

Public – please note:

We anticipate being able to provide a hybrid option for this meeting.

If desired, please use dial-in information to join the anticipated hybrid meeting.

Regional School District #4

**AGENDA & NOTICE FOR REGION 4 BOARD OF EDUCATION
GROUNDS and BUILDINGS MAINTENANCE & OVERSIGHT COMMITTEE
MEETING**

To: Members of the Region 4 BOE Grounds and Buildings Maintenance & Oversight Committee

Subject: April 20, 2023 Region 4 BOE Grounds and Buildings Maintenance & Oversight Committee Mtg.

Time: **6:00 p.m. – 7:00 p.m.**

Place: **John Winthrop Middle School Library** or dial (US) +1 (916) 836-2476 PIN: 991 092 559#

(We kindly ask that you **please mute your phone immediately** upon connecting to the meeting as this will improve the audio quality for all participants. Google Meet may do this automatically, depending on the number of people already connected to the call. If so, pressing *6 will unmute your phone when it's time to speak)

If you are unable to be in attendance, please e-mail Jennifer Bryan in Central Office at jbryan@reg4.k12.ct.us.

Mission Statement

We, the communities of Chester, Deep River, Essex and Region 4, engage all students in a rigorous and collaborative educational program. We prepare our learners to be respectful citizens who are empowered to contribute in a globalized society.

AGENDA

- a. Call to order 6:00 pm – *R. Grissom, Facilitator*
- b. Committee to share feedback and thoughts regarding the following reports or documents:
 - o BSC Group report R4 Athletics Facilities Master Plan (*Encl #1*)
 - o DRA Report – Long Term Capital Project Needs (*Encl #2*)
 - o 2023-24 Proposed Capital Projects for Region 4 (*Encl #3*)
 - o BOE Policy re: Capital Reserve (scheduled for adoption on April 6th) (*Encl #4*)
- c. Next Meeting Date: May 15th @ 6:00 p.m. in the JWMS Library
(to finalize Committee's recommendation for Region 4 Long Range Capital Plan to be presented to Region 4 BOE)
- d. Adjourn

Cc: Town Clerks, Chester, Deep River, and Essex

Encl #1



Athletic Facilities Master Plan

Regional School District No.4

March 2021

Prepared For:



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Acknowledgements

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Mary Ellen Barnes, Director

Region 4 Board of Education

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DG Fitton, Member

Rob Bibbiani, Member

Lori Ann Clymas, Member

Rick Daniels, Member

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Mike Barile, Principal

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Jeff Swan, Athletic Coordinator

Mick Fearon, Boys Soccer Coach

Brian Drinkard, Boys Cross Country and Baseball Coach

Beth Powers, Field Hockey Coach

John Winthrop Middle School

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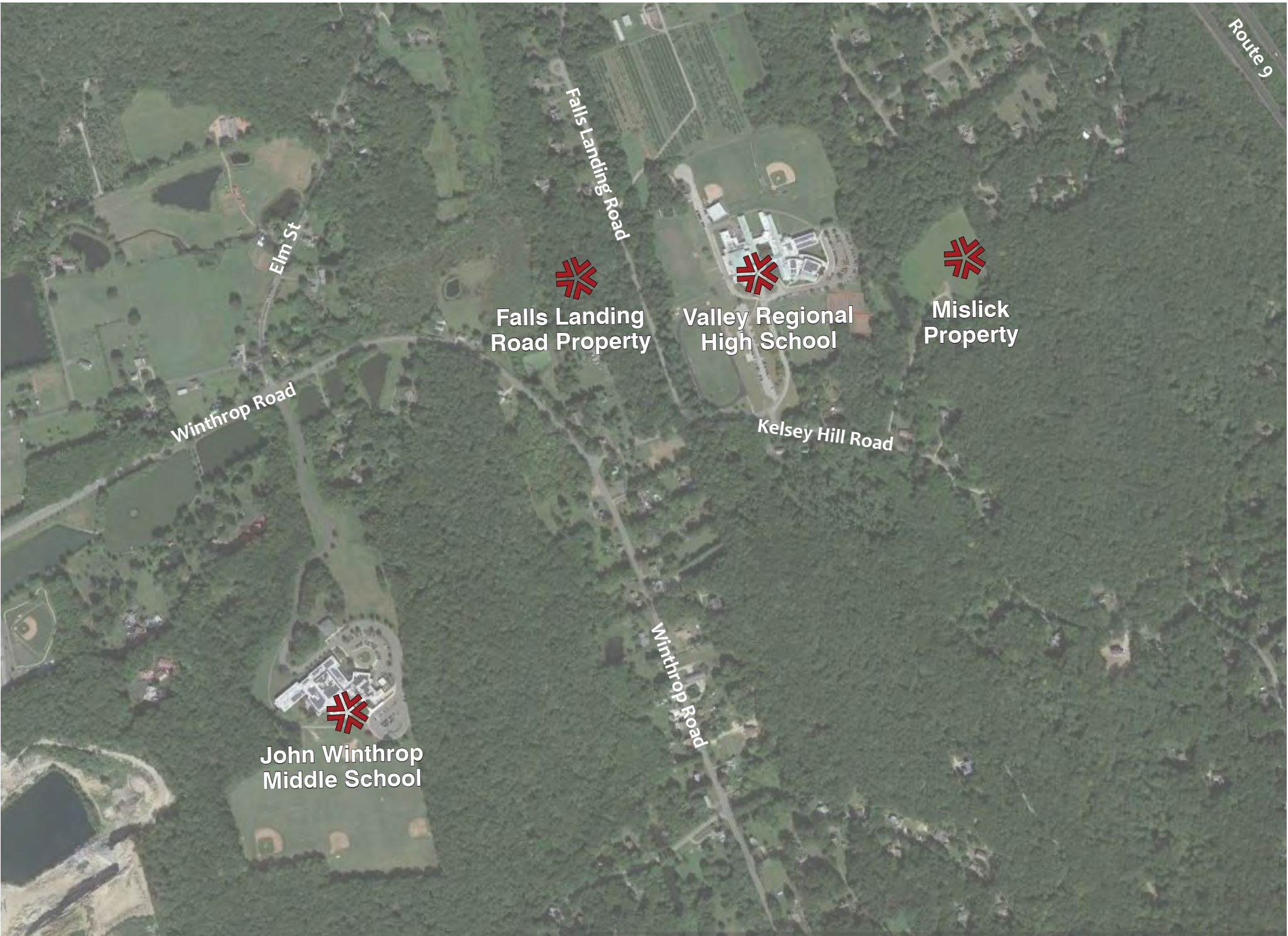
Introduction

At the beginning of 2020, Regional School District No. 4 (the District) engaged BSC Group, Inc. to complete a general assessment of the existing exterior athletic facilities and develop a strategic master plan for at John Winthrop Middle and Valley Regional High Schools. The District includes the towns of Chester, Deep River, and Essex, Connecticut. The strategic master plan is intended to allow the prioritizing of capital improvements in relation to use needs, maintenance, athletic facilities life cycles, renovation projects of new facilities.



A master planning process for athletic facilities within the District will create a process for gathering community input, a plan for future development, and a list of action items that the District can use for implementing improvements in a deliberate manner. This “action plan” is not intended to be implemented all at once, but is intended to provide the District with a firm action plan for improvements over the next five to ten years.

As part of the assessment process, BSC Group conducted assessments of each field’s physical conditions. Visual inspections documented the existing conditions of the facilities and shaped the direction for the recommendations for improvements.



Source: Google Earth, 2020

Project Location Map

Existing Facilities & Use Analysis

The strategic master planning process included a visual physical assessment of the athletic facilities to document the existing features and conditions. The existing facilities analysis included meetings with the Director of Facilities to identify ongoing issues, management practices, as well as the roles and responsibilities impacting use. The existing facility analysis that follows is intended to provide an overview of each facility, including the general overall condition of the athletic fields and various amenities. This combined with the use analysis information will be used to develop an overall understanding of the District’s needs related to the athletic facilities. This information will allow us to outline needs to prioritize projects within existing facilities and to identify needs for new facilities. This section, which focuses on the physical assessment of existing fields, includes general recommendations and considerations for action, including planning, maintenance, and future improvements. Reference the Appendices for a detailed breakdown of each facilities analysis.

Valley Regional High School

Valley Regional High School is located at 256 Kelsey Hill Road in the town of Deep River, CT. The athletic facilities are located to the south, west, and north sides of the campus which is perched on a hill. The facilities are primarily used by the high school athletics programs. Parking area located south of the school provides ample parking for events.

Facilities include: Stadium Field (6 lane running track with multi-sport field), Upper Field (field hockey/boys lacrosse), Tennis Courts (6), Baseball Field (90’ with multi-use outfield), Softball Field (60’ with multi-use outfield), Practice Field (160’ x 360’ football/multi-use field).



Valley Regional High School

Assessment Summary

Stadium Field

The existing track was constructed in 1995. It is in poor condition and appears to not have much resiliency left and should be resurfaced or replaced in the next couple of years. It is used by the track and field teams and the public. There is a steep slope down to the track on the east and a moderate wooded slope to the west.



Stadium Field

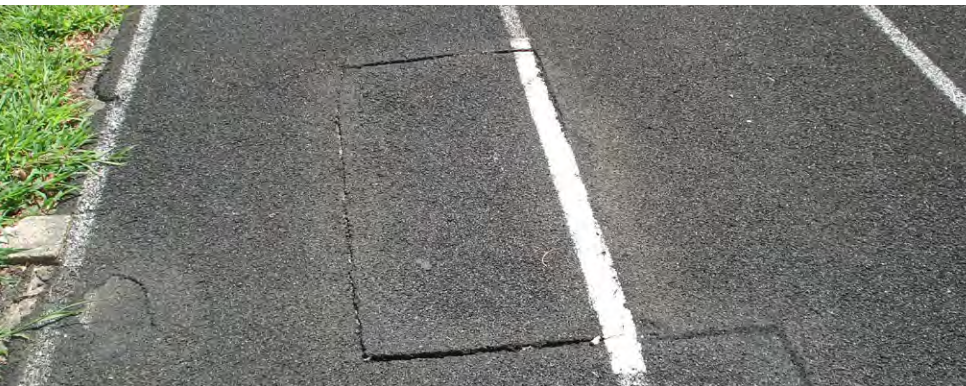


Existing Track

Spectator seating is accommodated at the top of the slope to the east of the stadium field. Our observations noted many code and accessibility deficiencies, Hand rails and rail attachments show signs of deterioration and missing posts. The press box/concession building was not part of the assessment. We recommend that the District hire an architectural consultant to perform an assessment of the building.



Spectator Seating



Existing Track Surface

The interior field is in fair to good condition with evidence of turf grass deterioration in the high use areas in the center and end zones of the field. Due to the pandemic, spring, summer and fall use has been limited giving the field much needed rest to reestablish turf cover. There doesn’t appear that the field has the proper crown which impedes drainage off the field to the edges. This has led to reserving this field for game football and varsity soccer games use. Additionally, it has required the District cancel or reschedule games because of poor field conditions. The field events (long/triple jump, pole vault, discus, shot put and javelin) are located to the north and outside the running track. The runways are in poor condition and should be replaced in conjunction with the track.



Existing Field Events

Upper Field

The upper field is utilized for a multitude of uses including field hockey practice and games, boy’s lacrosse practice and games as well as non-athletic events such as graduation. The current field configuration is confined by a 4-foot perimeter fence which prohibits the ability to shift the field from one side or the other, reducing wear in the high use areas. There is 10-foot high ball netting along the north end of field. The turf condition is poor. Spectator seating is provided on the west side of the field but lacks an accessible route to and from the parking lot.



Existing Conditions at Upper Field

Practice Field

The practice field is located to the north of the stadium field and is utilized for football and lacrosse practice, occasional JV soccer in the fall and track and field events in the spring and conditioning in the summer. Track and field events such as shot put, discus and javelin are located at the south end of the field with their throwing sectors in to the field. The putting circle is missing a 2-inch painted circle. Fencing around the discus circle is in good condition but does not meet today’s standards for height, setback from the circle or opening. The circle lacks a 2-inch wide painted circle and projecting lines.

The current field configuration allows for a 60-yard field. There is potential for expansion to the west. The field’s playing surface is uneven with bare spots in the turf coverage. It appears that the field lacks the proper crown for a field with natural grass surface leading to poor drainage condition. The goal posts are an “H” frame style, football/soccer goal combination. The goals are in fair to good condition. The field is irrigated by a self-propelled sprinkler. There is no spectator seating and a lack of accessible walkways. Concrete stairs descend the slope to the east, providing access from the school down to the field. The handrail does not meet code for extension at the top and bottom, and only provided on one side. Spalling of concrete along the nosing of the stairs treads with exposed reinforcing bar was noted.



Stairs to Practice Field



Existing Conditions at Practice Field

There are currently 6 courts utilized by the District and the public located in the southeast corner of the high school campus. They are lined for single and doubles play. No pickleball markings were noted. The overall condition of the courts is poor. The court surfacing is faded with numerous cracks, some over 1-inch in width, representing a safety hazard. The courts are accessed through "baffles" in the fence at a couple locations which are not accessible. There is an overall lack of spectator seating and access to and within the facility. Additionally, players accessing the two center courts must walk behind other players creating a distraction and potential safety hazard. There are a few wooden player benches that are in poor condition and newer metal benches that are in good condition.



The high school's JV and Varsity teams use the diamond field. The high school's JV boys soccer team uses the baseball outfield for both practice and games. The interface between the infield and raised outfield creates a trip hazard and affects the planarity of the playing surface. The field lacks a proper pitching mound. The outfield dimensions appear to be adequate for high school play. There is no foul ball protection for the spectators. Currently the baseball team shares the batting tunnel with softball however, the tunnel is designed for softball. A solitary pitcher's mound is located behind the backstop with no catcher's box or home plate to mark the proper pitching distance. There is also no fence which represents a spectator and player safety hazard. The field irrigated by use of manual hose and reel setup.



There are no accessible walkways to the dugouts and there are portable bleachers for spectator seating also without access. The dugouts lack electrical service and are not ADA accessible. The stairs and railing leading into the dugouts are made of wood and are unstable. There is a lip at grade that could be a tripping hazard as athletes enter and exit the dugouts. The structure itself is overall in good condition. The outfield fence appears to be in good condition.

The field, located to the north of the school and adjacent to the maintenance outbuilding is used by the varsity and JV softball teams. The outfield is primarily used by the girl's JV soccer team for both practice and games. The infield requires maintenance to eliminate weeds and the baselines are worn and compacted. There is no spectator seating or accessible routes to the dugouts. The backstop is in good condition; however, foul balls are a consideration given the proximity to parking. The dugouts appear to be in good condition. The first base dugout is not accessible due to it being placed between the backstop and building. The distance from the backstop to home plate should be increased.

BOYS SOCCER
195' X 300'

BASEBALL FIELD
NE ORIENTATION
90' BASELINE
350' FOUL LINE

SCOREBOARD

GIRLS SOCCER
190' X 300'

SOFTBALL FIELD
200' FOUL LINE

SHARED BATTING TUNNEL
IN FAIR CONDITION

DUGOUT

SCOREBOARD

PRACTICE FIELD ACCESS
VIA STAIRS ONLY

SURFACE UNDULATIONS
PRESENT HAZARD TO USERS

PRACTICE FIELD
160' X 360'

STADIUM FIELD
N/S ORIENTATION
205' X 360'

TENNIS COURTS
(6)

UPPER FIELD
N/S ORIENTATION
205' X 330'

GENERAL CONDITIONS

- FACILITY LACKS DEFINED PEDESTRIAN ROUTES TO EACH FACILITY AND HANDICAP ACCESSIBILITY
- TURF CONDITION IS POOR
- LACK OF AUTOMATIC IRRIGATION CONTRIBUTES TO POOR TURF CONDITIONS
- SITE AMENITIES GENERALLY IN FAIR CONDITION
- FIELD GRADING APPEARS TO FOLLOW RECOMMENDED GUIDELINES
- FENCING, INCLUDING BACKSTOPS GENERALLY IN FAIR CONDITION
- OUTFIELDS SHARE USE WITH SOCCER

NO DESIGNATED PEDESTRIAN CROSSING FROM SCHOOL

TENNIS COURT PEDESTRIAN ACCESS TO NON-ACCESSIBLE BAFFLE OPENINGS

LARGE CRACKS IN COURT SURFACING, POOR CONDITION

ACCESS TO COURTS THROUGH FIRST BATTERY ONLY

LACK OF DEFINED PEDESTRIAN CIRCULATION AND ADA ACCESS

TURF CONDITION SHOWS SIGNS OF HIGH USE. COMPACTED SOILS

SPECTATOR SEATING

- ADA COMPLIANCE
- LACK ACCESSIBLE PEDESTRIAN ACCESS TO FIELD & TRACK

EROSION AT EDGE OF TRACK/GATE

MAINTENANCE / VEHICLE GATE

6 LANE RUNNING TRACK

- EDGE DETERIORATION
- SURFACE CRACKING
- DE-LAMINATION IN SPOTS

DUGOUT

- NON-ACCESSIBLE
- WOODEN STAIRS NOT STURDY
- RAIL CONDITION FAIR. RUST AT CONNECTION WITH CONCRETE

BULL PEN

- NON-REGULATION MOUND
- OPEN ACCESS
- SHARED WITH VISITORS & SOFTBALL

FRENCH DRAIN AT BOTTOM OF SLOPE

Region 4 Athletic Facilities Master Plan |

John Winthrop Middle School

John Winthrop Middle School is located at 1 Winthrop Road in the town of Deep River, CT. The athletic facilities are located to the south side of the campus, perched on a hill. The facilities are utilized by both the middle school and recreation leagues. Parking is located adjacent to the school building

Facilities include: Soccer Field 1 (200' x 360), Soccer Field 2 (200' x 360'), Soccer Field 3 (195' x 360') Soccer Field 4 (youth fields), Baseball Field (90' with multi-use outfield), Softball Field (3-60' with multi-use outfield, 2 not currently used).



John Winthrop Middle School

Assessment Summary

The athletic fields at John Winthrop Middle School are one contiguous open space with four diamond fields, the two southern fields are discontinued. There are bleachers located in the field area and around the wood line as well as numerous player benches and soccer and lacrosse goals. These items and are in fair condition however, most of the nets are in poor condition and should be replaced. The fields are accessed via openings in a 4-foot fence at the edge of the parking with a vehicle gate and access road adjacent to the school building. The entire facility lacks irrigation infrastructure and is further constrained by allocation of staffing to deploy sprinklers. There is a grove of tree to the north of soccer field 1 with a few picnic tables and small concession shed.



Concessions and Seating Area

Soccer Field 1

This field is in the eastern most side of the facility. It is primarily used for middle school soccer practice and games. It appears the field lacks the proper crown and the turf is in poor condition with a lot of broad leaf weeds and crabgrass. There are no permanent accommodations for players or spectators and an overall lack of accessibility. This field also shares the outfield of one of two discontinued softball fields. A french drain is located between soccer field 1 & 2. However, the stone surface is silted in and covered with crabgrass, severely impacting its function.

Soccer Field 2

Soccer field 2 shares the outfield of two softball fields. This creates a scheduling conflict with spring sports. The fields primary use is soccer and lacrosse and has the appropriate north/south orientation. The turf grass is in poor condition and suffers from lack of irrigation. There are no permanent accommodations for players or spectators and an overall lack of accessibility.

Soccer Field 3

Soccer field 3 shares the outfield of the baseball field and is primarily used for soccer and field hockey. This creates a scheduling conflict with spring sports. The turf grass is in poor condition and suffers from lack of irrigation. There are no permanent accommodations for players or spectators and an overall lack of accessibility.



Condition of Existing Fields

Baseball Field

The baseball field is in the southwest corner of the facility and has proper northeast orientation. The outfield is shared with soccer field 3. The turf grass has a high percentage of weeds, bare spots from overuse with shared soccer field 3, compaction and is not irrigated. The backstop is in fair condition but short and the distance to home plate should be increased. There is no defined players area and no fencing. The infield is full of weeds, compacted and the material is course. Foul poles are present but need to be repainted and there is no foul ball protection for spectators.



Condition of Baseball Field

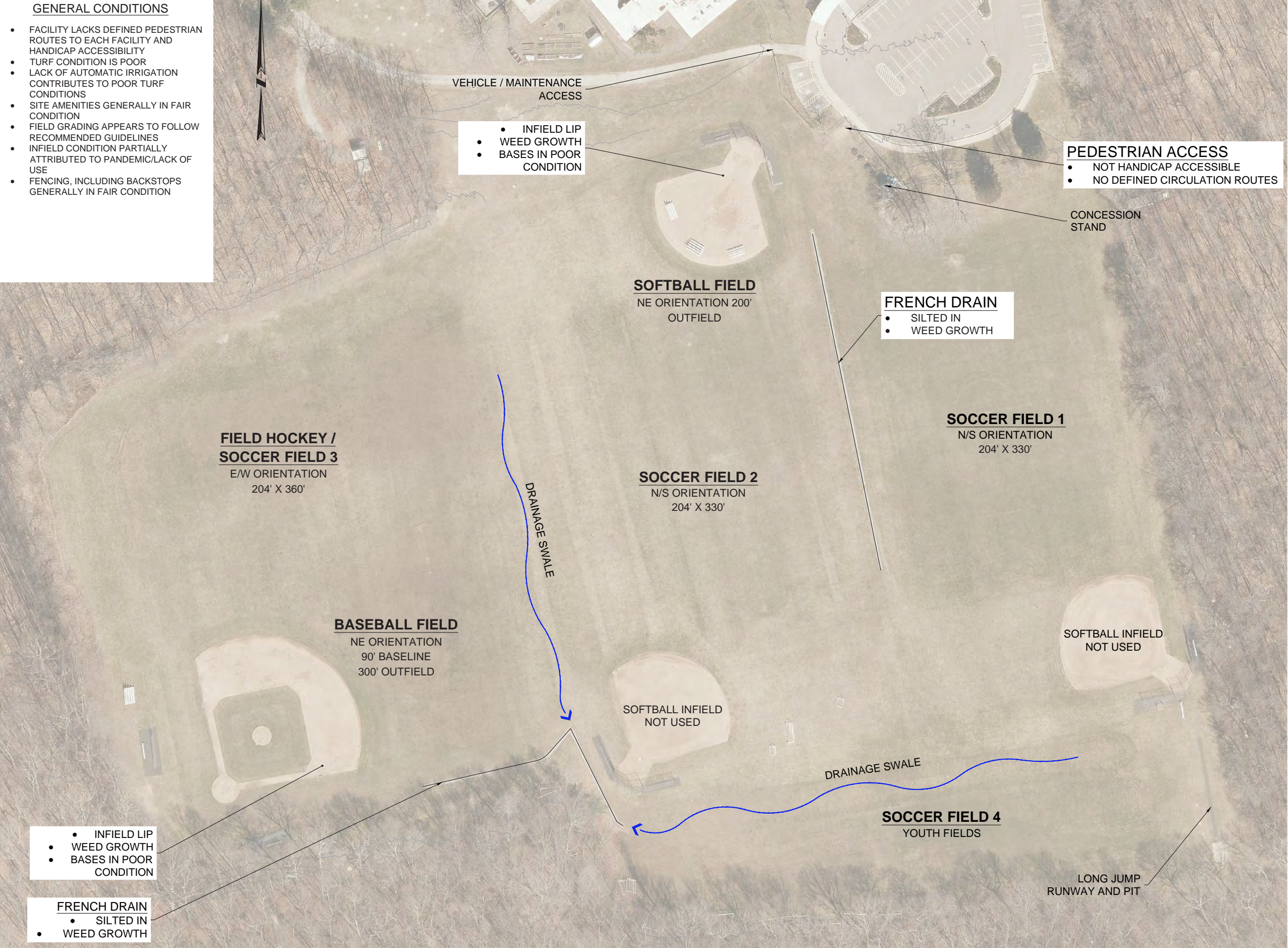
Field surface drainage is collected by a couple french and areas drains located between soccer field 2 and along right field foul line. The stone surface is silted in and covered with crabgrass, severely impacting its function. The field's location is far from parking with no accessible route.

Softball Field

The field, located in the center of the facility is not irrigated and in poor condition. The turf grass has a high percentage of weeds, bare spots from overuse with shared soccer field 2 and compaction. The backstop is in fair condition but short and the distance to home plate should be increased. There is 6-foot fence in front of the players areas which is in fair condition. The infield is full of weeds, compacted and the material is course. The field lacks foul poles and foul ball protection of spectators. There is no accessible route form the parking lot to the field.



Condition of Softball Field



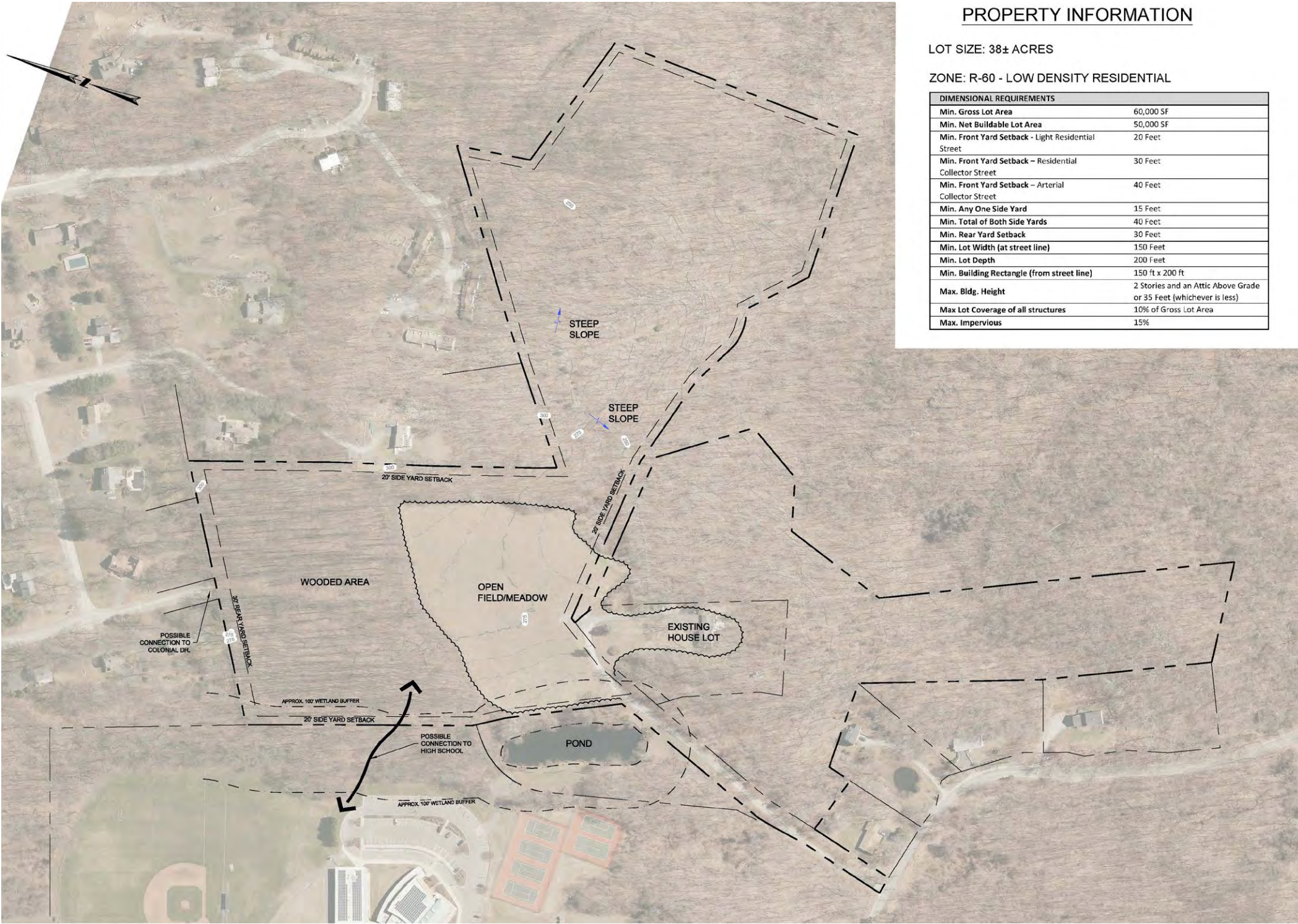
Overall JWMS Facilities Map

Mislick Property

Existing Conditions Analysis

The Mislick property is approximately 38.0 acres in size, adjacent to and east of Valley Regional High School. Access is provided off Kelsey Hill Road. Per available maps, the lot configuration is made up of three tracts of land. The topography is sloped, heavily wooded throughout with open space in the central tract. BSC performed a site visit and through review of Deep River’s zoning regulations to understand the opportunities and constraints to possible athletic field development. Due to the configuration of the eastern and southern most tracts, these portions of the property are not suitable for athletic field development.

However, our analysis shows that athletic field development is possible within the central tract of land which includes the meadow and is partially wooded. There is an established access road leading from Kelsey Hill Road with electrical utilities available.

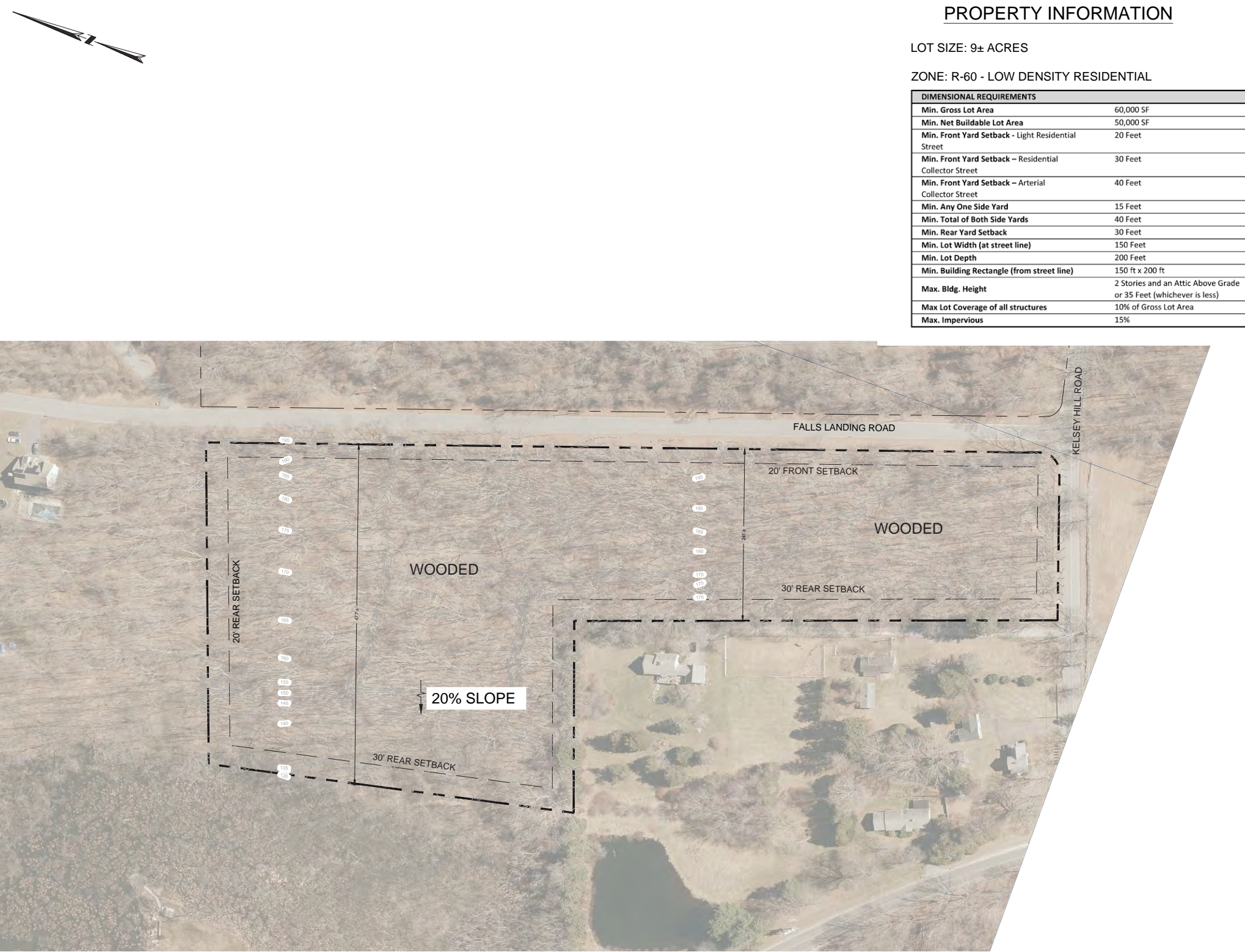


Mislick Property Map

Falls Landing Road Property

Existing Conditions Analysis

The Falls Landing Road property is approximately 9.0 acres in size located along the northwest corner of Kelsey Hill Road and Falls Landing Road. Per available maps, the lot configuration is L-shaped and the rear boundary line abuts inland wetlands. The topography is sloped and heavily wooded throughout. Due to the properties configuration and topographic challenges, BSC’s opinion is that this property would not be suitable for athletic field development and therefore agree with the conclusion of the Real Estate Appraisal, Dated May 17, 2018, prepared by Steven L. Frey & Associates, Inc., that the highest and best use would be for single family residential development.



Falls Landing Property Map

Needs Assessment

A critical component of any athletics master plan is to identify who is using each field, and how often are they using them. For planning purposes, there are two major goals of the demand determination calculations. The first goal is to determine raw field usage and document which athletic programs are using which fields, and how much. This data will affect how priorities are rated, and how fields scheduling is accommodated. The second goal is to determine how that usage of the fields affects maintenance requirements. Each sport wears a field differently. Football wears a field more than baseball, and Lacrosse wears a field differently than field hockey.

No study can hope to document every field use, or every specific type of usage, or the exact degree of wear on that field associated with a specific use. Youth sports use fields differently than adult sports, soccer wears a field differently than football, practice wears a field differently than a game. To attempt to measure that difference in wear between sports planners apply usage multipliers to the raw scheduling data in order to estimate the amount of wear on a field caused by those uses. The goal of this exercise is to confirm which fields are being overused, specifically fields that are being over used to a point of not being able to sustain a viable growth of turf.

The industry standard for the limits of being able to maintain a viable stand of grass, on a municipal maintenance budget, is between 200 and 250 uses per year. A ‘use’ being defined as a game, 2 hours long, with 11 players per team. Between 200 and 250 uses per year is considered borderline sustainable. The viability of the turf on that field is highly dependent on the quality of maintenance provided. Over 250 uses per year is considered unsustainable for growing turf for municipal fields maintained with typical municipal budgets.

It’s important to discuss the field maintenance capabilities of the District. Currently the District allocates 10 hours a week between Valley Regional High School and John Winthrop Middle School field maintenance. Additionally, the District contracts outside services for turf grass management. There is more discussion on field management later in this report.

The following sections consists of a narrative, methodology, recommendations, and a Field Usage Summary Table with Multipliers. The Field Usage Summary Table documents the field uses per field per year in a graphical manner, both with usage multipliers.

Fields and Amenities Demand Methodology

For the purposes of evaluating field demand, turf wear, degradation and needed maintenance the amount of use a field receives provides a measure of its condition. A field ‘USE’ is considered 2-hour game or practice involving two teams or approximately 22 athletes using a field for 2 hours. It is worth noting that a synthetic turf field can withstand any amount of use that can be effectively scheduled. For synthetic turf, the annual total use quantity is between 500 and 750 uses per synthetic turf field, depending on if athletic lighting is provided for the field.

Athletic Field Terminology

Baseball Field: Has grass on the infield surrounding the pitcher’s mound. The Pitcher’s mound is an elevated mound in the center of the infield. Typical baseball field dimensions include:

Baseball field (High School level and higher) have a 90-foot baseline and a preferred distance from home plate of 310 feet at left and right field and 350 feet to center field.

Softball Field: Has an infield that is fully ‘skinned’, which means the pitcher’s circle is surrounded by infield material (no grass on the infield). Softball fields do not have a pitcher’s mound, the pitching rubber is at the same elevation as the infield. Softball fields are smaller than baseball and typically have a 60’ baseline and a minimum 200’ outfield for most levels of play.

Multipurpose Rectangular Field (MPRF): MPRF sizes can vary greatly depending of level of use (e.g. youth soccer or High School Soccer) or sports played (lacrosse, football). In the United States a MPRF typically is used for some combination of soccer, football, lacrosse and field hockey. For High School level sports (or better) the preferred dimensions of the field is 385’x230’. This dimension can fit all the common athletic field sizes for adult play, with safety runouts around the perimeter of the field.

Dedicated Rectangular Field (by sport): Dedicated fields are fields that are only used by one sport (e.g. Football). Similar to MPR Fields, sizes can vary greatly depending of level of use (e.g. youth soccer or High School Soccer) or the sport played (lacrosse, football). Where indicated the sport and level of this type of field is indicated. This is important as smaller fields (e.g. American Football) cannot be used by other sports that require larger field area, or an athletic program may prohibit use of the field by other programs in order to prevent wear.

Combination fields: Combination fields include a Softball or Baseball field which shares its outfield with a multipurpose rectangular field. For usage calculations, these fields are counted as a single field, however different multipliers are used depending on the sports played.

BSC developed a field use matrix for all the athletic programs in the District that use the facilities reviewed as part of this report. The quantities listed in the Summary Matrix were obtained from school sports schedules and staff. All data reflects field use between the Spring, Summer and Fall 2019 seasons. The totals from this matrix provide a quantification of the documented field uses for each field, at each school for a year. Though detailed and thorough, the use data provided should not be considered as 100% of the uses. There are additional uses (spontaneously scheduled practices, rescheduled games and informal ‘pickup’ uses) that are not able to be documented or included in these use/demand estimates.

There are approximately 1162 annually scheduled uses on the District’s athletic fields. These are distributed over a population of thirteen (13) fields throughout the two schools. The field usage numbers identify one field that receives more than 200 uses per year. The High School Upper Field, which is heavily used by both High School field hockey and boy’s lacrosse. It should be noted that there is a sizable lacrosse use at the middle soccer, but the number of uses per year were not available at the time of this report.

Field usage numbers are an indicator of field condition, and should not be confused with the actual condition of the fields. An example of this is the stadium field is in fair condition but has restricted use well below 200 events per year. Conditions can be a factor of many things, field construction, play during wet conditions, maintenance or other factors that degrade field conditions.

Field Usage Conclusion

The Field Usage Summary Table identifies several facilities that are considered to have moderate use, and one field at the high school that is considered overused. The fields with more than 125 and fewer than 200 events per year are the practice and JV boys soccer fields at Valley Regional and soccer fields 1 & 2 at John Winthrop. The softball field at Valley Regional could also be considered to have moderate use with 122 uses per year. These fields appear to be in playable condition due to the maintenance resources that are used on them.

The field with more than 200 events per year is considered overused, as maintenance staff struggle to keep grass growing, even with the resources provided. This field is the upper field at Valley Regional. There are several reasons why this field is considered overused, but one of the most important reasons is because this field is conveniently located adjacent to parking and the school in relation to other facilities. The school uses this field for boy’s lacrosse and field hockey, PE and graduation. It would be beneficial to build at least one more full-size soccer field, since it could be used more by other sports, and would take pressure off these overused fields.

Practices for all sports must be held on the same fields as games are held, because there is a lack of dedicated practice fields or field conditions don’t allow practice to be held elsewhere. This puts additional stress on each field. In addition, the needs assessment does not address any games or practices that were displaced (e.g. played on another Town’s field) or cancelled due to rain. It would be beneficial to improve the practice field that would help take certain stresses from the official game fields.

The athletic facilities inventory and evaluation, is intended to provide the District with understandable information on the usage of each field, so that staff can evaluate and prioritize what additional fields should be considered for construction or improvement at either the middle of high schools.

The usage data is a tool to document both under-used facilities, as well as to highlight facilities that are in high demand or overused. The ultimate decision on which types of fields to include will rely on field types that are overused, and types of fields that are not frequent enough to support the current demand.

It should be noted that the District offers a lacrosse program, but currently does not have a dedicated lacrosse game field or suitable practice area. The lacrosse games are held at soccer field 1 & 2 at John Winthrop school. A space for lacrosse should be constructed in the District, as the sport is growing popularity. The impact of future trends should be considered as the District moves forward with its athletic facilities investments. Current participation

trends indicate that flag football, track and field, and lacrosse are quickly growing with an 8-10% increase in participation over previous years.

Continued monitoring and close coordination between the District, town and other organizations will be required to better manage levels of use. Short term strategies to even out field time can reduce overuse of certain facilities, but in the long run, the city will want to consider expanding its athletic facilities to better accommodate existing and future activities. In the short run, limiting practice times or sharing field space for non-game activities is likely the best solution where capacity is not currently a critical issue.

FIELD USAGE SUMMARY TABLE (With Multipliers)																					
Region 4 Athletic Field Assessment and Master Plan Date Updated: 11/23/2020			School Teams												Rec	Other					
			Baseball - V/ JV/F	Softball - V/ JV	Boys Soccer V/JV	Girls Soccer V/JV	Football - V/JV/F	Boys LAX V/JV/F	Girls LAX V/JV/F	Field Hockey V/JV	MS Field Hockey	MS Baseball	MS Soccer	MS Softball	Rec Soccer	Graduation	Physical Education	Tournament Games	Practice		
Multipliers			1.00	1.00	1.00	1.00	2.00	1.50	1.50	1.00	1.00	0.75	1.00	0.75	1.00	1.00	1.00	1.50	1.50		
SCHOOLS																					
Field Name	Field Description	Approx. Field Size (feet)																			
Regional School District 4 / Valley Regional High School			TOTALS																		TOTALS
Stadium Field	Football & Varsity Soccer	190 x 360	49	0	0	12	10	10	0	0	0	0	0	0	0	0	5	12	0	49	
Upper Field	Field Hockey & Lacrosse	221 x 365	203	0	0	0	0	0	24	24	17	0	0	0	0	2	5	11	225	203	
Boys Soccer	Baseball Outfield	180 x 330	131	0	0	6	0	0	0	0	0	0	0	0	0	0	5	0	120	131	
Girls Soccer	Softball Outfield		86	0	0	0	6	0	0	0	0	0	0	0	0	0	5	0	75	86	
Practice Field	Multi-Use	180 x 360	130	0	0	0	0	5	0	0	0	0	0	0	0	0	5	0	120	130	
Baseball Field	90'-diamond / shared with soccer	310	100	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	90	100	
Softball Field	60'-diamond/40' pitcher	225	122	18	19	0	0	0	0	0	0	0	0	0	0	0	5	5	75	122	
John Winthrop Middle School																					
Soccer 1	Soccer	195 x 360	136	0	0	0	0	0	0	0	0	0	44	0	92	0	0	0	0	136	
Soccer 2	Soccer	195 x 360	170	0	0	0	0	0	0	0	0	0	32	0	138	0	0	0	0	170	
Field Hockey	Multi-Use	180 x 330	68	0	0	0	0	0	0	0	8	0	0	0	60	0	0	0	0	68	
Youth Soccer	Soccer	100 x 450	12	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	12	
Baseball Field	90'-diamond / shared with soccer	350	89	0	0	0	0	0	0	0	0	29	0	0	60	0	0	0	0	89	
Softball Field	60'-diamond/40' pitcher	250	29	0	0	0	0	0	0	0	0	0	0	29	0	0	0	0	0	29	
TOTAL			1,428	18	19	18	16	15	24	24	17	8	29	76	29	362	2	35	32	705	1,428
NOTES																					
1. Each use event is defined as (2) teams on a field for 2 hour period																					
2. This table does not reflect existing conditions of the fields																					
LEGEND																					
Green: SUSTAINABLE USE - < 125 events per year, maintenance is feasible and typical management practices apply.																					
Yellow: MODERATE USE - 125 - 200 events per year, more frequent maintenance is required, additional management practices may be necessary.																					
Red: OVERUSE - > 200 events per year, maintenance is less proactive / more reactive, field performance is low.																					
Blue: INAPPROPRIATE USE - Non-intended field use (e.g. baseball on a softball diamond)																					

Management Recommendations

Consideration of the resources needed to properly maintain athletic facilities, such as the available staff and the equipment used is a vital component of planning for the athletic facilities. District owned facilities do not have the budget resources of a National Football League stadium, and cannot be maintained in the same way. District maintenance budgets are typically limited, and athletic facilities are typically designed to accommodate these constraints.

