



WILLIAMSBURG MIDDLE SCHOOL CAPACITY & EXPANSION STUDIES

FINAL DESIGN REPORT

February 19, 2016

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The following pages constitute a final design report for renovations and additions to Williamsburg Middle School(WMS). The current task at hand has been a capacity study to identify if additional seats are available for students within the current building footprint and are feasible within the current middle school model. Unlike changes at the high school level, additional capacity must be gained within the middle school team scenario by adding capacity for additional team space, not by moving teachers from classrooms during work periods. WMS is currently well utilized under that model. However, the following design options illustrate ideas to increase capacity by updating non-classroom spaces such as administration, the gymnasium, and cafeteria. There is a long-term benefit achieved through these modifications to the school and its ability to fluidly adapt to changing student population. There was a concentrated effort to bring spaces that are part of this study in line with current Arlington Public Schools(APS) Educational Specifications.

The redesign of the administration area will allow for additional classroom capacity to be gained. Additionally, it increases security and energy reductions by creating a vestibule at the front door that enters into the reception area and allows screening to be done before visitors enter the building proper. All administrative personnel are collected into this new design, and offices are correctly sized for their intended uses. The design also incorporates chases for tubular skylights to be directed down through the first floor in order to daylight improvements to the crawlspace/dirt rooms below. The gymnasium and locker rooms spaces have been studied and reorganized. By deleting unused shower spaces and consolidating several various storage spaces, the new conceptual design allows for an increased locker count (with room for future expansion by adding another top tier row of lockers), and increases the restroom capacity for the school. This new configuration resulted in the addition of two new medium sized classrooms. The new gym space concept also envisions the gym as a flexible whole school event space with a moveable stage and black box theater rigging. A revised cafeteria concept moves extended day office and storage space to a new room within the crawlspace footprint adjacent to 2 new gang bathrooms for student use. This should allow for an increased table count in the cafeteria. This proposal also includes an option for covered outdoor dining area immediately to the south of the cafeteria. This anticipates a relatively cost-effective free-standing roof structure over the designated area. This would increase student seating options to the outdoors.

Additional expansion concepts shown on the existing conditions plan identify the auditorium and adjacent spaces as underutilized but requiring a much larger and extensive redesign and impact to the building structure. Other spaces identified include reorganization of smaller classroom or office spaces into mid-sized classroom spaces, adding a small addition to seating capacity.

Current classroom capacity and size was evaluated against current APS Ed Specs and found to be generally in compliance with capacity requirements. A table within illustrates those findings. A conceptual cost estimate has been done and included herein identifying the work within the various options included. The cost estimate was done anticipating work to be completed for the fall semester of the 2017 school year. This estimate also includes a cost for a second story addition to the south wing of the school, increasing capacity by six classrooms. Note this 1990's addition (not by VMDO) was structurally designed to accommodate a second story. No architectural drawings are included herein for that work.

Finally, this book is meant to serve as a record of previous studies and designs that VMDO has completed for WMS. The appendix contains those prior studies as well as the meeting minutes and iterative design proposals completed for this current study.

Project Construction Cost Summary

| Option | Classrooms Gained | Seats Gained | Cost |
|---|-------------------|--------------|------------------------|
| North Hall Option 1 | 1 | 24 | \$1,827,014.00 |
| North Hall Option 2 | 1 | 24 | \$1,608,620.00 |
| Gym and Lockers | 2 | 48 | \$1,923,472.00 |
| Dirt Room Option 1 | N/A | | \$338,100.00 |
| Dirt Room Option 2 | N/A | | \$986,174.00 |
| Cafeteria Option 1 <small>Note: This increase is for seating capacity, not enrollment capacity.</small> | N/A | 88 | \$64,015.00 |
| Second Floor Classroom Addition Option 1 | 6 | 144 | \$4,153,839.00 |
| Total | 10 | 328 | \$10,901,234.00 |

EXECUTIVE SUMMARY

EXISTING CONDITIONS

NORTH HALL / ADMINISTRATION

GYMNASIUM

LOCKER ROOMS



DIRT ROOM / CRAWLSPACE

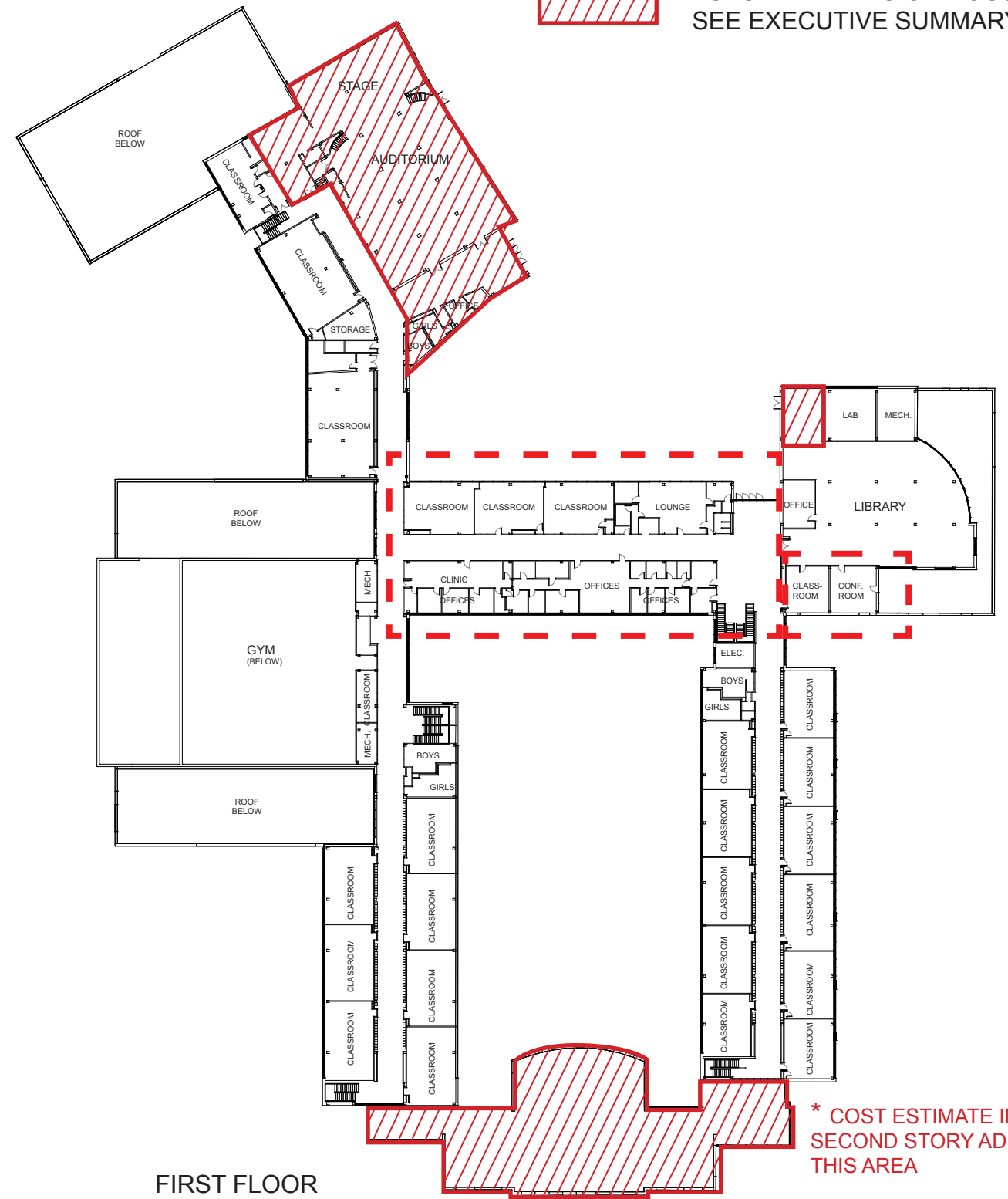
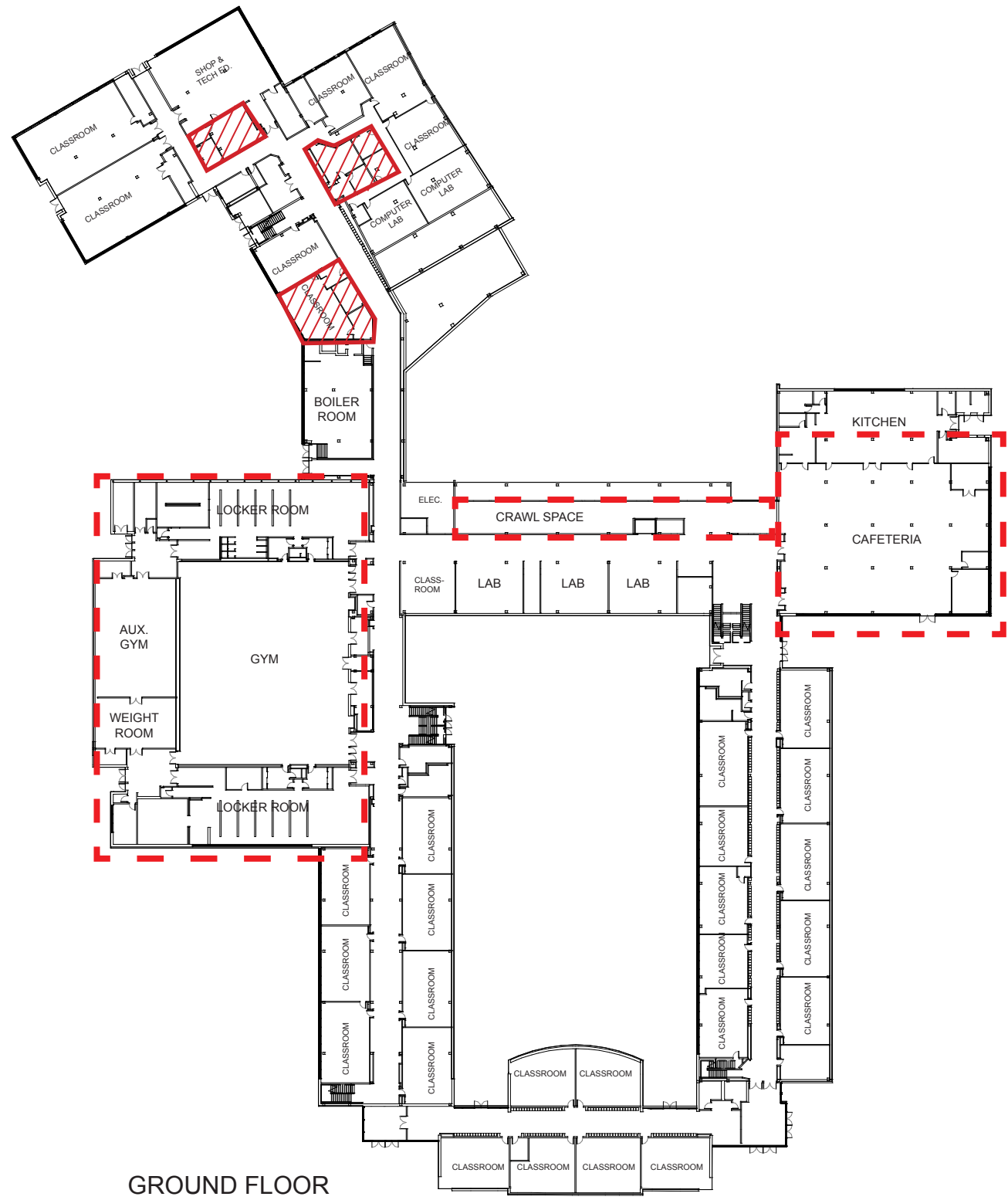
CAFETERIA

CLASSROOM CAPACITY ANALYSIS

COST ESTIMATE

APPENDIX

-  AREAS OF PROPOSED IMPROVEMENTS
-  FUTURE EXPANSION POSSIBILITIES
SEE EXECUTIVE SUMMARY

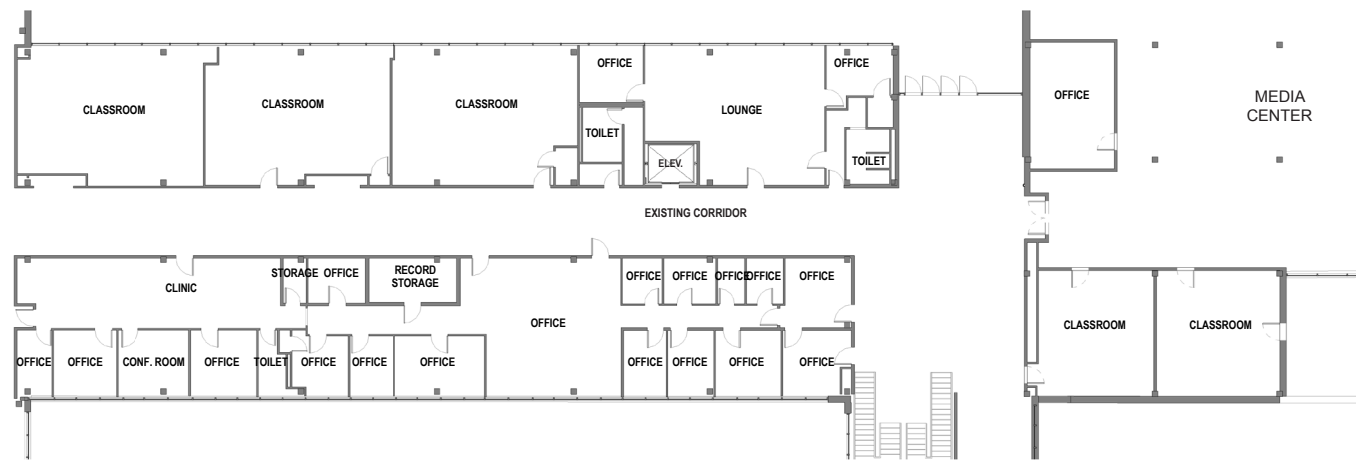


* COST ESTIMATE INCLUDES SECOND STORY ADDITION FOR THIS AREA

NOT TO SCALE

EXISTING CONDITIONS

EXISTING CONDITIONS

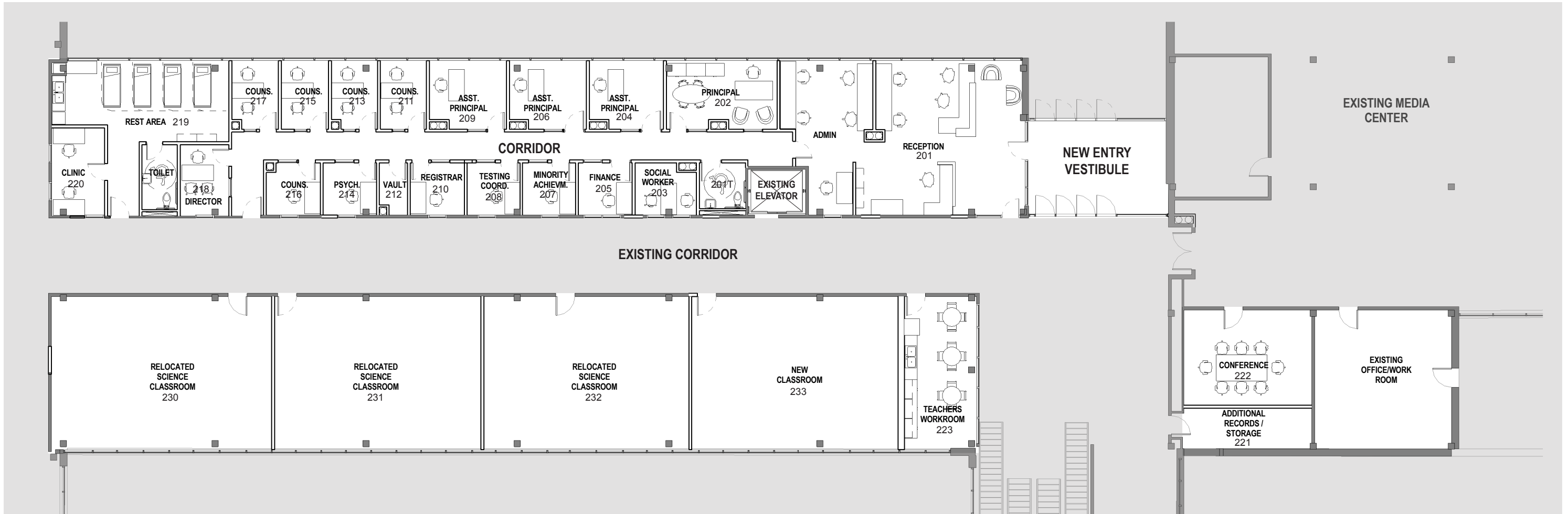


SCALE 1/32" = 1'-0"

SQUARE FOOTAGE

| Room # | Current Room | Existing SF CAD | New Room | Proposed SF | Ed. Spec. |
|--------|----------------------|-----------------|-------------------|-------------|-----------|
| | | | Entry Vestibule | 324 | N/A |
| 201 | Lounge | 620 | Reception/ Admin. | 895 | 600 |
| | Lounge Office West | 111 | | 0 | N/A |
| | Lounge Office East | 110 | | 0 | 100 |
| 201T | Admin Toilet West | 66 | | 46 | 65 |
| | Admin Toilet East | 74 | | 0 | 65 |
| 202 | Principal | 156 | | 180 | 200 |
| 203 | Social Worker | | | 75 | 120 |
| 204 | Assistant Principal | | | 120 | 120 |
| 205 | Finance Office | | | 70 | 100 |
| 206 | Assistant Principal | | | 120 | 120 |
| 207 | Minority Achievement | | | 70 | 120 |
| 208 | Testing Office | | | 70 | 120 |
| 209 | Assistant Principal | | | 120 | 120 |
| 210 | Registrar | | | 70 | 120 |
| 211 | Counselor Office | | | 78 | 100 |
| 212 | | | Vault | 35 | 100 |
| 213 | Counselor Office | | | 78 | 100 |
| 214 | Psychologist | | | 70 | 120 |
| 215 | Counselor Office | | | 78 | 100 |
| 216 | Counselor Office | | | 70 | 100 |
| 217 | Counselor Office | | | 78 | 100 |
| 218 | Director | | | 87 | 120 |
| 219 | Clinic Rest Area | | | 375 | 200 |
| 219T | Clinic Toilet | | | 59 | 65 |
| 220 | Clinic Office | | | 115 | 100 |
| 221 | Records/ Storage | 120 | | 122 | 100 |
| 222 | | | Conference Room | 240 | 200 |
| 223 | | | Teacher Workroom | 264 | 1000 |
| 230* | Classroom | 764 | | 785 | 900 |
| 231* | Classroom | 738 | | 785 | 900 |
| 232* | Classroom | 762 | | 785 | 900 |
| 233 | | | Classroom | 785 | 900 |
| 234 | Existing Workroom | 935 | | 550 | 700-750 |

* Classroom was moved.
NOTE: NEW ROOM NUMBERS GENERATED FOR THIS STUDY. THEY DO NOT REFLECT EXISTING CONDITIONS.

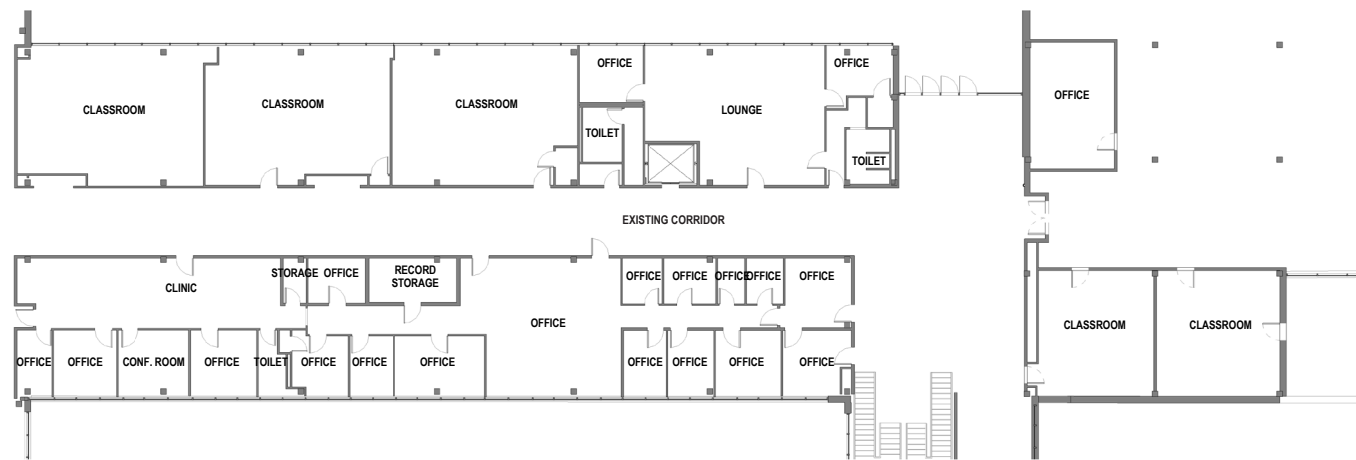


SCALE 1/16" = 1'-0"

OPTION - 01

NORTH ADMINISTRATION / OFFICES

EXISTING CONDITIONS

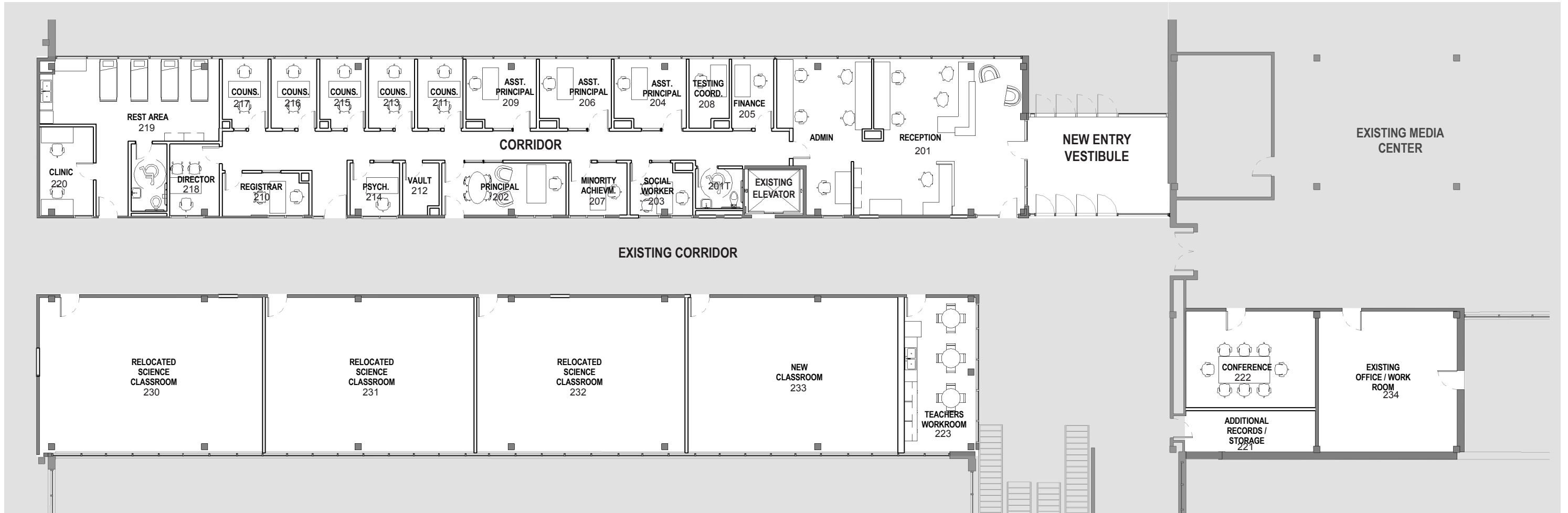


SCALE 1/32" = 1'-0"

SQUARE FOOTAGE

| Room # | Current Room | Existing SF CAD | New Room | Proposed SF | Ed. Spec. |
|--------|----------------------|-----------------|-------------------|-------------|-----------|
| | | | Entry Vestibule | 324 | N/A |
| 201 | Lounge | 620 | Reception/ Admin. | 895 | 600 |
| | Lounge Office West | 111 | | 0 | N/A |
| | Lounge Office East | 110 | | 0 | 100 |
| 201T | Admin Toilet West | 66 | | 46 | 65 |
| | Admin Toilet East | 74 | | 0 | 65 |
| 202 | Principal | 156 | | 180 | 200 |
| 203 | Social Worker | | | 75 | 120 |
| 204 | Assistant Principal | | | 120 | 120 |
| 205 | Finance Office | | | 70 | 100 |
| 206 | Assistant Principal | | | 120 | 120 |
| 207 | Minority Achievement | | | 70 | 120 |
| 208 | Testing Office | | | 70 | 120 |
| 209 | Assistant Principal | | | 120 | 120 |
| 210 | Registrar | | | 70 | 120 |
| 211 | Counselor Office | | | 78 | 100 |
| 212 | | | Vault | 35 | 100 |
| 213 | Counselor Office | | | 78 | 100 |
| 214 | Psychologist | | | 70 | 120 |
| 215 | Counselor Office | | | 78 | 100 |
| 216 | Counselor Office | | | 70 | 100 |
| 217 | Counselor Office | | | 78 | 100 |
| 218 | Director | | | 87 | 120 |
| 219 | Clinic Rest Area | | | 375 | 200 |
| 219T | Clinic Toilet | | | 59 | 65 |
| 220 | Clinic Office | | | 115 | 100 |
| 221 | Records/ Storage | 120 | | 122 | 100 |
| 222 | | | Conference Room | 240 | 200 |
| 223 | | | Teacher Workroom | 264 | 1000 |
| 230* | Classroom | 764 | | 785 | 900 |
| 231* | Classroom | 738 | | 785 | 900 |
| 232* | Classroom | 762 | | 785 | 900 |
| 233 | | | Classroom | 785 | 900 |
| 234 | Existing Workroom | 935 | | 550 | 700-750 |

* Classroom was moved.
NOTE: NEW ROOM NUMBERS GENERATED FOR THIS STUDY. THEY DO NOT REFLECT EXISTING CONDITIONS.



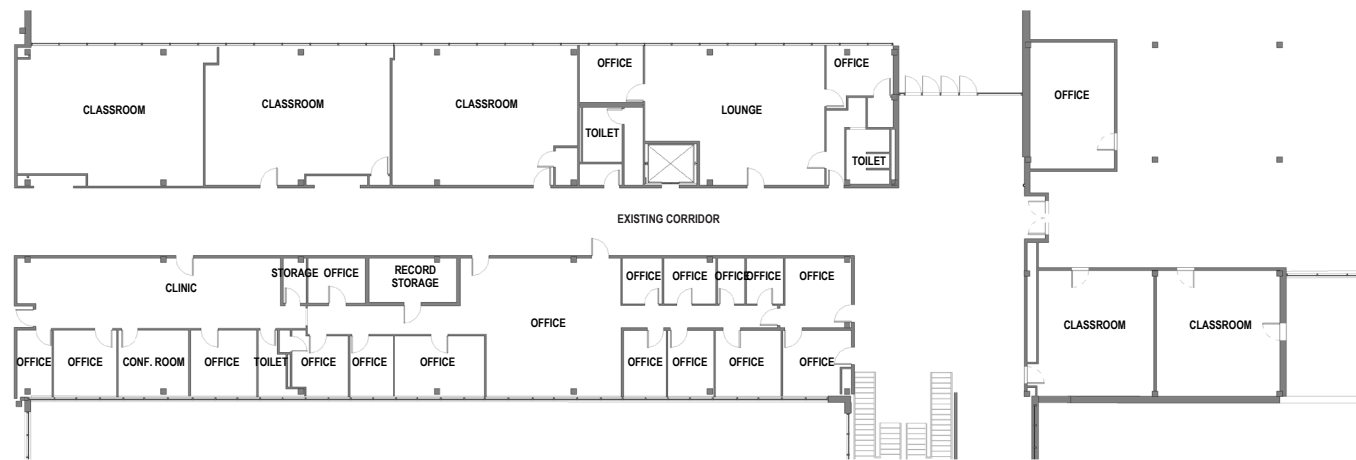
SCALE 1/16" = 1'-0"

NOTE: THIS OPTION RELOCATES THE PRINCIPLES OFFICE TO THE CORRIDOR FOR STUDENT ACCESS.

OPTION - 01A

NORTH ADMINISTRATION / OFFICES

EXISTING CONDITIONS



SCALE 1/32" = 1'-0"

SQUARE FOOTAGE

| Room # | Current Room | Existing SF CAD | New Room | Proposed SF | Ed. Spec. |
|--------|----------------------|-----------------|-------------------|-------------|-----------|
| | | | Entry Vestibule | 183 | N/A |
| 201 | Lounge | 620 | Reception/ Admin. | 895 | 600 |
| | Lounge Office West | 111 | | 0 | N/A |
| | Lounge Office East | 110 | | 0 | 100 |
| 201T | Admin Toilet West | 66 | | 46 | 65 |
| | Admin Toilet East | 74 | | 0 | 65 |
| 202 | Principal | 156 | | 170 | 200 |
| 203 | Assistant Principal | | | 105 | 120 |
| 204 | Assistant Principal | | | 115 | 120 |
| 205 | Assistant Principal | | | 124 | 120 |
| 206 | Conference | | | 200 | 200 |
| 207 | Records/ Vault | 120 | | 85 | 100 |
| 208 | Registrar | | | 100 | 120 |
| 209 | | | Teacher Workroom | 392 | 1000 |
| 210 | Clinic Rest Area | | | 380 | 200 |
| 210T | Clinic Toilet | | | 45 | 65 |
| 211 | Clinic Office | | | 105 | 100 |
| 212 | Psychologist | | | 90 | 120 |
| 213 | Counselor Office | | | 90 | 100 |
| 214 | Social Worker | | | 86 | 120 |
| 215 | Counselor Office | | | 90 | 100 |
| 216 | Counselor Office | | | 90 | 100 |
| 217 | Counselor Office | | | 90 | 100 |
| 218 | Testing Office | | | 75 | 120 |
| 219 | Minority Achievement | | | 100 | 120 |
| 220 | Director | | | 95 | 120 |
| 221 | Counselor Office | | | 95 | 100 |
| 222 | Finance Office | | | 86 | 100 |
| 230 | Classroom | 764 | | 764 | 900 |
| 231 | Classroom | 738 | | 738 | 900 |
| 232* | Classroom | 762 | | 764 | 900 |
| 233 | | | Classroom | 764 | 900 |
| 234 | Existing Workroom | 935 | | 575 | 700-750 |

* Classroom was moved.
NOTE: NEW ROOM NUMBERS GENERATED FOR THIS STUDY. THEY DO NOT REFLECT EXISTING CONDITIONS.

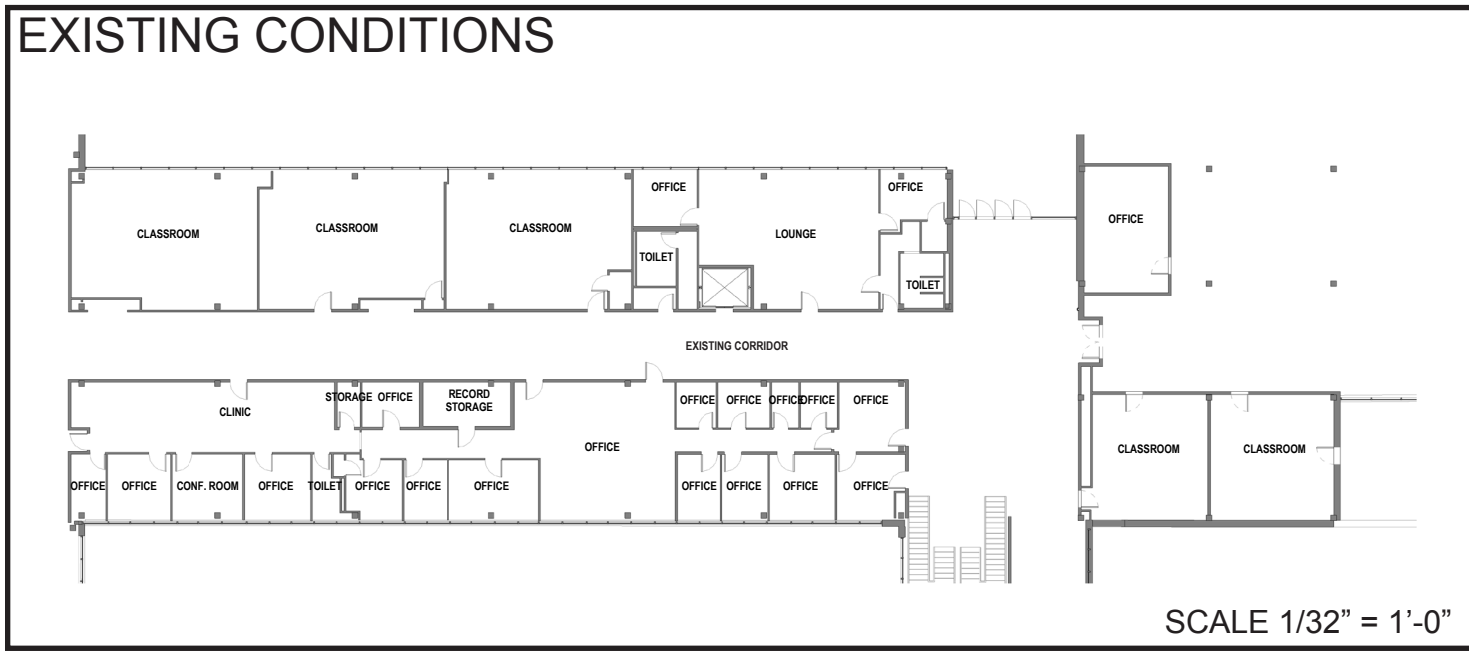


SCALE 1/16" = 1'-0"

OPTION - 02

NORTH ADMINISTRATION / OFFICES

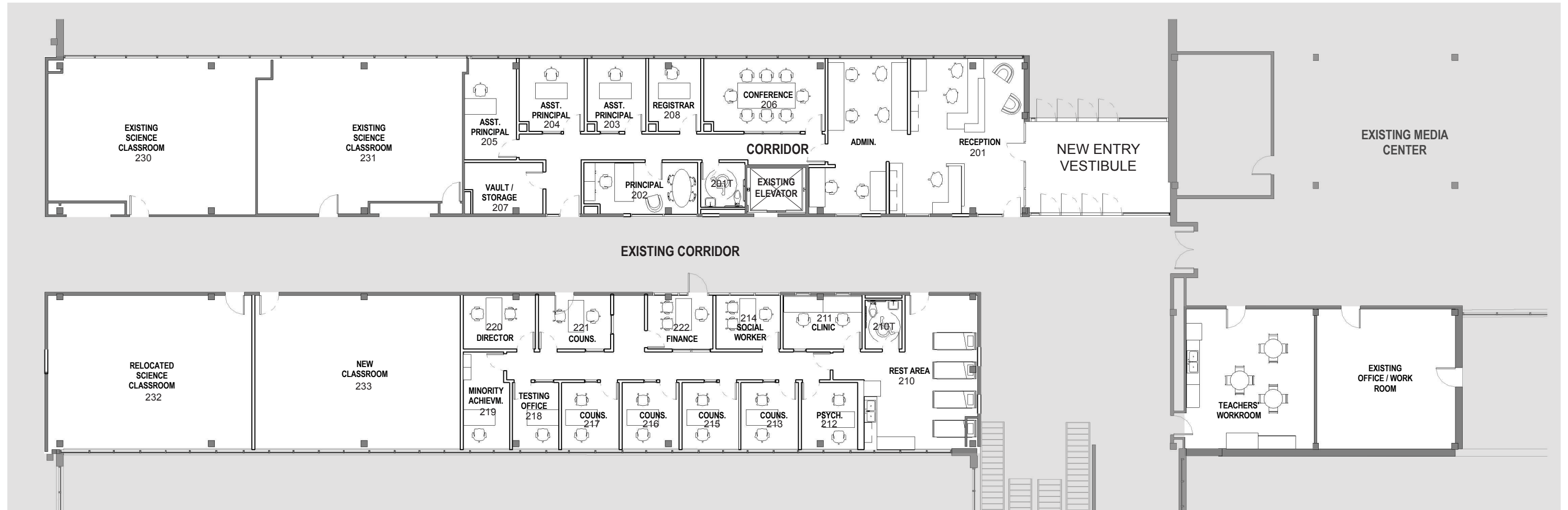
EXISTING CONDITIONS



SQUARE FOOTAGE

| Room # | Current Room | Existing SF CAD | New Room | Proposed SF | Ed. Spec. |
|--------|----------------------|-----------------|-------------------|-------------|-----------|
| 201 | Lounge | 620 | Entry Vestibule | 183 | N/A |
| | Lounge Office West | 111 | Reception/ Admin. | 895 | 600 |
| | Lounge Office East | 110 | | 0 | N/A |
| | Admin Toilet West | 66 | | 0 | 100 |
| 201T | Admin Toilet East | 74 | | 46 | 65 |
| | | | | 0 | 65 |
| 202 | Principal | 156 | | 170 | 200 |
| 203 | Assistant Principal | | | 105 | 120 |
| 204 | Assistant Principal | | | 115 | 120 |
| 205 | Assistant Principal | | | 124 | 120 |
| 206 | Conference | | | 200 | 200 |
| 207 | Records/ Vault | 120 | | 85 | 100 |
| 208 | Registrar | | | 100 | 120 |
| 209 | | | Teacher Workroom | 392 | 1000 |
| 210 | Clinic Rest Area | | | 380 | 200 |
| 210T | Clinic Toilet | | | 45 | 65 |
| 211 | Clinic Office | | | 105 | 100 |
| 212 | Psychologist | | | 90 | 120 |
| 213 | Counselor Office | | | 90 | 100 |
| 214 | Social Worker | | | 86 | 120 |
| 215 | Counselor Office | | | 90 | 100 |
| 216 | Counselor Office | | | 90 | 100 |
| 217 | Counselor Office | | | 90 | 100 |
| 218 | Testing Office | | | 75 | 120 |
| 219 | Minority Achievement | | | 100 | 120 |
| 220 | Director | | | 95 | 120 |
| 221 | Counselor Office | | | 95 | 100 |
| 222 | Finance Office | | | 86 | 100 |
| 230 | Classroom | 764 | | 764 | 900 |
| 231 | Classroom | 738 | | 738 | 900 |
| 232* | Classroom | 762 | | 764 | 900 |
| 233 | | | Classroom | 764 | 900 |
| 234 | Existing Workroom | 935 | | 575 | 700-750 |

* Classroom was moved.
NOTE: NEW ROOM NUMBERS GENERATED FOR THIS STUDY. THEY DO NOT REFLECT EXISTING CONDITIONS.

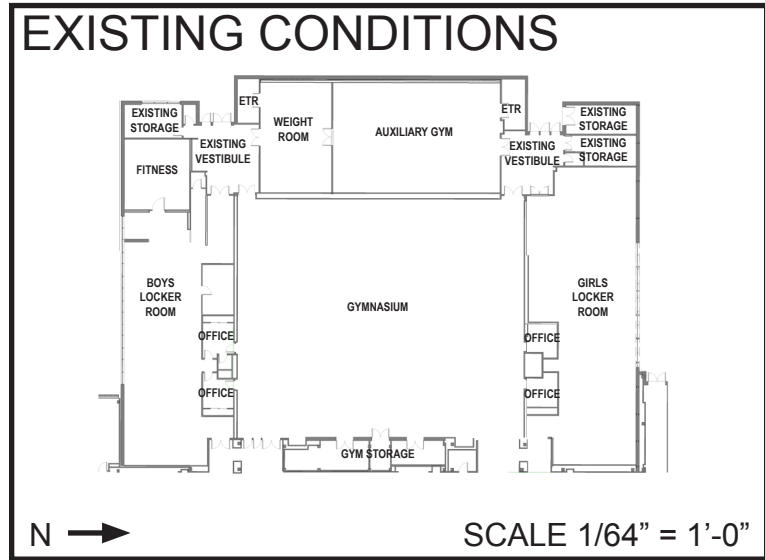


SCALE 1/16" = 1'-0"

NOTE: THIS OPTION RELOCATES THE PRINCIPLES OFFICE TO THE CORRIDOR FOR STUDENT ACCESS.

