

Section IV – Conceptual Design Options and Master Plans

To conclude the analysis of the school needs, several design options have been produced to help determine the appropriate solution for the future of Weston's schools. This portion of the study analyzes the information gathered from the Facility Conditions Analysis section, the Milone and MacBroom Comprehensive Enrollment Study projections and the Facility Programming section to provide viable options that address the population, the utilization, the physical facility needs and educational programmatic needs of the schools. Weston is facing a declining enrollment and has some areas in the school buildings that have not seen improvements in many years.

The design phase brings the Facility Conditions and Programming together to help reveal the needs and ultimately solutions. Additionally, many other components influence design such as the client, cost, schedule, program, site, context, community, environment, sustainability, technology, codes and regulations. Moving forward with all the information will create a dialogue for decision making. This allows the exploration of options and the implementation of appropriate solutions to the problem.

The first step in a ten-year master plan is to assign priorities to move forward in a logical sequence. As the facility conditions and the programming are overlaid, prioritizations tend to reveal themselves. School needs have been prioritized into the following order:

1. Weston Middle School
2. Weston High School
3. Hurlbutt Elementary School
4. Weston Intermediate School
5. Campus Master Plan

The Weston School campus is an unprecedented asset and almost collegiate in nature. With this in mind, the review of the campus, including its school administration offices, school support facilities and town offices, is integrated into various campus master plan options. The separation of Central Office and the Annex will be addressed along with the Bus building location. The vision is to create a master plan of improvements that will enhance Weston Public School's title: The highest rated school.

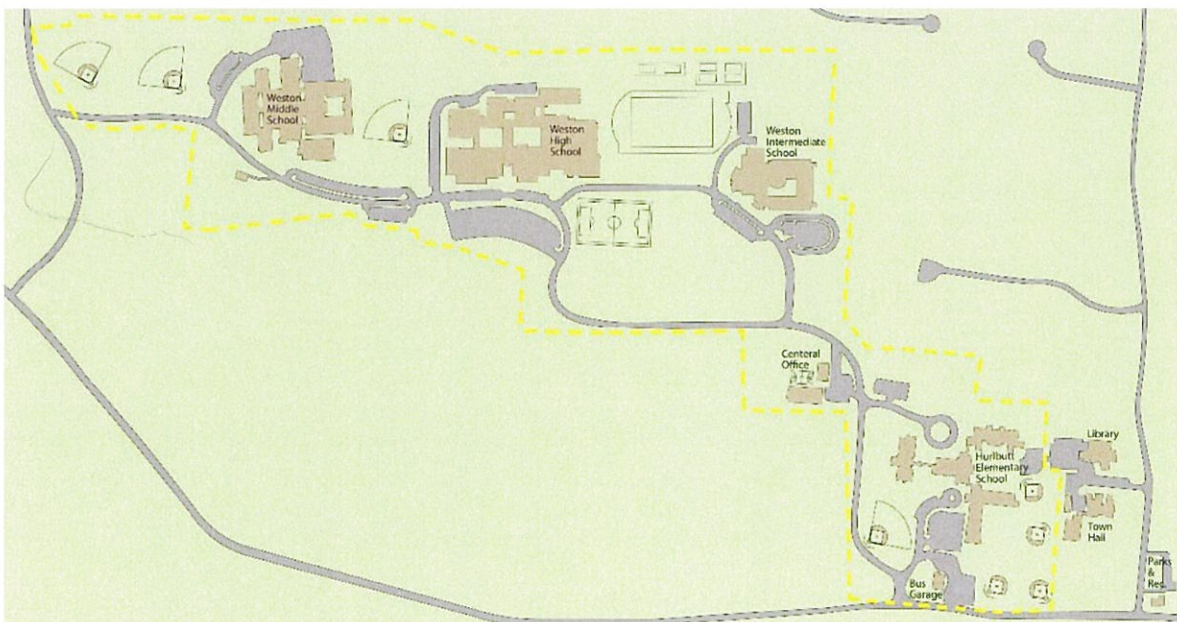


Figure 1: Campus Site Plan, SP+A

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School utilization is a key factor in all school studies, MMI and SP+A have joined efforts in determining the utilization of these schools today and in the future. MMI created a Building Deployment and Capacity formula which is based in part on the programming effort of SP+A. After determining how many full-sized general and support classrooms there are at each school the maximum class size policies are applied to each of these classrooms. The next step is scheduling periods as a factor applied to the occupancy of these rooms. This creates the maximum capacity of the school. Finally, the current enrollment is divided by the max capacity of 95% to determine the utilization of each school. In the following design options, classroom quantities may have changed and the MMI 5-year projections are used to determine the future utilization rate for each new design configuration.

Weston Middle School Design Options

Weston Middle School strives to support 21st century learning at its finest. Out of all the four schools the middle school has taken priority of the building in need of improvements. While it currently offers the students' academic options and provides a safe atmosphere to flourish in, it can only deliver so much with the current state of the building and its spaces. The Media Center and the Project Lead the Way classrooms shine amongst the rest of the 1960s building. This report has detailed a multitude of infrastructure, physical and programmatic improvements this building requires to provide a modern facility that will support the high standard of education delivered to these students.