This section of the Master Planning Report contains two parts: The first section outlines recommended maintenance practices and provides budgeting information based on those recommended practices. The intent of this first section is to provide a benchmark for comparison to the following section. The second section documents the current maintenance practices and budget in the District. In order to document current maintenance practices, maintenance staff was interviewed and basic equipment inventoried in order to compare current practices with those recommended to keep a District level playing field in playable condition.

Every type of sport or use impacts wear of natural turf differently. Soccer, football, softball and baseball each dictate a different set of conditions, requiring unique management approaches, (e.g., soccer goal mouths versus football midfield and side line areas). Maintenance requirements also can vary within individual fields, based on environmental conditions, soil conditions and changes in the micro climates (sun, shade, drainage, exposure to salt, traffic, etc.). Dedicated turf managers are aware of these variations and apply maintenance accordingly. The following outlines the tasks and scheduling required to properly maintain natural turf fields, and to assist in the formulation of maintenance budgets proposed later in this section. These are general recommendations and the costs used have been obtained from various owners throughout the northeast, and generalized for the purposes of this report. Actual budget needed may vary based on specific site conditions, quality of field construction and the turf manager's actual budget and time allocations. A general description of typical athletic turfgrass maintenance tasks are outlined below.

Managing turfgrass by using knowledge of turf biology, soil science, pest management practices, varieties of turf and cultural practices together in a scheduled and deliberate way to optimize the conditions for grass growth is known as Integrated Turf Management. This type of turf management requires thorough field monitoring of conditions, good record keeping and consideration of different turf management techniques with the goal to provide consistent proactive decision making on when to react to turf conditions and how maintenance is applied. A healthy stand of grass requires less maintenance, less herbicides and less water, the goal is to react early to turf conditions to catch deteriorating conditions and minimize having to make wide-spread repairs.

Recommended Turf Maintenance Tasks

Testing

As an integral part of a Integrated Turf Management Program for natural turf, each field should have its topsoil tested regularly for nutrient levels. Samples can normally be taken by on-site staff and sent to the UCONN or UMASS Agricultural Extension Service for testing and results (www.umass.edu/soiltest/). These tests will determine the amounts of fertilizer, lime and sand topdressing that need to be applied as part of regular maintenance. Knowing these results prevents unnecessary fertilizer and lime applications, and can provide significant savings on maintenance costs and materials.

Mowing

Turf grass in areas of play should be mowed at least weekly during the growing season to provide a suitable playing surface. Regular mowing practices enhance turf density, color, texture, root development, wear tolerance and other key aspects of turf quality. Mowers need to be maintained regularly, should not have any fluid leaks and must have sharp blades. Mowers dedicated only for use on athletic fields are highly recommended, so that blades are maintained sharp and weed seed and potential disease is not transferred to the fields. In New England most Athletic fields are a stand of Bluegrass or Bluegrass and Perennial Rye. Mowing heights are adjusted from one and a half to two and half inches (1.5"-2.5") during the growing season (until mid-July), to two and half to three and a half inches (2.5"-3.5") from mid-July to mid-September, and then gradually brought back down to one and half to two and a half inches (1.5"-2.5") over 4-6 weeks prior to the first game. Clippings should be either mulched and left behind, or collected and disposed of, depending on the height of the cut and the thatch density targeted.

Infield Maintenance - Baseball/Softball

During the spring (April-June) season, baseball/softball infields are typically dragged with a machine/drag-mat (intended for infield work) and amended to smooth and dry the infield material, as well as to adjust grades at wear areas near the bases and home plate. The batter box and foul lines are also typically painted. For baseball, the pitcher's mound is adjusted and divots repaired. This work is typically performed weekly during the regular season, and sometimes prior to every game for stadium fields or during play-offs. The infield maintenance budget should account for spring clean-up and preparation of the infields to remove leaves, weeds and replace bases.

Irrigation

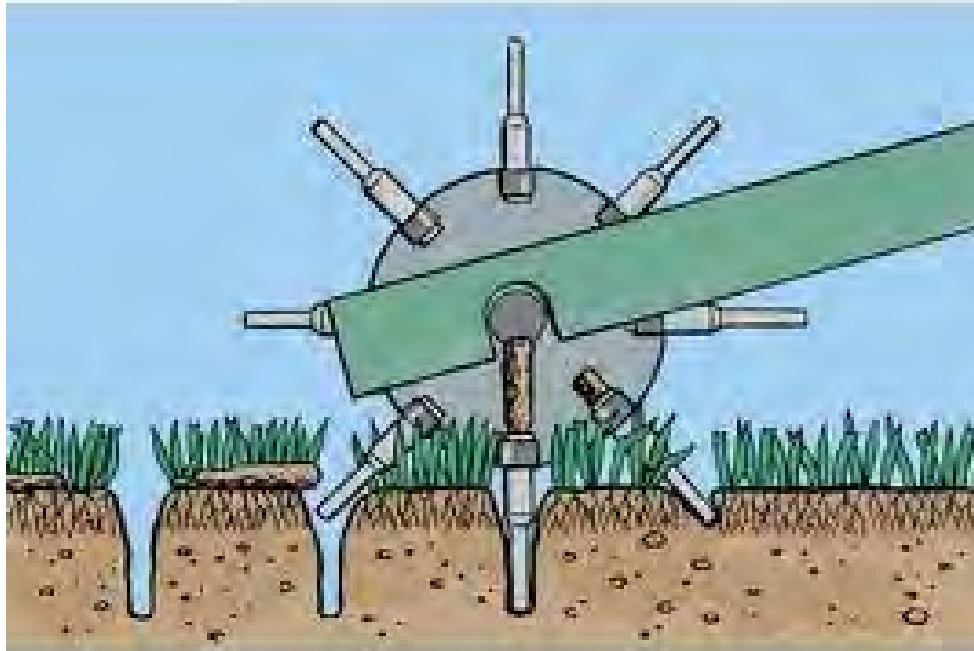
Irrigation is absolutely essential for maintaining acceptable playing surface quality on natural turfgrass athletic fields. In New England, the irrigation season typically runs from June through August. During that period, each field footprint should receive one inch (1") of water per week, which should be adjusted in accordance with precipitation. For a typical 90,000 SF soccer field, this equates to 54,000 gallons per week. The District is at an extreme disadvantage in that all fields lack an automatic irrigation system except for the stadium field. As the District upgrades their fields to include automatic irrigation systems, automatic irrigation systems should not be 'set and forget' systems. The Districts staff needs to actively monitor irrigation to confirm proper timing, coverage and operation, and monitor irrigation with the goal of using water sparingly. Fields that are watered too much are susceptible to disease, early wear and over compaction. We recommend the use of intelligent controllers with moisture sensors. Maintenance budgets need to account for spring start-up and repair of irrigation systems, as well as fall winterization.

Fertilizing

Fields are fertilized to provide micronutrients to the soil and "food" for the turf grass plant. Fertilization should generally be performed in the early spring and summer, and later supplemented on selected fields in the early fall, as needed. This will ensure that sufficient nutrients are available to develop healthy root zones during the peak growth period, which includes May and June. Fertilization should be directly related to soil tests performed on an individual field and as part of an overall integrated turf management program. This is particularly important for facilities that border on wetland receptors, which may be unnecessarily contaminated by over-fertilization. Once soil sample data has been obtained, fertilize with the proper nitrogen/phosphorus/potassium (N-P-K) ratio should be applied at the recommended rates. Low solubility fertilizers, applied only at rates which ensure uptake, should be used to minimize groundwater or surface water impacts.

Lime Application

Maintain soil pH 5.9-6.5 to maximize nutrient availability. Lime application is generally performed in late November, as it typically takes up to six (6) months to breakdown. Lime should only be applied to soil based on the results of the annual soil testing recommendations. Lime is caustic and should not be applied if field use is scheduled.



Aeration

Aeration alleviates compaction and develops deep-rooted turf. It is accomplished by creating spaces in the turf, thus allowing moisture, nutrients and oxygen to penetrate to the root zone. Aeration also breaks up thatch, which helps contribute to the organic content of the soil and breaks the mat on the soil surface. High-use fields should be aerated two to three (2-3) times per year. We recommend that six to seven inch (6"-7") hollow core aeration equipment be used for aeration. The timing of the first aeration in If the intent is a long-term modification of the root zone, we recommend removing the plugs and top dressing the field with coarse sand or compost depending on the desired target (drainage or organic content). Depth and location of irrigation should be considered with any aeration activities. Additionally, the District should consider contracting every two years to have fields cored with a vertidrain to get deep penetration

Topdressing

Topdressing (sand, compost or topsoil) is applied periodically, as a soil amendment, to maintain a smooth playing surface and to adjust the root zone particle size distribution, which can affect drainage and compaction of the topsoil. Top dressing adds soil, sand or other beneficial organic material, and soil amendments (as determined by turf needs and based on agronomic testing) to the surface of the turf. It should always follow core aerating, with the intent of working topdressing materials into the core holes.

Over-Seeding

Aggressive overseeding is one of the most important cultural practices required to maintain acceptable turf grass quality and playing conditions on a high traffic/pesticide free athletic field. Aggressive overseeding can be defined as applying seed (at rates exceeding the typical recommended ranges for seedling establishment) onto well-established turf grass areas, regardless of turf grass density.

Anticipated Maintenance Budgets for Existing Fields

The following are the costs for maintenance that would be anticipated if all the tasks listed above were performed correctly for a District level field. These costs were originally gathered from Massachusetts municipalities over a ten-year period and represent average estimated costs, based on prevailing wage and materials rates. BSC has maintained a data base of these costs from previous municipal projects. This calculation includes an estimate of the resources, manpower, equipment and materials to perform each activity on a typical natural turf playing field. In addition to material costs, this calculation accounts for labor and overhead costs, as well as equipment utilization rates and capitalization/depreciation.

Management Recommendations Conclusion

Though the District budget data was not made available, the above anticipated maintenance budget can be used to compare against the current allocation of funds. Additionally, the District recently renewed a contract with an outside vendor for grounds maintenance, including athletic fields for the next five years, at an average cost of \$123,170 per year. This equals almost half of the anticipated budget provided in the table.

Decision Matrix

Using the data and demand matrix developed as part of this report, BSC facilitated a programming process to define priorities for improvements to existing fields and/or development of new fields. This will also directly informed the recommendations discussed later in this report. The programming process used the demand matrix as the data management tool, and then added the athletic facility “needs” and “wants” to update prioritization of updates/renovations/new improvements at each facility. This information formed the core of the programming process, and will document the projected future needs (“demand”) for the athletic facilities and identify in specific terms what modifications (renovations, re-allocation, new facilities, etc.) will be required to align with future needs. BSC will develop recommendations based upon the demand matrix and programming process that will guide the District in determining priorities for improvements to existing fields or development of new fields. The matrix rankings will consider the recommendation against cost, revenue capacity, user group needs, site-specific conditions, environment, character and neighborhood concerns and include considerations such as synthetic turf and facility lighting. Recommendations will be calibrated to include “immediate” (2-5 years), “near-future” (5-10 years), and “future” (10-20 years) rankings. The needs assessment and resulting recommendations will include items such as recommendations for system-wide improvements, including acquiring developing/ improving athletic fields, assessment of current and future athletic field lighting, field irrigation, eliminating redundancies, adopting new policies, and partnership opportunities to support local needs, funding and interests.

JOHN WINTHROP MIDDLE SCHOOL

Facility	Needs/Wants	Primary Objectives Met	Project	Project Details
Soccer 1	Improved Drainage, Access, Spectator Seating, Synthetic Turf Field	Safety, Equity, Accessibility, Management of Assets	Reconstruct natural grass field, improve drainage.	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating
		Safety, Equity, Accessibility	Construct 4-Lane runway	Construct paved 4-Lane runway adjacent to walkway, new long/triple jump runway and pit, relocate throwing events
Soccer 2	Improved Drainage, Access, Spectator Seating	Safety, Accessibility, Management of Assets	Reconstruct natural grass field.	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating.
Soccer 3	Improved Drainage, Access, Spectator Seating	Safety, Management of Assets	Reconstruct natural grass field	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating.
Soccer 4	Improved Drainage, Access, Spectator Seating	Safety, Equity, Management of Assets	Reconstruct natural grass field, U10-U12	Reconstruct field, improve drainage, new irrigation system, improve accessibility and spectator seating
Softball Field	Improved Drainage, Access, Spectator Seating	Safety, Equity, Accessibility, Management of Assets	Reconstruct infield	Remove infield lip, new clay surface, new dugouts, backstop and fencing, improve accessibility and spectator seating
Baseball Field	Improved Drainage, Access, Spectator Seating	Safety	Reconstruct Infield	Remove infield lip, new clay surface, new dugouts, backstop and fencing, improve accessibility and spectator seating
		Safety, Accessibility, Equity	Renovate and adjust location	Relocate field, new fencing & backstop, new dugouts, irrigation, utilities, improved accessibility and spectator seating

Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)

General Considerations

In addition to the specific recommendations for each facility, the District should consider more global policies relating to the development of its athletic fields. The following are for the Districts’s consideration:

Americans with Disabilities Act (ADA): Federal and local regulations require all facilities to be accessible to the handicapped and less able. Where accessibility is not possible, accessibility to similar facilities needs to be provided. Removing barriers to accessibility should be a priority for renovations. Some barriers noted in this report include elements such as changes in grade, lack of accessible parking and signage, lack of accessible walkways, and accessible features such as gate latches, seating areas, or water fountains. Other accessible considerations include gate widths, dugouts, and concessions areas.

Title IX Requirements: Title IX of the United States Education Amendments Act of 1972 generally requires any education program receiving federal funds to provide equal access to programs for both girls and boys. Though Title IX requirements are typically associated with schools, Westerly schools use parks athletic facilities for both games and practice. Title IX should be considered when updating these facilities to provide equivalent facilities for both girls and boys.

Athletic Facilities and Trends: Youth sports continues to be very popular. Lacrosse, formerly a fringe sport, is now the fastest growing sport in the country. As youth sports programs grow, so does the demand for quality fields. A successful youth facility requires multiple fields, good parking, and concessions. Parks with multiple fields allow a minimum of supervision staff, and parks with multiple facilities provide parents and siblings with alternative activities while children are playing. While the diverse multi-field facilities such as these thrive, nearby single fields will be empty because they are less usable for a large sports program. Lighted facilities are also very popular as they allow play in off-hours and off-season and allow working parents to participate. Lighting technology is now very efficient and has a minimum of “spill” that can affect neighbors. The town should consider these when planning for new facilities.

Green Initiatives: Westerly recognizes the efficiency that can be realized in current construction techniques, sustainable products, and methods that preserve the environment and character of the town. Green initiatives, products, and techniques should be considered as part of any improvement proposed for Westerly Parks.

Developing Recreational Trends: New amenities are becoming popular with changes in population, demographics, and technology. Some new trends the town should be aware of and consider for addition to the parks include pickleball, a form of paddle ball that can be overlaid on a tennis court, which is popular with snow-birds returning from down south; futsal, a form of soccer played on a court-sized facility; and splash-pads, which offer a summer cool-off opportunity without the need for a lifeguard or full-time supervision.

Mislick Property

Facility	Needs/Wants	Project	Project Details
Mislick	Relieve Demand on existing facilities	Construct new field	Construct new 65 yard natural grass multi-sport field including tree clearing, earthwork, possible retaining wall, gravel parking area
Mislick	Relieve Demand on existing facilities	Provide Utilities	Upgrade electrical service, irrigation well, irrigation system
Mislick	Relieve Demand on existing facilities	Construction Cross Country Trail	Delineate route, minor clearing of trees and vegetation
Mislick	Relieve Demand on existing facilities	Construct (2) two new fields	Construct new (2) two 65 yard natural grass multi-sport field including tree clearing, earthwork, possible retaining walls, gravel parking area

Project Objectives: Equity, Accessibility, Safety, Maintenance, Management of Assets

Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)

VALLEY REGIONAL HIGH SCHOOL

Facility	Needs/Wants	Primary Objectives Met	Project	Project Details
Stadium Complex	Synthetic turf field, improved drainage, new track and jump pits, better quality/level fields	Safety	Replacement of running track surface.	Strip existing all-weather track surface, install new surface and new markings. Reconstruct pole vault runway. Construct (2) two long/triple jump runways and jump pits. Improve accessibility.
		Safety, Accessibility, Maintenance	Reconstruct running track. The project includes development of a new, 6-lane track to support regional meets.	Strip existing all-weather track surface, mill and pave asphalt base, install new polyurethane base mat with structural spray surface and new markings. Reconstruct pole vault runway. Construct (2) two long/triple jump runways and jump pits. Improve accessibility.
		Safety, Maintenance, Management of Assets	Reconstruct natural grass field, improve drainage.	Re-grade field, improve drainage, replace goal posts, relocate scoreboard, new irrigation system, sod
Upper Field	Synthetic turf field, lights, more seating, additional safety netting, better quality/level fields	Safety, Accessibility, Management of Assets	Reconstruct natural grass field.	Re-grade field, improve drainage, new scoreboard, new irrigation system, sod, ball safety netting, improve accessibility and spectator seating.
		Safety, Accessibility, Maintenance	Convert natural grass playing surface to synthetic multi-sport field.	Remove natural grass surface and replace with synthetic turf, new scoreboard, ball safety netting, improve accessibility and spectator seating.
Tennis Courts	Resurfaced courts, lights, access	Safety	Repair cracks	Prepare cracks, fill cracks with polyurethane filler or use Riteway repair system, resurface
		Safety, Accessibility, Maintenance	Reconstruct tennis courts	Demolish existing facility, new asphalt base, new equipment, new fencing, improve accessibility and spectator seating
		Safety, Accessibility, Maintenance	Construct post-tension concrete courts	Demolish existing facility, new post-tension concrete base, new equipment, new fencing, improve accessibility and spectator seating
Baseball Field	New outfield fence, electrical in dugouts, new infield surface, new bullpens & batting tunnel, bleachers	Safety	Reconstruct infield	Remove infield lip, new clay surface, reconstruct mound, upgrade utilities, new warning track, new irrigation system
		Safety, Maintenance, Management of Assets	Reconstruct outfield	Re-grade outfield, extend irrigation, new warning track, new scoreboard, new fencing, bull pens
		Equity, Safety, Management of Assets	Facility Amenities	Install batting tunnels, LED sports field lighting
		Equity, Safety, Accessibility	New Accessible Dugouts	Reconstruct dugouts to be accessible, improve accessibility and spectator seating, new fencing
Softball Field	New outfield fence, electrical in dugouts, new infield surface, new bullpens, bleachers	Safety	Reconstruct infield	Remove infield lip, new clay surface, improve accessibility and spectator seating
		Safety, Equity, Accessibility	Renovate and adjust location of softball field to address safety and accessibility issues	Upgrade facility to address accessibility issues, replace dugouts, backstop and fencing, improvements to drainage and utilities, new scoreboard
Practice Field	Better quality/level field, bleachers, size to accommodate full size soccer, synthetic turf field	Safety, Equity, Accessibility, Management of Assets	Replacement and expansion of facility	Renovate and expand facility to include 65 yard wide soccer field, new goal posts, improve accessibility, new irrigation system
		Safety, Accessibility, Maintenance	Convert natural grass playing surface to synthetic multi-sport field.	Convert playing surface to synthetic multi-sport turf, new sports field lighting, upgrade utilities, new amenities, spectator seating, improve accessibility

Project Objectives: Equity, Accessibility, Safety, Maintenance, Management of Assets

Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)

Recommendations

This section of the report illustrates potential changes to athletic facilities with budget cost estimates, should the District decide to pursue improvements and renovations under a General Contractor bid arrangement. The study has noted that the District has limited open space available for additional athletic field development. The Mislick property offers the greatest opportunity for field expansion. The high school and middle schools are currently built out to their limits, or are restricted by topography or regulated resource areas. This report also looked briefly at other potential sites, specifically the Falls Landing Road property.

For the Falls Landing property, it was concluded that the site was only suitable for a single family homes; the topography of the site would be prohibitively expensive, or unfeasible to develop as fields due to the amount of earthmoving needed to create a field.

The assessment conducted in conjunction with this report showed that all existing facilities need general improvements to address safety and accessibility for players and spectators. The assessment found that all facilities lack provisions for universal access including circulation routes and spectator areas. The projects were then assigned a priority level to be a relative ranking of importance. The highest priority projects resolve the existing conditions and address immediate safety concerns and meet overall goals and objectives. The planning process included a detailed assessment of the current field demand and patterns of use according to actual program scheduling based on practice and game hours. To relieve the current capacity issues, the plan incorporated both short, mid and long-term improvement strategies that are described in the table.

The following pages illustrate potential site improvement plans and budget cost estimates for each of the facilities at both the middle and high schools and the Mislick property. These are early, conceptual plans for budgeting and planning purposes only. The project scope, budget and goals for each will need to be refined further should the project become a priority for construction.

Valley Regional High School

The recommendations for the high school are based on the goals and objectives formed during the decision matrix task as well as feedback from the sub-committee. The following table identifies each project, provides corresponding detail as well as estimated cost range. A cost range is provided as there are many “options” when it comes to athletic field surfacing, amenities and the extent of the final renovation project. It should be noted that the cost range includes budgetary consultant costs for design, engineering, permitting (as applicable), and construction administration services.

Synthetic Turf Field

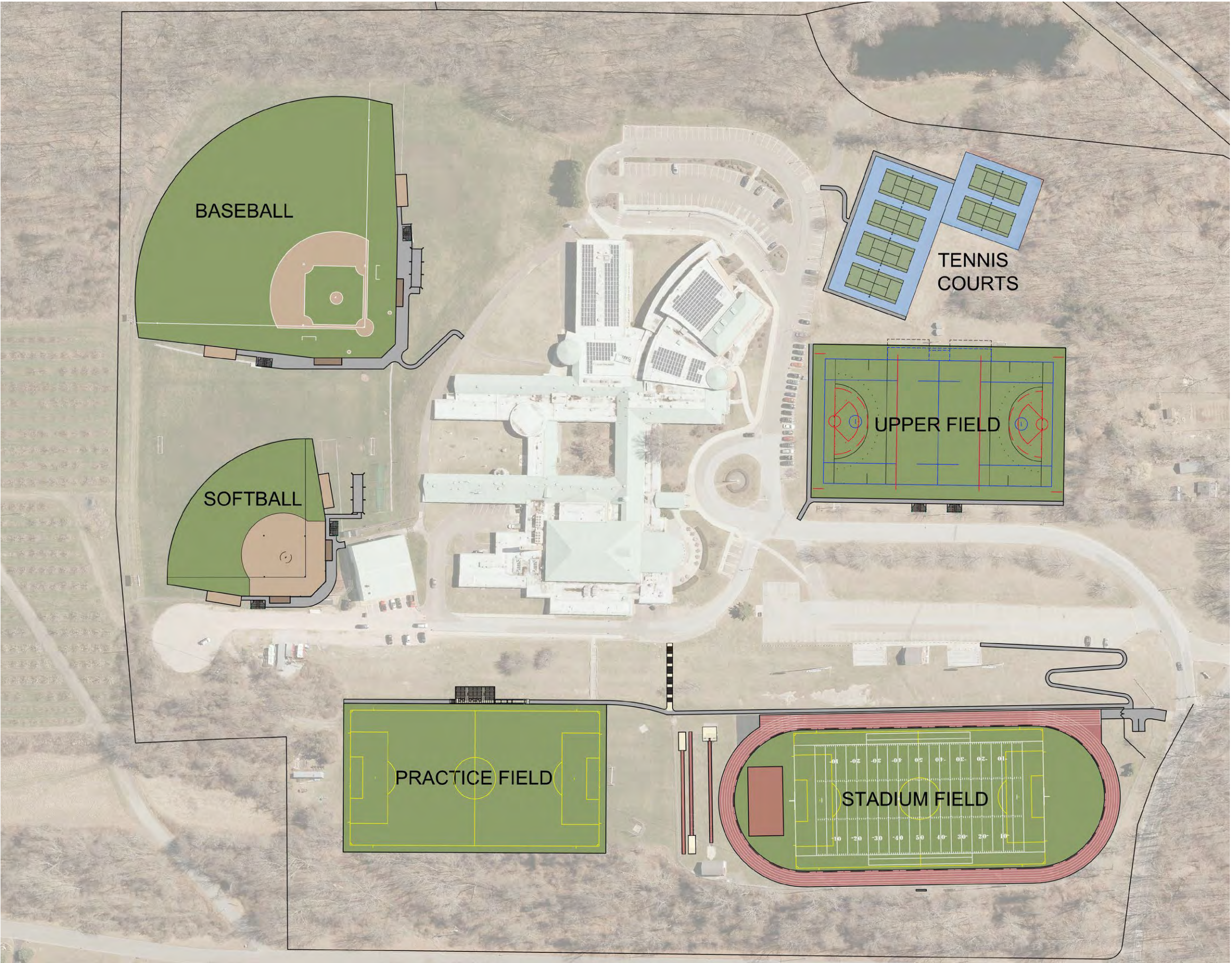
Results from the user survey as well as feedback from the committee indicates an overwhelming desire to have at least one of the athletic fields at the high school converted to a synthetic turf playing surface. In the recommendations listed above, we have identified the upper and practice fields as good candidates for possible turf field. If the District is successful in raising funds and there was strong community support for a turf field,

we would recommend the following turf system for consideration; Woven synthetic turf carpet with wood particle (BrockFill) infill. These products represent the latest in synthetic turf systems, are durable and simplifies the recycling effort at the end of the fields useful life. They offer a good balance of safety and performance for multi-sport fields.

VALLEY REGIONAL HIGH SCHOOL

Facility	Priority Level	Primary Objectives Met	Project	Project Details	Estimated Project Cost
Stadium Complex	1	Safety	Replacement of running track surface.	Strip existing all-weather track surface, install new surface and new markings. Reconstruct pole vault runway. Construct (2) two long/triple jump runways and jump pits. Improve accessibility.	\$400,000 - \$500,000
	1	Safety, Accessibility, Maintenance	Reconstruct running track. The project includes development of a new, 6-lane track to support regional meets.	Strip existing all-weather track surface, mill and pave asphalt base, install new polyurethane base mat with structural spray surface and new markings. Reconstruct pole vault runway. Construct (2) two long/triple jump runways and jump pits. Improve accessibility.	\$600,000 - \$700,000
	2	Safety, Maintenance, Management of Assets	Reconstruct natural grass field, improve drainage.	Re-grade field, improve drainage, replace goal posts, relocate scoreboard, new irrigation system, sod	\$500,000 - \$600,000
Upper Field	1	Safety, Accessibility, Management of Assets	Reconstruct natural grass field.	Re-grade field, improve drainage, new scoreboard, new irrigation system, sod, ball safety netting, improve accessibility and spectator seating.	\$800,000 - \$900,000
	3	Safety, Accessibility, Maintenance	Convert natural grass playing surface to synthetic multi-sport field.	Remove natural grass surface and replace with synthetic turf, new scoreboard, ball safety netting, improve accessibility and spectator seating.	\$1,400,000 - \$1,800,000
Tennis Courts	1	Safety	Repair cracks	Prepare cracks, fill cracks with polyurethane filler or use Riteway repair system, resurface	\$2,500 - \$6,000
	2	Safety, Accessibility, Maintenance	Reconstruct tennis courts	Demolish existing facility, new asphalt base, new equipment, new fencing, improve accessibility and spectator seating	\$310,000 - \$375,000
	2	Safety, Accessibility, Maintenance	Construct post-tension concrete courts	Demolish existing facility, new post-tension concrete base, new equipment, new fencing, improve accessibility and spectator seating	\$425,000 - \$525,000
Facility	Priority Level	Primary Objectives Met	Project	Project Details	Project Cost
Baseball Field	1	Safety	Reconstruct infield	Remove infield lip, new clay surface, reconstruct mound, upgrade utilities, new warning track, new irrigation system	\$150,000 - \$250,000
	3	Safety, Maintenance, Management of Assets	Reconstruct outfield	Re-grade outfield, extend irrigation, new warning track, new scoreboard, new fencing, bull pens	\$600,000 - \$700,000
	2	Equity, Safety, Management of Assets	Facility Armenties	Install batting tunnels, LED sports field lighting	\$650,000 - \$750,000
	3	Equity, Safety, Accessibility	New Accessible Dugouts	Reconstruct dugouts to be accessible, improve accessibility and spectator seating, new fencing	\$250,000 - \$350,000
Softball Field	2	Safety	Reconstruct infield	Remove infield lip, new clay surface, improve accessibility and spectator seating	\$220,000 - \$275,000
	3	Safety, Equity, Accessibility	Renovate and adjust location of softball field to address safety and accessibility issues	Upgrade facility to address accessibility issues, replace dugouts, backstop and fencing, improvements to drainage and utilities, new scoreboard	\$470,000 - \$625,000
Practice Field	2	Safety, Equity, Accessibility, Management of Assets	Replacement and expansion of facility	Renovate and expand facility to include 65 yard wide soccer field, new goal posts, improve accessibility, new irrigation system	\$850,000 - \$950,000
	3	Safety, Accessibility, Maintenance	Convert natural grass playing surface to synthetic multi-sport field.	Convert playing surface to synthetic multi-sport turf, new sports field lighting, upgrade utilities, new amenities, spectator seating, improve accessibility	\$1,400,000 - \$1,750,000

Project Objectives: Equity, Accessibility, Safety, Maintenance, Management of Assets
Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)



VRHS Master Plan

Recommendations

John Winthrop Middle School

The following table identifies each project, provides corresponding detail as well as estimated cost range. A cost range is provided to account for variability in the extent of the final project. Similar to the high school, although having less options, the projects identified are based on the goals and objectives formed during the decision matrix task and feedback form the from the sub-committee. It should be noted that the cost range includes budgetary consultant costs for design, engineering, permitting (as applicable), and construction administration services.

JOHN WINTHROP MIDDLE SCHOOL

Facility	Priority Level	Primary Objectives Met	Project	Project Details	Project Cost
Soccer 1	1	Safety, Equity, Accessibility, Management of Assets	Reconstruct natural grass field, improve drainage.	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating	\$430,000 - \$475,000
	3	Safety, Equity, Accessibility	Construct 4-Lane runway	Construct paved 4-Lane runway adjacent to walkway, new long/triple jump runway and pit, relocate throwing events	\$350,000 - \$375,000
Soccer 2	2	Safety, Accessibility, Management of Assets	Reconstruct natural grass field.	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating.	\$378,000 - \$390,000
Soccer 3	1	Safety, Management of Assets	Reconstruct natural grass field	Re-grade field, improve drainage, new irrigation system, sod, improve accessibility and spectator seating.	\$365,000 - \$375,000
Soccer 4	2	Safety, Equity, Management of Assets	Reconstruct natural grass field, U10-U12	Reconstruct field, improve drainage, new irrigation system, improve accessibility and spectator seating	\$195,000 - \$215,000
Softball Field	2	Safety, Equity, Accessibility, Management of Assets	Reconstruct infield	Remove infield lip, new clay surface, new dugouts, backstop and fencing, improve accessibility and spectator seating	\$220,000 - \$275,000
Baseball Field	2	Safety	Reconstruct Infield	Remove infield lip, new clay surface, new dugouts, backstop and fencing, improve accessibility and spectator seating	\$235,000 - \$280,000
	3	Safety, Accessibility, Equity	Renovate and adjust location	Reloacte field, new fencing & backstop, new dugouts, irrigation, utilities, improved accessibility and spectator seating	\$465,000 - \$520,000

Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)



JWMS Master Plan

Recommendations

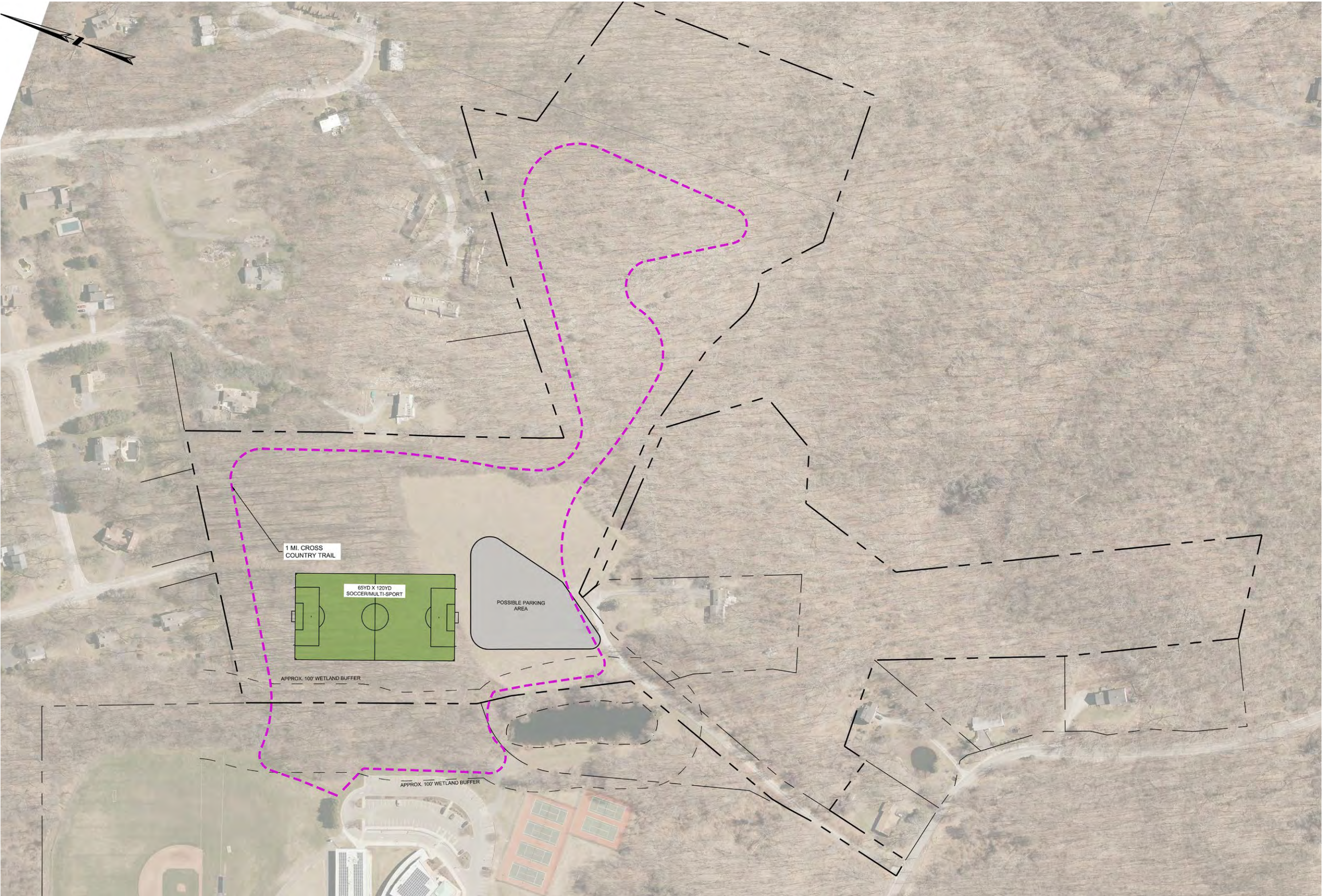
Mislick Property

The assessment section of this report identified the opportunities and constraints of the Mislick property. The central tract of land was noted as having the greatest opportunity for athletic field development. Based on this assessment, the recommendations focus on the development of a new athletic facility potentially alleviate the demand on certain fields at the middle and high schools. Additionally, the properties proximity to the high school presents an opportunity, if developed, with scheduling and field rotation at the high school. One of the greatest benefits would be to remove the JV soccer use out of the baseball and softball out fields. As depicted in the graphics, there is the potential to fit up to two full size soccer fields with associated parking.

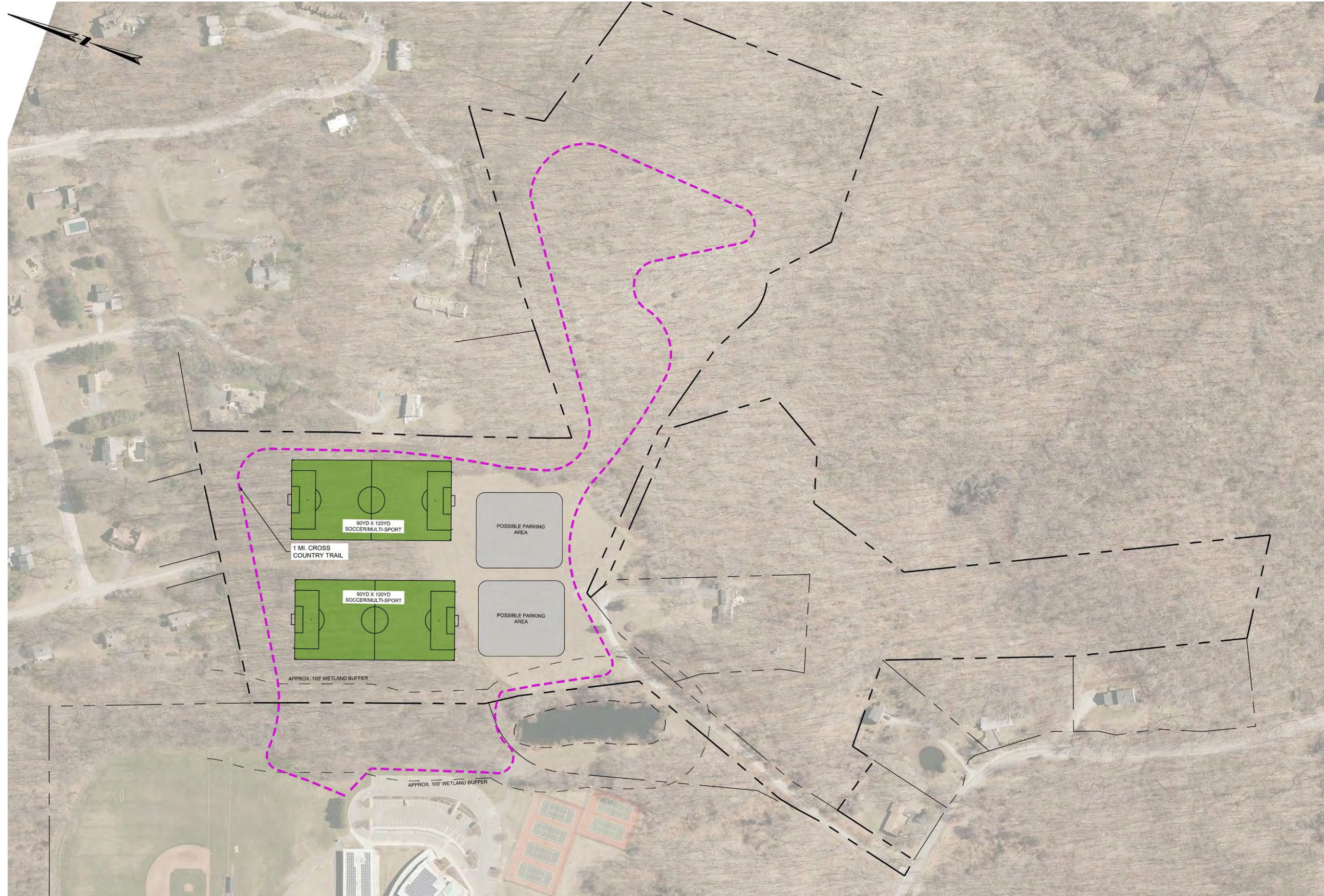
Mislick Property

Facility	Priority Level	Objectives Met	Project	Project Details	Project Cost
Mislick	2	Equity, Accessibility, Safety	Construct new field	Construct new 65 yard natural grass multi-sport field including tree clearing, earthwork, possible retaining wall, gravel parking area	\$500,000 - \$700,000
Mislick	3	Equity, Accessibility, Safety, Maintenance	Provide Utilities	Upgrade electrial service , irrigation well, irrigation system	\$20,000 - \$50,000
Mislick	1	Equity, Safety	Construction Cross Country Trail	Delinate route, minor clearing of trees and vegetation	\$10,000 - \$20,000
Mislick	3	Equity, Safety, Management of Assets	Construct (2) two new fields	Construct new (2) two 65 yard natural grass multi-sport field including tree clearing, earthwork, possible retaining walls, gravel parking area	\$1,000,000 - 1,500,000

Project Objectives: Equity, Accessibility, Safety, Maintenance, Management of Assets
Priority Levels: 1 = Short Term (1-4 years), 2 = Mid-Term (4-8 years), 3 = Long Term (8+ years)

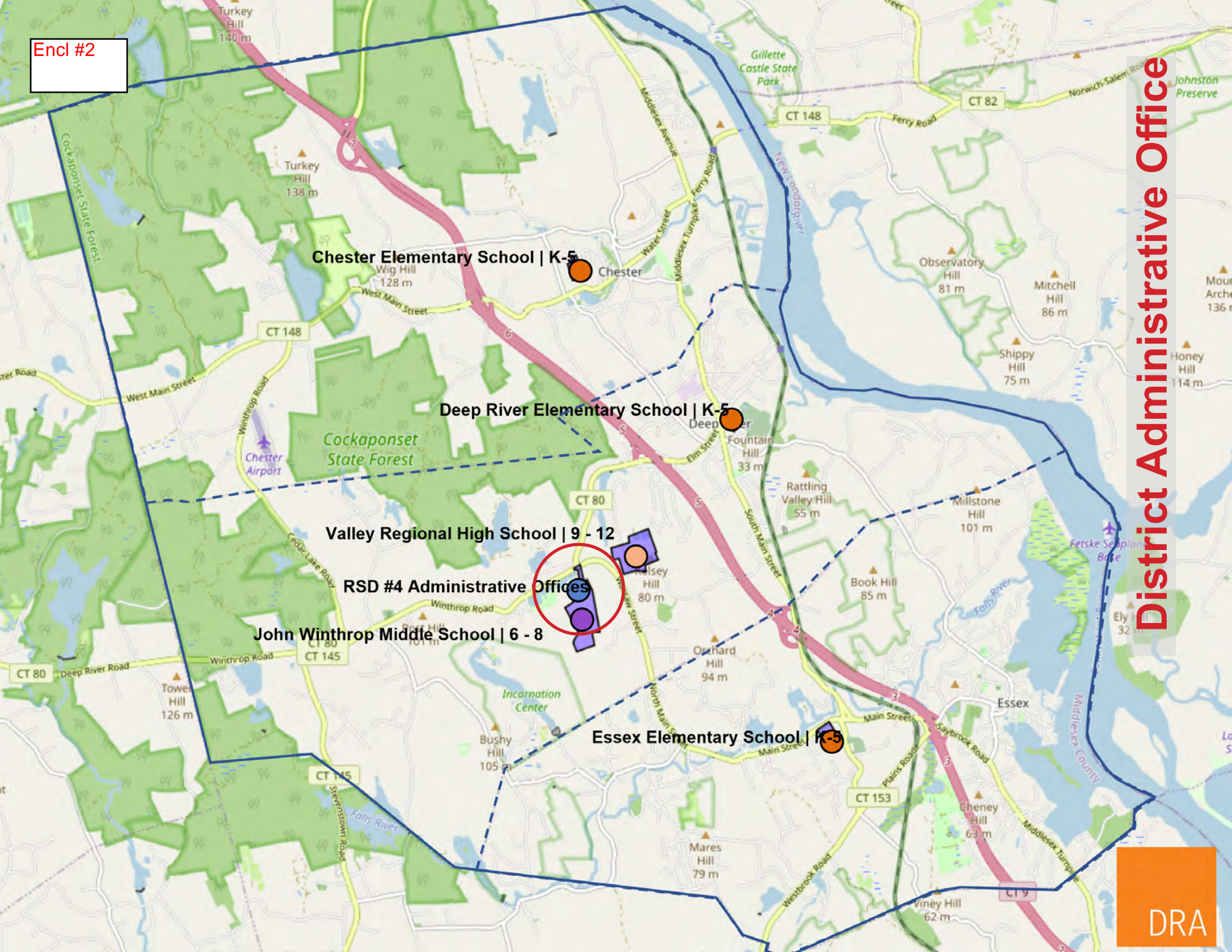


Mislick Property Option I



Mislick Property Option 2

End of Report



The RSD4 Administrative Office

District Administrative Services

1 Winthrop Road

Deep River, CT 06417

5,258 Square Feet total

One floor, full basement - unfinished

66.05 Acre Site

Originally Constructed: 2004 (Town of Deep River Land Records)

Site

The site is accessed from the north, where the access drive to the site intersects with Winthrop Road and West Elm Street. Once at the building the site is fairly flat. The Regional School District #4 John Winthrop Middle School is located on this site as well. The overall site is approximately 50% developed. There is a substantial amount of athletic field space to the south of the Middle School building. Those portions of the site that are not developed remain wooded with mature deciduous tree growth.

