy	16.00	18,176
Remove surplus fill off site	85	cy	25.00	2,125
Formwork	2,198	sf	12.00	26,376
Re-bar, 10#/lf	10,990	lbs	1.20	13,188
Concrete material; 3,000 psi	85	cy	125.00	10,625
Placing concrete	85	cy	55.00	4,675

Foundation walls at exterior - 14" thick

Formwork	8,792	sf	14.00	123,088
Re-bar, 4.5#/sf	19,782	lbs	1.20	23,738
Concrete material; 4,000 psi	200	cy	135.00	27,000
Placing concrete	200	cy	65.00	13,000
Dampproofing foundation wall and footing	6,594	sf	1.90	NIC
Insulation to foundation walls; 2" thick	4,396	sf	2.50	10,990
Form shelf	1,099	lf	8.00	8,792

Column footings, typical, 6' x 6' x 2'-0"

Excavation	611	cy	20.00	12,220
Store on site for reuse	611	cy	14.00	8,554
Backfill with new fill	465	cy	16.00	7,440
Remove surplus fill off site	146	cy	20.00	2,920
Formwork	2,496	sf	11.00	27,456
Re-bar	29,120	lbs	1.20	34,944
Concrete material; 3,000 psi	146	cy	125.00	18,250
Placing concrete	146	cy	55.00	8,030
Set anchor bolts grout plates	52	ea	150.00	7,800

Interior pilasters

Formwork	1,523	sf	11.00	16,753
Re-bar	9,360	lbs	1.20	11,232
Concrete material; 3,000 psi	27	cy	125.00	3,375
Placing concrete	27	cy	55.00	1,485

SUBTOTAL

483,746

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION



Feasibility Design Estimate

GFA

85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
NEW SCHOOL AT LYNCH ES 5C								
50	<u>New Slab on grade, 5" thick</u>							
51	Structural gravel fill, 8"	1,098	cy	30.00	32,940			
52	Base course, 8" gravel	1,098	cy	40.00	43,920			
53	Rigid insulation	44,442	sf	2.25	99,995			
54	Vapor barrier	44,442	sf	1.00	44,442			
55	Mesh reinforcing 15% lap	51,108	sf	0.80	40,886			
56	Concrete - 5" thick	726	cy	125.00	90,750			
57	Placing concrete	726	cy	45.00	32,670			
58	Finishing and curing concrete	44,442	sf	4.00	177,768			
59	Control joints - saw cut	44,442	sf	0.50	22,221			
60	<u>Miscellaneous</u>							
61	Elevator pit	1	ea	30,000.00	30,000			
62	Dewatering	1	ea	5,000.00	5,000			
63	SUBTOTAL					620,592		
64								
65	TOTAL - FOUNDATIONS							\$1,104,338
66								
67								
68	A20 BASEMENT CONSTRUCTION							
69								
70	A2010 BASEMENT EXCAVATION							
71	No items in this section							
72	SUBTOTAL						-	
73								
74	A2020 BASEMENT WALLS							
75	No items in this section							
76	SUBTOTAL						-	
77								
78	TOTAL - BASEMENT CONSTRUCTION							
79								
80								
81	B10 SUPERSTRUCTURE							
82								
83	B1010 FLOOR CONSTRUCTION							
84	<u>Floor Structure - Steel:</u>							
85	Steel beams and columns; 13/SF	267	tns	3,500.00	934,500			
86	Shear studs	8,203	ea	2.50	20,508			
87	<u>Floor Structure</u>							
88	2" Metal floor Deck	41,013	sf	4.20	172,255			
89	WWF reinforcement	47,165	sf	0.80	37,732			
90	Concrete Fill to metal deck; 5" normal weight	654	cy	125.00	81,750			
91	Place and finish concrete	41,013	sf	2.00	82,026			
92	Misc. perimeter angles	1,099	lf	25.00	27,475			
93	<u>Miscellaneous</u>							
94	Barrier one at slab	654	cy	65.00	42,510			
95	Fire proofing to columns and beams	41,013	sf	2.90	118,938			
96	Fire stopping floors	2	flrs	5,000.00	10,000			
97	SUBTOTAL					1,527,694		



Feasibility Design Estimate

GFA

85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

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B1020 ROOF CONSTRUCTION

Roof Structure - Steel:

Steel beams/Joists; 13#/SF **289** tns 3,800.00 1,098,200

Roof Structure

1-1/2" Metal floor Deck @ roof **44,442** sf 3.00 133,326

Miscellaneous

Roof screen framing - allow **1** ls 20,000.00 20,000

Fire proofing to columns, beams and deck **44,442** sf 4.00 177,768

SUBTOTAL 1,429,294

TOTAL - SUPERSTRUCTURE	\$2,956,988
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B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS; 60% solid/40% glass

Interior skin 19,123 sf

6" metal stud backup **19,123** sf 7.50 143,423

Batt insulation in stud **19,123** sf 2.25 43,027

2 1/2" Rigid Insulation **19,123** sf 3.00 57,369

Air barrier **19,123** sf 6.00 114,738

Air barrier/flashing at windows **4,207** lf 7.00 29,449

Gypsum Sheathing **19,123** sf 2.75 52,588

Drywall lining to interior face of stud backup **19,123** sf 3.00 57,369

Exterior skin

Brick veneer; 75% of exterior wall **14,342** sf 35.00 501,970

Metal panels; 25% of exterior wall **4,781** sf 60.00 286,860

Miscellaneous

Roof screens - allow **1** ls 60,000.00 60,000

Staging to exterior wall **31,871** sf 3.00 95,613

SUBTOTAL 1,442,406

B2020 WINDOWS

12,748 sf
 Premium for sunscreen and light shelf elements **1** ls NIC

Windows/storefront **12,748** sf 90.00 1,147,320

Backer rod & double sealant **4,207** lf 9.00 37,863

Wood blocking at openings **4,207** lf 4.00 16,828

SUBTOTAL 1,202,011

B2030 EXTERIOR DOORS

Glazed entrance doors including frame and hardware; double door at corridor exit **4** pr 8,000.00 32,000

Other doors **1** ls 10,000.00 10,000

Backer rod & double sealant **80** lf 9.00 720

Wood blocking at openings **80** lf 4.00 320

SUBTOTAL 43,040

TOTAL - EXTERIOR CLOSURE	\$2,687,457
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Feasibility Design Estimate

GFA 85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

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B30 ROOFING

B3010 ROOF COVERINGS

Flat roofing

PVC roof membrane fully adhered	44,442	sf	14.00	622,188	
Insulation	44,442	sf	7.00	311,094	
1/2" dens-deck protection board	44,442	sf	2.00	88,884	
Reinforced vapor barrier	44,442	sf	1.50	66,663	
Rough blocking	4,396	lf	6.00	26,376	
<u>Miscellaneous Roofing</u>					
Roof screens - allow					NIC
Roof fascia/cornice	1,099	lf	60.00	65,940	
SUBTOTAL					1,181,145

B3020 ROOF OPENINGS

Skylights, allow					NIC
Roof hatch	1	ea	5,000.00	5,000	
SUBTOTAL					5,000

TOTAL - ROOFING						\$1,186,145
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C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

Allowance for interior walls/glazed partitions etc.	85,455	gfa	20.00	1,709,100	
SUBTOTAL					1,709,100

C1020 INTERIOR DOORS

Interior doors, frames and hardware	85,455	gfa	5.00	427,275	
SUBTOTAL					427,275

C1030 SPECIALTIES / MILLWORK

Marker boards/tackboards in classroom	85,455	gfa	1.15	98,273	
Toilet partitions and accessories	85,455	gfa	0.75	64,091	
Room Signs	85,455	gfa	0.25	21,364	
Wood paneling/benches/display cases etc.	85,455	gfa	1.50	128,183	
Lockers	85,455	sf	1.00	85,455	
Miscellaneous metals throughout building	85,455	sf	1.25	106,819	
Miscellaneous sealants throughout building	85,455	sf	1.00	85,455	
SUBTOTAL					589,640

TOTAL - INTERIOR CONSTRUCTION						\$2,726,015
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C20 STAIRCASES

C2010 STAIR CONSTRUCTION

55100	Metal pan stair; egress stair	3	flt	24,000.00	72,000
33000	Concrete fill to stairs	3	flt	2,000.00	6,000



Feasibility Design Estimate

GFA 85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

198						78,000		
199								
200	C2020 STAIR FINISHES							
201	90009 High performance coating to stairs including all railings etc.	3	flt	3,000.00	9,000			
202	90006 Rubber tile at stairs - landings	330	sf	12.00	3,960			
203	90006 Rubber tile at stairs - treads & risers	345	flt	22.00	7,590			
204						20,550		
205								
206	TOTAL - STAIRCASES							\$98,550

C30 INTERIOR FINISHES

207								
208								
209								
210								
211	C3010 WALL FINISHES							
212	Wall finishes	85,455	gfa	4.50	384,548			
213						384,548		
214								
215	C3020 FLOOR FINISHES							
216	Floor finishes	85,455	sf	7.00	598,185			
217						598,185		
218								
219	C3030 CEILING FINISHES							
220	Ceiling finishes	85,455	sf	6.00	512,730			
221						512,730		
222								
223	TOTAL - INTERIOR FINISHES							\$1,495,463

D10 CONVEYING SYSTEMS

224								
225								
226								
227								
228	D1010 ELEVATOR							
229	93000 Passenger elevator; 2 stop, 3500 lbs	1	ea	100,000.00	100,000			
230						100,000		
231								
232	TOTAL - CONVEYING SYSTEMS							\$100,000