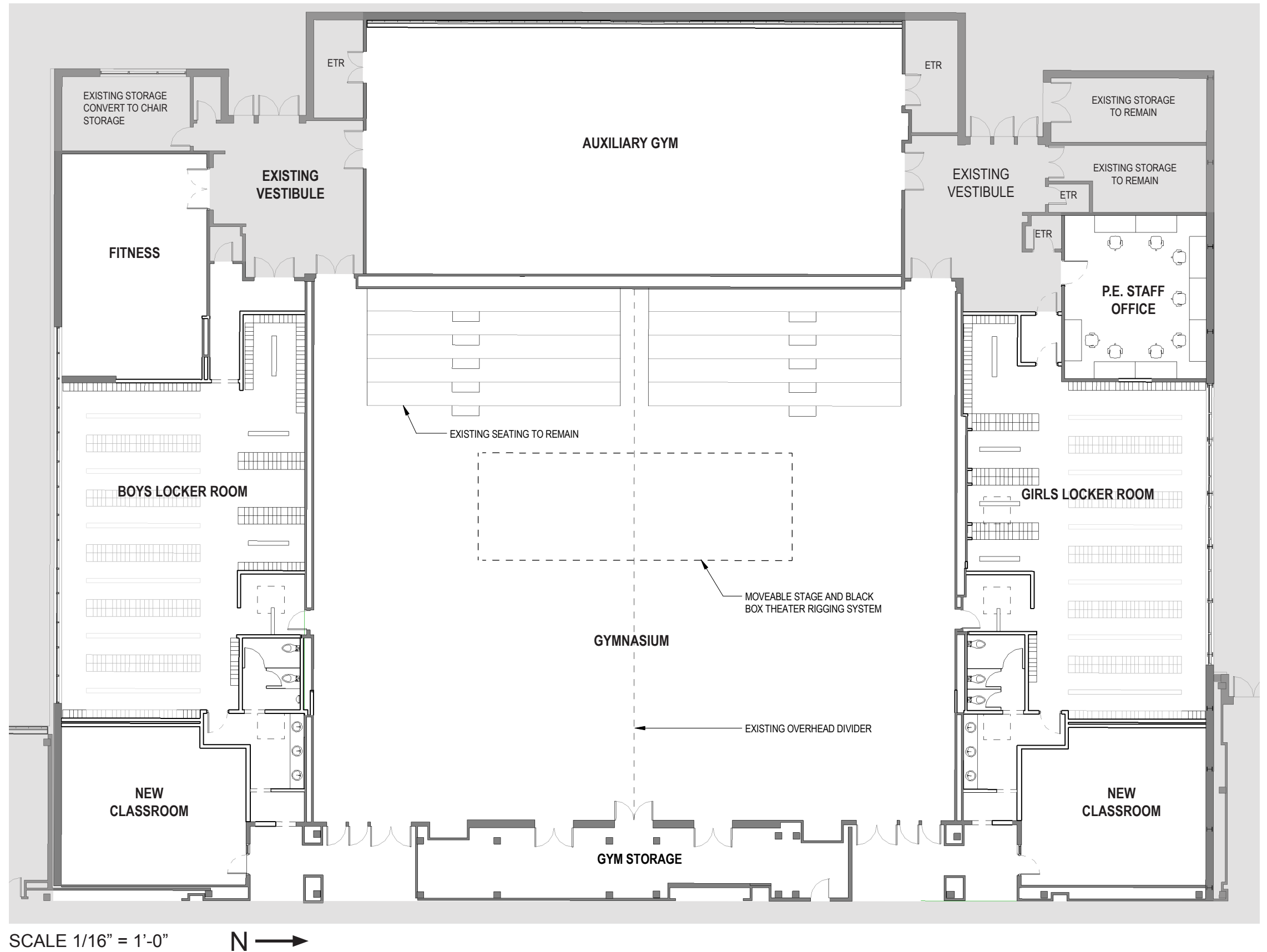
OPTION - 02A

NORTH ADMINISTRATION / OFFICES



SQUARE FOOTAGE

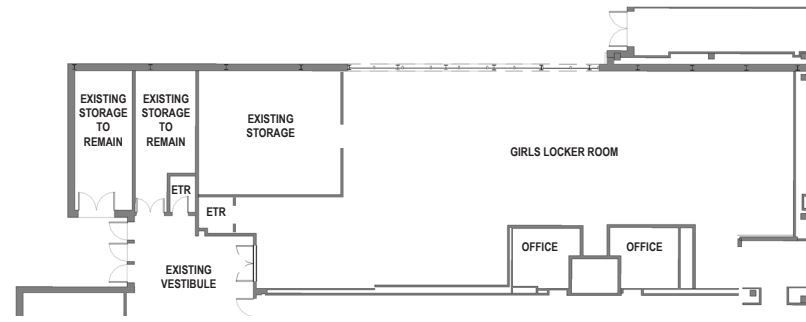
| Current Room | Existing SF CAD | New Room | Proposed SF | Ed. Spec. |
|------------------|-----------------|----------|-------------|------------|
| Auxiliary Gym | 2070 | | 2922 | 2000 |
| Weight Room | 885 | | 0 | N/A |
| Main Gym Storage | 145 | | 638 | 500 |
| Main Gym | 7543 | | 7543 | 8000-10500 |



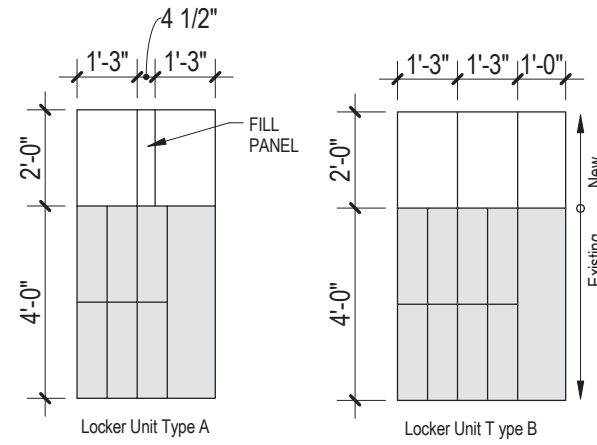
OPTION - 01

GYMNASIUM

EXISTING CONDITIONS



SCALE 1/32" = 1'-0"



86 Existing 12" Lockers (For use during gym class)

664 Existing 7.5" Lockers

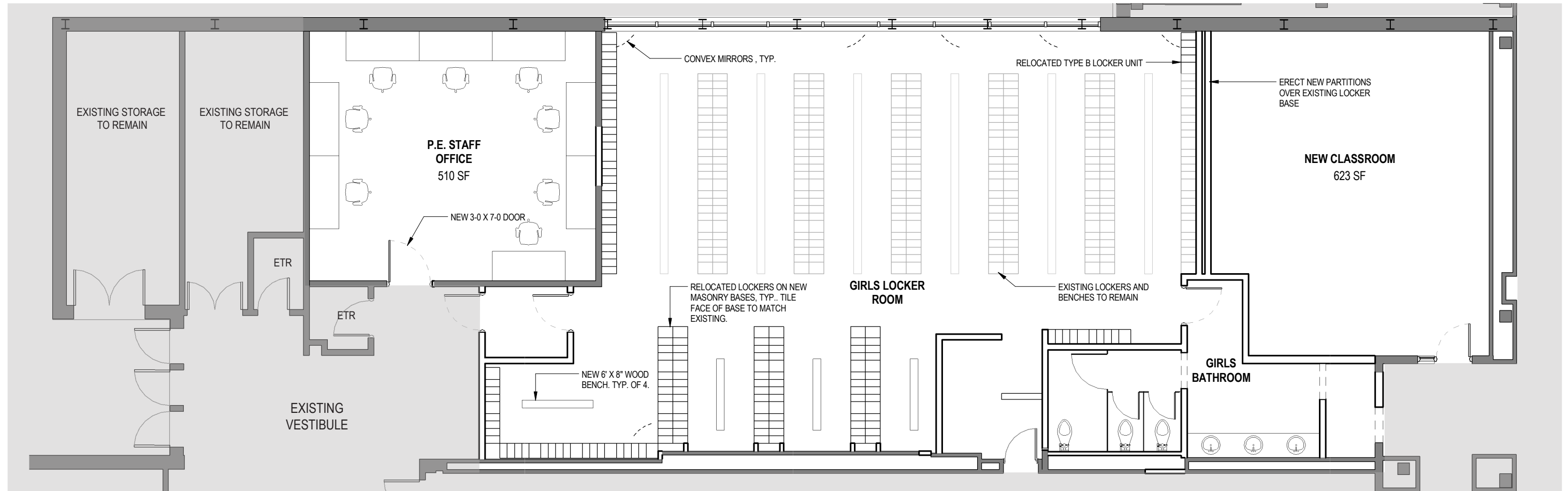
176 New 15"W x 15"D x 24"H Lockers

68 New 12"W x 15"D x 24"H Lockers

244 New Lockers

SQUARE FOOTAGE

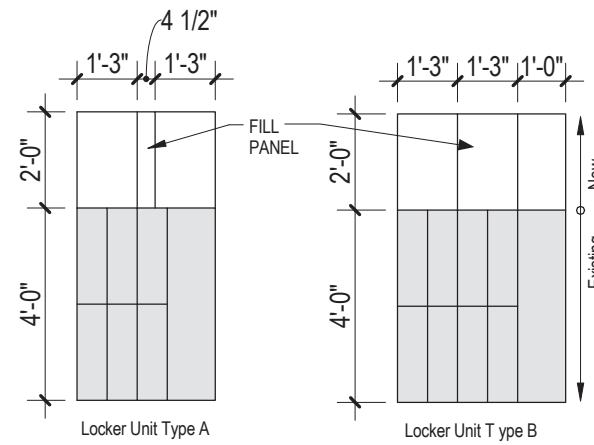
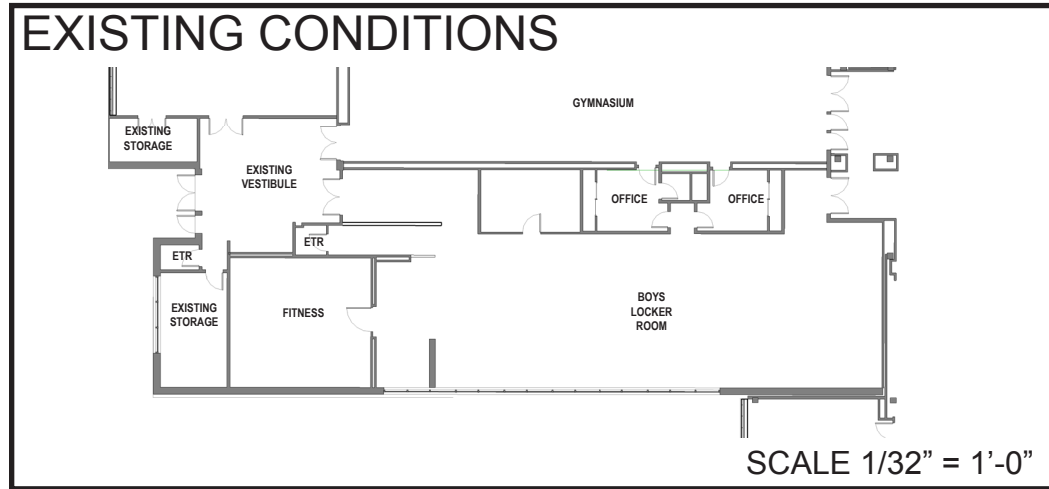
| Room # | Current Room | Existing SF CAD | New Room | Proposed SF | Ed. Spec. |
|--------|----------------------|-----------------|-------------------|-------------|-----------|
| | Girls Locker Room | 2522 | | 3279 | 3000 |
| | | | New Classroom | 623 | 700-750 |
| | Existing Gym Storage | 510 | | 0 | 500 |
| | | | P.E. Staff Office | 510 | 150-400 |



SCALE 1/8" = 1'-0"

OPTION - 02

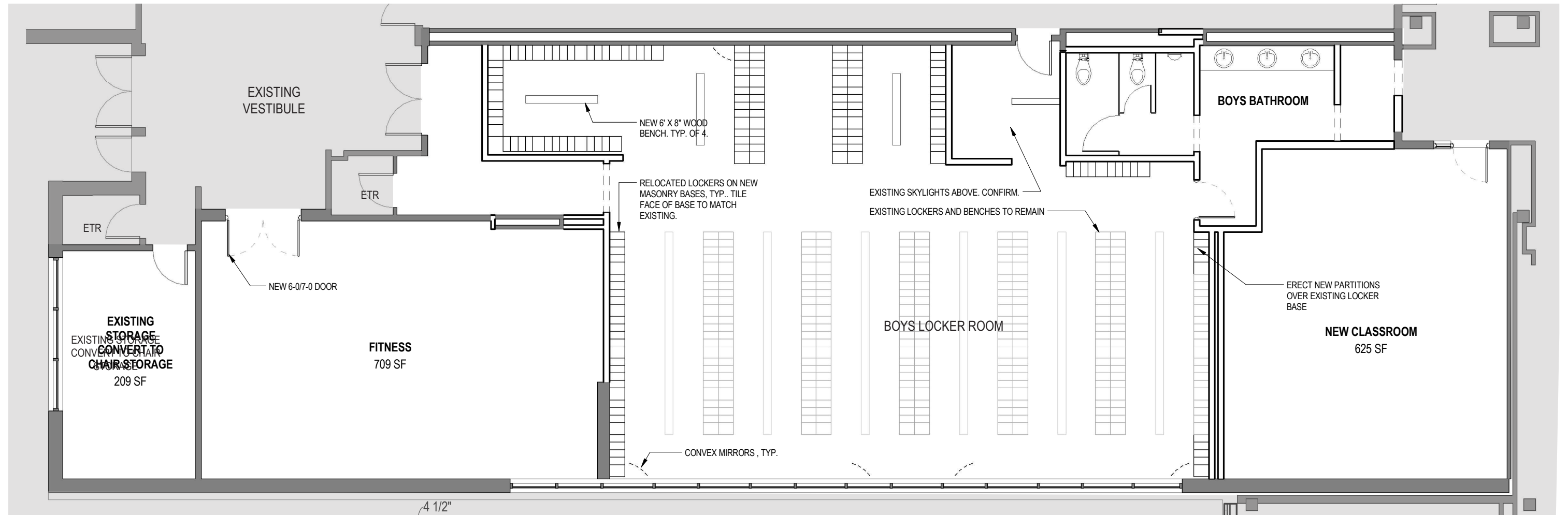
GIRL'S LOCKER ROOM



- 86 Existing 12" Lockers (For use during gym class)
- 664 Existing 7.5" Lockers
- 176 New 15"W x 15"D x 24"H Lockers
- 68 New 12"W x 15"D x 24"H Lockers
- 244 New Lockers

SQUARE FOOTAGE

| Room # | Current Room | Existing SF CAD | New Room | Proposed SF | Ed. Spec. |
|--------|----------------------|-----------------|---------------|-------------|-----------|
| | Boy's Locker Room | 2475 | | 2155 | 3000 |
| | | | New Classroom | 625 | 700-750 |
| | Existing Gym Storage | 209 | | 209 | 500 |
| | Fitness Room | 505 | | 709 | N/A |

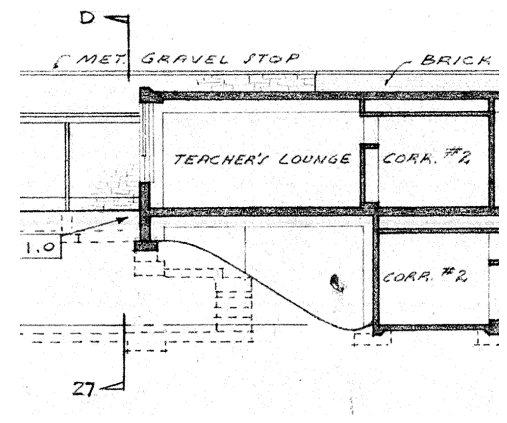
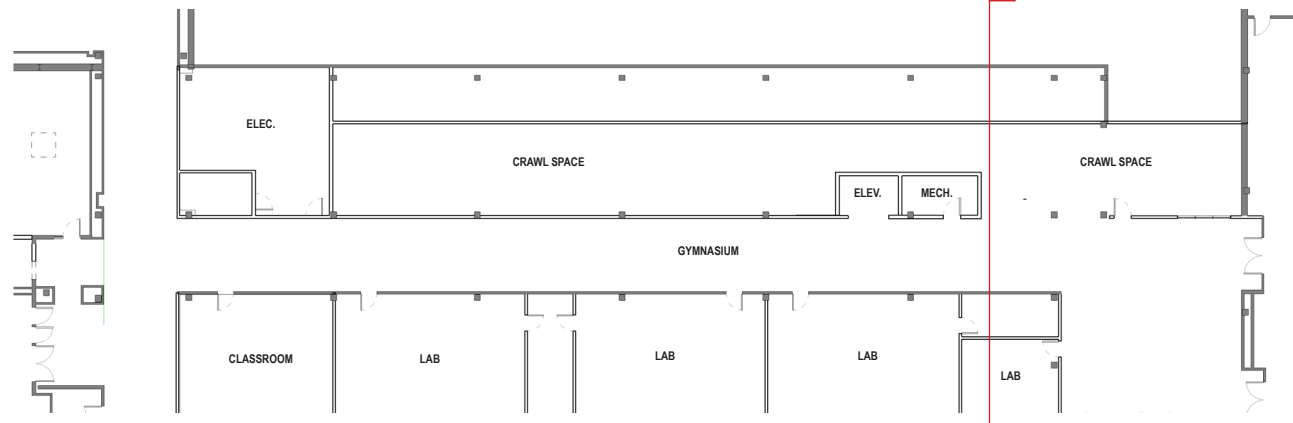


OPTION - 03

BOY'S LOCKER ROOM

EXISTING CONDITIONS

Crawl Space - Section looking West



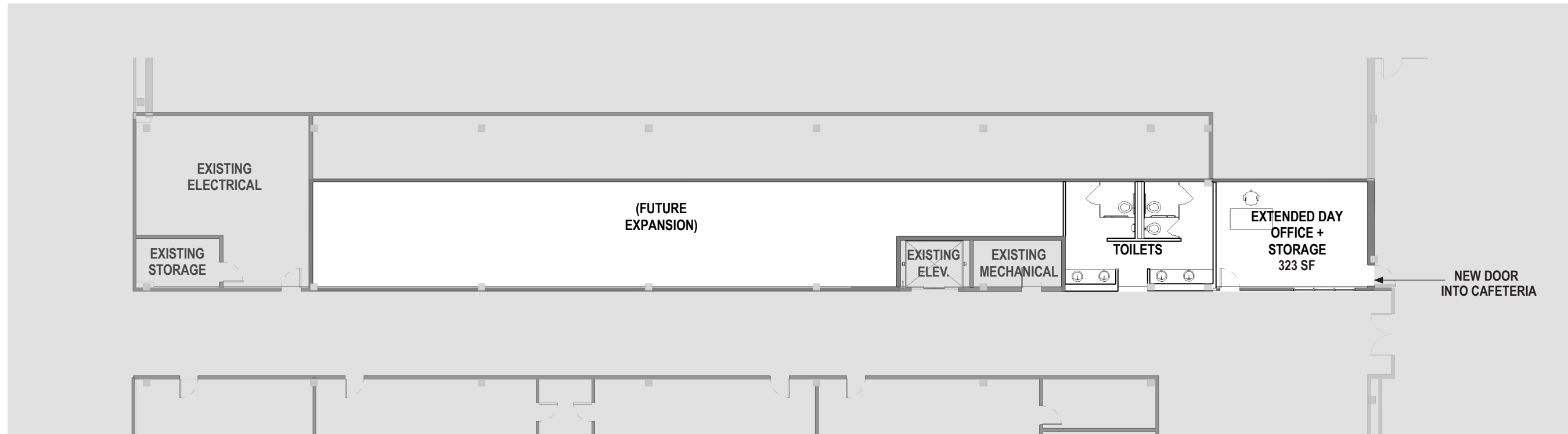
SCALE 1/32" = 1'-0"

*Not to scale.

SQUARE FOOTAGE

| Room # | Current Room | Existing SF CAD | New Room | Proposed SF | Ed. Spec. |
|--------|--------------|-----------------|------------------------|-------------|-----------|
| | Crawlspace | 1889 | | 1262 | N/A |
| | | | Extended Day & Storage | 323 | N/A |
| | | | Toilet | 316 | 65 |
| | | | Future Expansion Space | 1454 | N/A |

NOTE: COST ESTIMATE INCLUDES FUTURE EXPANSION OF CRAWL SPACE

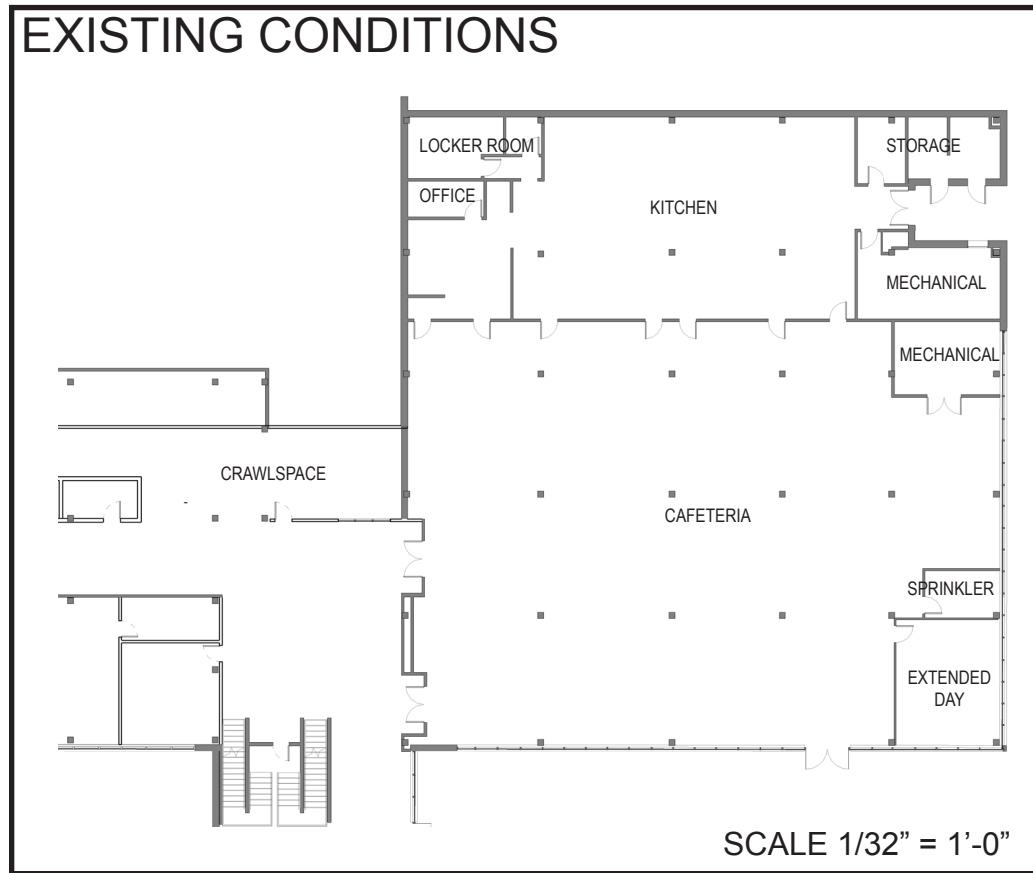


SCALE 1/16" = 1'-0"

OPTION - 01

CRAWL SPACE

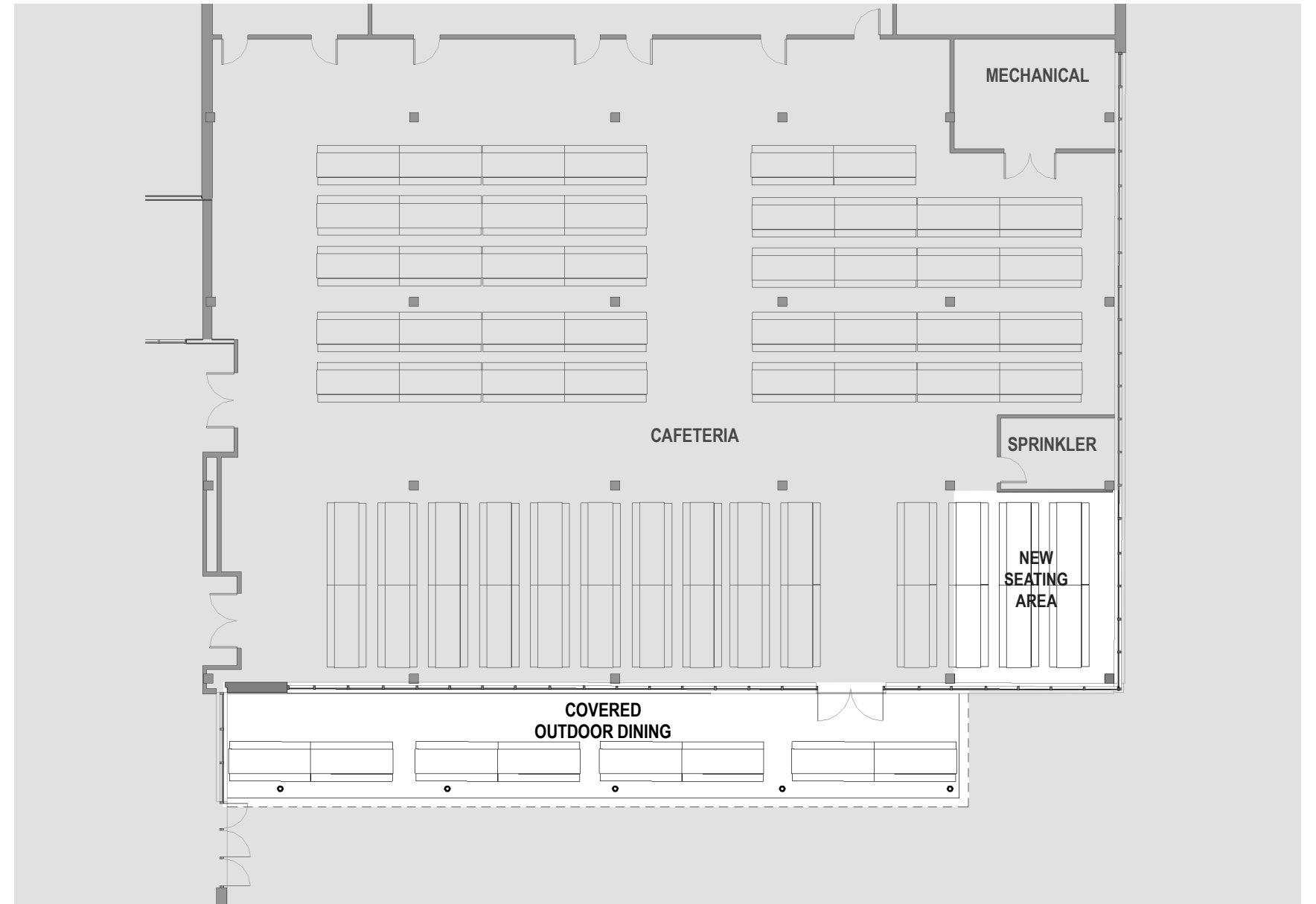
EXISTING CONDITIONS



SQUARE FOOTAGE

| Room # | Current Room | Existing SF CAD | New Room | Proposed SF | Ed. Spec. |
|--------|------------------|-----------------|------------------------|-------------|-----------|
| | Cafeteria | 6111 | | 6435 | 5800 |
| | Classroom | 324 | | 0 | 700-750 |
| | Sprinkler Closet | 95 | | 95 | N/A |
| | Mechanical Room | 209 | | 209 | N/A |
| | | | Covered Outdoor Dining | 916 | N/A |

* Illustrates indoor seating for 524 and outdoor seating for 64. These counts reflect increased seating capacity, not increased enrollment capacity.



OPTION - 01

CAFETERIA



EXISTING CLASSROOMS

| 6th Grade | | | | | | |
|--------------|----------------|-----|--------------|-------------------|-------------------|----------------------------|
| Room # | Classroom Name | SF | Ed. Spec. SF | Ed Spec. SF/Stud. | Ed Spec. Capacity | Williamsburg Max. Capacity |
| Ground Floor | | | | | | |
| 106 | Core Classroom | 728 | 700-750 | 29-31 | 24 | 25 |
| C101 | Core Classroom | 732 | 700-750 | 29-31 | 24 | 25 |
| C102 | Core Classroom | 754 | 700-750 | 29-31 | 24 | 26 |
| C103 | Core Classroom | 658 | 700-750 | 29-31 | 24 | 23 |
| C104 | Core Classroom | 740 | 700-750 | 29-31 | 24 | 26 |
| First Floor | | | | | | |
| 201 | Core Classroom | 736 | 700-750 | 29-31 | 24 | 25 |
| 202 | Core Classroom | 729 | 700-750 | 29-31 | 24 | 25 |
| 203 | Core Classroom | 727 | 700-750 | 29-31 | 24 | 25 |
| 204 | Core Classroom | 820 | 700-750 | 29-31 | 24 | 28 |
| 205 | Core Classroom | 729 | 700-750 | 29-31 | 24 | 25 |
| 206 | Core Classroom | 641 | 700-750 | 29-31 | 24 | 22 |
| 207 | Core Classroom | 684 | 700-750 | 29-31 | 24 | 24 |
| 208 | Core Classroom | 730 | 700-750 | 29-31 | 24 | 25 |
| 209 | Core Classroom | 727 | 700-750 | 29-31 | 24 | 25 |
| 210 | Core Classroom | 729 | 700-750 | 29-31 | 24 | 25 |
| 211 | Core Classroom | 723 | 700-750 | 29-31 | 24 | 25 |
| 232 | Science Lab | 748 | 1200 | 50 | 24 | 15 |

| 7th Grade | | | | | | |
|--------------|----------------|-----|--------------|-------------------|-------------------|----------------------------|
| Room # | Classroom Name | SF | Ed. Spec. SF | Ed Spec. SF/Stud. | Ed Spec. Capacity | Williamsburg Max. Capacity |
| Ground Floor | | | | | | |
| 103 | Core Classroom | 825 | 700-750 | 29-31 | 24 | 28 |
| 104 | Core Classroom | 825 | 700-750 | 29-31 | 24 | 28 |
| 105 | Core Classroom | 729 | 700-750 | 29-31 | 24 | 25 |
| 1A6 | Core Classroom | 579 | 700-750 | 29-31 | 24 | 20 |
| 107 | Science Lab | 702 | 900 | 38 | 24 | 19 |
| 109 | Core Classroom | 911 | 700-750 | 29-31 | 24 | 31 |
| 112 | Core Classroom | 739 | 700-750 | 29-31 | 24 | 25 |
| 124 | Core Classroom | 674 | 700-750 | 29-31 | 24 | 23 |
| 125 | Core Classroom | 769 | 700-750 | 29-31 | 24 | 27 |
| C105 | Core Classroom | 772 | 700-750 | 29-31 | 24 | 27 |
| C106 | Core Classroom | 771 | 700-750 | 29-31 | 24 | 27 |
| First Floor | | | | | | |
| 217 | Core Classroom | 823 | 700-750 | 29-31 | 24 | 28 |
| 218 | Core Classroom | 873 | 700-750 | 29-31 | 24 | 30 |
| 220 | Core Classroom | 825 | 700-750 | 29-31 | 24 | 28 |

NEW CLASSROOMS

| Room # | Classroom Name | SF | Ed. Spec. SF | Ed Spec. SF/Stud. | Ed Spec. Capacity |
|------------------------|---------------------|-----|--------------|-------------------|-------------------|
| 233 | New Core Classroom | 767 | 700-750 | 29-31 | 24 |
| | New Gym Classroom 1 | 625 | 700-750 | 29-31 | 24 |
| | New Gym Classroom 2 | 623 | 700-750 | 29-31 | 24 |
| Total New Seats | | | | | 72 |

-  = Capacity of room is higher than Ed. Spec capacity, per Ed. Spec SF/student parameter
-  = Capacity of room is lower than Ed. Spec capacity, per Ed. Spec SF/student parameter

EXISTING CLASSROOMS

| 8th Grade | | | | | | |
|--------------|-------------------|-----|--------------|-------------------|-------------------|----------------------------|
| Room # | Classroom Name | SF | Ed. Spec. SF | Ed Spec. SF/Stud. | Ed Spec. Capacity | Williamsburg Max. Capacity |
| Ground Floor | | | | | | |
| 111 | Core Classroom | 736 | 700-750 | 29-31 | 24 | 25 |
| 113 | Core Classroom | 738 | 700-750 | 29-31 | 24 | 25 |
| 115 | Core Classroom | 822 | 700-750 | 29-31 | 24 | 28 |
| 116 | Core Classroom | 846 | 700-750 | 29-31 | 24 | 29 |
| 117 | Core Classroom | 827 | 700-750 | 29-31 | 24 | 29 |
| 118 | Core Classroom | 832 | 700-750 | 29-31 | 24 | 29 |
| 119 | Core Classroom | 866 | 700-750 | 29-31 | 24 | 30 |
| 120 | Core Classroom | 828 | 700-750 | 29-31 | 24 | 29 |
| 121 | Core Classroom | 842 | 700-750 | 29-31 | 24 | 29 |
| 134 | Core Classroom | 713 | 700-750 | 29-31 | 24 | 25 |
| First Floor | | | | | | |
| 214 | Core Classroom | 814 | 700-750 | 29-31 | 24 | 28 |
| 215 | Core Classroom | 817 | 700-750 | 29-31 | 24 | 28 |
| 216 | Core Classroom | 817 | 700-750 | 29-31 | 24 | 28 |
| 219 | Special Education | 821 | 700-750 | 29-31 | 24 | 28 |

| EL/WL | | | | | | |
|---------------|-------------------|------|--------------|-------------------|-------------------|----------------------------|
| Room # | Classroom Name | SF | Ed. Spec. SF | Ed Spec. SF/Stud. | Ed Spec. Capacity | Williamsburg Max. Capacity |
| Ground Floor | | | | | | |
| 101 | Core Classroom | 843 | 700-750 | 29-31 | 24 | 29 |
| 102 | Special Education | 808 | 700-750 | 29-31 | 24 | 28 |
| 114 | Special Education | 630 | 700-750 | 29-31 | 24 | 22 |
| 127 | Art Lab | 1808 | 1650 | 69 | 24 | 26 |
| 128 | Multi-purpose Lab | 1911 | 1650 | 69 | 24 | 27 |
| 129 | Tech Lab | 646 | 1000-1200 | 42-50 | 24 | 15 |
| 132 | Core Classroom | 651 | 700-750 | 29-31 | 24 | 22 |
| 133 | Core Classroom | 677 | 700-750 | 29-31 | 24 | 23 |
| 134 | Core Classroom | 713 | 700-750 | 29-31 | 24 | 25 |
| 136 | Computer Lab | 779 | 830 | 35 | 24 | 22 |
| 137 | Computer Lab | 636 | 830 | 35 | 24 | 18 |
| Res Lab (CTR) | Science Lab | 594 | 900-1200 | 38-50 | 24 | 16 |
| First Floor | | | | | | |
| 225 | Band Room | 1512 | 1800 | 36 | 50 | 42 |
| 227 | Orchestra | 1430 | 1200 | 30 | 40 | 48 |
| 228 | | 930 | | | | |

FUTURE CLASSROOMS

| 2nd Floor Addition | | | | | | |
|------------------------|----------------------|-----|--------------|-------------------|-------------------|--|
| Room # | Classroom Name | SF | Ed. Spec. SF | Ed Spec. SF/Stud. | Ed Spec. Capacity | |
| above 101 | New Core Classroom 1 | 843 | 700-750 | 29-31 | 24 | |
| above 102 | New Core Classroom 2 | 808 | 700-750 | 29-31 | 24 | |
| above 103 | New Core Classroom 3 | 825 | 700-750 | 29-31 | 24 | |
| above 104 | New Core Classroom 4 | 825 | 700-750 | 29-31 | 24 | |
| above 105 | New Core Classroom 5 | 729 | 700-750 | 29-31 | 24 | |
| above 106 | New Core Classroom 6 | 728 | 700-750 | 29-31 | 24 | |
| Total New Seats | | | | | 144 | |

Conceptual Design / Feasibility Cost Estimate Report

Report Date: January 19, 2016

Revised: February 17, 2016

Prepared for:

VMDO Architects

Arlington Public Schools
Williamsburg Middle School
Arlington, Virginia



COST ESTIMATE CLARIFYING NOTES, ASSUMPTIONS & EXCLUSIONS

- We have incorporated construction costs for a single Contractor procurement via lump sum General Contract. It is assumed that at least 5 General Contractor bids will be received. It is assumed that the facility will be occupied during construction and the project will be phased accordingly. We include phased sequenced construction costs. We do not include relocation cost, or temporary modular classrooms for the current occupants.
- **We include hard construction and soft construction costs.** The Soft construction costs are budgeted as 23.5% of the construction hard costs. Please refer to the main project summary for the outline of all budgeted items.
- The Limits of Construction are those indicated on the documents provided.
- We exclude all **HAZMAT abatement costs for** Lead Paint, Asbestos, PCB's or Mold. Any type of HAZMAT remediation cost is not included in our analysis.
- Design Contingency accounts for the costs of yet unidentified scope requirements and engineering. **A 15% Design Contingency has been included.**
- Construction Contingency accounts for the costs of change orders due to unforeseen conditions and / or owner generated changes. An **8% Construction Contingency has been included.**
- Escalation accounts for the inflationary effects of elapsed time. **Escalation costs have been included as indicated on the summary page.**
- All cost data is based on Open shop wage and burden rates.

SOFT COSTS INCLUDED IN OUR COSTS ANALYSIS

We are utilizing a 22.5 % Construction Soft Cost multiplier for the project budget. It is assumed that the Soft Cost multiplier will include the following items:

FURNITURE, FIXTURE & EQUIPMENT [FF&E]

- Loose, unattached system furniture, traditional furniture, etc.
- Special fixtures relevant to subject facility operations and uses
- Communications equipment, such as servers, telephone sets, communications cables, instruments, & accessories
- Vending equipment purchases and/or leases, etc.
- Exterior equipment, such as exercise equipment, pay telephones.

MOVING & STORAGE COSTS

- Contract and/or internal staff implemented moving costs.
- Temporary storage and insurance.
- Removal and disposal of furnishings of no salvage value.

TEMPORARY FACILITIES

- Non-contractor temporary storage trailers.
- Non-contractor temporary utilities.

REAL ESTATE

- Land acquisitions, leases, easements and rights of way.
- Real estate taxes.
- Transfer taxes.
- Recordation fees & taxes.
- Brokerage commissions.
- Settlement charges.
- Legal fees.

MANAGEMENT *Indirect Owner Mgt Expenses*

- Real estate necessary to house management & staff.
- Utilities.
- Insurance.
- Furniture, fixture & equipment.
- Project management salaries.
- Communications, telephone, facsimile expenses, e-mail, etc.
- Travel, parking, courier services, etc.
- Security.
- Office equipment & supplies.

COMMON OWNER SOFT CONSTRUCTION COSTS (continued)

PROMOTION / RESPONDING TO PUBLIC & MEDIA INQUIRIES

- Artwork and reproduction of advertising, brochures, hand-outs.
- Advertising fees.
- Postage.
- Signage.
- Photography.
- Renderings.
- Public and/or promotional events, such as hearings, fund raisers, etc.

FINANCIAL

- Accounting [in-house].
- Accounting [CPA].
- Interim financing [loan, bond, other] origination fees, expenses & interest.
- Permanent financing [loan, bond, other] origination fees, expenses & interest.
- Appraisal fees.
- Working capital / start-up.
- Performance [Owner, not to be confused with contractor] bonds

INSURANCE PREMIUMS

- Owner's Builder's Risk Insurance
- Owner Liability Insurance
- Title Insurance
- Other Owner Insurance Policies related to the project

LEGAL FEES

- Real estate purchase, land use changes, zoning compliance, proffers
- Partnerships
- Financing
- Contracts
- Leasing

JURISDICTIONAL FEES

- Zoning, site and general building permit fees & expenses. Note: jurisdictional trade permit fees are included in our computations.
- Primary water utility availability and connection fees
- Primary sewer utility availability and connection fees
- Gas company fees
- Power company fees
- Telephone company fees

COMMON OWNER SOFT CONSTRUCTION COSTS (continued)

- Cable TV company fees
- State & local highway fees
- Mandatory completion bonds
- Adjoining owner demands
- Mandated off-site storm water management contributions

DESIGN FEES

- Architect / Engineer / Cost Management / Construction Management Consultant Fees
- Surveys, Civil Engineering, Testing and Third Party Inspection Fees
- Traffic Consultant Fees

RECOMMENDED COST CONTROL PROCESS

Controlling construction costs is a continuous process that spans from the initial programmatic level through to final completion. We recommend that further construction cost estimates be performed if the project advances past the concept/feasibility study level.

MARKET CONDITIONS & OPINIONS OF PROBABLE COST

Downey and Scott, LLC has no control over market conditions or acts of God that can create rapid fluctuations in material prices. We have extensive experience in similar projects and have employed our best judgment in analyzing the subject project. We cannot, however, guarantee that actual construction costs will not vary from the opinions of probable construction costs herein provided.