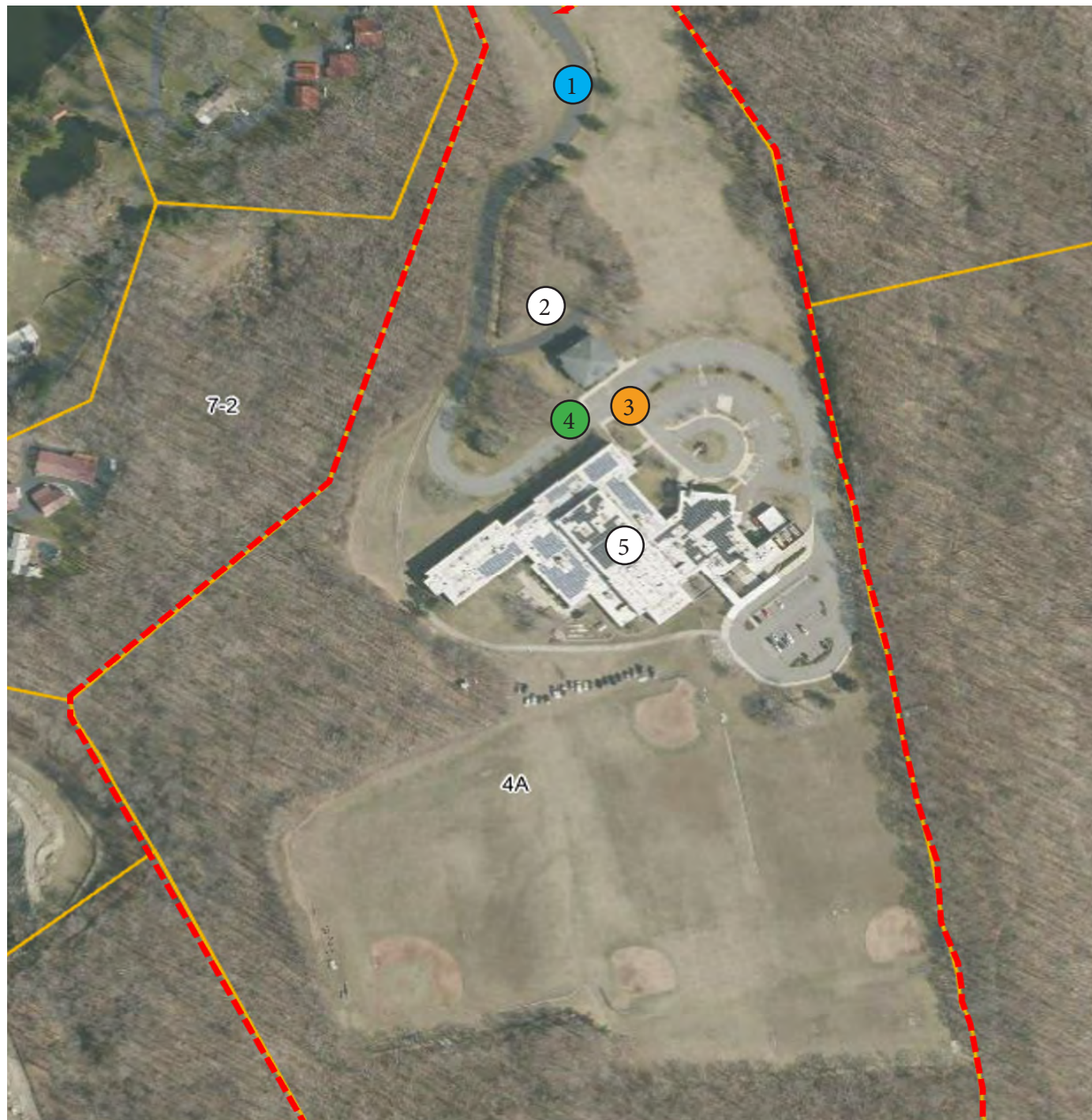
There is only the one entry point. The roadway appears to be about 22 feet wide and climbs a fair amount as it travels south toward the building.

There are two separate parking areas, the larger one has 110 spaces, of which 13 are allocated to the Regional Office. spaces. There are handicapped designated spaces within spaces allocated to the Regional Office.

There is a secondary drive to the north of the building which provides access to the lower level of the building and overflow parking.



- ① Winthrop Drive
- ② Loading / Service Area
- ③ Staff & Visitor Parking
- ④ Main Entry to Building
- ⑤ Winthrop Middle School



Curbs in the parking lot are deteriorating in places. The sidewalks at building are also beginning to deteriorate. The accessible route across the driveway is lacking the tactile warning strips required where the sidewalk meets the driveway.



The walkway on the east side of the building may have too steep of a cross-slope to be ADA compliant. The outdoor dining area lacks a table with a wheelchair accessible space.

The ADA compliance concerns should be further investigated and corrected as might be needed.



ADA parking space is of adequate width for van access. The striping and markings are fading. The required handicapped parking sign is missing.



There are no walkways connecting the rear lot from the main lot.

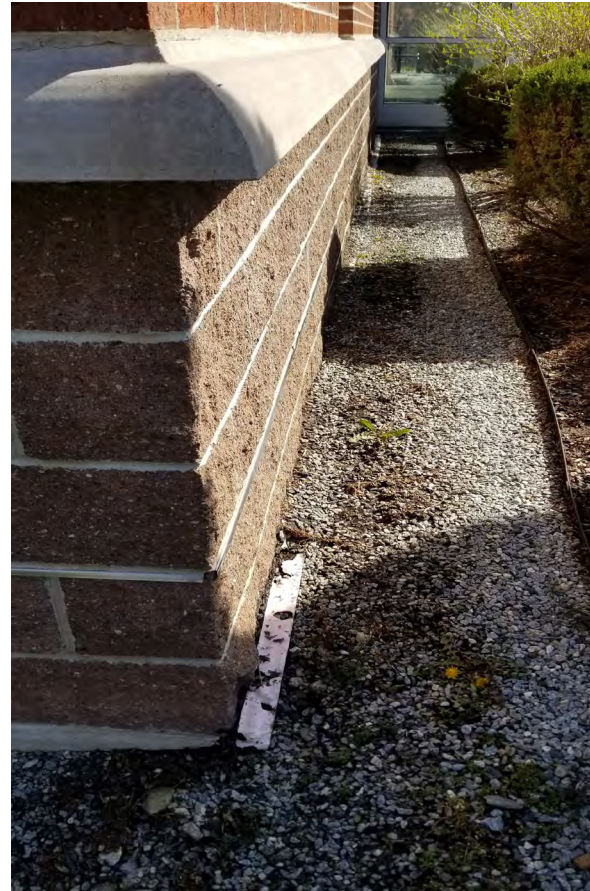


Building

The building is a wood framed / masonry skinned construction with a concrete slab on deck for the main floor. The roof is wood trusses. It is overall in good condition with some elements approaching the end of their life-cycle expectancy.

The exterior is a combination of brick, split-face concrete masonry units, and exposed concrete, with limestone headers, sills, and water course.

The masonry is showing signs of what might be efflorescence as well as areas of mold and lichen growth. Some areas of mortar have been repaired. The building would look better if it were power-washed to remove the dirt and growth.



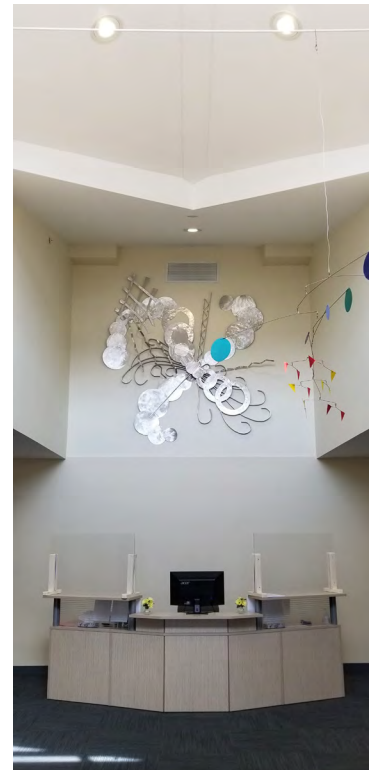
The windows are double pane insulated and are aging well. The aluminum entry doors are in good condition. Sealant around the windows is aging well, replacement should be planned for in the next two to five years.



The threshold at the outer door of the vestibule does not appear to seal, which could allow water to enter during a storm or when snow melts. It appears that the sweep on the bottom of the east (main operating) leaf is missing. This should be replaced to prevent water and insects from entering the vestibule.



Soffits, fascia, and other exterior trimwork is in good condition and showing no signs of deterioration. The roof is reported to have suffered some leaking a few years ago. It is approaching the end of its life expectancy and replacement should be undertaken within the next two to five years.



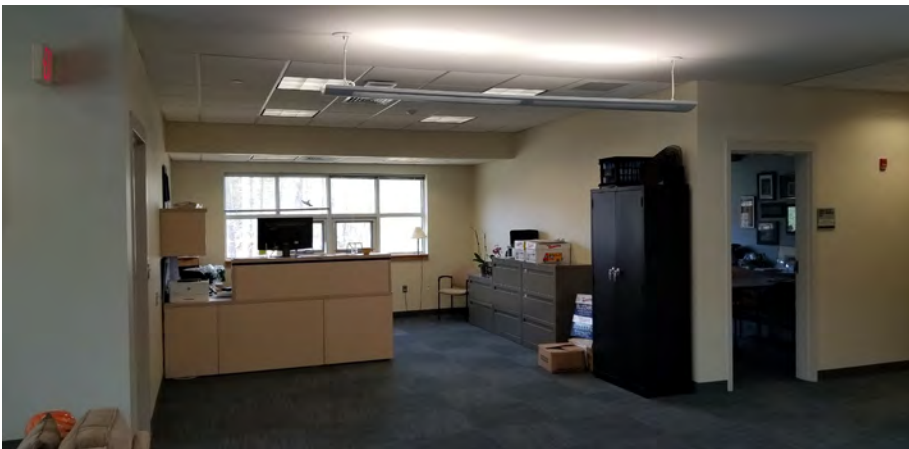
INTERIOR

The interior is in keeping with the mission of the building and is in overall good condition.

The reception area has a high ceiling with windows to let sunlight into the space. The walls, ceilings, and floors are in good condition.



The office spaces are carpeted, with GWB walls and lay-in acoustical ceilings. The rooms are overall in good condition. Windows have operable sashes and blinds to control sunlight entry to the room. Door hardware is ADA compliant throughout. Some workstations are not fully ADA compliant, due mainly to how and where equipment is located.



Restrooms and signage all appear to be ADA compliant and in good condition.

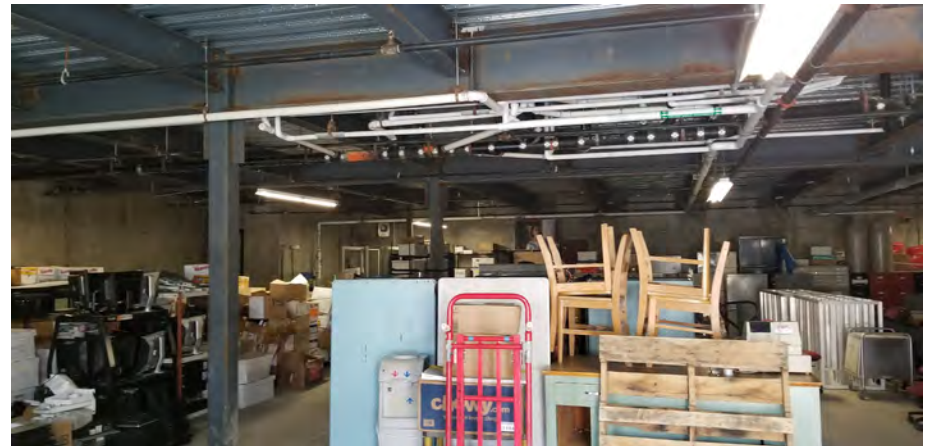




The main conference room is adequately sized for the need, with a large whiteboard and display screens. The screens and whiteboards appear to be ADA compliant as to mounting heights and operational requirements.

Furniture throughout appears to be in good condition and aging well.

The lower level of the building is open and currently used for storage. It has generous floor to deck heights, windows along the north wall, and a concrete floor. It is not set up with formal storage racks but is providing the District with adequate storage as it is currently arranged.



Mechanical / Electrical / Plumbing Systems

A. PLUMBING NARRATIVE: PLUMBING UTILITIES

1. Domestic Water: The domestic water service for the building enters in the basement areas through the exterior wall, below grade. The domestic water service appears to be 2" in size and is provided with an isolation valve to shut down service to the building if required. The system is fed from the Middle School, which is why the system is not provided with a separate backflow preventer.

2. Gas: Gas for the building is provided through a buried propane tank near the rear of the building. It is believed that the tank is roughly 500-1000 gallons. The propane system is provided with a regulator and shut off valve at the exterior of the building before it enters to serve the gas fired furnaces located in the attic space.

3. Sanitary: The buildings sanitary system serves a buried septic tank located in the back of the building. The manholes are exposed for ease of servicing. Most of the buildings sanitary is either PVC or cast iron. The systems appears to be in fair to good condition with no issues indicated by the occupants during the walk through.



Photo # 1: Typical thermostat.



Photo # 2: Kitchenette area



Photo # 3: Mop sink



Photo # 4: Gas fire furnace located in attic space.

PLUMBING FIXTURES AND SPECIALTIES

1. Existing plumbing fixtures are as follows:
- Water closets are floor mounted, tank type, vitreous china.
 - Lavatory sinks are wall mounted, vitreous china, with manual operated faucets.
 - Kitchenette sink is counter mounted, stainless steel with manual operated faucet.
 - Janitors Mop Sink is floor mounted, stone, with manual operated faucet. Condensate from gas fired furnaces terminate to this location.

DOMESTIC HOT WATER SYSTEMS

1. Domestic hot water is provided by an electric water heater located in the attic space. The water heater is manufactured by Bradford White and has a capacity of 19 gallons. The water heater appears to be 208V, single phase with an input of 2500 Watts. The disconnect for the water heater is mounted to the top of the tank. The water heater is mounted in a drain pipe which is piped to a drain pipe. The water heater appears to be installed in 2019 and appears to be in new to good condition. Hot water from the water heater serves a mixing valve located adjacent to the water heater in the attic before serving the fixtures throughout the building such as the kitchenette sink and lavatory sinks. The mixing valve appears to be in good condition and operating correctly.

B. FIRE PROTECTION NARRATIVE:

1. The Fire protection service for the building enters through the basement floor and comes in at 4" diameter. The service reduces to 3" before entering a backflow preventer and serves the entire building. Sprinklers are located throughout the basement, first floor and attic space. The wet system serves the attic space with upright sprinkler heads extended from the main serving the main floor below. The service appears to be in good condition.

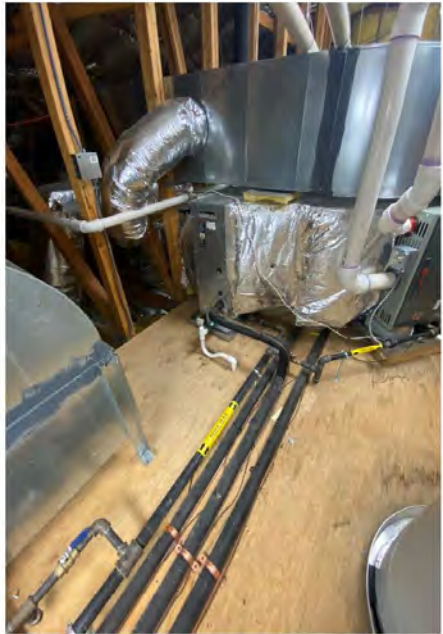


Photo # 5: Gas fired furnace with duct mounted DX cooling coil.



Photo # 6: Gas fired furnace.



Photo # 7: Domestic hot water heater.



Photo # 8: Domestic water mixing valve.



Photo # 9: Front exterior of superintendents office building



Photo # 10: Air cooled condensing units serving gas fired furnaces in attic space.



Photo # 11: Fire Protection service entering through basement.



Photo # 12: Domestic water service entering through basement.

C. MECHANICAL SYSTEMS NARRATIVE:

1. The building heating and cooling system is provided by (5) gas fired furnaces located in the attic space. The Units are provided with gas burners for heating and dedicated DX cooling coils with outdoor condensing units for cooling. The units range in capacity from 3.0 to 6.0 tons. The two larger gas fired furnaces are provided with duct mounted DX cooling coils while the three units in the 3 ton range are provided with DX cooling coils mounted in the units. Condensate and acid neutralizers are piped from all of the cooling coils to sanitary drains in the attic space. Each unit is vented to the exterior through (2) 4" PVC vents. The units appear to be from 2004 and are roughly 18 years old. Even though the units are approaching the end of their useful life, they appeared to be in good condition with no issues reported by the occupants of the building. The main entrance to the building is provided with electric pedestal fin tube. The fin tube radiators appeared to be in good condition with minimal damage noticed. Each gas fired furnace is provided with a dedicated thermostat for the area they are serving.

2. Electrical unit heaters are provided in the basement space for freeze protection of the sprinkler and domestic water systems. The unit heaters are manufactured by QMark and are suspended from the structure. The unit heaters appeared to be in good condition and operating correctly at the time of the site visit.

D. ELECTRICAL SYSTEMS NARRATIVE:

1. Electric Utility Service – Power to the site comes from CL&P pole #976, located on the northeast side of the circular drive in front of Winthrop Middle School. The utility primary runs underground from this pole to a utility company owned 208Y/120volt, 3-phase, 4-wire pad mounted transformer located on the west side of the building. Secondary feeders run underground from the pad mount and enter the building in the basement where the main service switch and CT cabinet are located.

2. Electric Service Switchboard - The service entrance equipment is located in the basement of the building and consists of a 208Y/120volt, 3-phase, 4-wire main switch and CT cabinet, manufactured by General Electric and rated for 600 amperes. The metering cubicle is arranged cold sequence with the meter mounted on the exterior of the building. The main switch and CT section feeds a 600A, 208Y/120V, 3-phase, 4-wire MLO distribution panel “MDP”, which contains circuit breakers that feed lights and equipment in the basement. “MDP-2” is a 208Y/120V, 3-phase, 4-wire MLO distribution panel, rated at 600A and fed off the lugs of panel “MDP”. “MDP-2” feeds HVAC equipment and panels located in the basement and ground level. All this equipment dates from 2004, when the building was constructed. It is in excellent condition and should serve the facility for another 15-20 years.

3. Electric Panelboards – Branch circuit panelboards are by General Electric and are original to the building. As observed, panelboards appear to be in excellent condition and should be in service for another 15-20 years. Available spare/bus space appears adequate.



Photo # 13: Electric unit heater for freeze protection of basement area.



Photo # 14: Fire department connection.



Photo # 15: Propane gas service into building.



Photo # 16: Buried propane tank access covers.



Photo # 17: - Utility Service Pole with Power and Telecommunications



Photo # 18: - Utility Pad Mounted Transformer



Photo # 19: - Utility Meter



Photo # 20: - Service Entrance Main Switch and CT Cabinet in Basement

4. Branch circuit wiring is in EMT/armored cable, where observed.

5. Interior lighting fixtures are a mix of fluorescent and LED technologies. Lights in corridors, offices, conference spaces, etc. are controlled via local switches and occupancy sensors.

6. Building mounted LED fixtures, controlled via timeclock and photocell, light the parking area and exits. All exterior lighting appeared in good working condition.

7. Battery operated emergency lights and remote emergency light heads are used to light egress paths in corridors and above exterior doors. Emergency lighting fixtures were not tested for operation, but appear correctly installed and in good condition. Exit signs are LED with battery backup. Exit signage in all areas of the building appears in compliance with current codes. All signage appears operational and in good condition.

8. Fire Alarm System – The building is equipped with an Edwards EST addressable fire alarm system control panel with four zones. The fire alarm control panel is located at the main entrance to the building along with a booster power supply. Fire alarm speaker/strobe coverage throughout the building appears sufficient. Locations of manual pull stations are compliant. All fire alarm devices appeared to be mounted at the correct ADA height. Monitor and control modules for duct smoke detectors were not observed.

9. The building has a sprinkler system. Smoke and heat detectors were observed in storage areas and mechanical spaces. All system devices appear operational and in compliance.

10. Emergency Call-for-Aid pull cords were observed in restrooms. Call-for-Aid dome lights were mounted in corridors above restroom doors. System devices appeared to be functioning and in good working condition.

E. TECHNOLOGY SYSTEMS NARRATIVE:

1. Telecommunications services, including fiber, originate at CL&P pole #976, located along the circular drive in front of Winthrop Middle School. Cabling runs underground from this pole and enters the building in the basement floor mechanical space, where the main telecommunications backboard is located. From this location, service cabling runs to a system rack in a storage closet on the ground level.

2. The data communications system consists of a fiber backbone and a combination of wired outlets and wireless access points located throughout the building. All equipment and cabling observed appeared to be functioning properly and in good condition.

3. General telephone utilization throughout the building is VoIP provided by Valcom. This is tied in to the building paging/public address system with ceiling and wall mounted speakers located throughout the facility. Combination analogue clock/paging speakers are installed in classrooms. All systems appeared operational with no reported issues.



Photo # 21: - Service Entrance Equipment – Main Distribution Panel “MDP”



Photo # 22: - Distribution Panel “MDP-2”



Photo # 23: - Branch Panelboards in Basement



Photo # 24: - Branch Panelboard Interior

4. TV - The building appears to contain elements of TV infrastructure at the MDF rack for Video IPTV streaming

5. Access Control and Surveillance - The building uses an access control system consisting of a card reader and keyed alarm station located at the main entry. Headend equipment is by KerriSystems. No video surveillance cameras or equipment were observed.

F. MEP SYSTEMS CONCLUSION:
Overall, the plumbing system in the building appears to be in good condition. The electric water heater was installed in 2019 and is in new condition.

The gas fired furnaces and air cooled condensing units providing the heating and cooling for the building appear to be in good to fair condition and are operating as designed. The units are roughly 18 years old and are starting to near the end of their useful life. The useful life of these units is roughly 20-25 years. It would be recommended to replace these units over the next 5-10 years to more energy efficient units. These units also did not appear to bring in outside air into the spaces. It would be recommended that if the HVAC system is upgraded, a ventilation system be added to the cooling and heating units.



Photo # 25: - Reception Area Lighting

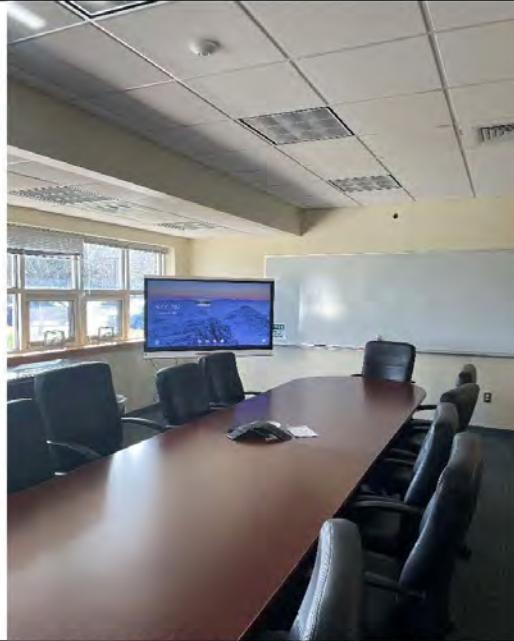


Photo # 26: - Conference Room Lighting



Photo # 27: - Interior Entry Lighting



Photo # 28: - Exit and Emergency Lighting

We would recommend upgrading the existing thermostats to thermostats that have the ability to tie into a central BMS (building management system). The BMS system will help improve system efficiency, help troubleshoot any issues with the equipment as well as help stay up to date on all preventive maintenance items.

The Main Electric Service and distribution system are original to the building and of recent vintage. All equipment is in good condition with no reported issues.

Most lighting systems have been retrofitted with newer technology, more energy efficient LED lamps. Emergency lighting and exit signage are battery powered and of recent vintage. It is suggested that the remaining lighting systems that have not been upgraded, be replaced with new LED fixtures, or retrofitted with LED lamps and drivers.

The fire alarm system and ancillary devices are new and in excellent operating condition. Modifications and programming enhancements can be made to this system as required, but no immediate improvements are necessary.



Photo # 29: - Exterior and Emergency Lighting at Front Entrance



Photo # 30: - Fire Alarm Service Control Panel and Booster Cabinet at Main Entry

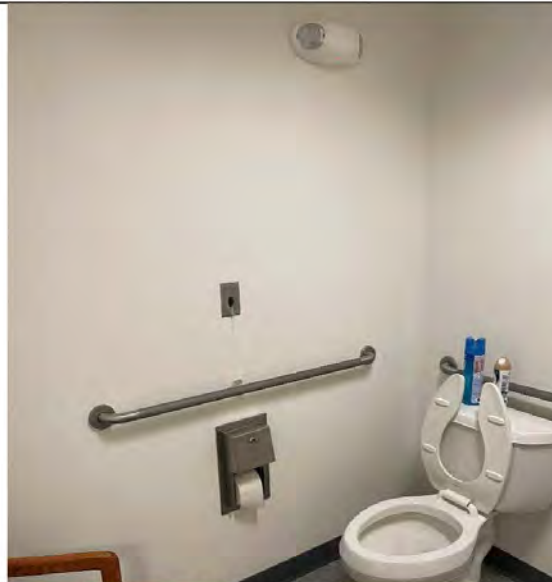


Photo # 31: - Call-for-Aid Pull Cord and Emergency Light in Restroom

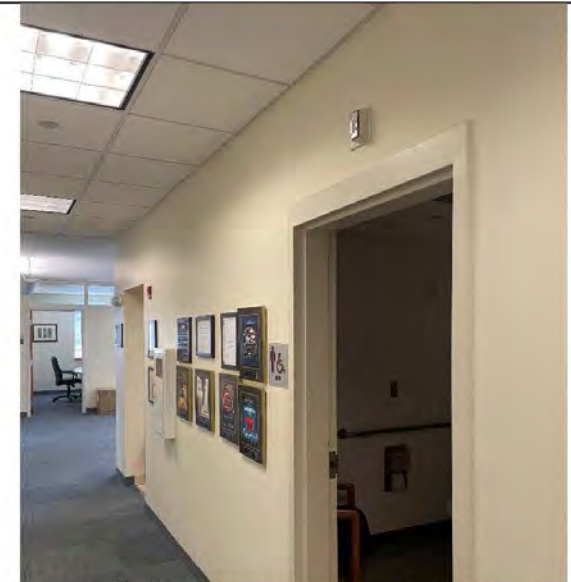


Photo # 32: - Call-for-Aid Dome Light in Corridor



Photo # 33: Telecommunications Demarc with Fiber in Basement



Photo # 34: - Conduit for Telecommunications Cabling up to Main Floor



Photo # 35: - Telecommunications Rack with Fiber in Main Floor Storage Closet



Photo # 36: - Security Access Headend Equipment

The data network infrastructure is in good condition and does not require immediate improvement. The wireless access point distribution appears to be adequate based on conventional industry standard spacing. No improvements are required at present.

The existing access control system appears adequate. High definition surveillance cameras are recommended for the main entry and various points around the exterior, networked to a video display station for monitoring.

Summation:

The building overall is in good condition. The condition of the finishes and overall quality of the building reflects the attention and care that staff expend on the tasks of maintaining a proper educational environment.

The site has some areas of concern relative to physical condition of the pavement and some of the concrete walkways. ADA compliance is a concern in regards to crosswalks, access points, and markings.

The building exterior is showing signs of aging of some components. Most notable of these is the roof. This apparently suffered some damage a few years ago and replacement is recommended in the next two to five years.

There are areas of deterioration on the foundation, masonry, and concrete walls. These areas should be washed and then watched to assure further deterioration is addressed as it develops (5 - 10 years).

The building interior shows few signs of deterioration. Finishes throughout the interior are generally in good condition and the building provides a good working environment.

Projected Capital Improvement Expenditures

Projections of expenditures for capital improvements are provided to serve as a guide to help the District plan for fiscal and logistical needs for the next 20 years. As such, there is not a detailed budget developed for any of the items listed.

The projected costs are based upon current market pricing from projects of similar scope and complexity. The costs include allowances for what are commonly referred to as 'Owner's soft costs' such as professional designer fees, construction management, hazardous materials testing, etc.

It is recommended that best-practices in preparing the CIP budget would be to provide funding for, and undertake investigations and design in advance of appropriations for the actual construction; IE appropriate monies for design in FY2024 for work that would be funded and undertaken in FY2025.

This approach allows sufficient time for investigation of existing conditions and proper design, documentation, and budget estimating so that the funding request for the construction is based upon completed documents.

Finally, the costs for near-term (2025), mid-term (2030), long-term (2035), and future (2040) are inclusive of cost escalation factors. This is done to provide as realistic a projection as might be possible for work that might be undertaken years in the future.

The demarcation of particular fiscal years is intended not as a hard target for the work described, but as a milestone date by which the planning and funding discussions should be fully addressed.

The immediate (2023) expenditures projected for the Administrative Office are to address safety concerns on the walkways around the building.

For FY 2025 there are no CIP projects forecast.

For FY 2030 it is recommended that the roof be replaced along with the mechanical and plumbing systems.

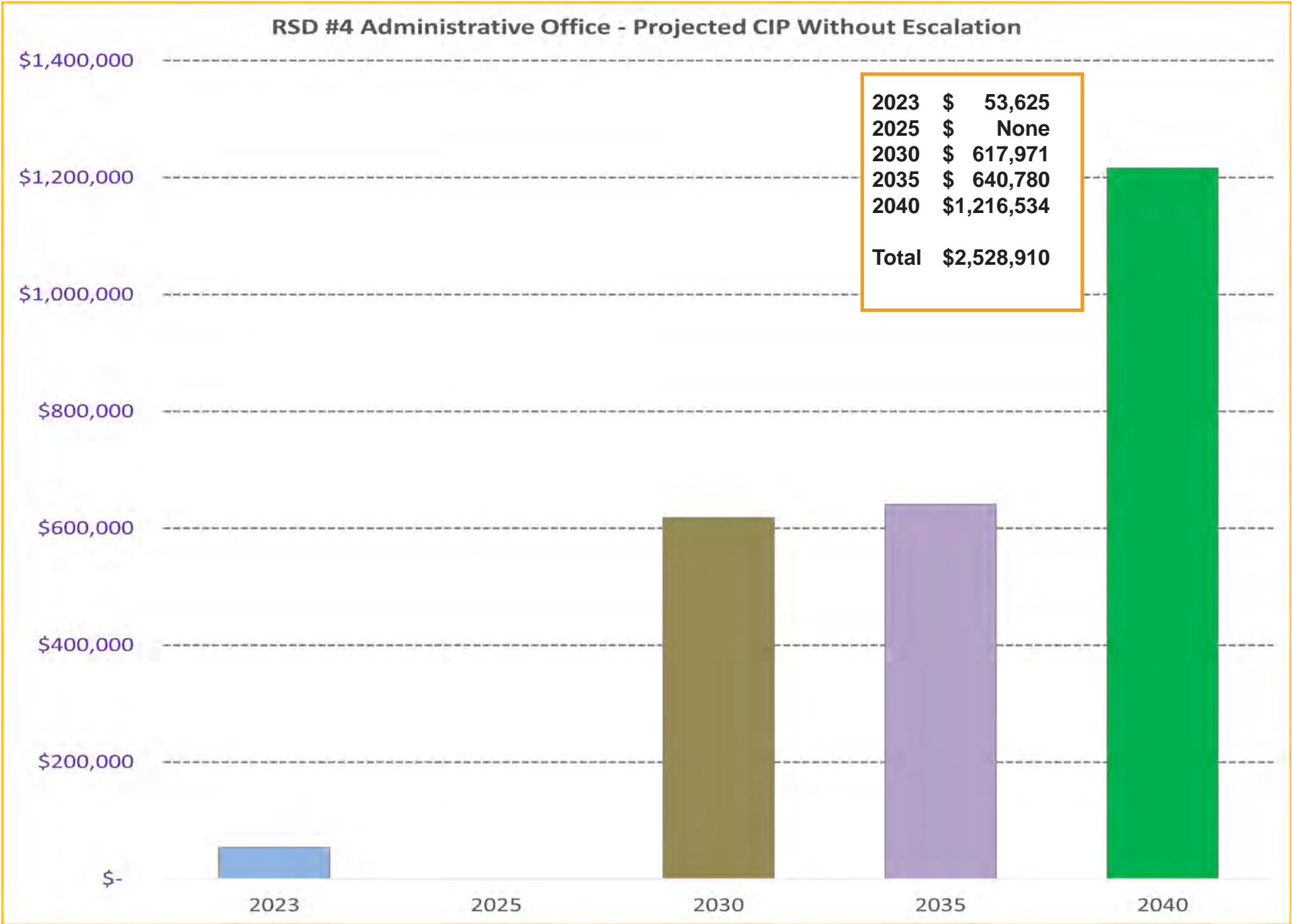
The following pages show the projected needs and costs for FYs 2023, 2025, 2030, 2035, and 2040.

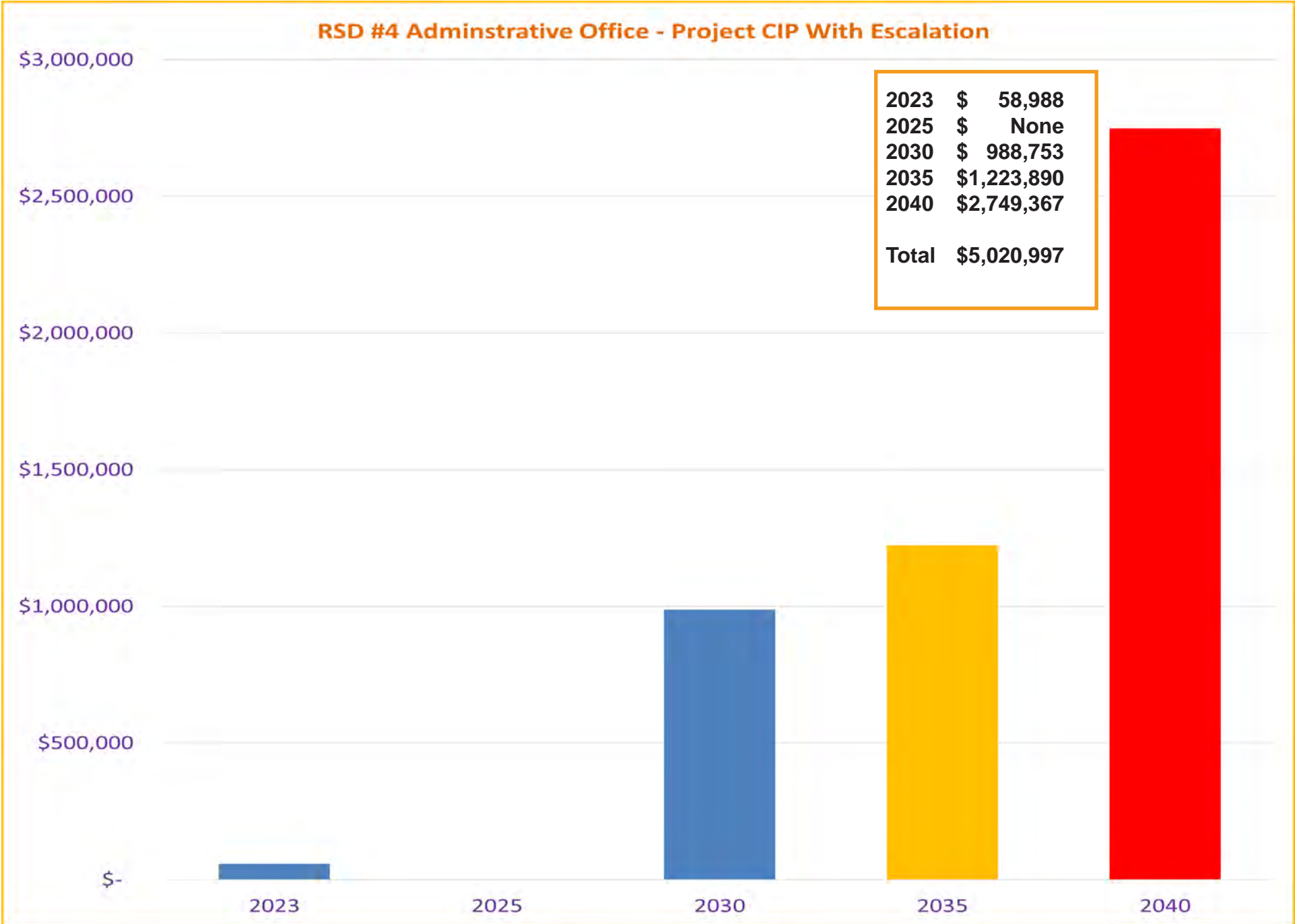
The final page of this section has bar charts showing total projected costs in present-year (2022) as well as escalated costs for each milestone Fiscal Year.