The concept of STEAM (Science, Technology, Engineering, Art, Math) education has gained much prominence in this middle school and across America's schools in general. It has become a crucial component of education and continues to gain traction as it's a program that truly prepares the next generation. While the technology and engineering at the middle school provide its students an optimal space to explore, question, discover, and collaborate, the science and art spaces fall short. The biggest struggle this school has is the inadequate Science Labs. Priorities have been defined as the following:

1. Building Infrastructure
2. STEAM – Science Labs
3. STEAM – Art & Music - stage
4. Lockers
5. Classrooms
6. Administration
7. 2nd gym – new type of physical education function/share with town?

The Middle School has greater needs on a larger scale than any of the facilities and therefore multiple options have been brought forward. Many elements remain consistent throughout each option such as renovations to the locker rooms, music rooms, art rooms, lockers and the demolition of the existing interior science labs. Some of the elements of each option can be selected individually and combined in various ways to create the town and schools' most desired plan. The three options suggest a good, better, best selection with Option 1 being the best, achieving all the requests and recommendations.

Option 1

Option 1 delivers the optimal Science labs. To achieve this, more demolition and new construction will need to take place than the following 2 science options. Demolishing a good portion of G-wing and building 6 new sufficiently sized Science Clabs along with 3 shared prep rooms is the best option to meet the school program. This location with its adjacency to engineering also creates a STEM wing for the school and opens the enclosed courtyard to the field. The removal of the current science labs allows for a courtyard to provide natural light into many of the interior bound classrooms. Additionally,

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a new stage is provided in place of the undersized inaccessible stage. The New gym is shown converted into other physical activities such as Project Challenge or various fitness spaces. Another component of this option is the new entry and office. It's the largest of all the options but provides the best entry sequence and office layout. This eliminates the grand exterior stair and bringing everyone inside closer to the parking. It also incorporates security right at the stair and elevator.

Moving forward with this option Weston Middle School would have an 88% utilization rate based on the MMI 5-year projections. Currently the school is operating at a 99% utilization rate. The decrease occurs mostly due to the reduction in enrollment, but is also affected by the elimination of a classroom due to the science lab reconfiguration and demolition of G-wing.

Option 2

Option 2 takes a more modest approach and works at reusing more of the building. Instead of demolishing G-wing, the idea here is to renovate and demolish interior walls to create Science Labs. Working in the existing structure creates some challenges and sacrifices. For instance, the overall size of each lab is smaller than preferred. It is desired to have space for the lab and a classroom (Clab) which cannot be achieved well within this square footage. Additionally, there is no space to incorporate supporting Prep rooms. However, these labs will be more functional and better than what exists today. The stage addition is shown on the opposite side of the cafeteria which is a challenge due to the generator and transformer locations, but is a plausible option to explore. The entry also takes a similar approach to Option 1, just on a smaller scale. The entry will still bring people right into the building from the parking area, but the sequence is not as welcoming and the stair is quite linear. The office space is like the previous option altered to work with this entry.

Moving forward with this option Weston Middle School would have a 93% utilization rate based on the MMI 5-year projections. Currently the school is operating at a 99% utilization rate. The decrease occurs mostly due to the reduction in enrollment, but is also affected by the elimination of classrooms due to the science lab reconfiguration of G-wing and some special Education rooms in C-wing.

Option 3

Option 3 takes a similar approach to Option 2 however this option includes adding a space designated to Central Office in A-wing. This location works well for a variety of reasons. It can easily be separated and secured from the remainder of the school and has a proximity to the Media Center. It can accommodate a separate entry and parking area. The square footage area of A-wing meets the square footage needs of Central Office. Unfortunately, this takes away the larger classrooms and wreaks havoc on the grade 6 and 7 wings which is critical to keep clustered together. The building functions with its grade level wings and necessitates the quantity of classrooms to support team teaching. Therefore, some classroom additions are added to the bookends of the wings to accommodate the minimum of 6 classrooms. Additionally, since so much space is taken away from the school the 2 small courtyards could be converted into special education classrooms. A new entry sequence is not included here, but a modest office addition is.

Moving forward with this option Weston Middle School would have a 101% utilization rate based on the MMI 5-year projections. Currently the school is operating at a 99% utilization rate. The increase occurs because of the educational loss of A-wing to the Central Office relocation and to the science lab reconfiguration of G-wing and some special Education rooms in C-wing. This option begins to push the capacity limits of this building.