Please contact Fred Scott – Principal or Christopher M. Taylor – Vice President regarding this project should you have any questions or concerns.

| <i>Revision 2</i> | | Report: Feasibility Study Const Cost Estimate | Prepared by: Downey & Scott, LLC | Status: Concept | PM: ct | | |
|-------------------|--------------------------------|---|---|----------------------------|----------------|-----------|-----------|
| Project: | Williamsburg MS Capacity Study | Location: Arlington Public Schools | 6799 Kennedy Road, Suite F Warrenton, Virginia 20187 | Client: VMDO | Chkd by: fs/sm | | |
| Documents Dated: | January 8, 2016 | | Ph 540.347.5001 Fax 540.347.5021 www.downeyscott.com | Submissn: January 19, 2016 | Job no: 15129 | | |
| | | | | Run Date: See footer | | | |
| | | | | Revised: February 17, 2016 | | | |
| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |

Arlington Public Schools - Williamsburg Middle School Study

PROJECT CONSTRUCTION COST SUMMARY

| | | |
|--|-----------------|-------------|
| North Hall Option 1 | carried forward | \$1,827,014 |
| North Hall Option 2 | carried forward | \$1,608,620 |
| Gym/Locker Room Option | carried forward | \$1,923,472 |
| Dirt Room Option 1 | carried forward | \$338,100 |
| Dirt Room Option 2 | carried forward | \$986,174 |
| Cafeteria Option | carried forward | \$64,015 |
| Second Floor Classroom Addition Option | carried forward | \$4,153,839 |

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| | | www.downeyandscott.com | Revised: February 17, 2016 | | | | |
| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |

North Hall Option 1

CONSTRUCTION COSTS

| | | | | | | | |
|---------------------|---|-------------------------|---------------|--|--|--------------------|--------------------|
| North Hall Option 1 | Renovation | | | | | | |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | Subtotal | | | | | | \$1,128,885 |
| North Hall Option 1 | Escalation to construction mid point | Bid 2017, Complete 2017 | 5.51% | | | | \$62,230 |
| North Hall Option 1 | Subtotal | | | | | | \$1,191,114 |
| North Hall Option 1 | Design Contingency | | 15.00% | | | | \$178,667 |
| North Hall Option 1 | Subtotal | | | | | | \$1,369,781 |
| North Hall Option 1 | Construction Contingency | | 8.00% | | | | \$109,583 |
| North Hall Option 1 | | | | | | Cost per SF | |
| North Hall Option 1 | Total Hard Construction Costs Base Bid | | | | | \$168.97 | \$1,479,364 |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | Project Soft Cost - A/E Fees, F.F.&E., Owner Staffing, Owner Costs | | 23.50% | | | | \$347,651 |
| North Hall Option 1 | | | | | | Cost per SF | |
| North Hall Option 1 | Total Hard Construction Costs Base Bid & Soft Cost | | | | | \$208.68 | \$1,827,014 |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | | | | | | | |

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| | | www.downeyandscott.com | Revised: February 17, 2016 | | | | |
| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |

| | | | | | | | |
|---------------------|-------|-------------------|---|-----------|-----|--------------------|------------|
| North Hall Option 1 | 00.00 | BUILDING | | | | | |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 00.50 | SELECT BLDG. DEMO | Demolition | 8,755.00 | GSF | 4.50 | 39,397.50 |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 01.00 | FOUNDATIONS | | | | Not Included | |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 02.00 | SUBSTRUCTURE | SOG - patch existing floor | 2,188.75 | SF | 8.30 | 18,166.63 |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 03.00 | SUPERSTRUCTURE | Roof framing & deck | 273.00 | SF | 21.00 | 5,733.00 |
| North Hall Option 1 | | | Misc metals | 8,755.00 | GSF | 1.55 | 13,570.25 |
| North Hall Option 1 | | | Misc Wood Blocking | 8,755.00 | GSF | 0.75 | 6,566.25 |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 04.00 | EXTERIOR CLOSURE | Perimeter Wall | | | Existing to Remain | |
| North Hall Option 1 | | | Windows | | | Existing to Remain | |
| North Hall Option 1 | | | Misc. w.p./caulk/fire sealants/etc. Div 7 | 8,755.00 | GSF | 0.73 | 6,347.38 |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 05.00 | ROOFING | Low slope membrane w/ flashing & copings | 0.00 | SF | 12.50 | 0.00 |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 06.00 | INTERIOR CONST | Mtl stud & GWB partitions, hi-impact | 15,372.00 | SF | 10.25 | 157,563.00 |
| North Hall Option 1 | | | GWB ceilings/bulkheads | 8,755.00 | GSF | 0.15 | 1,313.25 |
| North Hall Option 1 | | | Misc. batt insulation | 8,755.00 | GSF | 0.45 | 3,939.75 |
| North Hall Option 1 | | | Sound transmission control insulation | 8,755.00 | GSF | 0.19 | 1,663.45 |
| North Hall Option 1 | | | Storefront entrances | 588.00 | SF | 55.00 | 32,340.00 |
| North Hall Option 1 | | | Interior glass at interior partition allowance | 8,755.00 | SF | 0.38 | 3,283.13 |
| North Hall Option 1 | | | Doors, frames, hardware, sidelites | 29.00 | EA | 2,500.00 | 72,500.00 |
| North Hall Option 1 | | | Acoustic ceiling, avg | 8,755.00 | GSF | 2.75 | 24,076.25 |
| North Hall Option 1 | | | Prem. ceilings: main corridors / mtg. rms, prem add | 1,751.00 | GSF | 1.75 | 3,064.25 |
| North Hall Option 1 | | | Premium wall finish: main corridors & conf. rm | 8,755.00 | GSF | 0.75 | 6,566.25 |
| North Hall Option 1 | | | CT floor, base, walls in restrooms | 130.00 | SF | 18.50 | 2,405.00 |
| North Hall Option 1 | | | CT wainscot hallways/restrooms | 620.00 | SF | 12.50 | 7,750.00 |
| North Hall Option 1 | | | Vinyl Floor/vinyl base | 4,552.00 | SF | 3.75 | 17,070.00 |
| North Hall Option 1 | | | Carpet | 467.00 | SY | 43.00 | 20,081.00 |
| North Hall Option 1 | | | Wood flooring | 0.00 | SF | 16.50 | 0.00 |
| North Hall Option 1 | | | Rubber Athletic Flooring | 0.00 | SF | 12.50 | 0.00 |
| North Hall Option 1 | | | Painting | 8,755.00 | GSF | 2.25 | 19,698.75 |
| North Hall Option 1 | | | Misc cut and patching | 8,755.00 | GSF | 0.30 | 2,626.50 |

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| | | www.downeyandscott.com | Revised: February 17, 2016 | | | | |
| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |

| | | | | | | | |
|---------------------|-------|-------------------|--|---------------------|-----|-----------------|---------------------|
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 07.00 | SPECIAL EQUIPMENT | Toilet partitions/accessories | 8.00 | EA | 325.00 | 2,600.00 |
| North Hall Option 1 | | | Window treatment | 8,755.00 | GSF | 0.45 | 3,939.75 |
| North Hall Option 1 | | | General casework | 78.00 | LF | 255.00 | 19,890.00 |
| North Hall Option 1 | | | General millwork | 8,755.00 | GSF | 0.45 | 3,939.75 |
| North Hall Option 1 | | | Visual display MB & TB | 8,755.00 | GSF | 1.00 | 8,755.00 |
| North Hall Option 1 | | | Solatube | 17.00 | EA | 2,650.00 | 45,050.00 |
| North Hall Option 1 | | | Smart boards | | | Refer to FF&E | |
| North Hall Option 1 | | | Kitchen / faculty lounge appliances allowance | 1.00 | LS | 10,000.00 | 10,000.00 |
| North Hall Option 1 | | | Misc spec. dr signs/f.e./jan shelving/etc. | 8,755.00 | GSF | 1.50 | 13,132.50 |
| North Hall Option 1 | | | Student desks and work stations | | | Refer to FF&E | |
| North Hall Option 1 | | | Office furnishings, sofas and chairs | | | Refer to FF&E | |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 08.00 | CONVEYING | | | | | Not Included |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 09.00 | MECHANICAL HVAC | HVAC Equipment | | | | Existing to Remain |
| North Hall Option 1 | | | Piping & Valves | | | | Existing to Remain |
| North Hall Option 1 | | | Ductwork - modify existing | 8,755.00 | GSF | 4.97 | 43,534.24 |
| North Hall Option 1 | | | Air Outlets - replace existing | 8,755.00 | GSF | 0.59 | 5,165.45 |
| North Hall Option 1 | | | Ductwork Accessories | 8,755.00 | GSF | 0.72 | 6,303.60 |
| North Hall Option 1 | | | Insulation | 8,755.00 | GSF | 1.95 | 17,072.25 |
| North Hall Option 1 | | | Temperature Controls | 8,755.00 | GSF | 4.10 | 35,895.50 |
| North Hall Option 1 | | | Air & Water Balance | 8,755.00 | GSF | 0.33 | 2,889.15 |
| North Hall Option 1 | | | Coordination Drawings | 8,755.00 | GSF | 0.22 | 1,926.10 |
| North Hall Option 1 | | | Systems Operation & Testing | 8,755.00 | GSF | 0.25 | 2,188.75 |
| North Hall Option 1 | | | Demolition | 8,755.00 | GSF | 0.85 | 7,441.75 |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 9.20 | PLUMBING | Demolition | 8,755.00 | GSF | 0.45 | 3,939.75 |
| North Hall Option 1 | | | Water Closet | 2.00 | EA | 1,150.00 | 2,300.00 |
| North Hall Option 1 | | | Lavatory | 2.00 | EA | 675.00 | 1,350.00 |
| North Hall Option 1 | | | Domestic Water Piping | 8,755.00 | GSF | 0.50 | 4,355.61 |
| North Hall Option 1 | | | DWW Piping | 8,755.00 | GSF | 0.37 | 3,195.58 |
| North Hall Option 1 | | | Storm Piping | | | | Existing to Remain |
| North Hall Option 1 | | | Gas Piping | | | | Existing to Remain |
| North Hall Option 1 | | | Plumbing Insulation | 8,755.00 | GSF | 0.14 | 1,225.70 |
| North Hall Option 1 | | | Coordination Drawings | | | | Not Included |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 9.30 | FIRE SPRINKLER | Sprinkler - modify existing | 8,755.00 | GSF | 1.75 | 15,321.25 |
| North Hall Option 1 | | | Fire Pump | | | | Not Included |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 10.00 | ELECTRICAL | Switchboards | | | | Existing to Remain |
| North Hall Option 1 | | | Panelboards - modify existing | 8,755.00 | GSF | 0.25 | 2,144.98 |
| North Hall Option 1 | | | Bus Duct & Transformers | | | | Existing to Remain |
| North Hall Option 1 | | | Generator, 150 KW/Automatic Transfer Switches | | | | Existing to Remain |
| North Hall Option 1 | | | Light Fixtures - based on T5/LED fixtures | 8,755.00 | GSF | 6.40 | 56,032.00 |
| North Hall Option 1 | | | Light Switches, includes DDC control connections | 8,755.00 | GSF | 1.25 | 10,943.75 |
| North Hall Option 1 | | | Power Outlets | 8,755.00 | GSF | 0.95 | 8,317.25 |
| North Hall Option 1 | | | Safety Cabinets & Disconnects | | | | Existing to Remain |
| North Hall Option 1 | | | Power Feeders | | | | Existing to Remain |
| North Hall Option 1 | | | Power Home Runs | 8,755.00 | GSF | 2.20 | 19,261.00 |
| North Hall Option 1 | | | Power Branches | 8,755.00 | GSF | 0.85 | 7,441.75 |
| North Hall Option 1 | | | Lighting Home Runs | 8,755.00 | GSF | 1.15 | 10,068.25 |
| North Hall Option 1 | | | Lighting Branches | 8,755.00 | GSF | 1.05 | 9,192.75 |
| North Hall Option 1 | | | Grounding/Lightning Protection | | | | Existing to Remain |
| North Hall Option 1 | | | Clock System | 8,755.00 | GSF | 0.45 | 3,939.75 |
| North Hall Option 1 | | | Phone/Data System | 8,755.00 | GSF | 3.90 | 34,144.50 |
| North Hall Option 1 | | | Security System | 8,755.00 | GSF | 0.94 | 8,229.70 |
| North Hall Option 1 | | | P.A. & A.V. Systems | 8,755.00 | GSF | 0.55 | 4,815.25 |
| North Hall Option 1 | | | TV System | 8,755.00 | GSF | 0.29 | 2,538.95 |
| North Hall Option 1 | | | Fire Alarm | 8,755.00 | GSF | 1.88 | 16,459.40 |
| North Hall Option 1 | | | Coordination Drawings | 8,755.00 | GSF | 0.22 | 1,926.10 |
| North Hall Option 1 | | | Demolition | 8,755.00 | GSF | 0.80 | 7,004.00 |
| North Hall Option 1 | | | | | | | |
| North Hall Option 1 | 11.00 | MARK-UPS | Subtotal | | | | 929,592.63 |
| North Hall Option 1 | | | General Conditions | 10.00% | | | 92,959.26 |
| North Hall Option 1 | | | Subtotal | | | | 1,022,551.89 |
| North Hall Option 1 | | | GC OH @ 4% plus Profit @ 4.5% | 8.50% | | | 86,916.91 |
| North Hall Option 1 | | | Subtotal | | | | 1,109,468.80 |
| North Hall Option 1 | | | Bonds & insurance | 1.75% | | | 19,415.70 |
| North Hall Option 1 | | | Subtotal | 8,755.00 GSF | | \$128.94 | 1,128,884.50 |

| | | | | | |
|-------------------|--|---|----------------------------------|----------------------------|-----------------|
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|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

North Hall Option 2

CONSTRUCTION COSTS

| | | | | | | | |
|---------------------|---|-------------------------|--|---------------|--|--------------------|--------------------|
| North Hall Option 2 | Renovation | | | | | | |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | Subtotal | | | | | | \$993,942 |
| North Hall Option 2 | Escalation to construction mid point | Bid 2017, Complete 2017 | | 5.51% | | | \$54,791 |
| North Hall Option 2 | Subtotal | | | | | | \$1,048,733 |
| North Hall Option 2 | Design Contingency | | | 15.00% | | | \$157,310 |
| North Hall Option 2 | Subtotal | | | | | | \$1,206,043 |
| North Hall Option 2 | Construction Contingency | | | 8.00% | | | \$96,483 |
| North Hall Option 2 | | | | | | Cost per SF | |
| North Hall Option 2 | Total Hard Construction Costs Base Bid | | | | | \$183.51 | \$1,302,526 |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | Project Soft Cost - A/E Fees, F.F.&E., Owner Staffing, Owner Costs | | | 23.50% | | | \$306,094 |
| North Hall Option 2 | | | | | | Cost per SF | |
| North Hall Option 2 | Total Hard Construction Costs Base Bid & Soft Cost | | | | | \$226.63 | \$1,608,620 |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | | | | | | | |

| | | | | | |
|-------------------|--|---|----------------------------------|----------------------------|-----------------|
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|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

| | | | | | | | |
|---------------------|-------|-------------------|---|-----------|-----|--------------------|------------|
| North Hall Option 2 | | | BUILDING | | | | |
| North Hall Option 2 | 00.00 | | | | | | |
| North Hall Option 2 | 00.50 | SELECT BLDG. DEMO | Demolition | 7,098.00 | GSF | 4.50 | 31,941.00 |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 01.00 | FOUNDATIONS | | | | Not Included | |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 02.00 | SUBSTRUCTURE | SOG - patch existing floor | 1,774.50 | SF | 8.30 | 14,728.35 |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 03.00 | SUPERSTRUCTURE | Roof framing & deck | 273.00 | SF | 21.00 | 5,733.00 |
| North Hall Option 2 | | | Misc metals | 7,098.00 | GSF | 1.55 | 11,001.90 |
| North Hall Option 2 | | | Misc Wood Blocking | 7,098.00 | GSF | 0.75 | 5,323.50 |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 04.00 | EXTERIOR CLOSURE | Perimeter Wall | | | Existing to Remain | |
| North Hall Option 2 | | | Windows | | | Existing to Remain | |
| North Hall Option 2 | | | Misc. w.p./caulk/fire sealants/etc. Div 7 | 7,098.00 | GSF | 0.73 | 5,146.05 |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 05.00 | ROOFING | Low slope membrane w/ flashing & copings | 0.00 | SF | 12.50 | 0.00 |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 06.00 | INTERIOR CONST | Mtl stud & GWB partitions, hi-impact | 14,406.00 | SF | 10.25 | 147,661.50 |
| North Hall Option 2 | | | GWB ceilings/bulkheads | 7,098.00 | GSF | 0.15 | 1,064.70 |
| North Hall Option 2 | | | Misc. batt insulation | 7,098.00 | GSF | 0.45 | 3,194.10 |
| North Hall Option 2 | | | Sound transmission control insulation | 7,098.00 | GSF | 0.19 | 1,348.62 |
| North Hall Option 2 | | | Storefront entrances | 588.00 | SF | 55.00 | 32,340.00 |
| North Hall Option 2 | | | Interior glass at interior partition allowance | 7,098.00 | SF | 0.38 | 2,661.75 |
| North Hall Option 2 | | | Doors, frames, hardware, sidelites | 29.00 | EA | 2,500.00 | 72,500.00 |
| North Hall Option 2 | | | Acoustic ceiling, avg | 7,098.00 | GSF | 2.75 | 19,519.50 |
| North Hall Option 2 | | | Prem. ceilings: main corridors / mtg. rms, prem add | 1,419.60 | GSF | 1.75 | 2,484.30 |
| North Hall Option 2 | | | Premium wall finish: main corridors & conf. rm | 7,098.00 | GSF | 0.75 | 5,323.50 |
| North Hall Option 2 | | | CT floor, base, walls in restrooms | 130.00 | SF | 18.50 | 2,405.00 |
| North Hall Option 2 | | | CT wainscot hallways/restrooms | 620.00 | SF | 12.50 | 7,750.00 |
| North Hall Option 2 | | | Vinyl Floor/vinyl base | 2,895.00 | SF | 3.75 | 10,856.25 |
| North Hall Option 2 | | | Carpet | 467.00 | SY | 43.00 | 20,081.00 |
| North Hall Option 2 | | | Wood flooring | 0.00 | SF | 16.50 | 0.00 |
| North Hall Option 2 | | | Rubber Athletic Flooring | 0.00 | SF | 12.50 | 0.00 |
| North Hall Option 2 | | | Painting | 7,098.00 | GSF | 2.25 | 15,970.50 |
| North Hall Option 2 | | | Misc cut and patching | 7,098.00 | GSF | 0.30 | 2,129.40 |
| North Hall Option 2 | | | | | | | |

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|-------------------|--|---|----------------------------------|----------------------------|-----------------|
| Revision 2 | | Report: Feasibility Study Const Cost Estimate | Prepared by: Downey & Scott, LLC | Status: Concept | PM: ct |
| | | Project: Williamsburg MS Capacity Study | 6799 Kennedy Road, Suite F | Client: VMDO | Chckd by: fs/sm |
| | | Location: Arlington Public Schools | Warrenton, Virginia 20187 | Submissn: January 19, 2016 | Job no: 15129 |
| | | Documents Dated: January 8, 2016 | Ph 540.347.5001 Fax 540.347.5021 | Run Date: See footer | |
| | | | www.downeyscott.com | Revised: February 17, 2016 | |

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|---------------------|-------|-------------------|--|----------|-----|--------------------|------------|
| North Hall Option 2 | 07.00 | SPECIAL EQUIPMENT | Toilet partitions/accessories | 8.00 | EA | 325.00 | 2,600.00 |
| North Hall Option 2 | | | Window treatment | 7,098.00 | GSF | 0.45 | 3,194.10 |
| North Hall Option 2 | | | General casework | 101.00 | LF | 255.00 | 25,755.00 |
| North Hall Option 2 | | | General millwork | 7,098.00 | GSF | 0.45 | 3,194.10 |
| North Hall Option 2 | | | Visual display MB & TB | 7,098.00 | GSF | 1.00 | 7,098.00 |
| North Hall Option 2 | | | Solatube | 17.00 | EA | 2,650.00 | 45,050.00 |
| North Hall Option 2 | | | Smart boards | | | Refer to FF&E | |
| North Hall Option 2 | | | Kitchen / faculty lounge appliances allowance | 1.00 | LS | 10,000.00 | 10,000.00 |
| North Hall Option 2 | | | Misc spec. dr signs/f.e./jan shelving/etc. | 7,098.00 | GSF | 1.50 | 10,647.00 |
| North Hall Option 2 | | | Student desks and work stations | | | Refer to FF&E | |
| North Hall Option 2 | | | Office furnishings, sofas and chairs | | | Refer to FF&E | |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 08.00 | CONVEYING | | | | Not Included | |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 09.00 | MECHANICAL HVAC | HVAC Equipment | | | Existing to Remain | |
| North Hall Option 2 | | | Piping & Valves | | | Existing to Remain | |
| North Hall Option 2 | | | Ductwork - modify existing | 7,098.00 | GSF | 4.97 | 35,294.81 |
| North Hall Option 2 | | | Air Outlets - replace existing | 7,098.00 | GSF | 0.59 | 4,187.82 |
| North Hall Option 2 | | | Ductwork Accessories | 7,098.00 | GSF | 0.72 | 5,110.56 |
| North Hall Option 2 | | | Insulation | 7,098.00 | GSF | 1.95 | 13,841.10 |
| North Hall Option 2 | | | Temperature Controls | 7,098.00 | GSF | 4.10 | 29,101.80 |
| North Hall Option 2 | | | Air & Water Balance | 7,098.00 | GSF | 0.33 | 2,342.34 |
| North Hall Option 2 | | | Coordination Drawings | 7,098.00 | GSF | 0.22 | 1,561.56 |
| North Hall Option 2 | | | Systems Operation & Testing | 7,098.00 | GSF | 0.25 | 1,774.50 |
| North Hall Option 2 | | | Demolition | 7,098.00 | GSF | 0.85 | 6,033.30 |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 9.20 | PLUMBING | Demolition | 7,098.00 | GSF | 0.45 | 3,194.10 |
| North Hall Option 2 | | | Water Closet | 2.00 | EA | 1,150.00 | 2,300.00 |
| North Hall Option 2 | | | Lavatory | 2.00 | EA | 675.00 | 1,350.00 |
| North Hall Option 2 | | | Domestic Water Piping | 7,098.00 | GSF | 0.50 | 3,531.26 |
| North Hall Option 2 | | | DWW Piping | 7,098.00 | GSF | 0.37 | 2,590.77 |
| North Hall Option 2 | | | Storm Piping | | | Existing to Remain | |
| North Hall Option 2 | | | Gas Piping | | | Existing to Remain | |
| North Hall Option 2 | | | Plumbing Insulation | 7,098.00 | GSF | 0.14 | 993.72 |
| North Hall Option 2 | | | Coordination Drawings | | | Not Included | |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 9.30 | FIRE SPRINKLER | Sprinkler - modify existing | 7,098.00 | GSF | 1.75 | 12,421.50 |
| North Hall Option 2 | | | Fire Pump | | | Not Included | |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 10.00 | ELECTRICAL | Switchboards | | | Existing to Remain | |
| North Hall Option 2 | | | Panelboards - modify existing | 7,098.00 | GSF | 0.25 | 1,739.01 |
| North Hall Option 2 | | | Bus Duct & Transformers | | | Existing to Remain | |
| North Hall Option 2 | | | Generator, 150 KW/Automatic Transfer Switches | | | Existing to Remain | |
| North Hall Option 2 | | | Light Fixtures - based on T5/LED fixtures | 7,098.00 | GSF | 6.40 | 45,427.20 |
| North Hall Option 2 | | | Light Switches, includes DDC control connections | 7,098.00 | GSF | 1.25 | 8,872.50 |
| North Hall Option 2 | | | Power Outlets | 7,098.00 | GSF | 0.95 | 6,743.10 |
| North Hall Option 2 | | | Safety Cabinets & Disconnects | | | Existing to Remain | |
| North Hall Option 2 | | | Power Feeders | | | Existing to Remain | |
| North Hall Option 2 | | | Power Home Runs | 7,098.00 | GSF | 2.20 | 15,615.60 |
| North Hall Option 2 | | | Power Branches | 7,098.00 | GSF | 0.85 | 6,033.30 |
| North Hall Option 2 | | | Lighting Home Runs | 7,098.00 | GSF | 1.15 | 8,162.70 |
| North Hall Option 2 | | | Lighting Branches | 7,098.00 | GSF | 1.05 | 7,452.90 |
| North Hall Option 2 | | | Grounding/Lightning Protection | | | Existing to Remain | |
| North Hall Option 2 | | | Clock System | 7,098.00 | GSF | 0.45 | 3,194.10 |
| North Hall Option 2 | | | Phone/Data System | 7,098.00 | GSF | 3.90 | 27,682.20 |
| North Hall Option 2 | | | Security System | 7,098.00 | GSF | 0.94 | 6,672.12 |
| North Hall Option 2 | | | P.A. & A.V. Systems | 7,098.00 | GSF | 0.55 | 3,903.90 |
| North Hall Option 2 | | | TV System | 7,098.00 | GSF | 0.29 | 2,058.42 |
| North Hall Option 2 | | | Fire Alarm | 7,098.00 | GSF | 1.88 | 13,344.24 |
| North Hall Option 2 | | | Coordination Drawings | 7,098.00 | GSF | 0.22 | 1,561.56 |
| North Hall Option 2 | | | Demolition | 7,098.00 | GSF | 0.80 | 5,678.40 |
| North Hall Option 2 | | | | | | | |
| North Hall Option 2 | 11.00 | MARK-UPS | Subtotal | | | | 818,472.50 |
| North Hall Option 2 | | | General Conditions | 10.00% | | | 81,847.25 |
| North Hall Option 2 | | | Subtotal | | | | 900,319.75 |
| North Hall Option 2 | | | GC OH @ 4% plus Profit @ 4.5% | 8.50% | | | 76,527.18 |
| North Hall Option 2 | | | Subtotal | | | | 976,846.93 |
| North Hall Option 2 | | | Bonds & insurance | 1.75% | | | 17,094.82 |
| North Hall Option 2 | | | Subtotal | 7,098.00 | GSF | \$140.03 | 993,941.75 |
| North Hall Option 2 | | | | | | | |

COST ESTIMATE

| | | | | | |
|-------------------|--|---|----------------------------------|----------------------------|-----------------|
| Revision 2 | | Report: Feasibility Study Const Cost Estimate | Prepared by: Downey & Scott, LLC | Status: Concept | PM: ct |
| | | Project: Williamsburg MS Capacity Study | 6799 Kennedy Road, Suite F | Client: VMDO | Chckd by: fs/sm |
| | | Location: Arlington Public Schools | Warrenton, Virginia 20187 | Submissn: January 19, 2016 | Job no: 15129 |
| | | Documents Dated: January 8, 2016 | Ph 540.347.5001 Fax 540.347.5021 | Run Date: See footer | |
| | | | www.downeyandscott.com | Revised: February 17, 2016 | |

| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

Gym/Locker Room Option

CONSTRUCTION COSTS

| | | | | | | | |
|------------------------|---|-------------------------|--|------------------|--|--------------------------|--------------------|
| Gym/Locker Room Option | Renovation | | | 17,896.00 | | Gross Square Feet | |
| Gym/Locker Room Option | | | | 66.41 | | Cost per SF | |
| Gym/Locker Room Option | Subtotal | | | | | | \$1,188,484 |
| Gym/Locker Room Option | Escalation to construction mid point | Bid 2017, Complete 2017 | | 5.51% | | | \$65,515 |
| Gym/Locker Room Option | Subtotal | | | | | | \$1,253,999 |
| Gym/Locker Room Option | Design Contingency | | | 15.00% | | | \$188,100 |
| Gym/Locker Room Option | Subtotal | | | | | | \$1,442,099 |
| Gym/Locker Room Option | Construction Contingency | | | 8.00% | | | \$115,368 |
| Gym/Locker Room Option | | | | | | Cost per SF | |
| Gym/Locker Room Option | Total Hard Construction Costs Base Bid | | | | | \$87.03 | \$1,557,467 |
| Gym/Locker Room Option | Project Soft Cost - A/E Fees, F.F.&E., Owner Staffing, Owner Costs | | | 23.50% | | | \$366,005 |
| Gym/Locker Room Option | | | | | | Cost per SF | |
| Gym/Locker Room Option | Total Hard Construction Costs Base Bid & Soft Cost | | | | | \$107.48 | \$1,923,472 |

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|-------------------|--|---|----------------------------------|----------------------------|-----------------|
| Revision 2 | | Report: Feasibility Study Const Cost Estimate | Prepared by: Downey & Scott, LLC | Status: Concept | PM: ct |
| | | Project: Williamsburg MS Capacity Study | 6799 Kennedy Road, Suite F | Client: VMDO | Chckd by: fs/sm |
| | | Location: Arlington Public Schools | Warrenton, Virginia 20187 | Submissn: January 19, 2016 | Job no: 15129 |
| | | Documents Dated: January 8, 2016 | Ph 540.347.5001 Fax 540.347.5021 | Run Date: See footer | |
| | | | www.downeyandscott.com | Revised: February 17, 2016 | |

| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

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|------------------------|-------|-------------------------|---|-----------|-----|--------------------|-----------|
| Gym/Locker Room Option | 00.00 | BUILDING | | | | | |
| Gym/Locker Room Option | 00.50 | SELECT BLDG. DEMO | Demolition | 17,896.00 | GSF | 3.58 | 63,978.20 |
| Gym/Locker Room Option | 01.00 | FOUNDATIONS | | | | Not Included | |
| Gym/Locker Room Option | 02.00 | SUBSTRUCTURE | SOG - patch existing floor | 4,474.00 | SF | 8.30 | 37,134.20 |
| Gym/Locker Room Option | 03.00 | SUPERSTRUCTURE | Roof framing & deck | 0.00 | SF | 21.00 | 0.00 |
| Gym/Locker Room Option | | | Misc metals | 17,896.00 | GSF | 0.78 | 13,869.40 |
| Gym/Locker Room Option | | | Concrete Base for Lockers | 1,368.00 | SF | 7.50 | 10,260.00 |
| Gym/Locker Room Option | | | Misc Wood Blocking | 17,896.00 | GSF | 0.38 | 6,711.00 |
| Gym/Locker Room Option | 04.00 | EXTERIOR CLOSURE | Perimeter Wall | | | Existing to Remain | |
| Gym/Locker Room Option | | | Windows | | | Existing to Remain | |
| Gym/Locker Room Option | | | Storefront entrances | 0.00 | SF | 55.00 | 0.00 |
| Gym/Locker Room Option | | | Misc. w.p./caulk/fire sealants/etc. Div 7 | 17,896.00 | GSF | 0.29 | 5,189.84 |
| Gym/Locker Room Option | 05.00 | ROOFING | Low slope membrane w/ flashing & copings | 0.00 | SF | 12.50 | 0.00 |
| Gym/Locker Room Option | 06.00 | INTERIOR CONST | Mtl stud & G/WB partitions, hi-impact | 9,419.20 | SF | 10.25 | 96,546.80 |
| Gym/Locker Room Option | | | GWB ceilings/bulkheads | 0.00 | GSF | 0.15 | 0.00 |
| Gym/Locker Room Option | | | Misc. batt insulation | 0.00 | GSF | 0.45 | 0.00 |
| Gym/Locker Room Option | | | Sound transmission control insulation | 0.00 | GSF | 0.19 | 0.00 |
| Gym/Locker Room Option | | | Interior glass at interior partition allowance | 0.00 | SF | 0.38 | 0.00 |
| Gym/Locker Room Option | | | Doors, frames, hardware, sidelites | 7.00 | EA | 2,500.00 | 17,500.00 |
| Gym/Locker Room Option | | | Acoustic ceiling, avg | 4,803.50 | GSF | 2.75 | 13,209.63 |
| Gym/Locker Room Option | | | Prem. ceilings: main corridors / mtg. rms, prem add | 0.00 | GSF | 1.75 | 0.00 |
| Gym/Locker Room Option | | | Premium wall finish: main corridors & conf. rm | 0.00 | GSF | 0.75 | 0.00 |
| Gym/Locker Room Option | | | CT floor, base, walls in restrooms | 3,579.50 | SF | 18.50 | 66,220.75 |
| Gym/Locker Room Option | | | CT wainscot hallways/restrooms | 4,016.00 | SF | 12.50 | 50,200.00 |
| Gym/Locker Room Option | | | Vinyl Floor/vinyl base | 1,224.00 | SF | 3.75 | 4,590.00 |
| Gym/Locker Room Option | | | Carpet | 0.00 | SY | 43.00 | 0.00 |
| Gym/Locker Room Option | | | Wood flooring - refinished existing | 5,357.00 | SF | 4.54 | 24,307.39 |
| Gym/Locker Room Option | | | Rubber Athletic Flooring | 4,423.00 | SF | 12.50 | 55,287.50 |
| Gym/Locker Room Option | | | Painting | 17,896.00 | GSF | 2.25 | 40,266.00 |
| Gym/Locker Room Option | | | Misc cut and patching | 17,896.00 | GSF | 0.30 | 5,368.80 |

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|-------------------|--|---|----------------------------------|----------------------------|-----------------|
| Revision 2 | | Report: Feasibility Study Const Cost Estimate | Prepared by: Downey & Scott, LLC | Status: Concept | PM: ct |
| | | Project: Williamsburg MS Capacity Study | 6799 Kennedy Road, Suite F | Client: VMDO | Chckd by: fs/sm |
| | | Location: Arlington Public Schools | Warrenton, Virginia 20187 | Submissn: January 19, 2016 | Job no: 15129 |
| | | Documents Dated: January 8, 2016 | Ph 540.347.5001 Fax 540.347.5021 | Run Date: See footer | |
| | | | www.downeyandscott.com | Revised: February 17, 2016 | |

| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

| | | | | | | | |
|------------------------|-------|--------------------------|--|----------------------|-----|--------------------|---------------------|
| Gym/Locker Room Option | 07.00 | SPECIAL EQUIPMENT | Toilet partitions/accessories | 28.00 | EA | 325.00 | 9,100.00 |
| Gym/Locker Room Option | | | Window treatment | 0.00 | GSF | 0.45 | 0.00 |
| Gym/Locker Room Option | | | General casework - vanity | 44.00 | LF | 127.50 | 5,610.00 |
| Gym/Locker Room Option | | | General millwork | 0.00 | GSF | 0.45 | 0.00 |
| Gym/Locker Room Option | | | Visual display MB & TB | 17,896.00 | GSF | 0.25 | 4,474.00 |
| Gym/Locker Room Option | | | Lockers - new | 488.00 | EA | 181.17 | 88,410.96 |
| Gym/Locker Room Option | | | Lockers - relocated | 531.00 | EA | 102.47 | 54,408.92 |
| Gym/Locker Room Option | | | Locker Benches | 72.00 | LF | 32.50 | 2,340.00 |
| Gym/Locker Room Option | | | Black Box Theater - rigging & curtain (1,290 SF) | 0.00 | LS | 55,740.00 | 0.00 |
| Gym/Locker Room Option | | | Black Box Theater - AV & Lighting | 0.00 | LS | 245,000.00 | 0.00 |
| Gym/Locker Room Option | | | Kitchen / faculty lounge appliances allowance | 0.00 | LS | 10,000.00 | 0.00 |
| Gym/Locker Room Option | | | Misc spec. dr signs/f.e./jan shelving/etc. | 17,896.00 | GSF | 0.11 | 2,013.30 |
| Gym/Locker Room Option | | | Student desks and work stations | | | Refer to FF&E | |
| Gym/Locker Room Option | | | Office furnishings, sofas and chairs | | | Refer to FF&E | |
| Gym/Locker Room Option | 08.00 | CONVEYING | | | | Not Included | |
| Gym/Locker Room Option | 09.00 | MECHANICAL HVAC | HVAC Equipment | 17,896.00 | GSF | 3.20 | 57,267.20 |
| Gym/Locker Room Option | | | Piping & Valves | | | Existing to Remain | |
| Gym/Locker Room Option | | | Ductwork - modify existing | 17,896.00 | GSF | 1.17 | 20,938.32 |
| Gym/Locker Room Option | | | Air Outlets - replace existing | 17,896.00 | GSF | 0.59 | 10,558.64 |
| Gym/Locker Room Option | | | Ductwork Accessories | 17,896.00 | GSF | 0.07 | 1,288.51 |
| Gym/Locker Room Option | | | Insulation | 17,896.00 | GSF | 0.20 | 3,489.72 |
| Gym/Locker Room Option | | | Temperature Controls | 17,896.00 | GSF | 0.82 | 14,674.72 |
| Gym/Locker Room Option | | | Air & Water Balance | 17,896.00 | GSF | 0.33 | 5,905.68 |
| Gym/Locker Room Option | | | Coordination Drawings | | | Not Included | |
| Gym/Locker Room Option | | | Systems Operation & Testing | 17,896.00 | GSF | 0.25 | 4,474.00 |
| Gym/Locker Room Option | | | Demolition | 17,896.00 | GSF | 0.17 | 3,042.32 |
| Gym/Locker Room Option | 9.20 | PLUMBING | Demolition | 17,896.00 | GSF | 0.45 | 8,053.20 |
| Gym/Locker Room Option | | | Water Closet | 6.00 | EA | 1,150.00 | 6,900.00 |
| Gym/Locker Room Option | | | Urinal | 2.00 | EA | 995.00 | 1,990.00 |
| Gym/Locker Room Option | | | Lavatory | 6.00 | EA | 675.00 | 4,050.00 |
| Gym/Locker Room Option | | | Domestic Water Piping | 17,896.00 | GSF | 0.50 | 8,903.26 |
| Gym/Locker Room Option | | | DWV Piping | 17,896.00 | GSF | 0.37 | 6,532.04 |
| Gym/Locker Room Option | | | Storm Piping | | | Existing to Remain | |
| Gym/Locker Room Option | | | Gas Piping | | | Existing to Remain | |
| Gym/Locker Room Option | | | Plumbing Insulation | 17,896.00 | GSF | 0.14 | 2,505.44 |
| Gym/Locker Room Option | | | Coordination Drawings | | | Not Included | |
| Gym/Locker Room Option | 9.30 | FIRE SPRINKLER | Sprinkler - modify existing | 17,896.00 | GSF | 1.75 | 31,318.00 |
| Gym/Locker Room Option | | | Fire Pump | | | Not Included | |
| Gym/Locker Room Option | 10.00 | ELECTRICAL | Switchboards | | | Existing to Remain | |
| Gym/Locker Room Option | | | Panelboards - modify existing | 17,896.00 | GSF | 0.15 | 2,630.71 |
| Gym/Locker Room Option | | | Bus Duct & Transformers | | | Existing to Remain | |
| Gym/Locker Room Option | | | Generator, 150 KW/Automatic Transfer Switches | | | Existing to Remain | |
| Gym/Locker Room Option | | | Light Fixtures - modify existing | 17,896.00 | GSF | 1.92 | 34,360.32 |
| Gym/Locker Room Option | | | Light Switches - modify existing | 17,896.00 | GSF | 0.19 | 3,355.50 |
| Gym/Locker Room Option | | | Power Outlets | 17,896.00 | GSF | 0.29 | 5,100.36 |
| Gym/Locker Room Option | | | Safety Cabinets & Disconnects | | | Existing to Remain | |
| Gym/Locker Room Option | | | Power Feeders | | | Existing to Remain | |
| Gym/Locker Room Option | | | Power Home Runs - modify existing | 17,896.00 | GSF | 0.55 | 9,842.80 |
| Gym/Locker Room Option | | | Power Branches - modify existing | 17,896.00 | GSF | 0.21 | 3,802.90 |
| Gym/Locker Room Option | | | Lighting Home Runs - modify existing | 17,896.00 | GSF | 0.29 | 5,145.10 |
| Gym/Locker Room Option | | | Lighting Branches - modify existing | 17,896.00 | GSF | 0.26 | 4,697.70 |
| Gym/Locker Room Option | | | Grounding/Lightning Protection | | | Existing to Remain | |
| Gym/Locker Room Option | | | Clock System - modify existing | 17,896.00 | GSF | 0.11 | 2,013.30 |
| Gym/Locker Room Option | | | Phone/Data System - modify existing | 17,896.00 | GSF | 0.98 | 17,448.60 |
| Gym/Locker Room Option | | | Security System - modify existing | 17,896.00 | GSF | 0.24 | 4,205.56 |
| Gym/Locker Room Option | | | P.A. & A.V. Systems - modify existing | 17,896.00 | GSF | 0.14 | 2,460.70 |
| Gym/Locker Room Option | | | TV System - modify existing | 17,896.00 | GSF | 0.07 | 1,297.46 |
| Gym/Locker Room Option | | | Fire Alarm - modify existing | 17,896.00 | GSF | 0.47 | 8,411.12 |
| Gym/Locker Room Option | | | Coordination Drawings | | | Not Included | |
| Gym/Locker Room Option | | | Demolition | 17,896.00 | GSF | 0.28 | 5,010.88 |
| Gym/Locker Room Option | 11.00 | MARK-UPS | Subtotal | | | | 978,670.74 |
| Gym/Locker Room Option | | | General Conditions | 10.00% | | | 97,867.07 |
| Gym/Locker Room Option | | | Subtotal | | | | 1,076,537.82 |
| Gym/Locker Room Option | | | GC OH @ 4% plus Profit @ 4.5% | 8.50% | | | 91,505.71 |
| Gym/Locker Room Option | | | Subtotal | | | | 1,168,043.53 |
| Gym/Locker Room Option | | | Bonds & insurance | 1.75% | | | 20,440.76 |
| Gym/Locker Room Option | | | Subtotal | 17,896.00 GSF | | \$66.41 | 1,188,484.29 |

| | | | | | |
|---|--|---|----------------------------------|----------------------------|-----------------|
| Revision 2 | | Report: Feasibility Study Const Cost Estimate | Prepared by: Downey & Scott, LLC | Status: Concept | PM: ct |
| Project: Williamsburg MS Capacity Study | | 6799 Kennedy Road, Suite F | | Client: VMDO | Chckd by: fs/sm |
| Location: Arlington Public Schools | | Warrenton, Virginia 20187 | | Submissn: January 19, 2016 | Job no: 15129 |
| Documents Dated: January 8, 2016 | | Ph 540.347.5021 Fax 540.347.5021 | | Run Date: See footer | |
| | | www.downeyandscott.com | | Revised: February 17, 2016 | |

| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

Dirt Room Option 1

CONSTRUCTION COSTS

| | | | | | | | |
|--------------------|---|-------------------------|--|------------------------|--|--------------------|--------------------------|
| Dirt Room Option 1 | Renovation | | | Renovation | | 664.00 | <i>Gross Square Feet</i> |
| Dirt Room Option 1 | | | | Total | | 664.00 | <i>Gross Square Feet</i> |
| Dirt Room Option 1 | | | | | | <i>Cost per SF</i> | |
| Dirt Room Option 1 | | | | <i>Carried forward</i> | | 314.62 | \$208,907 |
| Dirt Room Option 1 | Subtotal | | | | | | \$208,907 |
| Dirt Room Option 1 | Escalation to construction mid point | Bid 2017, Complete 2017 | | 5.51% | | | \$11,516 |
| Dirt Room Option 1 | Subtotal | | | | | | \$220,423 |
| Dirt Room Option 1 | Design Contingency | | | 15.00% | | | \$33,063 |
| Dirt Room Option 1 | Subtotal | | | | | | \$253,486 |
| Dirt Room Option 1 | Construction Contingency | | | 8.00% | | | \$20,279 |
| Dirt Room Option 1 | | | | | | <i>Cost per SF</i> | |
| Dirt Room Option 1 | Total Hard Construction Costs Base Bid | | | | | \$412.30 | \$273,765 |
| Dirt Room Option 1 | Project Soft Cost - A/E Fees, F.F.&E., Owner Staffing, Owner Costs | | | 23.50% | | | \$64,335 |
| Dirt Room Option 1 | | | | | | <i>Cost per SF</i> | |
| Dirt Room Option 1 | Total Hard Construction Costs Base Bid & Soft Cost | | | | | \$509.19 | \$338,100 |

| | | | | | |
|---|--|---|----------------------------------|----------------------------|-----------------|
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| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

| | | | | | | | |
|--------------------|-------|-------------------|---|----------|-----|--------------------|-----------|
| Dirt Room Option 1 | | | | | | | |
| Dirt Room Option 1 | 00.00 | | BUILDING | | | | |
| Dirt Room Option 1 | 00.50 | SELECT BLDG. DEMO | Demolition | 664.00 | GSF | 6.50 | 4,316.00 |
| Dirt Room Option 1 | 01.00 | FOUNDATIONS | Foundations | 664.00 | GSF | 11.80 | 7,835.20 |
| Dirt Room Option 1 | 02.00 | SUBSTRUCTURE | SOG | 664.00 | SF | 16.60 | 11,022.40 |
| Dirt Room Option 1 | 03.00 | SUPERSTRUCTURE | Roof framing & deck | 0.00 | SF | 21.00 | 0.00 |
| Dirt Room Option 1 | | | Misc metals | 664.00 | GSF | 1.55 | 1,029.20 |
| Dirt Room Option 1 | | | Misc Wood Blocking | 664.00 | GSF | 0.75 | 498.00 |
| Dirt Room Option 1 | 04.00 | EXTERIOR CLOSURE | Perimeter Wall | 954.00 | SF | 20.50 | 19,557.00 |
| Dirt Room Option 1 | | | Windows | | | Existing to Remain | |
| Dirt Room Option 1 | | | Storefront entrances | 0.00 | SF | 55.00 | 0.00 |
| Dirt Room Option 1 | | | Misc. w.p./caulk/fire sealants/etc. Div 7 | 664.00 | GSF | 0.73 | 481.40 |
| Dirt Room Option 1 | 05.00 | ROOFING | Low slope membrane w/ flashing & copings | 0.00 | SF | 12.50 | 0.00 |
| Dirt Room Option 1 | 06.00 | INTERIOR CONST | Mtl stud & GWB partitions, hi-impact | 3,006.00 | SF | 10.25 | 30,811.50 |
| Dirt Room Option 1 | | | GWB ceilings/bulkheads | 664.00 | GSF | 0.15 | 99.60 |
| Dirt Room Option 1 | | | Misc. batt insulation | 664.00 | GSF | 0.45 | 298.80 |
| Dirt Room Option 1 | | | Sound transmission control insulation | 664.00 | GSF | 0.19 | 126.16 |
| Dirt Room Option 1 | | | Interior glass at interior partition allowance | 664.00 | SF | 0.38 | 249.00 |
| Dirt Room Option 1 | | | Doors, frames, hardware, sidelites | 2.00 | EA | 2,500.00 | 5,000.00 |
| Dirt Room Option 1 | | | Acoustic ceiling, avg | 664.00 | GSF | 2.75 | 1,826.00 |
| Dirt Room Option 1 | | | Prem. ceilings: main corridors / mtg. rms, prem add | 132.80 | GSF | 1.75 | 232.40 |
| Dirt Room Option 1 | | | Premium wall finish: main corridors & conf. rm | 664.00 | GSF | 0.75 | 498.00 |
| Dirt Room Option 1 | | | CT floor, base, walls in restrooms | 314.00 | SF | 18.50 | 5,809.00 |
| Dirt Room Option 1 | | | CT wainscot hallways/restrooms | 570.00 | SF | 12.50 | 7,125.00 |
| Dirt Room Option 1 | | | Vinyl Floor/vinyl base | 350.00 | SF | 3.75 | 1,312.50 |
| Dirt Room Option 1 | | | Carpet | 0.00 | SY | 43.00 | 0.00 |
| Dirt Room Option 1 | | | Wood flooring | 0.00 | SF | 16.50 | 0.00 |
| Dirt Room Option 1 | | | Rubber Athletic Flooring | 0.00 | SF | 12.50 | 0.00 |
| Dirt Room Option 1 | | | Painting | 664.00 | GSF | 2.25 | 1,494.00 |
| Dirt Room Option 1 | | | Misc cut and patching | 664.00 | GSF | 0.30 | 199.20 |

| | | | | | |
|---|--|---|----------------------------------|----------------------------|-----------------|
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| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

| | | | | | | | |
|--------------------|-------|-------------------|--|-------------------|-----|-----------------|--------------------|
| Dirt Room Option 1 | 07.00 | SPECIAL EQUIPMENT | Toilet partitions/accessories | 16.00 | EA | 325.00 | 5,200.00 |
| Dirt Room Option 1 | | | Window treatment | 664.00 | GSF | 0.45 | 298.80 |
| Dirt Room Option 1 | | | General casework | 16.00 | LF | 255.00 | 4,080.00 |
| Dirt Room Option 1 | | | General millwork | 664.00 | GSF | 0.45 | 298.80 |
| Dirt Room Option 1 | | | Visual display MB & TB | 664.00 | GSF | 1.00 | 664.00 |
| Dirt Room Option 1 | | | Kitchen / faculty lounge appliances allowance | 0.00 | LS | 10,000.00 | 0.00 |
| Dirt Room Option 1 | | | Misc spec. dr signs/f.e./jan shelving/etc. | 664.00 | GSF | 1.50 | 996.00 |
| Dirt Room Option 1 | | | Student desks and work stations | | | | Refer to FF&E |
| Dirt Room Option 1 | | | Office furnishings, sofas and chairs | | | | Refer to FF&E |
| Dirt Room Option 1 | 08.00 | CONVEYING | | | | | Not Included |
| Dirt Room Option 1 | 09.00 | MECHANICAL HVAC | HVAC Equipment | 664.00 | GSF | 13.50 | 8,964.00 |
| Dirt Room Option 1 | | | Piping & Valves | 664.00 | GSF | 4.97 | 3,301.74 |
| Dirt Room Option 1 | | | Ductwork - modify existing | 664.00 | GSF | 4.97 | 3,301.74 |
| Dirt Room Option 1 | | | Air Outlets - replace existing | 664.00 | GSF | 0.59 | 391.76 |
| Dirt Room Option 1 | | | Ductwork Accessories | 664.00 | GSF | 0.72 | 478.08 |
| Dirt Room Option 1 | | | Insulation | 664.00 | GSF | 1.95 | 1,294.80 |
| Dirt Room Option 1 | | | Temperature Controls | 664.00 | GSF | 4.10 | 2,722.40 |
| Dirt Room Option 1 | | | Air & Water Balance | 664.00 | GSF | 0.33 | 219.12 |
| Dirt Room Option 1 | | | Coordination Drawings | 664.00 | GSF | 0.22 | 146.08 |
| Dirt Room Option 1 | | | Systems Operation & Testing | 664.00 | GSF | 0.25 | 166.00 |
| Dirt Room Option 1 | | | Demolition | 664.00 | GSF | 0.85 | 564.40 |
| Dirt Room Option 1 | 9.20 | PLUMBING | Demolition | 664.00 | GSF | 0.45 | 298.80 |
| Dirt Room Option 1 | | | Water Closet | 3.00 | EA | 1,150.00 | 3,450.00 |
| Dirt Room Option 1 | | | Urinal | 1.00 | EA | 995.00 | 995.00 |
| Dirt Room Option 1 | | | Lavatory | 4.00 | EA | 675.00 | 2,700.00 |
| Dirt Room Option 1 | | | Domestic Water Piping | 664.00 | GSF | 0.50 | 330.34 |
| Dirt Room Option 1 | | | DWV Piping | 664.00 | GSF | 0.37 | 242.36 |
| Dirt Room Option 1 | | | Storm Piping | | | | Existing to Remain |
| Dirt Room Option 1 | | | Gas Piping | | | | Existing to Remain |
| Dirt Room Option 1 | | | Plumbing Insulation | 664.00 | GSF | 0.14 | 92.96 |
| Dirt Room Option 1 | | | Coordination Drawings | | | | Not Included |
| Dirt Room Option 1 | 9.30 | FIRE SPRINKLER | Sprinkler - modify existing | 664.00 | GSF | 3.50 | 2,324.00 |
| Dirt Room Option 1 | | | Fire Pump | | | | Not Included |
| Dirt Room Option 1 | 10.00 | ELECTRICAL | Switchboards | | | | Existing to Remain |
| Dirt Room Option 1 | | | Panelboards - modify existing | 664.00 | GSF | 0.25 | 162.68 |
| Dirt Room Option 1 | | | Bus Duct & Transformers | | | | Existing to Remain |
| Dirt Room Option 1 | | | Generator, 150 KW/Automatic Transfer Switches | | | | Existing to Remain |
| Dirt Room Option 1 | | | Light Fixtures - based on T5/LED fixtures | 664.00 | GSF | 6.40 | 4,249.60 |
| Dirt Room Option 1 | | | Light Switches, includes DDC control connections | 664.00 | GSF | 1.25 | 830.00 |
| Dirt Room Option 1 | | | Power Outlets | 664.00 | GSF | 0.95 | 630.80 |
| Dirt Room Option 1 | | | Safety Cabinets & Disconnects | | | | Existing to Remain |
| Dirt Room Option 1 | | | Power Feeders | | | | Existing to Remain |
| Dirt Room Option 1 | | | Power Home Runs | 664.00 | GSF | 2.20 | 1,460.80 |
| Dirt Room Option 1 | | | Power Branches | 664.00 | GSF | 0.85 | 564.40 |
| Dirt Room Option 1 | | | Lighting Home Runs | 664.00 | GSF | 1.15 | 763.60 |
| Dirt Room Option 1 | | | Lighting Branches | 664.00 | GSF | 1.05 | 697.20 |
| Dirt Room Option 1 | | | Grounding/Lightning Protection | | | | Existing to Remain |
| Dirt Room Option 1 | | | Clock System | 664.00 | GSF | 0.45 | 298.80 |
| Dirt Room Option 1 | | | Phone/Data System | 664.00 | GSF | 3.90 | 2,589.60 |
| Dirt Room Option 1 | | | Security System | 664.00 | GSF | 0.94 | 624.16 |
| Dirt Room Option 1 | | | P.A. & A.V. Systems | 664.00 | GSF | 0.55 | 365.20 |
| Dirt Room Option 1 | | | TV System | 664.00 | GSF | 0.29 | 192.56 |
| Dirt Room Option 1 | | | Fire Alarm | 664.00 | GSF | 1.88 | 1,248.32 |
| Dirt Room Option 1 | | | Coordination Drawings | 664.00 | GSF | 0.22 | 146.08 |
| Dirt Room Option 1 | | | Demolition | 664.00 | GSF | 0.80 | 531.20 |
| Dirt Room Option 1 | 11.00 | MARK-UPS | Subtotal | | | | 158,696.54 |
| Dirt Room Option 1 | | | General Conditions | 15.00% | | | 23,804.48 |
| Dirt Room Option 1 | | | Subtotal | | | | 182,501.02 |
| Dirt Room Option 1 | | | GC OH @ 5% plus Profit @ 7.5% | 12.50% | | | 22,812.63 |
| Dirt Room Option 1 | | | Subtotal | | | | 205,313.65 |
| Dirt Room Option 1 | | | Bonds & insurance | 1.75% | | | 3,592.99 |
| Dirt Room Option 1 | | | Subtotal | 664.00 GSF | | \$314.62 | 208,906.64 |

COST ESTIMATE

| | | | | | |
|---|--|---|----------------------------------|----------------------------|-----------------|
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| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

Dirt Room Option 2

CONSTRUCTION COSTS

| | | | | | | | |
|--------------------|---|-------------------------|--|-----------------|--|--------------------------|------------------|
| Dirt Room Option 2 | Renovation | | | 2,236.00 | | Gross Square Feet | |
| Dirt Room Option 2 | | | | | | | |
| Dirt Room Option 2 | Subtotal | | | | | | \$609,342 |
| Dirt Room Option 2 | Escalation to construction mid point | Bid 2017, Complete 2017 | | 5.51% | | | \$33,590 |
| Dirt Room Option 2 | Subtotal | | | | | | \$642,932 |
| Dirt Room Option 2 | Design Contingency | | | 15.00% | | | \$96,440 |
| Dirt Room Option 2 | Subtotal | | | | | | \$739,371 |
| Dirt Room Option 2 | Construction Contingency | | | 8.00% | | | \$59,150 |
| Dirt Room Option 2 | | | | | | | |
| Dirt Room Option 2 | Total Hard Construction Costs Base Bid | | | | | Cost per SF | \$357.12 |
| Dirt Room Option 2 | | | | | | | \$798,521 |
| Dirt Room Option 2 | Project Soft Cost - A/E Fees, F.F.&E., Owner Staffing, Owner Costs | | | 23.50% | | | \$187,652 |
| Dirt Room Option 2 | | | | | | | |
| Dirt Room Option 2 | Total Hard Construction Costs Base Bid & Soft Cost | | | | | Cost per SF | \$441.04 |
| Dirt Room Option 2 | | | | | | | \$986,174 |
| Dirt Room Option 2 | | | | | | | |

| | | | | | |
|---|--|---|----------------------------------|----------------------------|-----------------|
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|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

| | | | | | | | |
|--------------------|-------|-------------------|---|----------|-----|--------------------|-----------|
| Dirt Room Option 2 | 00.00 | | BUILDING | | | | |
| Dirt Room Option 2 | 00.50 | SELECT BLDG. DEMO | Demolition | 2,236.00 | GSF | 6.50 | 14,534.00 |
| Dirt Room Option 2 | 01.00 | FOUNDATIONS | Foundations | 2,236.00 | GSF | 11.80 | 26,384.80 |
| Dirt Room Option 2 | 02.00 | SUBSTRUCTURE | SOG - patch existing floor | 2,236.00 | SF | 16.60 | 37,117.60 |
| Dirt Room Option 2 | 03.00 | SUPERSTRUCTURE | Roof framing & deck | 0.00 | SF | 21.00 | 0.00 |
| Dirt Room Option 2 | | | Misc metals | 2,236.00 | GSF | 1.55 | 3,465.80 |
| Dirt Room Option 2 | | | Misc Wood Blocking | 2,236.00 | GSF | 0.75 | 1,677.00 |
| Dirt Room Option 2 | 04.00 | EXTERIOR CLOSURE | Perimeter Wall | 4,248.00 | SF | 20.50 | 87,084.00 |
| Dirt Room Option 2 | | | Windows | | | Existing to Remain | |
| Dirt Room Option 2 | | | Storefront entrances | 0.00 | SF | 55.00 | 0.00 |
| Dirt Room Option 2 | | | Misc. w.p./caulk/fire sealants/etc. Div 7 | 2,236.00 | GSF | 0.73 | 1,621.10 |
| Dirt Room Option 2 | 05.00 | ROOFING | Low slope membrane w/ flashing & copings | 0.00 | SF | 12.50 | 0.00 |
| Dirt Room Option 2 | 06.00 | INTERIOR CONST | Mtl stud & GWB partitions, hi-impact | 7,236.00 | SF | 10.25 | 74,169.00 |
| Dirt Room Option 2 | | | GWB ceilings/bulkheads | 2,236.00 | GSF | 0.15 | 335.40 |
| Dirt Room Option 2 | | | Misc. batt insulation | 2,236.00 | GSF | 0.45 | 1,006.20 |
| Dirt Room Option 2 | | | Sound transmission control insulation | 2,236.00 | GSF | 0.19 | 424.84 |
| Dirt Room Option 2 | | | Interior glass at interior partition allowance | 2,236.00 | SF | 0.38 | 838.50 |
| Dirt Room Option 2 | | | Doors, frames, hardware, sidelites | 6.00 | EA | 2,500.00 | 15,000.00 |
| Dirt Room Option 2 | | | Acoustic ceiling, avg | 2,236.00 | GSF | 2.75 | 6,149.00 |
| Dirt Room Option 2 | | | Prem. ceilings: main corridors / mtg. rms, prem add | 447.20 | GSF | 1.75 | 782.60 |
| Dirt Room Option 2 | | | Premium wall finish: main corridors & conf. rm | 2,236.00 | GSF | 0.75 | 1,677.00 |
| Dirt Room Option 2 | | | CT floor, base, walls in restrooms | 314.00 | SF | 18.50 | 5,809.00 |
| Dirt Room Option 2 | | | CT wainscot hallways/restrooms | 570.00 | SF | 12.50 | 7,125.00 |
| Dirt Room Option 2 | | | Vinyl Floor/vinyl base | 1,922.00 | SF | 3.75 | 7,207.50 |
| Dirt Room Option 2 | | | Carpet | 0.00 | SY | 43.00 | 0.00 |
| Dirt Room Option 2 | | | Wood flooring | 0.00 | SF | 16.50 | 0.00 |
| Dirt Room Option 2 | | | Rubber Athletic Flooring | 432.00 | SF | 12.50 | 5,400.00 |
| Dirt Room Option 2 | | | Painting | 2,236.00 | GSF | 2.25 | 5,031.00 |
| Dirt Room Option 2 | | | Misc cut and patching | 2,236.00 | GSF | 0.30 | 670.80 |

| | | | | | |
|---|--|---|----------------------------------|----------------------------|-----------------|
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|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

| | | | | | | | |
|--------------------|-------|-------------------|--|---------------------|-----|--------------------|-------------------|
| Dirt Room Option 2 | 07.00 | SPECIAL EQUIPMENT | Toilet partitions/accessories | 16.00 | EA | 325.00 | 5,200.00 |
| Dirt Room Option 2 | | | Window treatment | 2,236.00 | GSF | 0.45 | 1,006.20 |
| Dirt Room Option 2 | | | General casework | 16.00 | LF | 255.00 | 4,080.00 |
| Dirt Room Option 2 | | | General millwork | 2,236.00 | GSF | 0.45 | 1,006.20 |
| Dirt Room Option 2 | | | Visual display MB & TB | 2,236.00 | GSF | 1.00 | 2,236.00 |
| Dirt Room Option 2 | | | Kitchen / faculty lounge appliances allowance | 0.00 | LS | 10,000.00 | 0.00 |
| Dirt Room Option 2 | | | Misc spec. dr signs/f.e./jan shelving/etc. | 2,236.00 | GSF | 1.50 | 3,354.00 |
| Dirt Room Option 2 | | | Student desks and work stations | | | Refer to FF&E | |
| Dirt Room Option 2 | | | Office furnishings, sofas and chairs | | | Refer to FF&E | |
| Dirt Room Option 2 | 08.00 | CONVEYING | | | | | Not Included |
| Dirt Room Option 2 | 09.00 | MECHANICAL HVAC | HVAC Equipment | 2,236.00 | GSF | 13.50 | 30,186.00 |
| Dirt Room Option 2 | | | Piping & Valves | 2,236.00 | GSF | 4.97 | 11,118.51 |
| Dirt Room Option 2 | | | Ductwork - modify existing | 2,236.00 | GSF | 4.97 | 11,118.51 |
| Dirt Room Option 2 | | | Air Outlets - replace existing | 2,236.00 | GSF | 0.59 | 1,319.24 |
| Dirt Room Option 2 | | | Ductwork Accessories | 2,236.00 | GSF | 0.72 | 1,609.92 |
| Dirt Room Option 2 | | | Insulation | 2,236.00 | GSF | 1.95 | 4,360.20 |
| Dirt Room Option 2 | | | Temperature Controls | 2,236.00 | GSF | 4.10 | 9,167.60 |
| Dirt Room Option 2 | | | Air & Water Balance | 2,236.00 | GSF | 0.33 | 737.88 |
| Dirt Room Option 2 | | | Coordination Drawings | 2,236.00 | GSF | 0.22 | 491.92 |
| Dirt Room Option 2 | | | Systems Operation & Testing | 2,236.00 | GSF | 0.25 | 559.00 |
| Dirt Room Option 2 | | | Demolition | 2,236.00 | GSF | 0.85 | 1,900.60 |
| Dirt Room Option 2 | 9.20 | PLUMBING | Demolition | 2,236.00 | GSF | 0.45 | 1,006.20 |
| Dirt Room Option 2 | | | Water Closet | 3.00 | EA | 1,150.00 | 3,450.00 |
| Dirt Room Option 2 | | | Urinal | 1.00 | EA | 995.00 | 995.00 |
| Dirt Room Option 2 | | | Lavatory | 4.00 | EA | 675.00 | 2,700.00 |
| Dirt Room Option 2 | | | Domestic Water Piping | 2,236.00 | GSF | 0.50 | 1,112.41 |
| Dirt Room Option 2 | | | DWV Piping | 2,236.00 | GSF | 0.37 | 816.14 |
| Dirt Room Option 2 | | | Storm Piping | | | Existing to Remain | |
| Dirt Room Option 2 | | | Gas Piping | | | Existing to Remain | |
| Dirt Room Option 2 | | | Plumbing Insulation | 2,236.00 | GSF | 0.14 | 313.04 |
| Dirt Room Option 2 | | | Coordination Drawings | | | Not Included | |
| Dirt Room Option 2 | 9.30 | FIRE SPRINKLER | Sprinkler - modfy existing | 2,236.00 | GSF | 3.50 | 7,826.00 |
| Dirt Room Option 2 | | | Fire Pump | | | Not Included | |
| Dirt Room Option 2 | 10.00 | ELECTRICAL | Switchboards | | | Existing to Remain | |
| Dirt Room Option 2 | | | Panelboards - modify existing | 2,236.00 | GSF | 0.25 | 547.82 |
| Dirt Room Option 2 | | | Bus Duct & Transformers | | | Existing to Remain | |
| Dirt Room Option 2 | | | Generator, 150 KW/Automatic Transfer Switches | | | Existing to Remain | |
| Dirt Room Option 2 | | | Light Fixtures - based on T5/LED fixtures | 2,236.00 | GSF | 6.40 | 14,310.40 |
| Dirt Room Option 2 | | | Light Switches, includes DDC control connections | 2,236.00 | GSF | 1.25 | 2,795.00 |
| Dirt Room Option 2 | | | Power Outlets | 2,236.00 | GSF | 0.95 | 2,124.20 |
| Dirt Room Option 2 | | | Safety Cabinets & Disconnects | | | Existing to Remain | |
| Dirt Room Option 2 | | | Power Feeders | | | Existing to Remain | |
| Dirt Room Option 2 | | | Power Home Runs | 2,236.00 | GSF | 2.20 | 4,919.20 |
| Dirt Room Option 2 | | | Power Branches | 2,236.00 | GSF | 0.85 | 1,900.60 |
| Dirt Room Option 2 | | | Lighting Home Runs | 2,236.00 | GSF | 1.15 | 2,571.40 |
| Dirt Room Option 2 | | | Lighting Branches | 2,236.00 | GSF | 1.05 | 2,347.80 |
| Dirt Room Option 2 | | | Grounding/Lightning Protection | | | Existing to Remain | |
| Dirt Room Option 2 | | | Clock System | 2,236.00 | GSF | 0.45 | 1,006.20 |
| Dirt Room Option 2 | | | Phone/Data System | 2,236.00 | GSF | 3.90 | 8,720.40 |
| Dirt Room Option 2 | | | Security System | 2,236.00 | GSF | 0.94 | 2,101.84 |
| Dirt Room Option 2 | | | P.A. & A.V. Systems | 2,236.00 | GSF | 0.55 | 1,229.80 |
| Dirt Room Option 2 | | | TV System | 2,236.00 | GSF | 0.29 | 648.44 |
| Dirt Room Option 2 | | | Fire Alarm | 2,236.00 | GSF | 1.88 | 4,203.68 |
| Dirt Room Option 2 | | | Coordination Drawings | 2,236.00 | GSF | 0.22 | 491.92 |
| Dirt Room Option 2 | | | Demolition | 2,236.00 | GSF | 0.80 | 1,788.80 |
| Dirt Room Option 2 | 11.00 | MARK-UPS | Subtotal | | | | 462,888.21 |
| Dirt Room Option 2 | | | General Conditions | 15.00% | | | 69,433.23 |
| Dirt Room Option 2 | | | Subtotal | | | | 532,321.44 |
| Dirt Room Option 2 | | | GC OH @ 5% plus Profit @ 7.5% | 12.50% | | | 66,540.18 |
| Dirt Room Option 2 | | | Subtotal | | | | 598,861.62 |
| Dirt Room Option 2 | | | Bonds & insurance | 1.75% | | | 10,480.08 |
| Dirt Room Option 2 | | | Subtotal | 2,236.00 GSF | | \$272.51 | 609,341.70 |

| | | | | | |
|---|--|---|----------------------------------|----------------------------|-----------------|
| Revision 2 | | Report: Feasibility Study Const Cost Estimate | Prepared by: Downey & Scott, LLC | Status: Concept | PM: ct |
| Project: Williamsburg MS Capacity Study | | 6799 Kennedy Road, Suite F | | Client: VMDO | Chckd by: fs/sm |
| Location: Arlington Public Schools | | Warrenton, Virginia 20187 | | Submissn: January 19, 2016 | Job no: 15129 |
| Documents Dated: January 8, 2016 | | Ph 540.347.5001 Fax 540.347.5021 | | Run Date: See footer | |
| | | www.downeyscott.com | | Revised: February 17, 2016 | |

| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

Cafeteria Option

CONSTRUCTION COSTS

| | | | | | | | |
|------------------|---|-------------------------|--|---------------|--|--------------------|-----------------|
| Cafeteria Option | Renovation | | | | | | |
| Cafeteria Option | | | | | | | |
| Cafeteria Option | Subtotal | | | | | | \$39,554 |
| Cafeteria Option | Escalation to construction mid point | Bid 2017, Complete 2017 | | 5.51% | | | \$2,180 |
| Cafeteria Option | Subtotal | | | | | | \$41,734 |
| Cafeteria Option | Design Contingency | | | 15.00% | | | \$6,260 |
| Cafeteria Option | Subtotal | | | | | | \$47,994 |
| Cafeteria Option | Construction Contingency | | | 8.00% | | | \$3,840 |
| Cafeteria Option | | | | | | | |
| Cafeteria Option | Total Hard Construction Costs Base Bid | | | | | Cost per SF | \$31.15 |
| Cafeteria Option | | | | | | | \$51,834 |
| Cafeteria Option | Project Soft Cost - A/E Fees, F.F.&E., Owner Staffing, Owner Costs | | | 23.50% | | | \$12,181 |
| Cafeteria Option | | | | | | | |
| Cafeteria Option | Total Hard Construction Costs Base Bid & Soft Cost | | | | | Cost per SF | \$38.47 |
| Cafeteria Option | | | | | | | \$64,015 |

| | | | | | |
|---|--|---|----------------------------------|----------------------------|-----------------|
| Revision 2 | | Report: Feasibility Study Const Cost Estimate | Prepared by: Downey & Scott, LLC | Status: Concept | PM: ct |
| Project: Williamsburg MS Capacity Study | | 6799 Kennedy Road, Suite F | | Client: VMDO | Chckd by: fs/sm |
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| | | www.downeyscott.com | | Revised: February 17, 2016 | |

| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

| | | | | | | | |
|------------------|-------|-------------------|---|----------|-----|----------|--------------------|
| Cafeteria Option | | | BUILDING | | | | |
| Cafeteria Option | 00.00 | | | | | | |
| Cafeteria Option | 00.50 | SELECT BLDG. DEMO | Demolition | 1,664.00 | GSF | 4.50 | 7,488.00 |
| Cafeteria Option | 01.00 | FOUNDATIONS | | | | | Not Included |
| Cafeteria Option | 02.00 | SUBSTRUCTURE | SOG - patch existing floor | 166.40 | SF | 8.30 | 1,381.12 |
| Cafeteria Option | 03.00 | SUPERSTRUCTURE | Roof framing & deck | 0.00 | SF | 21.00 | 0.00 |
| Cafeteria Option | | | Misc metals | 0.00 | GSF | 1.55 | 0.00 |
| Cafeteria Option | | | Misc Wood Blocking | 0.00 | GSF | 0.75 | 0.00 |
| Cafeteria Option | 04.00 | EXTERIOR CLOSURE | Perimeter Wall | | | | Existing to Remain |
| Cafeteria Option | | | Windows | | | | Existing to Remain |
| Cafeteria Option | | | Storefront entrances | 0.00 | SF | 55.00 | 0.00 |
| Cafeteria Option | | | Misc. w.p./caulk/fire sealants/etc. Div 7 | 0.00 | GSF | 0.73 | 0.00 |
| Cafeteria Option | 05.00 | ROOFING | Low slope membrane w/ flashing & copings | 0.00 | SF | 12.50 | 0.00 |
| Cafeteria Option | 06.00 | INTERIOR CONST | Mtl stud & GWB partitions, hi-impact | 456.00 | SF | 10.25 | 4,674.00 |
| Cafeteria Option | | | GWB ceilings/bulkheads | 0.00 | GSF | 0.15 | 0.00 |
| Cafeteria Option | | | Misc. batt insulation | 0.00 | GSF | 0.45 | 0.00 |
| Cafeteria Option | | | Sound transmission control insulation | 0.00 | GSF | 0.19 | 0.00 |
| Cafeteria Option | | | Interior glass at interior partition allowance | 0.00 | GSF | 0.38 | 0.00 |
| Cafeteria Option | | | Doors, frames, hardware, sidelites | 0.00 | EA | 2,500.00 | 0.00 |
| Cafeteria Option | | | Acoustic ceiling - patch | 832.00 | GSF | 2.75 | 2,288.00 |
| Cafeteria Option | | | Prem. ceilings: main corridors / mtg. rms, prem add | 0.00 | GSF | 1.75 | 0.00 |
| Cafeteria Option | | | Premium wall finish: main corridors & conf. rm | 0.00 | GSF | 0.75 | 0.00 |
| Cafeteria Option | | | CT floor, base, walls in restrooms | 0.00 | SF | 18.50 | 0.00 |
| Cafeteria Option | | | CT wainscot hallways/restrooms | 0.00 | SF | 12.50 | 0.00 |
| Cafeteria Option | | | Vinyl Floor/vinyl base - patch | 832.00 | SF | 3.75 | 3,120.00 |
| Cafeteria Option | | | Carpet | 0.00 | SY | 43.00 | 0.00 |
| Cafeteria Option | | | Wood flooring | 0.00 | SF | 16.50 | 0.00 |
| Cafeteria Option | | | Rubber Athletic Flooring | 0.00 | SF | 12.50 | 0.00 |
| Cafeteria Option | | | Painting | 1,664.00 | GSF | 2.25 | 3,744.00 |
| Cafeteria Option | | | Misc cut and patching | 1,664.00 | GSF | 0.30 | 499.20 |

| | | | | | |
|---|--|---|----------------------------------|----------------------------|-----------------|
| Revision 2 | | Report: Feasibility Study Const Cost Estimate | Prepared by: Downey & Scott, LLC | Status: Concept | PM: ct |
| Project: Williamsburg MS Capacity Study | | 6799 Kennedy Road, Suite F | | Client: VMDO | Chckd by: fs/sm |
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| | | www.downeyscott.com | | Revised: February 17, 2016 | |

| LOC REF | SYS # | UNIFORMAT SYSTEM | SPECIFICATION | QUANTITY | U/M | UNIT COST | EXTENSION |
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|
|---------|-------|------------------|---------------|----------|-----|-----------|-----------|

| | | | | | | | |
|------------------|-------|-------------------|--|----------|-----|-----------|--------------------|
| Cafeteria Option | 07.00 | SPECIAL EQUIPMENT | Toilet partitions/accessories | 0.00 | EA | 325.00 | 0.00 |
| Cafeteria Option | | | Window treatment | 0.00 | GSF | 0.45 | 0.00 |
| Cafeteria Option | | | General casework | 0.00 | LF | 255.00 | 0.00 |
| Cafeteria Option | | | General millwork | 0.00 | GSF | 0.45 | 0.00 |
| Cafeteria Option | | | Visual display MB & TB | 0.00 | GSF | 1.00 | 0.00 |
| Cafeteria Option | | | Kitchen / faculty lounge appliances allowance | 0.00 | LS | 10,000.00 | 0.00 |
| Cafeteria Option | | | Misc spec. dr signs/f.e./jan shelving/etc. | 0.00 | GSF | 1.50 | 0.00 |
| Cafeteria Option | | | Student desks and work stations | | | | Refer to FF&E |
| Cafeteria Option | | | Office furnishings, sofas and chairs | | | | Refer to FF&E |
| Cafeteria Option | 08.00 | CONVEYING | | | | | Not Included |
| Cafeteria Option | 09.00 | MECHANICAL HVAC | | | | | Not Included |
| Cafeteria Option | 9.20 | PLUMBING | | | | | Not Included |
| Cafeteria Option | 9.30 | FIRE SPRINKLER | | | | | Not Included |
| Cafeteria Option | 10.00 | ELECTRICAL | Switchboards | | | | Existing to Remain |
| Cafeteria Option | | | Panelboards - modify existing | | | | Existing to Remain |
| Cafeteria Option | | | Bus Duct & Transformers | | | | Existing to Remain |
| Cafeteria Option | | | Generator, 150 KW/Automatic Transfer Switches | | | | Existing to Remain |
| Cafeteria Option | | | Light Fixtures - modify existing | 1,664.00 | GSF | 2.56 | 4,259.84 |
| Cafeteria Option | | | Light Switches, includes DDC control connections | 1,664.00 | GSF | 1.25 | 2,080.00 |
| Cafeteria Option | | | Power Outlets - modify existing | 1,664.00 | GSF | 0.48 | 790.40 |
| Cafeteria Option | | | Safety Cabinets & Disconnects | | | | Existing to Remain |
| Cafeteria Option | | | Power Feeders | | | | Existing to Remain |
| Cafeteria Option | | | Power Home Runs - modify existing | | | | Existing to Remain |
| Cafeteria Option | | | Power Branches - modify existing | 1,664.00 | GSF | 0.43 | 707.20 |
| Cafeteria Option | | | Lighting Home Runs - modify existing | | | | Existing to Remain |
| Cafeteria Option | | | Lighting Branches - modify existing | 1,664.00 | GSF | 0.53 | 873.60 |
| Cafeteria Option | | | Grounding/Lightning Protection | | | | Existing to Remain |
| Cafeteria Option | | | Clock System | | | | Existing to Remain |
| Cafeteria Option | | | Phone/Data System | | | | Existing to Remain |
| Cafeteria Option | | | Security System | | | | Existing to Remain |
| Cafeteria Option | | | P.A. & A.V. Systems | | | | Existing to Remain |
| Cafeteria Option | | | TV System | | | | Existing to Remain |
| Cafeteria Option | | | Fire Alarm - modify existing | | | | Existing to Remain |
| Cafeteria Option | | | Coordination Drawings | 0.00 | GSF | 0.22 | 0.00 |
| Cafeteria Option | | | Demolition | 1,664.00 | GSF | 0.40 | 665.60 |
| Cafeteria Option | 11.00 | MARK-UPS | Subtotal | | | | 32,570.96 |
| Cafeteria Option | | | General Conditions | | | | 3,257.10 |
| Cafeteria Option | | | Subtotal | | | | 35,828.06 |
| Cafeteria Option | | | GC OH @ 4% plus Profit @ 4.5% | | | | 8.50% |
| Cafeteria Option | | | Subtotal | | | | 38,873.44 |
| Cafeteria Option | | | Bonds & insurance | | | | 1.75% |
| Cafeteria Option | | | Subtotal | | | | 680.29 |
| Cafeteria Option | | | Subtotal | | | | 1,664.00 GSF |
| Cafeteria Option | | | Subtotal | | | | \$23.77 |
| Cafeteria Option | | | Subtotal | | | | 39,553.73 |

WILLIAMSBURG MIDDLE SCHOOL CAPACITY STUDY

APPENDIX

APPENDIX TABLE OF CONTENTS

PROGRESS MEETING #4 MEETING MINUTES AND CAPACITY STUDY
01.08.16

PROGRESS MEETING #3 MEETING MINUTES
12.17.15

PROGRESS MEETING #2 MEETING MINUTES
11.12.15

KICK-OFF CAPACITY MEETING#1 MEETING MINUTES
10.26.15

PAST PROPOSALS
10.02.12

PROJECT 1172A, Williamsburg Capacity Study

MEETING Progress Meeting #5

DATE 01/08/2016

REPORTING Philip Donovan VMDO Architects

ISSUED 01/14/2016

SENT TO All Attendees

| PRESENT | Name, Title | Representing |
|---------|--------------------------|---------------------------|
| | Benjamin Burgin | APS-Design & Construction |
| | Jen Xu | APS-Design & Construction |
| | Zach Larnard (via phone) | APS-Design & Construction |
| | Gordon Laurie | APS-WMS Principle |
| | Philip Donovan | VMDO Architects |

MINUTES

OVERVIEW

The goal of the meeting was to continue developing an understanding of specific needs for Williamsburg Middle School and to move forward in the progress of the proposed renovations. New iterations of each of the design option schemes based on previous feedback were presented in each of the following areas: Gym/Locker, Dirt Room, North Hall/Admin, Auditorium, and Cafeteria.

DISCUSSION

Philip began the meeting by introducing the Final Design Report booklet including the current options for reworking the north hall, gym, and dirt room. He also showed a representation of the smaller scale space reallocations of the auditorium and cafeteria space. The discussion focused on further identifying the logistical needs and priorities of the school in terms of classroom, locker, and office space. Additionally the existing conditions will be checked in all drawing updates to ensure accurate locations of all elements. Square foot calculation tables will be updated throughout to include all missing information. VMDO will also include additional seat count gained through study options.

1) Executive Summary – POE

The group discussed the need for an executive summary on the Table of Contents(TOC) page that identifies the initial goals of the study, memorializes the iterative process to date, describes the cost estimating and scheduling assumptions, proffers future capacity ideas and summarizes conclusions of the current study. The TOC will also contain a copy of all meeting minutes. It was requested to also add an appendix at the end of the booklet that includes all past VMDO studies at Williamsburg as well as the past iterations of this study. This booklet will become a master copy of all studies done at Williamsburg to date and can be used by the

client moving forward as a reference.

2) Existing Conditions

Currently the existing conditions drawings are using the original CAD base from APS record documents. However this base does not appear to be updated recently and so the REVIT existing conditions model will be used as the existing conditions plan. VMDO will identify additional areas that seats may be gained in outline form on the existing conditions plans.

3) North hall/Offices

Two final options were presented for the north hall/admin area.

-Option 01 will flip the conference/records space in the library to be located in the current teacher work space in order to maintain the existing classroom space. Option 1A will reflect all of the current updates and inclusion of new offices as shown in Option 01. However it will show the change to place the principal's office on the corridor side.

-Option 02 will make the same change to the library workroom and existing classroom graphics as stated in notes for Option 01.

4) Gym

VMDO presented one gym option. Option 01 is reflective of all prior comments including those by the PE staff. It was noted that the current vestibule/exterior exit layout seems to have changed from the existing conditions. VMDO to investigate and revise. Discussion also focused around need to have direct access to the locker room for observation and control of spaces by PE staff. VMDO to reinsert existing door between gym and locker room into the plans. Additionally APS indicated that there is an internal discussion occurring regarding use and quantity of PE lockers at the middle school level. APS has asked VMDO to investigate other school districts policy. Currently Option 01 is showing 744 lockers in each locker room which is an add of 60-100 lockers for each locker room. However this quantity seems excessive at the sacrifice of an additional classroom. Option 01 also is tied to the renovation of the dirt rooms to provide a new fitness/weight room in that location. VMDO will provide current Option 01 as Option 02 in final booklet. Option 01 will then cycle back to show fewer locker but include the extra classroom and fitness-weight room as shown in previous Option 02 dated 11/30/15. It was also discussed that locker capacity could be increased by adding an additional locker on top of the existing double-stack lockers. This could be done everywhere or at perimeter of room to ensure visibility remains over top of double stack lockers in the center of the room. VMDO to investigate quantities achieved following both alternatives.