Capital Needs Survey Form										
District Administrative Offices								Site	66.05	Acres
#REF!								Building:	5,260	Square Feet
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS	
2023										
Site - Sidewalks	1	2	2004	2023	1,500	sq.ft	\$ 15	\$ 22,500		
Exterior Platforms, Stair, and Areaways	1	2	2004	2023	750	sq.ft	\$ 35	\$ 26,250		
2025										
2030										
Site - Paving	1	3	2004	2030	10,000	sq.ft	\$ 7	\$ 70,000		
Roofing	1	1	2004	2030	7,500	sq.ft.	\$ 8.00	\$ 60,000		
Flashing	1	1	2004	2030	7,500	sq.ft.	\$ 0.50	\$ 3,750		
Water Infiltration Conditions	1	1	2004	2030	7,500	sq. ft.	\$ 1.00	\$ 7,500		
Doors - Exterior	1	2	2004	2030	5	each	\$ 3,500.00	\$ 17,500		
Paint	2	4	2004	2030	84600	sq.ft.	\$ 0.50	\$ 42,300		
Other finishes	2	4	2004	2030	250	sq.ft.	\$ 15.00	\$ 3,750		
Blinds / Shades	2	4	2004	2030	16	each	\$ 250	\$ 4,000		
Heating Furnaces	1	3	2004	2030	5	Each	20000	\$ 100,000		
Ventilation Systems	1	1	2004	2030	1	allow	35000	\$ 35,000		
Exhaust Systems	1	2	2004	2030	2	each	3000	\$ 6,000		
Control Systems	1	3	2004	2030	5,260	sq.ft.	5	\$ 26,300		
Air Cooled Condensing Units	1	3	2004	2030	5	Each	20000	\$ 100,000		
Electric Unit Heaters	2	4	2004	2030	4	Each	2500	\$ 10,000		
Security System	1	3	2004	2030	5,260	sq.ft.	\$ 3	\$ 15,780		
A/V Systems	3	3	2004	2030	5,260	sq.ft.	\$ 5	\$ 26,300		

Capital Needs Survey Form									
District Administrative Offices								Site	66.05 Acres
August 1, 2022								Building:	5,260 Square Feet
SYSTEM	System Priority 1 to 4 (1-High, 2-Medium, 3-Low, 4-Poor)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS
2035									
Site - Lighting			2004						
Building Mounted Fixtures	1	4	2004	2035	8	each	\$ 3,500	\$ 28,000	
Pole Mounted Fixtures	1	4	2004	2035	4	each	\$ 3,500	\$ 14,000	
Site - Fuel Tanks	1	4	2004	2035	1	allow	\$ 10,000	\$ 10,000	
Site - Lawn and plantings	2	3	2004	2035	20,000	sq.ft	\$ 4	\$ 80,000	
Site - Fencing	1	4	2004	2035	400	ln.ft.	\$ 50	\$ 20,000	
Site - Drainage	1	4	2004	2035	20000	each	\$ 6	\$ 120,000	
Masonry Walls - Exterior	1	4	2004	2035	2,500	sq.ft	\$ 25.00	\$ 62,500	
Framing and Wood Trusses	1	4	2004	2035	7,500	sq.ft	\$ 2	\$ 15,000	
Finish Woodwork	2	4	2004	2035	7,500	sq.ft	\$ 10	\$ 75,000	
Office cabinetry	2	4	2004	2035	9	office	\$ 5,000	\$ 45,000	
Reception cabinetry	2	4	2004	2035	1	space	\$ 12,500	\$ 12,500	
Other cabinetry	2	4	2004	2035	1	allow	\$ 15,000	\$ 15,000	
Carpet	2	3	2004	2035	500	sq.yd.	\$ 55.00	\$ 27,500	
VCT	2	2	2004	2035	500	sq.ft.	\$ 8.00	\$ 4,000	
Visual Display Surfaces - tack boards	3	4	2004	2035	4	each	\$ 300.00	\$ 1,200	
Visual Display Surfaces - white boards	3	4	2004	2035	4	each	\$ 300.00	\$ 1,200	
Communication Systems	1	4	2004	2035	5,260	sq.ft.	\$ 2	\$ 10,520	
Technology Systems	2	4	2004	2035	5,260	sq.ft.	\$ 1.5	\$ 7,890	
Clock System	2	4	2004	2035	5,260	sq.ft.	\$ 1.5	\$ 7,890	

Capital Needs Survey Form									
District Administrative Offices								Site	66.05 Acres
August 1, 2022								Building:	5,260 Square Feet
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS
2040									
Site - Electrical	1	4	2004	2040	1	allow	\$ 50,000	\$ 50,000	
Concrete Foundation Walls	1	5	2004	2040	30,000	sq.ft.	\$ 3	\$ 90,000	
Concrete Floor/Roof Planks	1	5	2004	2040	5,260	sq.ft.	\$ 3	\$ 15,780	
Masonry Walls - Interior	1	4	2004	2040	2,000	sq.ft.	\$ 3.00	\$ 6,000	
Structural Steel	1	4	2004	2040	5,260	sq.ft.	\$ 0.50	\$ 2,630	
Steel Joists	1	4	2004	2040	5,260	sq.ft.	\$ 0.25	\$ 1,315	
Steel Deck	1	4	2004	2040	5,260	sq.ft.	\$ 0.25	\$ 1,315	
Steel Lintels	1	4	2004	2040	700	ln.ft.	\$ 20.00	\$ 14,000	
Doors - Interior	1	2	2004	2040	15	each	\$ 3,500.00	\$ 52,500	
Doors - Finish Hardware	1	2	2004	2040	15	each	\$ 2,000.00	\$ 30,000	
Windows	1	1	2004	2040	300	sq.ft.	\$ 150.00	\$ 45,000	
Acoustical	2	5	2004	2040	4200	sq.ft.	\$ 5.00	\$ 21,000	
GWB	2	5	2004	2040	1060	sq.ft.	\$ 3.00	\$ 3,180	
Toilet Compartments / Accessories	2	5	2004	2040	2	rooms	\$ 4,000.00	\$ 8,000	
Fire Protection Water Main	1	5	2004	2040	200	LF	\$ 1,000	\$ 200,000	
FP Backflow Device	1	5	2004	2040	4	each	\$ 2,500	\$ 10,000	
FP Water Distribution System	1	5	2004	2040	5,260	sq.ft.	\$ 10	\$ 52,600	
Domestic Water Main	2	3	2004	2040	200	LF	1000	\$ 200,000	
Domestic Water Distribution System	2	3	2004	2040	5,260	sq.ft.	8	\$ 42,080	
Natural Gas Main	3	3	2004	2040		each		\$ -	
Plumbing Drainage System	3	3	2004	2040	5,260	sq.ft.	3	\$ 15,780	
Plumbing Fixtures / Equipment	3	2	2004	2040	8	each	3500	\$ 28,000	
Water Heater	2	5	2019	2040	1	each	10000	\$ 10,000	
Electrical Service	1	4	2004	2040	1	allow	\$ 50,000	\$ 50,000	
Electrical Distribution	1	4	2004	2040	5,260	sq.ft.	\$ 15	\$ 78,900	
Transformer	1	4	2004	2040	1	Each	\$ 20,000	\$ 20,000	
Lighting - General	1	4	2004	2040	5,260	each	\$ 8	\$ 42,080	
Emergency Lighting	1	4	2004	2040	5,260	sq.ft.	\$ 2	\$ 7,890	
Fire Alarm System	1	4	2004	2040	5,260	sq.ft.	1.50	\$ 7,890	





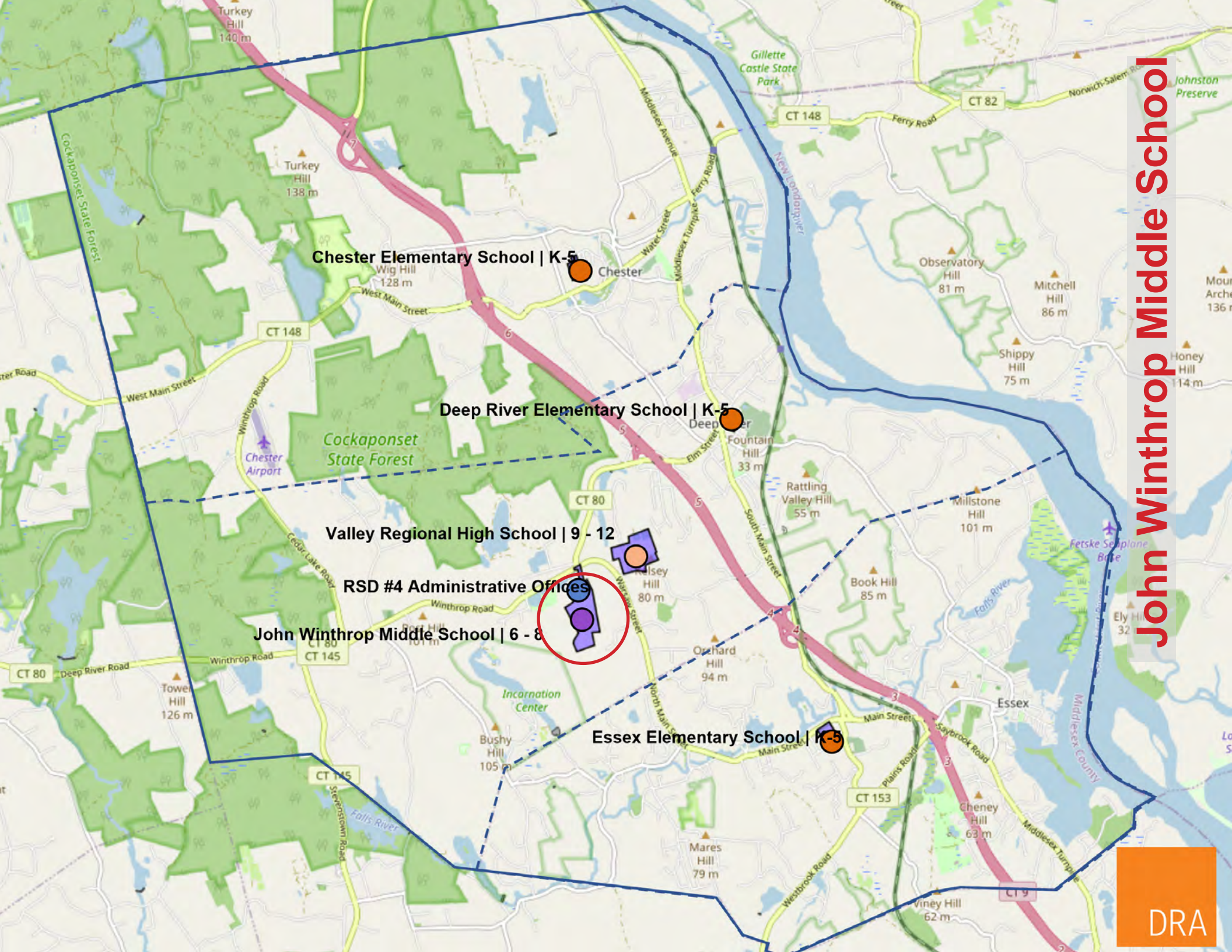
APPROPRIATENESS FOR USE

The Regional District Administrative building comprises approximately 5,200 square feet of net area. The location of the building and the arrangement of spaces within the building suit the needs both now and likely into the future.

It may be possible to relocate the District Administrative functions into one of the schools. Doing so would make the Administrative building redundant, creating the possibility of leasing the space to an outside tenant.

Doing so would make the District a landlord, with the attendant responsibilities that come with that arrangement.





Chester Elementary School | K-5

Deep River Elementary School | K-5

Valley Regional High School | 9 - 12

RSD #4 Administrative Offices

John Winthrop Middle School | 6 - 8

Essex Elementary School | K-5

John Winthrop Middle School

DRA

The John Winthrop Middle School

Grades Seven and Eight

1 Winthrop Road

Deep River, CT 06417

129,600 Square Feet total

Two floors

66.05 Acre Site

Originally Constructed: 1970 (Town of Deep River Land Records)

Overview

The John Winthrop Middle School is a two story building of approximately 129,600 square feet, set on a site of just over 60 acres. The original building was constructed in 1970, with two small additions and renovations taking place in 2003.

The site is accessed from the north, where the access drive to the site intersects with Winthrop Road and West Elm Street. Once at the building the site is fairly flat. The



Regional School District #4 Administrative offices are located on this site as well. The overall site is approximately 50% developed. There is a substantial amount of athletic field space to the south of the building. Those portions of the site that are not developed remain wooded with mature deciduous tree growth.

There is only the one entry point. The roadway appears to be about 22 feet wide and climbs a fair amount as it travels south toward the building.

There are two separate parking areas, the larger one, with 110 spaces, of which 13 abut the Regional Office, is to the east of the school. The one to the south with 61 spaces. There are handicapped designated spaces within each of the lots.

The eastern lot incorporates the private vehicle drop-off / pick-up loop. The southern lot has the bus drop-off / pick-up loop.

Access to the athletic fields is from the southern lot.

- ① Winthrop Drive
- ② Drop Off / Pick Up
- ③ ADA Compliant Parking
- ④ Main Entry to Building
- ⑤ Visitor Parking
- ⑥ Bus Drop Entry Drive
- ⑦ Staff Parking
- ⑧ Secondary Entry to Building
- ⑨ Play field
- ⑩ Loading Area



There is a hard-surface patio off of the library. Nearby is a fenced garden / growing area with a small barn for storage.

There are four baseball and softball diamonds along with at least two soccer pitches making up the athletic fields. The soccer pitches overlap the outfield areas of some of the ballfields, but it appears possible to play concurrent games.

The building is a two story structure, with the lower floor being considerably smaller than the upper level. The lower level is in two unconnected parts. There is an elevator in each of the areas. The lower level contains classrooms and related spaces. The upper level contains the gymnasium, kitchen, cafeteria, library, auditorium, main office, and classrooms.

The original 1970 building was a double loaded classroom corridor to the north side of the main floor, single loaded classroom corridor on the lower floor directly beneath.

The large volume spaces such as the gym, auditorium, and cafeteria are to the south and east of the classroom corridor.

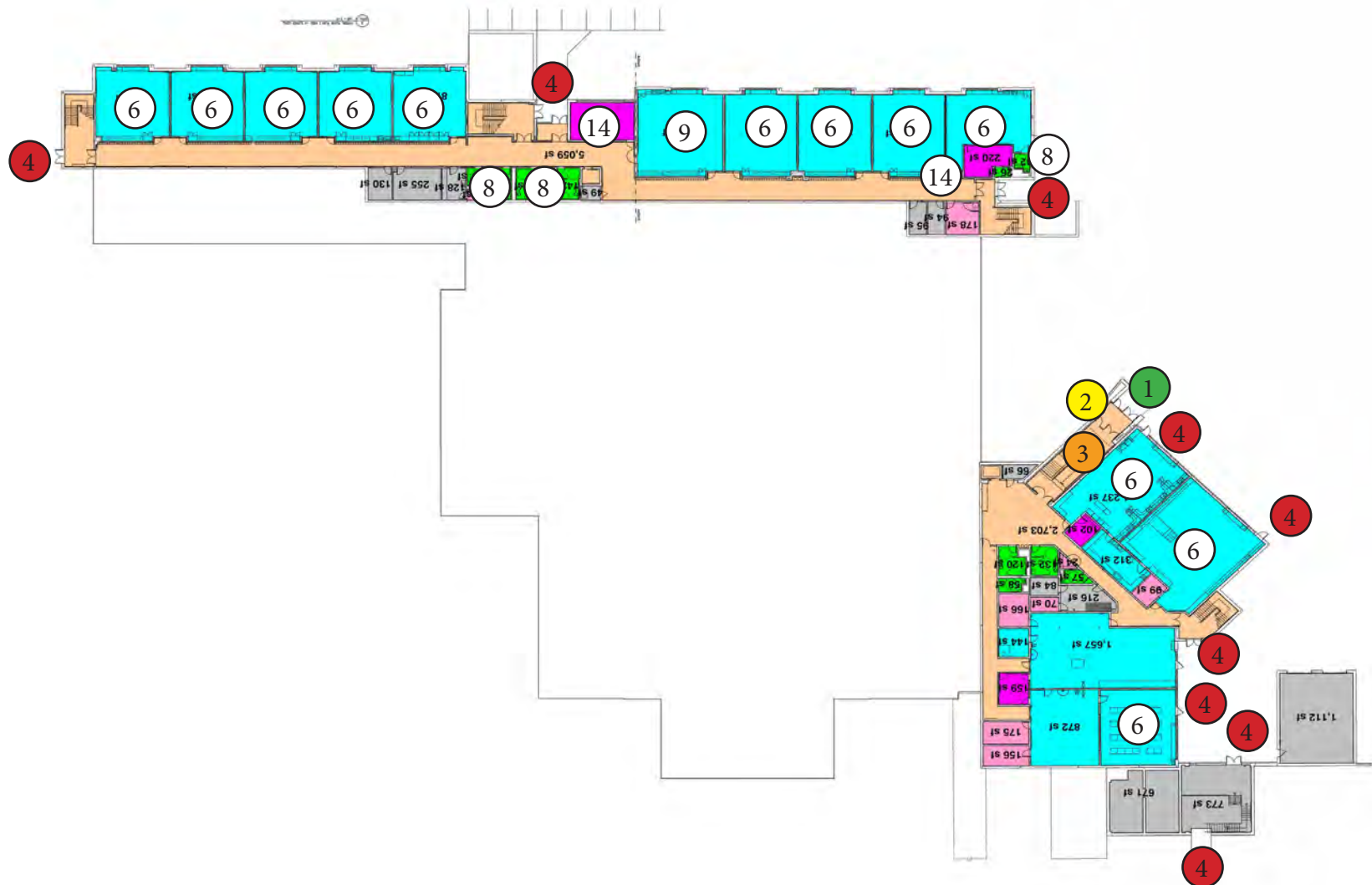
The gymnasium and auditorium are generously sized for a middle school. The library is of good size as well.

The footprint and design of the school is typical of 1970s middle and high school design, incorporating modestly sized classrooms along with well sized and equipped gyms and auditoriums to provide a range of learning opportunities and functions.

- ① Main Entry
- ② Secure Vestibule
- ③ Student Entry
- ④ Secondary Egress
- ⑥ Classrooms
- ⑧ Restrooms Teacher's
- ⑨ Art Classroom
- ⑭ Meeting Room / Office

John Winthrop Middle School

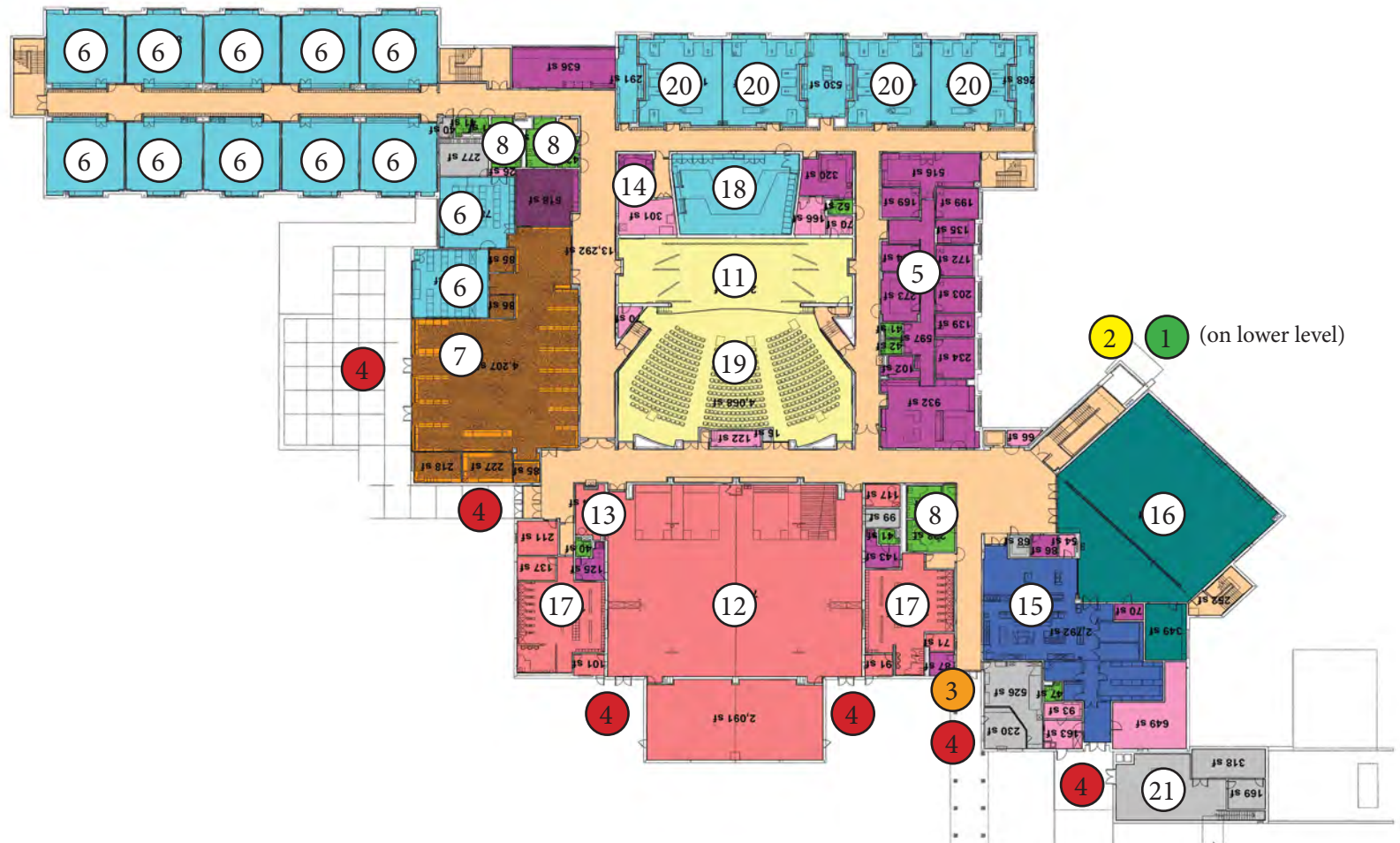
Lower Level



- | | | |
|--------------------|-------------------------|----------------|
| ① Main Entry | ⑩ Teacher's Breakroom | ⑰ Locker Rooms |
| ② Secure Vestibule | ⑪ Stage | ⑱ Music Room |
| ③ Student Entry | ⑫ Gym | ⑲ Auditorium |
| ④ Secondary Egress | ⑬ Gym Storage | ⑳ Science Lab |
| ⑤ Main Office | ⑭ Meeting Room / Office | ㉑ Mechanical |
| ⑥ Classrooms | ⑮ Kitchen | ㉒ Kitchen |
| ⑦ Library | ⑯ Cafeteria | ㉓ Cafeteria |
| ⑧ Restrooms | | |

John Winthrop Middle School

Upper Level



The entry from the private vehicle drop is on the lower level. From this entry there is a staircase and an elevator by which the main floor level is reached.

The entry from the bus drop is through a set of doors to a corridor which runs between the locker rooms and kitchen. Through this entry one enters onto the main floor.

Neither entry point provides a secure, observable vestibule arrangement. There is no logical way in which an entry sequence could be established that would provide direct connection from the entry door to the main office. Security for the entries would rely upon a staff member being located at each of the two main entry points.

Assessment Narrative

Site

Site access and driveways throughout the site appear to be all the same age. Pavement is in fair condition throughout the site, with cracking and deterioration beginning to grow. Repaving of the site should be on track for consideration in the next 5 - 10 years.

The accessible routes are not properly constructed or marked. There are designated ADA spaces on the east and south sides of the building. These appear to be properly sized for van loading and car use. However, the required crosswalks, signs, markings, and tactile warning strips are either faded, missing, or broken, taking these spaces out of compliance. This should be addressed as a first order item. Most of the corrections are straight-forward to implement.





The curbing and sidewalks immediately the north of the building entrance are concrete. Deterioration is spreading quickly in some areas and some of the walks are becoming unsafe. Deterioration will typically accelerate once it has begun. Remedial work should be scheduled in the next two years.

Other curbing and sidewalks on site are in slightly better condition. These are broken in some places, but not as badly as to the north of the building. This curbing and sidewalks should be addressed as necessary so that it doesn't become a tripping hazard or cause damage to a vehicle.

Trees and plantings throughout the site are a mix of what appear to be recently planted fruit trees and mature native growth. All appear to be healthy and in good



condition. The recently planted fruit trees near the building could be part of a science project that would engage students in hands-on study of the trees over the years to document growth and fruit production.

The play fields to the south of the building are generally well defined and appear to have a substantial and well-established turf surface. There is a baseball diamond and backstop. There were are bleachers at the nearest field. No seating was observed at the other fields. This area did not have an accessible path to any of the fields. Overall in good condition otherwise.

There is an outdoor seating area to the west, accessed through either the hallway near the library or by foot on a path around the south side of the building. There is a table with an ADA compliant seating area.

Near the outdoor seating area is a fenced garden area with a storage shed. This appears to be used as a project-based learning area. There is no accessible path to this area.

The bench in the outdoor classroom is broken.





Building - Exterior

The building is clad in brick with corrugated metal and precast exposed stone panels. The brick walls show spalling, some cracking, loss of mortar, and efflorescence. The extent of this condition in some areas is concerning and it is recommended that potential causes and resolution be investigated to assure continued structural and environmental integrity of the building.

The deterioration of the brick is especially evident on some of the building corners, the chimney, and other areas both at ground level and above the roofline. Given.

The photos on this and the facing page illustrate some of the areas observed during our assessment.

The windows throughout the building are a mix of relatively new with a greater number that appear to be original to the building. These are single glazed and in poor condition. Consideration should be given to replacing these to double glazed, energy efficient units. Given the age of the building, it should be assumed while planning and budgeting that the sealant at any original door or window will contain hazardous materials.

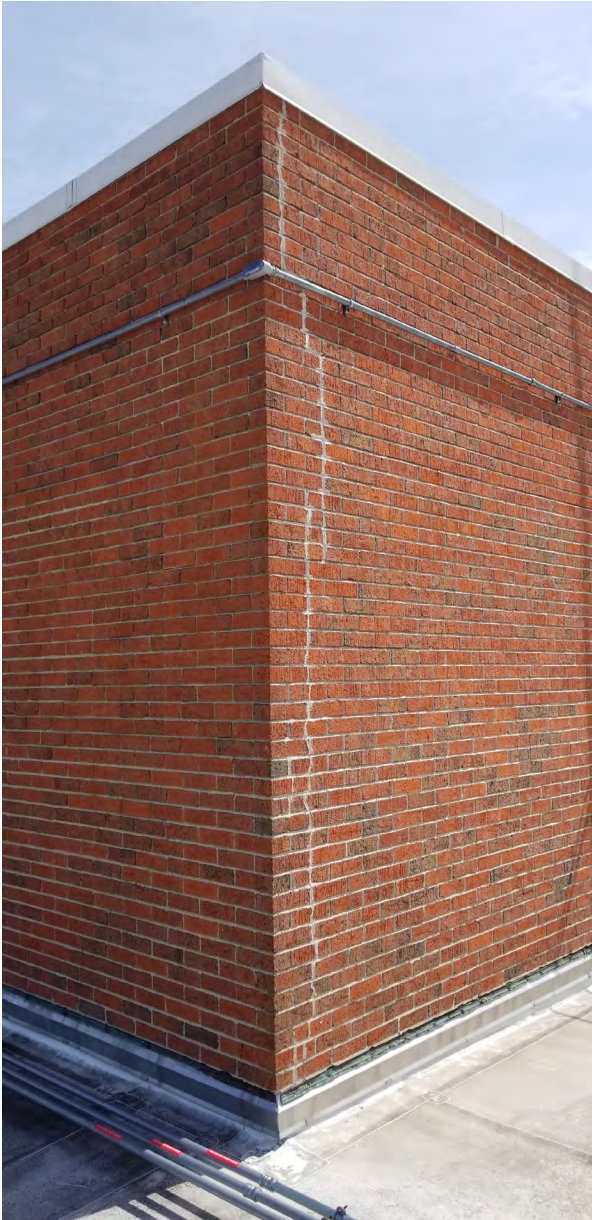
The main entry doors are aluminum with double glazed windows. These appear to have been installed as part of the 2003 renovation.

Fascias and soffit appear to be cement stucco on backer board. These are generally in fair condition. These should be checked to confirm the soundness of the installation and then cleaned and painted, or replaced if found to be deteriorated.

Some of the steel doors leading from the building are in need of paint.

The roof is epdm that was installed in 2005. This roofing system has a 20 year warranty, which will expire in 2025. There may be a





leak or point of water ingress along the north side of the roof. This shows on the interior as rot, dampness, and mold on the wall near the nurse's office. This roof should be further investigated to determine what life expectancy might be left. Roof drains need to be cleaned in various locations on the roof, and secondary scuppers are needed in many areas. It is recommended that replacement of this roof be planned for sometime in the next three to five years, unless further investigation determines it remains a sound roof and drain system.

There are PV arrays on a good portion of the roof. These appear to have been properly installed.

Photos on this and the facing page give an idea of the conditions on the roof relative to effluorescence in the brick, deterioration of the chimney caps, water ponding on the roof, and the overall condition of the roofing membrane itself.



Building - Interior

The 2003 renovation is aging well, the building interior not looking anywhere near 20 years on from completion.

Most floors in hallways and offices throughout the building have carpeted floors, walls are painted GWB, and the ceilings are acoustical tile.

Interior doors and hardware were addressed during the renovation and remain in good condition with few concerns.

The main office is remote from either of the entrances, which precludes having a safe vestibule / receiving area into which visitors must pass before gaining access to the building. With the current arrangement a visitor may call the main office from the north entry vestibule and a staff member would go down to greet them. Alternately a staff member can be stationed at the vestibule to greet and check visitors into the building.

The north vestibule was refurbished and the elevator added as part of the 2003 renovation. This area remains in good condition.

The main office has a number of individual offices. All materials are in good condition. There are a few ADA compliance items, mostly down to access spaces for office machines.

The main office is situated near the cafeteria and is bound on two sides by corridors. There are a number of windows allowing views from the office into the corridors, and vice versa. This visual connection is considered to be a positive influence on students by giving both a view of what they might be doing in the corridor and allowing them to see into the office to see the work of running the school.





The kitchen is a full-preparation operation with a good floor plan and modern equipment. There is adequate space for staff movement during preparation, serving, and cleanup.



The serving area is well-sized and arranged. There is good lighting in the room and visitor flow through the space appears to be well thought-out. There are two point of sale stations and variety of food service options appears to be offered.

The serving area is open to the dining area, which helps to create a good connection for staff and students and encourages interaction and good behavior.

The cafeteria appears to be well sized for the enrolment. The ceilings are a bit lower than desired, which can tend to increase the noise level.

There is a window-wall along the northeast wall which provides natural light into the space as well as a visual connection to the outdoors.

An area of concern is seen in the large photo on the facing page. This shows the damage caused by a persistent roof leak. Water has traveled beneath the roof membrane to an opening in the roof deck at one of the walls. Water has made its way down the wall near the door to the Nurse's office, where it has rotted the door frame and caused efflorescence of the brick.

Additional signs of water infiltration are shown in the smaller photo on the facing page. This is in one of the stair towers and appears to be caused by water penetrating the wallboard.

It is unclear if the cause of this water infiltration has been found. This is cause for concern on a number of fronts and should be addressed as quickly as possible.

The classrooms are generally in good overall condition. Materials and finishes are appropriate for the uses and the built-in cabinetry provides storage for materials and books.

The lighting is from the 2003 renovation and appears to be a combination up / downlighting fixture which will provide a uniform light throughout the room.

Furniture in the classrooms is dated and was not state of the art even when the building was renovated in 2003. Upgrading of is not necessarily a CIP consideration, but thought should be given to bringing in modern classroom furniture for students and teachers.





The gymnasium is of sufficient size for a middle school program. It is in good condition with a wood floor, folding divider, and pull-out bleacher seating.

The operation of folding partition could not be demonstrated at the time of our visit. However, staff confirmed that it does operate properly and they are familiar with the maintenance and operation required.

There is padding on the end walls and the wall across from the bleachers. This padding appears to be in good condition. This padding should be checked regularly to assure it is not torn or moved on its mountings.

Operation of the bleachers could not be demonstrated at the time of our visit. It is unclear if the bleachers have a space for wheelchair seating and a companion seat adjacent.

Lighting and ventilation within the gym appears to be adequate.

There are two large locker rooms to either side of the gym. These rooms are larger than typically seen in a middle school and are in very good condition. No ADA compliant lockers were seen in either locker room, however.

The library is large and is adjacent to two classrooms which are used as computer labs. The condition of the finishes and furniture within the library is good. The carpet shows very little wear. There are good sightlines from the circulation desk and the stacks are arranged to allow easy supervision of the space.



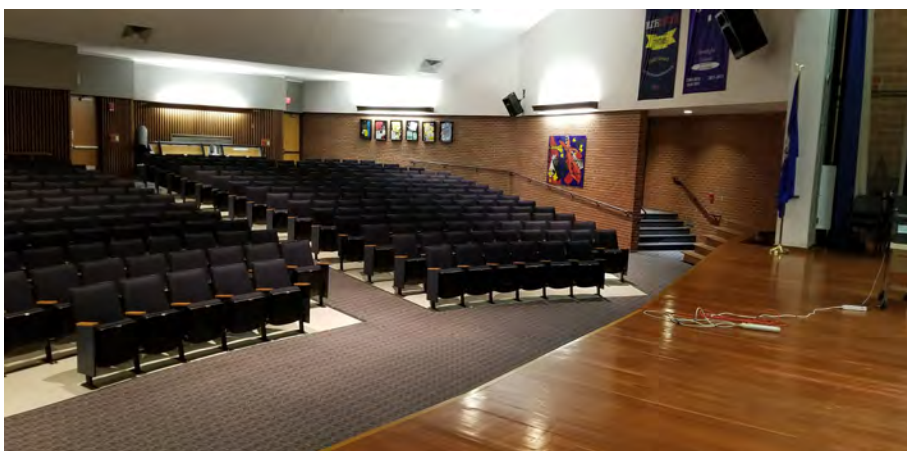


The auditorium is a very nice space and a positive attribute for the school. It is unusual to see a space with this level of finish and serviceability in a middle school.

Seating is in good condition with appropriate wheelchair locations throughout the seating area. The raked floor is properly sloped.

Though not a full fly, the stage area does have room for set changes, adequate space in the wings for staging, and room for off-stage movements.

The lighting is appropriate for the space and the sound system is reported to be very good as well.



A. PLUMBING NARRATIVE:

PLUMBING UTILITIES

1. Domestic Water: The domestic water service for the building is provided through two onsite wells which serve a large buried storage tank and vertical hydropneumatic tank located inside the building in the water room area. The incoming well water pipes are provided with a water meter and pressure reducing valve. The buried tank is assumed to be roughly 10,000 gallons and is only partially exposed in the space. The water from the storage tanks is sent throughout the building by a pair of base mounted booster pumps. The booster pumps are manufactured by Grundfos with an Armstrong control panel. The pump model are CR-15. The pumps appear to be in fair condition and operating correctly.

2. Sanitary: The School's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the School. The piping material above grade is primarily cast iron. It was indicated during the walk through that the school has its own septic system. No issues were observed.

PLUMBING FIXTURES AND SPECIALTIES

1. Existing plumbing fixtures are as follows:

- Water closets are wall mounted; with sensor operated flush valves, vitreous china.
- Urinals are wall mounted; with sensor operated flush valves, vitreous china.
- Lavatories in single and gang restrooms are wall mounted, vitreous china, with sensor operated faucets.
- Drinking fountains are stainless, multi- level, with no bottle fillers.



Photo # 1: Electric water heater with mixing valves.

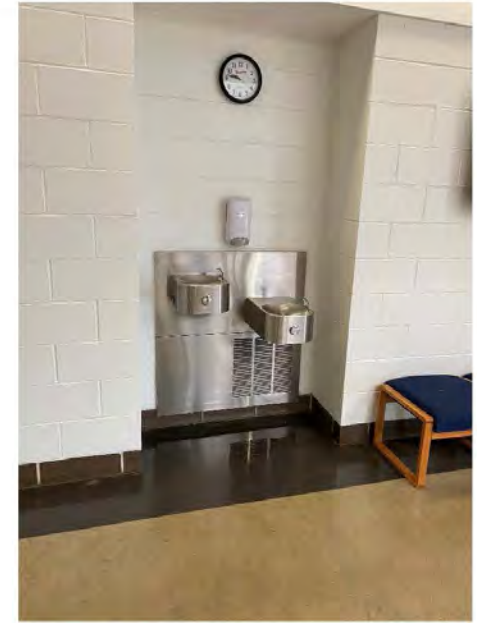


Photo # 2: Existing drinking fountain.



Photo # 3: Domestic hot water re-circulation pump.



Photo # 4: Existing boiler plant.



Photo # 5: Dual temp base mounted pumps.



Photo # 6: Expansion tanks for hydronic systems.



Photo # 7: Chilled water distribution piping.



Photo # 8: Water storage tank.

DOMESTIC HOT WATER SYSTEMS

1. Domestic hot water is provided by (8) electric water heaters scattered throughout the building. The water heaters range in size from 119 gallon storage models manufactured by Vanguard Commercial and Rheen/ Ruud to 82 gallon manufactured by Lochinvar. The water heaters all appear to be in fair to good condition and were observed to be operating correctly. There are dedicated hot water heaters for the mens and womens locker rooms, woodshop area, kitchen, and science room areas. Each water heater is provided with its own mixing valve and hot water re-circulation pump to ensure the fixtures are getting hot water in the required.

B. FIRE PROTECTION NARRATIVE:

1. The entire building is provided with a fire protection sprinkler system. The system utilizes a water storage tank to provide enough water for the fire pump duration run time. The fire pump is installed to ensure enough pressure is provided for the sprinkler and standpipe system. The fire pump is rated at 500 gpm @ 100 PSI and was installed by Encore Fire Protection. The fire pump is manufactured by Peerless pumps and is a centrifugal, horizontal split case type. The fire pump appears to be in fair to good condition and is up to date on the servicing. The fire protection system enters the room as a 6" pipe size before serving (3) 4" zone risers and fire department connection riser. The fire pump control panel and disconnect switch are located next to the risers and pump equipment.

C. MECHANICAL SYSTEMS NARRATIVE:

1. The building heating system is provided by (2) H.B. Smith cast iron, oil fired boilers. The boilers

are fed with No. 2 fuel oil from a 10,000 gallon buried tank located near the rear of the building. A duplex set of pumps in the mechanical room supply the oil from the tank to the boilers. The boiler model number is 28A-S/W-15 with a rating of 3330 MBH each. The boiler system appears to be operating correctly, however, the boilers are exceeding their useful life expectancy and should be replaced in the near future. Hot water is distributed throughout the building by a pair of base mounted pumps with wall mounted VFD drives. The pumps appear to be in fair condition, however they are approaching the end of their useful life. The pumps are used for both chilled and hot water distribution depending on if it is cooling or heating season.

2. Heating hot water is distributed around the building to serve unit ventilators, cabinet unit heaters and hot water coils in air handling units.

3. Ventilation, cooling and heating is provided through a mix of unit ventilators, roof mounted air handling units and indoor air handling units. There are (6) indoor air handling units with hot and chilled water coils that serve the conference rooms/ corridors, band room, Industrial Arts room, auditorium, and (2) units that serve the gymnasium. There are (4) units on the roof with hot and chilled water coils that serve the additional gym and locker room areas. Two additional units on the roof are packaged units with their own DX cooling compressors and coil and hot water coils. Classrooms are provided with unit ventilators that are either chilled water/ hot water or DX cooling/ hot water. A glycol system was added in roughly 6 years ago to help with freeze protection of the hot water system.



Photo # 9: Buried water storage tank.



Photo # 10: Domestic water booster pump system.



Photo # 11: Fire pump and sprinkler riser assembly.



Photo # 12: Existing air cooled chillers.

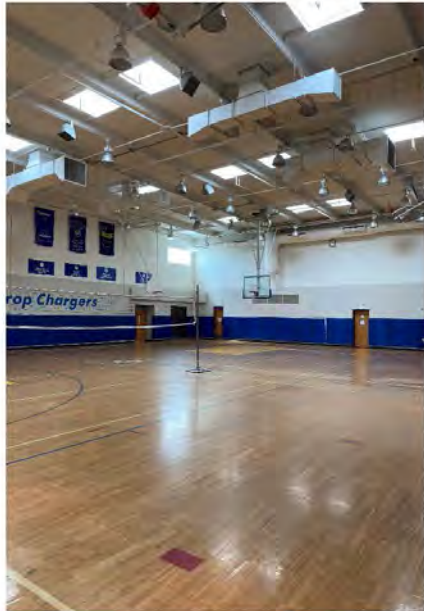


Photo # 13: Ductwork distribution in gym.



Photo # 14: Existing electric domestic water heaters.



Photo # 15: Semi recessed cabinet unit heater.



Photo # 16: Additional electric water heater in storage room.

The air handling units/ roof top units and unit ventilators vary in age, however, the units are operating past their useful life and should be upgraded/ replaced in the near future. Chilled water is provided to the air handling units, rooftop units and unit ventilators via (2) 130 ton air cooled chillers, located on grade next to the building. The chillers are manufactured by York and are model YCAS0138EB46YFA. The chillers appear to be operating correctly, however, as the rest of the air handling equipment, the chillers are exceeding their useful life and should be replaced in the near future.

4. Restroom groups are served by dedicated roof mounted exhaust fans. The fans appeared to be operating correctly, however, they appear to be getting near the end of their useful life.

5. Temperature Controls were recently updated last summer by ESC to a full BMS system.

D. ELECTRICAL SYSTEMS NARRATIVE:

1. Electric Utility Service – Power to the site comes from CL&P pole #1351, located on the northeast side of the circular drive that runs in front of the Middle School. The utility primary runs underground from this pole to a utility company owned 480Y/277volt, 3-phase, 4-wire pad mounted transformer located a few yards from the utility pole. Secondary feeders run underground from the pad mount and enter the building in the basement main electric room where the main service switchboard is located.

2. Electric Service Switchboard - The service entrance switchboard is located in the main electrical room and consists of a 480Y/277volt, 3-phase, 4-wire main switch, CT and distribution section, manufactured by Square D and rated for 2000 amperes. The metering cubicle is

arranged cold sequence with the meter mounted on the exterior of the building. The main switch section feeds a 2000A, 480Y/277V, and 3-phase, 4-wire distribution section, which contains branch circuit breakers that feed various panels and equipment at 480V located throughout the building. 480V primary/208Y/120V secondary distribution transformers feed 208/120V branch panelboards. All equipment was installed as part of additions and renovations that were done in 2005. It is in excellent condition and should serve the school for another 15-20 years.

3. Electric Panelboards—All panelboards observed are by Square D and were installed during the 2005 additions and renovations. 480/277V panels serve mechanical equipment and lighting loads throughout the school. 208/120V panels serve receptacles, small motors and various other loads. All this equipment should provide another 15-20 years of service before replacement.

4. Branch circuit wiring is in EMT/armored cable, where observed. All wiring systems installed as part of the 2005 additions and renovations appears in good to excellent condition. Wiring that exists within the older 69'-70' portions of the building should be examined for integrity. Typically, if left untouched, this older wiring can provide adequate service for many years. If modified, however, wiring insulation can become a safety concern. If future renovations are made in parts of the building where older wiring systems still exist, we recommend this wiring be replaced along with any older generation panelboards that may still be in service.



Photo # 17: AC split unit with condensate pump.



Photo # 18: Existing air handling unit.



Photo # 19: Gas fired heat pumps- installed in 2017.



Photo # 20: Typical roof mounted exhaust fans.



Photo # 21: Honeywell thermostat.



Photo # 22: Kitchen exhaust fan

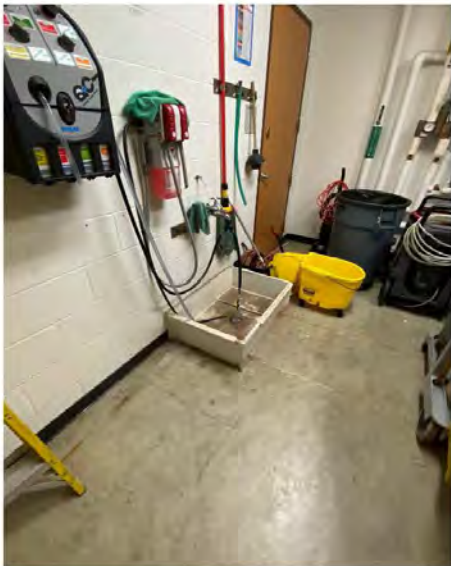


Photo # 23: Existing mop sink.



Photo # 24: Roof drain.

5. Emergency and Optional Standby Power – Emergency and Stand-by power to the building is provided by a 400kW/500kVA, 480/277V, 3-phase, 4-wire diesel-fired standby generator with sub-base fuel tank, manufactured by Caterpillar. A 600A generator mounted circuit breaker is fed from a 600A MCB, 480/277V Emergency Distribution Panel “EDP”. Panel “EDP” contains a 150A circuit breaker and a 500A circuit breaker, which feed the Life Safety and Optional Standby transfer switches, respectively. Life Safety transfer switch “ATS-LS” is wired to a 150A MCB, 480/277V Life Safety distribution panel, which feeds branch panels throughout the building for emergency lighting. The Optional Standby transfer switch, marked “600AMP ATS”, is wired to a 500A MCB, 480/277V 2-section distribution panel “ESB-1”. “ESB-1 (SECT. 1)” feeds “CP” branch panels, AHU’s, and various other pieces of mechanical equipment. “ESB-1 (SECT. 2) feeds RTU’s, well pumps, kitchen panel “KP-1” and transformer for panel “EOP”. “EOP” is a 100A, 208/120V panel that feeds various 120V and 208V mechanical equipment loads.

6. Photovoltaic System – The PV system is of the grid-connected type and does not include battery/back-up storage or secondary electrical generation devices. The system utilizes solar arrays, installed on the various roof structures and produces AC power at 480V into local services via inverters mounted on the roof. The system disconnect and meters and are located at the ground level exterior, close to the utility meter. This system appears to be functioning properly with no issues reported.

7. Interior lighting throughout the facility is a mix of LED and fluorescent technologies. Corridors are lit with either 2x2 lay-in fixtures with parabolic diffusers, or perimeter mounted linear fluorescents retrofitted with LED lamps. LED downlights are used to light vestibules. All areas are controlled by key switches and ceiling occupancy sensors. Office lighting consists primarily of 2'x2' fluorescent direct/indirect fixtures with wall switches and occupancy sensors for control. Most classrooms use fluorescent direct/indirect pendant mounted light fixtures, controlled with wall switches and ceiling occupancy sensors. No daylighting controls were observed. Suggest replacing the remaining fluorescent troffers with new LED direct/indirect lay-in fixtures and the fluorescent pendants in classrooms with direct/indirect LED pendants for improved light quality. Low voltage wall dimmer switches along with ceiling mounted occupancy/vacancy sensors and daylighting control is recommended in all classrooms and offices to improve efficiency and meet current energy code standards.