D20 PLUMBING

233								
234								
235								
236								
237	D20 PLUMBING, GENERALLY							
238	Plumbing allowance	85,455	gsf	12.00	1,025,460			
239						1,025,460		
240								
241	TOTAL - PLUMBING							\$1,025,460

D30 HVAC

242								
243								
244								
245								
246	D30 HVAC, GENERALLY							
247	HVAC complete system	85,455	gsf	38.00	3,247,290			
248						3,247,290		
249								
250	TOTAL - HVAC							\$3,247,290

D40 FIRE PROTECTION

251							
252							
253							
254							
255	D40 FIRE PROTECTION, GENERALLY						



Feasibility Design Estimate

GFA 85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

256	Sprinkler system	85,455	gsf	4.50	384,548			
257	SUBTOTAL					384,548		
258	TOTAL - FIRE PROTECTION							\$384,548

D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEM

265	Electrical system; complete	85,455	gsf	34.00	2,905,470			
266	SUBTOTAL					2,905,470		
269	TOTAL - ELECTRICAL							\$2,905,470

E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY

275	11500 Gym wall pads	1	ls	10,000.00	10,000			
276	11500 Basketball backstops; swing up; electric operated	2	ea	9,800.00	19,600			
277	11500 Gymnasium dividing net; electrically operated	1	loc	45,000.00	45,000			
278	11500 Volleyball net and standards	1	ea	2,000.00	2,000			
279	11500 Telescoping bleachers	1	ls	25,000.00	25,000			
280	11500 Cubicle curtain & track at nurse area	1	loc	500.00	500			
281	11970 Platform curtains, rigging and controls	1	ls	35,000.00	35,000			
282	AV Equipment at Caf�/Gym/ Learning				F,F&E			
283	11400 Food Service equipment	1	ls	225,000.00	225,000			
284	11500 Allowance for loading dock equipment	1	ls	10,000.00	10,000			
285	11400 Refrigerator/Freezer	1	ea	1,000.00	1,000			
286	11400 Kiln	1	ea	3,000.00	3,000			
287	10999 Electrically operated projection screens in gym & cafeteria	2	loc	10,000.00	20,000			
288	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)				FF+E			
289	SUBTOTAL					396,100		
291	TOTAL - EQUIPMENT							\$396,100

E20 FURNISHINGS

E2010 FIXED FURNISHINGS

297	Entry mats & frames - recessed with carpet/rubber strips	100	sf	45.00	4,500		
298	Manual operated roller shades	12,748	sf	6.00	76,488		
299	Counters, base cabinets, tall storage in classrooms and other rooms	85,455	gfa	4.00	341,820		
300	SUBTOTAL					422,808	

E2020 MOVABLE FURNISHINGS

303	All movable furnishings to be provided and installed by owner						
304	SUBTOTAL						NIC



Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

01-Mar-17

Feasibility Design Estimate

GFA

85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

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TOTAL - FURNISHINGS							\$422,808
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F10	SPECIAL CONSTRUCTION						
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F10 SPECIAL CONSTRUCTION
 No Work in this section
 SUBTOTAL

TOTAL - SPECIAL CONSTRUCTION							
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F20	SELECTIVE BUILDING DEMOLITION						
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F2010 BUILDING ELEMENTS DEMOLITION
 SUBTOTAL

F2020 HAZARDOUS COMPONENTS ABATEMENT
 None Included
 SUBTOTAL

TOTAL - SELECTIVE BUILDING DEMOLITION							
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Feasibility Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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SITWORK NEW LYNCH SCHOOL

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G SITEWORK

G10 SITE PREPARATION & DEMOLITION

Site Demolitions and Relocations

024100	Site construction fence/barricades; visual screen	2,000	lf	9.00	18,000		
02200	Demolish existing paving	100,000	sf	1.00	100,000		
02200	Demolish soccer field	1	loc	10,000	10,000		
02200	Site clearing/grubbing	1	ls	30,000.00	30,000		
02200	Miscellaneous demolition allowance including existing utilities	1	ls	50,000	50,000		

Site Earthwork

310000	Construction entrances/wheel washes (allowance)	2	loc	12,000.00	24,000		
311000	Strip topsoil, store; assume 6"	3,704	cy	8.00	29,632		
310000	Cut/fill	16,667	cy	6.00	100,002		
310000	Export excess material - assumed balanced site						
310000	Fine grading	33,333	sy	0.75	25,000		
312500	Silt fence/erosion control (allowance)	2,000	lf	12.00	24,000		
312500	Erosion Control monitoring & maintenance	1	ls	30,000.00	30,000		

Hazardous Waste Remediation

SUBTOTAL

440,634

G20 SITE IMPROVEMENTS

Roadways and Parking Lots

	Bituminous concrete paving	<i>62,551</i>	sf		-		
320000	gravel base; 12" thick	2,317	cy	35.00	81,095		
320000	bituminous concrete; 4" thick	6,950	sy	26.00	180,700		
320000	6"x18" granite curb	3,811	lf	35.00	133,385		
320000	Premium for radius curbs	1	ls	25,000.00	25,000		
320000	Road markings	1	ls	15,000.00	15,000		
321724	Signage	1	ls	20,000.00	20,000		

Fire lane

	Bituminous concrete paving	<i>23,260</i>	sf		-		
320000	gravel base; 18" thick	1,292	cy	35.00	45,220		
320000	bituminous concrete; 4" thick	2,584	sy	26.00	67,184		
320000	6"x18" granite curb	1,806	lf	35.00	63,210		

Pedestrian paving; allowance of 10,000 sf

	Concrete paving broom finish	<i>10,000</i>	sf		-		
320000	gravel base; 8" thick	248	cy	35.00	8,680		
033000	concrete paving; 4" thick	10,000	sf	6.50	65,000		

Concrete pavers; allowance of 5,000 sf

	Concrete pavers	<i>5,000</i>	sf		-		
320000	sand bedding; 1" thick	15	cy	25.00	375		
033000	Precast concrete pavers	5,000	sf	14.00	70,000		
320000	gravel base; 8" thick	124	cy	35.00	4,340		
033000	concrete base; 4" thick	5,000	sf	5.00	25,000		

Site Improvements

129300	Bicycle racks - Allowance	20	ea	1,000.00	20,000		
129300	Flag pole	1	loc	7,500.00	7,500		
129300	Ornamental trash/recycling receptacles	8	loc	1,400.00	11,200		
129300	Bollards	10	ea	850.00	8,500		
129300	Bollards; moveable	4	loc	1,500.00	6,000		



Feasibility Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITWORK NEW LYNCH SCHOOL							
53	129300	Dumpster enclosure and pad	1	ls	15,000.00	15,000	
54	129300	Fence along perimeter	1,200	lf	90.00	108,000	
55	129300	New site entrance sign	1	ls	25,000.00	25,000	
56	129300	Miscellaneous site improvements	1	ls	100,000.00	100,000	
57		<u>Soccer Field - assumed grass</u>					
58	329210	Grass field including drainage etc.	71,500	sf	2.00	143,000	
59	116800	Soccer Goal	2	loc	4,000.00	8,000	
60	116800	Benches - allowance	2	loc	2,250.00	4,500	
61	323114	Vinyl CL Fencing 4'	961	lf	55.00	52,855	
62	323114	Gate, single	2	ea	1,200.00	2,400	
63							
64		<u>Landscaping & Plantings:</u>					
65	329900	Spread existing amended topsoil @ seeded areas.	3,704	cy	22.00	81,488	
66	329900	New seeded areas	200,949	sf	0.25	50,237	
67	02830	Planting allowance	1	ls	150,000.00	150,000	
68		SUBTOTAL					1,597,869
69							
70	G30	CIVIL MECHANICAL UTILITIES					
71							
72	331000	<i>WATER UTILITIES</i>					
73	312003	New fire DI piping; 8"	400	lf	90.00	36,000	
74	312003	New DI piping; 6"	400	lf	75.00	30,000	
75	312003	New fire hydrant	2	loc	2,600.00	5,200	
76	312003	FD connection	1	loc	2,000.00	2,000	
77	312003	Gate valves	4	loc	750.00	3,000	
78							
79	333000	<i>SANITARY SEWERAGE UTILITIES</i>					
80	333000	<u>Sanitary sewer</u>					
81	333000	6" PVC Sanitary sewer	400	lf	45.00	18,000	
82	333000	SMH	4	ea	4,000.00	16,000	
83	333000	Grease trap; 9,000 Gal	1	loc	15,000.00	15,000	
84							
85	334000	<i>STORM DRAINAGE UTILITIES</i>					
86	312003	Allowance for storm water management	77,551	sf	5.00	387,755	
87							
88	312003	<u>Gas service</u>					
89	312003	E&B trench for new lines, pipe and install by utilities					
90	312003	New gas service	400	lf	25.00	10,000	
91		SUBTOTAL					522,955
92							
93	G40	ELECTRICAL UTILITIES					
94	016100	Electric handhole	2	ea	1,500.00	3,000	
95	016100	Primary ductbank	400	lf	120.00	48,000	
96	016100	Transformer by Utility Company	1	ea		NIC	
97	016100	Transformer pad	1	ea	2,000.00	2,000	
98	016100	Secondary service					
99	016100	Ductbank	50	lf	500.00	25,000	
100	016100	Emergency service					
101	016100	Ductbank	100	lf	150.00	15,000	
102	016100	Generator pad	1	ea	1,500.00	1,500	
103	016100	<u>Site lighting</u>					
104	016100	Allowance for site lighting	1	ls	100,000.00	100,000	
105	016100	Allowance for sports lighting					NIC



Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

01-Mar-17

Feasibility Design Estimate

<i>CSI</i>				<i>UNIT</i>	<i>EST'D</i>	<i>SUB</i>	<i>TOTAL</i>
<i>CODE</i>	<i>DESCRIPTION</i>	<i>QTY</i>	<i>UNIT</i>	<i>COST</i>	<i>COST</i>	<i>TOTAL</i>	<i>COST</i>

SITWORK NEW LYNCH SCHOOL

106	016100	<u>Site communications and security</u>					
107	016100	Site security	1	ls	15,000.00	15,000	
108	016100	Communication riser pole	1	ea	2,500.00	2,500	
109	016100	Telecom handhole	2	ea	1,500.00	3,000	
110	016100	Ductbank	400	lf	130.00	52,000	
111		SUBTOTAL					267,000

SUBTOTAL - SITE DEVELOPMENT LYNCH SCHOOL

\$2,828,458

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C

Feasibility Design Estimate

**Winchester Schools
NEW MURACO + LYNCH COMBINED**

Winchester, MA

PM&C LLC
20 Downer Avenue, Suite 1c
Hingham, MA 02043
(T) 781-740-8007
(F) 781-740-1012

Prepared for:

Flansburgh Architects

March 13, 2017



Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

13-Mar-17

Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
OPTION ES-5C - NEW LYNCH ELEMENTARY SCHOOL				
DEMOLISH EXISTING SCHOOL		79,745	\$8.00	\$637,960
HAZMAT REMOVALS		79,745	\$15.00	\$1,196,175
NEW SCHOOL		85,455	\$242.66	\$20,736,632
SITework				\$3,193,098
SUB-TOTAL	Mar-18	85,455	\$301.49	\$25,763,865
ESCALATION TO START - (assumed 3% PA)	6.0%			\$1,545,832
DESIGN AND PRICING CONTINGENCY	12%			\$3,091,664
SUB-TOTAL		85,455	\$355.76	\$30,401,361
GENERAL CONDITIONS				\$2,432,109
BONDS	1.00%			\$304,014
INSURANCE	2.00%			\$608,027
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$912,041
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Mar-18	85,455	\$405.56	\$34,657,552



Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

13-Mar-17

Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
OPTION ES-5C - NEW MURACO ELEMENTARY SCHOOL				
DEMOLISH EXISTING SCHOOL		55,415	\$8.00	\$443,320
HAZMAT REMOVALS		55,415	\$15.00	\$831,225
NEW SCHOOL		74,215	\$258.09	\$19,154,294
SITework - (Allowance of 12% of Building)				\$2,298,515
SUB-TOTAL	Mar-20	74,215	\$289.06	\$21,452,809
ESCALATION TO START - (assumed 4% PA)	12.0%			\$2,574,337
DESIGN AND PRICING CONTINGENCY	12%			\$2,574,337
SUB-TOTAL		74,215	\$358.44	\$26,601,483
GENERAL CONDITIONS				\$2,128,119
BONDS	1.00%			\$266,015
INSURANCE	2.00%			\$532,030
PERMIT				NIC
OVERHEAD AND FEE	3.00%			\$798,044
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Mar-20	74,215	\$408.62	\$30,325,691



Winchester Schools
NEW MURACO + LYNCH COMBINED
Winchester, MA

13-Mar-17

Feasibility Design Estimate

This Feasibility Design cost estimate was produced from preliminary drawings prepared by Flansburgh Architects Inc. and their design team dated February 28, 2017. 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, general contractor's overhead, fee 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:

- Land acquisition, feasibility, and financing costs
- All professional fees and insurance
- Site or existing conditions surveys investigations costs, including to determine subsoil conditions
- 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 as indicated in the estimate
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)
- Construction contingency



CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT MURACO ES 5C					
A10 FOUNDATIONS					
A1010	Standard Foundations	\$614,098			
A1020	Special Foundations	\$0			
A1030	Lowest Floor Construction	\$696,377	\$1,310,475	\$17.66	6.8%
A20 BASEMENT CONSTRUCTION					
A2010	Basement Excavation	\$0			
A2020	Basement Walls	\$0	\$0	\$0.00	0.0%
B10 SUPERSTRUCTURE					
B1010	Upper Floor Construction	\$1,050,175			
B1020	Roof Construction	\$1,492,407	\$2,542,582	\$34.26	13.3%
B20 EXTERIOR CLOSURE					
B2010	Exterior Walls	\$1,527,916			
B2020	Windows	\$1,276,504			
B2030	Exterior Doors	\$43,040	\$2,847,460	\$38.37	14.9%
B30 ROOFING					
B3010	Roof Coverings	\$1,237,289			
B3020	Roof Openings	\$5,000	\$1,242,289	\$16.74	6.5%
C10 INTERIOR CONSTRUCTION					
C1010	Partitions	\$1,484,300			
C1020	Interior Doors	\$371,075			
C1030	Specialties/Millwork	\$512,084	\$2,367,459	\$31.90	12.4%
C20 STAIRCASES					
C2010	Stair Construction	\$78,000			
C2020	Stair Finishes	\$20,550	\$98,550	\$1.33	0.5%
C30 INTERIOR FINISHES					
C3010	Wall Finishes	\$333,968			
C3020	Floor Finishes	\$519,505			
C3030	Ceiling Finishes	\$445,290	\$1,298,763	\$17.50	6.8%
D10 CONVEYING SYSTEMS					
D1010	Elevator	\$100,000	\$100,000	\$1.35	0.5%
D20 PLUMBING					
D20	Plumbing	\$890,580	\$890,580	\$12.00	4.6%



Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

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Feasibility Design Estimate

GFA 74,215

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>		<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
NEW SCHOOL AT MURACO ES 5C					
D30 HVAC					
D30	HVAC	\$2,820,170	\$2,820,170	\$38.00	14.7%
D40 FIRE PROTECTION					
D40	Fire Protection	\$333,968	\$333,968	\$4.50	1.7%
D50 ELECTRICAL					
D5010	Complete System	\$2,523,310	\$2,523,310	\$34.00	13.2%
E10 EQUIPMENT					
E10	Equipment	\$396,100	\$396,100	\$5.34	2.1%
E20 FURNISHINGS					
E2010	Fixed Furnishings	\$382,588			
E2020	Movable Furnishings	NIC	\$382,588	\$5.16	2.0%
F10 SPECIAL CONSTRUCTION					
F10	Special Construction	\$0	\$0	\$0.00	0.0%
F20 HAZMAT REMOVALS					
F2010	Building Elements Demolition	\$0			
F2020	Hazardous Components Abatement	\$0	\$0	\$0.00	0.0%
TOTAL DIRECT COST (Trade Costs)			\$19,154,294	\$258.09	100.0%



Feasibility Design Estimate

GFA

74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 5C

GROSS FLOOR AREA CALCULATION

First Floor	46,401
Second Floor	27,814

TOTAL GROSS FLOOR AREA (GFA)	74,215 sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	1,329	cy	20.00	26,580
Store on site for reuse	1,329	cy	14.00	18,606
Backfill with existing fill	1,236	cy	16.00	19,776
Remove surplus fill off site	93	cy	25.00	2,325
Formwork	2,392	sf	12.00	28,704
Re-bar, 10#/lf	11,960	lbs	1.20	14,352
Concrete material; 3,000 psi	93	cy	125.00	11,625
Placing concrete	93	cy	55.00	5,115

Foundation walls at exterior - 14" thick

Formwork	9,568	sf	14.00	133,952
Re-bar, 4.5#/sf	21,528	lbs	1.20	25,834
Concrete material; 4,000 psi	218	cy	135.00	29,430
Placing concrete	218	cy	65.00	14,170
Dampproofing foundation wall and footing	7,176	sf	1.90	NIC
Insulation to foundation walls; 2" thick	4,784	sf	2.50	11,960
Form shelf	1,196	lf	8.00	9,568

Column footings, typical, 6' x 6' x 2'-0"

Excavation	998	cy	20.00	19,960
Store on site for reuse	998	cy	14.00	13,972
Backfill with new fill	760	cy	16.00	12,160
Remove surplus fill off site	238	cy	20.00	4,760
Formwork	4,080	sf	11.00	44,880
Re-bar	47,600	lbs	1.20	57,120
Concrete material; 3,000 psi	238	cy	125.00	29,750
Placing concrete	238	cy	55.00	13,090
Set anchor bolts grout plates	85	ea	150.00	12,750

Interior pilasters

Formwork	2,489	sf	11.00	27,379
Re-bar	15,300	lbs	1.20	18,360
Concrete material; 3,000 psi	44	cy	125.00	5,500
Placing concrete	44	cy	55.00	2,420

SUBTOTAL 614,098

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION



Feasibility Design Estimate

GFA

74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 5C

50	<u>New Slab on grade, 5" thick</u>						
51	Structural gravel fill, 8"	1,146	cy	30.00	34,380		
52	Base course, 8" gravel	1,146	cy	40.00	45,840		
53	Rigid insulation	46,401	sf	2.25	104,402		
54	Vapor barrier	46,401	sf	1.00	46,401		
55	Mesh reinforcing 15% lap	53,361	sf	0.80	42,689		
56	Concrete - 5" thick	758	cy	125.00	94,750		
57	Placing concrete	758	cy	45.00	34,110		
58	Finishing and curing concrete	46,401	sf	4.00	185,604		
59	Control joints - saw cut	46,401	sf	0.50	23,201		
60	<u>Miscellaneous</u>						
61	Backfill existing foundations/basement	1	ea	50,000.00	50,000		
62	Elevator pit	1	ea	30,000.00	30,000		
63	Dewatering	1	ea	5,000.00	5,000		
64	SUBTOTAL					696,377	