28 NEW ROUND CAFETERIA TABLES

RECONFIGURE HALLWAY LOCKER ALCOVES & RESTROOMS

RENOVATE ART ROOMS. ADD WINDOWS

DEMOLISH 3325 SQ FT OF SCIENCE LABS

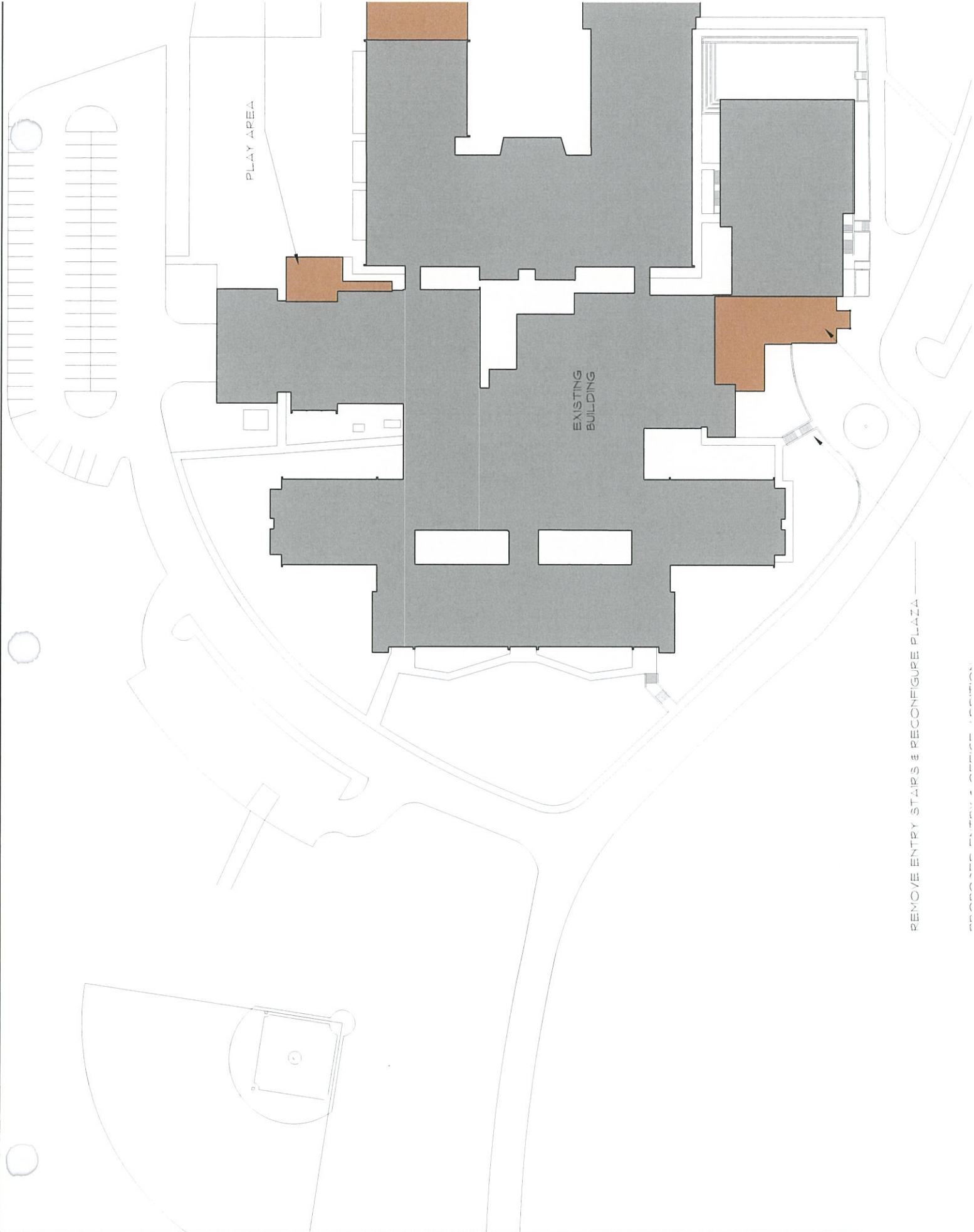
REMOVE NARROW HALL. EXPAND COMPUTER LABS