5) Dirt room

Two options were presented for the dirt room/crawl space. Option 01 was an initial stage of renovation that shows the extended day storage/office and the new restrooms. It was noted that the existing CAD plan is not reflective of the actual north wall enclosure in that space. VMDO has updated the Revit model to match the existing conditions drawings. VMDO will add the section cut through the dirt/crawl space for reference. Option 02 shows the full build-out of the space including the PE staff offices and relocated fitness/weight classroom that is tied to Gym Option 01. This is not a preferable scenario for APS.

6) Cafeteria

VMDO to update Option to include new door to Extended Day space . VMDO to also show option for covered outdoor eating on the south side of the cafeteria. Will calculate additional seating capacity. VMDO noted this could be a free-standing pre-manufactured roof structure that could be installed quickly and at a reasonable cost. Would also serve the pick-up/drop off process as a student waiting area. Safety issues include public access to the space during the school day, could be overcome with additional teacher supervision. VMDO to include in final cost estimate.

7) Auditorium

Option 01 presented showing a new classroom in existing stage-left space. It was discussed that this space is not very conducive to a learning environment therefore it and the backstage area has the potential to become book storage/storage space. VMDO to note as such in Executive Summary.

8) Misc

The group discussed several smaller, underutilized spaces where seats may be gained throughout the building. Included converting and adding several storage spaces in the north elective wing to existing classroom space. This storage would be relocated to the backstage area in the auditorium. Additionally several offices located in the space below the auditorium will be moved to the new admin area and these collectively can be converted into one small classroom. VMDO to update options and seat addition count.

9) Classroom Capacity Evaluation

VMDO presented classroom capacity evaluation for all grade levels and special classroom spaces. In general capacity is at or slightly exceeded based on current educational specification requirements. No new capacity is gained by reducing classroom square footage.

10) Cost Estimate for Second Story Addition

Downey & Scott continuing work on cost estimate for second story addition as well as all other schemes.

SUMMARY AND MOVING FORWARD

Further investigations:

Get cost estimates for interventions-fold into booklet to accompany each scheme
Work towards preview of final package

Additional meetings: TBD, Final Booklet preview review early week of 1/17/2016

Notify the reporter of these minutes of any discrepancies or omissions, within 5 business days of receipt of this document. Otherwise, these minutes will be considered an accurate record of the issues discussed during the meeting.

TABLE OF CONTENTS

EXISTING CONDITIONS

NORTH HALL / ADMINISTRATION

GYMNASIUM

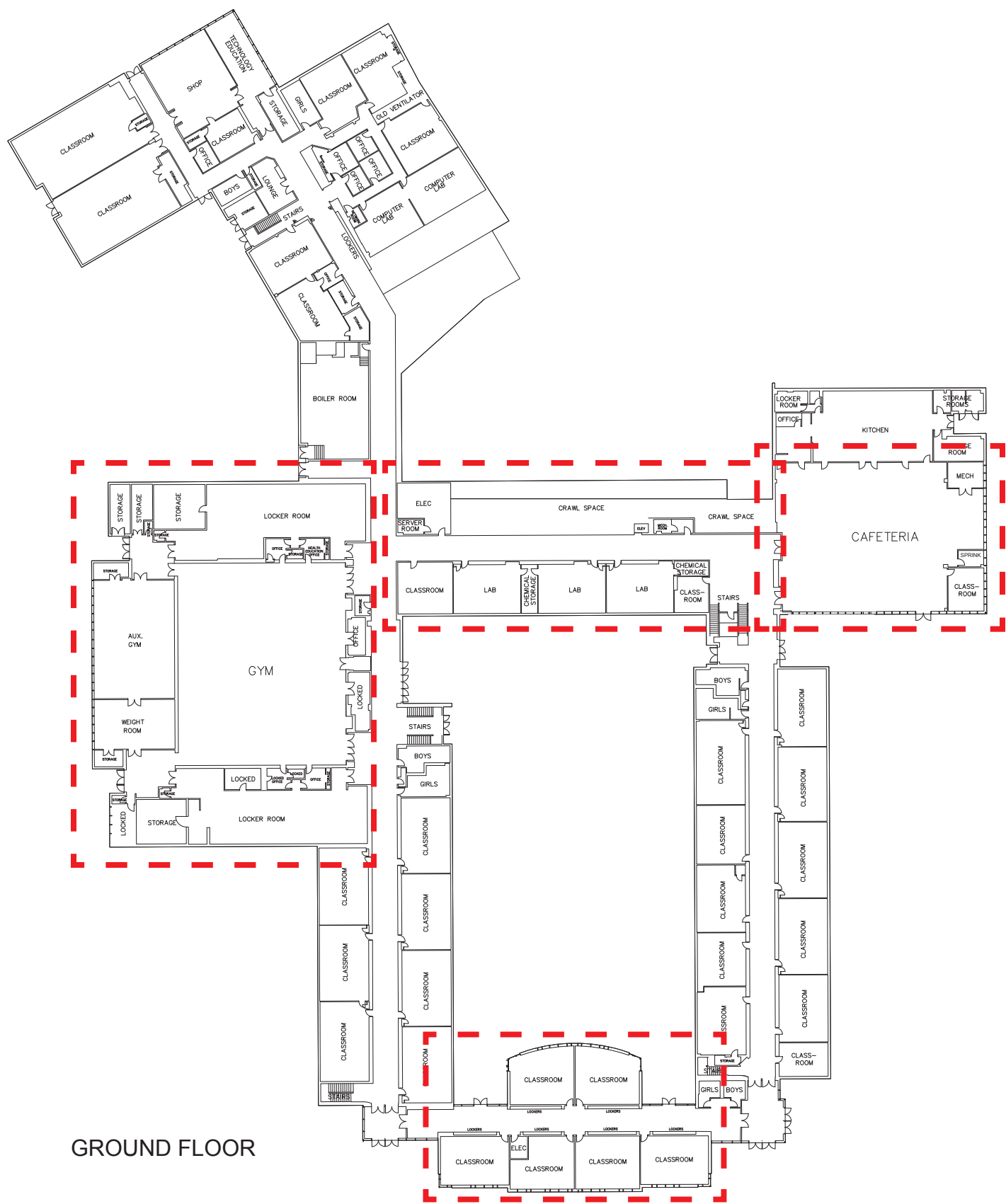
DIRT ROOM / CRAWLSPACE

CAFETERIA

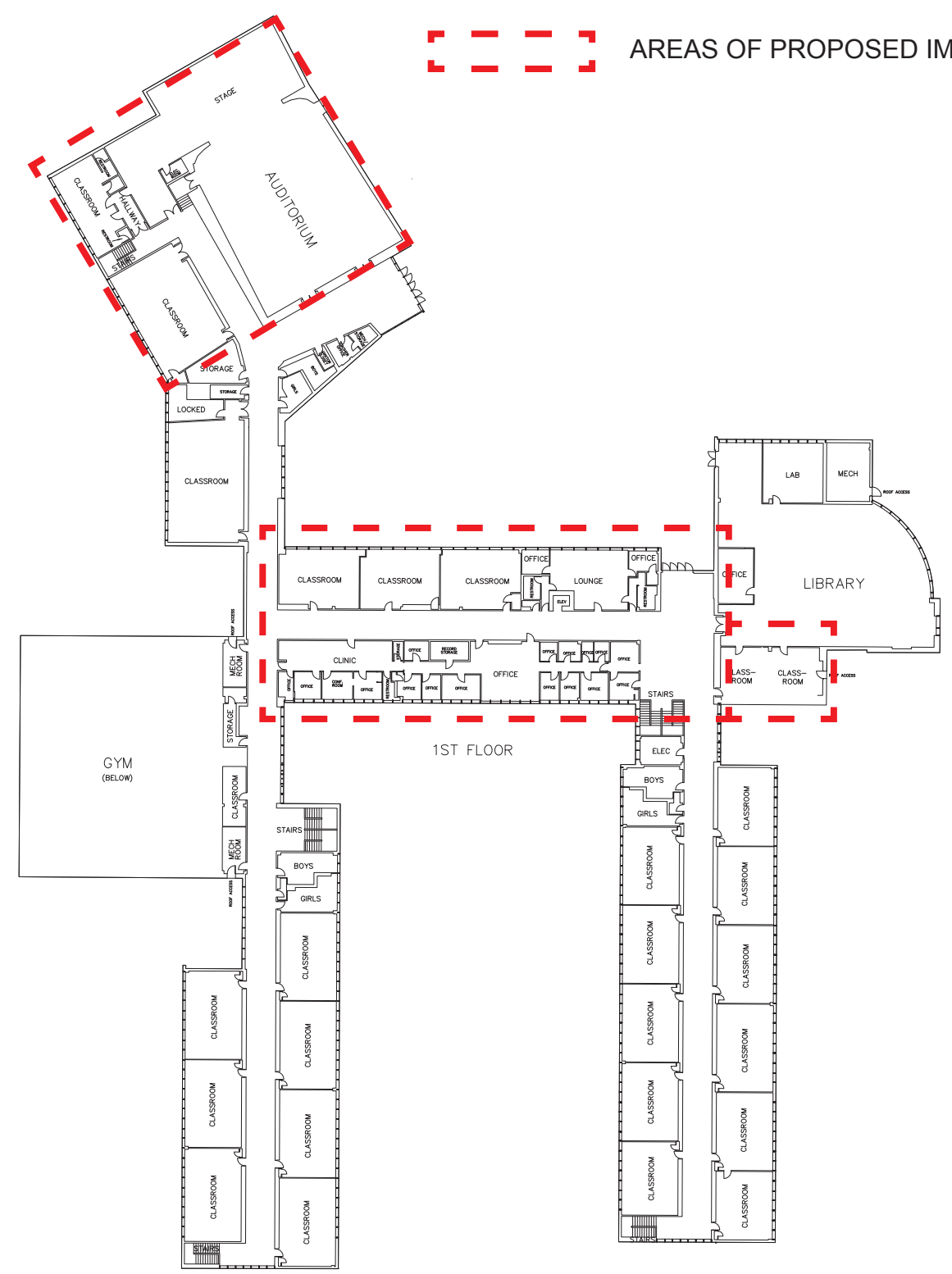
AUDITORIUM

EXISTING CLASSROOM CAPACITY ANALYSIS

--- AREAS OF PROPOSED IMPROVEMENTS



GROUND FLOOR

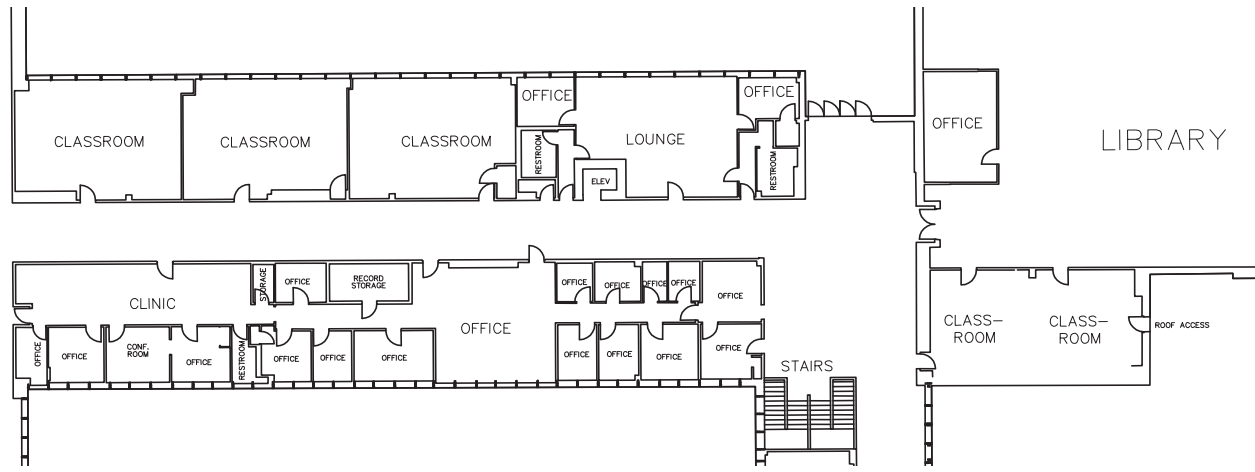


FIRST FLOOR

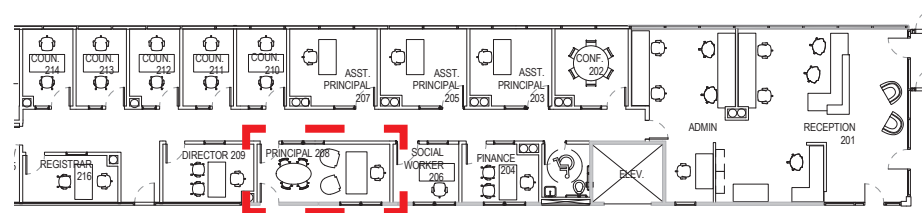
NOT TO SCALE

EXISTING CONDITIONS

SCALE: 1/32" = 1'-0"



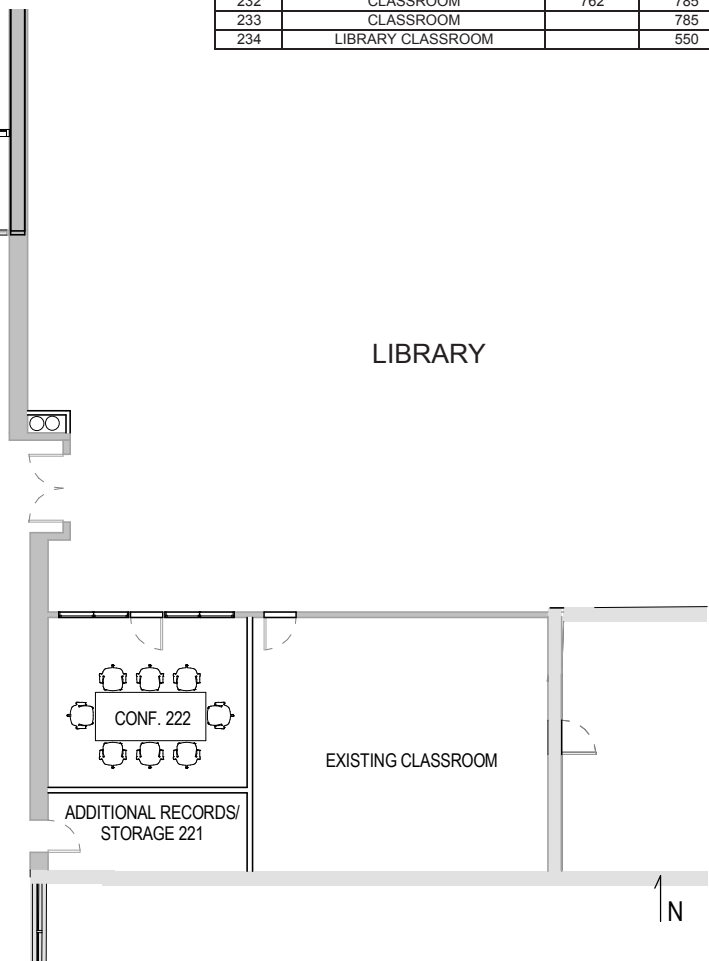
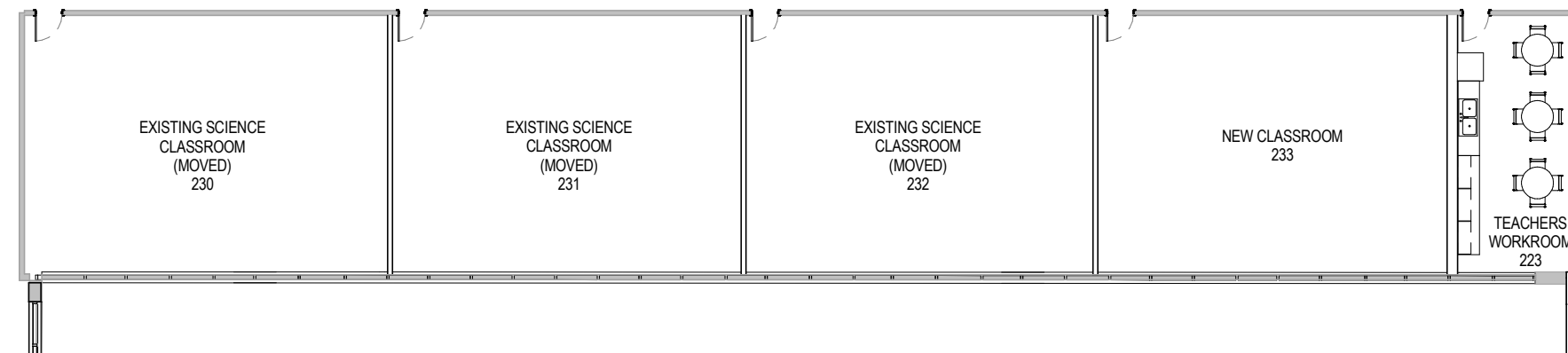
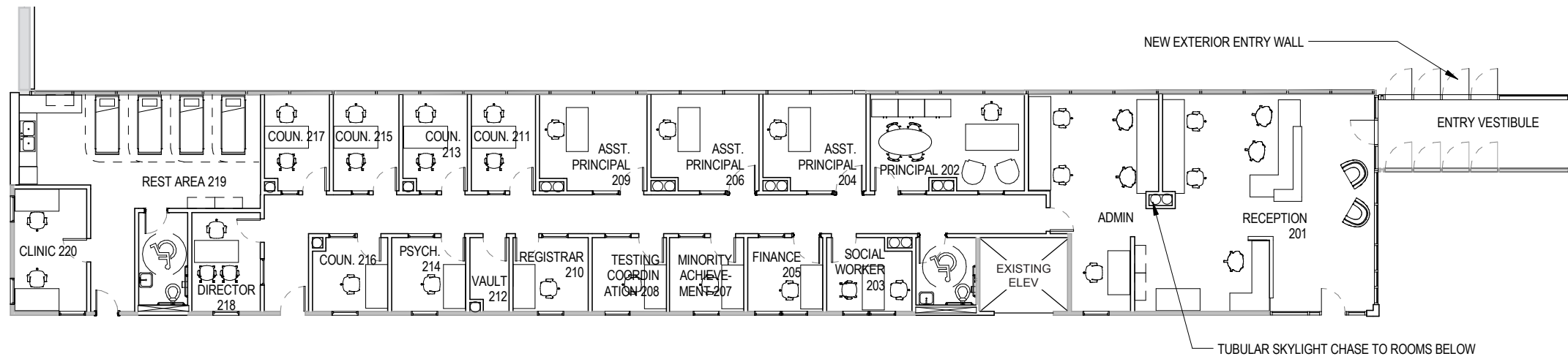
*OPTION SHIFTS PRINCIPAL TO CENTER OF ADMIN TO BE ACCESSIBLE FROM CORRIDOR



OPTION - 01A

SQUARE FOOTAGE

| ROOM # | ROOM | EXISTING | PROPOSED | ED SPEC |
|--------|----------------------|----------|----------|------------|
| | ENTRY VESTIBULE | | 183 | |
| 201 | RECEPTION/ADMIN | 620 | 895 | 600 |
| 201T | TOILET | 143 | 46 | 65 |
| 202 | PRINCIPAL | 156 | 180 | 200 |
| 204 | ASSISTANT PRINCIPAL | | 120 | 120 |
| 206 | ASSISTANT PRINCIPAL | | 120 | 120 |
| 209 | ASSISTANT PRINCIPAL | | 120 | 120 |
| 203 | SOCIAL WORKER | | 75 | 120 |
| 205 | FINANCE OFFICE | | 70 | 100 |
| 207 | MINORITY ACHIEVEMENT | | 70 | 120 |
| 208 | TESTING COORDINATOR | | 70 | 120 |
| 210 | REGISTRAR | | 70 | |
| 212 | RECORDS/VAULT | | 35 | 100 |
| 211 | COUNSELOR OFFICE | | 78 | 100 |
| 213 | COUNSELOR OFFICE | | 78 | 100 |
| 215 | COUNSELOR OFFICE | | 78 | 100 |
| 217 | COUNSELOR OFFICE | | 78 | 100 |
| 218 | DIRECTOR | | 87 | 120 |
| 216 | COUNSELOR OFFICE | | 70 | 100 |
| 214 | PSYCHOLOGIST | | 70 | 120 |
| 219 | CLINIC REST AREA | | 375 | 250 (+200) |
| 219T | CLINIC TOILET | | 59 | 65 |
| 220 | CLINIC OFFICE | | 115 | |
| 221 | RECORDS/VAULT | | 122 | 200 |
| 222 | CONFERENCE | | 240 | 200 |
| 223 | TEACHER WORKROOM | 696 | 264 | 1000 |
| 230 | CLASSROOM | 784 | 785 | 900 |
| 231 | CLASSROOM | 738 | 785 | 900 |
| 232 | CLASSROOM | 762 | 785 | 900 |
| 233 | CLASSROOM | | 785 | 900 |
| 234 | LIBRARY CLASSROOM | | 550 | 700-750 |



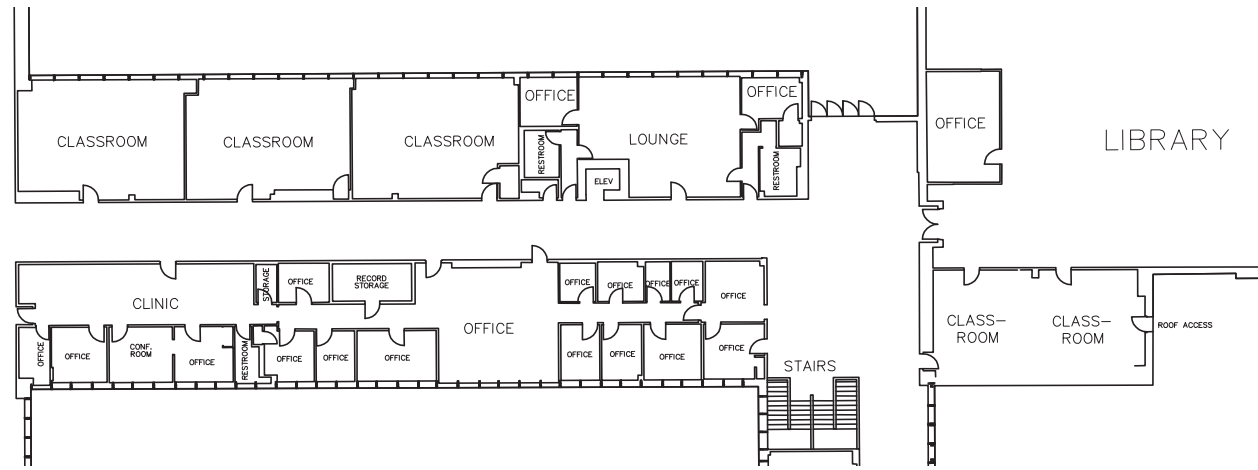
SCALE 1/16" = 1'-0"

OPTION - 01

NORTH HALL / ADMINISTRATION

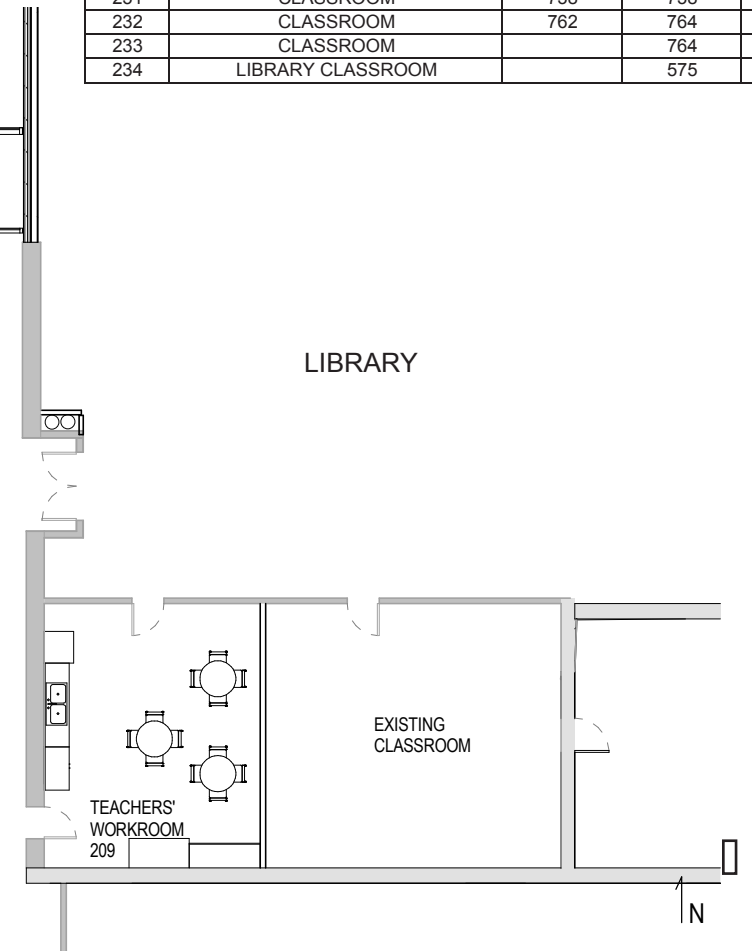
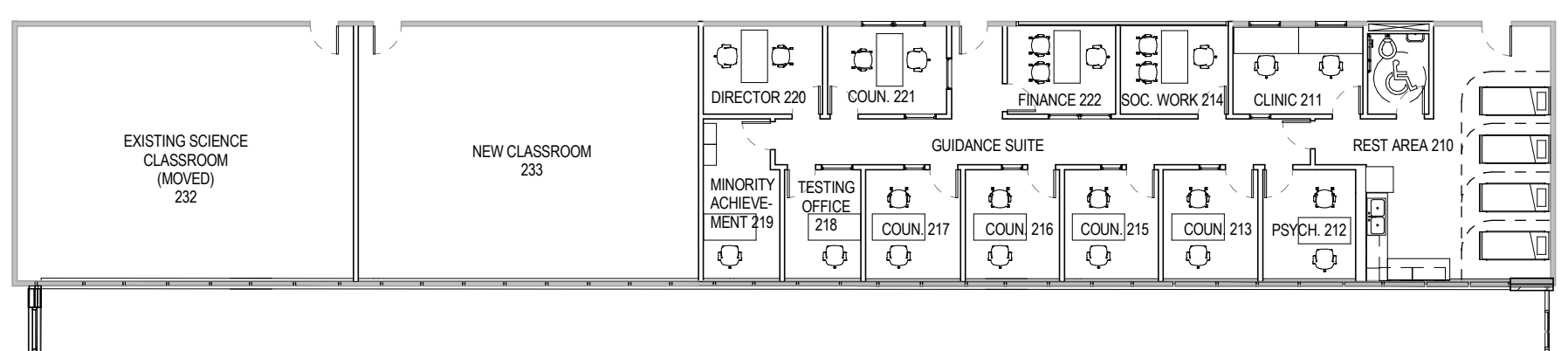
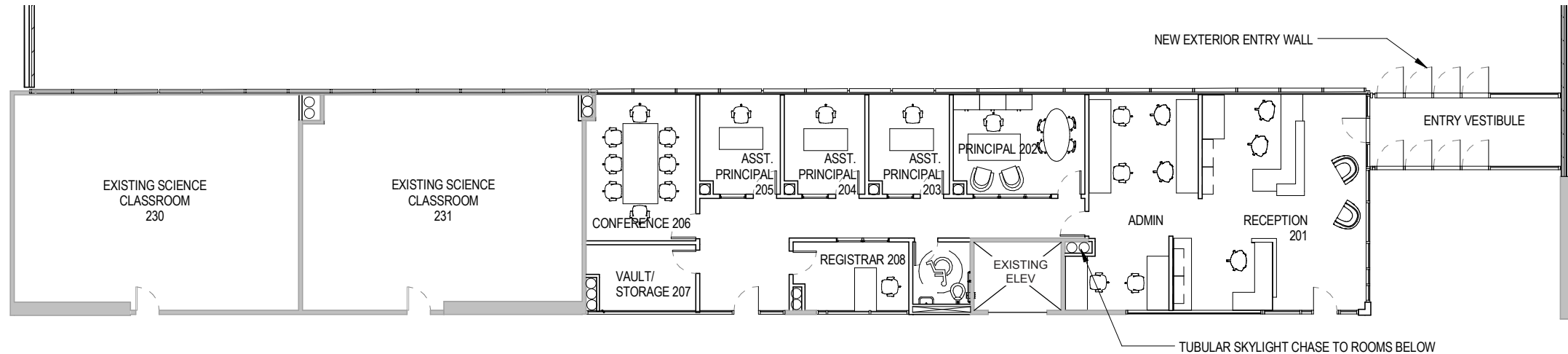
EXISTING CONDITIONS

SCALE: 1/32" = 1'-0"



SQUARE FOOTAGE

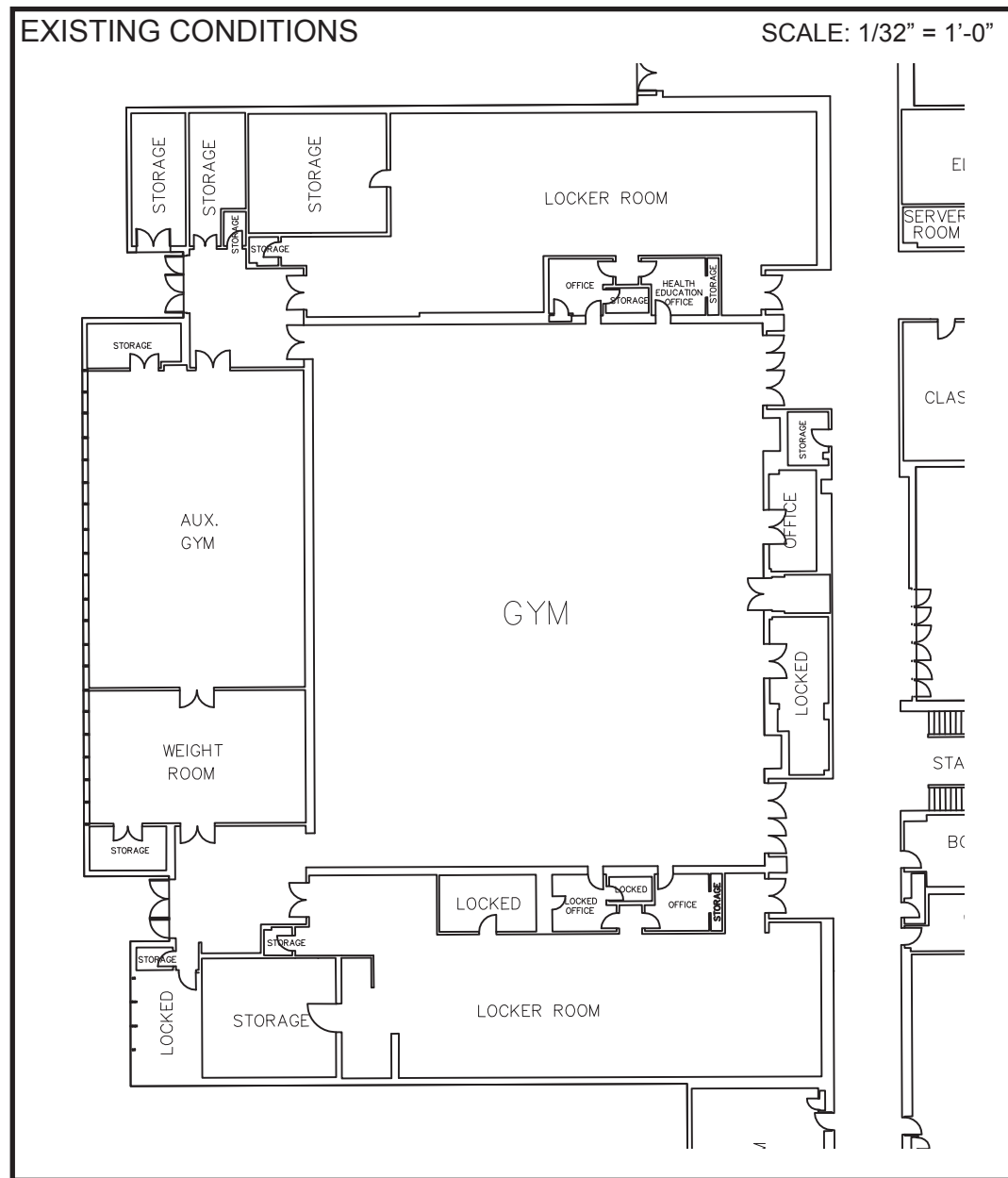
| ROOM # | ROOM | EXISTING | PROPOSED | ED SPEC |
|--------|----------------------|----------|----------|------------|
| | ENTRY VESTIBULE | | 183 | |
| 201 | RECEPTION/ADMIN | 620 | 178 | 600 |
| 201T | TOILET | 143 | 46 | 65 |
| 202 | PRINCIPAL | 156 | 170 | 200 |
| 203 | ASSISTANT PRINCIPAL | | 100 | 120 |
| 204 | ASSISTANT PRINCIPAL | | 100 | 120 |
| 205 | ASSISTANT PRINCIPAL | | 100 | 120 |
| 206 | CONFERENCE | | 200 | 200 |
| 207 | RECORDS/VAULT | | 85 | 100 (+200) |
| 208 | REGISTRAR | | 100 | |
| 209 | TEACHER WORKROOM | 696 | 392 | 1000 |
| 210 | CLINIC REST AREA | | 380 | 250 (+200) |
| 210T | CLINIC TOILET | | 45 | 65 |
| 211 | CLINIC OFFICE | | 105 | |
| 212 | PSYCHOLOGIST | | 90 | 120 |
| 213 | COUNSELOR OFFICE | | 90 | 100 |
| 215 | COUNSELOR OFFICE | | 90 | 100 |
| 216 | COUNSELOR OFFICE | | 90 | 100 |
| 217 | COUNSELOR OFFICE | | 90 | 100 |
| 214 | SOCIAL WORKER | | 86 | 120 |
| 222 | FINANCE OFFICE | | 86 | 100 |
| 218 | TESTING COORDINATOR | | 75 | |
| 219 | MINORITY ACHIEVEMENT | | 100 | 120 |
| 220 | GUIDANCE DIRECTOR | | 95 | 120 |
| 221 | COUNSELOR OFFICE | | 95 | 100 |
| 230 | CLASSROOM | 764 | 764 | 900 |
| 231 | CLASSROOM | 738 | 738 | 900 |
| 232 | CLASSROOM | 762 | 764 | 900 |
| 233 | CLASSROOM | | 764 | 900 |
| 234 | LIBRARY CLASSROOM | | 575 | 700-750 |



SCALE 1/16" = 1'-0"

OPTION - 02

NORTH HALL / ADMINISTRATION

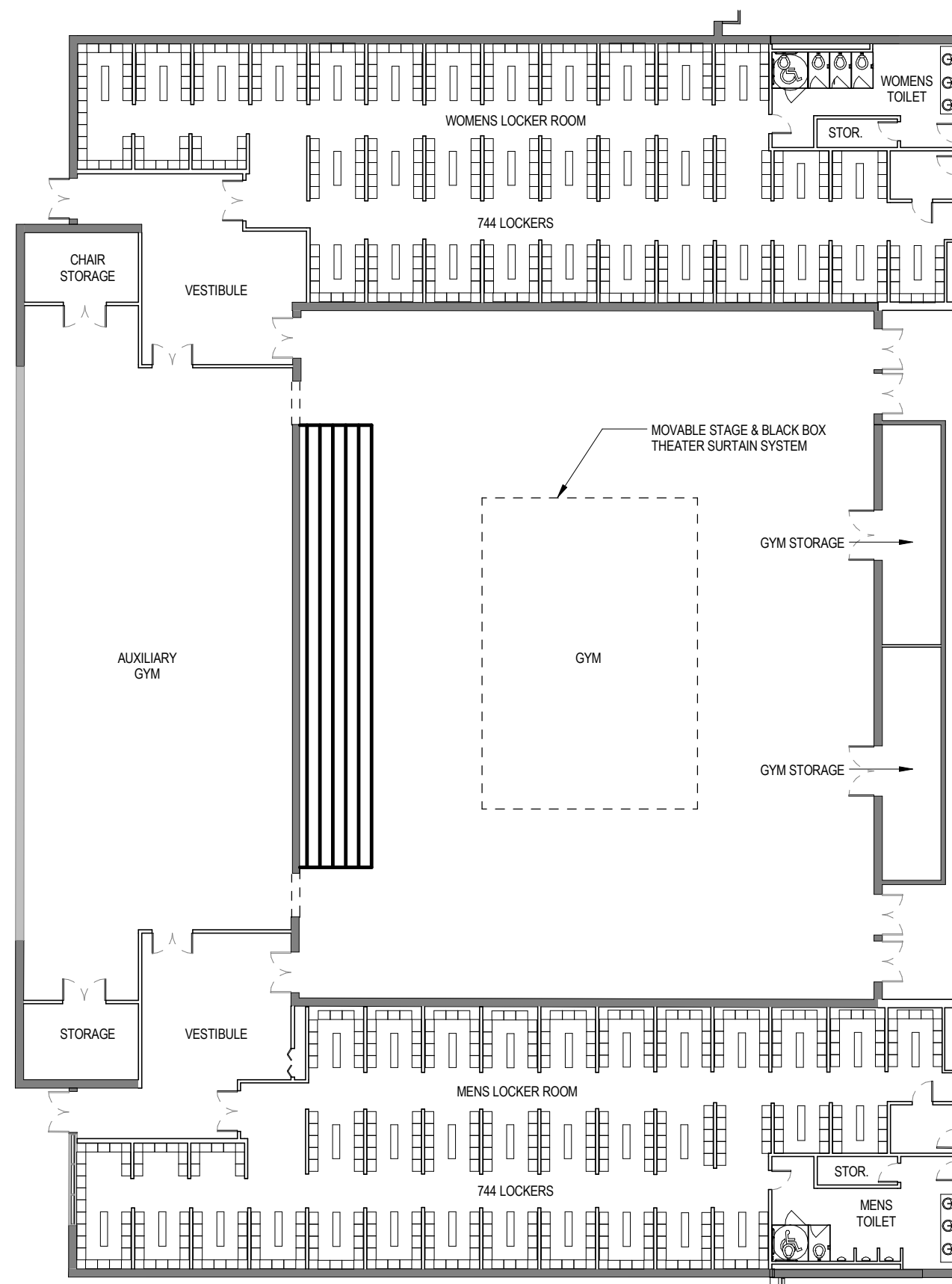


* NOTE, WORK ASSUMED TO BE DONE IN CONSTRUCTION WITH DIRT ROOM RENOVATION TO PROVIDE REQUIRED/RELOCATED OFFICES AND WEIGHT ROOM/FITNESS ROOM.