Photo # 25: - Utility Service Pole #1351



Photo # 26: - Utility Service Pole Primary and Telecommunications with Utility Transformer



Photo # 27: - Utility Pad Mounted Transformer

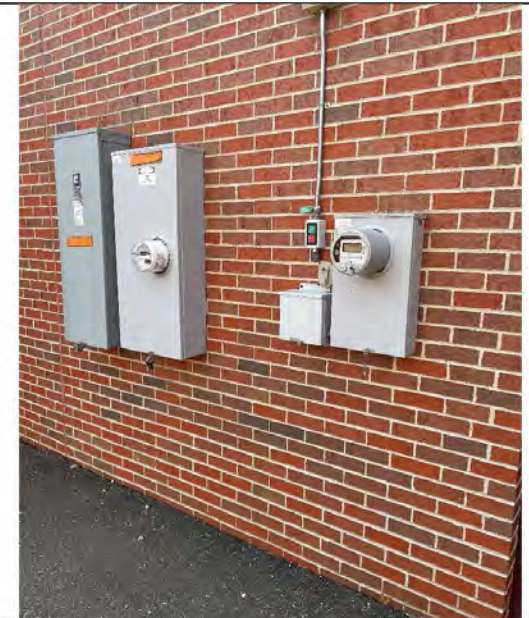


Photo # 28: - Utility Meter alongside Fire Pump Meter and Disconnect



Photo # 29: - Service Entrance Switchboard in Main Electric Room



Photo # 30: - Typical "CP" for Mechanical Equipment



Photo # 31: - Typical Electrical Closet Panels and Distribution Transformer



Photo # 32: - Typical Branch Panelboards – Square D (2005)

8. Lighting fixtures in the gymnasium are high-bay type with LED lamps controlled by key-operated toggle switches. Light levels appeared to meet the requirements of the space. None of the gymnasium light fixtures are equipped with wire guards and some have been damaged as a result. This is an ongoing safety issue and needs to be resolved.

9. General lighting systems and control in the auditorium appear to meet the requirements of the space. The theatrical lighting dimming system is by Sensor. Theatrical lighting was not tested.

10. Pole and building mounted fixtures, controlled by timeclock and photocells light the walkways, exits and parking areas around the building. The fixtures are new LED replacements of older metal halide, high-pressure sodium or compact fluorescent technologies. Exterior/site lighting throughout the grounds appeared in good working condition.

11. Exit signs are LED and wired to the emergency system for constant illumination. Exit signage in all areas of the building appears in compliance with current codes. All signage appears to be in good condition.

12. Fire Alarm System – The building is equipped with an Edwards EST3 addressable fire alarm system control panel with voice evacuation. The fire alarm control panel is located in the maintenance work room and contains a microphone handset to allow annunciation over the building’s speaker/horn-strobe devices. Remote annunciator panels with voice evac were observed in the main entrance vestibule and administration offices. There are also a voice evacuation panels with microphones in the gymnasium and auditorium. Fire alarm speaker/strobe coverage throughout the building appears sufficient. Locations of manual pull stations are compliant. All fire alarm devices appeared to be mounted at the correct ADA height. Monitor and control modules for duct smoke detectors were not observed.



Photo # 33: - Emergency Distribution Panel “EDP”



Photo # 34: - Automatic Transfer Switch – 150A “ATS-LS” (Life Safety)

13. The building has a sprinkler system. Smoke detectors were observed in storage areas and electrical rooms, heat detectors in mechanical rooms, tamper and flow alarm switches on standpipes. All system devices appear operational and in compliance.



Photo # 35: - Automatic Transfer Switch – 600A (Optional Standby)



Photo # 36: - Standby ATS with Distribution Panel “ESB-1” and Transformer for Panel “EOP”

14. Fire Pump – A 60HP fire pump with ATS and controller is located in the sprinkler service room. Normal side of the ATS is connected to the utility transformer secondary through a 500A fused disconnect switch. Emergency power comes from the generator via a 200A circuit breaker. The meter for this system is located on the exterior, alongside the building utility meter.



Photo # 37: - 400kW/500kVA Diesel Powered Generator with Sub-Base Fuel Tank



Photo # 38: - Solar Panels on Roof



Photo # 39: - Solar Panels on Roof



Photo # 40: - Typical Photovoltaic System Inverters on Roof

E. TECHNOLOGY SYSTEMS NARRATIVE:

1. Telecommunications services, including fiber, originate at CL&P pole #1351, located along the circular drive in front of the building. Cabling runs underground from this pole and enters the building in the main electric room, where the main telecommunications backboard is located. From this location, service cabling runs to systems racks in the Main Distribution Frame (MDF). This system serves as the main telecommunications hub for the entire school district.

2. The data communications system consists of a fiber backbone and a combination of wired outlets and wireless access points located throughout the facility. Typical classrooms contain a hardwired data drop approximate to the teacher's desk and convenience drops that vary in quantity depending on room type. Wireless Access Point devices are distributed throughout the facility – one per classroom or office suite and throughout corridors and common areas. All equipment and cabling observed appeared in good condition.

3. General telephone utilization throughout the building is VoIP provided by Valcom. This is tied in to the building paging/public address system with ceiling and wall mounted speakers located throughout the facility. Combination analogue clock/paging speakers are installed in classrooms. All systems appeared operational with no reported issues.

4. TV - The building appears to contain elements of TV infrastructure at the MDF rack. These could not be confirmed as Video IPTV streaming provisions for the building.

5. Access Control and Surveillance - The building uses an access control system consisting of card readers located at the main points of entry. Headend equipment is by KerriSystems. Surveillance cameras are located at various points around the exterior and interior of the building. The video system is networked with a dedicated HD display located in the Administration area. All systems appear to be operating properly, with no reported issues. No intrusion detection was observed.

F. MEP SYSTEMS CONCLUSION:

Plumbing systems appear to be in fair condition. Equipment such as the booster pumps and water heaters and nearing the end of their useful life and should be replaced in the near future. A majority of the distribution piping and sanitary piping is original to the building and should be replaced if a major renovation takes place.

In a building this age, we have seen many underground cast iron sanitary/storm pipes start to corrode and fail. If a renovation is contemplated, we would recommend replacement of the underground piping systems.

The fire protection system appears to be in fair condition given the age of the system. Overtime, piping can start to corrode due to water chemistry and air being trapped in the system if it is not properly pitched to drains, etc. It would be recommended that if the building was renovated, the entire fire protection service assembly (including the main service into the building) be replaced with new.

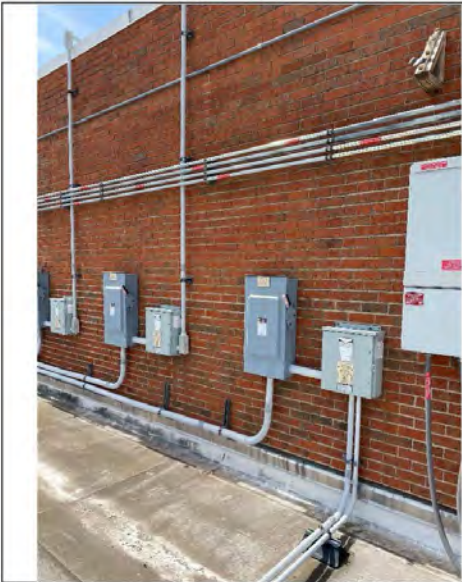


Photo # 41: - Photovoltaic System Disconnects on Roof

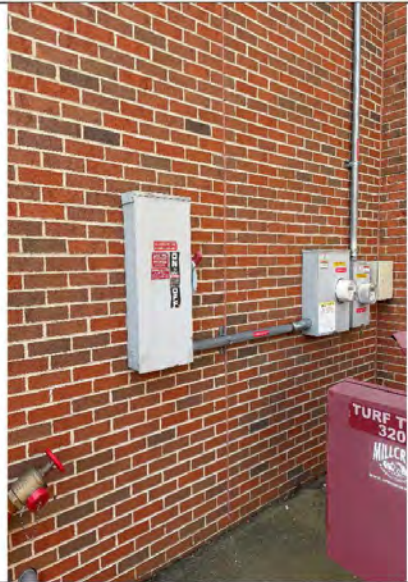


Photo # 42: - Photovoltaic System Main Disconnect and Meters

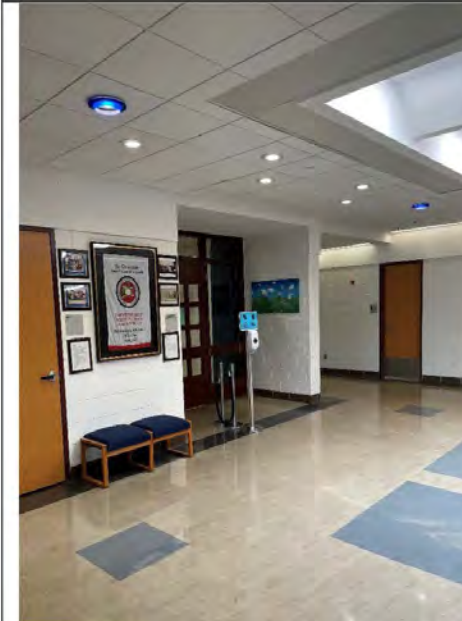


Photo # 43: - Typical Interior Vestibule Lighting



Photo # 44: - Typical Corridor Lighting

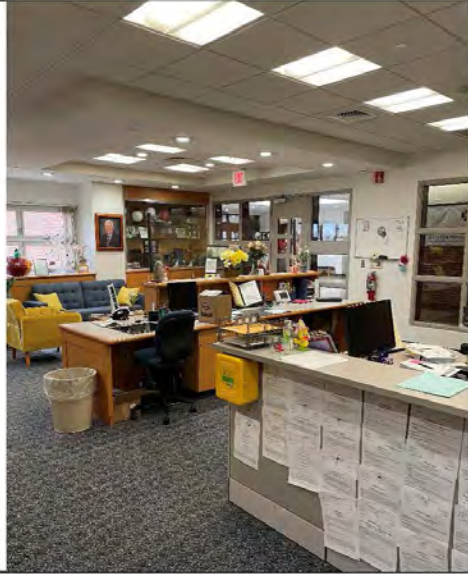


Photo # 45: - Administration Office Lighting



Photo # 46: - Typical Classroom Lighting

The boiler plant, chiller plant air handling units and unit ventilators, while all still operating as designed, these units are past their life expectancy (20-25 years) and should be replaced in the near future before a system issue causes damage or makes the building inoperable. New dedicated outdoor air units could be provided for ventilation air throughout the space while chilled and hot water could serve terminal units in classrooms for better comfort control. Any new equipment upgraded should be added to the existing building management system for monitoring of equipment.

The Main Electric Service Switchboard and distribution system were installed as part of additions and renovations that were made 2005. This equipment is in excellent condition with no reported issues and should remain in service for another 15-20 years. Branch panelboards and feeders appeared in good condition with no issues reported.



Photo # 47: - Gymnasium High Bay Lights



Photo # 48 – Auditorium

Some lighting systems in the corridors have been retrofitted with newer technology, more energy efficient LED lamps. Emergency lighting and exit signage for egress appeared to be operating properly. It is suggested that lights in the classrooms be replaced with new LED equipped fixtures and low voltage controls, for improved light quality and higher efficiency. Any remaining fluorescent fixtures in the corridors should be either retrofitted with new LED lamps, or replaced entirely with new LED designed fixtures and drivers.

The fire alarm system and ancillary devices are part of more recent improvements. All this equipment is new and in excellent operating condition. Modifications and programming enhancements can be made to this system as required, but no immediate improvements are necessary.

The data network infrastructure was upgraded recently. The VoIP phone system offers the highest level of technological advancement to date. These systems are in good condition and do not require immediate improvement, but we were informed the VoIP system will be upgraded in the near future. The wireless access point distribution appears to be adequate based on conventional industry standard spacing. No improvements are required at present.

The existing access control system is recent with no major issues reported. It is recommended that a review of desired access controlled doors and end-user operations be conducted. A full assessment by a qualified technician is recommended to verify that all devices are connected and tested for proper operation.

The existing video surveillance system is in good working condition. As an improvement, it is recommended that additional high definition cameras be added inside the school. As higher resolution cameras become available, an assessment of existing network video recorder capacity should be conducted to determine future expansion capabilities.

The paging system and speakers currently function with no issues. No improvements are required at present.

No existing panic button or silent alarm system was observed in the building. If none is present, it is recommended that the installation and implementation of such a system be considered.



Photo # 49: - Typical Exterior Egress Light Fixture

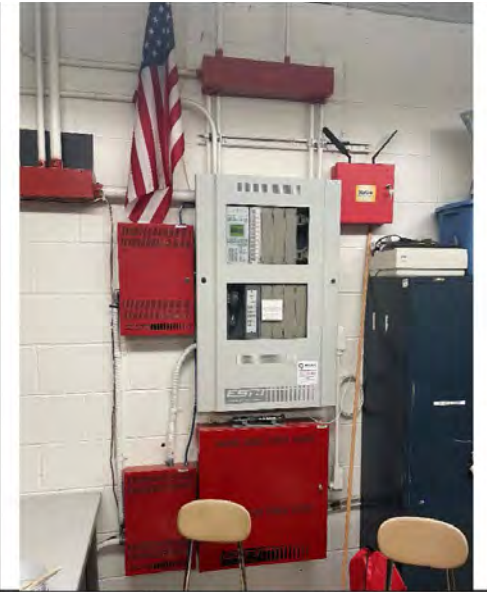


Photo # 50: - Fire Alarm System Control Panel



Photo # 51: - Fire Alarm Remote Annunciator Panel in Main Entrance Vestibule



Photo # 52: - Fire Alarm Voice Evac Panel in Auditorium



Photo # 57: - Audio System Rack



Photo # 58: - Access Control System Headend Equipment

Summation:

The building overall is in good condition. The condition of the finishes and overall quality of the building reflects the attention and care that staff expend on the tasks of maintaining a proper educational environment.

The site has some areas of concern relative to physical condition of the asphalt curbing. ADA compliance is a concern in regards to playfields. The playgrounds are in need of some attention as well.

The building exterior is showing signs of deterioration and aging of several components. Most notable of these are the aging sealant at building joints and the amount of effluorescence and brick deterioration exhibit in many locations.

The roofs are of uniform age and type. The section to the north of the auditorium raises some concern as it appears to be allowing water to ingress and leak into the hallway outside of the nurse's office.

Some doors need to be painted, and the missing trim at the two southern vestibules should be addressed.

The building interior also shows minimal signs of use and is in overall good condition. There are no areas of particular concern within the building. Continued attention to rectifying problems as they arrive and maintaining a preventive maintenance program will provide positive return on investments.

Finishes throughout the interior are generally in good condition and the building provides a good learning environment.

Projected Capital Improvement Expenditures

Projections of expenditures for capital improvements are provided to serve as a guide to help the District plan for fiscal and logistical needs for the next 20 years. As such, there is not a detailed budget developed for any of the items listed.

The projected costs are based upon current market pricing from projects of similar scope and complexity. The costs include allowances for what are commonly referred to as 'Owner's soft costs' such as professional designer fees, construction management, hazardous materials testing, etc.

It is recommended that best-practices in preparing the CIP budget would be to provide funding for, and undertake investigations and design in advance of appropriations for the actual construction; IE appropriate monies for design in FY2024 for work that would be funded and undertaken in FY2025.

This approach allows sufficient time for investigation of existing conditions and proper design, documentation, and budget estimating so that the funding request for the construction is based upon completed documents.

Finally, the costs for near-term (2025), mid-term (2030), long-term (2035), and future (2040) are inclusive of cost escalation factors. This is done to provide as realistic a projection as might be possible for work that might be undertaken years in the future.

The demarcation of particular fiscal years is intended not as a hard target for the work described, but as a milestone date by which the planning and funding discussions should be fully addressed. The immediate (2023) expenditures projected for the Essex Elementary School are to address safety concerns on the playgrounds and ADA compliance matters

For FY 2025 it is recommended that some of the plumbing and electrical issues, as well as the lack of an intrusion system and stand-by generator be addressed.

The following pages show the projected needs and costs for FYs 2030, 2035, and 2040.

The final page of this section has a bar chart showing total projected, escalated costs for each milestone Fiscal Year.

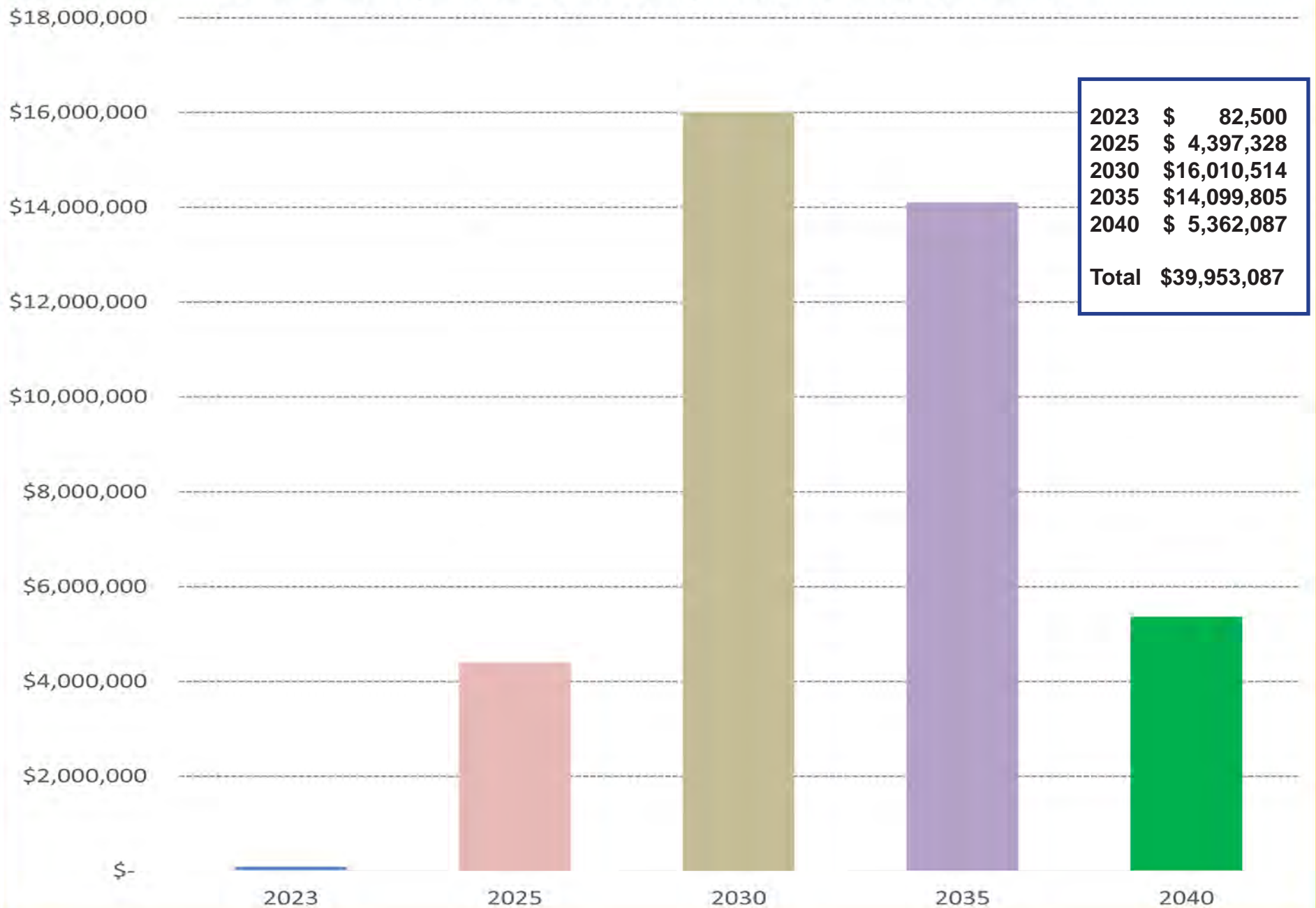
Capital Needs Survey Form									
John Winthrop Middle School							Site	66.05	Acres
October 20, 2022							Building:	129,600	Square Feet
SYSTEM	System Priority 1 to 4 (1-High, 2-Medium, 3-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS
2023									
Site - Access and ADA compliance	1	1	2005	2023	1	allow	\$ 75,000.00	\$ 75,000	
2025									
Roofing - investigation and design	1	2	2005	2025	129600	sq.ft.	\$ 0.50	\$ 64,800	
Roofing - replacement	1	2	2005	2025	129600	sq.ft.	\$ 20.00	\$ 2,592,000	
Flashing - replacement	1	2	2005	2025	129600	sq.ft.	\$ 8.00	\$ 1,036,800	
Water Infiltration Conditions - replacement	1	3	2005	2025	129600	sq.ft.	\$ 0.50	\$ 64,800	

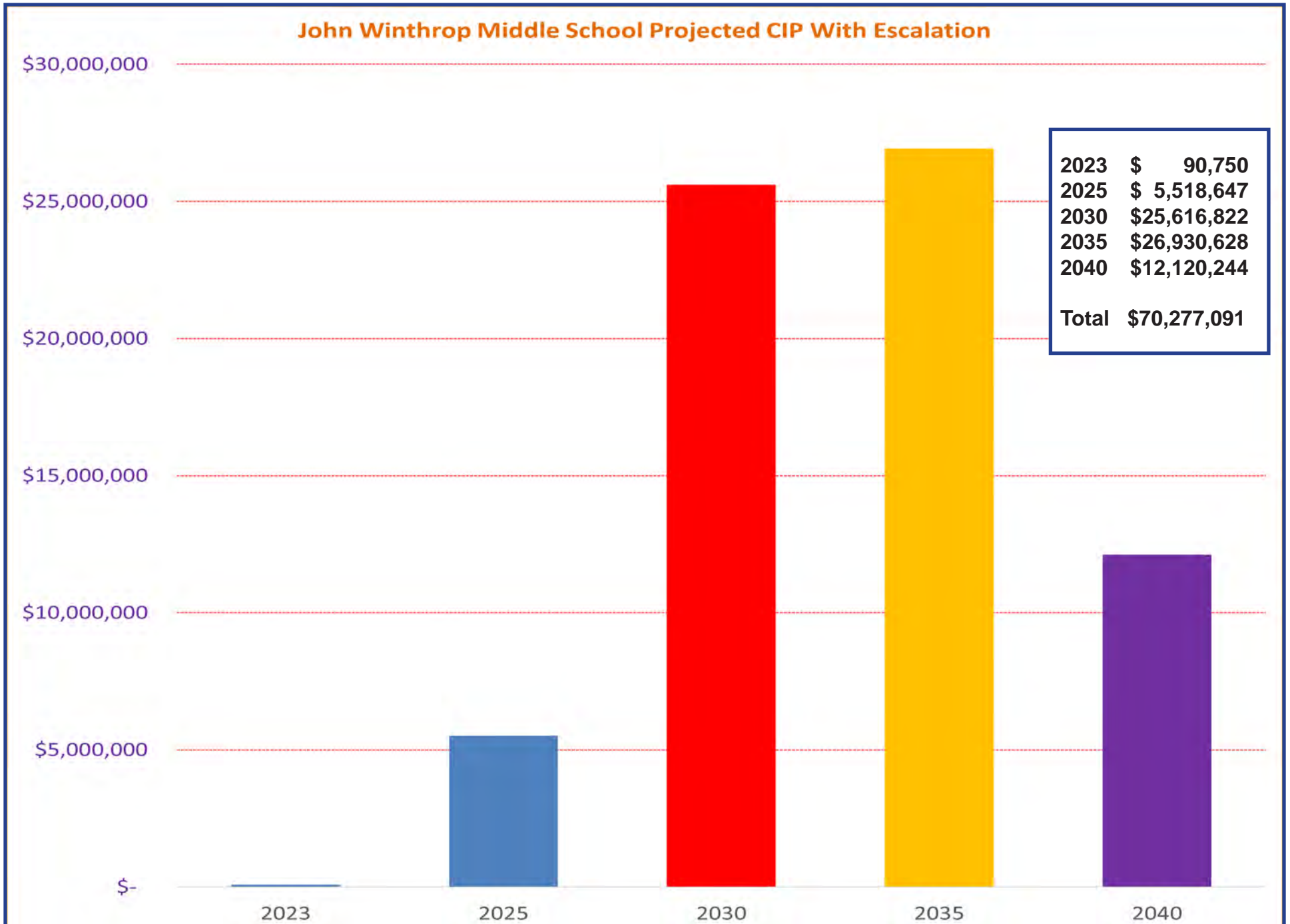
Capital Needs Survey Form									
John Winthrop Middle School							Site	66.05	Acres
October 20, 2022							Building:	129,600	Square Feet
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS
2030									
Site - Lighting									
Building Mounted Fixtures	1	3	2005	2030	20	each	\$ 3,500	\$ 70,000	
Pole Mounted Fixtures	1	3	2005	2030	12	each	\$ 3,500	\$ 42,000	
Site - Fuel Tanks	1	3	2005	2030	1	each	\$ 35,000	\$ 35,000	
Site - Sidewalks	1	3	2005	2030	1,200	sq.ft	\$ 15	\$ 18,000	
Masonry Walls - Exterior	1	2	1970	2030	120,000	sq.ft	\$ 6	\$ 720,000	
Pipe and Tube Railings	1	3	2005	2030	350	ln.ft	\$ 25	\$ 8,750	
Exterior Canopies	2	3	2005	2030	125	sq.ft.	\$ 300.00	\$ 37,500	
Stairs, and Stair Railings	1	3	2005	2030	350	ln.ft	\$ 25	\$ 8,750	
Windows	1	2	1970	2030	15000	sq.ft.	\$ 75.00	\$ 1,125,000	
Visual Display Surfaces - tack boards	3	3	2005	2030	75	each	\$ 400.00	\$ 30,000	
Visual Display Surfaces - white boards	3	3	2005	2030	75	each	\$ 400.00	\$ 30,000	
Toilet Compartments / Accessories	2	3	2005	2030	6	rooms	\$ 35,000	\$ 210,000	
Blinds / Shades	3	3	2005	2030	90	each	\$ 2,000	\$ 180,000	
Fire Protection Water Main	1	3	1970	2030	150	l.f.	\$ 100	\$ 15,000	
FP Backflow Device	1	3	1970	2030	1	each	\$ 25,000	\$ 25,000	
FP Water Distribution System	1	3	1970	2030	129,600	sq.ft.	\$ 12	\$ 1,555,200	
Domestic Water Main	1	2	1970	2030	1	each	\$ 30,000	\$ 30,000	
Domestic Water Distribution System	1	2	1970	2030	129,600	sq.ft.	\$ 11	\$ 1,425,600	
Plumbing Drainage System	1	2	1970	2030	129,600	sq.ft.	\$ 7	\$ 907,200	
Plumbing Fixtures / Equipment	1	2	1970	2030	129600	each	\$ 12	\$ 1,555,200	
Water Heater	1	2	1970	2030	8	each	\$ 20,000	\$ 160,000	
Oil fired furnace	1	2	1970	2030	2	each	\$ 375,000	\$ 750,000	
Exhaust Systems	3	2	1970	2030	6	each	\$ 35,000	\$ 210,000	
Control Systems	3	2	1970	2030	129,600	sq. ft.	\$ 8	\$ 1,036,800	
Heating/ Ventilation	1	2	1970	2030	129,600	sq. ft.	\$ 27	\$ 3,499,200	

Capital Needs Survey Form									
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2035									
Site - Electrical	1	4	2005	2035	1	allow	\$ 100,000	\$ 100,000	
Site - Paving	1	3	2005	2035	54,000	sq.ft	\$ 6.00	\$ 324,000	
Site - Fencing	2	4	2005	2035	1000	ln.ft.	\$ 25.00	\$ 25,000	
Site - sub-surface drainage	1	3	2005	2035	1000	ln.ft.	\$ 35.00	\$ 35,000	
Exterior Platforms, Stair, and Areaways	1	3	1970	2035	1500	sq. ft.	\$ 20.00	\$ 30,000	
Concrete Floor	1	3	1970	2035	75000	sq.ft	\$ 3.00	\$ 225,000	
Masonry Walls - Interior	1	2	1970	2035	80000	sq.ft	\$ 3.00	\$ 240,000	
Finish Woodwork	2	3	2005	2035	2500	sq.ft	\$ 45.00	\$ 112,500	
Doors - Exterior	1	3	2005	2035	44	each	\$ 2,000.00	\$ 88,000	
Doors - Interior	1	3	2005	2035	135	each	\$ 2,000.00	\$ 270,000	
Doors - Finish Hardware	1	3	2005	2035	179	each	\$ 2,000.00	\$ 358,000	
Carpet	2	3	2005	2035	1,100	sq.yd.	\$ 45.00	\$ 49,500	
VCT	2	4	2005	2035	117000	sq.ft.	\$ 7	\$ 819,000	
Ceramic tile	2	4	2005	2035	3,500	sq.ft.	\$45.00	\$ 157,500	
Other finishes	2	4	2005	2035	7000	sq.ft.	\$45.00	\$ 315,000	
Paint	2	3	2005	2035	800,000	sq.ft.	\$0.50	\$ 400,000	
Other finishes	2	3	2005	2035	2,500	sq.ft.	\$4.00	\$ 10,000	
Acoustical	2	3	2005	2035	119,000	sq.ft.	\$5.00	\$ 595,000	
GWB	2	3	2005	2035	10,600	sq.ft.	\$4.00	\$ 42,400	
Carpet	2	3	2005	2035	1,100	sq.yd.	\$45.00	\$ 49,500	
VCT	2	4	2005	2035	117,000	sq.ft.	\$7.00	\$ 819,000	
Ceramic tile	2	4	2005	2035	3,500	sq.ft.	\$45.00	\$ 157,500	
Other finishes	2	4	2005	2035	7,000	sq.ft.	\$45.00	\$ 315,000	
Paint	2	3	2005	2035	800,000	sq.ft.	\$0.50	\$ 400,000	
Other finishes	2	3	2005	2035	2,500	sq.ft.	\$4.00	\$ 10,000	
Acoustical	2	3	2005	2035	119,000	sq.ft.	\$5.00	\$ 595,000	
GWB	2	3	2005	2035	10600	sq.ft.	\$ 4	\$ 42,400	
Food Service Equipment	2	5	2005	2035	1	room	\$ 550,000	\$ 550,000	
Casework	2	3	2005	2035	22	room	\$ 15,000.00	\$ 330,000	
Casework - Science Labs	2	3	2005	2035	4	room	\$ 25,000.00	\$ 100,000	
Casework - Library	2	3	2005	2035	1	room	\$ 65,000	\$ 65,000	
Security Systems	1	3	2005	2035	129,600	sq.ft.	\$5.00	\$ 648,000	
Fire Alarm Systems	1	3	2005	2035	129,600	sq.ft.	\$1.00	\$ 129,600	
Sprinkler Systems	1	3	2005	2035	129,600	sq.ft.	\$ 15.00	\$ 1,944,000	
Lightning Protection	1	3	2005	2035	129600	sq.ft.	\$ 5.00	\$ 648,000	
Clock Systems	1	3	2005	2035	129,600	sq.ft.	\$ 8.00	\$ 1,036,800	
Elevators	1	3	1970	2035	1	each	\$225,000.00	\$ 225,000	

Capital Needs Survey Form										
John Winthrop Middle School								Site	66.05	Acres
October 20, 2022								Building:	129,600	Square Feet
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2040										
Concrete Foundation Walls	1	4	1970	2040	75000	sq.ft	\$ 1	\$ 75,000		
Electrical Service	1	4	2005	2040	1	each	\$ 15,000	\$ 15,000		
Standby Generator / ATS System	1	3	2005	2040	1	Each	\$ 55,000	\$ 55,000		
Electrical Distribution	3	4	2005	2040	129,600	allow	\$4.50	\$ 583,200		
Lighting - General	2	3	2005	2040	129,600	sq.ft.	\$10.00	\$ 1,296,000		
Emergency Lighting	1	3	2005	2040	129600	sq.ft.	\$ 2	\$ 259,200		
Communication Systems	1	1	2005	2040	129600	sq.ft.	\$ 4	\$ 453,600		
Technology Systems	2	3	2005	2040	129600	sq.ft.	\$ 4	\$ 453,600		
Fire Alarm System	1	4	2005	2040	129600	sq.ft.	\$ 4	\$ 518,400		
Security System - Intrusion	1	2	2005	2040	129600	sq.ft.	\$ 3	\$ 388,800		
Electronic Access Control System	1	4	2005	2040	129600	sq.ft.	\$ 3	\$ 388,800		
Security System - Surveillance	1	4	2005	2040	129600	sq.ft.	\$ 3	\$ 388,800		

John Winthrop Middle School - Projected CIP Without Escalation





APPROPRIATENESS FOR USE

The John Winthrop Middle School comprises approximately 91,400 square feet of net area and 129,600 square feet gross, yielding a 1.24 gross to net ratio. The State of Connecticut Office of School Construction Grants & Review (OSCG&R) allocates a net to gross ratio of 1.11. The inefficiency of the Winthrop MS is attributable primarily to the single loaded corridors throughout the lower level.

Following the OSCG&R guidelines, this size building would accommodate around 895 students.

The facility provides spaces and learning opportunities that are atypical of current middle schools. These include the auditorium, science labs, and large project space on the lower level.

Most of the teaching spaces in the building approach or exceed the OSCG&R guidelines as to size or amenities. Spaces designed for contemporary approaches to the lesson plans for those students with individual educational plans or special education needs are lacking.

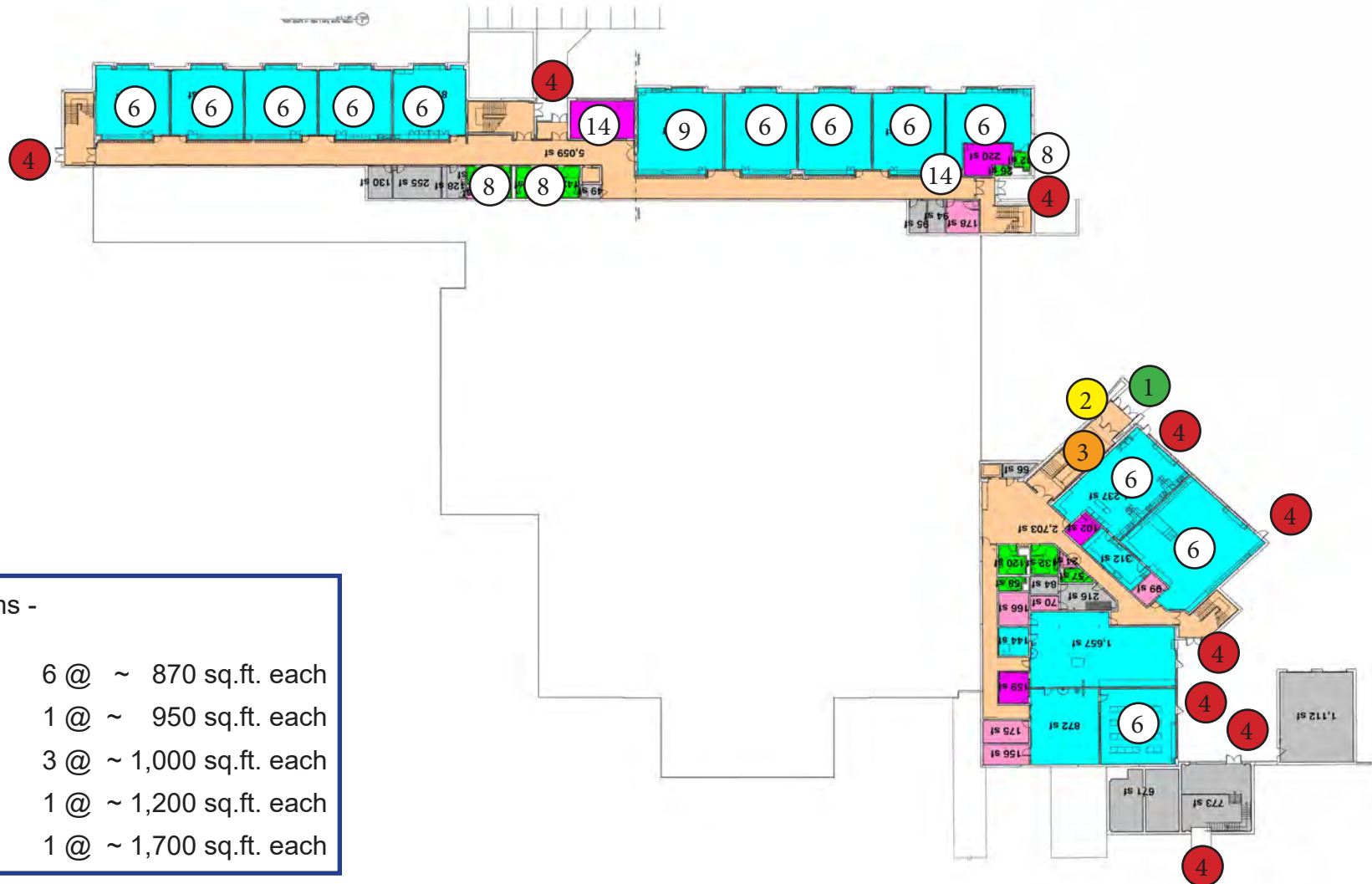
From an educational planning perspective, the building is a very good middle school plan and layout. It comprises educational spaces that most middle schools do not have at these sizes or levels of sophistication.



- ① Main Entry
- ② Secure Vestibule
- ③ Student Entry
- ④ Secondary Egress
- ⑥ Classrooms
- ⑧ Restrooms Teacher's
- ⑨ Art Classroom
- ⑭ Meeting Room / Office

John Winthrop Middle School

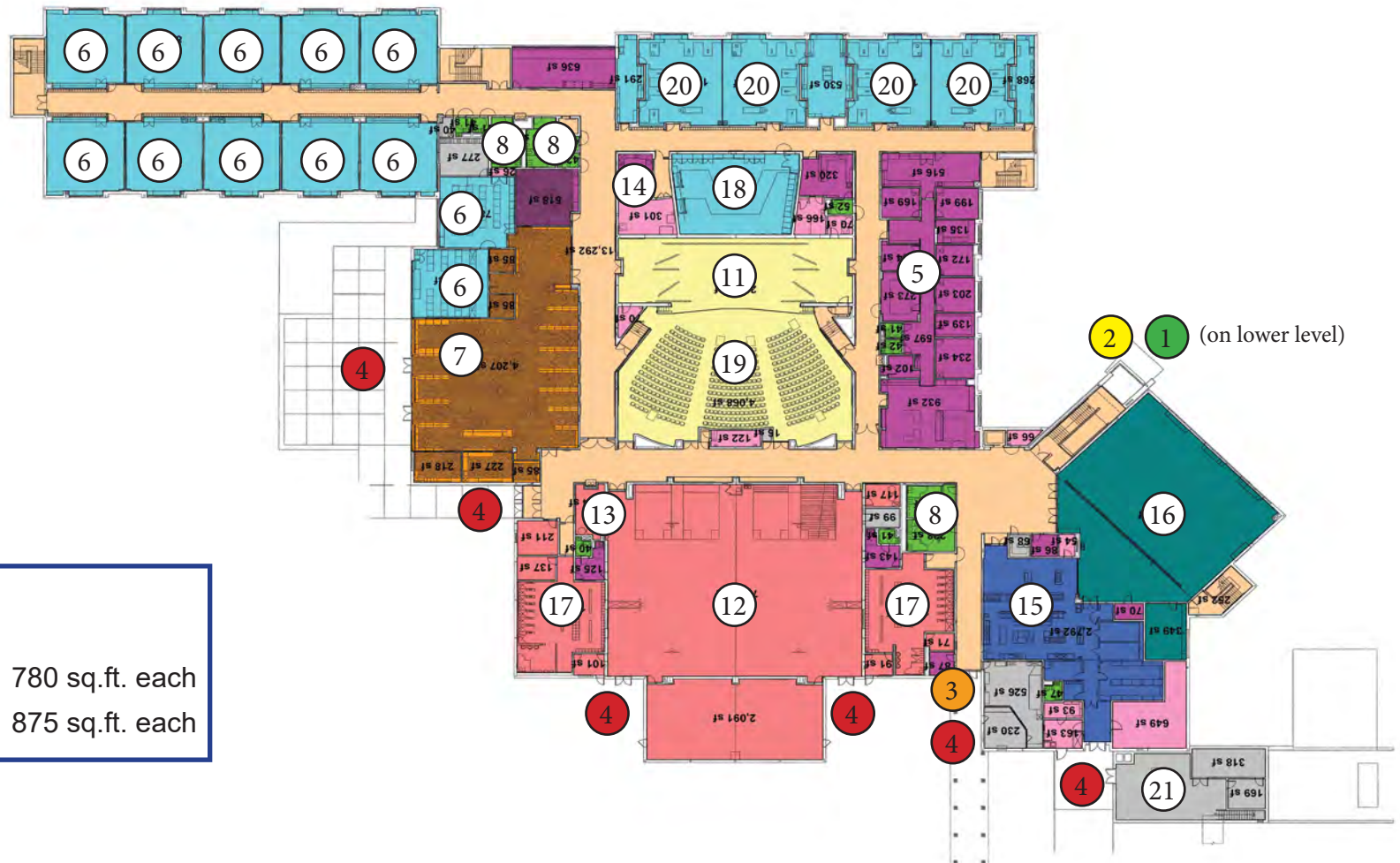
Lower Level



- | | | |
|--------------------|-------------------------|----------------|
| ① Main Entry | ⑩ Teacher's Breakroom | ⑰ Locker Rooms |
| ② Secure Vestibule | ⑪ Stage | ⑱ Music Room |
| ③ Student Entry | ⑫ Gym | ⑲ Auditorium |
| ④ Secondary Egress | ⑬ Gym Storage | ⑳ Science Lab |
| ⑤ Main Office | ⑭ Meeting Room / Office | ㉑ Mechanical |
| ⑥ Classrooms | ⑮ Kitchen | ㉒ Kitchen |
| ⑦ Library | ⑯ Cafeteria | ㉓ Cafeteria |
| ⑧ Restrooms | | |

John Winthrop Middle School

Upper Level



12 Classrooms -

2 @ ~ 780 sq.ft. each
10 @ ~ 875 sq.ft. each

Projected Enrollment

School District: RSD #4, CT

11/22/2021

Enrollment Projections By Grade*																				
Birth Year	Births*		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2016	98		2021-22	29	101	80	102	94	97	105	107	126	123	111	140	132	182	0	1500	1529
2017	82		2022-23	34	90	105	80	103	95	99	107	109	131	115	112	142	136	0	1424	1458
2018	82		2023-24	36	90	92	106	80	104	97	100	109	112	123	116	114	146	0	1389	1425
2019	80		2024-25	38	89	93	92	106	81	106	98	102	113	105	124	118	118	0	1345	1383
2020	90	(prov.)	2025-26	40	99	93	93	92	107	83	107	100	107	107	106	126	121	0	1341	1381
2021	86	(est.)	2026-27	42	95	103	94	95	93	109	84	109	104	101	108	108	130	0	1333	1375
2022	84	(est.)	2027-28	44	92	98	103	96	96	95	110	86	114	97	102	111	112	0	1312	1356
2023	84	(est.)	2028-29	46	93	95	98	104	97	97	96	112	90	107	98	104	114	0	1305	1351
2024	85	(est.)	2029-30	48	93	96	95	99	105	99	99	98	117	84	108	100	107	0	1300	1348
2025	86	(est.)	2030-31	50	95	96	96	96	100	107	101	101	102	110	85	111	103	0	1303	1353
2026	85	(est.)	2031-32	52	93	98	96	97	97	102	109	103	104	96	111	86	114	0	1306	1358

Note: Ungraded students (UNGR) often are high school students whose anticipated years of graduation are unknown, or students with special needs - UNGR not included in Grade Combinations for 7-12, 9-12, etc.

Based on an estimate of births

Based on children already born

Based on students already enrolled

*Birth data provided by Public Health Vital Records Departments in each state.