RECONFIGURE HALLWAY LOCKER ALCOVES & RESTROOMS

CONVERT MAIN OFFICE & LOBBY INTO CONFERENCE ROOMS

CONVERT TO NURSE SUITE





PLAY AREA

EXISTING BUILDING

REMOVE ENTRY STAIRS & RECONFIGURE PLAZA

RECONFIGURE ENTRY & OFFICE CORRIDOR

WESTON SCHOOLS FACILITIES FEASIBILITY STUDY

WESTON MIDDLE SCHOOL - DESIGN OPTION 1 ESTIMATE

Design Option Projects	Area	Cost Per Sq ft	Subtotal	Totals
BUILDING INFRASTRUCTURE (Facility Conditions)				
HVAC			\$ 4,284,000	
Electrical - to support HVAC, improve emergency power, new lighting throughout			\$ 935,625	
Ceilings & devices throughout	102,380	\$ 15	\$ 1,535,700	
Restroom Renovations throughout			\$ 525,000	\$ 7,280,325
STUDENT LOCKERS & A-WING				
Hallway reconfigurations, restrooms & lockers	6,916	\$ 400	\$ 2,766,400	\$ 2,766,400
SCIENCE				
Science demolition	3,325	\$ 50	\$ 166,250	
G-wing demolition	7,534	\$ 40	\$ 301,360	
Science Addition	11,119	\$ 500	\$ 5,559,500	\$ 6,027,110
ART, MUSIC & CAFETERIA				
Music Renovations	6,651	\$ 300	\$ 1,995,300	
Art Renovations	2,633	\$ 300	\$ 789,900	
Cafeteria - stage demolition	644	\$ 20	\$ 12,880	
Stage Addition	1,773	\$ 500	\$ 886,500	
Computer Lab expansion/ Eliminate hall	1,589	\$ 300	\$ 476,700	\$ 4,161,280
GYMS & LOCKER ROOMS				
Old Gym Renovation (finishes & equipment)	5,563	\$ 150	\$ 834,450	
Locker Room Reconfiguration	2,224	\$ 300	\$ 667,200	
New Gym Reconfiguration	5,250	\$ 300	\$ 1,575,000	
Pool Locker Rooms reno and conversion	7,683	\$ 350	\$ 2,689,050	\$ 5,765,700
ENTRY & ADMINISTRATION				
Entry & stair demolition	1,504	\$ 40	\$ 60,160	
New Entry (Stair & Elevator) & Office Addition	7,091	\$ 500	\$ 3,545,500	
Office Renovations/reconfigurations	2,415	\$ 300	\$ 724,500	\$ 4,330,160
OPTION 1 TOTAL				\$ 30,330,975
FACILITY CONDITIONS				
Items from Facility Conditions Spreadsheets			\$ 17,298,474	
Remaining portions, not addressed above				\$ 7,129,674
				\$ 37,460,649



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1,173 SQ FT PLATFORM ADDITION