SQUARE FOOTAGE

| ROOM | EXISTING | PROPOSED | ED SPEC |
|--------------------|----------|----------|------------|
| MENS LOCKER ROOM | 2572 | 3298 | 3000 |
| MENS TOILET | | 345 | |
| GYM | 7543 | 8235 | 8000-10500 |
| AUXILIARY GYM | 2070 | 4080 | 2000 |
| GYM STORAGE | 556 | 360 | 500 |
| WOMENS LOCKER ROOM | 2522 | 3279 | 3000 |
| WOMENS TOILET | | 315 | |

SCALE 1/16" = 1'-0"

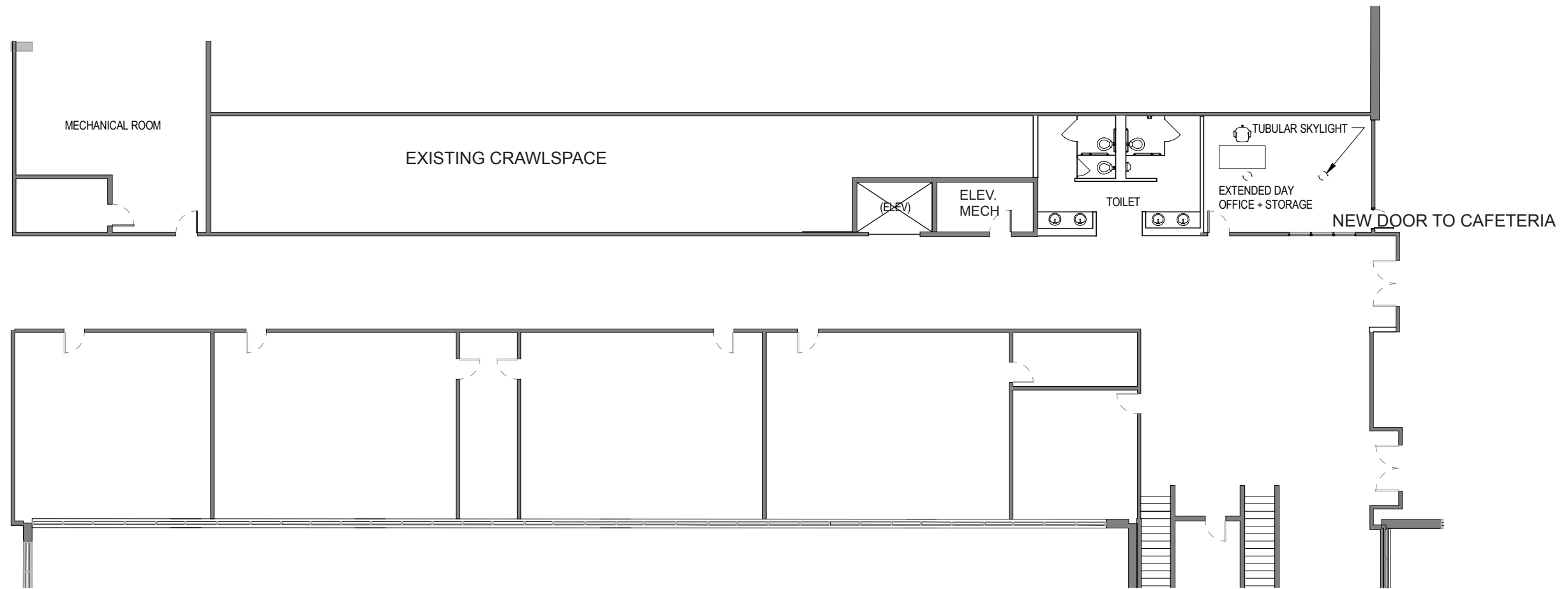
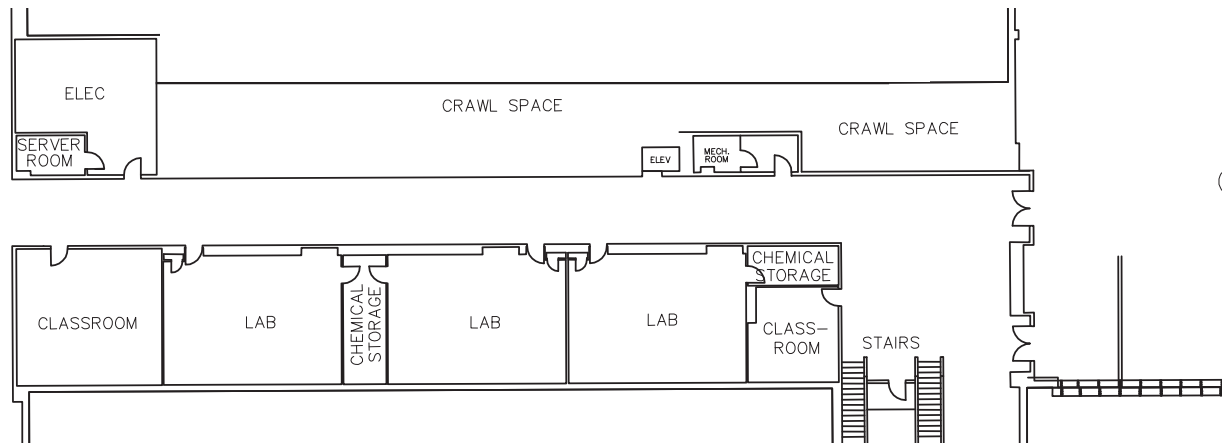


OPTION - 01

GYMNASIUM

EXISTING CONDITIONS

SCALE: 1/32" = 1'-0"



SCALE 1/16" = 1'-0"

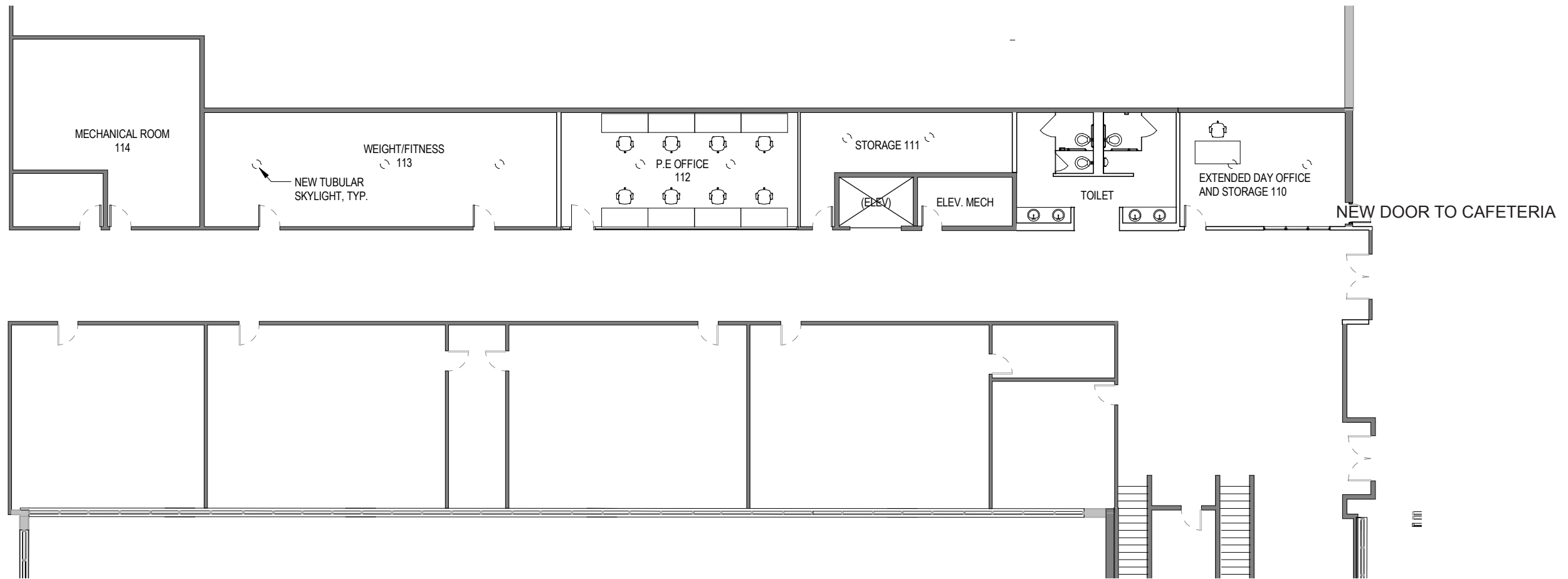
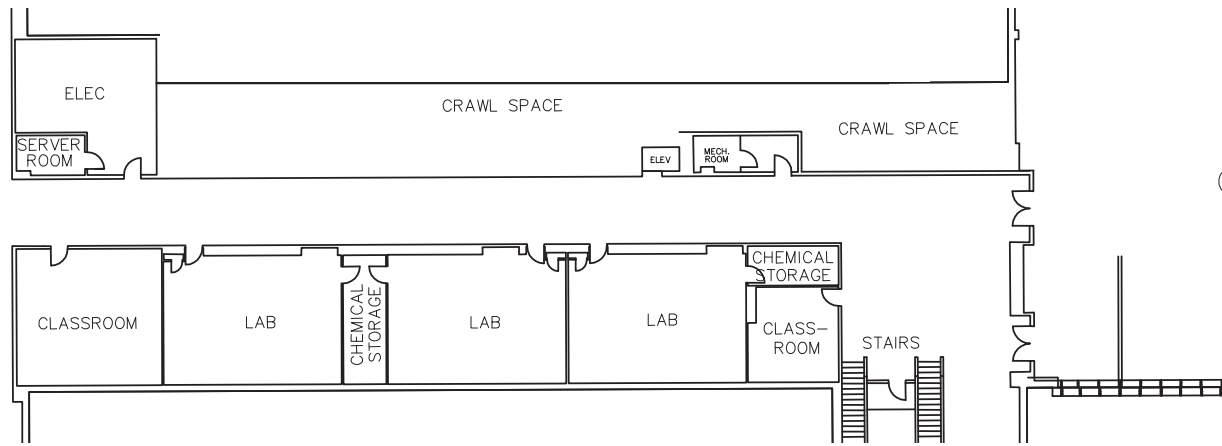


OPTION - 01

CRAWLSPACE / DIRT ROOM

EXISTING CONDITIONS

SCALE: 1/32" = 1'-0"

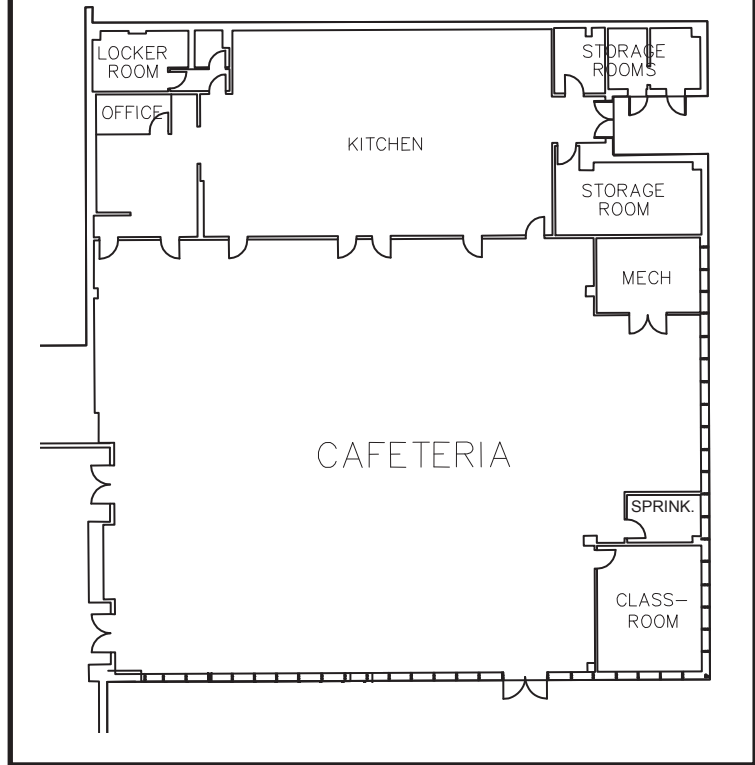


SCALE 1/16" = 1'-0"

OPTION - 02

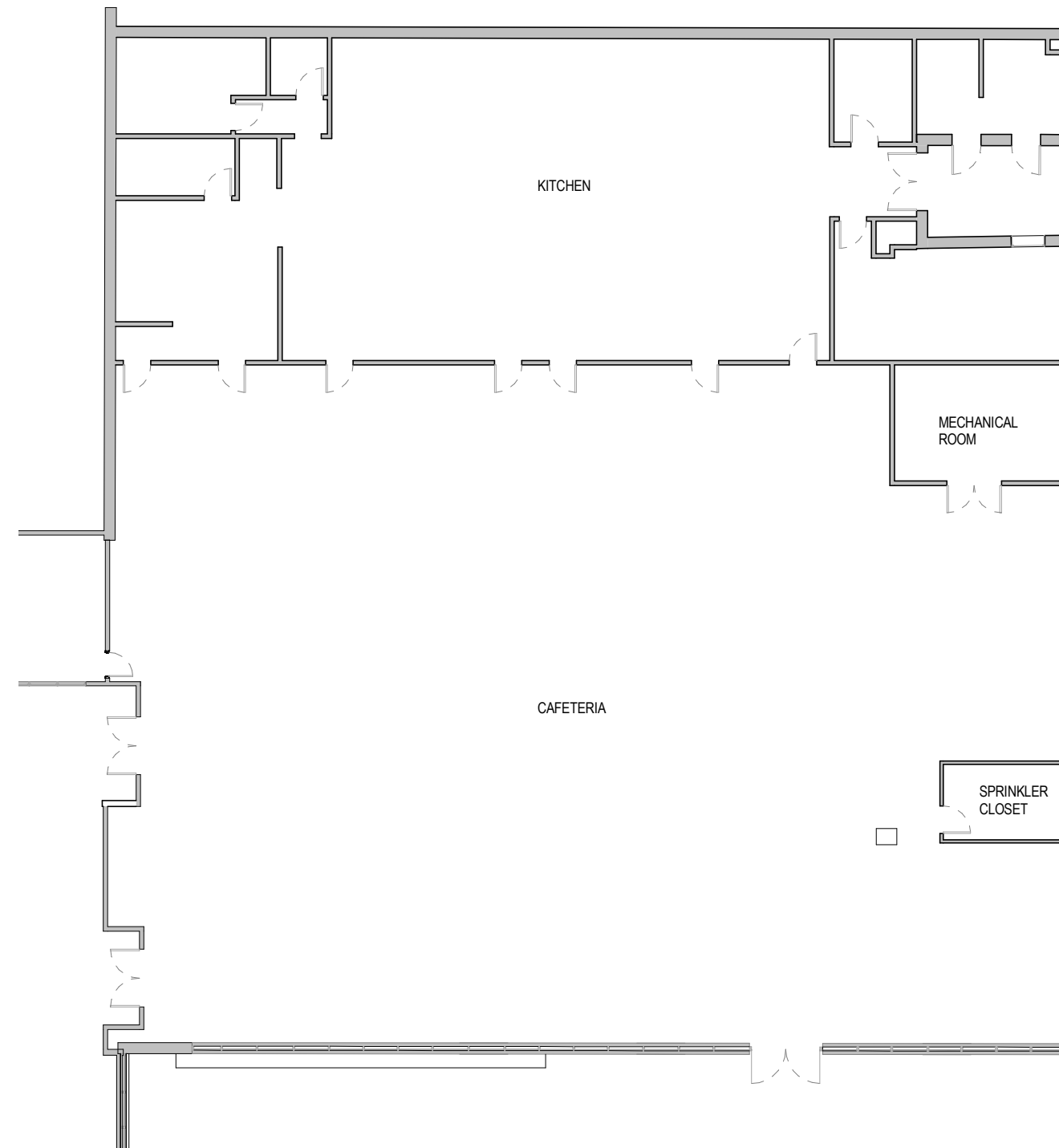
CRAWLSPACE / DIRT ROOM

EXISTING CONDITIONS SCALE: 1/32" = 1'-0"



SQUARE FOOTAGE

| ROOM | EXISTING | PROPOSED | ED SPEC |
|------------------|----------|----------|---------|
| KITCHEN | 3030 | 3030 | 3700 |
| CAFETERIA | 6111 | 6435 | 5800 |
| SPRINKLER CLOSET | 95 | 95 | |
| MECHANICAL ROOM | 209 | 209 | |



SCALE 1/16" = 1'-0"

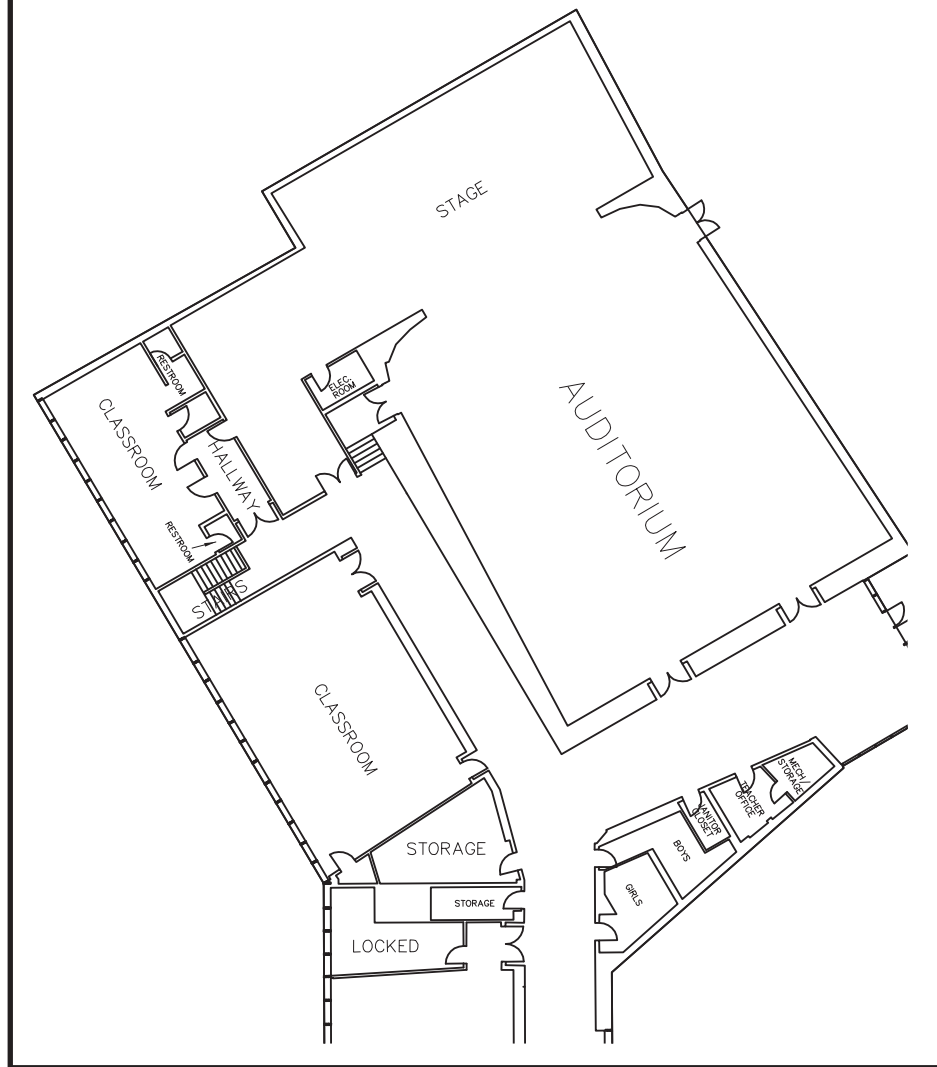


OPTION - 01

CAFETERIA

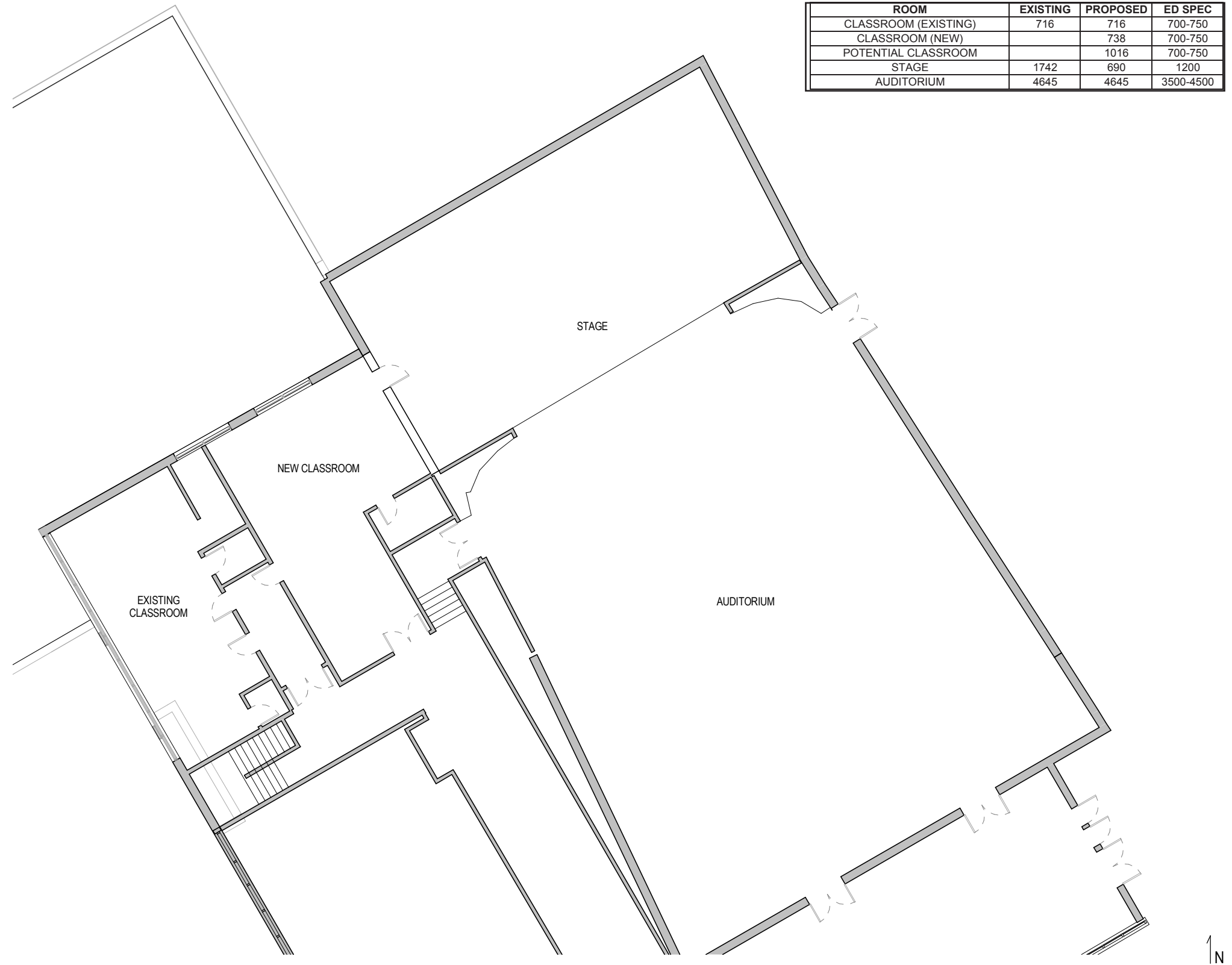
EXISTING CONDITIONS

SCALE: 1/32" = 1'-0"



SQUARE FOOTAGE

| ROOM | EXISTING | PROPOSED | ED SPEC |
|----------------------|----------|----------|-----------|
| CLASSROOM (EXISTING) | 716 | 716 | 700-750 |
| CLASSROOM (NEW) | | 738 | 700-750 |
| POTENTIAL CLASSROOM | | 1016 | 700-750 |
| STAGE | 1742 | 690 | 1200 |
| AUDITORIUM | 4645 | 4645 | 3500-4500 |



SCALE 1/16" = 1'-0"

OPTION - 01

AUDITORIUM

CURRENT CLASSROOM CAPACITY EVALUATION

| Classroom number | School Map Square Foot | CAD Square Foot | Space Name | Number of Students | Square Foot per Student | Ed Specification Classroom | Ed Specification SF per Student | |
|------------------|------------------------|-----------------|------------|--------------------|-------------------------|----------------------------|---------------------------------|------------|
| 6th Grade | | | | | | | | |
| Ground Floor | 106 | 747 | 728 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | C101 | 772 | 732 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | C102 | 793 | 754 | Core Classroom | 26 | 29 | 700 - 750 | 29 - 31 SF |
| | C103 | 690 | 658 | Core Classroom | 26 | 25 | 700 - 750 | 29 - 31 SF |
| | C104 | 788 | 740 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| First Floor | 201 | 858 | 736 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 202 | 840 | 729 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 203 | 840 | 727 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 204 | 846 S | 820 | Core Classroom | 26 | 32 | 700 - 750 | 29 - 31 SF |
| | 205 | 740 | 729 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 206 | 364 | 641 | Core Classroom | 26 | 25 | 700 - 750 | 29 - 31 SF |
| | 207 | 747 | 684 | Core Classroom | 26 | 26 | 700 - 750 | 29 - 31 SF |
| | 208 | 637 | 730 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 209 | 736 | 727 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 210 | 629 | 729 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 211 | 886 | 723 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 232 | 918 | 748 | Science Lab | 26 | 29 | 1200 | 50 SF |
| | 233 | 1180 | 767 | Science Lab | 26 | 30 | 1200 | 50 SF |

6TH GRADE CLASSROOMS APPEAR TO BE SIZED CORRECTLY BASED ON CURRENT ED SPECIFICATIONS

| Classroom number | School Map Square Foot | CAD Square Foot | Space Name | Number of Students | Square Foot per Student | Ed Specification Classroom | Ed Specification SF per Student | |
|------------------|------------------------|-----------------|------------|--------------------|-------------------------|----------------------------|---------------------------------|------------|
| 7th Grade | | | | | | | | |
| Ground Floor | 103 | 840 | 825 | Core Classroom | 26 | 32 | 700 - 750 | 29 - 31 SF |
| | 104 | 846 | 825 | Core Classroom | 26 | 32 | 700 - 750 | 29 - 31 SF |
| | 105 | 740 | 729 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 1A6 (106) | 637 | 579 | Core Classroom | 26 | 22 | 700 - 750 | 29 - 31 SF |
| | 107 | 736 | 702 | Science Lab | 26 | 27 | 900 | 37 SF |
| | 109 | 886 | 911 | Core Classroom | 26 | 35 | 700 - 750 | 29 - 31 SF |
| | 112 | 806 | 739 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 124 | NA | 674 | Core Classroom | 26 | 26 | 700 - 750 | 29 - 31 SF |
| | 125 | 635 | 769 | Core Classroom | 26 | 30 | 700 - 750 | 29 - 31 SF |
| | C105 | 798 | 772 | Core Classroom | 26 | 30 | 700 - 750 | 29 - 31 SF |
| | C106 | 796 | 771 | Core Classroom | 26 | 30 | 700 - 750 | 29 - 31 SF |
| First Floor | 217 | 819 | 823 | Core Classroom | 26 | 32 | 700 - 750 | 29 - 31 SF |
| | 218 | 871 | 873 | Core Classroom | 26 | 34 | 700 - 750 | 29 - 31 SF |
| | 220 | 841 | 825 | Core Classroom | 26 | 32 | 700 - 750 | 29 - 31 SF |

7TH GRADE CLASSROOMS APPEAR TO BE SIZED CORRECTLY BASED ON CURRENT ED SPECIFICATIONS

| Classroom number | School Map Square Foot | CAD Square Foot | Space Name | Number of Students | Square Foot per Student | Ed Specification Classroom | Ed Specification SF per Student | |
|------------------|------------------------|-----------------|------------|--------------------|-------------------------|----------------------------|---------------------------------|------------|
| 8th Grade | | | | | | | | |
| Ground Floor | 111 | 789 | 736 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 113 | 819 | 738 | Core Classroom | 26 | 28 | 700 - 750 | 29 - 31 SF |
| | 115 | 810 | 822 | Core Classroom | 26 | 32 | 700 - 750 | 29 - 31 SF |
| | 116 | 810 | 846 | Core Classroom | 26 | 33 | 700 - 750 | 29 - 31 SF |
| | 117 | 801 | 827 | Core Classroom | 26 | 32 | 700 - 750 | 29 - 31 SF |
| | 118 | 819 | 832 | Core Classroom | 26 | 32 | 700 - 750 | 29 - 31 SF |
| | 119 | 871 | 866 | Core Classroom | 26 | 33 | 700 - 750 | 29 - 31 SF |
| | 120 | 805 | 828 | Core Classroom | 26 | 32 | 700 - 750 | 29 - 31 SF |
| | 121 | 841 | 842 | Core Classroom | 26 | 32 | 700 - 750 | 29 - 31 SF |
| | 134 | 712 | 713 | Core Classroom | 26 | 27 | 700 - 750 | 29 - 31 SF |
| | First Floor | 214 | 810 | 814 | Core Classroom | 26 | 31 | 700 - 750 |
| 215 | | 810 | 817 | Core Classroom | 26 | 31 | 700 - 750 | 29 - 31 SF |
| 216 | | 801 | 817 | Core Classroom | 26 | 31 | 700 - 750 | 29 - 31 SF |
| 219 | | 805 | 821 | Special Education | 26 | 32 | 650 - 830 | |

7TH GRADE CLASSROOMS APPEAR TO BE SIZED CORRECTLY BASED ON CURRENT ED SPECIFICATIONS

| Classroom number | School Map Square Foot | CAD Square Foot | Space Name | Number of Students | Square Foot per Student | Ed Specification Classroom | Ed Specification SF per Student | |
|------------------|------------------------|-----------------|------------|--------------------|-------------------------|----------------------------|---------------------------------|-------|
| EI/WL | | | | | | | | |
| Ground Floor | 101 | 858 | 843 | Core Classroom | | 700 - 750 SF | 29 - 31 SF | |
| | 102 | 840 | 808 | Special Education | | 650 - 830 | 27 - 34 SF | |
| | 114 | 663 | 630 | Special Education | | 650 - 830 | 81 - 34 SF | |
| | 127 | NA | 1808 | Art Lab | | 1650 | 68 SF | |
| | 128 | 1839 | 1911 | | | | | |
| | 129 | 1278 | 646 | Tech Lab | | 1000 - 1200 | 41 - 50 SF | |
| | 132 | NA | 651 | Core Classroom | | 700 - 750 | 29 - 31 SF | |
| | 133 | NA | 677 | Core Classroom | | 700 - 750 | 29 - 31 SF | |
| | 134 | NA | 713 | Core Classroom | | 700 - 750 | 29 - 31 SF | |
| | 136 | NA | 779 | Computer Lab | | 830 | 34 SF | |
| | 137 | NA | 636 | Computer Lab | | 830 | 34 SF | |
| | Res Lab (CTR) | 625 | 594 | Science Lab | | 900 - 1200 | 37 - 50 SF | |
| | First Floor | 225 | 1639 | 1512 | Band Room | | 1800 SF | 36 SF |
| | | 227 | 1560 | 1430 | Orchestra | | 1200 SF | 30 SF |
| 220 | | 841 | 825 | Core Classroom | | 700 - 750 | 29 - 31 SF | |
| 228 | | 766 | 930 | | | | | |

EI/WL CLASSROOMS WERE EVALUATED FOR SIZE COMPARISON ONLY AS STUDENT ENROLLMENT DATA WAS NOT AVAILABLE

PROJECT 1172A, Williamsburg Capacity Study

MEETING Progress Meeting #4

DATE 12/17/2015

REPORTING Lauren Scott, VMDO Architects

ISSUED 12/17/2015, REVISED & REISSUED 12/28/15

SENT TO All Attendees

| PRESENT | Name, Title | Representing |
|---------|------------------|-----------------|
| | Benjamin Burgin | APS |
| | Jen Xu | APS |
| | Zach Larnard | APS |
| | Elizabeth Rowden | WMS |
| | Philip Donovan | VMDO Architects |
| | Lauren Scott | VMDO Architects |

MINUTES

OVERVIEW

The goal of the meeting was to continue developing an understanding of specific needs for Williamsburg Middle School and to move forward in the progress of the proposed renovations. New iterations of each of the design option schemes based on previous feedback were presented in each of the following areas: Gym/Locker, Dirt Room, North Hall, Auditorium, and Cafeteria.

DISCUSSION

Philip began the meeting by introducing the current options for reworking the north hall, gym, and dirt room. He also showed a representation of the smaller scale space reallocations of the auditorium and cafeteria space. The discussion focused on further specifying the logistical needs and priorities of the school in terms of classroom, locker, and office space.

1) North hall/Offices

Three different design options for the North Hall of classrooms and administration were presented, two of which (options #1 and #3) keep the classrooms south of the corridor and move all of the admin to the north, which would keep the classrooms lining the courtyard cohesively. The remaining scheme (option #2) has the admin and classrooms split east-west, with the admin at the entrance of the school. Both options have a new entry vestibule and increase the number of classrooms from

three to four. Elizabeth emphasized the importance of having four science classrooms here, as the sixth grade will have four teams instead of the current three, and need the extra classroom space. She also questioned whether science furniture/equipment was part of the overall renovation budget. In terms of office space, the roles of many of the different administrators were discussed at length to determine whether any of the office spaces could be combined or shared since there were at least 3 offices not fit in each of the options. Elizabeth clarified that not all of the administrators are full-time in office, but that the confidential nature of nearly all of their jobs (especially counselors) require a closed, single office. Though Philip asserted that he is a proponent for option #1, Jen pointed out that option #2 has the advantage of the clinic being across the hall from the admin, which would increase ease for parents picking up sick children. It was also decided that a conference room proves to be a frustrating thing to lack, and that particular space is not worth sacrificing for more office space. This led to an examination of the auxiliary spaces of the library, and a potential reworking of the current small classrooms into one larger classroom or a teacher workspace, allowing the currently proposed workspace across the hall to be utilized for offices or a small classroom for the reading specialist.

2) Gym

Philip presented the idea of adding restrooms into the space that is currently the dirt room. The logic behind this move is that the dirt room already has plumbing (sprinkler risers) and the lack of windows would make the space ideal for conversion into restrooms. The extent of the slab needs to be investigated and the infrastructure in general needs to be explored. These restrooms would primarily serve the cafeteria and/or gym. It needs to be confirmed that the sewer lines from the restrooms above come through the space. This intervention is also categorized as Tier 1 and would work in conjunction with the flipping of the north hallway above. (The east end of the dirt room can be used as a storage space for extended day service, as previously discussed).

3) Gym/locker rooms

The first main issue regarding the gym space was the separation of the main and auxiliary gyms. There were strong opinions voiced in favor of keeping the main gym and auxiliary gym separate, which perhaps can be solved by punching holes in (instead of fully removing) the adjoining wall, and having removable wall compartments that could divide the spaces when necessary. One priority is fitting the entire school in the gym for assemblies, while still allowing space to be divided for the five simultaneous gym classes. Location of the bleachers and gym storage were addressed by the storage closets incorporated in the auxiliary gym for the time being. The question of egress and codes came

up – that there may need to be a direct exit from the gym to the outside, rather than through the vestibule that attaches to the locker rooms. The other larger discussion was about the use and need for lockers. Clarification is needed on whether the lockers are shared, exactly how many are necessary, and whether or not that space could be further optimized to generate more space for classrooms. In thinking further ahead, it was questioned whether the lockers would be a waste once new schools opened was combated by Elizabeth, who believes the need will still exist even after the surplus of students has passed. Philip said he would like to email Maryann and the Phys Ed department to try and clarify those issues.

4) Dirt room

The features that have been consistently incorporated into the dirt room have been bathrooms, which are understood to be a pressing need, but the new option (#3) incorporates the weight/fitness room and the P.E. office as well. The questions were mostly about the existing dirt room – how much structural intervention would be necessary, if the ceiling is high enough to host a weight room, and the question of removing the dirt.

5) Cost Estimate for Second Story Addition

Per email from APS Project Manager Jennifer Xu on 12/09/2015, it was confirmed that the previous addition on the south end of the courtyard was structurally designed to allow for a second story addition. APS requested VMDO provide cost estimate and schedule for adding an addition to this area.

SUMMARY AND MOVING FORWARD

To finish the discussion, Philip said he would send out the sharefile link. The possibility of bringing back the tiers in accordance with cost estimates was presented, as well as long-term/short-term proposals. At least initially the cost estimate of a large scale addition is not necessary, but it was established that past studies and proposals should be included in the final package regardless of scale. Looking forward, a thumbnail or other representation of the existing building should be included on the plans, as well as a table of square footage to reference for the final package.

Further investigations:

Get cost estimates for interventions
Investigate classroom capacity

Collect square footage of rooms for better comparison
Work towards preview of final package

Additional meetings: Friday January 8, tentatively 3:30pm

Notify the reporter of these minutes of any discrepancies or omissions, within 5 business days of receipt of this document. Otherwise, these minutes will be considered an accurate record of the issues discussed during the meeting.

PROJECT 1172A, Williamsburg Capacity Study

MEETING Progress Meeting #2

DATE 11/12/2015

REPORTING Lauren Scott, VMDO Architects

ISSUED 11/16/2015

SENT TO All Attendees

ATTACHED

| PRESENT | Name, Title | Representing |
|---------|--------------------------|------------------------|
| | Benjamin Burgin | APS |
| | Jen Xu | APS |
| | Zach Larnard | APS |
| | Kelly Krug | APS |
| | Gordon Laurie, Principal | WMS |
| | Philip Donovan | VMDO Architects |
| | Lauren Scott | VMDO Architects |
| | Dan Curry | Quinn Evans Architects |

MINUTES

OVERVIEW

The goal of the meeting was to examine preliminary strategies and development issues for Williamsburg Middle School. These were all discussed:

- 1) Rethinking cafeteria space allocation in conjunction with extended day storage.
- 2) Flipping admin and classrooms in north hall and changing entrance
- 3) Utilizing the dirt room for bathrooms or additional storage
- 4) Assessing gym/locker room space
- 5) Longer-term conversion of auditorium into classroom space

Framework for discussion:

- 1) Tier 1 – simple, low-cost conversions or renovations (low-hanging fruit), mostly reallocation of existing spaces
- 2) Tier 2 - Increase in cost/complexity, still feasible to complete during school breaks
- 3) Tier 3 – Major renovation that would be preparing for long-term future, most complex and

costly

Philip began the meeting by describing the past process in assessing the growth strategies – that it was the intention to rethink scheduling, but that would have interfered undesirably with the APS middle school model. The next step was to assess the school spatially and find opportunities for growth and reallocation categorized into three tiers of development.

1) Cafeteria

Due to scheduling structure, a fourth lunch period is a solution that should try to be avoided. Gordon and the school have already ordered new furniture for the cafeteria, increasing capacity by using tables with benches instead of stools. Another idea that the space already has the capacity for is a grab-and-go line to make the purchase of snacks and smaller items simpler. The proposed step from there is to take the extended day office/storage space and expand the cafeteria into that space. The extended day storage could be downsized significantly and/or moved to the adjacent end of the dirt room as a tier 1 intervention. It was noted by Gordon that the closet space next to the extended day office is a sprinkler closet, and it was agreed that this would be costly to change or move.

The second option, tier 2, would be to bump out the cafeteria to the east or south (preferably east). The receiving area is large and has an expanse of grass between, so the functionality of the loading area would not be sacrificed. A Tier 3 addition to the kitchen would be the next level of renovation to address growth in accordance with bumping out the cafeteria to the east. Jen brought up the idea of potentially using the current hallway space to expand the cafeteria into. Gordon liked the idea of a more open campus but has reservations about kids distracting each other if allowed to roam during their lunch period while other students are in class. Additionally, egress and code issues would need to be addressed before moving forward with that idea.

2) North hall/Offices

Philip proposed adding a vestibule at the entrance, a glass storefront at the edge of the building that would allow the admin to have more control over the circulation in and out of the building if the admin suite and the classrooms are switched. Flipping and resizing the admin suite, clinic, guidance suite, and classrooms would allow potentially more classrooms to be created, and would keep the classrooms more cohesively in a zone, rather than scattered among offices, an idea that Gordon appreciated. Other variations discussed would be to flip the admin suite and some offices, but leave the classrooms and the guidance or clinic where they are. Jen brought up the concern about the changes in square footage available to the admin suite and lounge, to which Philip proposed a

simple, unisex faculty bathroom and perhaps a smaller, more highly-utilized teachers' lounge. It was noted that the science curriculum does not necessarily need gas capabilities, so it would not be too much trouble to move the science classrooms around. The current restrooms within the teachers' lounge would not be difficult to move/change because the dirt room directly underneath has plumbing, but must confirm that sewer lines from above come through the space. Any of these changes would be considered Tier 1. The idea to bump out the vestibule even further and create a new admin suite in the front of the school was later brought up as an option.

3) Dirt room

Philip presented the idea of adding restrooms into the space that is currently the dirt room. The logic behind this move is that the dirt room already has plumbing (sprinkler risers) and the lack of windows would make the space ideal for conversion into restrooms. The extent of the slab needs to be investigated and the infrastructure in general needs to be explored. These restrooms would primarily serve the cafeteria and/or gym. It needs to be confirmed that the sewer lines from the restrooms above come through the space. This intervention is also categorized as Tier 1 and would work in conjunction with the flipping of the north hallway above. (The east end of the dirt room can be used as a storage space for extended day service, as previously discussed).

4) Gym/locker rooms

Philip proposed a Tier 3 renovation of the gym that would knock down the walls between the gym, small gym, and weight room and combine their square footage into one enlarged gym. The intervention would be Tier 3 because the west wall of the gym is load-bearing. There is also a change in ceiling height between the large gym and auxiliary rooms that would need to be resolved. This idea allows for the gym to act as an auditorium as well, including a (mobile?) stage. Zach and Jen introduced the idea of keeping the load bearing wall, but combining the weight room and small gym and creating apertures in the load bearing wall that would open the spaces up without making large-scale structural changes. The events in which there are the most occupants in the gym are when students gather for P.E. in the beginning of the year (~250 students), foul weather days when everyone must be in the gym, and graduation/promotion (~350 students + parents).

In terms of current utilization, the locker room showers and restrooms are not heavily used, but the lockers are. They have a strange entrance and the hallway space right outside of the rooms is underutilized. The space of the locker rooms could be reorganized and opened up to create a dance/fitness room, or bike storage and changing space. The restrooms could easily be reworked

and stalls added to create extra space. All of the locker room changes are Tier 2 implementations. With correct sequencing, these renovations could occur over the span of a winter/summer break.

5) Auditorium

The backstage areas as well as the auditorium itself are currently extremely underused. The school cannot fit into the auditorium for assemblies, and so the space is used for concerts or musicals a 2+ times a year. The drama classroom has its own small stage. The high upper windows in some spots might make the space a good opportunity for elective classrooms, and the previously proposed mobile stage in the gym could act as a traditional theater or black box with its mobility.

SUMMARY AND MOVING FORWARD

The overall dilemma seems to be whether or not a series of smaller scale interventions using interstitial spaces and vestibules would be more or less costly and effective as a large addition. The south hallway is constructed with the ability to add a second floor, and adding a row of classrooms along one edge of the courtyard were two larger proposals mentioned in accordance with this debate.

Additional comments made were that it would be desirable to get the window-less classrooms out from underneath the auditorium. Along with this, classrooms receiving natural light was noted as a priority for all new classrooms created. Additionally, Gordon brought up the idea of a transgender restroom and reported a great deal of negative feedback.