TOTAL - FOUNDATIONS						\$1,310,475
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A20 BASEMENT CONSTRUCTION

A2010 BASEMENT EXCAVATION

No items in this section

SUBTOTAL

A2020 BASEMENT WALLS

No items in this section

SUBTOTAL

TOTAL - BASEMENT CONSTRUCTION						
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B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

Floor Structure - Steel:

Steel beams and columns; 13/SF

Shear studs

Floor Structure

2" Metal floor Deck

WWF reinforcement

Concrete Fill to metal deck; 5" normal weight

Place and finish concrete

Misc. perimeter angles

Miscellaneous

Barrier one at slab

Fire proofing to columns and beams

Fire stopping floors

83		13	lbs/sf				
84		483	tns				
85							
86		181	tns	3,500.00	633,500		
87		5,563	ea	2.50	13,908		
88							
89		27,814	sf	4.20	116,819		
90		31,986	sf	0.80	25,589		
91		443	cy	125.00	55,375		
92		27,814	sf	2.00	55,628		
93		1,196	lf	25.00	29,900		
94							
95		443	cy	65.00	28,795		
96		27,814	sf	2.90	80,661		
97		2	flrs	5,000.00	10,000		



Feasibility Design Estimate

GFA

74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 5C

98 SUBTOTAL 1,050,175

99

B1020 ROOF CONSTRUCTION

Roof Structure - Steel:

102 Steel beams/Joists; 13#/SF 302 tns 3,800.00 1,147,600

103 Roof Structure

104 1-1/2" Metal floor Deck @ roof 46,401 sf 3.00 139,203

105 Miscellaneous

106 Roof screen framing - allow 1 ls 20,000.00 20,000

107 Fire proofing to columns, beams and deck 46,401 sf 4.00 185,604

108 SUBTOTAL 1,492,407

109

TOTAL - SUPERSTRUCTURE

\$2,542,582

110

111

112

B20 EXTERIOR CLOSURE

113

114

B2010 EXTERIOR WALLS; 60% solid/40% glass

Interior skin

117 6" metal stud backup 20,306 sf 7.50 152,295

118 Batt insulation in stud 20,306 sf 2.25 45,689

119 2 1/2" Rigid Insulation 20,306 sf 3.00 60,918

120 Air barrier 20,306 sf 6.00 121,836

121 Air barrier/flashing at windows 4,468 lf 7.00 31,276

122 Gypsum Sheathing 20,306 sf 2.75 55,842

123 Drywall lining to interior face of stud backup 20,306 sf 3.00 60,918

124 Exterior skin

125 Brick veneer; 75% of exterior wall 15,230 sf 35.00 533,050

126 Metal panels; 25% of exterior wall 5,076 sf 60.00 304,560

127 Miscellaneous

128 Roof screens - allow 1 ls 60,000.00 60,000

129 Staging to exterior wall 33,844 sf 3.00 101,532

130 SUBTOTAL 1,527,916

131

B2020 WINDOWS

13,538 sf

133 Premium for sunscreen and light shelf elements 1 ls NIC

134 Windows/storefront 13,538 sf 90.00 1,218,420

135 Backer rod & double sealant 4,468 lf 9.00 40,212

136 Wood blocking at openings 4,468 lf 4.00 17,872

137 SUBTOTAL 1,276,504

138

B2030 EXTERIOR DOORS

140 Glazed entrance doors including frame and hardware; double door at corridor exit 4 pr 8,000.00 32,000

141 Other doors 1 ls 10,000.00 10,000

142 Backer rod & double sealant 80 lf 9.00 720

143 Wood blocking at openings 80 lf 4.00 320

144 SUBTOTAL 43,040

145



Feasibility Design Estimate

GFA 74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 5C

TOTAL - EXTERIOR CLOSURE						\$2,847,460
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B30 ROOFING

B3010 ROOF COVERINGS

Flat roofing

PVC roof membrane fully adhered	46,401	sf	14.00	649,614
Insulation	46,401	sf	7.00	324,807
1/2" dens-deck protection board	46,401	sf	2.00	92,802
Reinforced vapor barrier	46,401	sf	1.50	69,602
Rough blocking	4,784	lf	6.00	28,704

Miscellaneous Roofing

Roof screens - allow				NIC
Roof fascia/cornice	1,196	lf	60.00	71,760

SUBTOTAL 1,237,289

B3020 ROOF OPENINGS

Skylights, allow				NIC
Roof hatch	1	ea	5,000.00	5,000

SUBTOTAL 5,000

TOTAL - ROOFING						\$1,242,289
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C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

Allowance for interior walls/glazed partitions etc.	74,215	gfa	20.00	1,484,300
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SUBTOTAL 1,484,300

C1020 INTERIOR DOORS

Interior doors, frames and hardware	74,215	gfa	5.00	371,075
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SUBTOTAL 371,075

C1030 SPECIALTIES / MILLWORK

Marker boards/tackboards in classroom	74,215	gfa	1.15	85,347
Toilet partitions and accessories	74,215	gfa	0.75	55,661
Room Signs	74,215	gfa	0.25	18,554
Wood paneling/benches/display cases etc.	74,215	gfa	1.50	111,323
Lockers	74,215	sf	1.00	74,215
Miscellaneous metals throughout building	74,215	sf	1.25	92,769
Miscellaneous sealants throughout building	74,215	sf	1.00	74,215

SUBTOTAL 512,084

TOTAL - INTERIOR CONSTRUCTION						\$2,367,459
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C20 STAIRCASES

C2010 STAIR CONSTRUCTION

55100	Metal pan stair; egress stair	3	flt	24,000.00	72,000
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Feasibility Design Estimate

GFA 74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
NEW SCHOOL AT MURACO ES 5C								
198	33000 Concrete fill to stairs	3	ft	2,000.00	6,000			
199	SUBTOTAL					78,000		
200								
201	C2020 STAIR FINISHES							
202	90009 High performance coating to stairs including all railings etc.	3	ft	3,000.00	9,000			
203	90006 Rubber tile at stairs - landings	330	sf	12.00	3,960			
204	90006 Rubber tile at stairs - treads & risers	345	lft	22.00	7,590			
205	SUBTOTAL					20,550		
206								
207	TOTAL - STAIRCASES						\$98,550	
208								
209								
210	C30 INTERIOR FINISHES							
211								
212	C3010 WALL FINISHES							
213	Wall finishes	74,215	gfa	4.50	333,968			
214	SUBTOTAL					333,968		
215								
216	C3020 FLOOR FINISHES							
217	Floor finishes	74,215	sf	7.00	519,505			
218	SUBTOTAL					519,505		
219								
220	C3030 CEILING FINISHES							
221	Ceiling finishes	74,215	sf	6.00	445,290			
222	SUBTOTAL					445,290		
223								
224	TOTAL - INTERIOR FINISHES						\$1,298,763	
225								
226								
227	D10 CONVEYING SYSTEMS							
228								
229	D1010 ELEVATOR							
230	93000 Passenger elevator; 2 stop, 3500 lbs	1	ea	100,000.00	100,000			
231	SUBTOTAL					100,000		
232								
233	TOTAL - CONVEYING SYSTEMS						\$100,000	
234								
235								
236	D20 PLUMBING							
237								
238	D20 PLUMBING, GENERALLY							
239	Plumbing allowance	74,215	gsf	12.00	890,580			
240	SUBTOTAL					890,580		
241								
242	TOTAL - PLUMBING						\$890,580	
243								
244								
245	D30 HVAC							
246								
247	D30 HVAC, GENERALLY							
248	HVAC complete system	74,215	gsf	38.00	2,820,170			
249	SUBTOTAL					2,820,170		
250								
251	TOTAL - HVAC						\$2,820,170	
252								
253								
254	D40 FIRE PROTECTION							



Feasibility Design Estimate

GFA

74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 5C

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D40 FIRE PROTECTION, GENERALLY

Sprinkler system	74,215	gsf	4.50	333,968		
SUBTOTAL						333,968

TOTAL - FIRE PROTECTION						\$333,968
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D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEM

Electrical system; complete	74,215	gsf	34.00	2,523,310		
SUBTOTAL						2,523,310

TOTAL - ELECTRICAL						\$2,523,310
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E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY

11500	Gym wall pads	1	ls	10,000.00	10,000	
11500	Basketball backstops; swing up; electric operated	2	ea	9,800.00	19,600	
11500	Gymnasium dividing net; electrically operated	1	loc	45,000.00	45,000	
11500	Volleyball net and standards	1	ea	2,000.00	2,000	
11500	Telescoping bleachers	1	ls	25,000.00	25,000	
11500	Cubicle curtain & track at nurse area	1	loc	500.00	500	
11970	Platform curtains, rigging and controls	1	ls	35,000.00	35,000	
	AV Equipment at Caf�/Gym/ Learning					F,F&E
11400	Food Service equipment	1	ls	225,000.00	225,000	
11500	Allowance for loading dock equipment	1	ls	10,000.00	10,000	
11400	Refrigerator/Freezer	1	ea	1,000.00	1,000	
11400	Kiln	1	ea	3,000.00	3,000	
10999	Electrically operated projection screens in gym & cafeteria	2	loc	10,000.00	20,000	
	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)					FF+E
	SUBTOTAL					396,100