RECONFIGURE HALLWAY LOCKER
ALCOVES RESTROOMS & SPED

CONVERT 2 SCIENCE
LABS INTO 4 SPED

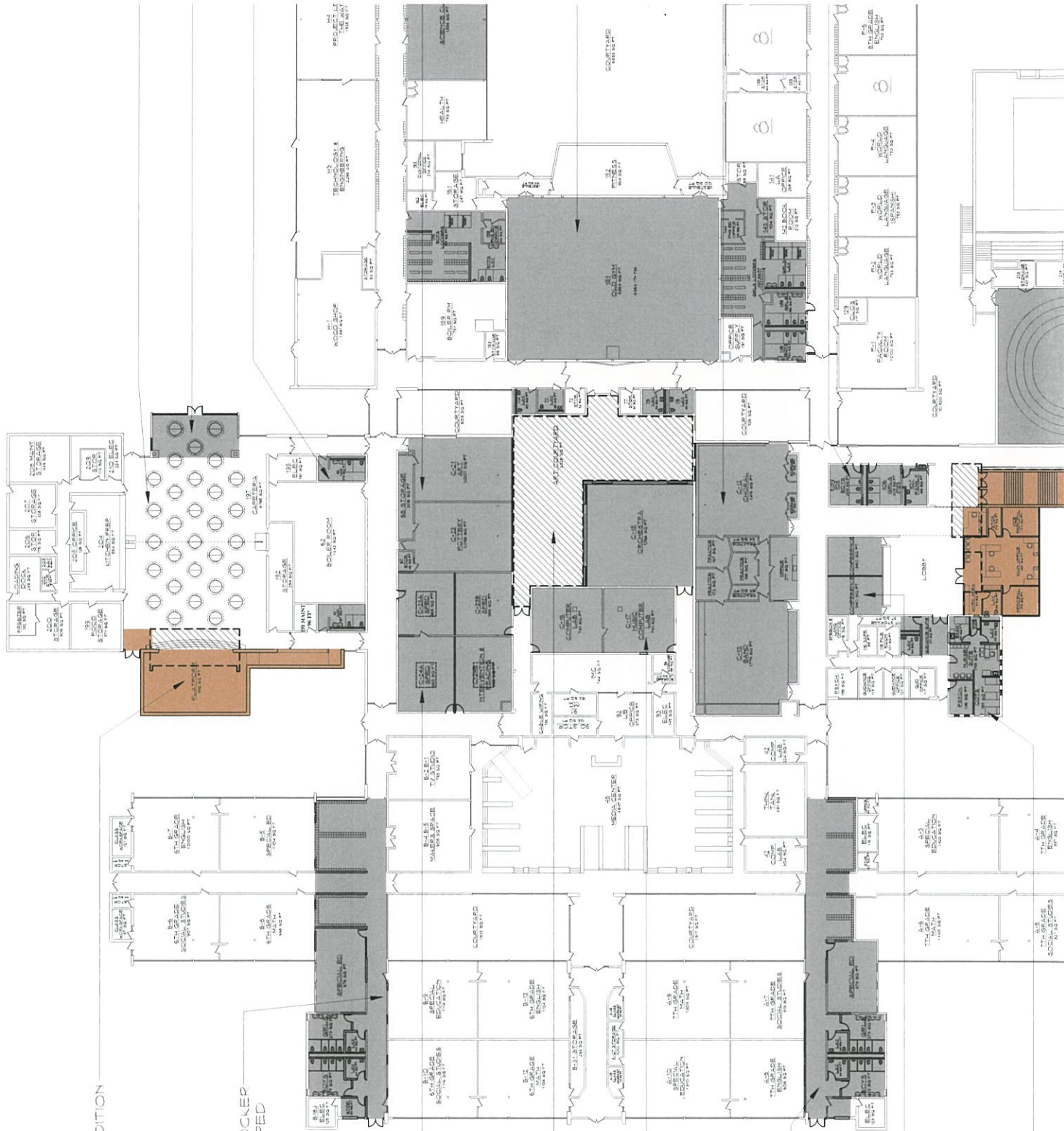
DEMOLISH 3,325 SQ FT
OF SCIENCE LABS

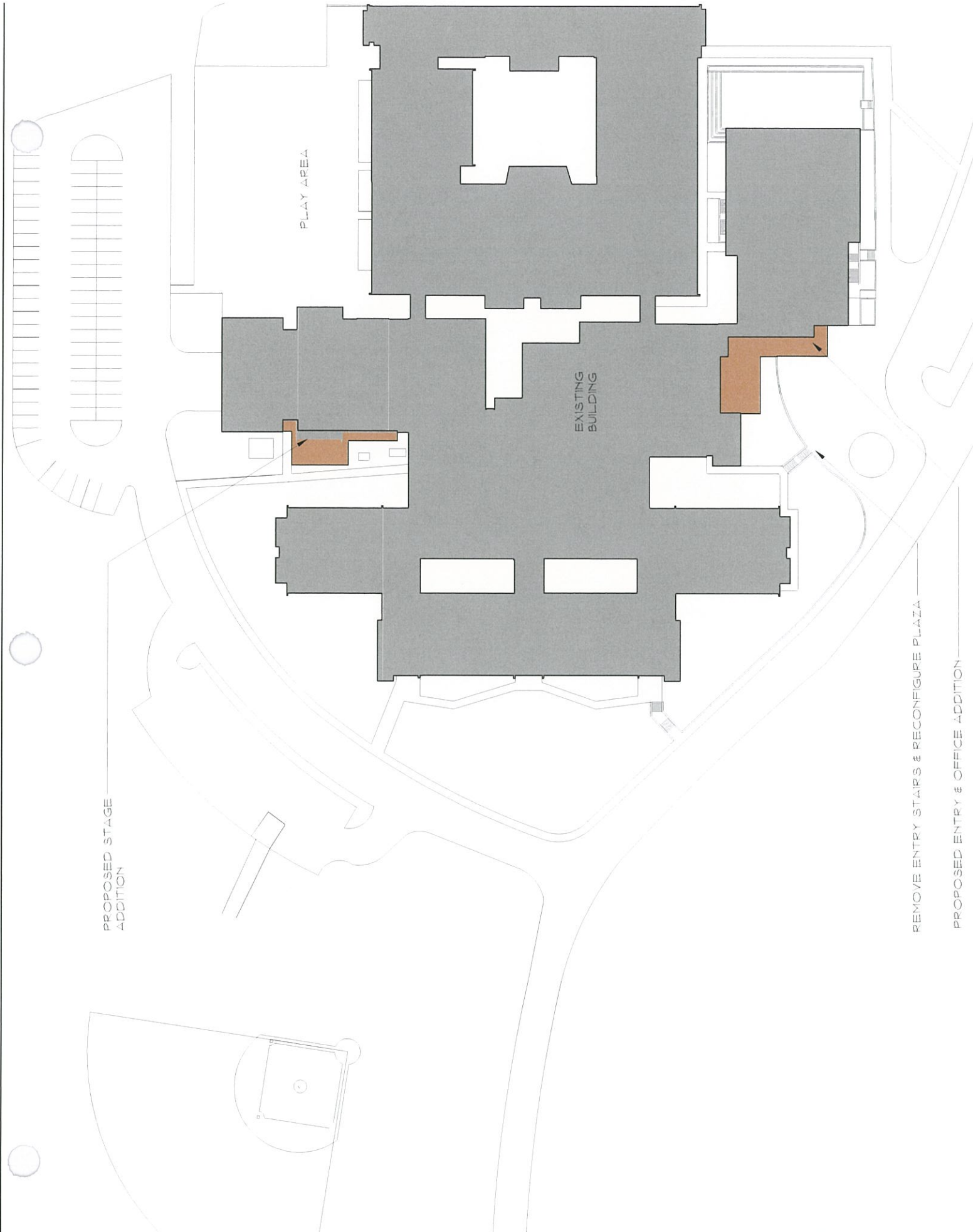
REMOVE NARROW HALL
EXPAND COMPUTER LABS

RECONFIGURE HALLWAY,
LOCKER ALCOVES,
RESTROOMS & SPED

CONVERT MAIN OFFICE TO
CONFERENCE ROOMS

CONVERT TO NURSE SUITE





PLAY AREA

EXISTING BUILDING

PROPOSED STAGE
ADDITION

REMOVE ENTRY STAIRS & RECONFIGURE PLAZA

PROPOSED ENTRY & OFFICE ADDITION

**WESTON SCHOOLS
FACILITIES FEASIBILITY STUDY
WESTON MIDDLE SCHOOL - DESIGN OPTION 2 ESTIMATE**

Design Option Projects	Area	Cost Per Sq ft	Subtotal	Totals
BUILDING INFRASTRUCTURE (Facility Conditions)				
HVAC			\$ 4,165,000	
Electrical - to support HVAC, improve emergency power, new lighting throughout			\$ 935,625	
Ceilings & devices throughout	96,909	\$ 15	\$ 1,453,635	
Restroom Renovations throughout			\$ 875,000	\$ 7,429,260
STUDENT LOCKERS & A-WING				
Hallway reconfigurations, restrooms & lockers	6,916	\$ 400	\$ 2,766,400	\$ 2,766,400
SCIENCE				
Science demolition	3,325	\$ 50	\$ 166,250	