Several types of multi-purpose space were discussed – outdoor classroom space like at TJ, a lunch lounge/small classroom, and reconfiguring classrooms to gain a type of breakout space (assuming 25-28 students per class)

Further investigations:

Rework Tiers and get cost/time estimates for interventions

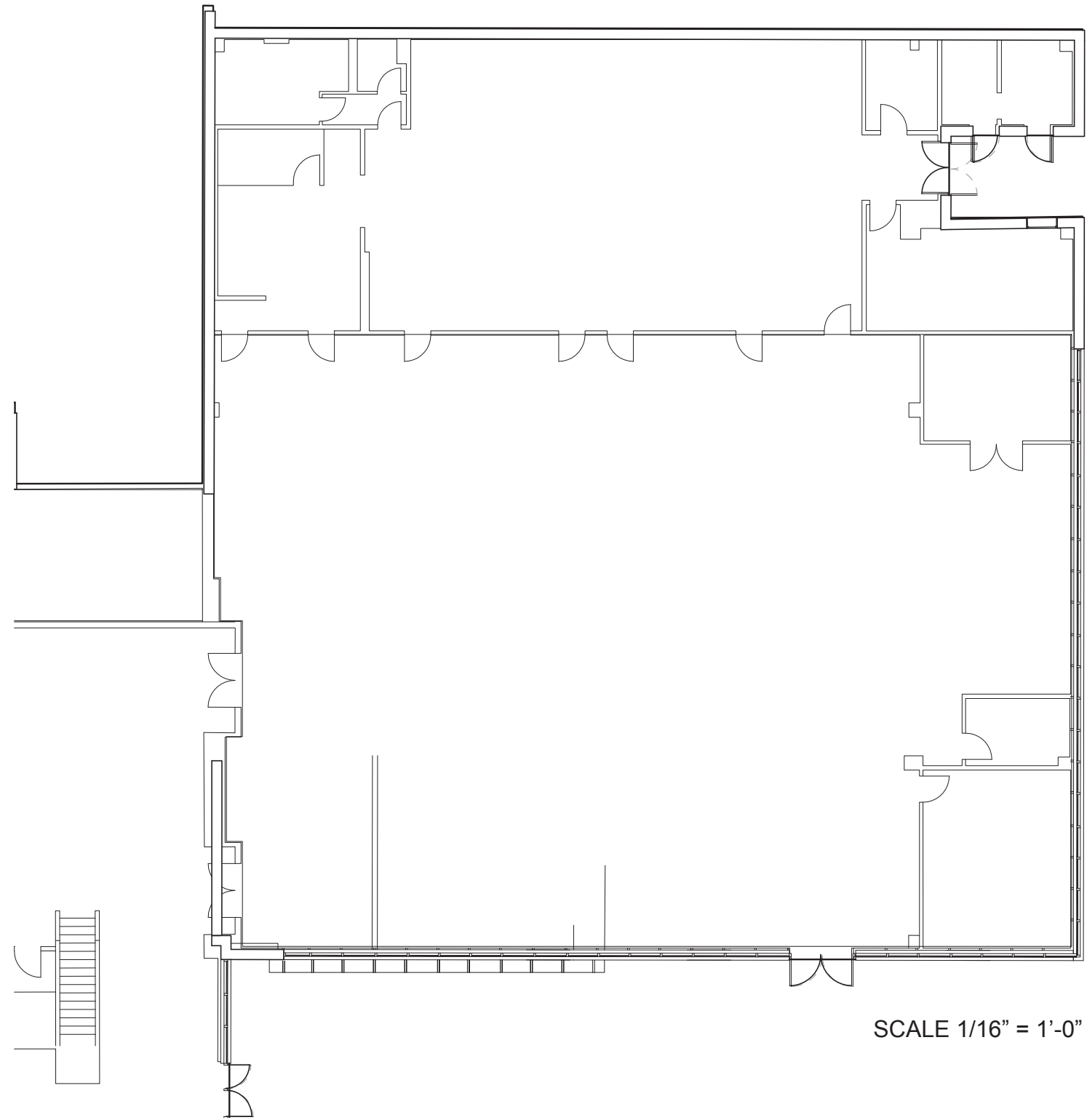
Assess pinch point created by relocatables at Door 10

Further research specs for area needs of admin/guidance

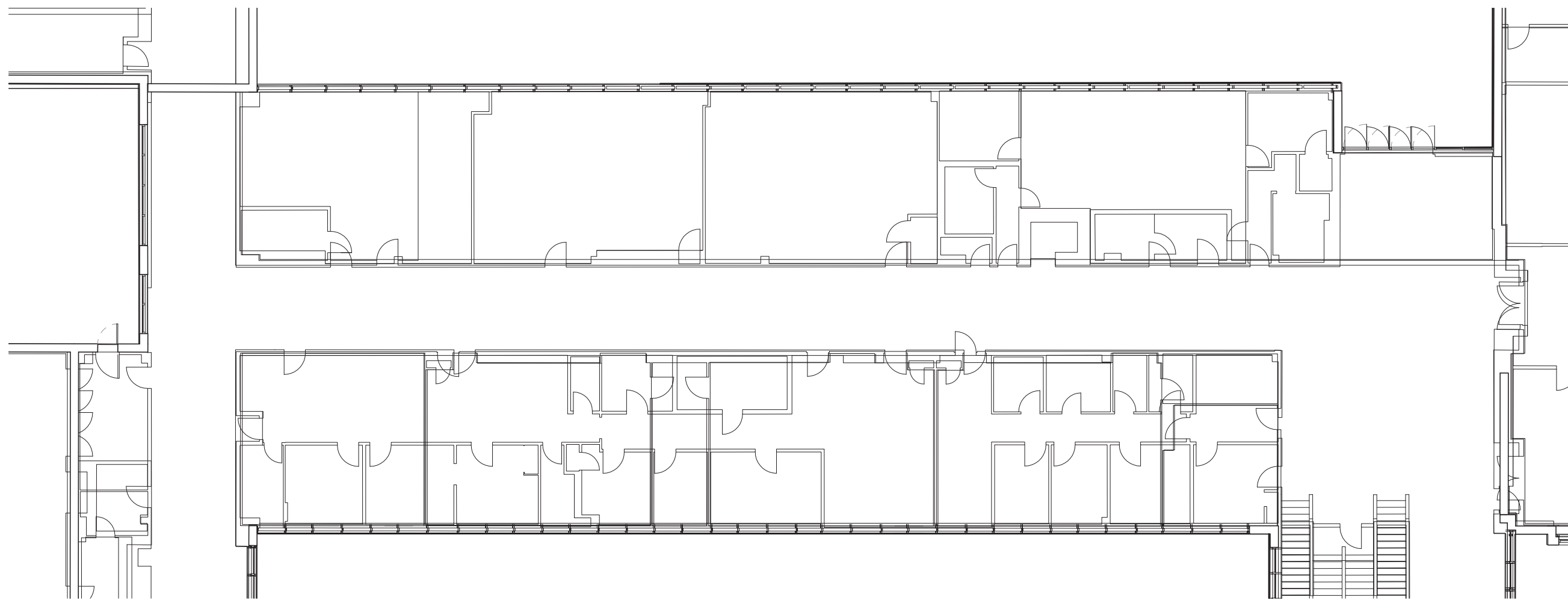
Investigate dirt room, elevator, and square footage

Additional meetings: First week in December, to be scheduled

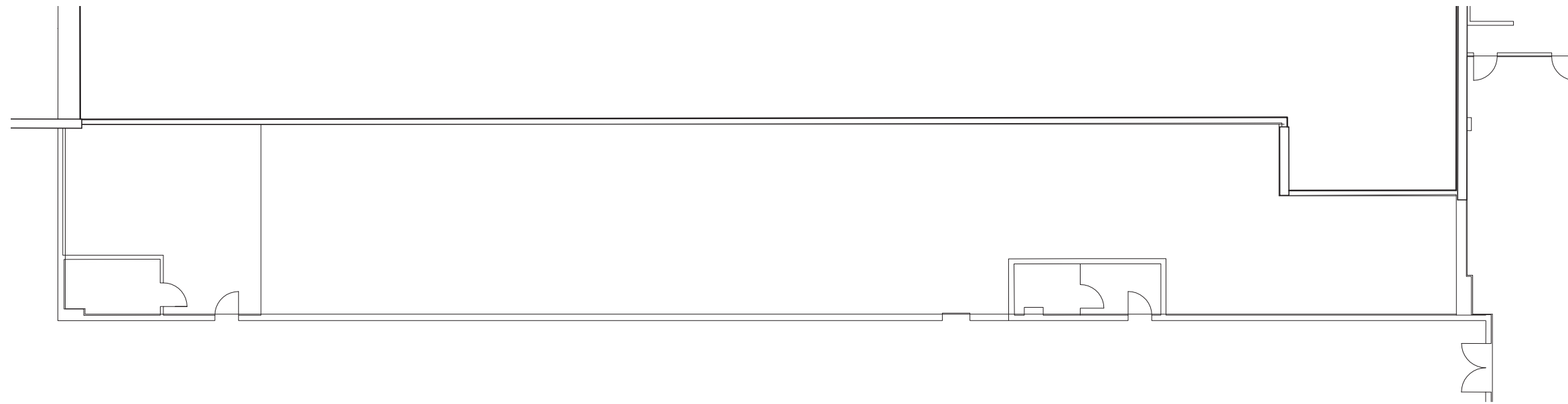
Notify the reporter of these minutes of any discrepancies or omissions, within 5 business days of receipt of this document. Otherwise, these minutes will be considered an accurate record of the issues discussed during the meeting.



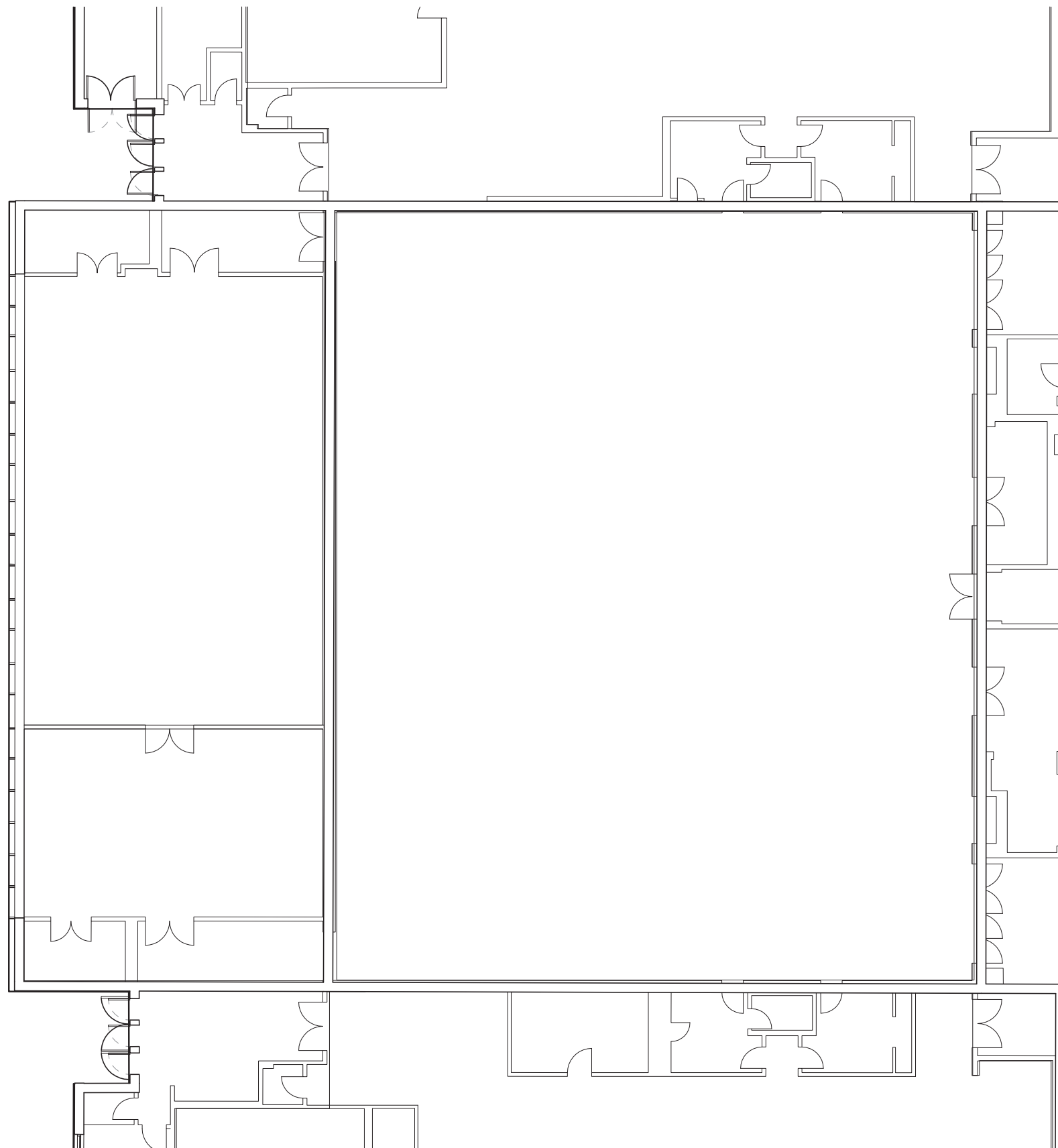
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MEETING MINUTES

PROJECT 1172A, Williamsburg Middle School Capacity Study

MEETING Kick-off Meeting

DATE 10/26/2015

REPORTING Philip Donovan, VMDO Architects

ISSUED 11/16/2015

SENT TO All Attendees, Wyck Knox, file

ATTACHED

| PRESENT | Name, Title | Representing |
|---------|------------------|--------------|
| | Gordon Laurie | APS |
| | Jen Xu | APS |
| | Benjamin Burgin | APS |
| | Kathleen Meagher | APS |
| | Susan Holland | APS |
| | Julia Siple | Quinn Evans |
| | Daniel Curry | Quinn Evans |

MINUTES

Kick-off Meeting for Williamsburg Middle School Capacity Study

Intent is to determine if capacity at Williamsburg can be increased through evaluation of current class period scheduling and may involve some renovation/adaptation to existing spaces.

1. Discussion of teaching model for APS middle schools. Teaching is done in teams for each grade level. There can be multiple teams per grade, roughly 100 students per team. Currently allows for a free teacher team period (teachers meet to discuss shared students) and a planning period.
2. Difficult to add additional classes per grade as the team method means all students in that grade share the same planning and team periods. Utilizing these rooms for different grades is not effective as classrooms are set up for a specific grade level type of teaching.
3. Gordon noted the intrinsic nature of the middle school teaching model within the overall APS pedagogy, the team experience is felt by families as much as the students and teachers.

4. Discussed renovations to T.J. Middle School over the last year. These changes did not include revisions to scheduling. TJ was able to pickup up additional space by looking at underutilized auxiliary spaces.
5. Attempt to keep classes together within zones of the building to minimize travel distance. Parents have complained about proximity of classrooms and student travel.
6. Backpacks were reintroduced this year and allow students to forgo additional trips to locker for books during the school day
7. Time between classes is currently 3 min. Very difficult to use the bathroom with such short time.
8. Bathroom facilities inadequate.
9. HILT (High Intensity Language Training) takes place in general classrooms during class time.
10. Life Skills/Specialty classes are located in their own classrooms.
11. Room 130 is the only workroom for staff.
12. WMS wants to try and keep team size to around 100 students
13. Are considering moving all of 8th grade to relocatables when all have been installed (28 total). This could free up room for more teams within 6th & 7th grade.
14. Teachers prefer relocatables because they have a restroom.
15. All offices are used and some are inadequate for the services they serve.
16. Going to be difficult to change scheduling model, in-grained in APS culture.
17. Students only use locker rooms to change clothes, no showers are taken there.

NEXT STEPS

1. Tour school with Gordon to understand principles perspective on current space utilization.
2. VMDO to begin assessing both schedule and alternative space utilization for next meeting.

Next Meeting – 9/9/15 at 3:30 pm at WMS.

(Tab to add rows)



Philip M. Donovan, AIA
VMDO Architects



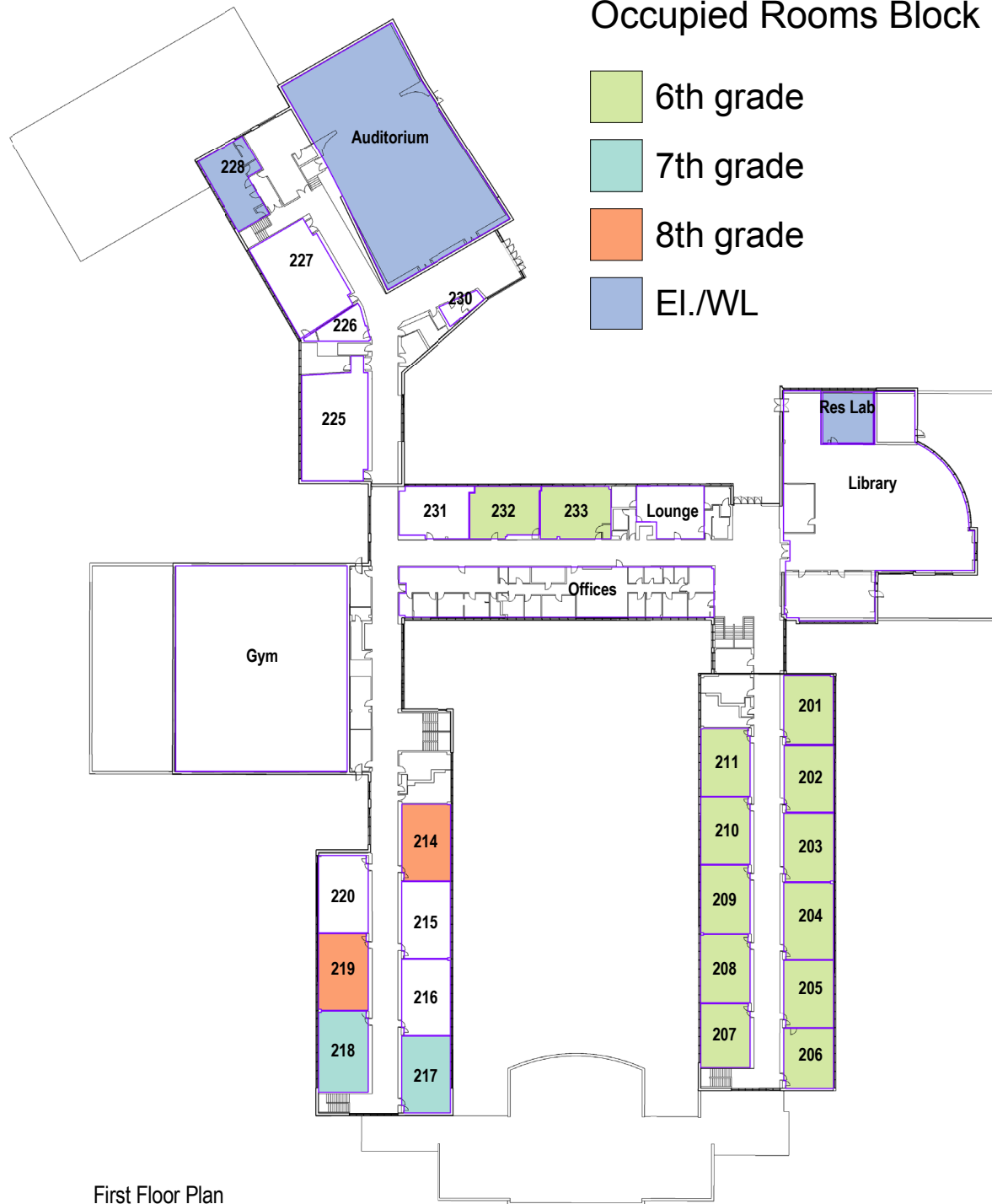
WILLIAMSBURG MIDDLE SCHOOL CAPACITY STUDY

FIRST PROGRAM MEETING

October 26, 2015

Occupied Rooms Block 1

- 6th grade
- 7th grade
- 8th grade
- EI./WL



Capacity Study - Block 1

1172A Williamsburg Middle School

GRAPHIC SCALE - 1/64" = 1'-0"

VMDO ARCHITECTS

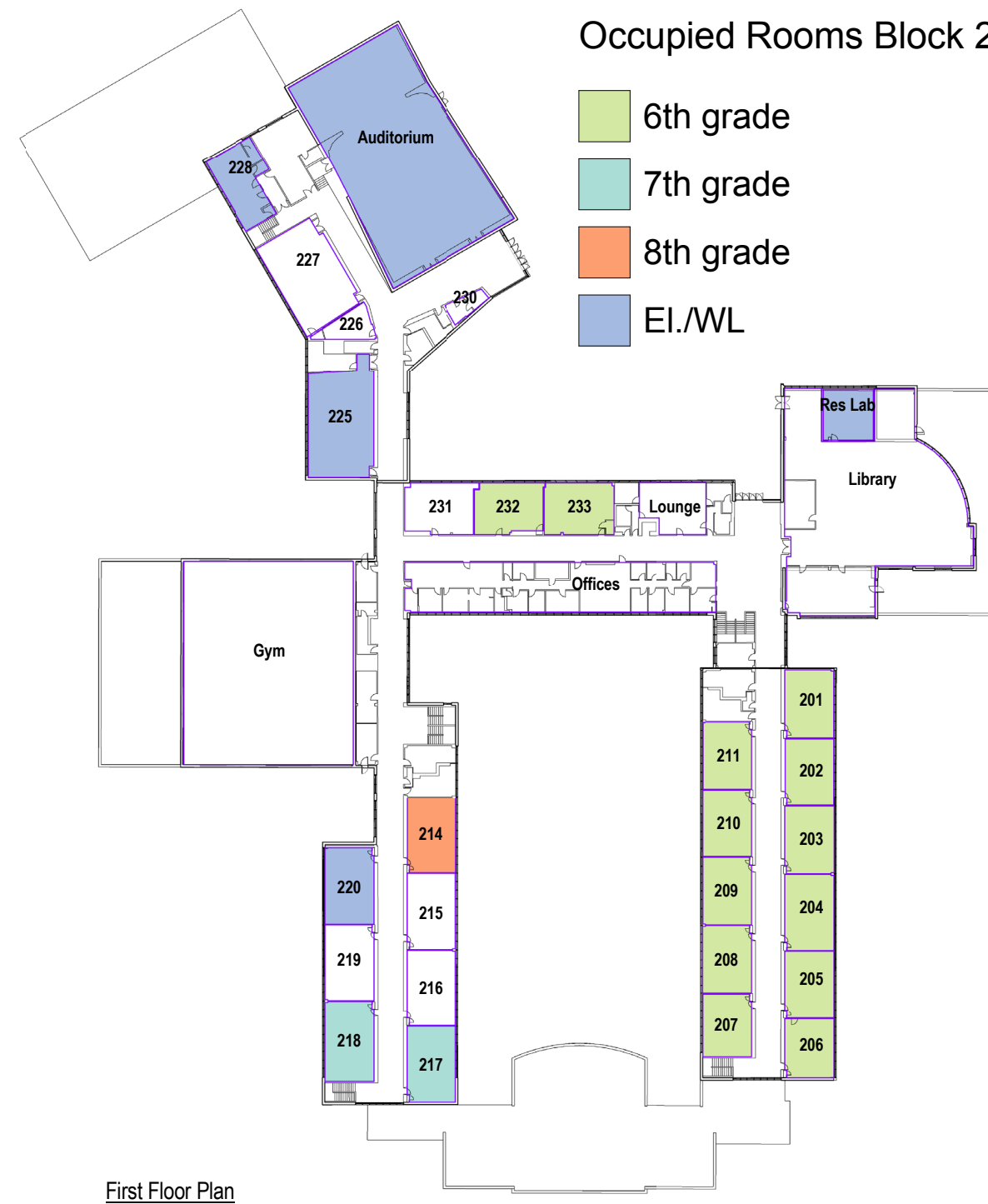


Occupied Rooms Block 2

- 6th grade
- 7th grade
- 8th grade
- EI./WL



Ground Floor Plan



First Floor Plan

Capacity Study - Block 2

1172A Williamsburg Middle School

GRAPHIC SCALE - 1/64" = 1'-0"

VMDO ARCHITECTS

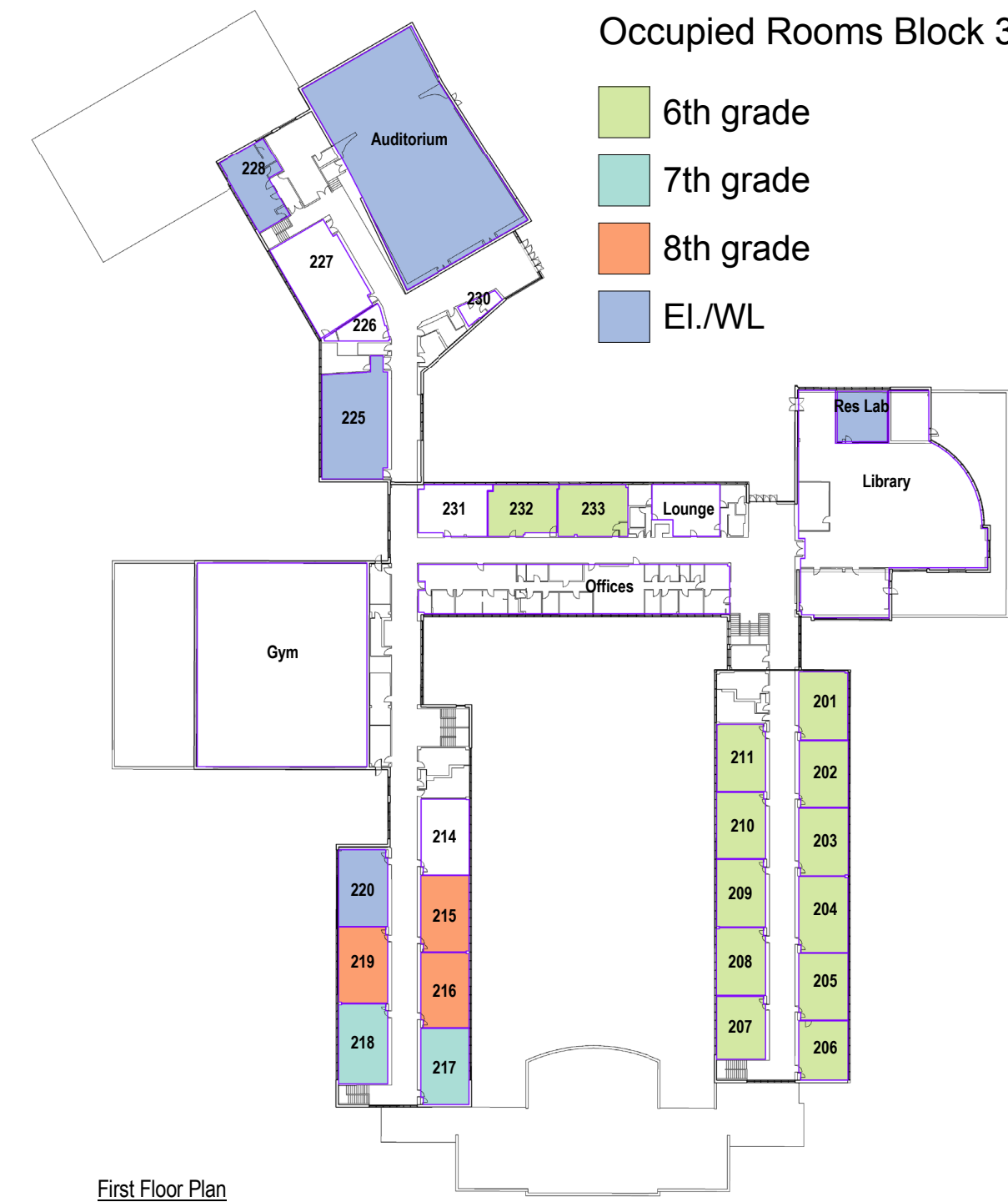


Occupied Rooms Block 3

- 6th grade
- 7th grade
- 8th grade
- EI./WL



Ground Floor Plan



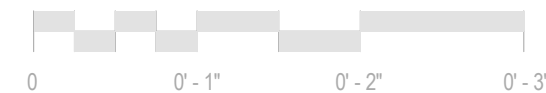
First Floor Plan

Capacity Study - Block 3

1172A Williamsburg Middle School

GRAPHIC SCALE - 1/64" = 1'-0"

VMDO ARCHITECTS

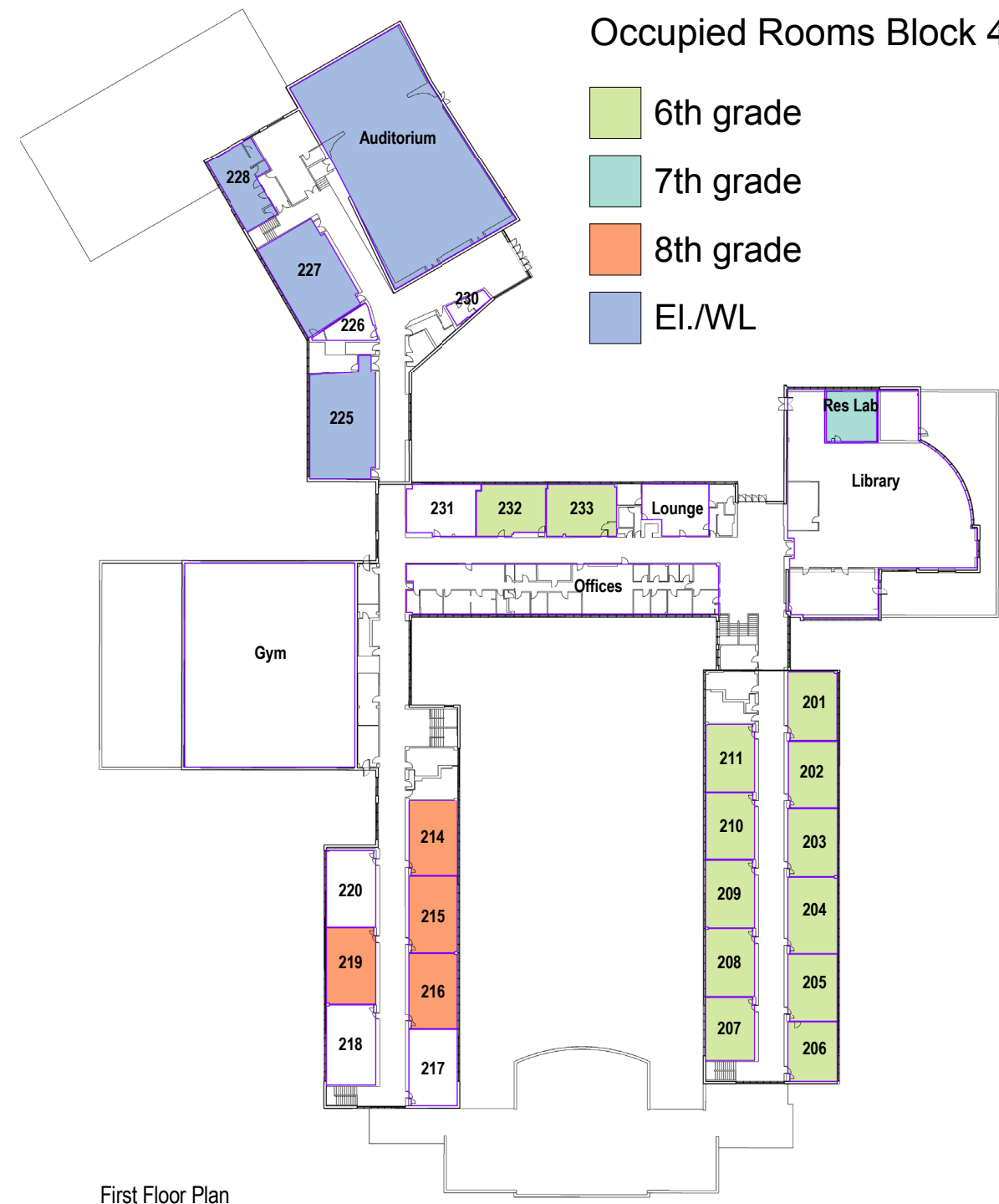


Occupied Rooms Block 4

- 6th grade
- 7th grade
- 8th grade
- EI./WL



Ground Floor Plan



First Floor Plan

Capacity Study - Block 4

1172A Williamsburg Middle School

GRAPHIC SCALE - 1/64" = 1'-0"

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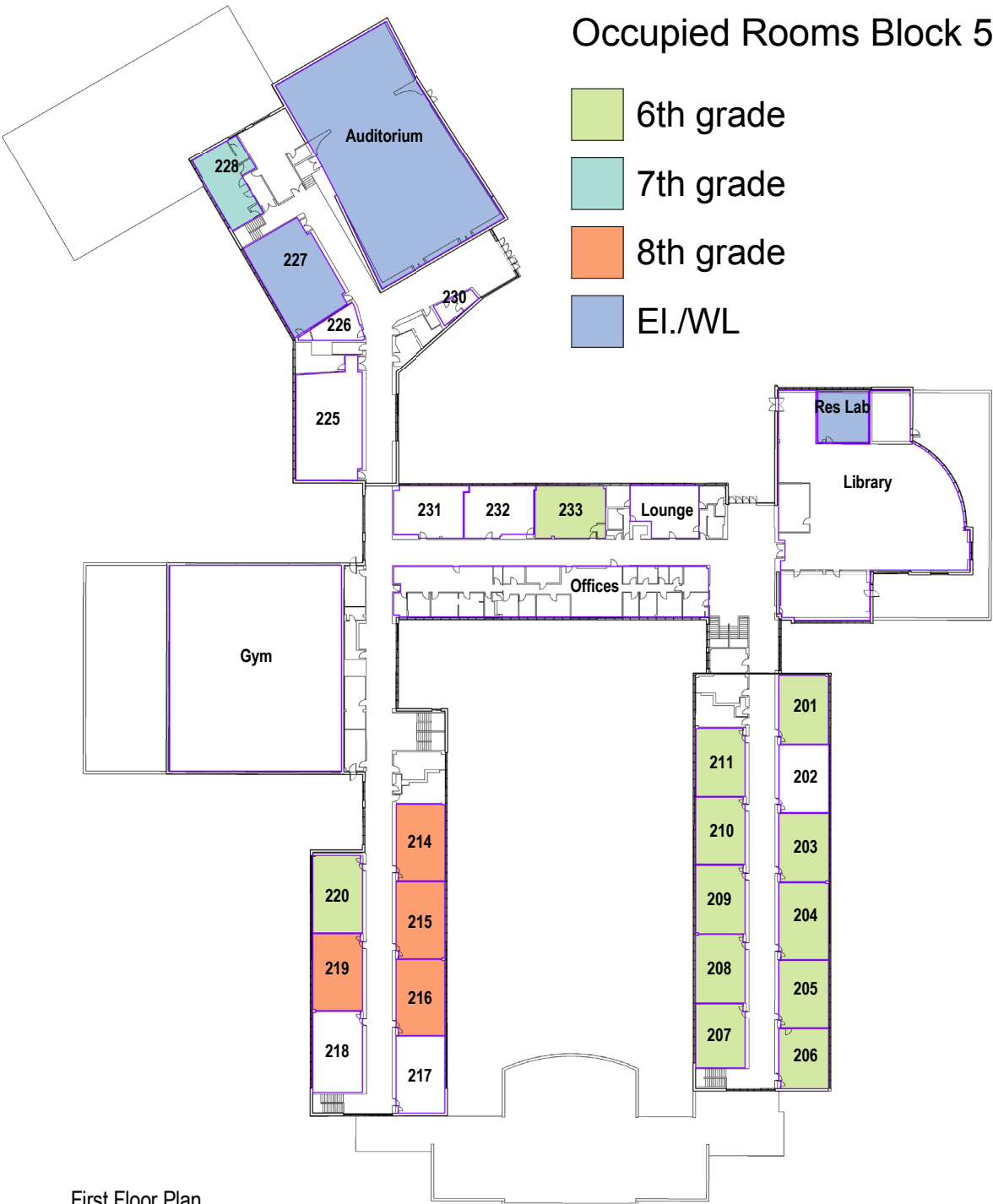


Occupied Rooms Block 5

- 6th grade
- 7th grade
- 8th grade
- EI./WL



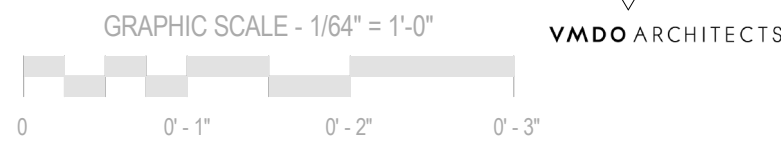
Ground Floor Plan



First Floor Plan

Capacity Study - Block 5

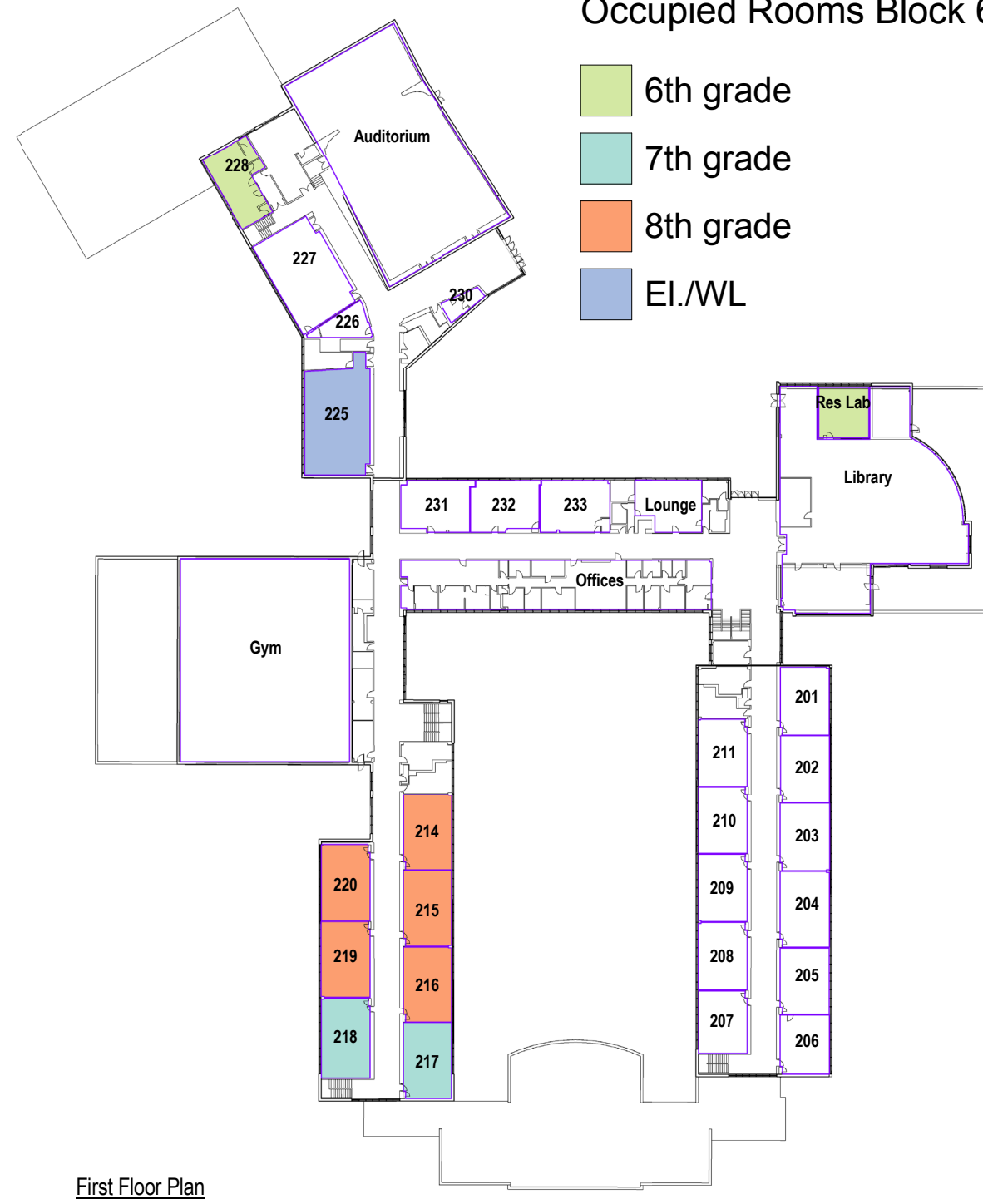
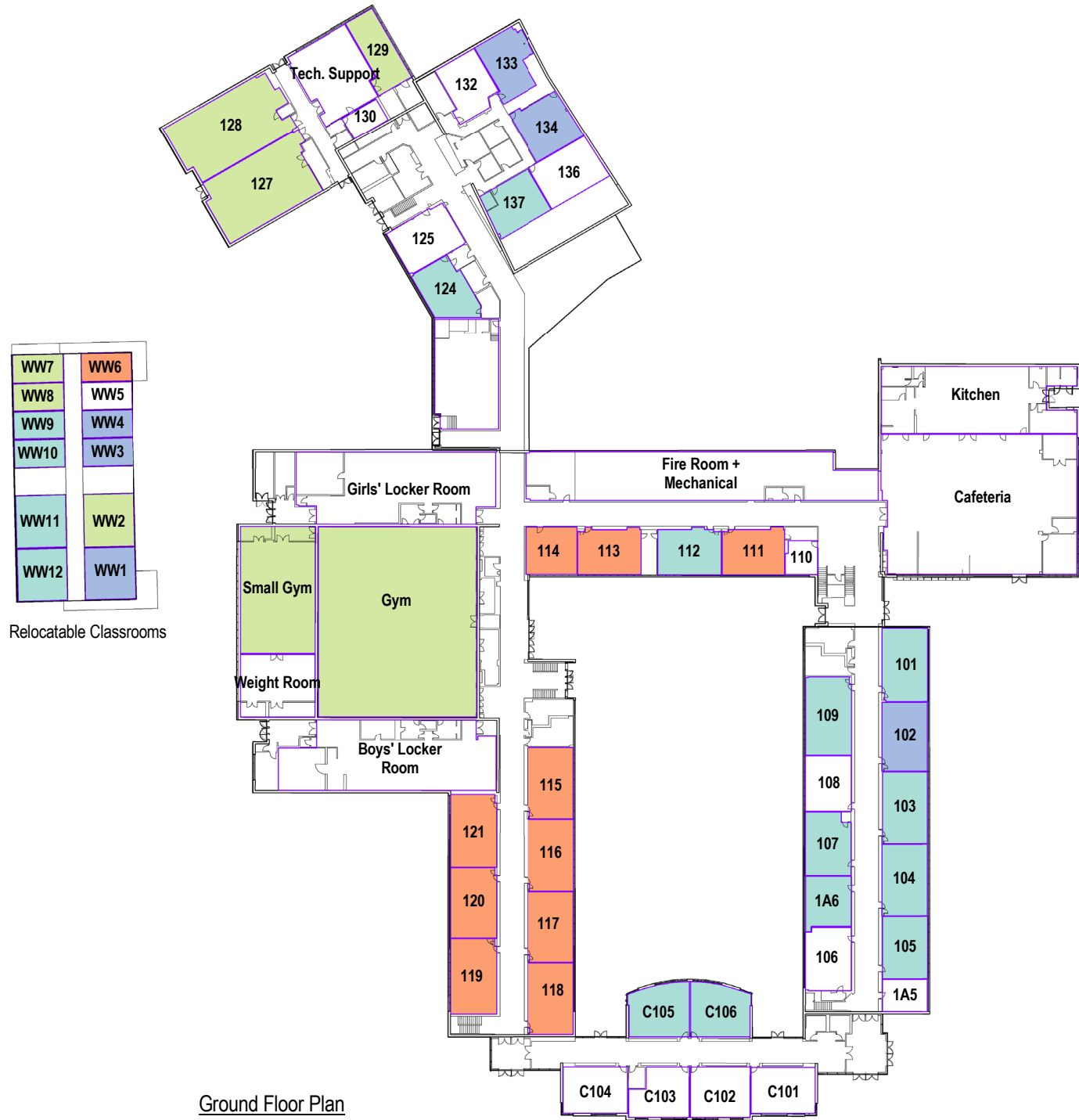
1172A Williamsburg Middle School