Projected Enrollment in Grade Combinations*									
Year	K-6	K-5	PK-6	K-8	PK-8	6-8	7-8	7-12	9-12
2021-22	686	579	715	935	964	356	249	814	565
2022-23	679	572	713	919	953	347	240	745	505
2023-24	669	569	705	890	926	321	221	720	499
2024-25	665	567	703	880	918	313	215	680	465
2025-26	674	567	714	881	921	314	207	667	460
2026-27	673	589	715	886	928	297	213	660	447
2027-28	690	580	734	890	934	310	200	622	422
2028-29	680	584	726	882	928	298	202	625	423
2029-30	686	587	734	901	949	314	215	614	399
2030-31	691	590	741	894	944	304	203	612	409
2031-32	692	583	744	899	951	316	207	614	407

Projected Percentage Changes			
Year	K-12	Diff.	%
2021-22	1500	0	0.0%
2022-23	1424	-76	-5.1%
2023-24	1389	-35	-2.5%
2024-25	1345	-44	-3.2%
2025-26	1341	-4	-0.3%
2026-27	1333	-8	-0.6%
2027-28	1312	-21	-1.6%
2028-29	1305	-7	-0.5%
2029-30	1300	-5	-0.4%
2030-31	1303	3	0.2%
2031-32	1306	3	0.2%
Change		-194	-12.9%

*Projections should be updated annually to reflect changes in in/out-migration of families, real estate sales, residential construction, births, and similar factors.

Projected Enrollment in Grade Combinations*

Year	K-6	K-5	PK-6	K-8	PK-8	6-8	7-8	7-12	9-12
2021-22	686	579	715	935	964	356	219	814	565
2022-23	679	572	713	919	953	347	240	745	505
2023-24	669	569	705	890	926	321	221	720	499
2024-25	665	567	703	880	918	313	215	680	465
2025-26	674	567	714	881	921	314	207	667	460
2026-27	673	589	715	886	928	297	213	660	447
2027-28	690	580	734	890	934	310	200	622	422
2028-29	680	584	726	882	928	298	202	625	423
2029-30	686	587	734	901	949	314	215	614	399
2030-31	691	590	741	894	944	304	203	612	409
2031-32	692	583	744	899	951	316	207	614	407

Maximum Reimbursable Gross Square Feet**36,240**

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	26,471	26,471	25
Special Education	0	0	0	
Administration	0	3,555	3,555	
Media Center	0	5,122	5,122	
Visual Arts	0	1,200	1,200	1
Music	0	1,995	1,995	2
Performing Arts / Auditorium	0	6,840	6,840	1
Life Skills/Tech/Bus Education	0	980	980	1
Physical Education	0	12,275	12,275	2
Student Dining	0	4,770	4,770	
Food Service	0	2,790	2,790	
Custodial	0	756	756	
Subtotal - Net Square Feet	0	66,754	66,754	32
Building Services	0	24,674	24,674	
Subtotal - Net SF including Building Service	0	91,428	91,428	
Construction Factor	0.11	0.11	0.42	
Total Gross SF Programmed - Funded	0	101,485	129,600	

Difference between existing building and OSCG&R Space Guidelines is 93,360 square feet

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten	0	0.00	Grade 6	0	0.00
Kindergarten	0	0.00	Grade 7	109	5.01
Grade 1	0	0.00	Grade 8	131	6.03
Grade 2	0	0.00	Grade 9		0.00
Grade 3	0	0.00	Grade 10		0.00
Grade 4	0	0.00	Grade 11		0.00
Grade 5	0	0.00	Grade 12		0.00
Total Student Enrollment				240	11.04

ABOVE: Teaching space allocation matrix from Form SCG-2500, Chapter 5 of the Office of School Construction. This shows that for the highest projected enrollment over the next eight years (which for Winthrop MS is the current (2022 - 2023) school year) the State Construction Grant program would provide grant funding for construction of fifteen (12) classrooms utilizing a 25 student classroom loading.

PRECEDING PAGE: Space allocation matrix from Form SCG-2500 showing Maximum Reimbursable Gross Square Feet under OSCGR formula for a 240 student Grades 7 & 8 school is 36,240 square feet. The existing Winthrop Middle School comprises approximately 66,754 square feet of program space in a building of just over 129,600 square feet. The existing building exceeds the OSCG&R funding guideline by 17 classroom spaces and over 93,360 square feet of building.

Consideration for Future Uses

The Winthrop Middle School vastly exceeds the space guidelines for funding through an OSCG&R grant at the highest enrolment projected over the next eight years.

The existing spaces within the school are at or above the space standards the OSCG&R guidelines allocate and there are no spaces shown within the guidelines that don't already exist within the school.

The building could support an enrolment of perhaps 650 or more students within the existing floor plan, the OSCG&R guidelines state that it could accommodate 890.

The site is quite large and there are plenty of athletic and physical education opportunities with the established fields on site. The gymnasium, auditorium, library, and dining areas are all large enough to easily accommodate additional students.

There is no practical means of decreasing the size of the building except to perhaps cease using the lower level classrooms. Taking this route would burden the District with finding a renter suitable to occupy a portion of a public school while school is in session.

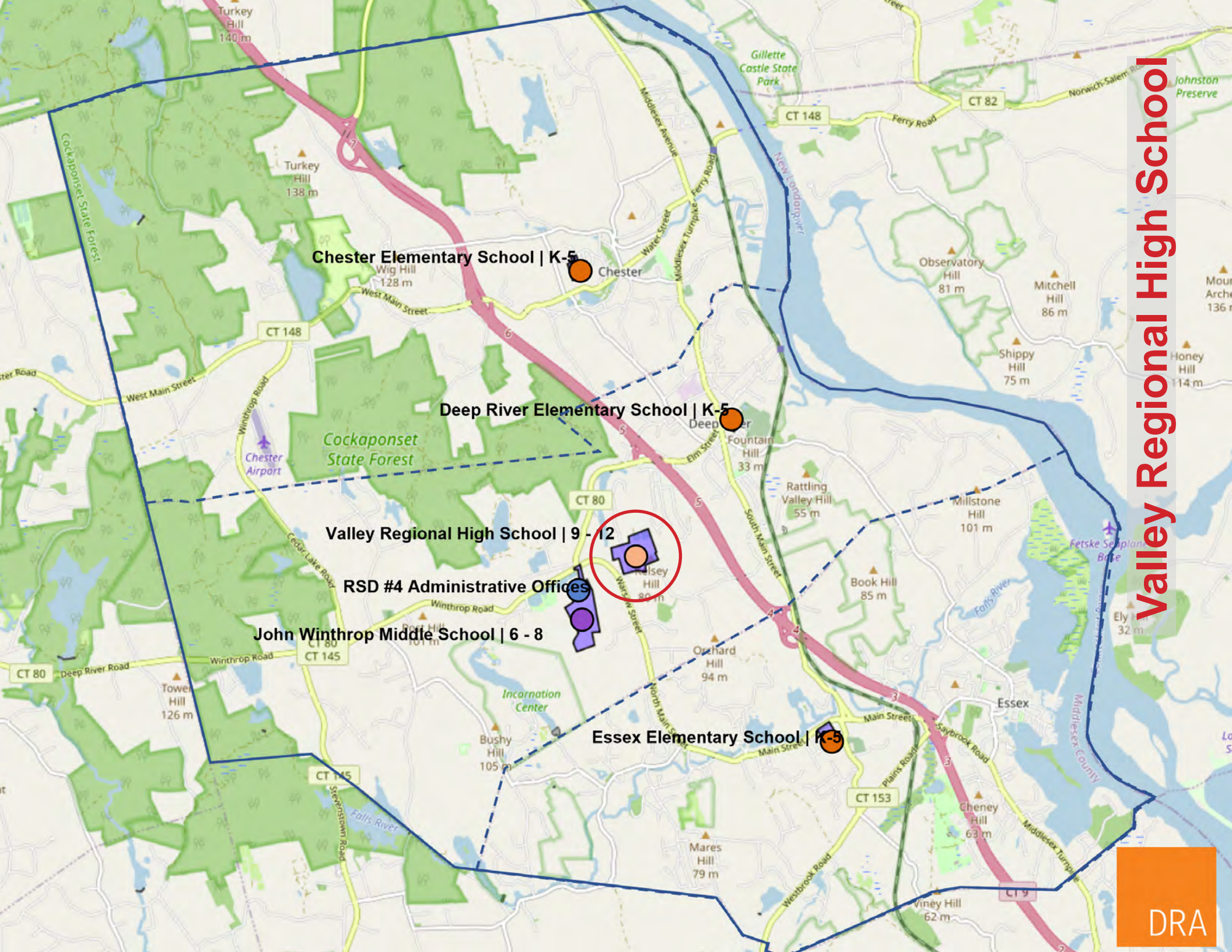
A different approach would be to look to increase the enrolment of the school. All three elementary schools are oversized as well, so it would appear that there is little room to move. However, the enrolment at Chester and Deep River Elementary Schools are small and projected to decrease.

A plan that moves Grade 6 from all three Elementary Schools to the Middle School could have numerous benefits:

- Elementary School cohorts decrease in size, to a projected District-wide total of 590 students in the 2030-31 school year.
- This complete cohort could be accommodated in the Essex Elementary School with some modifications.
- Alternately, the Towns and District could collectively run two elementary schools of 300 student each.
- This would create a Grade 6 - 8 cohort projected to be 347 students in the upcoming school year.
- Aligning Grade 6 with Grades 7 & 8 provides increased learning opportunities for the Grade 6 students, with access to science labs, the auditorium, and other spaces and amenities of the Winthrop Middle School.

A different approach to increasing cohort size is to combine the middle and high schools to create a middle / high school within one building. In this case the suggested move would be to move the middle school cohort to the Valley Regional High School. This would have the effect of increasing the enrolment size at Valley Regional, which would support increased curricular offerings, a wider range of extra-curricular activities, and make sports teams and club activities available to middle school students.





Valley Regional High School

The Valley Regional High School

Grades Nine through Twelve

256 Kelsey Hill Road

Deep River, CT 06417

140,000 Square Feet total

Two floors

47.36 Acre Site

Originally Constructed: 1952 (Town of Deep River Land Records)

Overview

The Valley Central High School is predominantly a single story building with a small a two story classroom wing. of approximately 140,000 square feet, set on a site of just over 47.36 acres.



The aerial image on the facing page shows the parcel boundaries per the current Town of Deep River Tax Assessor records.

The school buildings, parking, roadways, football, softball, and baseball fields are on one parcel of 38.67 acres.

The lacrosse field and tennis courts are on an abutting parcel of 8.69 acres.

The Regional District owns two other parcels; one abutting to the south and east of 38.13 acres, which shows two interior parcels held by other owners, and the parcel across Falls Landing Road to the west, which is 9.33 acres.



- ① Kelsey Hill Road Entrance
- ② Private Vehicle Drop Off / Pick Up
- ③ Main Entry to Building
- ④ Visitor Parking
- ⑤ Bus Drop Off / Pick Up
- ⑥ Secondary Entry to Building
- ⑦ Staff & Student Parking
- ⑧ ADA Compliant Parking
- ⑨ Softball Field
- ⑩ Baseball Field
- ⑪ Tennis Courts
- ⑫ Lacrosse Field
- ⑬ Football Field / Track
- ⑭ Practice Field
- ⑮ Delivery Area
- ⑯ Tech-Ed Building



The site is accessed from the south, where the access drive to the site intersects with Kelsey Hill Road just east of Falls Landing Road. The building sits at the top of a hill, with the football, baseball fields, and tennis courts at elevations below the building. The lacrosse field is at roughly the same elevation as the building.

The overall site is approximately 90% developed. There is a substantial amount of athletic field space surrounding the building. Those portions of the site that are not developed remain wooded with mature deciduous tree growth.

There is only the one entry point. The roadway appears to be about 22 feet wide and climbs a fair amount as it travels north toward the building.

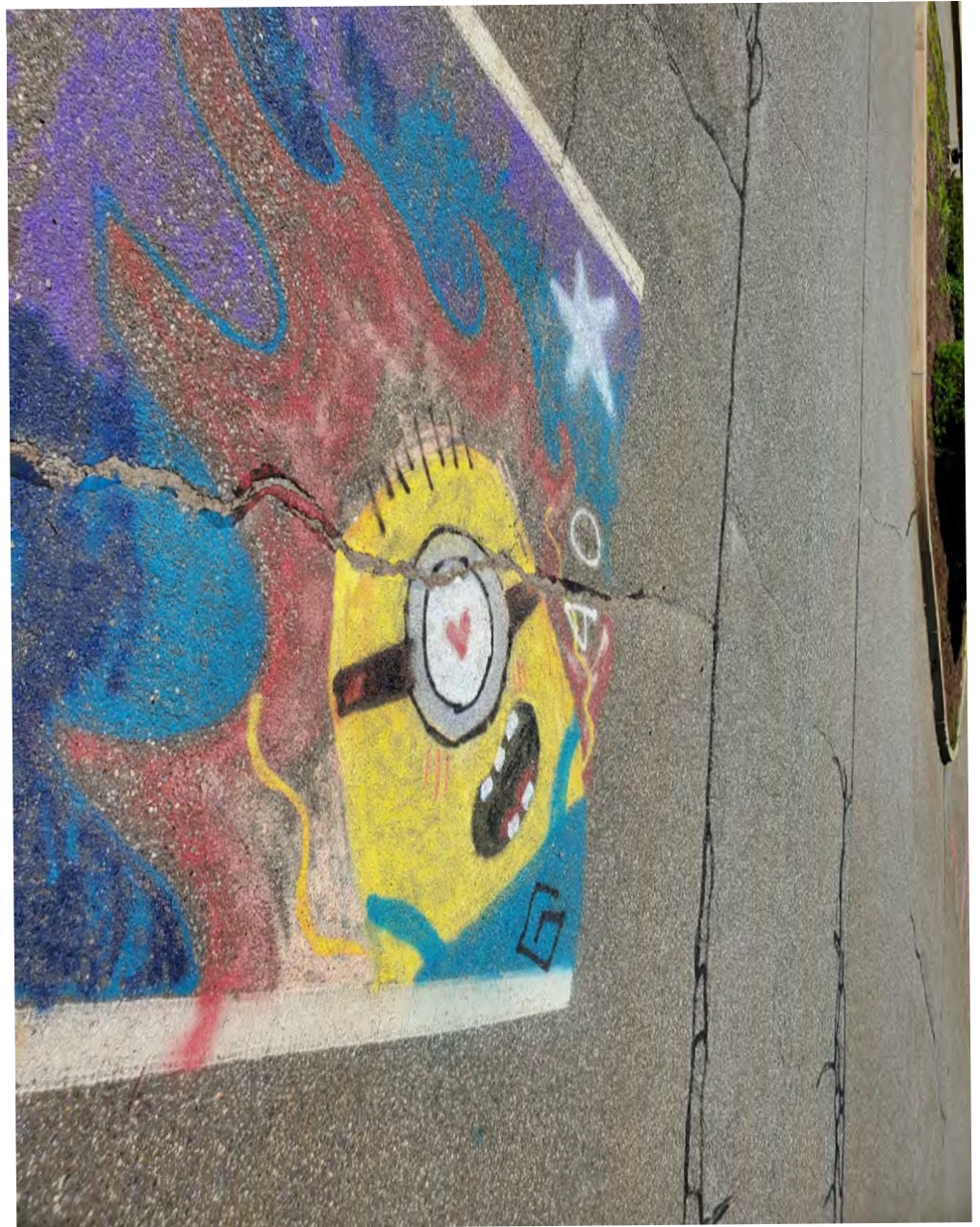
There are several parking areas. To the west of the entry drive is a long double-loaded lot with parking for 106 cars.

Stretching from the north end of the lacrosse field down and to the east is a continuous lot with parking for 124 cars, including three handicapped parking spots.

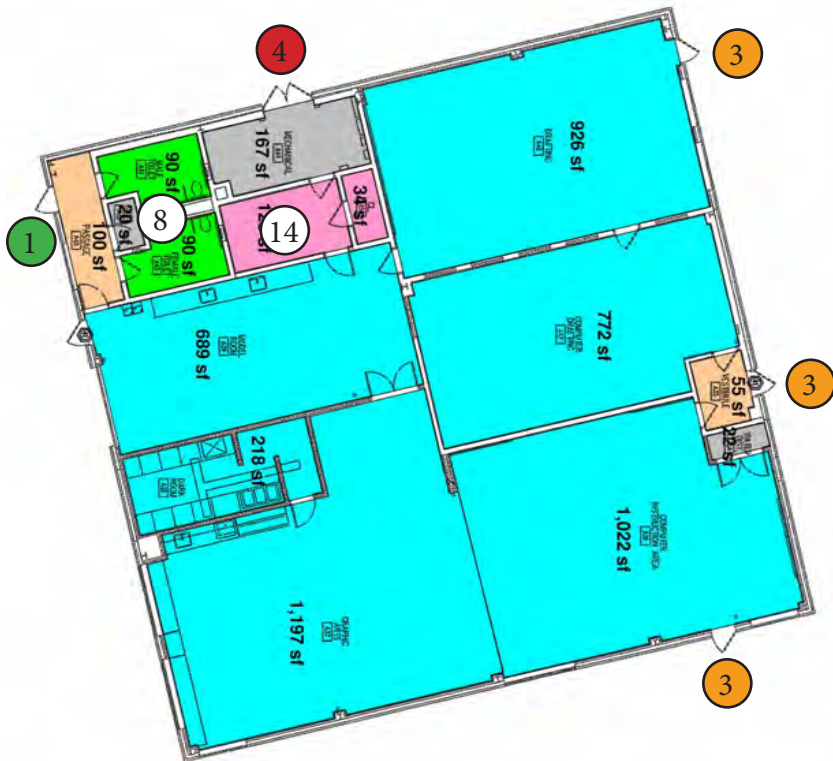
To the west of the main entrance are three handicapped designated spaces. Near the maintenance shops is parking for six vehicles and at the front of the Tech Ed building are eight spaces.

This totals to 247 spaces on the site.

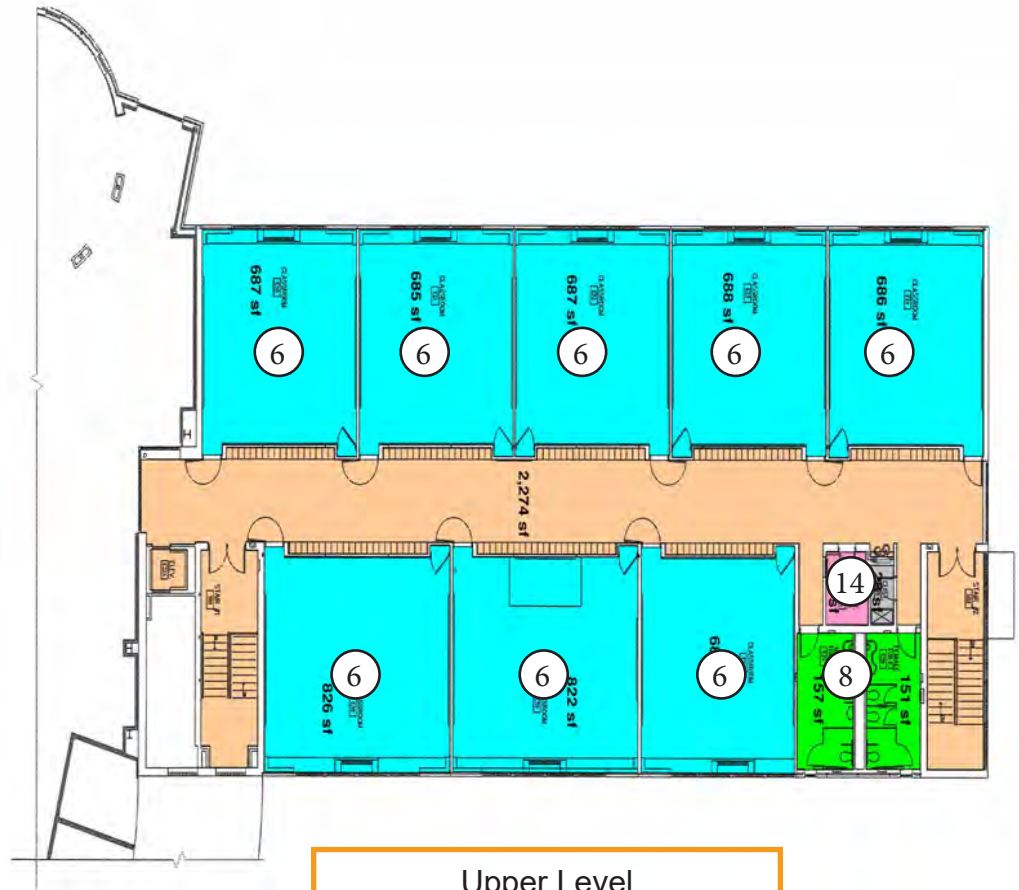
The eastern lot incorporates the bus drop-off / pick-up loop. The private vehicle drop-off / pick-up loop is at the main entrance to the school.



- ① Main Entry
- ③ Student Entry
- ④ Secondary Egress
- ⑥ Classrooms
- ⑧ Restrooms Teacher's
- ⑭ Meeting Room / Office



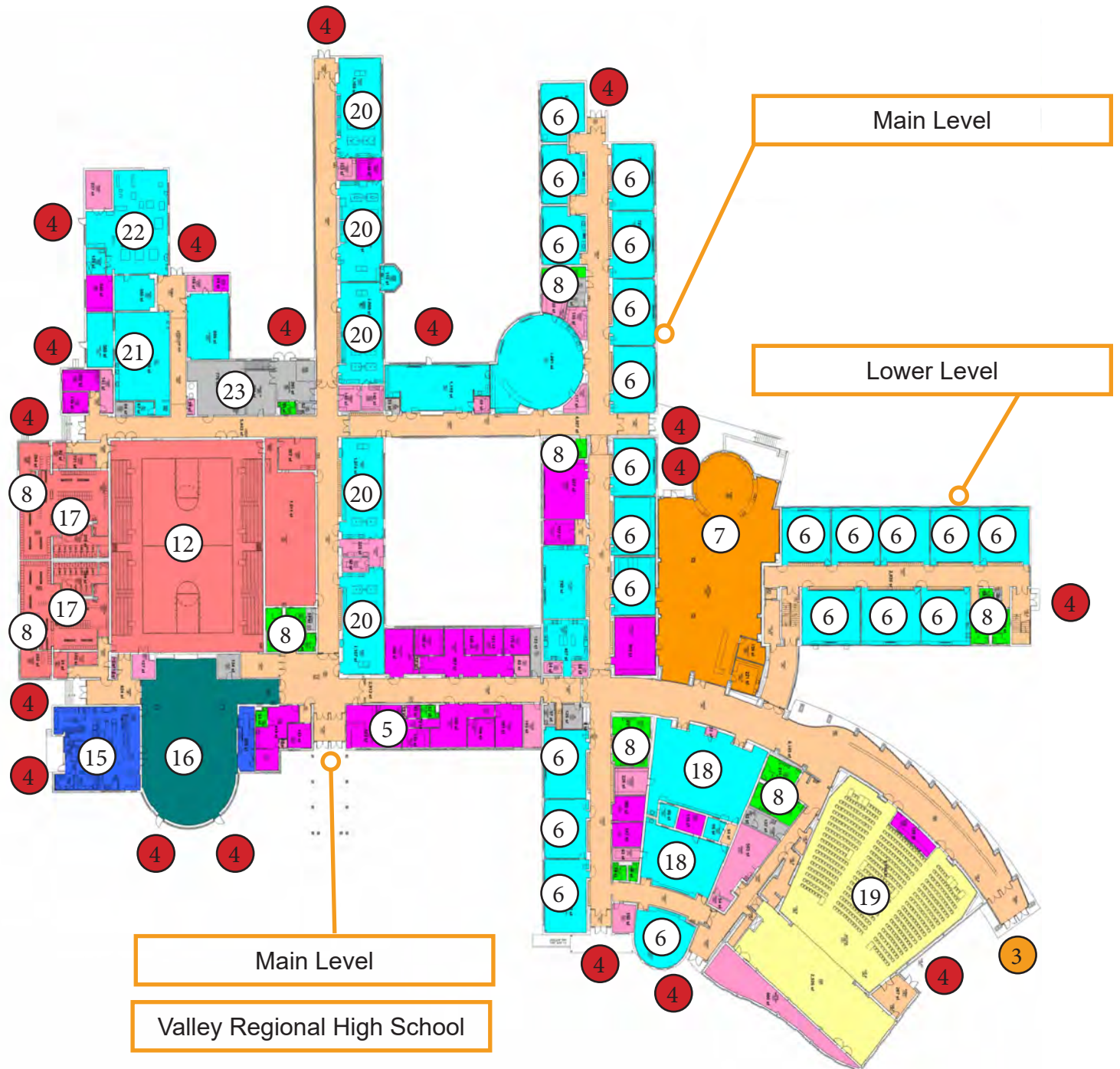
Tech-Ed Building



Upper Level

Valley Regional High School

- ① Main Entry
- ② Secure Vestibule
- ③ Student Entry
- ④ Secondary Egress
- ⑤ Main Office
- ⑥ Classrooms
- ⑦ Library
- ⑧ Restrooms
- ⑩ Teacher's Breakroom
- ⑪ Stage
- ⑫ Gym
- ⑬ Gym Storage
- ⑭ Meeting Room / Office
- ⑮ Kitchen
- ⑯ Cafeteria
- ⑰ Locker Rooms
- ⑱ Music Room
- ⑲ Auditorium
- ⑳ Science Lab
- ㉑ Art Room
- ㉒ Wood Shop
- ㉓ Mechanical



There is a concrete dining patio off of the cafeteria.

There is an interior courtyard that can be accessed from the corridor near the art room. This has a small concrete patio associated with the space.

There is a concrete patio outside of the north end of the library as well.

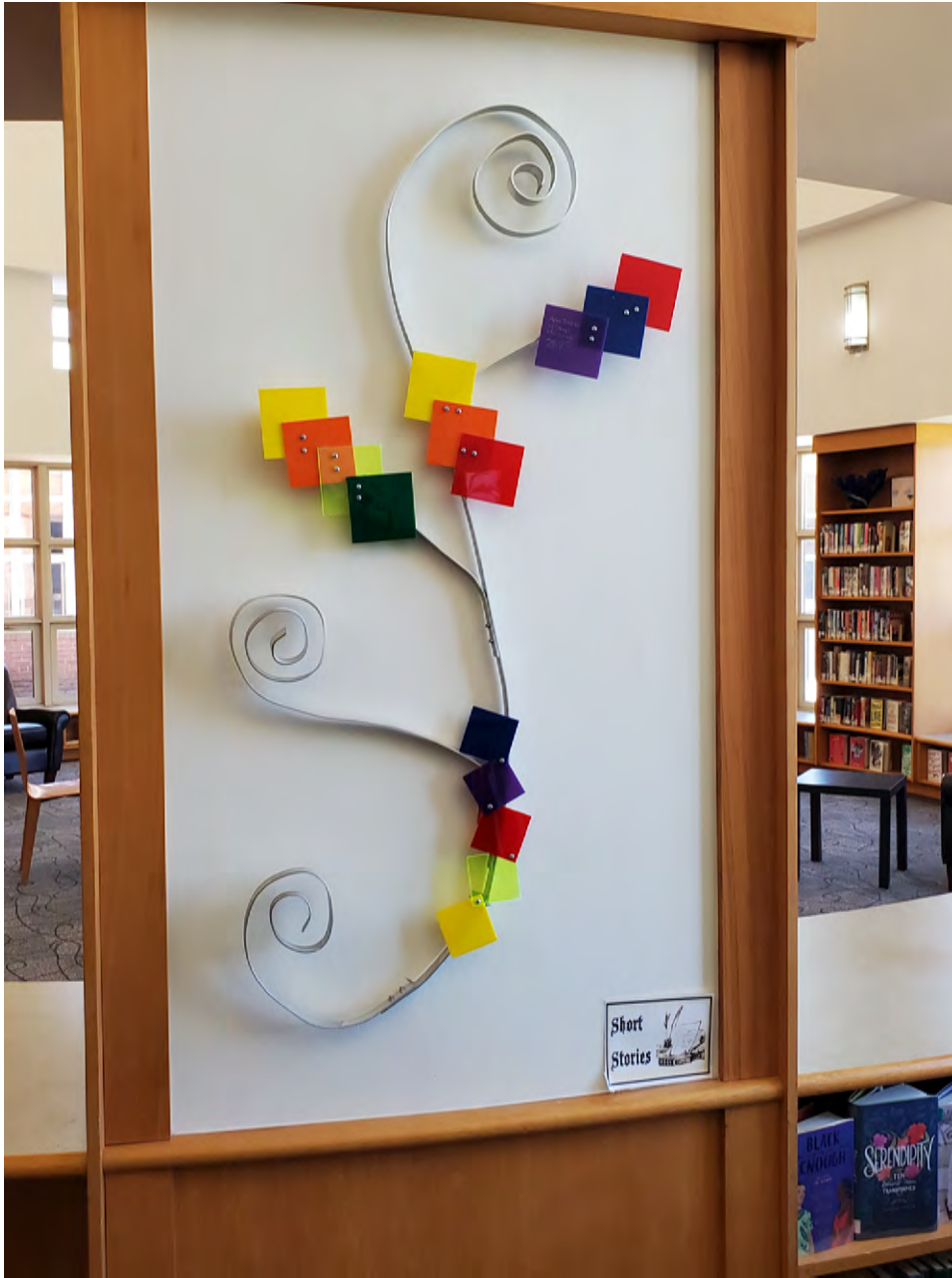
North of the art room, between the building wings, is an outdoor sculpture area displaying permanent and temporary sculpture installations.

There are baseball and softball diamonds are to the north of the school. Football fields, along with the track are to the west. Lacrosse and tennis are to the north.

The original building was constructed in 1952, with the auditorium addition, library alteration, and full renovation of the existing areas taking place in 2005.

The building is predominantly a single story structure. The eastern classroom wing is two floors, with the lower floor elevation being lower than the main building and the upper floor being above the main floor. This results in the classroom addition being like a split-level range and the complex overall actually having three different floor elevations.





The original 1952 building is a combination of a double loaded classroom corridor running north to south and a parallel corridor to the west. The western corridor is double-loaded for half its length, then single loaded for the northern half of its length.

The gym and cafeteria are at the southwest corner of the building, the library is center-east, and the auditorium is the southeast terminus of the building.

The gymnasium, library, and auditorium are generously sized.

The footprint and design of the school is forward thinking for 1950s high school design, incorporating modestly sized classrooms along with good daylight harvesting into the classrooms. The well sized and equipped gym and smallish cafeteria are in keeping with some of the school planning trends of that era.

The main entry point provides a secure, observable vestibule arrangement. There are controlled doors at both the inner and outer doors, with a transaction window from the lobby to the main office.

Assessment Narrative

Site

Site access and driveways throughout the site appear to be all the same age. Pavement is in fair condition throughout the site, with cracking and deterioration beginning to grow. Repaving of the site should be on track for consideration in the next 5 - 10 years.

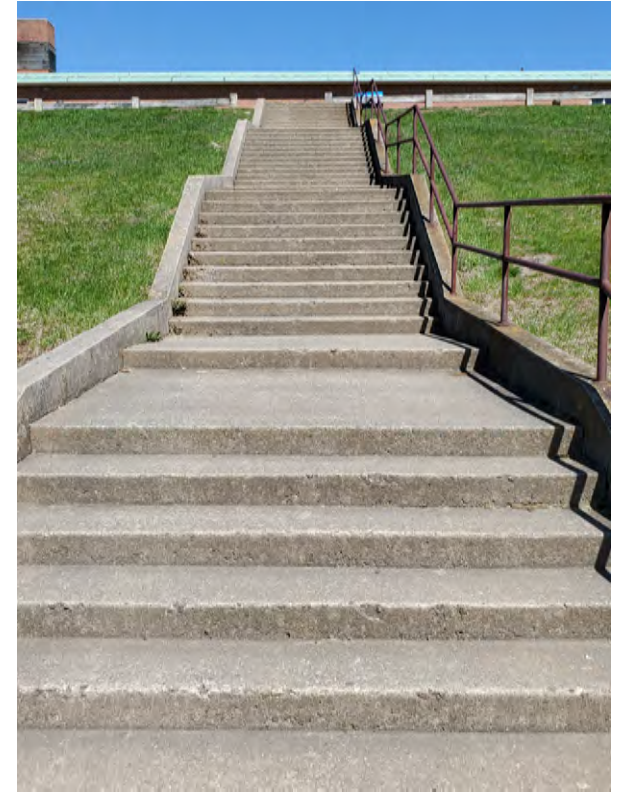
The accessible routes cause some concern for proper location, construction, or marking. There are designated ADA spaces on the east and southwest sides of the building. These appear to be properly sized for van loading and car use. There may be tactile warning pads missing and some of the crosswalks and markings are fading.

However, the required crosswalks, signs, markings, and tactile warning strips to lead from the southwest spots to the football field are missing. As there are no designated or compliant parking spots near the football field, these spaces out of compliance.

A similar concern for parking and accessibility involves the lacrosse, baseball, and softball fields and the tennis courts. There is no compliant parking adjacent or within an acceptable distance from these areas. The existing ADA compliant spaces which may be used by someone attending a sports event are either too distant or do not have a designate, accessible route to the area.

Beyond the absence of compliant parking, none of the sports fields or courts has a compliant accessible path to the field, court, or viewing areas. The tennis courts do not have an accessible gate to provide a wheelchair player access to the courts for play.

There is a long, multiple-flight concrete stair that connects the western driveway with the football practice field. This staircase has a railing on just one side, the other having apparently broken off. This stairway has differing tread and riser dimensions and could be considered a hazard.





This accessibility situation should be addressed as a first order item. Most of the corrections are straight-forward to implement, others will require more in-depth planning.

The curbing and sidewalks the site are a combination of concrete and asphalt. Those to the front and east side, where most students and visitors come to, are concrete. These are overall in good condition, with some areas of broken curbing, which should be addressed.

To the north and west of the building the walkways and curbing is mostly asphalt. These are in fair to good condition. There is some concern relative to ADA compliance given the width and slope of some areas of the asphalt walks. These walks should be evaluated in more depth and corrections made as needed.



The interior courtyard contains a number of mature hardwood trees with lawn between and benches for sitting. This area appears to be well-maintained and provides a nice connection to the outdoors from what would otherwise be rooms with little connection to the outside.

Trees and plantings throughout the site are a mix of mature native and planted hardwood trees. All appear to be healthy and in good condition.



Access to the athletic fields is from various places on the site, but none of the access routes appear to be ADA compliant. The District recently completed an assessment of the athletic facilities so this assessment does not go too deeply into the fields and facilities.



The outdoor seating area adjacent to the cafeteria provides opportunity to dine or meet outdoors without traveling too far from the cafeteria. This location also precludes people who may be outdoors from bothering or distracting students in class, as there is no visual connection between this area and any classroom or learning area. No ADA compliant seating was seen in this area.

The outdoor sculpture area near the art room is a wonderful example of the ways in which teaching and learning can move beyond the lesson plans and walls of the building. The area is visible for a number of rooms within the building and encourages students to explore their creative and artistic inspirations while also beautifying the campus.





Building - Exterior

The building is predominantly clad in brick. The majority of this is typical red brick. The two-story classroom wing and some of the auditorium have beige brick fields with red accent strips.

With the exception of the chimney on the 1953 portion, the brick overall appears to be in good condition with little deterioration or effluorecence seen. The chimney is showing signs of deterioration and failure. This area should be investigated further and appropriate repairs made as soon as possible.

The Tech Ed building is a premanufactured metal building. The siding appears to be sound with no rust or deterioration seen.





There are what appear to be aluminum composite panels in the window bays of the classroom wing and in some of the entry door facades. These all appear to be in good condition with no dents or damage observed.

The finish on these panels appears to be showing no signs of deterioration or failure.

Some of the soffits and facias are made of these same aluminum composite panels. These areas are in a similar condition to the window bay infill panels.

The sealant at the windows, doors, and brick joints appears to be aging well. No deterioration or failing sealant joints were observed.

In some areas the building would benefit from being power-washed to remove accumulated grime and atmospheric dirt.

Those soffits not made of aluminum panels appear to be painted wood. This paint is beginning to fail in some areas and should be cleaned and repainted before base material deterioration begins.

Of particular note is the soffit of the arced wall of the Art Room. As seen in the bottom right photo on this page, the paint on this soffit has failed completely.

The entry canopy for the south entry is a metal framed structure on brick-clad columns. The roof looks to be a panelized system. The two pictures to the right on the opposite page show this area.

This structure appears to be in good condition with minimal deterioration of materials or finishes. No bird or insect nests were noticed, pointing to diligence on the part of the maintenance and custodial crews.

Exterior doors throughout the school are aluminum store-front systems. Secondary exterior doors are hollow metal steel.

Some of the hollow metal doors would benefit from painting in the next few years. This includes those units on the Tech Ed building.

The aluminum store-front system doors appear to all be in good condition. Hardware worked well and did not exhibit wear or deterioration.

The weatherstripping, and in particular the bottom of door sweeps, is deteriorating at some of the doors. The photo on the bottom left of the opposite page illustrates the condition of the sweeps, which can be seen to have failed, as shown by the light that is coming through under the doors.





The roof appears to be a mix of two types of rubber roof as manufactured by Sika Sarnafil. The roof was installed new in 2004. The manufacturer is Sika and the warranty start year was 2004. There was a 15 year prorated warranty on the roofing products. This warranty expired in 2019.

The sloped portions of the roof are aging well. These areas are dirty but largely in good condition. There are some patches and repairs, but overall not much deterioration. This roof could have a 25 year life expectancy. The warranty was for a 15 year period, which expired in 2019. This roof should be considered for further investigation within the next two to five years.

The low-slope (aka 'flat') portions of the roof are white. This product is by the same manufacturer as the sloped roofs. The overlap and joining of the two roofs, as seen in the upper right photo on the opposite page, is per manufacturer's specifications.

This roofing is aging more rapidly than the more steeply sloped portions. Though it had the same warranty and life expectancy as the green areas, it does not appear to have the same amount of service life remaining.

In most areas the two roof types do not overlap. That said, there are a number of long seams of overlap. Since a replacement of the white roof without replacing the green would not be practical, it is recommended that the white roof areas be investigated more fully in the next year or two and a determination made as to life expectancy.

There are PV arrays on a good portion of the roof. These appear to have been properly installed.

The access doors, some louvers, and roof hardware need to be painted or replaced. See photo upper right of the opposite page.





Building - Interior

The 2005 renovation is overall aging well, though some aspects are beginning to show wear.

Floors in hallways are linoleum, which is wearing well and overall in fair to good condition.

In the Cafeteria the linoleum floor is showing wear and tear from chairs. Linoleum in the kitchen is showing wear and tear especially at walk-in cooler freezer also at soup kettle. Some sections of linoleum have been replaced with VCT. Section of floor at three Bay sink has been replaced with VCT.

Offices throughout the building have carpeted floors. The carpet is wearing in high-traffic areas.

The auditorium and library have carpeted floors. These are both aging well with minimal wear.

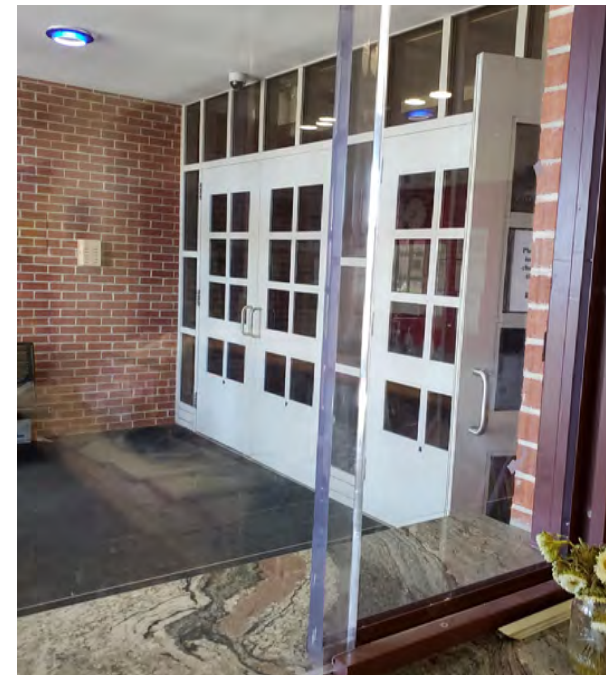
Near the auditorium the corridor floors are carpet. This carpet is showing signs of wear and deterioration.

The gymnasium has a wood floor. This floor is in good condition and appears to be well maintained.

The stairs in the classroom wing have rubber tread covers. These are worn and should be replaced to eliminate potential slipping hazards, especially when the stairs might have water on them. - Lower right hand picture on opposite page.

There is a proper security vestibule with a transaction window linking the main office with the security vestibule. Electronic lock controls allow office staff to admit a visitor to the building once they have been screened and properly documented.

The transaction window does not have a slot or pass-through tray. This necessitates the opening of the sliding portion of the transaction window if an item needs to be exchanged. Addition of a pass-through tray can be difficult and expensive, however.





Ceilings are mostly two foot by two foot lay-in acoustical tiles. These are overall in good condition with very little staining or sagging.

Some portions of ceilings in areas such as the music rooms, auditorium, and gymnasium are a combination of acoustical lay-in tile and painted GWB. These ceilings are likewise in good condition.

The 2005 addition contains the auditorium, stage, storage, and lobby space. The auditorium lobby serves as the main eastern entry to the building on a daily basis. The design of the lobby has a staircase to the main floor level elevation, with an ADA compliant ramp running alongside. It is a nicely integrated design and is showing few signs of wear.

The choral and instrumental rooms are in space that was within the original building. These spaces are in good condition and appear to be fully ADA compliant. There are no risers or platforms in either space.

The auditorium has seating for more than 565 people. There are appropriate wheelchair seating locations distributed throughout the house, each with the required companion seat.

The condition of the materials in the house section is good to very good. No ripped or torn seats were observed. Carpets, woodwork, and ceilings all appear to be in good condition.

The stage is a full fly configuration. Equipment and stage floor all appear to be in good condition. The fire rating of the proscenium curtain could not be confirmed.

The access to the stage from the house is not compliant with State of CT requirements relative to being able to travel from the house to the stage without stairs and without leaving the house.





The library is large and infused with abundant natural light from the north facing windowwall. The space is overall in very good condition.

The floor is carpet and shows few signs of wear or deterioration.

The casework and furniture are all in good condition and appropriate for a high school library.

Lighting is in keeping with the aesthetic of the space and provides good coverage and illumination.

Ceilings are two by two lay-in acousical tile with some painted GWB.

There is artwork displayed throughout the space, adding to the lively, engaging atmosphere of the space.





The general curriculum classrooms appear to be in overall fair to good condition. There are minor areas where counters or doors are not accessible, but these cases are very limited.

Floors in most of the classrooms are VCT. A few have linoleum floors. Some of the floors are showing wear, especially in the areas covered with VCT. These floors in particular should be carefully monitored and corrective action taken to preclude the creation of slip / trip hazards.

Ceilings are predominantly two by two foot lay-in acoustical ceiling tile. Some of the rooms have painted GWB soffits or sections of ceiling.

In the Life Skills room the counters and sinks are not ADA accessible compliant. Some of the cabinets and counter tops are starting to delaminate in some areas. The counter in the sewing area is also not accessible. There does not appear to be accessible sewing machine.



In the two level east classroom wing the linoleum flooring in the corridor showing some wear. Brown spots on/in linoleum floors in this wing are from dampness in the slabs. We were informed that the water infiltration issue has been resolved. Attention should be paid to the indoor environmental conditions in this wing.