G-wing Science Club Conversion	8,026	\$ 400	\$ 3,210,400	
C-wing (science) Special Education Conversion	2,552	\$ 300	\$ 765,600	\$ 3,376,650
ART & MUSIC				
Music Renovations	6,651	\$ 300	\$ 1,995,300	
Art Renovations	2,633	\$ 300	\$ 789,900	
Cafeteria - stage demolition	644	\$ 20	\$ 12,880	
Cafeteria - Northwest demolition	539	\$ 20	\$ 10,780	
Stage Addition	1,773	\$ 500	\$ 886,500	
Computer Lab expansion/ Eliminate hall	1,589	\$ 300	\$ 476,700	\$ 4,172,060
GYMS & LOCKER ROOMS				
Old Gym Renovation (finishes & equipment)	5,563	\$ 150	\$ 834,450	
Locker Room Reconfiguration	2,224	\$ 300	\$ 667,200	
New Gym Reconfiguration	5,250	\$ 300	\$ 1,575,000	
Pool Locker Rooms	7,683	\$ 350	\$ 2,689,050	\$ 5,765,700
ENTRY & ADMINISTRATION				
Existing entry & stair demolition	1,504	\$ 40	\$ 60,160	
New Entry (Stair & Elevator) & Office Addition	3,874	\$ 500	\$ 1,937,000	
Office Renovations/reconfigurations	2,415	\$ 300	\$ 724,500	\$ 2,721,660
OPTION 2 TOTAL				\$ 26,231,730
FACILITY CONDITIONS				
Items from Facility Conditions Spreadsheets			\$ 17,298,474	
Remaining portions, not addressed above				\$ 7,248,674
				\$ 33,480,404