TOTAL - EQUIPMENT						\$396,100
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E20 FURNISHINGS

E2010 FIXED FURNISHINGS

Entry mats & frames - recessed with carpet/rubber strips	100	sf	45.00	4,500		
Manual operated roller shades	13,538	sf	6.00	81,228		
Counters, base cabinets, tall storage in classrooms and other rooms	74,215	gfa	4.00	296,860		
SUBTOTAL						382,588

E2020 MOVABLE FURNISHINGS

All movable furnishings to be provided and installed by owner						NIC
SUBTOTAL						



Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

13-Mar-17

Feasibility Design Estimate

GFA

74,215

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT MURACO ES 5C

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TOTAL - FURNISHINGS							\$382,588
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F10 SPECIAL CONSTRUCTION

F10 SPECIAL CONSTRUCTION
 No Work in this section
 SUBTOTAL

TOTAL - SPECIAL CONSTRUCTION

F20 SELECTIVE BUILDING DEMOLITION
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F2010 BUILDING ELEMENTS DEMOLITION
 SUBTOTAL

F2020 HAZARDOUS COMPONENTS ABATEMENT
 None Included
 SUBTOTAL

TOTAL - SELECTIVE BUILDING DEMOLITION
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Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

13-Mar-17

Feasibility Design Estimate

GFA 85,455

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
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NEW SCHOOL AT LYNCH ES 5C

A10 FOUNDATIONS

A1010	Standard Foundations	\$483,746		
A1020	Special Foundations	\$0		
A1030	Lowest Floor Construction	\$620,592	\$1,104,338	\$12.92 5.3%

A20 BASEMENT CONSTRUCTION

A2010	Basement Excavation	\$0		
A2020	Basement Walls	\$0	\$0	\$0.00 0.0%

B10 SUPERSTRUCTURE

B1010	Upper Floor Construction	\$1,527,694		
B1020	Roof Construction	\$1,429,294	\$2,956,988	\$34.60 14.3%

B20 EXTERIOR CLOSURE

B2010	Exterior Walls	\$1,442,406		
B2020	Windows	\$1,202,011		
B2030	Exterior Doors	\$43,040	\$2,687,457	\$31.45 13.0%

B30 ROOFING

B3010	Roof Coverings	\$1,181,145		
B3020	Roof Openings	\$5,000	\$1,186,145	\$13.88 5.7%

C10 INTERIOR CONSTRUCTION

C1010	Partitions	\$1,709,100		
C1020	Interior Doors	\$427,275		
C1030	Specialties/Millwork	\$589,640	\$2,726,015	\$31.90 13.1%

C20 STAIRCASES

C2010	Stair Construction	\$78,000		
C2020	Stair Finishes	\$20,550	\$98,550	\$1.15 0.5%

C30 INTERIOR FINISHES

C3010	Wall Finishes	\$384,548		
C3020	Floor Finishes	\$598,185		
C3030	Ceiling Finishes	\$512,730	\$1,495,463	\$17.50 7.2%

D10 CONVEYING SYSTEMS

D1010	Elevator	\$100,000	\$100,000	\$1.17 0.5%
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D20 PLUMBING

D20	Plumbing	\$1,025,460	\$1,025,460	\$12.00 4.9%
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Winchester Schools
 NEW MURACO + LYNCH COMBINED
 Winchester, MA

13-Mar-17

Feasibility Design Estimate

GFA 85,455

CONSTRUCTION COST SUMMARY					
<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>	
NEW SCHOOL AT LYNCH ES 5C					
D30 HVAC					
D30 HVAC	\$3,247,290	\$3,247,290	\$38.00	15.7%	
D40 FIRE PROTECTION					
D40 Fire Protection	\$384,548	\$384,548	\$4.50	1.9%	
D50 ELECTRICAL					
D5010 Complete System	\$2,905,470	\$2,905,470	\$34.00	14.0%	
E10 EQUIPMENT					
E10 Equipment	\$396,100	\$396,100	\$4.64	1.9%	
E20 FURNISHINGS					
E2010 Fixed Furnishings	\$422,808				
E2020 Movable Furnishings	NIC	\$422,808	\$4.95	2.0%	
F10 SPECIAL CONSTRUCTION					
F10 Special Construction	\$0	\$0	\$0.00	0.0%	
F20 HAZMAT REMOVALS					
F2010 Building Elements Demolition	\$0				
F2020 Hazardous Components Abatement	\$0	\$0	\$0.00	0.0%	
TOTAL DIRECT COST (Trade Costs)		\$20,736,632	\$242.66	100.0%	



Feasibility Design Estimate

GFA

85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

GROSS FLOOR AREA CALCULATION

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First Floor	44,442
Second Floor	41,013

TOTAL GROSS FLOOR AREA (GFA)	85,455 sf
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Strip footings - 2'-0" x 1'-0"

Excavation	1,221	cy	20.00	24,420
Store on site for reuse	1,221	cy	14.00	17,094
Backfill with existing fill	1,136	cy	16.00	18,176
Remove surplus fill off site	85	cy	25.00	2,125
Formwork	2,198	sf	12.00	26,376
Re-bar, 10#/lf	10,990	lbs	1.20	13,188
Concrete material; 3,000 psi	85	cy	125.00	10,625
Placing concrete	85	cy	55.00	4,675

Foundation walls at exterior - 14" thick

Formwork	8,792	sf	14.00	123,088
Re-bar, 4.5#/sf	19,782	lbs	1.20	23,738
Concrete material; 4,000 psi	200	cy	135.00	27,000
Placing concrete	200	cy	65.00	13,000
Dampproofing foundation wall and footing	6,594	sf	1.90	NIC
Insulation to foundation walls; 2" thick	4,396	sf	2.50	10,990
Form shelf	1,099	lf	8.00	8,792

Column footings, typical, 6' x 6' x 2'-0"

Excavation	611	cy	20.00	12,220
Store on site for reuse	611	cy	14.00	8,554
Backfill with new fill	465	cy	16.00	7,440
Remove surplus fill off site	146	cy	20.00	2,920
Formwork	2,496	sf	11.00	27,456
Re-bar	29,120	lbs	1.20	34,944
Concrete material; 3,000 psi	146	cy	125.00	18,250
Placing concrete	146	cy	55.00	8,030
Set anchor bolts grout plates	52	ea	150.00	7,800

Interior pilasters

Formwork	1,523	sf	11.00	16,753
Re-bar	9,360	lbs	1.20	11,232
Concrete material; 3,000 psi	27	cy	125.00	3,375
Placing concrete	27	cy	55.00	1,485

SUBTOTAL

483,746

A1020 SPECIAL FOUNDATIONS

No Work in this section

SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION



Feasibility Design Estimate

GFA

85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

50	<u>New Slab on grade, 5" thick</u>							
51	Structural gravel fill, 8"	1,098	cy	30.00	32,940			
52	Base course, 8" gravel	1,098	cy	40.00	43,920			
53	Rigid insulation	44,442	sf	2.25	99,995			
54	Vapor barrier	44,442	sf	1.00	44,442			
55	Mesh reinforcing 15% lap	51,108	sf	0.80	40,886			
56	Concrete - 5" thick	726	cy	125.00	90,750			
57	Placing concrete	726	cy	45.00	32,670			
58	Finishing and curing concrete	44,442	sf	4.00	177,768			
59	Control joints - saw cut	44,442	sf	0.50	22,221			
60	<u>Miscellaneous</u>							
61	Elevator pit	1	ea	30,000.00	30,000			
62	Dewatering	1	ea	5,000.00	5,000			
63	SUBTOTAL					620,592		
64								
65	TOTAL - FOUNDATIONS							\$1,104,338
66								
67								
68	A20 BASEMENT CONSTRUCTION							
69								
70	A2010 BASEMENT EXCAVATION							
71	No items in this section							
72	SUBTOTAL						-	
73								
74	A2020 BASEMENT WALLS							
75	No items in this section							
76	SUBTOTAL						-	
77								
78	TOTAL - BASEMENT CONSTRUCTION							
79								
80								
81	B10 SUPERSTRUCTURE							
82								
83	B1010 FLOOR CONSTRUCTION							
84	<u>Floor Structure - Steel:</u>							
85	Steel beams and columns; 13/SF	267	tns	3,500.00	934,500			
86	Shear studs	8,203	ea	2.50	20,508			
87	<u>Floor Structure</u>							
88	2" Metal floor Deck	41,013	sf	4.20	172,255			
89	WWF reinforcement	47,165	sf	0.80	37,732			
90	Concrete Fill to metal deck; 5" normal weight	654	cy	125.00	81,750			
91	Place and finish concrete	41,013	sf	2.00	82,026			
92	Misc. perimeter angles	1,099	lf	25.00	27,475			
93	<u>Miscellaneous</u>							
94	Barrier one at slab	654	cy	65.00	42,510			
95	Fire proofing to columns and beams	41,013	sf	2.90	118,938			
96	Fire stopping floors	2	flrs	5,000.00	10,000			
97	SUBTOTAL					1,527,694		



Feasibility Design Estimate

GFA

85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

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B1020 ROOF CONSTRUCTION

Roof Structure - Steel:

Steel beams/Joists; 13#/SF **289** tns 3,800.00 1,098,200

Roof Structure

1-1/2" Metal floor Deck @ roof **44,442** sf 3.00 133,326

Miscellaneous

Roof screen framing - allow **1** ls 20,000.00 20,000

Fire proofing to columns, beams and deck **44,442** sf 4.00 177,768

SUBTOTAL 1,429,294

TOTAL - SUPERSTRUCTURE	\$2,956,988
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B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS; 60% solid/40% glass

Interior skin

6" metal stud backup **19,123** sf 7.50 143,423

Batt insulation in stud **19,123** sf 2.25 43,027

2 1/2" Rigid Insulation **19,123** sf 3.00 57,369

Air barrier **19,123** sf 6.00 114,738

Air barrier/flashing at windows **4,207** lf 7.00 29,449

Gypsum Sheathing **19,123** sf 2.75 52,588

Drywall lining to interior face of stud backup **19,123** sf 3.00 57,369

Exterior skin

Brick veneer; 75% of exterior wall **14,342** sf 35.00 501,970

Metal panels; 25% of exterior wall **4,781** sf 60.00 286,860

Miscellaneous

Roof screens - allow **1** ls 60,000.00 60,000

Staging to exterior wall **31,871** sf 3.00 95,613

SUBTOTAL 1,442,406

B2020 WINDOWS

Premium for sunscreen and light shelf elements **1** ls NIC

Windows/storefront **12,748** sf 90.00 1,147,320

Backer rod & double sealant **4,207** lf 9.00 37,863

Wood blocking at openings **4,207** lf 4.00 16,828

SUBTOTAL 1,202,011

B2030 EXTERIOR DOORS

Glazed entrance doors including frame and hardware; double door at corridor exit **4** pr 8,000.00 32,000

Other doors **1** ls 10,000.00 10,000

Backer rod & double sealant **80** lf 9.00 720

Wood blocking at openings **80** lf 4.00 320

SUBTOTAL 43,040

TOTAL - EXTERIOR CLOSURE	\$2,687,457
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Feasibility Design Estimate

GFA 85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

B30 ROOFING

B3010 ROOF COVERINGS

Flat roofing

PVC roof membrane fully adhered	44,442	sf	14.00	622,188	
Insulation	44,442	sf	7.00	311,094	
1/2" dens-deck protection board	44,442	sf	2.00	88,884	
Reinforced vapor barrier	44,442	sf	1.50	66,663	
Rough blocking	4,396	lf	6.00	26,376	

Miscellaneous Roofing

Roof screens - allow					NIC
Roof fascia/cornice	1,099	lf	60.00	65,940	
SUBTOTAL					1,181,145

B3020 ROOF OPENINGS

Skylights, allow					NIC
Roof hatch	1	ea	5,000.00	5,000	
SUBTOTAL					5,000

TOTAL - ROOFING

\$1,186,145

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

Allowance for interior walls/glazed partitions etc.	85,455	gfa	20.00	1,709,100	
SUBTOTAL					1,709,100

C1020 INTERIOR DOORS

Interior doors, frames and hardware	85,455	gfa	5.00	427,275	
SUBTOTAL					427,275

C1030 SPECIALTIES / MILLWORK

Marker boards/tackboards in classroom	85,455	gfa	1.15	98,273	
Toilet partitions and accessories	85,455	gfa	0.75	64,091	
Room Signs	85,455	gfa	0.25	21,364	
Wood paneling/benches/display cases etc.	85,455	gfa	1.50	128,183	
Lockers	85,455	sf	1.00	85,455	
Miscellaneous metals throughout building	85,455	sf	1.25	106,819	
Miscellaneous sealants throughout building	85,455	sf	1.00	85,455	
SUBTOTAL					589,640

TOTAL - INTERIOR CONSTRUCTION

\$2,726,015

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

55100	Metal pan stair; egress stair	3	flt	24,000.00	72,000
33000	Concrete fill to stairs	3	flt	2,000.00	6,000



Feasibility Design Estimate

GFA 85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

198	SUBTOTAL					78,000		
199								
200	C2020 STAIR FINISHES							
201	90009 High performance coating to stairs including all railings etc.	3	flt	3,000.00	9,000			
202	90006 Rubber tile at stairs - landings	330	sf	12.00	3,960			
203	90006 Rubber tile at stairs - treads & risers	345	lft	22.00	7,590			
204	SUBTOTAL					20,550		
205								
206	TOTAL - STAIRCASES							\$98,550

C30 INTERIOR FINISHES

207								
208								
209	C3010 WALL FINISHES							
210	Wall finishes	85,455	gfa	4.50	384,548			
211	SUBTOTAL					384,548		
212								
213	C3020 FLOOR FINISHES							
214	Floor finishes	85,455	sf	7.00	598,185			
215	SUBTOTAL					598,185		
216								
217	C3030 CEILING FINISHES							
218	Ceiling finishes	85,455	sf	6.00	512,730			
219	SUBTOTAL					512,730		
220								
221	TOTAL - INTERIOR FINISHES							\$1,495,463
222								
223								

D10 CONVEYING SYSTEMS

224								
225								
226	D1010 ELEVATOR							
227	93000 Passenger elevator; 2 stop, 3500 lbs	1	ea	100,000.00	100,000			
228	SUBTOTAL					100,000		
229								
230	TOTAL - CONVEYING SYSTEMS							\$100,000
231								
232								

D20 PLUMBING

233								
234								
235	D20 PLUMBING, GENERALLY							
236	Plumbing allowance	85,455	gsf	12.00	1,025,460			
237	SUBTOTAL					1,025,460		
238								
239	TOTAL - PLUMBING							\$1,025,460
240								
241								

D30 HVAC

242								
243								
244	D30 HVAC, GENERALLY							
245	HVAC complete system	85,455	gsf	38.00	3,247,290			
246	SUBTOTAL					3,247,290		
247								
248	TOTAL - HVAC							\$3,247,290
249								
250								

D40 FIRE PROTECTION

251	D40 FIRE PROTECTION, GENERALLY						
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Feasibility Design Estimate

GFA 85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

256	Sprinkler system	85,455	gsf	4.50	384,548			
257	SUBTOTAL					384,548		
258	TOTAL - FIRE PROTECTION							\$384,548

D50 ELECTRICAL

D5010 COMPLETE ELECTRICAL SYSTEM

265	Electrical system; complete	85,455	gsf	34.00	2,905,470			
266	SUBTOTAL					2,905,470		
267	TOTAL - ELECTRICAL							\$2,905,470

E10 EQUIPMENT

E10 EQUIPMENT, GENERALLY

275	11500 Gym wall pads	1	ls	10,000.00	10,000			
276	11500 Basketball backstops; swing up; electric operated	2	ea	9,800.00	19,600			
277	11500 Gymnasium dividing net; electrically operated	1	loc	45,000.00	45,000			
278	11500 Volleyball net and standards	1	ea	2,000.00	2,000			
279	11500 Telescoping bleachers	1	ls	25,000.00	25,000			
280	11500 Cubicle curtain & track at nurse area	1	loc	500.00	500			
281	11970 Platform curtains, rigging and controls	1	ls	35,000.00	35,000			
282	AV Equipment at Caf�/Gym/ Learning						F,F&E	
283	11400 Food Service equipment	1	ls	225,000.00	225,000			
284	11500 Allowance for loading dock equipment	1	ls	10,000.00	10,000			
285	11400 Refrigerator/Freezer	1	ea	1,000.00	1,000			
286	11400 Kiln	1	ea	3,000.00	3,000			
287	10999 Electrically operated projection screens in gym & cafeteria	2	loc	10,000.00	20,000			
288	AV Equipment (including Smartboards, Projectors, LED monitors, Digital information displays etc.)						FF+E	
289	SUBTOTAL					396,100		
290	TOTAL - EQUIPMENT							\$396,100

E20 FURNISHINGS

E2010 FIXED FURNISHINGS

297	Entry mats & frames - recessed with carpet/rubber strips	100	sf	45.00	4,500			
298	Manual operated roller shades	12,748	sf	6.00	76,488			
299	Counters, base cabinets, tall storage in classrooms and other rooms	85,455	gfa	4.00	341,820			
300	SUBTOTAL					422,808		
301	E2020 MOVABLE FURNISHINGS							
302	All movable furnishings to be provided and installed by owner							
303	SUBTOTAL						NIC	



Feasibility Design Estimate

GFA 85,455

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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NEW SCHOOL AT LYNCH ES 5C

306	TOTAL - FURNISHINGS						\$422,808
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307							
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309	F10 SPECIAL CONSTRUCTION						
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311	F10 SPECIAL CONSTRUCTION						
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312	No Work in this section						
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313	SUBTOTAL						
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315	TOTAL - SPECIAL CONSTRUCTION						
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318	F20 SELECTIVE BUILDING DEMOLITION						
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319							
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320	F2010 BUILDING ELEMENTS DEMOLITION						
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321	SUBTOTAL						
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322							
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323	F2020 HAZARDOUS COMPONENTS ABATEMENT						
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324	None Included						
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325	SUBTOTAL						
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326							
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327	TOTAL - SELECTIVE BUILDING DEMOLITION						
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Feasibility Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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SITWORK NEW LYNCH SCHOOL

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G SITEWORK

G10 SITE PREPARATION & DEMOLITION

Site Demolitions and Relocations

024100	Site construction fence/barricades; visual screen; includes moving for phasing	2,000	lf	15.00	30,000		
02200	Demolish existing paving	100,000	sf	1.00	100,000		
02200	Demolish soccer field	1	loc	10,000	10,000		
02200	Site clearing/grubbing	1	ls	30,000.00	30,000		
02200	Miscellaneous demolition allowance including existing utilities	1	ls	50,000	50,000		