Throughout the building it is noted that no accessible lockers were observed in any of the locker banks.

The science spaces are commonly referred to as 'clabs' - classroom and lab combined. The spaces in Valley Regional HS are a little undersized for this approach to science learning spaces.

These rooms have a fairly high floor aspect ratio (how long relative to how wide), which can be beneficial in a clab arrangement so long as there is a teaching station at each end of the room. However, the existing rooms are narrower than current design guidelines for science spaces.

The equipment in the science lab, such as fume hoods and work stations are older. Consideration should be given to a modernization project focused on bringing the science labs up to date and fully compliant codes and guidelines for these types of spaces.

The Special Education classrooms are finished in the same materials as the other spaces throughout the building. There is little in the rooms visited that would let a visitor know the nature of the curriculum taught within.

The window shades all appeared to function properly in the SPED rooms, critical to controlling the glare of external light entering the space.

The light fixtures are the same as in the other classrooms.

We often see artificial lighting that can be dimmed as well as tuned to a particular color spectrum, allowing the rooms to be tailored to the individual students throughout the day.

The furniture in most spaces in the school is outdated. Consideration should be given to an annual budget line item for replacement of existing furniture in a regular, systematic method.





The gymnasium is adequately sized for high school physical education and team sports. The main gym, auxiliary gym, and locker rooms are all in good condition.

The gym floor is wood. It is striped for a number of different sports and is overall good condition.

The walls are exposed brick, covered by the retracting bleacher seating along the two long walls. The end walls have padding, which is sagging in places and showing overall wear.

The exposed brick above the bleachers is in good condition and creates a nice atmosphere for the space.

The ceiling is a combination of GWB soffits and lay-in acoustical tile. The acoustical tile is in fair condition, showing signs of aging and wear.

The operation of the bleachers could not be confirmed during our visit. It is unclear if there are required wheelchair seating areas with companion seats adjacent.

There is a dividing partition that splits the large gym in two when closed. The operational and overall condition of this partition could not be determined during our visit.

The locker rooms are well configured and in overall good condition. No ADA compliant lockers were seen in any of the locker rooms.



The cafeteria is on the south side of the school and has a full wall of windows that look out onto the concrete patio. The room is adequately sized for the current enrolment.

The space has a linoleum floor that is in good condition, showing some wear in places. The walls are exposed brick, the ceiling a combination of GWB soffits and lay-in acoustical tile.

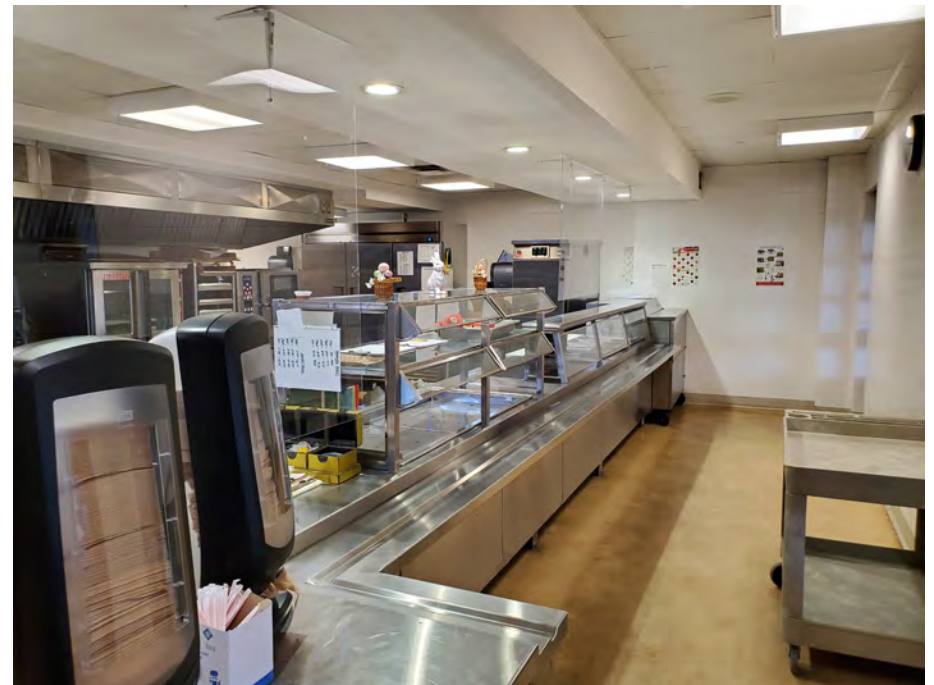
Tables are ovoid and seat six to eight utilizing separate seats. Both the tables and chairs embody the approach to dining furniture recommended for high school students. These are in good condition and high quality.

The kitchen is a full-preparation operation with a good floor plan and reasonably modern equipment. There is adequate space for staff movement during preparation, serving, and cleanup.



There are two serving areas. The larger serving area is adjacent to the kitchen and is one-way travel arrangement. The space might be a little tight for high school students, but the length is relatively short. This serving line is behind the demising wall of the cafeteria and thus out of sight of the dining room.

The second serving area is a 'grab and go' or school store arrangement. This configuration appears to be configured to allow students to access food or snacks without the full kitchen and serving area to be open.



A. PLUMBING NARRATIVE:

PLUMBING UTILITIES

1. Domestic Water: The domestic water service for the high school is provided from (2) wells located on site. The wells serve a buried storage tank which is partially exposed in the water service room in the building. The domestic water from the wells enters the building and goes through a set of carbon filters before entering the storage tank. From the storage tank, a pair of booster pumps distributes water throughout the building. The booster pumps are manufactured by Armstrong and are model VMS 10004. The pumps appear to be operating correctly, but are exceeding their useful life.

2. Sanitary: The School's sanitary sewer system provides sanitary waste drainage for plumbing fixtures located throughout the School. The piping material above grade is primarily cast iron. The building utilizes its own on site septic system.

PLUMBING FIXTURES AND SPECIALTIES

1. Existing plumbing fixtures are as follows:

- Water closets building are wall mounted; with manual operated flush valves, vitreous china.
- Urinals are wall mounted; with manual operated flush valves, vitreous china.
- Lavatory sinks are wall hung, solid surface with sensor operated faucets.
- Drinking fountains are located throughout the building. Drinking fountains are stainless steel, dual height with no bottle fillers



Photo # 1: Indoor air handling unit

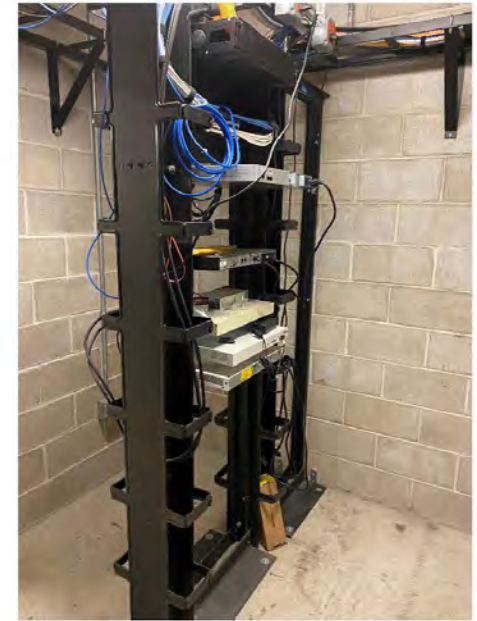


Photo # 2: Existing IT rack



Photo # 3: Existing piping serving kitchen AHU

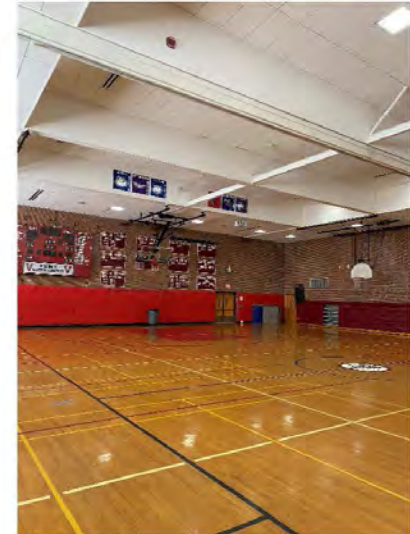


Photo # 4: School gym with linear diffusers.



Photo # 5: Existing cabinet unit heater



Photo # 6: Wood shop classroom with overhead ductwork to dust collector.



Photo # 7: Mixing valve serving emergency showers.



Photo # 8: Exterior dust collector serving wood shop classroom.

DOMESTIC HOT WATER SYSTEMS

1. Domestic hot water for the building is provided through (2) Weil Mclain "76" hot water boilers. The boilers model number are (#676) and are rated at 355 MBH. The boilers appear to be in fair condition. Though the boilers appear to be operating as designed, they are exceeding their useful life. The (2) hot water boilers provide hot water for (4) Amtrol Boiler mate indirect water heaters. Each indirect water heater has a storage capacity of 41 gallons. All of the indirect water heaters are set for an output of 140°F hot water before they serve the buildings mixing valves to provide tempered water to the building fixtures. The indirect water heaters appear to be in good condition and operating correctly.

B. FIRE PROTECTION NARRATIVE:

1. The high school is provided with full sprinkler coverage throughout the building. The water for the sprinkler system is provided via a buried storage tank which is partially visible in the fire protection room. To provide the required flow and pressure for the system, a fire pump is provided. The fire pump is electric and is rated at 500 GPM @ 125 PSI. The fire pump is manufactured by Peerless Pumps and appears to be operating correctly and is up to date on testing and servicing. Sprinkler piping is distributed throughout the building via a vertical pipe riser assembly. The main school is comprised of (3) zones for sprinkler distribution as well as a fire department connection with check valve.

C. MECHANICAL SYSTEMS NARRATIVE:

1. The building heating system is provided by (3) HB Smith cast iron boilers. The boilers are oil fired with the oil storage tank located above grade at the building exterior. The HB Smith boilers are Model #28A-S/W-08 and have a capacity of 1709 MBH each. Each boiler is provided with its own in-line hot water recirculation pump to ensure minimum flow is maintained through the boiler. The boilers are original to the building and are operating past their useful life. The hot water is distributed throughout the building via a pair of base mounted, end suction pumps. The do both hot and chilled water distribution depending on if the system is in heating or cooling operation. The pumps appear original to the building and are operating past their useful life.

2. Heating hot water is distributed throughout the building to serve fin tube radiators, cabinet unit heaters, and hot water coils in the air handling units. Glycol was added to the system roughly 2-3 years ago to help with freeze protection of the coils.

3. Ventilation, cooling and heating for the building is provided through a mix of indoor and outdoor air handling units. A majority of the units are manufactured by York. The units are provided with heating hot water coils and cooling chilled water coils. During the walkthrough, it was indicated that one of the units located on the roof was not operational (original to the building). All of the air handling units are past or are approaching the end of their useful life and should be replaced in the near future. Unit ventilators are provided in classrooms for ventilation, heating and cooling. There are (4) unit ventilators that utilize a outdoor condensing unit to provide cooling for the space. Chilled water for cooling is provided via (2) York air cooled chillers, mounted on the roof. The units



Photo # 9: Exterior, above grade, fuel oil tank





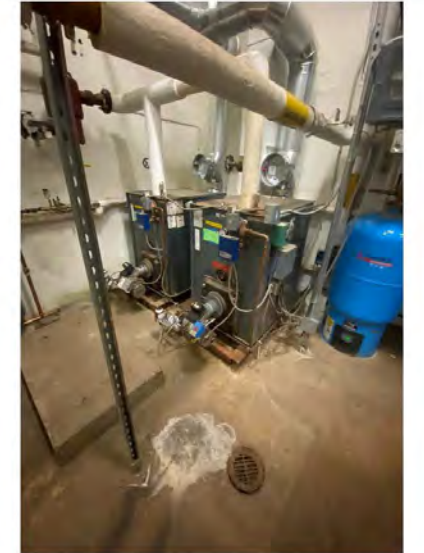
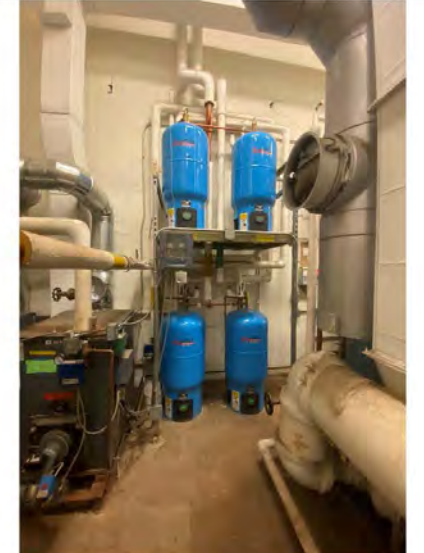
Photo # 10: Exterior hose bib



Photo # 11: Existing hot water boilers (Total of 3).



Photo # 12: Existing chilled water pumps

	
<p>Photo # 13: Existing sump pump in boiler room.</p>	<p>Photo # 14: Fuel oil pump set.</p>
	
<p>Photo # 15: Existing boilers serving indirect domestic hot water heaters.</p>	<p>Photo # 16: Amtrol Boilermate indirect water heaters.</p>

are provided with sound attenuation to reduce the amount of breakout noise from when the units are operating. The units create chilled water for all of the air handling units throughout the building. The chillers are nearing the end of their useful life and should be replaced or upgraded in the near future.

4. Restroom groups are served by dedicated roof mounted exhaust fans. The fans appeared to be operating correctly, however, they appear to be getting near the end of their useful life.

5. Temperature Controls were observed to be provided by the controls contractor ESC. A Honeywell controls system is provided for all of the air handling units, and terminal devices throughout the building.

D. ELECTRICAL SYSTEMS NARRATIVE:

1. Electric Utility Service – Power to the site comes from CL&P pole #1352, located along Regional High School Road No. 1, on the west side of the playing field nearest the main entrance. The utility primary runs underground from this pole to a utility company owned 480Y/277volt, 3-phase, 4-wire pad mounted transformer located along Regional High School Road No. 2. Secondary feeders run underground from the pad mount and enter the building in the basement main electric room in building Area “F”, where the main service switchboard is located. Primary feeders for the Field House also originate at pole #1352 and run underground to a utility meter cabinet situated on Regional High School Road No. 1. Secondary feeders extend underground from this point to a service panel inside the Field House.

2. Electric Service Switchboard - The main service switchboard “MSB-1” is located in the basement of Area “F” in Electric Room U05 and consists of a 480Y/277volt, 3-phase, 4-wire main switch, CT and distribution section, manufactured by Square D and rated for 3000 amperes. The metering cubicle is arranged cold sequence with the meter mounted on the exterior of the building. The main switch section feeds a 3000A 480Y/277V, 3-phase, 4-wire distribution section, which contains branch circuit breakers that feed various panels and equipment at 480V located throughout Building Areas “C”, “D”, “E” and “F”. 480V primary/208Y/120V secondary distribution transformers feed 208/120V distribution panelboards that serve 208/120V branch circuit panels. All service entrance and distribution equipment was installed as part of additions and renovations that were done between 2003 and 2006. This equipment is in excellent condition and should serve the school for another 15-20 years.

3. “MSB-1” feeds distribution switchboard “HBDB”, located on the mechanical mezzanine in building Area “B”. “HBDB” consists of a 480Y/277volt, 3-phase, 4-wire main switch and distribution sections, manufactured by Square D and rated for 2000 amperes. The distribution section contains branch circuit breakers that feed various panels and equipment at 480V in Building Areas “A” and “B”. 480V primary/208Y/120V secondary distribution transformers feed 208/120V distribution panelboards that serve 208/120V branch circuit panels. All equipment was installed as part of the 2003-2006 renovations and is in excellent condition.



Photo # 17: Roof mounted, air cooled chillers



Photo # 18: Existing, roof mounted air handling units



Photo # 19: Kitchen exhaust fan.



Photo # 20: Domestic water pump room



Photo # 21: Domestic water booster pumps.



Photo # 22: Domestic water carbon filters



Photo # 23: Domestic water meter assemblies.



Photo # 24: Sump pumps located in domestic water pump room.

4. Electric Panelboards – All the panelboards observed are by Square D and were installed during the 2003-2006 additions and renovations. 480/277V panels serve mechanical equipment and lighting loads throughout the school. 208/120V panels serve receptacles, small motors and various other loads. All this equipment should provide another 15-20 years of service before replacement.

5. Branch circuit wiring is in EMT/ armored cable, where observed. All wiring systems installed as part of the 2003-2006 additions and renovations appears in good to excellent condition. Wiring that still exists within the older portions of the building should be examined for integrity. Typically, if left untouched, this older wiring can provide adequate service for many years. If modified, however, wiring insulation can become a safety concern. If future renovations are made in parts of the building where older wiring systems still exist, we recommend this wiring be replaced along with any older generation panelboards that may still be in service.

6. Emergency and Optional Standby Power – Emergency and Stand-by power to the building is provided by a 250kW/313kVA, 480/277V, 3-phase, 4-wire diesel-fired standby generator with remote fuel tank, manufactured by Caterpillar, which resides in the basement of building Area “E”, in Generator Room U01. A 400A generator mounted circuit breaker is fed from two automatic transfer switches for Life Safety and Optional Standby via circuit breakers in Panel “EDP”. Life Safety transfer switch “ATS-1” is wired to a 400A MCB, 480/277V distribution panel “EDP-1”, which feeds branch panels throughout the building for emergency lighting. Optional Standby transfer switch “ATS-2” is wired to a 200A MCB, 480/277V distribution panel “EDP-2”. “EDP-2” feeds kitchen equipment panel “ELKP” and various other 208/120V branch panels via 480V primary/208Y/120V secondary distribution transformers throughout the facility. Normal power feeds to the transfer switches originate in “MSB-1”



Photo # 25: - Utility Service Pole #1352 on Regional High School Road No.1



Photo # 26: - Utility Service Pole Primary and Telecommunications



Photo # 27: - Utility Pad Mounted Transformer



Photo # 28: - Utility Meter Cabinet with Tap Box and Feeders to Field House

7. Photovoltaic System – The PV system is of the grid-connected type and does not include battery/back-up storage or secondary electrical generation devices. The system utilizes solar arrays, installed on the various roof structures and produces AC power at 480V into local services via inverters mounted on the roof. The system disconnect and meters and are located at the ground level exterior, close to the utility meter. This system appears to be functioning properly with no issues reported.

8. Interior lighting throughout the facility is a mix of LED and fluorescent technologies. Corridors and vestibules are lit with LED downlights and 2x2 direct/indirect lay-in fixtures retrofitted with LED lamps and drivers. Lights in these areas are controlled with key switches and occupancy sensors. Office lighting consists primarily of 2'x2' fluorescent direct/indirect fixtures with wall switches and occupancy sensors for control. Most classrooms use fluorescent direct/indirect pendant mounted light fixtures, controlled with wall switches and ceiling mounted occupancy sensor.



Photo # 29: - Building Utility Meter



Photo # 30: - Main Distribution Switchboard "MSB-1" in Main Electrical Room



Photo # 31: - Switchboard "MSB-1" Distribution Section and Main Switch



Photo # 32: - Distribution Switchboard "HBDB" in Building Area "B" Electrical Room

No daylighting controls were observed. Suggest replacing the remaining fluorescent troffers with new LED direct/indirect lay-in fixtures and the fluorescent pendants in classrooms with direct/indirect LED pendants for improved light quality. Low voltage wall dimmer switches along with ceiling mounted occupancy/vacancy sensors and daylighting control is recommended in all classrooms and offices to improve efficiency and meet current energy code standards.

9. Lighting fixtures in the gymnasium are 2x2 lay-in troffers with acrylic prismatic lens controlled by key-operated toggle switches. Light levels appeared poor. Suggest replacing the troffers with HO high bay type LED fixtures for improved light levels and low voltage key switches for control.

10. General lighting systems and control in the auditorium appear to meet the requirements of the space. The theatrical lighting dimming system is by Sensor. Theatrical lighting was not tested.

11. Pole and building mounted fixtures, controlled by timeclock and photocells light the walkways, exits and parking areas around the building. The fixtures are new LED replacements of older metal halide, high-pressure sodium or compact fluorescent technologies. Exterior/site lighting throughout the grounds appeared in good working condition.



Photo # 33: - Transformer and Distribution Panels in Building Area "B"

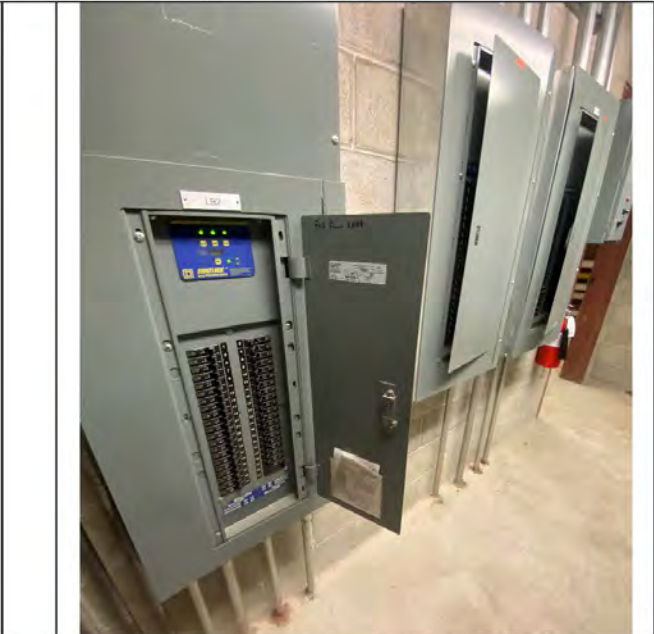


Photo # 34: - Typical Branch Panelboards in Building Area "B"



Photo # 35: - Disconnect for Theatrical Lighting and Dimming System Racks

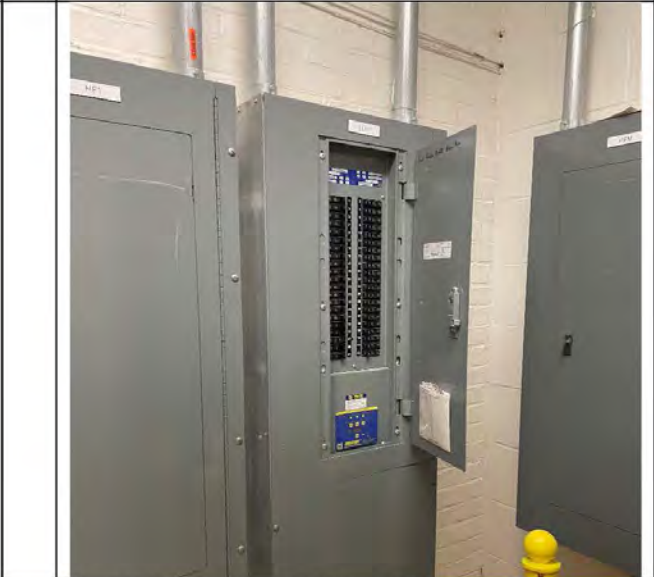


Photo # 36: - Typical Branch Panelboards



Photo # 37: - Life Safety Transfer Switch "ATS-1" and Distribution Panel "EDP-1"



Photo # 38: - Standby Transfer Switch "ATS-2" and Distribution Panel "EDP-2"

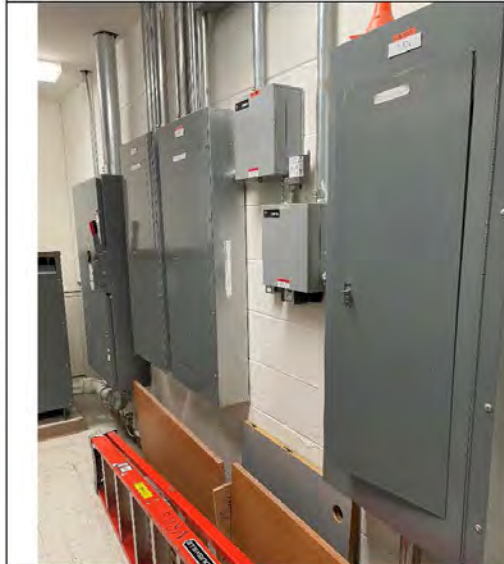


Photo # 39: - Emergency Branch Panelboards and Equipment



Photo # 40: - 250kVA/313kW Diesel Powered Generator

12. Exit signs are LED and wired to the emergency system for constant illumination. Exit signage in all areas of the building appears in compliance with current codes. All signage appears to be in good condition.

13. Fire Alarm System – The building fire alarm system consists of three Edwards EST3 addressable fire alarm control panels networked together with remote annunciators for voice evacuation. Fire Alarm Control Panel #1 serves devices on all floors in Areas "A" and "B" and is located in Utility Room B08. Fire Alarm Control Panel #2 serves devices on all floors in Areas "C" and "D" and is located in Elec. Closet C07. Fire Alarm Control Panel #3 serves devices on all floors in Areas "E" and "F" and is located Elec. Closet F10A. Remote annunciator panels are located in Main Entrance Lobby B01 and Lobby F20. The annunciator panels contain a microphone handset to allow annunciation over the building's speaker/horn-strobe devices. Fire alarm speaker/strobe coverage throughout the building appears sufficient. Locations of manual pull stations are compliant. All fire alarm devices appeared to be mounted at the correct ADA height. Monitor and control modules for duct smoke detectors were not observed.

14. The building has a sprinkler system. Smoke detectors were observed in storage areas and electrical rooms, heat detectors in mechanical rooms, tamper and flow alarm switches on standpipes. All system devices appear operational and in compliance.

15. Fire Pump – A 60HP fire pump with ATS and controller is located in the basement of building Area “E” in Fire Pump Room U03, adjacent to the Generator Room. Normal side of the ATS is connected to the utility transformer secondary through a 600A fused disconnect switch. Emergency power comes from the generator via a 200A circuit breaker. The meter for this system is located on the exterior, alongside the building utility meter.

E. TECHNOLOGY SYSTEMS NARRATIVE:

1. Telecommunications services, including fiber, originate at CL&P pole #1352, located along Regional High School Road No. 1. Cabling runs underground from this pole and enters the building in the basement of building Area “F”, in Telephone Service Room U05A, where the main telecommunications demarc is located. From this location, service cabling runs to systems racks in the MDF. There are three remote IDF’s located throughout the building. Each IDF receives a single-mode fiber backbone cable from the MDF.

2. The data communications system consists of a fiber backbone and a combination of wired outlets and wireless access points located throughout the facility. Typical classrooms contain a hardwired data drop approximate to the teacher’s desk and convenience drops that vary in quantity depending on room type. Wireless Access Point devices are distributed throughout the facility – one per classroom or office suite and throughout corridors and common areas. All equipment and cabling observed appeared in good condition.



Photo # 41: - Photovoltaic System Disconnects on Roof



Photo # 42: - Photovoltaic System Main Disconnect and Meters



Photo # 43: - Typical Interior Vestibule Lighting

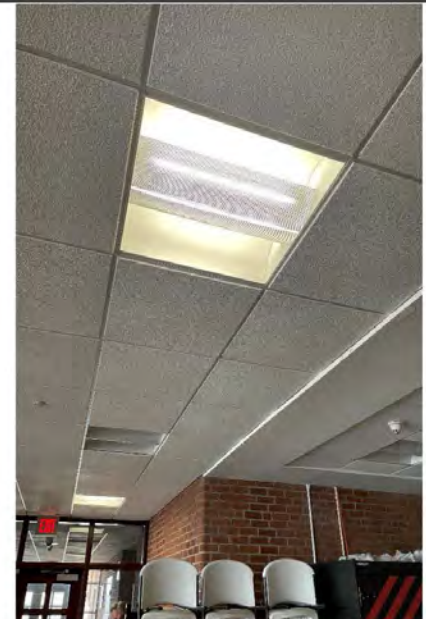


Photo # 44: - Typical Corridor Lighting

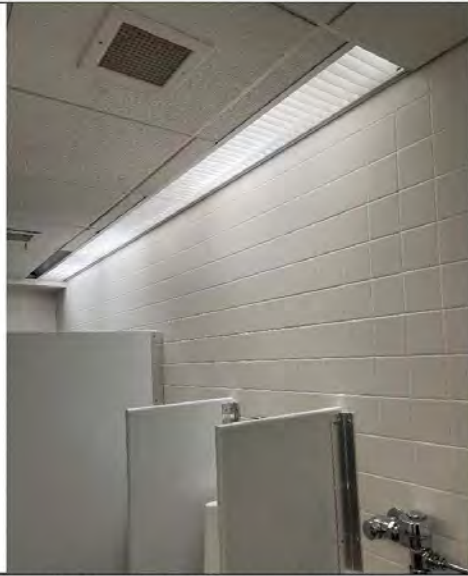


Photo # 45: - Typical Restroom Lighting



Photo # 46: - Typical Classroom Lighting



Photo # 47: - Typical Lab Classroom Lighting

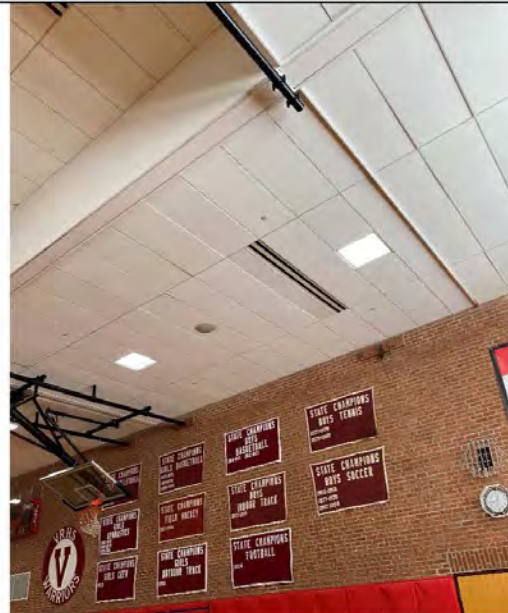


Photo # 48 - Recessed Lighting in Gymnasium

3. General telephone utilization throughout the building is VoIP provided by Valcom. This is tied in to the building paging/public address system with ceiling and wall mounted speakers located throughout the facility. Combination analogue clock/paging speakers are installed in classrooms. All systems appeared operational with no reported issues.

4. TV - The building appears to contain elements of TV infrastructure at the MDF rack for Video IPTV streaming in the building.

5. Access Control and Surveillance - The building uses an access control system consisting of card readers located at the main points of entry. Headend equipment is by KerriSystems. Surveillance cameras are located at various points around the exterior and interior of the building. The video system is networked with a dedicated HD displays located in Facilities and Administration. All systems appear to be operating properly, with no reported issues. No intrusion detection was observed.

6. The building is equipped with an Aiphone video entry/monitoring system, with stations located at the main points of entry.

F. TECH ED BUILDING:

7. Power to the building comes from Eversource Pole #1107, located behind the building along Regional High School Road No. 2. Secondary service cabling runs overhead from the pole mounted utility transformer to a weatherhead mounted above the backside of the structure. Cabling in conduit runs from there down to a utility meter socket and tap box. Conduit extends from the tap box to a point where it enters the building to feed a 200A, 208Y/120V, 3-phase, 4-wire distribution panelboard.

8. The distribution panel is a General Electric NLQ series of undetermined vintage. This panel serves lights, receptacles and equipment. Small 24-circuit GE load centers serve other loads in various parts of the building. Replacement parts/spares for this equipment will be difficult to find should any require service.

9. Lighting in classroom areas consists of LED direct/indirect pendant fixtures, controlled by wall switches and ceiling mounted occupancy sensors. "Back of house" lights were chain hung industrial type fluorescents with wireguards. Lighting systems throughout the space appeared to be well maintained and in good to excellent condition.

10. A trunk line from the school carries fiber and telecommunications cabling to a systems rack inside the building. The rack contains patch panels for fiber and localized telecommunications distribution. Wired outlets and wireless access points are located throughout the building.

11. The access control system consists of card readers located at the main points of entry. Headend equipment is by KerriSystems. No surveillance cameras or intrusion detection were observed.

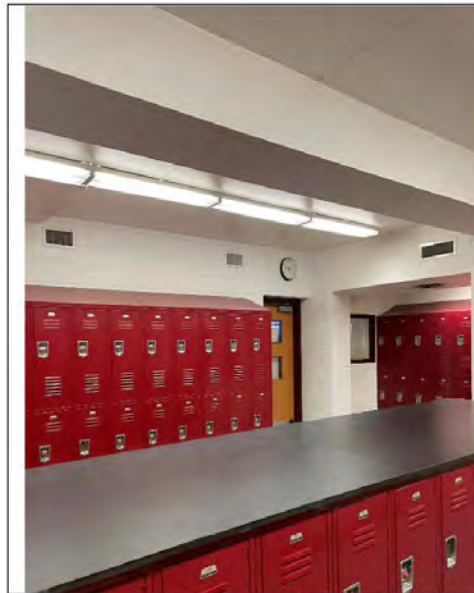


Photo # 49: - Typical Locker Room Lighting

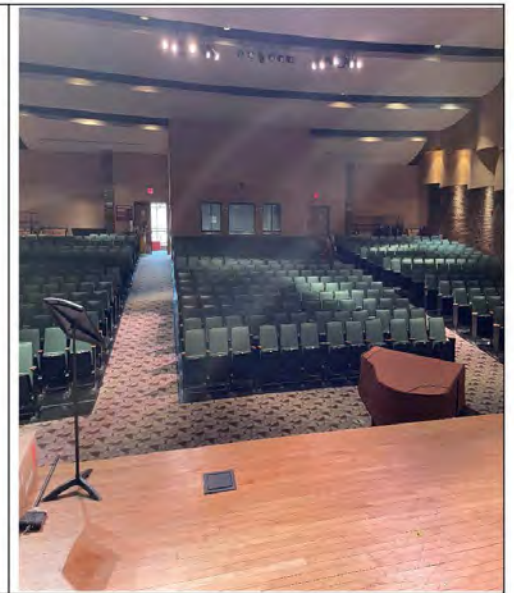


Photo # 50: - Auditorium Lighting

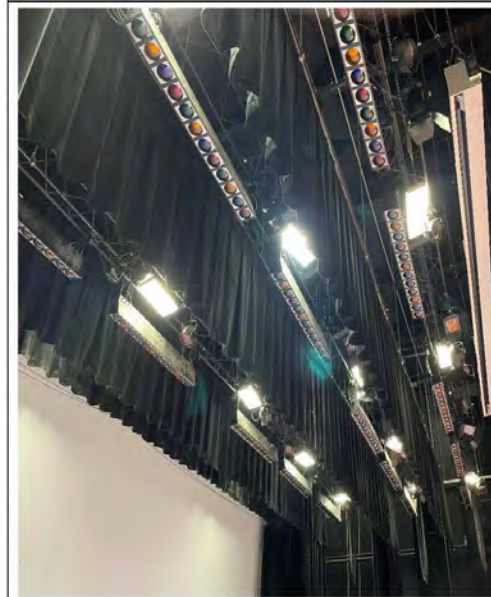


Photo # 51: - Auditorium Theatrical Stage Lights and Rigging



Photo # 52: - Typical Fire Alarm System Control Panel (one of three that serve the facility)



Photo # 53: - Typical Remote Annunciator Panel with Microphone for Voice Evacuation



Photo # 54 – Fire Pump

12. The building is provided with full sprinkler system from the system provided to the main school. The riser is located in a storage closet and is a 3" wet riser with alarm valve. A fire department connection is located on the exterior of the building. The sprinkler system appears to be in fair condition for its age and appears to be operating correctly.

13. Heating hot water is provided via (1) H.B. Smith oil fired boiler. There is a dedicated 330 gallon oil tank in the building which serves the boiler. The boiler has a rated capacity of 359 MBH. Hot water is circulated around the building via an in-line pump. The pump is manufactured by Bell & Gossett and was installed in 1999.

14. Cooling and ventilation is provided by (2) ducted unit ventilators. The unit ventilators are provided with cooling from grade mounted, condensing units. The units were installed in 1995 and are operating past their useful life.



Photo # 55: - Fire Pump Controller



Photo # 56: - Fire Pump Disconnect

G. MEP SYSTEMS CONCLUSION:

Plumbing systems are in fair condition. Equipment appears to be operating as designed, however, the equipment is nearing the end of its useful life. It would be recommended to upgrade the domestic water heating plant if a major renovation was to take place. It may be considered to reduce the amount of water heaters to reduce the amount of equipment that needs to be maintained by the building staff.

The fire protection system appears to be in fair condition given the age of the system. Overtime, piping can start to corrode due to water chemistry and air being trapped in the system if it is not properly pitched to drains, etc. It would be recommended that if the building was renovated, the entire fire protection service assembly (including the main service into the building) be replaced with new.

The existing boiler plant and pumps are exceeding their useful life and should be replaced in the near future. High efficiency gas boilers may be an option for replacing the existing boiler plant. Since no natural gas is available, propane could be used to serve the new boiler plant.

The buildings ventilation and cooling system via the air cooled chiller plant is exceeding its useful life and should be replaced/ upgraded within the next 5-10 years. While the equipment is still operating as designed, a failure in piping could lead to leaking and damage within the building. Existing air handling units should be replaced with dedicated outdoor air units that don't mix any of the return air back into the supply air stream. The units would be more efficient utilizing energy recovery wheels and economizer controls.



Photo # 57: - Main Telecommunications System Demarc

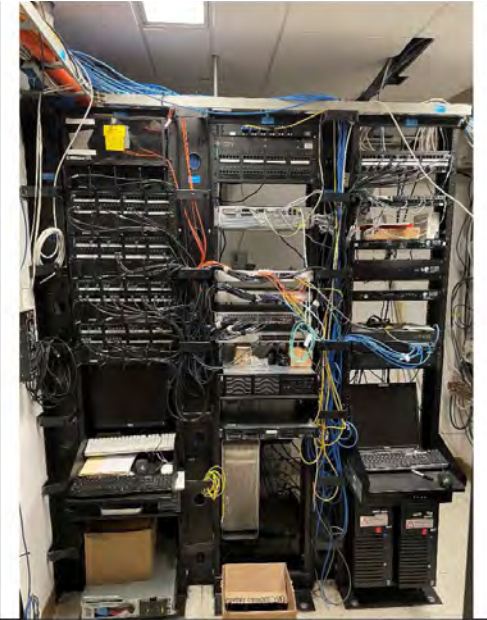


Photo # 58: - MDF Racks and Equipment



Photo # 59: - IDF Rack and Equipment (one of three that serve the facility)



Photo # 60: - Public Address Audio System Rack



Photo # 61: - Access Control Headend Equipment (KerriSystems)



Photo # 62: - Card Reader and Aiphone Video Monitoring Station

The Main Electric Service Switchboard and distribution system were installed as part of additions and renovations that were made in 2003-2006. This equipment is in excellent condition with no reported issues and should remain in service for another 15-20 years. Distribution and branch panelboards, distribution transformers and feeders appeared in good condition with no issues reported.

Lighting systems in the corridors and vestibules have been retrofitted with newer technology, more energy efficient LED lamps. Emergency lighting and exit signage for egress appeared to be operating properly. It is suggested that lights in the classrooms be replaced with new LED equipped fixtures and low voltage controls, for improved light quality and higher efficiency. Any remaining fluorescent fixtures should be either retrofitted with new LED lamps, or replaced entirely with new LED designed fixtures and drivers.

The fire alarm system and ancillary devices were installed during the 2003-2006 additions and renovations. All this equipment is in excellent operating condition. Modifications and programming enhancements can be made to this system as required, but no immediate improvements are necessary.

The data network infrastructure was upgraded recently. The VoIP phone system offers the highest level of technological advancement to date. These systems are in good condition and do not require immediate improvement. The wireless access point distribution appears to be adequate based on conventional industry standard spacing. No improvements are required at present.



Photo # 63: - Tech Ed Building



Photo # 64: - Eversource Utility Pole #1107 Behind Tech Ed

The existing access control system is recent with no major issues reported. It is recommended that a review of desired access controlled doors and end-user operations be conducted. A full assessment by a qualified technician is recommended to verify that all devices are connected and tested for proper operation.

The existing video surveillance system is in good working condition. As an improvement, it is recommended that additional high definition cameras be added inside the school. As higher resolution cameras become available, an assessment of existing network video recorder capacity should be conducted to determine future expansion capabilities.

The paging system and speakers currently function with no issues. No improvements are required at present.

No existing panic button or silent alarm system was observed in the building. If none is present, it is recommended that the installation and implementation of such a system be considered.

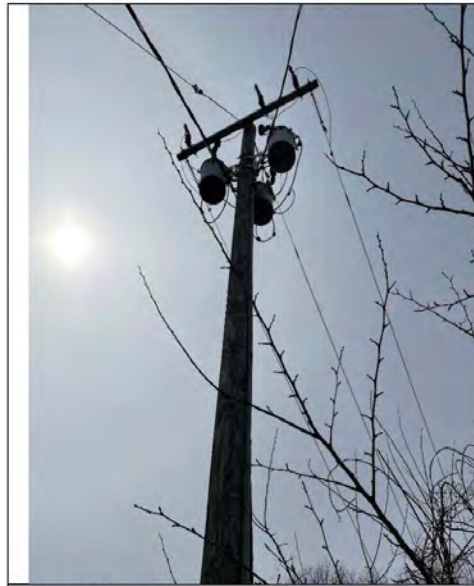


Photo # 65: - Eversource Utility Pole Transformers

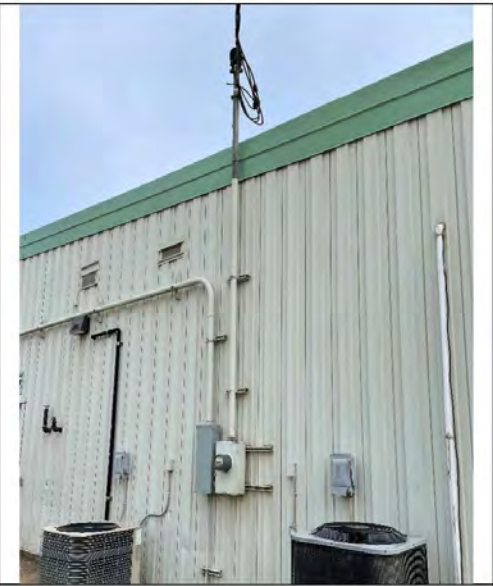


Photo # 66: - Overhead Utility Service and Weatherhead



Photo # 67: - Utility Meter Socket and Tap Box



Photo # 68: - 200A Distribution Panel



Photo # 69: - GE Load Center Panel



Photo # 70: - Classroom Lighting



Photo # 65: - Telecommunications Rack Equipment



Photo # 66: - Access Control Headend

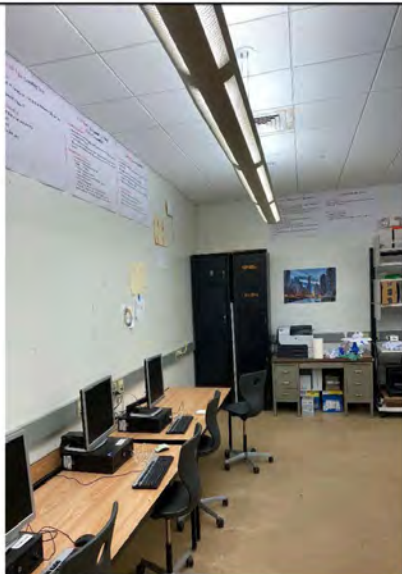


Photo # 71: - Classroom Lighting



Photo # 72: - Telecommunications Conduits into Rack



Photo # 67: Electric fire pump control panels.