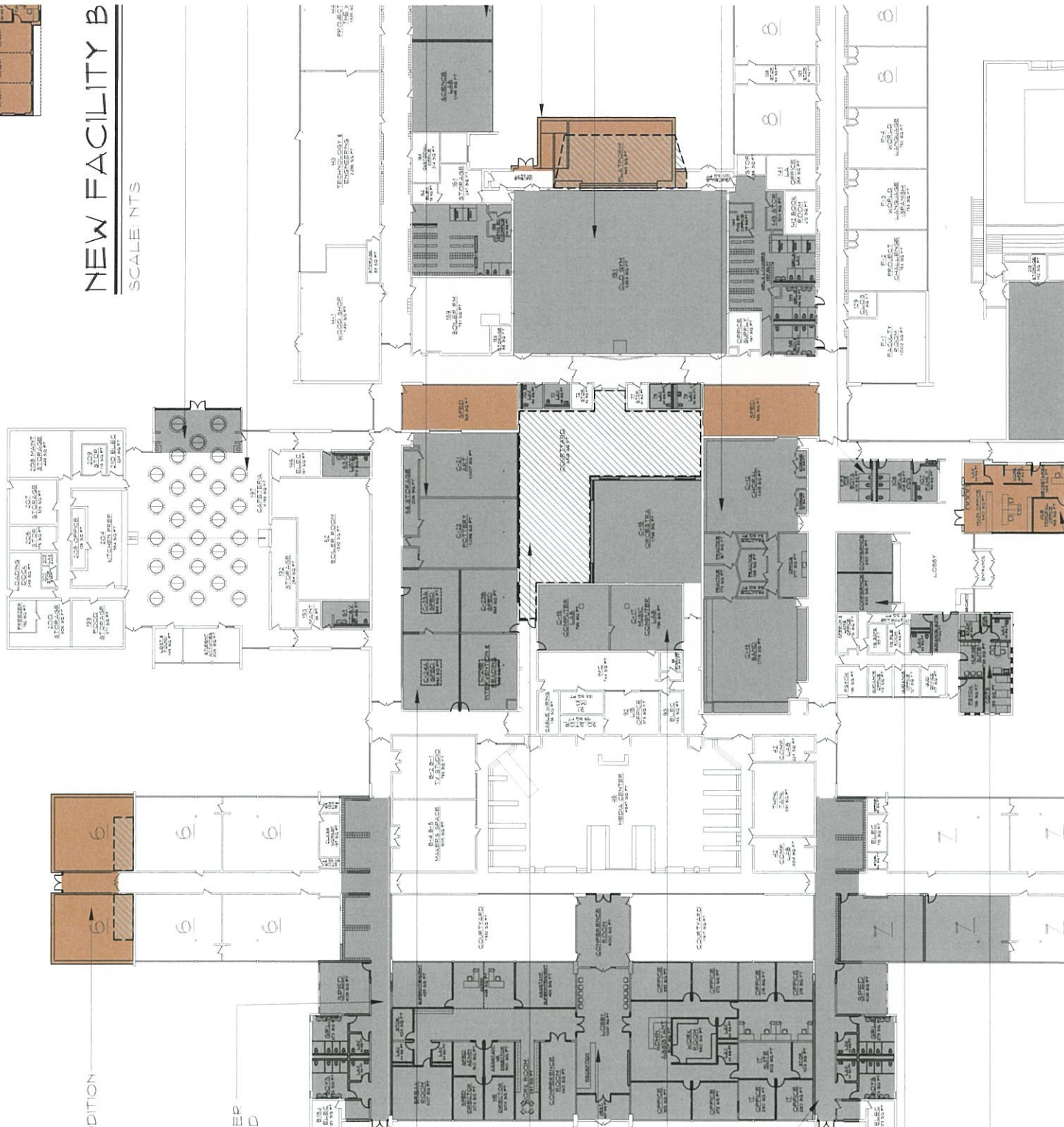
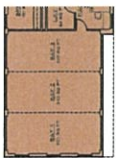