Site Earthwork

310000	Construction entrances/wheel washes (allowance)	2	loc	12,000.00	24,000		
311000	Strip topsoil, store; assume 6"	3,704	cy	8.00	29,632		
310000	Cut/fill	16,667	cy	6.00	100,002		
310000	Export excess material - assumed balanced site						
310000	Fine grading	33,333	sy	0.75	25,000		
312500	Silt fence/erosion control (allowance)	2,000	lf	12.00	24,000		
312500	Erosion Control monitoring & maintenance	1	ls	30,000.00	30,000		

Temporary Work/Phasing

310000	Contractor Parking; includes demolition	15,397	sf	3.50	53,890		
310000	Temporary Parking; includes demolition	19,142	sf	3.30	63,169		
310000	Construction access road; includes demolition	29,123	sf	3.00	87,369		
310000	Dust control/Mobilization costs	1	ls	50,000.00	50,000		

311000	Strip topsoil, store; assume 6"	3,704	cy	8.00	29,632		
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Hazardous Waste Remediation

SUBTOTAL 736,694

G20 SITE IMPROVEMENTS

Roadways and Parking Lots

	Bituminous concrete paving	62,551	sf		-		
320000	gravel base; 12" thick	2,317	cy	35.00	81,095		
320000	bituminous concrete; 4" thick	6,950	sy	26.00	180,700		
320000	6"x18" granite curb	3,811	lf	35.00	133,385		
320000	Premium for radius curbs	1	ls	25,000.00	25,000		
320000	Road markings	1	ls	15,000.00	15,000		
321724	Signage	1	ls	20,000.00	20,000		

Fire lane

	Bituminous concrete paving	23,260	sf		-		
320000	gravel base; 18" thick	1,292	cy	35.00	45,220		
320000	bituminous concrete; 4" thick	2,584	sy	26.00	67,184		
320000	6"x18" granite curb	1,806	lf	35.00	63,210		

Pedestrian paving; allowance of 10,000 sf

	Concrete paving broom finish	10,000	sf		-		
320000	gravel base; 8" thick	248	cy	35.00	8,680		
033000	concrete paving; 4" thick	10,000	sf	6.50	65,000		

Concrete pavers; allowance of 5,000 sf

	Concrete pavers	5,000	sf		-		
320000	sand bedding; 1" thick	15	cy	25.00	375		



Feasibility Design Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITWORK NEW LYNCH SCHOOL							
51	033000	Precast concrete pavers	5,000	sf	14.00	70,000	
52	320000	gravel base; 8" thick	124	cy	35.00	4,340	
53	033000	concrete base; 4" thick	5,000	sf	5.00	25,000	
54		<u>Site Improvements</u>					
55	129300	Bicycle racks - Allowance	20	ea	1,000.00	20,000	
56	129300	Flag pole	1	loc	7,500.00	7,500	
57	129300	Ornamental trash/recycling receptacles	8	loc	1,400.00	11,200	
58	129300	Bollards	10	ea	850.00	8,500	
59	129300	Bollards; moveable	4	loc	1,500.00	6,000	
60	129300	Dumpster enclosure and pad	1	ls	15,000.00	15,000	
60	129300	Retaining wall	381	lf	180.00	68,580	
61	129300	Fence along perimeter	1,200	lf	90.00	108,000	
62	129300	New site entrance sign	1	ls	25,000.00	25,000	
63	129300	Miscellaneous site improvements	1	ls	100,000.00	100,000	
64		<u>Soccer Field - assumed grass</u>					
65	329210	Grass field including drainage etc.	71,500	sf	2.00	143,000	
66	116800	Soccer Goal	2	loc	4,000.00	8,000	
67	116800	Benches - allowance	2	loc	2,250.00	4,500	
68	323114	Vinyl CL Fencing 4'	961	lf	55.00	52,855	
69	323114	Gate, single	2	ea	1,200.00	2,400	
70							
71		<u>Landscaping & Plantings:</u>					
72	329900	Spread existing amended topsoil @ seeded areas.	3,704	cy	22.00	81,488	
73	329900	New seeded areas	200,949	sf	0.25	50,237	
74	02830	Planting allowance	1	ls	150,000.00	150,000	
75		SUBTOTAL					1,666,449
76							
77	G30	CIVIL MECHANICAL UTILITIES					
78							
79	331000	<u>WATER UTILITIES</u>					
80	312003	New fire DI piping; 8"	400	lf	90.00	36,000	
81	312003	New DI piping; 6"	400	lf	75.00	30,000	
82	312003	New fire hydrant	2	loc	2,600.00	5,200	
83	312003	FD connection	1	loc	2,000.00	2,000	
84	312003	Gate valves	4	loc	750.00	3,000	
85							
86	333000	<u>SANITARY SEWERAGE UTILITIES</u>					
87	333000	<u>Sanitary sewer</u>					
88	333000	6" PVC Sanitary sewer	400	lf	45.00	18,000	
89	333000	SMH	4	ea	4,000.00	16,000	
90	333000	Grease trap; 9,000 Gal	1	loc	15,000.00	15,000	
91							
92	334000	<u>STORM DRAINAGE UTILITIES</u>					
93	312003	Allowance for storm water management	77,551	sf	5.00	387,755	
94							
95	312003	<u>Gas service</u>					
96	312003	E&B trench for new lines, pipe and install by utilities					
97	312003	New gas service	400	lf	25.00	10,000	
98		SUBTOTAL					522,955
99							
100	G40	ELECTRICAL UTILITIES					
101	016100	Electric handhole	2	ea	1,500.00	3,000	
102	016100	Primary ductbank	400	lf	120.00	48,000	



Feasibility Design Estimate

<i>CSI</i>				<i>UNIT</i>	<i>EST'D</i>	<i>SUB</i>	<i>TOTAL</i>	
<i>CODE</i>	<i>DESCRIPTION</i>	<i>QTY</i>	<i>UNIT</i>	<i>COST</i>	<i>COST</i>	<i>TOTAL</i>	<i>COST</i>	
SITWORK NEW LYNCH SCHOOL								
103	016100 Transformer by Utility Company	1	ea			NIC		
104	016100 Transformer pad	1	ea	2,000.00	2,000			
105	016100 Secondary service							
106	016100 Ductbank	50	lf	500.00	25,000			
107	016100 Emergency service							
108	016100 Ductbank	100	lf	150.00	15,000			
109	016100 Generator pad	1	ea	1,500.00	1,500			
110	016100 <u>Site lighting</u>							
111	016100 Allowance for site lighting	1	ls	100,000.00	100,000			
112	016100 Allowance for sports lighting					NIC		
113	016100 <u>Site communications and security</u>							
114	016100 Site security	1	ls	15,000.00	15,000			
115	016100 Communication riser pole	1	ea	2,500.00	2,500			
116	016100 Telecom handhole	2	ea	1,500.00	3,000			
117	016100 Ductbank	400	lf	130.00	52,000			
118							267,000	
119								
120	SUBTOTAL - SITE DEVELOPMENT LYNCH SCHOOL							\$3,193,098



Feasibility Design Estimate

Winchester Schools New Team Rooms

Winchester, MA

PM&C LLC
20 Downer Avenue, Suite 1c
Hingham, MA 02043
(T) 781-740-8007
(F) 781-740-1012

Prepared for:
Flansburgh Architects

March 30, 2017



Winchester Schools
 New Team Rooms
 Winchester, MA

30-Mar-17

Feasibility Design Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	\$/sf	Estimated Construction Cost
RENOVATION TO McCALL MS - NEW TEAM ROOMS				
New Team Rooms + Restrooms		1,740	\$205.82	\$358,130
<hr/>				
SUB-TOTAL	Jun-18	1,740	\$205.82	\$358,130
ESCALATION TO START - (assumed 4% PA)	5.7%			\$20,413
DESIGN AND PRICING CONTINGENCY	15%			\$53,720
<hr/>				
SUB-TOTAL		1,740	\$248.43	\$432,263
GENERAL CONDITIONS				\$64,839
BONDS	1.00%			\$4,323
INSURANCE	2.00%			\$8,645
PERMIT				NIC
OVERHEAD AND FEE	10.00%			\$43,226
OWNER CONTINGENCY				By Owner
TOTAL OF ALL CONSTRUCTION	Jun-18	1,740	\$317.99	\$553,296

This Feasibility Design cost estimate was produced from preliminary drawings prepared by Flansburgh Architects Inc. and their design team dated February 2, 2017. 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, general contractor's overhead, fee 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



Winchester Schools

New Team Rooms

Winchester, MA

30-Mar-17

Feasibility Design Estimate

Items not included in this estimate are:

- Land acquisition, feasibility, and financing costs
- All professional fees and insurance
- Site or existing conditions surveys investigations costs, including to determine subsoil conditions
- 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 as indicated in the estimate
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)
- Construction contingency