Photo # 68: Electric fire pump and jockey pump.



Photo # 69: Fire protection riser assemblies.



Photo # 70: Fire Protection water storage tank



Photo # 73: Tech Ed: Existing HB Smith boiler.



Photo # 74: Tech Ed: Existing electric domestic water heater.



Photo # 71: Fire protection test header and fire department connection.



Photo # 72: Existing air handling units in mezzanine.



Photo # 75: Tech Ed: Fire Protection riser assembly.

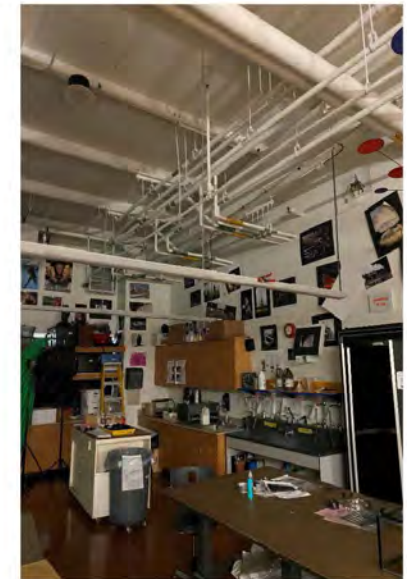


Photo # 76: Tech Ed: Classroom area with exposed piping and ductwork.

Summation:

The building overall is in good condition. The condition of the finishes and overall quality of the building reflects the attention and care that staff expend on the tasks of maintaining a proper educational environment.

The site has some areas of concern relative to physical condition of the asphalt walkways and curbing. ADA compliance is a concern in regards to playfields.

The building exterior is showing signs of deterioration and aging of several components. Most notable of these are the chimney and the low-slope roofs

The roofs are of uniform age and are two different products from the same manufacturer. The roofs are generally aging well but are approaching the end of their service lives. The warranty on the roof systems expired in 2019. Planning for the replacement of the roofs should be undertaken in the next two years (2023/24)

Some wear and loss of paint is seen on areas of the soffits, this should be addressed quickly to prevent rotting of the wood trim.

The building interior also shows minimal signs of wear and is in overall good condition. The no areas of particular concern within the building are some worn areas of flooring and beginning of what appears to be terminal failure of some of the built-in casework.

There are relatively few ADA compliance issues that were identified.

Projected Capital Improvement Expenditures

Projections of expenditures for capital improvements are provided to serve as a guide to help the District plan for fiscal and logistical needs for the next 20 years. As such, there is not a detailed budget developed for any of the items listed.

The projected costs are based upon current market pricing from projects of similar scope and complexity. The costs include allowances for what are commonly referred to as 'Owner's soft costs' such as professional designer fees, construction management, hazardous materials testing, etc.

It is recommended that best-practices in preparing the CIP budget would be to provide funding for, and undertake investigations and design in advance of appropriations for the actual construction; IE appropriate monies for design in FY2024 for work that would be funded and undertaken in FY2025.

This approach allows sufficient time for investigation of existing conditions and proper design, documentation, and budget estimating so that the funding request for the construction is based upon completed documents.

Finally, the costs for near-term (2025), mid-term (2030), long-term (2035), and future (2040) are inclusive of cost escalation factors. This is done to provide as realistic a projection as might be possible for work that might be undertaken years in the future.

The demarcation of particular fiscal years is intended not as a hard target for the work described, but as a milestone date by which the planning and funding discussions should be fully addressed. The immediate (2023) expenditures projected for the Valley Regional High School are to address concerns related to the chimney and investigations / planning for the roof replacement.

For FY 2025 it is recommended that some of the ADA compliance issues at the athletic facilities be addressed along with upgrades to signage throughout the campus.

The following pages show the projected needs and costs for FYs 2030, 2035, and 2040.

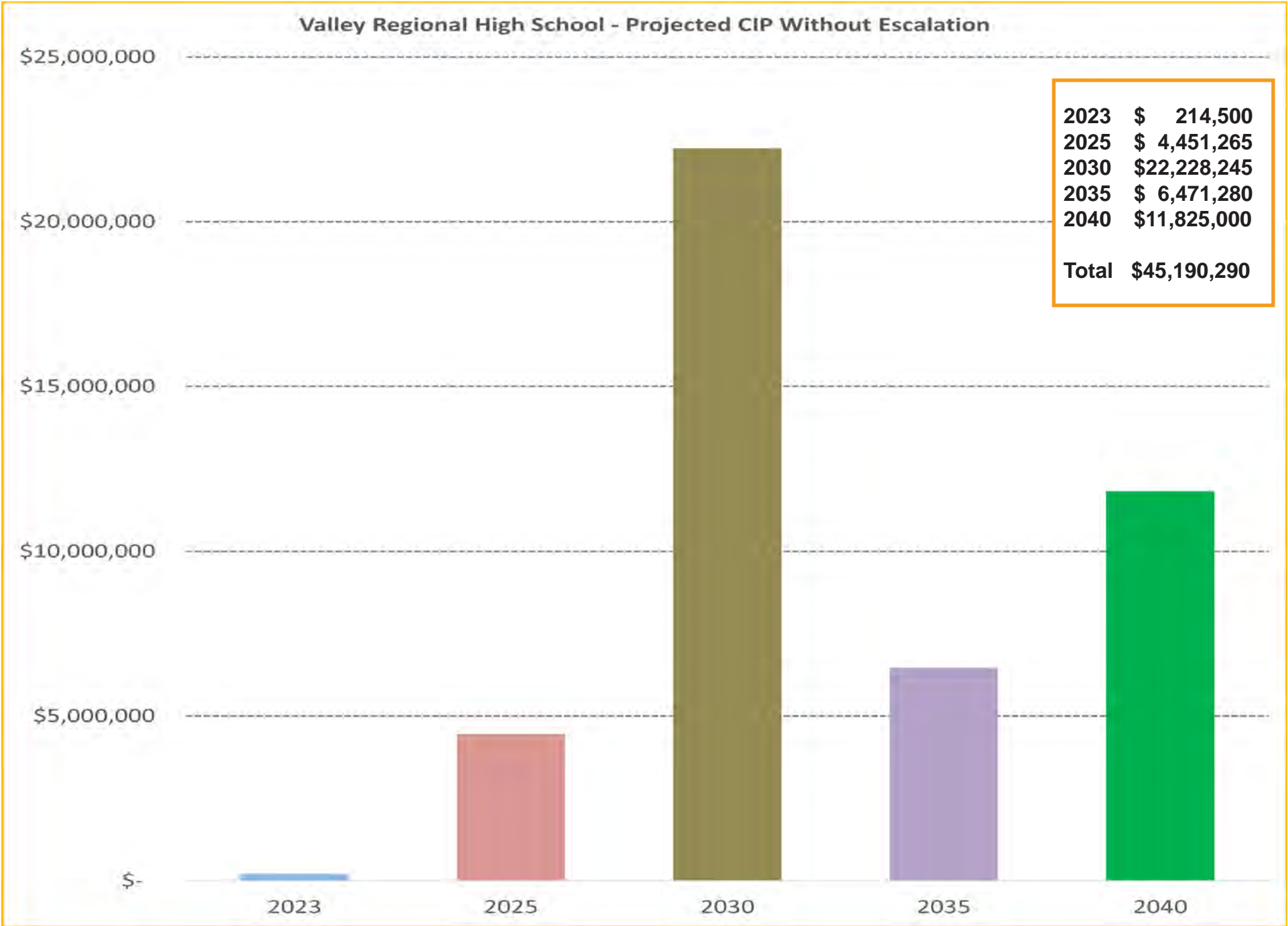
The final two pages of this section have first a bar chart showing total projected costs for each milestone Fiscal Year. The second bar chart depicts the same scope of work but reflects costs escalated on a compounded annual basis to illustrate the projected increase in cost for the same scope of work as time moves on.

Regional School District #4									
Capital Needs Survey Form									
Valley Regional High School									
October 20, 2022							Site	38.67	Acres
							Building:	140,000	Square Feet
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS
2023									
Chimneys	1	3	1952	2023	1	each	\$ 125,000	\$ 125,000	
Roofing - investigation and design	1	3	N/A	2023	140,000	sq.ft.	\$ 1	\$ 70,000	
2025									
Site - Sidewalks - sports accessibility	1	2	2005	2025	3,500	sq.fl	\$ 100	\$ 350,000	
Site - Play surfacing - Tennis Courts	1	2	2005	2025	37,200	sq.fl	\$ 10	\$ 372,000	
Site - Play surfacing - Running Track	1	2	2005	2025	157000	sq.fl	\$ 3	\$ 392,500	
Site - Signage	1	2	2005	2025	30000	sq.fl	\$ 1.00	\$ 30,000	
Roofing - replacement	1	3	2004	2025	140000	sq.fl.	\$ 18.00	\$ 2,520,000	
Flashing - replacement	1	3	2004	2025	140000	sq.fl.	\$ 0.50	\$ 70,000	
Water Infiltration Conditions - replacement	1	3	2004	2025	140000	sq.fl.	\$ 0.50	\$ 70,000	

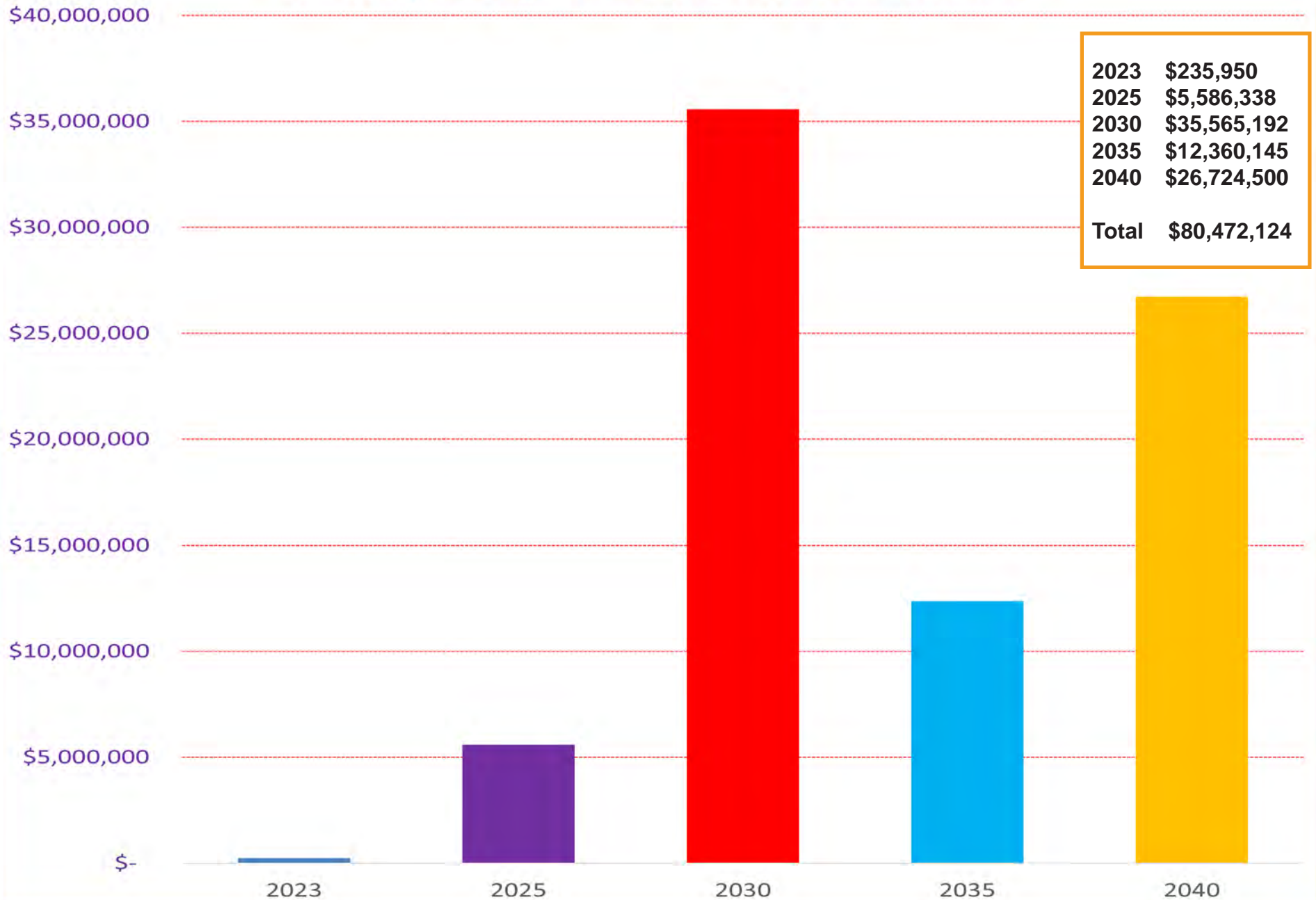
Regional School District #4										
Capital Needs Survey Form										
Valley Regional High School								Site	38.67	Acres
October 20, 2022								Building:	140,000	Square Feet
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS	
2030										
Site - Fuel Tanks	1	2	2005	2030	1	each	\$ 15,000	\$ 15,000		
Site - Paving	1	2	2005	2030	125,000	sq.ft	\$ 9	\$ 1,125,000		
Site - Sidewalks - site	1	2	2005	2030	3000	sq.ft	\$ 15	\$ 45,000		
Site - Retaining Walls	1	2	2005	2030	1	each	\$ 15,000	\$ 15,000		
Site - Fencing	1	4	2005	2030	3,650	ln.ft.	\$ 50.00	\$ 182,500		
Exterior Platforms, Stair, and Areaways	1	5	952 / 200	2030	500	sq.ft	\$ 30	\$ 15,000		
Pipe and Tube Railings	1	4	952 / 200	2030	300	ln.ft.	\$ 20.00	\$ 6,000		
Exterior Canopies	1	4	952 / 200	2030	2500	sq.ft.	\$ 35.00	\$ 87,500		
Stairs, and Stair Railings	1	2	952 / 200	2030	120	ln.ft	\$ 800.00	\$ 96,000		
Carpet	2	3	2005	2030	2250	sq.yd.	\$ 25.00	\$ 56,250		
Paint	2	3	2005	2030	800000	sq.ft.	\$ 0.50	\$ 400,000		
Other finishes	2	3	2005	2030	3000	sq.ft.	\$ 15.00	\$ 45,000		
Gymnasium Wall Padding	1	3	2005	2030	350	ln.ft.	\$ 40.00	\$ 14,000		
Stage Curtains-If across stage	2	3	2005	2030	1800	sq.ft.	\$ 35.00	\$ 63,000		
Blinds / Shades	2	3	2005	2030	125	each	\$ 250.00	\$ 31,250		
Fire Protection Water Main	1	3	2005	2030	1	each	\$ 35,000.00	\$ 35,000		
FP Backflow Device	1	3	2005	2030	1	each	\$ 35,000.00	\$ 35,000		
FP Water Distribution System	1	3	2005	2030	140000	sq.ft.	\$ 12.00	\$ 1,680,000		
Domestic Water Main	1	3	2005	2030	1	each	\$ 65,000.00	\$ 65,000		
Domestic Water Distribution System	1	2	2005	2030	140000	sq.ft.	\$ 15.00	\$ 2,100,000		
Gas Supply	1	N/A	N/A	2030	1	each	\$ 35,000.00	\$ 35,000		
Plumbing Drainage System	1	3	2005	2030	140000	sq.ft.	\$ 12.00	\$ 1,680,000		
Plumbing Fixtures / Equipment	1	3	2005	2030	0	each	\$ -	\$ -		
Boys/Girls Restrooms	1	3	2005	2030	12	each	\$ 120,000	\$ 1,440,000		
Restroom Sinks	1	3	2005	2030	18	each	\$ 2,000.0	\$ 36,000		
Classroom Sinks	1	3	2005	2030	18	each	\$ 2,000	\$ 36,000		
Water Heater	1	3	2005	2030	2	each	\$ 45,000	\$ 90,000		
Circulator Pumps	1	3	2005	2030	2	each	\$ 2,500	\$ 5,000		
Heating Boiler	1	3	2005	2030	3	Each	\$ 125,000	\$ 375,000		
Heating/ Ventilation	1	3	2005	2030	140000	sq. ft.	\$ 27	\$ 3,780,000		
Air Conditioning	1	3	2005	2030	140000	sq. ft.	\$ 24	\$ 3,360,000		
Exhaust Systems	1	3	2005	2030	10	each	\$ 15,000	\$ 150,000		
Control Systems	1	3	2005	2030	140,000	sq. ft.	\$ 8	\$ 1,120,000		
Heating Pumps/Zones	1	3	2005	2030	8	Each	\$ 10,000	\$ 80,000		
Security System	1	3	2005	2030	140,000	sq.ft.	\$ 5	\$ 700,000		

Regional School District #4									
Capital Needs Survey Form									
Valley Regional High School							Site	38.67	Acres
October 20, 2022							Building:	140,000	Square Feet
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS
2035									
Site - Lighting									
Building Mounted Fixtures	1	4	2005	2035	10	each	\$ 3,500	\$ 35,000	
Pole Mounted Fixtures	1	3	2005	2035	10	each	\$ 4,500	\$ 45,000	
Site - Play Equipment	1	3	2005	2035	2	each	\$ 125,000.00	\$ 250,000	
Site - Play Fields	1	3	2005	2035	401200	sq.ft.	\$ 2.00	\$ 802,400	
Finish Woodwork	2	3	2005	2035	3000	sq.ft.	\$ 10.00	\$ 30,000	
Classroom cabinetry	2	3	2005	2035	31	clsrn	\$ 15,000	\$ 465,000	
Art Room cabinetry	2	3	2005	2035	2	clsrn	\$ 20,000	\$ 40,000	
Library cabinetry	2	3	2005	2035	1	clsrn	\$ 75,000	\$ 75,000	
Science Lab cabinetry	2	3	2005	2035	5	clsrn	\$ 25,000	\$ 125,000	
Doors - Exterior	1	3	2005	2035	38	each	\$ 2,000	\$ 76,000	
Doors - Interior	1	3	2005	2035	256	each	\$ 2,000	\$ 512,000	
Doors - Finish Hardware	1	3	2005	2035	294	each	\$ 2,000	\$ 588,000	
Windows	1	3	2005	2035	13,500	sq.ft.	\$ 65	\$ 877,500	
VCT	2	4	2005	2035	11000	sq.ft.	\$ 12.00	\$ 132,000	
Other flooring	2	4	2005	2035	8800	sq.ft.	\$ 15.00	\$ 132,000	
Ceramic tile	2	4	2005	2035	2000	sq.ft.	\$ 15.00	\$ 30,000	
Ceilings									
Acoustical	2	4	2005	2035	125,000	sq.ft.	\$ 3	\$ 375,000	
GWB	2	4	2005	2035	8,500	sq.ft.	\$ 3	\$ 25,500	
Visual Display Surfaces - tack boards	3	3	2005	2035	110	each	\$ 200	\$ 22,000	
Visual Display Surfaces - white boards	3	3	2005	2035	110	each	\$ 200	\$ 22,000	
Toilet Compartments / Accessories	2	3	2005	2035	10	rooms	\$ 15,000	\$ 150,000	
Louvers	2	3	2005	2035	4	each	\$ 2,000	\$ 8,000	
Food Service Equipment	1	4	2005	2035	1	room	\$ 525,000.00	\$ 525,000	
Auditorium Seating-seats	2	4	2005	2035	488	each	\$ 225.00	\$ 109,800	
Standby Generator / ATS Equipment	2	4	2005	2035	1	each	\$ 175,000.00	\$ 175,000	
Transformer	1	4	2005	2035	0	each	\$ -	\$ -	

Regional School District #4									
Capital Needs Survey Form									
Valley Regional High School									
October 20, 2022							Site	38.67	Acres
							Building:	140,000	Square Feet
SYSTEM	System Priority 1 to 4 (1-Health & Safety, 2-High, 3-Medium, 4-Low)	System Rating 1 to 5 (1 Poor, 5 Excellent)	Last Major Reconstruction (Year)	Projected Replacement (Year)	Quantity	Unit of Measure	Unit Price	Current Replacement Cost	REMARKS
2040									
Site - Electrical	2	3	2005	2040	1	allow	\$ 250,000	\$ 250,000	
Concrete Foundation Walls	1	5	952 / 200	2040	20,000	sq.ft	\$ 1	\$ 20,000	
Concrete Floor/Roof Planks	1	3	952 / 200	2040	140,000	sq.ft	\$ 1	\$ 140,000	
Masonry Walls - Exterior	1	5	952 / 200	2040	240,000	sq.ft	\$ 3.00	\$ 720,000	
Masonry Walls - Interior	1	5	952 / 200	2040	120,000	sq.ft	\$ 3.00	\$ 360,000	
Structural Steel	1	4	952 / 200	2040	140,000	sq.ft.	\$ 3.00	\$ 420,000	
Steel Joists	1	4	952 / 200	2040	140,000	sq.ft.	\$ 3.00	\$ 420,000	
Steel Deck	1	4	952 / 200	2040	140000	sq.ft.	\$ 3	\$ 420,000	
Steel Lintels	1	3	952 / 200	2040	1,500	ln.ft	\$ 20.00	\$ 30,000	
Elevators	1	4	2005	2040	1	each	\$ 225,000.00	\$ 225,000	
Electrical Service	1	4	2005	2040	1	allow	\$ 45,000.00	\$ 45,000	
Electrical Distribution	1	4	2005	2040	140000	sq.ft.	\$ 10.00	\$ 1,400,000	
Lighting - General	0	0	2005	0	140000	sq.ft.	\$ 11.00	\$ 1,540,000	
Classroom Lighting	1	4	2005	2040	0	sq.ft.	\$ -	\$ -	
Gymnasium Lighting	1	4	2005	2040	0	sq.ft.	\$ -	\$ -	
Corridor Lighting	1	4	2005	2040	0	sq.ft.	\$ -	\$ -	
Emergency Lighting	1	4	2005	2040	140000	sq.ft.	\$ 7	\$ 980,000	
Communication Systems	1	4	2005	2040	140,000	sq.ft.	\$ 8	\$ 1,120,000	
Technology Systems	1	4	2005	2040	140,000	sq.ft.	\$ 8	\$ 1,120,000	
Fire Alarm System	1	4	2005	2040	140,000	sq.ft.	\$ 8.00	\$ 1,120,000	
Clock System	1	4	2005	2040	140,000	sq.ft.	\$ 3.00	\$ 420,000	



Valley Regional High School - Project CIP With Escalation



APPROPRIATENESS FOR USE

The Valley Regional High School comprises approximately 112,000 square feet of net area and 140,600 square feet gross, yielding a 1.24 gross to net ratio. The State of Connecticut Office of School Construction Grants & Review (OSCG&R) allocates a net to gross ratio of 1.11. The inefficiency of the Valley Regional HS is attributable primarily to the single loaded corridors in the science area, and the size of the library and auditorium.

Following the OSCG&R guidelines, this size building would accommodate around 819 students.

The floor plan is that of a large high school of the early Baby Boom era, with attention given to daylight harvesting and extra-curricular activities. The addition of the auditorium in 2005 provided the final piece of large-volume space so that the facility really can offer something for everyone.

Virtually all of the teaching spaces in the building are close to the OSCG&R guidelines as to size and amenities. Spaces designed for contemporary approaches to the lesson plans for those students with individual educational plans or special education needs are lacking, however.



- ① Main Entry
- ③ Student Entry
- ④ Secondary Egress
- ⑥ Classrooms
- ⑧ Restrooms Teacher's
- ⑭ Meeting Room / Office

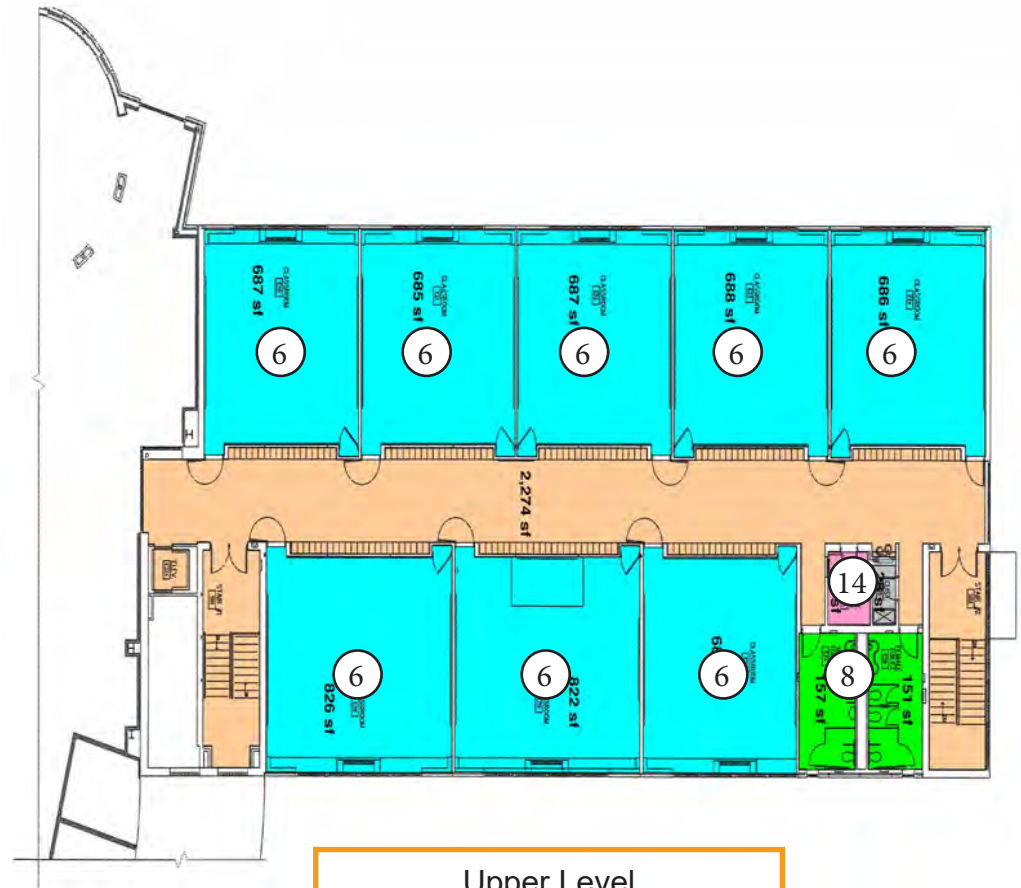
8 Classrooms -

6 @ ~ 670 sq.ft. each

2 @ ~ 825 sq.ft. each



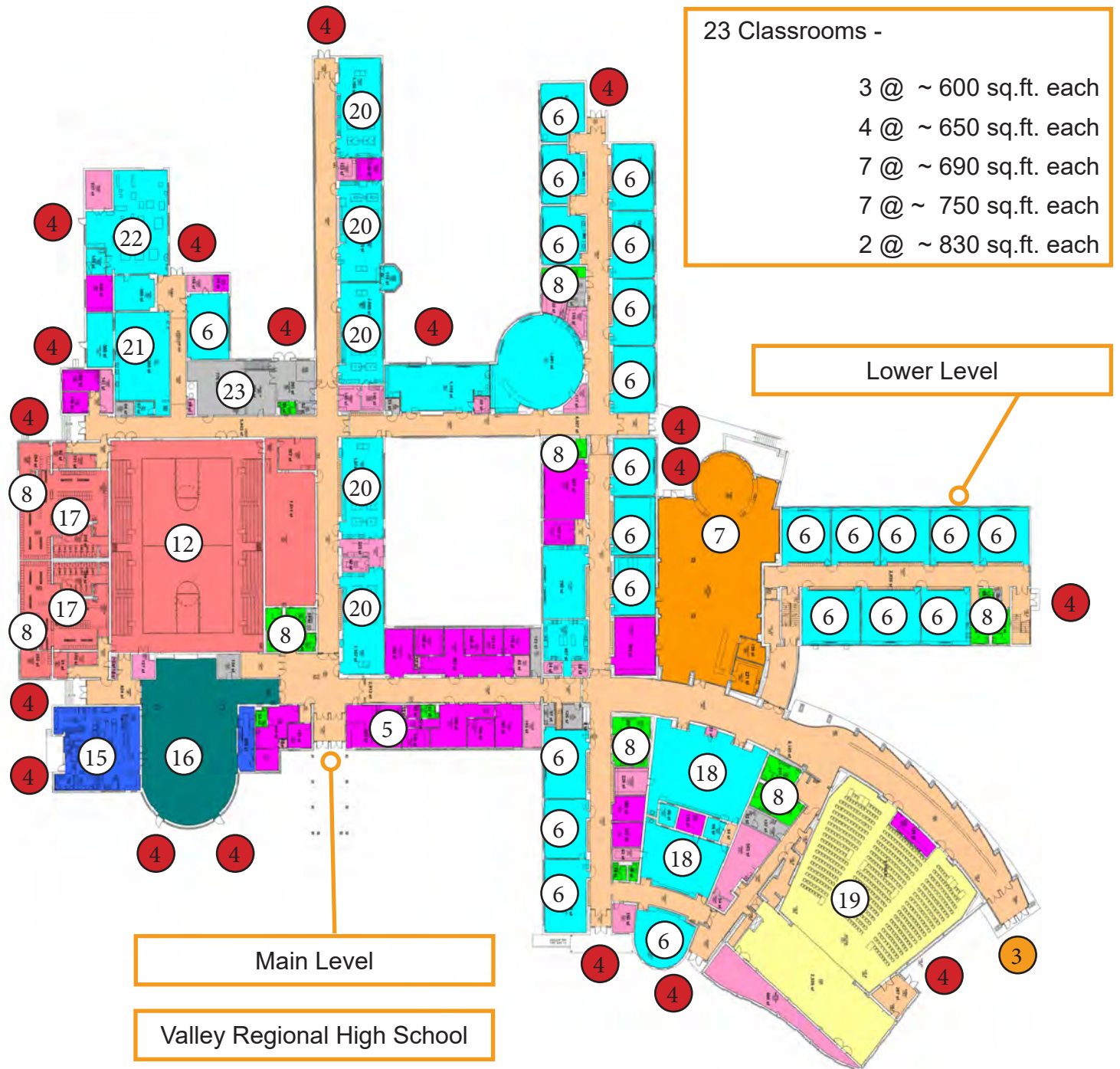
Tech-Ed Building



Upper Level

Valley Regional High School

- ① Main Entry
- ② Secure Vestibule
- ③ Student Entry
- ④ Secondary Egress
- ⑤ Main Office
- ⑥ Classrooms
- ⑦ Library
- ⑧ Restrooms
- ⑩ Teacher's Breakroom
- ⑪ Stage
- ⑫ Gym
- ⑬ Gym Storage
- ⑭ Meeting Room / Office
- ⑮ Kitchen
- ⑯ Cafeteria
- ⑰ Locker Rooms
- ⑱ Music Room
- ⑲ Auditorium
- ⑳ Science Lab
- ㉑ Art Room
- ㉒ Wood Shop
- ㉓ Mechanical



Projected Enrollment

School District: RSD #4, CT

11/22/2021

Enrollment Projections By Grade*																				
Birth Year	Births*		School Year	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	UNGR	K-12	PK-12
2016	98		2021-22	29	101	80	102	94	97	105	107	126	123	111	140	132	182	0	1500	1529
2017	82		2022-23	34	90	105	80	103	95	99	107	109	131	115	112	142	136	0	1424	1458
2018	82		2023-24	36	90	92	106	80	104	97	100	109	112	123	116	114	146	0	1389	1425
2019	80		2024-25	38	89	93	92	106	81	106	98	102	113	105	124	118	118	0	1345	1383
2020	90	(prov.)	2025-26	40	99	93	93	92	107	83	107	100	107	107	106	126	121	0	1341	1381
2021	86	(est.)	2026-27	42	95	103	94	95	93	109	84	109	104	101	108	108	130	0	1333	1375
2022	84	(est.)	2027-28	44	92	98	103	96	96	95	110	86	114	97	102	111	112	0	1312	1356
2023	84	(est.)	2028-29	46	93	95	98	104	97	97	96	112	90	107	98	104	114	0	1305	1351
2024	85	(est.)	2029-30	48	93	96	95	99	105	99	99	98	117	84	108	100	107	0	1300	1348
2025	86	(est.)	2030-31	50	95	96	96	96	100	107	101	101	102	110	85	111	103	0	1303	1353
2026	85	(est.)	2031-32	52	93	98	96	97	97	102	109	103	104	96	111	86	114	0	1306	1358

Note: Ungraded students (UNGR) often are high school students whose anticipated years of graduation are unknown, or students with special needs - UNGR not included in Grade Combinations for 7-12, 9-12, etc.

Based on an estimate of births

Based on children already born

Based on students already enrolled

*Birth data provided by Public Health Vital Records Departments in each state.

Projected Enrollment in Grade Combinations*									
Year	K-6	K-5	PK-6	K-8	PK-8	6-8	7-8	7-12	9-12
2021-22	686	579	715	935	964	356	249	814	565
2022-23	679	572	713	919	953	347	240	745	505
2023-24	669	569	705	890	926	321	221	720	499
2024-25	665	567	703	880	918	313	215	680	465
2025-26	674	567	714	881	921	314	207	667	460
2026-27	673	589	715	886	928	297	213	660	447
2027-28	690	580	734	890	934	310	200	622	422
2028-29	680	584	726	882	928	298	202	625	423
2029-30	686	587	734	901	949	314	215	614	399
2030-31	691	590	741	894	944	304	203	612	409
2031-32	692	583	744	899	951	316	207	614	407

Projected Percentage Changes			
Year	K-12	Diff.	%
2021-22	1500	0	0.0%
2022-23	1424	-76	-5.1%
2023-24	1389	-35	-2.5%
2024-25	1345	-44	-3.2%
2025-26	1341	-4	-0.3%
2026-27	1333	-8	-0.6%
2027-28	1312	-21	-1.6%
2028-29	1305	-7	-0.5%
2029-30	1300	-5	-0.4%
2030-31	1303	3	0.2%
2031-32	1306	3	0.2%
Change		-194	-12.9%

*Projections should be updated annually to reflect changes in in/out-migration of families, real estate sales, residential construction, births, and similar factors.

Projected Enrollment in Grade Combinations*

Year	K-6	K-5	PK-6	K-8	PK-8	6-8	7-8	7-12	9-12
2021-22	686	579	715	935	964	356	249	814	515
2022-23	679	572	713	919	953	347	248	745	505
2023-24	669	569	705	890	926	321	221	720	499
2024-25	665	567	703	880	918	313	215	680	465
2025-26	674	567	714	881	921	314	207	667	460
2026-27	673	589	715	886	928	297	213	660	447
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2029-30	686	587	734	901	949	314	215	614	399
2030-31	691	590	741	894	944	304	203	612	409
2031-32	692	583	744	899	951	316	207	614	407

Maximum Reimbursable Gross Square Feet**88,660**

PROGRAM AREAS	New	Exist SF	Total SF	# Instr Area
Academic Core	0	25,735	25,735	31
Special Education	0	3,000	3,000	
Administration	0	4,410	4,410	
Media Center	0	6,400	6,400	
Visual Arts	0	2,120	2,120	1
Music	0	3,974	3,974	2
Performing Arts / Auditorium	0	10,266	10,266	1
Life Skills/Tech/Bus Education	0	3,660	3,660	2
Physical Education	0	14,810	14,810	3
Student Dining	0	3,840	3,840	
Food Service	0	1,714	1,714	
Custodial	0	400	400	
Subtotal - Net Square Feet	0	80,329	80,329	40
Building Services	0	31,846	31,846	
Subtotal - Net SF including Building Service	0	112,175	112,175	
Construction Factor	0.11	0.11	0.25	
Total Gross SF Programmed - Funded	0	124,514	140,000	

Difference between existing building and OSCG&R Space Guidelines is 51,340 square feet

PROJECTED STUDENT ENROLLMENT	Students	# Inst. Areas		Students	# Inst. Areas
8-Year Highest Projected Enrollment	8-Year	25		8-Year	25
Pre-Kindergarten	0	0.00	Grade 6	0	0.00
Kindergarten	0	0.00	Grade 7	0	0.00
Grade 1	0	0.00	Grade 8	0	0.00
Grade 2	0	0.00	Grade 9	115	5.29
Grade 3	0	0.00	Grade 10	112	5.15
Grade 4	0	0.00	Grade 11	142	6.53
Grade 5	0	0.00	Grade 12	136	6.26
Total Student Enrollment				505	23.23

ABOVE: Teaching space allocation matrix from Form SCG-2500, Chapter 5 of the Office of School Construction. This shows that for the highest projected enrollment over the next eight years (which for Valley Regional HS is the current (2022 - 2023) school year) the State Construction Grant program would provide grant funding for construction of fifteen (24) classrooms utilizing a 25 student classroom loading.

PRECEDING PAGE: Space allocation matrix from Form SCG-2500 showing Maximum Reimbursable Gross Square Feet under OSCG&R formula for a 505 student Grades 9 to 12 school is 36,240 square feet. The existing Valley Regional High School comprises approximately 112,175 square feet of program space in a building of just over 140,000 square feet. The existing building exceeds the OSCG&R funding guideline by 7 classroom spaces and over 51,340 square feet of building.

Consideration for Future Uses

The Valley Regional High School greatly exceeds the space guidelines for funding through an OSCG&R grant at the highest enrolment projected over the next eight years.

The existing spaces within the school are reasonably within the space standards the OSCG&R guidelines allocate and there are no spaces shown within the guidelines that don't already exist within the school.

The building could support an enrolment of perhaps 800 or more students within the existing floor plan, the OSCG&R guidelines state that it could accommodate 819.

The site is quite large and there are plenty of athletic and physical education opportunities with the established fields on site. The gymnasium, auditorium, library, and dining areas are all large enough to easily accommodate additional students.

There is no practical means of decreasing the size of the building.

The most logical approach would be to look to increase the enrolment of the school. The John Winthrop Middle School is significantly oversize and underutilized.

A plan that moves Grades 7 & 8 from the Winthrop Middle School could have numerous benefits:

- A Middle / High School cohort of 745 students in the current school year.
- This size cohort would be comfortably accommodated in the Valley Regional High School building with few modifications.
- A Middle / High School model provides educational benefits through a greater range of curriculum offerings.
- The sports and athletic offerings would likely increase for all students.
- Aligning Grades 7 & 8 with the High School provides increased learning opportunities for the Middle School students, with access to science labs, the auditorium, and other spaces and amenities of the Valley Regional High School.



Region 4 - John Winthrop - Valley Regional				
Proposed Capital Projects for 23-24 Fiscal Year				
Working Document Prepared As Of: 3/31/2023				
Priority	School	Amount Requested:	Funding Source	School Year 2021-2022
1	Valley Regional	Home Ec Kitchen Renovation	Capital Fund	65,000.00
1	Valley Regional	Science Lab Cabinetry Replacements	Capital Fund	18,000.00
1	Valley Regional	Library Furniture	Capital Fund	13,150.00
1	Valley Regional	HVAC Needs for Aging Equipment	Capital Fund	24,980.00
1, 2	Valley Regional	Curbing, Sidewalks, and Facility Paving	Capital Fund	25,423.00
1	Valley Regional	Flooring - Part of Continuous Flooring Replacement Plan	Capital Fund	14,523.00
		TOTAL		161,076.00
Other Projects & Requests (NOT in 23-24 List of Funding Needs)				
1	Valley Regional	Chimney Repair	Capital Fund (21-22 appropriation)	85,700.00
1	Valley Regional	Tennis Court Repair and Resurfacing (multi-phase)	State Grants	100,340.00
2	John Winthrop	10K UGT Investigation / Repair	Capital Fund	50,000.00
		TOTAL OTHER CAPITAL PROJECTS & REQUESTS		236,040.00
Priority Descriptions				
	1 End of Service Life, Health & Safety, or Risk Mitigation			
	2 Code or Access Issue			
	3 Projects represent risk and need, but not as immediate as Priority 1			

Business and Non-Instructional Operations**Non-Lapsing Education Fund
(Reserve Fund for Capital and Nonrecurring Expenditures)**

On Oct 03, 2019 the Regional School District #4 Board of Education (the “Board”) approved a resolution to create a reserve fund for capital and nonrecurring expenditures pursuant to Section 10-51(d)(2) of the Connecticut General Statutes (the “Capital Reserve Fund”).

The following policy will govern the Capital Reserve Fund:

1. *The aggregate amount of annual and supplemental appropriations to the Capital Reserve Fund shall not exceed ~~one-two~~ percent ± 2% of the annual district budget in any given fiscal year. Annual appropriations to the Capital Reserve Fund shall be included in the share of net expenses paid by each member town. In addition, supplemental appropriations to the Capital Reserve Fund shall be approved by a vote of the Board and may be made from any estimated fiscal year end surplus in operating funds as allowed by state statute and Region 4 policy.*
2. *Interest and investment earnings received with respect to amounts held in the Capital Reserve Fund shall be credited to the Capital Reserve Fund. The Capital Reserve Fund shall be a separate, non-lapsing account and such funds shall be held in a separate account from operating funds.*
3. *Unanticipated non-emergency expenditures of more than \$250,000, such as an opportunity to make a purchase not previously anticipated, shall be presented to the public in a regional public hearing, prior to Board action. Expenditures over \$500,000 shall be presented to the public in a regional public hearing, followed by a district meeting or referendum.*
4. *No later than October 1 of each year, the Board shall submit a complete and detailed report of the condition of the Capital Reserve Fund to the First Selectman, Finance Director (or equivalent), and the Chairperson of the Board of Finance of each member town. Such report shall contain: (i) the total dollar amount of the Capital Reserve Fund at the end of the prior fiscal year; (ii) the total amount of interest or investment earnings deposited into the Capital Reserve Fund in the prior fiscal year; (iii) a list of all projects that are being financed in whole or in part by the Capital Reserve Fund and that are not yet completed; and (iv) any additional information that the Board approves for inclusion in the report. Additional information may include expenditures by project, original appropriations, approved expenditures, expenditures incurred by year to date or project to date, and remaining balance.*

5. *Upon the recommendation and approval of the Board, any part or the whole of the Capital Reserve Fund may be used for capital and nonrecurring expenditures, but such use shall be restricted to the funding of all or part of the planning, construction, reconstruction or acquisition of any specific capital improvement or the acquisition of any specific item of equipment. Upon the approval of any such expenditure, an appropriation shall be set up, plainly designated for the project or acquisition for which it has been authorized, and such unexpended appropriation may be continued until such project or acquisition is completed. Notice of approval of expenditures shall be communicated electronically to the First Selectmen, the Chair of the Board of Finance and the Finance Director (or equivalent) of each member town within five business days of such approval. Any unexpended portion of such appropriation remaining after such completion shall remain in the Capital Reserve Fund.*
6. *If any authorized appropriation is set up pursuant to this policy and through unforeseen circumstances the completion of the project or acquisition for which such appropriation has been designated is impossible to attain or is no longer in the best interests of the District, the Board, by a majority vote of its entire membership, may terminate such appropriation which then shall no longer be in effect. Any remaining funds for such project or acquisition shall remain in the Capital Reserve Fund for reallocation.*
7. The Capital Reserve Fund may be discontinued, after the recommendation and approval by a majority vote of the entire membership of the Board, and any amounts held in the Capital Reserve Fund shall be transferred to the general fund of the District.
8. This policy shall be reviewed by a committee of the Region 4 Board at least once every five years. Said committee shall include Town officials from each member town.

Legal Reference:

Connecticut General Statute:

Section 10-51(d)(2) of the Connecticut General Statutes

[June Special Session, Public Act No. 212](#)

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