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NEW FACILITY B

SCALENTS



2,136 SQ. FT. 2 CLASSROOM ADDITION

RECONFIGURE HALLWAY LOCKER
ALCOVES RESTROOMS & SPED

CONVERT 2 SCIENCE
LABS INTO 4 SPED

DEMOLISH 3,325 SQ. FT.
OF SCIENCE LABS

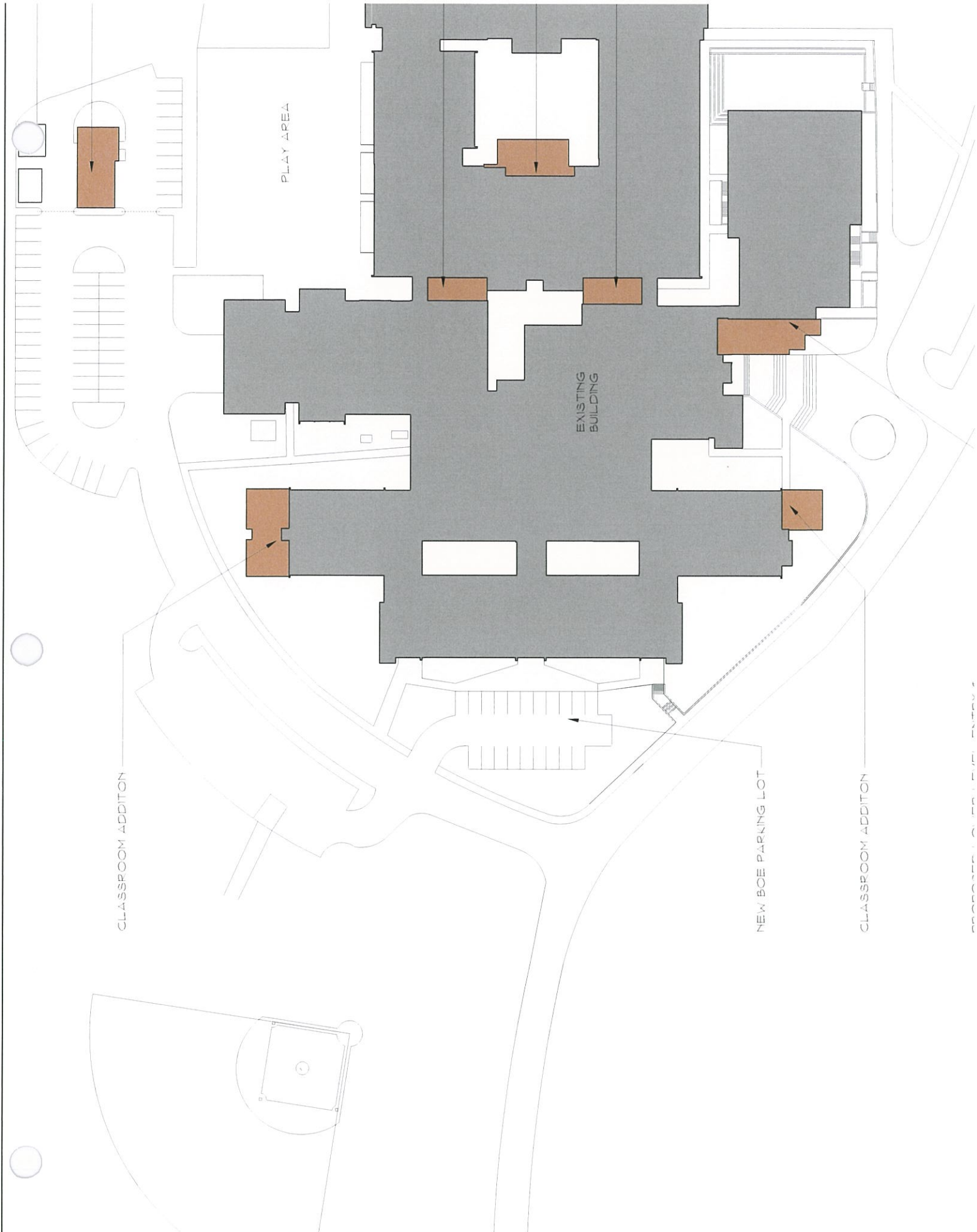
CONVERT CLASSROOMS
INTO BOE SUITE

REMOVE NARROW HALL
EXPAND COMPUTER LABS

RECONFIGURE HALLWAY
LOCKER ALCOVES
RESTROOMS & SPED

CONVERT MAIN OFFICE TO
CONFERENCE ROOMS

CONVERT TO NURSE SUITE



PLAY AREA

EXISTING BUILDING

CLASSROOM ADDITION

NEW BOE PARKING LOT

CLASSROOM ADDITION

PROPOSED CLASSROOM ADDITION

WESTON SCHOOLS
FACILITIES FEASIBILITY STUDY
WESTON MIDDLE SCHOOL - DESIGN OPTION 3 ESTIMATE

Design Option Projects	Area	Cost Per Sq ft	Subtotal	Totals
BUILDING INFRASTRUCTURE (Facility Conditions)				
HVAC			\$ 3,847,000	
Electrical - to support HVAC, improve emergency power, new lighting throughout			\$ 810,875	
Ceilings & devices throughout	83,977	\$ 15	\$ 1,259,655	
Restroom Renovations throughout			\$ 875,000	\$ 6,792,530
STUDENT LOCKERS & A-WING				
Hallway reconfigurations, restrooms & lockers	6,916	\$ 400	\$ 2,766,400	\$ 2,766,400
SCIENCE				
Science demolition	3,325	\$ 50	\$ 166,250	
G-wing Science Club Conversion	7,097	\$ 400	\$ 2,838,800	
C-wing (science) Special Ed Conversion	2,552	\$ 300	\$ 765,600	\$ 3,005,050
ART & MUSIC				
Art & Music Renovations	9,284	\$ 300	\$ 2,785,200	
Cafeteria - stage demolition	644	\$ 20	\$ 12,880	
New windows and door at old stage	340	\$ 125	\$ 42,500	
Gym Stage demolition	1,035	\$ 40	\$ 41,400	
Stage Addition	1,562	\$ 500	\$ 781,000	
Computer Lab expansion/ Eliminate hall	1,589	\$ 300	\$ 476,700	\$ 4,139,680
GYMS & LOCKER ROOMS				
Old Gym Renovation (finishes & equipment)	5,563	\$ 150	\$ 834,450	
Gym and Pool Locker Room Reconfiguration	9,907	\$ 350	\$ 3,467,450	
New Gym Renovation (finishes & equipment)	5,250	\$ 150	\$ 787,500	\$ 5,089,400
ADMINISTRATION & POOL ENTRY				
Entry & stair demolition	1,504	\$ 40	\$ 60,160	
Main Office, Stair, Elevator Addition	2,170	\$ 500	\$ 1,085,000	
Office Renovations/reconfigurations	2415	300	\$ 724,500	\$ 1,869,660
BOE RELOCATION TO A-WING				
A-Wing BOE office reconfiguration	11,035	\$ 400	\$ 4,414,000	
Classroom ends demolition	463	\$ 40	\$ 18,520	
Classroom additions & courtyard infill	4,841	\$ 500	\$ 2,420,500	
Classroom renovation	1,889	\$ 300	\$ 566,700	
New facility building at rear	2,136	\$ 300	\$ 640,800	\$ 8,060,520
OPTION 3 TOTAL				\$ 31,723,240
FACILITY CONDITIONS				
Items from Facility Conditions Spreadsheets			\$ 17,298,474	
Remaining portions, not addressed above				\$ 7,566,674
				\$ 39,289,914



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