Winchester Schools
New Team Rooms
Winchester, MA

30-Mar-17

Feasibility Design Estimate

GFA 1,740

CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO McCALL MS - NEW TEAM ROOMS				
A10 FOUNDATIONS				
A1010 Standard Foundations	\$6,800			
A1020 Special Foundations	\$0			
A1030 Lowest Floor Construction	\$11,420	\$18,220	\$10.47	5.1%
B10 SUPERSTRUCTURE				
B1010 Upper Floor Construction	\$0			
B1020 Roof Construction	\$0	\$0	\$0.00	0.0%
B20 EXTERIOR CLOSURE				
B2010 Exterior Walls	\$7,000			
B2020 Windows/Curtainwall	\$0			
B2030 Exterior Doors	\$4,600	\$11,600	\$6.67	3.2%
B30 ROOFING				
B3010 Roof Coverings	\$4,000			
B3020 Roof Openings	\$0	\$4,000	\$2.30	1.1%
C10 INTERIOR CONSTRUCTION				
C1010 Partitions	\$89,080			
C1020 Interior Doors	\$8,200			
C1030 Specialties/Millwork	\$80,450	\$177,730	\$102.14	49.6%
C20 STAIRCASES				
C2010 Stair Construction	\$0			
C2020 Stair Finishes	\$0	\$0	\$0.00	0.0%
C30 INTERIOR FINISHES				
C3010 Wall Finishes	\$7,220			
C3020 Floor Finishes	\$22,620			
C3030 Ceiling Finishes	\$12,180	\$42,020	\$24.15	11.7%
D10 CONVEYING SYSTEMS				
D1010 Elevator	\$0	\$0	\$0.00	0.0%
D20 PLUMBING				
D20 Plumbing	\$28,000	\$28,000	\$16.09	7.8%
D30 HVAC				
D30 HVAC	\$43,500	\$43,500	\$25.00	12.1%
D40 FIRE PROTECTION				
D40 Fire Protection	\$3,480	\$3,480	\$2.00	1.0%



Winchester Schools
 New Team Rooms
 Winchester, MA

30-Mar-17

Feasibility Design Estimate

GFA 1,740

CONSTRUCTION COST SUMMARY

<i>BUILDING SYSTEM</i>	<i>SUB-TOTAL</i>	<i>TOTAL</i>	<i>\$/SF</i>	<i>%</i>
RENOVATION TO McCALL MS - NEW TEAM ROOMS				
D50 ELECTRICAL				
D5010 Electrical Systems	\$26,100	\$26,100	\$15.00	7.3%
E10 EQUIPMENT				
E10 Equipment	\$0	\$0	\$0.00	0.0%
E20 FURNISHINGS				
E2010 Fixed Furnishings	\$0			
E2020 Movable Furnishings	NIC	\$0	\$0.00	0.0%
F10 SPECIAL CONSTRUCTION				
F10 Special Construction	\$0	\$0	\$0.00	0.0%
F20 SELECTIVE BUILDING DEMOLITION				
F2010 Building Elements Demolition	\$3,480			
F2020 Hazardous Components Abatement	\$0	\$3,480	\$2.00	1.0%
TOTAL DIRECT COST (Trade Costs)		\$358,130	\$205.82	100.0%



Feasibility Design Estimate

GFA 1,740

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - NEW TEAM ROOMS

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TOTAL RENOVATED AREA (GFA)						1,740	GSF
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A10 FOUNDATIONS

A1010 STANDARD FOUNDATIONS

Grading and patching of existing landscape/planting	1	ls	2,000.00	2,000	
New versalok retaining wall	96	sf	50.00	4,800	
SUBTOTAL					6,800

A1020 SPECIAL FOUNDATIONS

No work in this section
 SUBTOTAL

A1030 LOWEST FLOOR CONSTRUCTION

New exterior concrete walkway	160	sf	12.00	1,920	
Patch existing slab at new bathroom	200	sf	20.00	4,000	
Trenching and patching existing slab to connect to existing sanitary pipe	50	lf	110.00	5,500	
SUBTOTAL					11,420

TOTAL - FOUNDATIONS						\$18,220
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B10 SUPERSTRUCTURE

B1010 FLOOR CONSTRUCTION

SUBTOTAL -

B1020 ROOF CONSTRUCTION

SUBTOTAL -

TOTAL - SUPERSTRUCTURE						
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B20 EXTERIOR CLOSURE

B2010 EXTERIOR WALLS

Cut and patch exterior wall for new doors; including new lintels	2	loc	3,500.00	7,000	
SUBTOTAL					7,000

B2020 WINDOWS/CURTAINWALL

No work assumed to existing exterior
 SUBTOTAL -

B2030 EXTERIOR DOORS

New HM door, frame and hardware	2	loc	2,300.00	4,600	
SUBTOTAL					4,600

TOTAL - EXTERIOR CLOSURE						\$11,600
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Feasibility Design Estimate

GFA

1,740

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
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RENOVATION TO McCALL MS - NEW TEAM ROOMS

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B30 ROOFING

B3010 ROOF COVERINGS

Patch roofing for new vents/exhausts	2	loc	2,000.00	4,000		4,000
SUBTOTAL						4,000

B3020 ROOF OPENINGS

No work in this section						-
SUBTOTAL						-

TOTAL - ROOFING \$4,000

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

Furred GWB walls at exterior	1,000	sf	9.00	9,000		
New CMU walls at team rooms and toilets	3,640	sf	22.00	80,080		
SUBTOTAL						89,080

C1020 INTERIOR DOORS

New egress doors at team rooms	2	ea	2,500.00	5,000		
New doors at toilets	2	ea	1,600.00	3,200		
SUBTOTAL						8,200

C1030 SPECIALTIES / MILLWORK

Toilet accessories	2	rms	1,555.00	3,110		
Room Signs	4	loc	150.00	600		
Team room lockers	200	ea	350.00	70,000		
Team room benches	1	ls	5,000.00	5,000		
Miscellaneous sealants	1,740	sf	1.00	1,740		
SUBTOTAL						80,450

TOTAL - INTERIOR CONSTRUCTION \$177,730

C20 STAIRCASES

C2010 STAIR CONSTRUCTION

No work in this section						-
SUBTOTAL						-

C2020 STAIR FINISHES

No work in this section						-
SUBTOTAL						-

TOTAL - STAIRCASES

C30 INTERIOR FINISHES

C3010 WALL FINISHES

Paint to walls etc.	1,740	gsf	3.00	5,220		
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Feasibility Design Estimate

GFA

1,740

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
RENOVATION TO McCALL MS - NEW TEAM ROOMS								
106	Patch/paint existing walls	1	ls	2,000.00	2,000			
107	SUBTOTAL					7,220		
108								
109	C3020 FLOOR FINISHES							
110	New epoxy flooring	1,740	sf	11.00	19,140			
111	Floor prep	1,740	sf	2.00	3,480			
112	SUBTOTAL					22,620		
113								
114	C3030 CEILING FINISHES							
115	ACT, 2x2	1,740	sf	7.00	12,180			
116	SUBTOTAL					12,180		
117								
118	TOTAL - INTERIOR FINISHES						\$42,020	
119								
120								
121	D10 CONVEYING SYSTEMS							
122								
123	No work in this section							
124	SUBTOTAL					-		
125								
126	TOTAL - CONVEYING SYSTEMS							
127								
128								
129	D20 PLUMBING							
130								
131	D20 PLUMBING, GENERALLY							
132	New plumbing fixtures; includes all piping including connection to existing UG sanitary	4	fxt	7,000.00	28,000			
133	SUBTOTAL					28,000		
134								
135	TOTAL - PLUMBING						\$28,000	
136								
137								
138	D30 HVAC							
139								
140	D30 HVAC, GENERALLY							
141	HVAC to renovated area	1,740	sf	25.00	43,500			
142	SUBTOTAL					43,500		
143								
144	TOTAL - HVAC						\$43,500	
145								
146								
147	D40 FIRE PROTECTION							
148								
149	D40 FIRE PROTECTION, GENERALLY							
150	Sprinkler system modifications	1,740	sf	2.00	3,480			
151	SUBTOTAL					3,480		
152								
153	TOTAL - FIRE PROTECTION						\$3,480	
154								
155								
156	D50 ELECTRICAL							
157								
158	D5010 COMPLETE ELECTRICAL SYSTEMS							



Feasibility Design Estimate

GFA

1,740

	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST	
RENOVATION TO McCALL MS - NEW TEAM ROOMS								
159	Lighting, power and Tele/Data modifications	1,740	sf	15.00	26,100			
160	SUBTOTAL					26,100		
161	TOTAL - ELECTRICAL							\$26,100
162	E10 EQUIPMENT							
163	E10 EQUIPMENT, GENERALLY							
164	No work in this section							
165	SUBTOTAL					-		
166	TOTAL - EQUIPMENT							
167	E20 FURNISHINGS							
168	E2010 FIXED FURNISHINGS							
169	No work in this section							
170	SUBTOTAL					-		
171	E2020 MOVABLE FURNISHINGS							
172	All movable furnishings to be provided and installed by owner							
173	SUBTOTAL					NIC		
174	TOTAL - FURNISHINGS							
175	F10 SPECIAL CONSTRUCTION							
176	F10 SPECIAL CONSTRUCTION							
177	No items in this section							
178	SUBTOTAL							
179	TOTAL - SPECIAL CONSTRUCTION							
180	F20 SELECTIVE BUILDING DEMOLITION							
181	F2010 BUILDING ELEMENTS DEMOLITION							
182	Miscellaneous demo/protection	1,740	gfa	2.00	3,480			
183	SUBTOTAL					3,480		
184	F2020 HAZARDOUS COMPONENTS ABATEMENT							
185	None Included							
186	SUBTOTAL							
187	TOTAL - SELECTIVE BUILDING DEMOLITION							\$3,480