UTILIZATION

Occupied Rooms Block 6

- 6th grade
- 7th grade
- 8th grade
- EI./WL



Capacity Study - Block 6

1172A Williamsburg Middle School

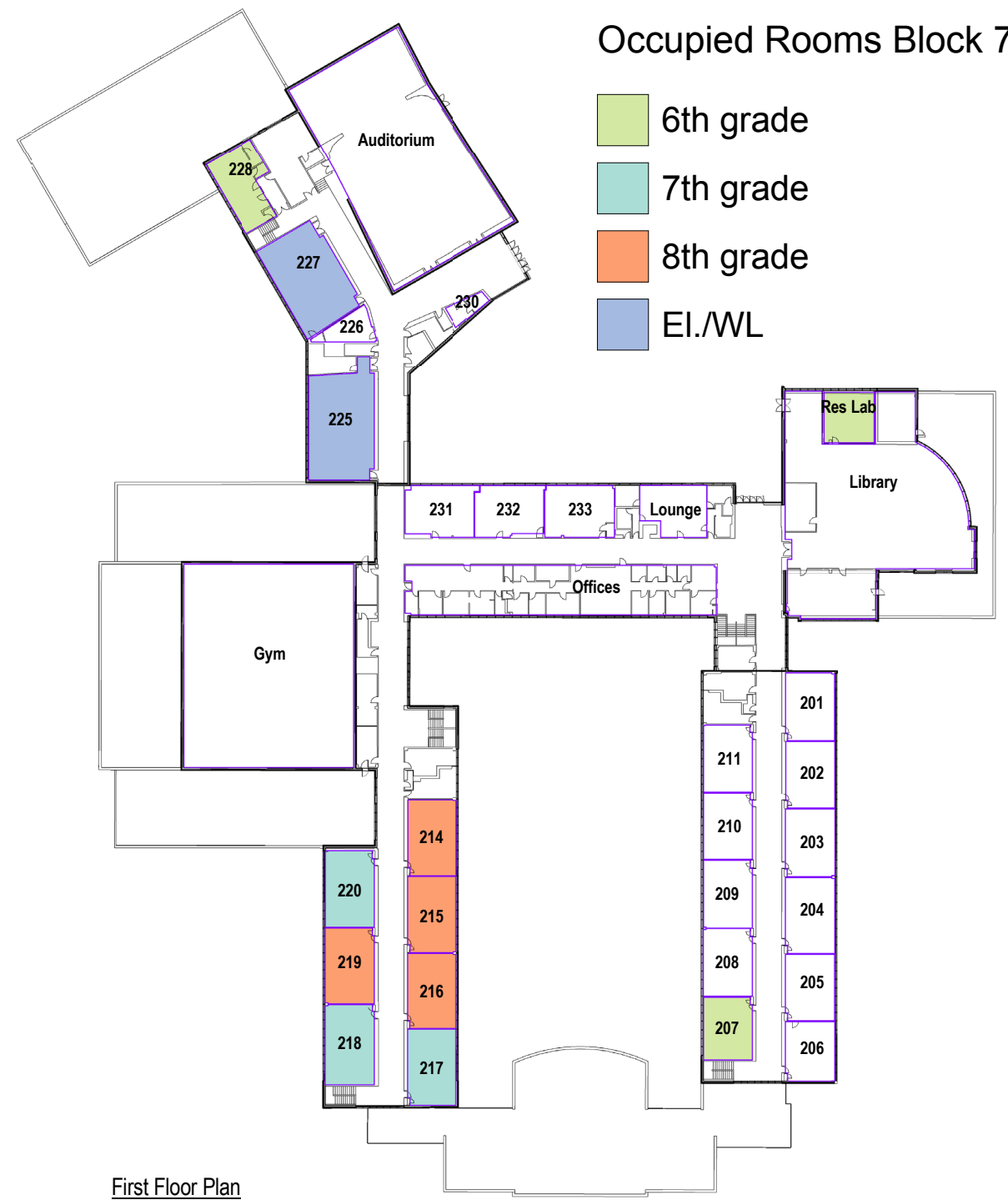
GRAPHIC SCALE - 1/64" = 1'-0"



VMDO ARCHITECTS



Ground Floor Plan



First Floor Plan

Capacity Study - Block 7

1172A Williamsburg Middle School

GRAPHIC SCALE - 1/64" = 1'-0"

VMDO ARCHITECTS

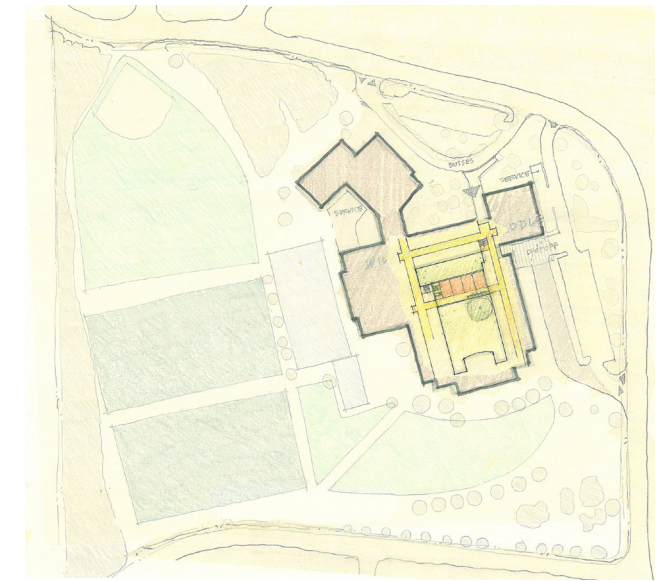
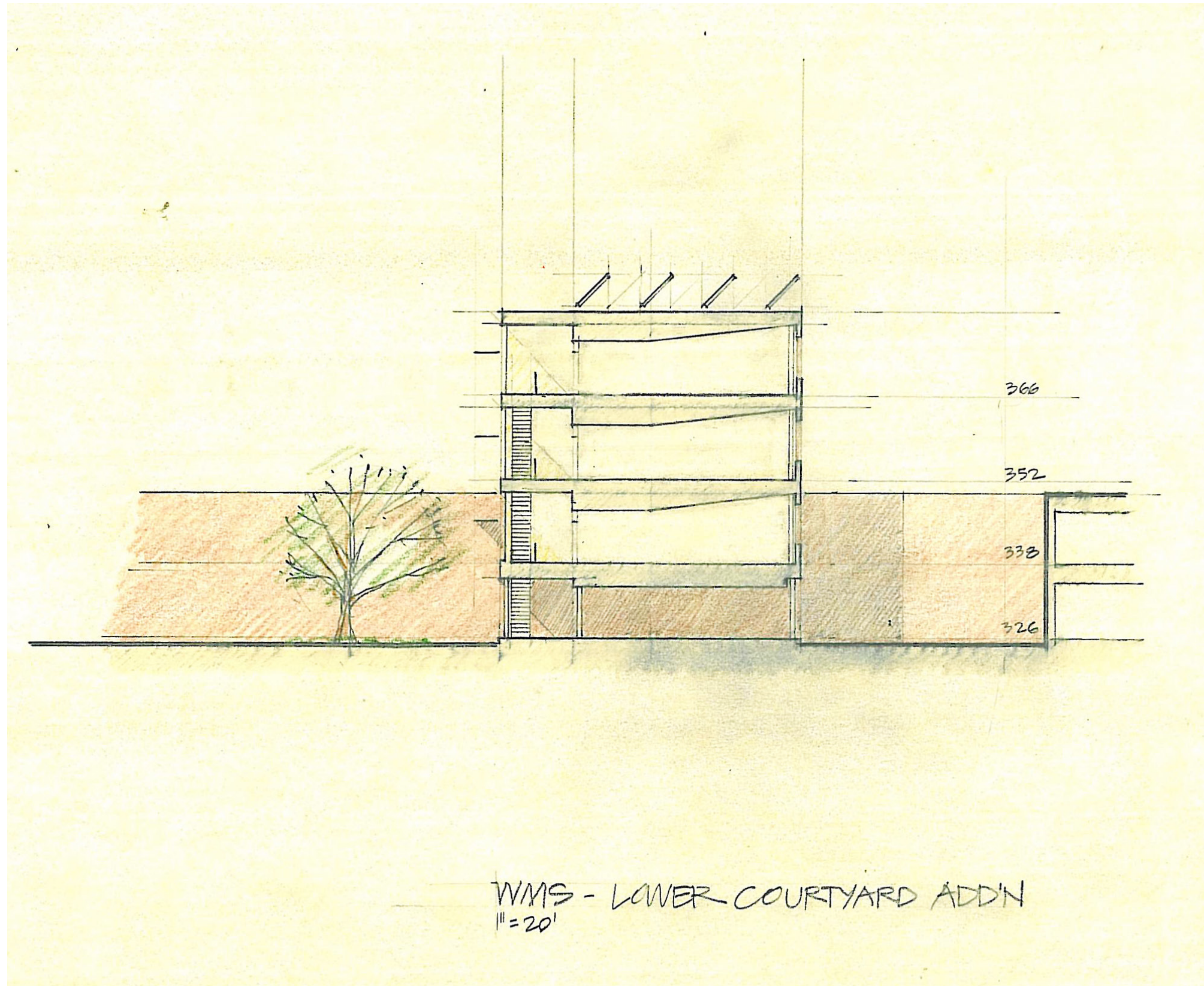


WILLIAMSBURG MIDDLE SCHOOL PAST PROPOSALS

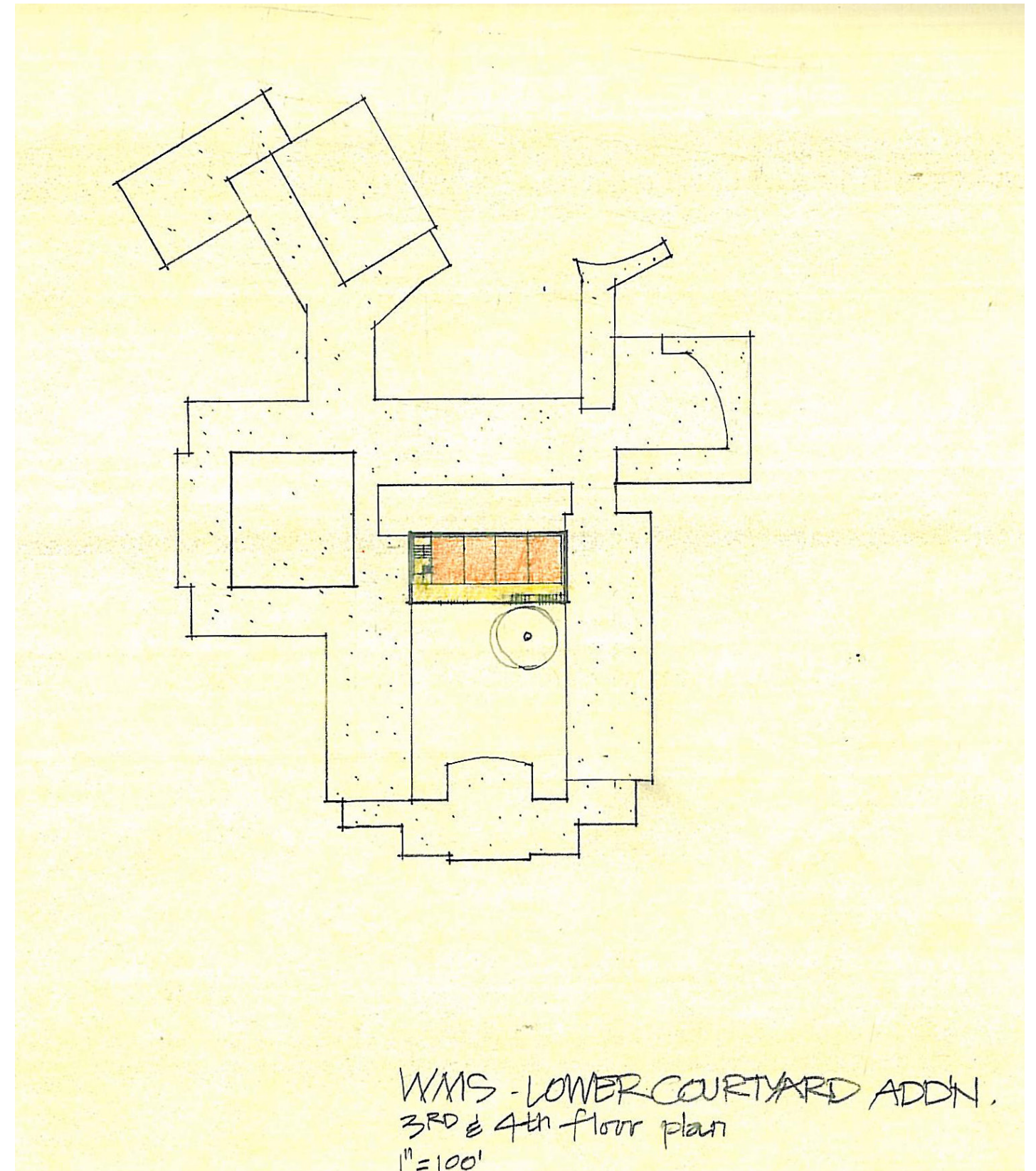
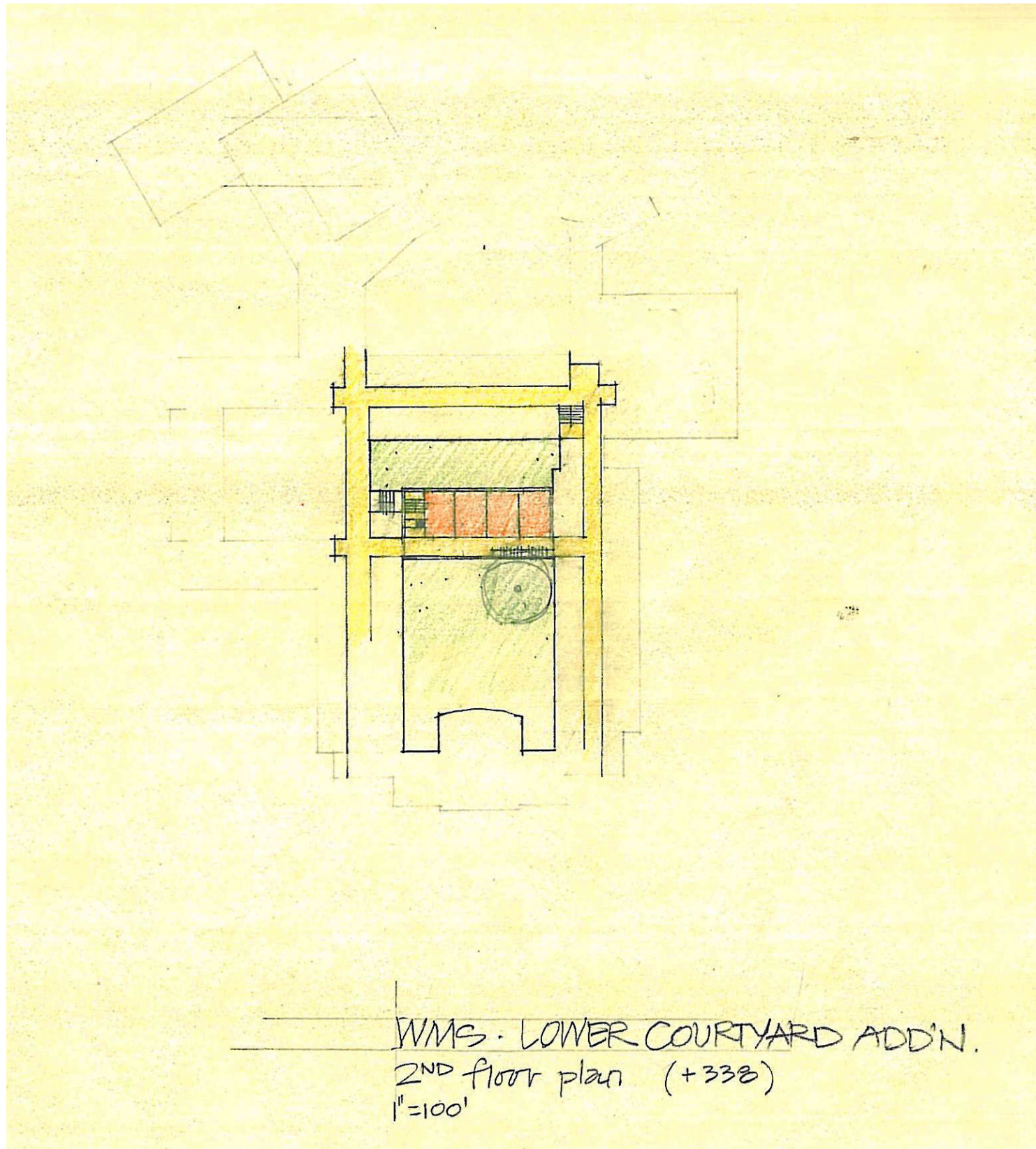
OCTOBER 2, 2012

* Note: Drawings not to scale.

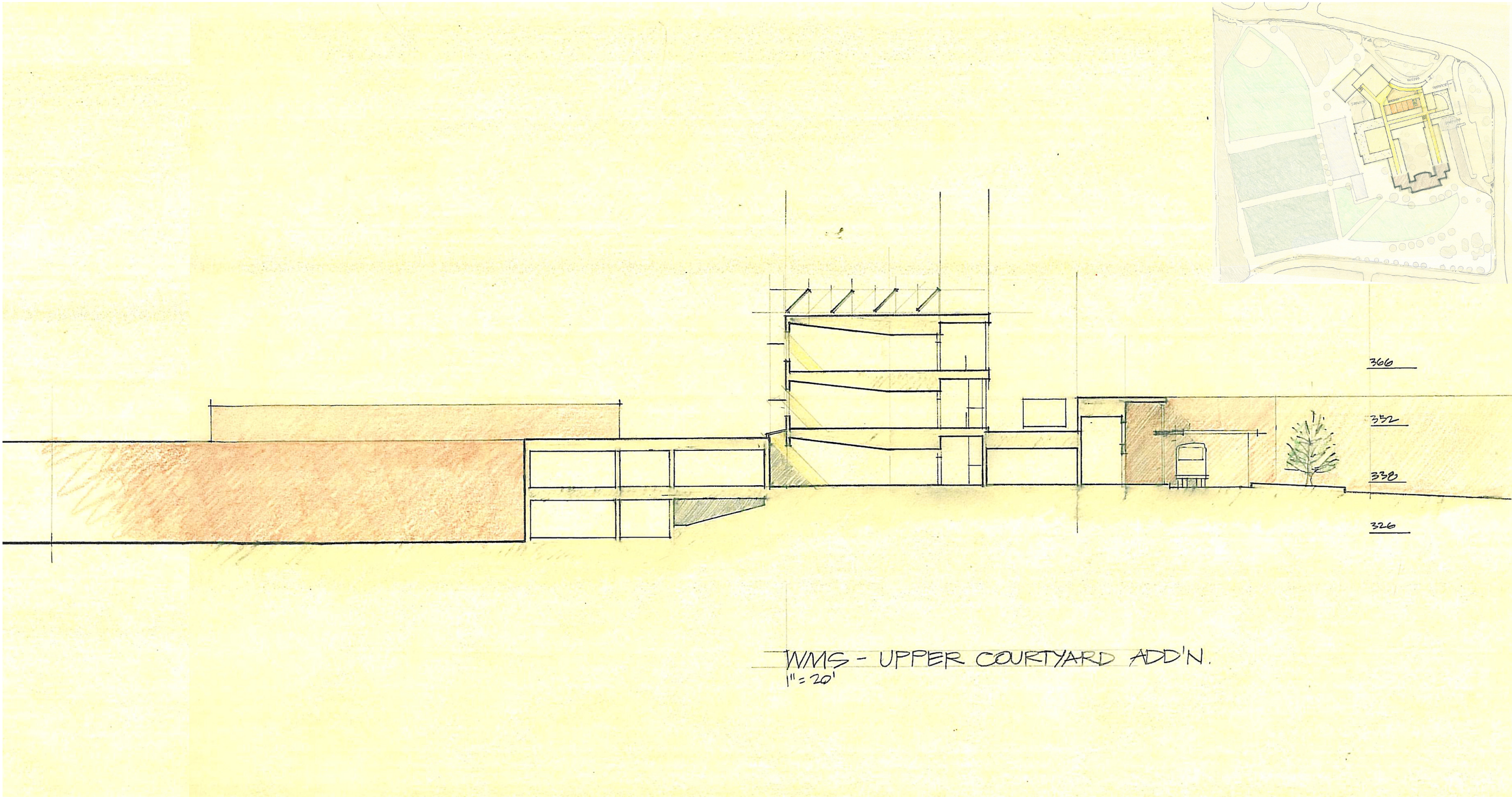
COURTYARD ADDITION 1

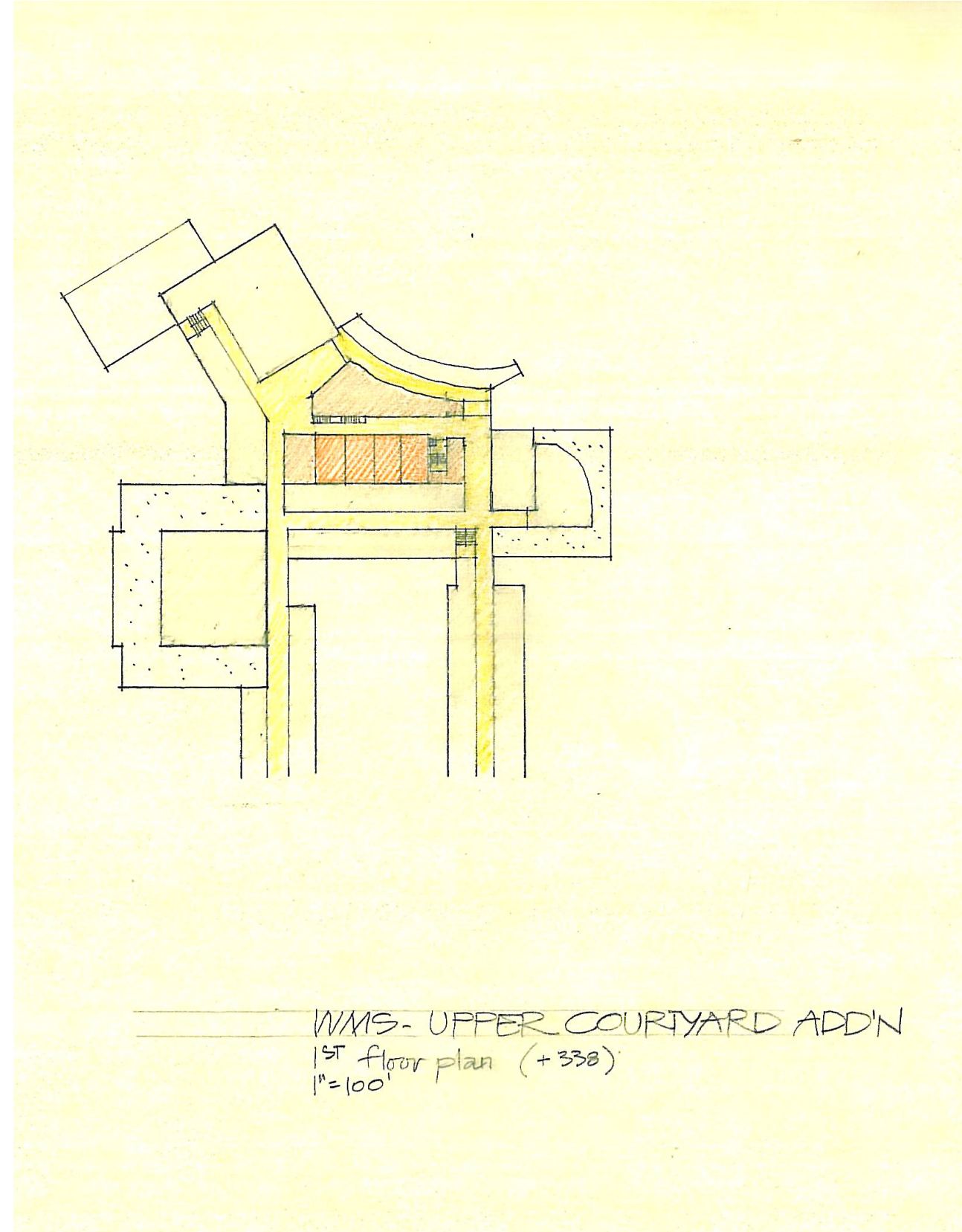
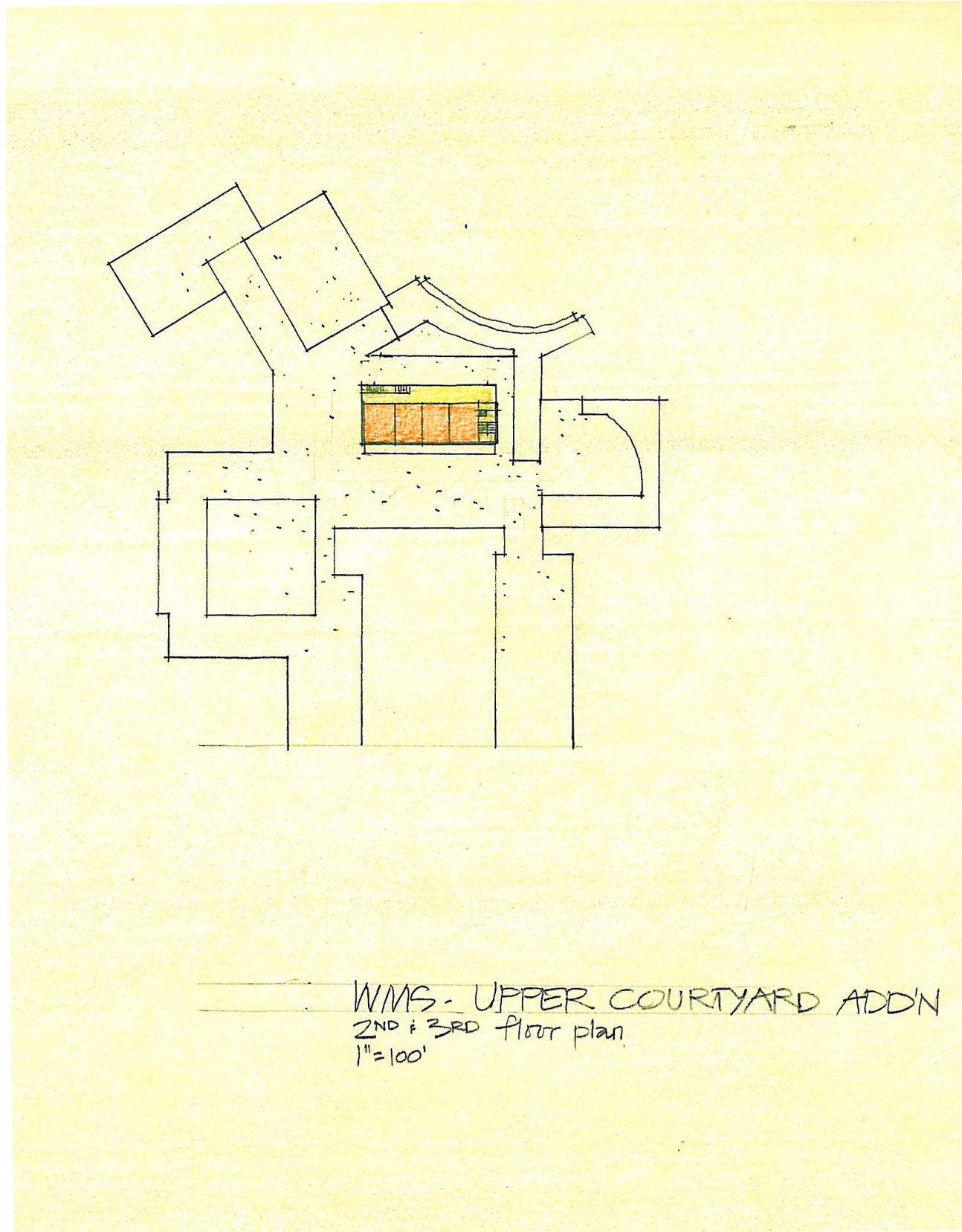


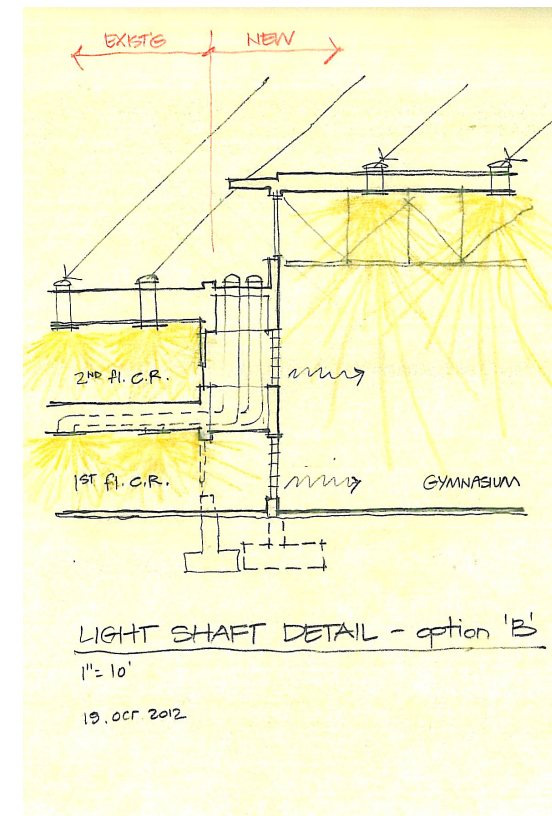
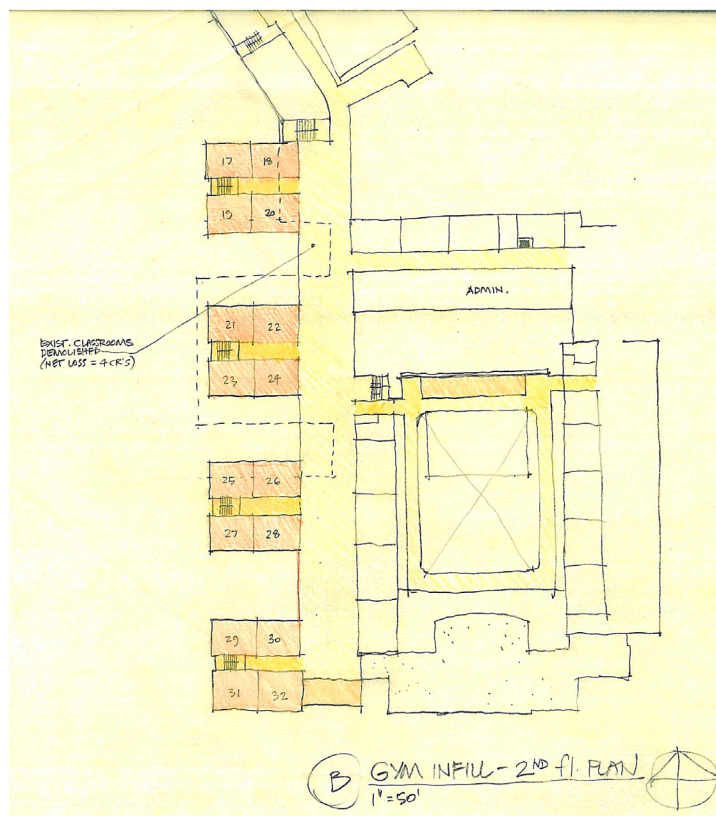
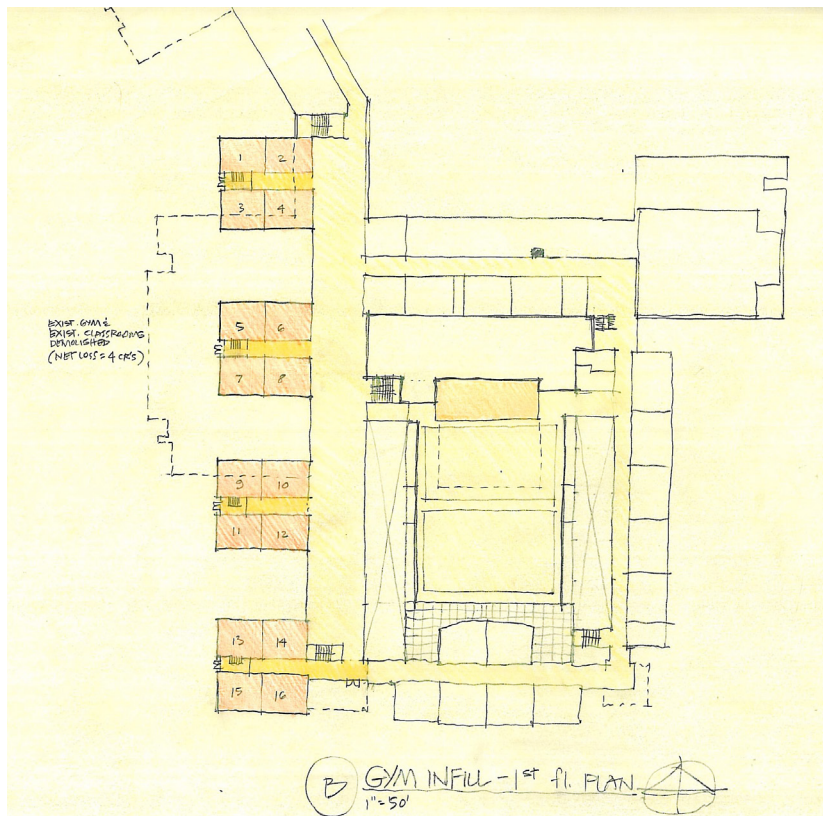
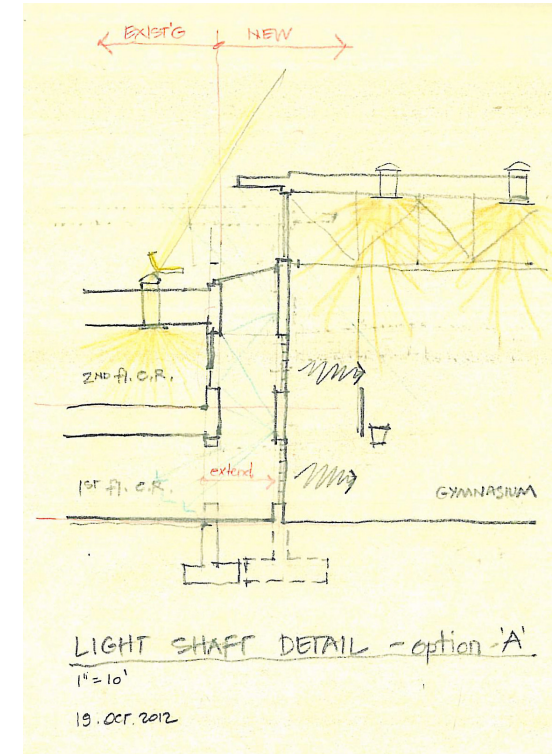
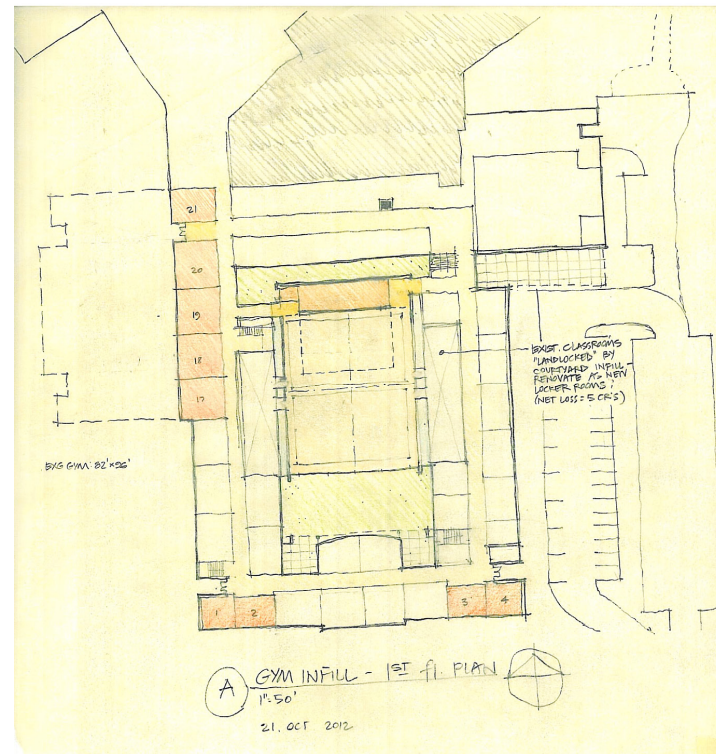
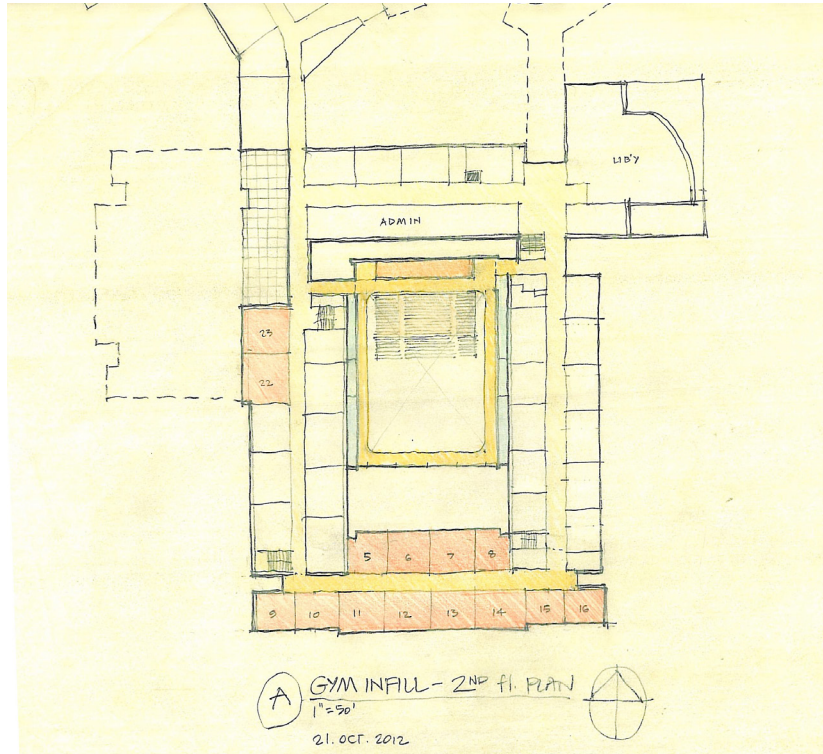
PAST PROPOSALS

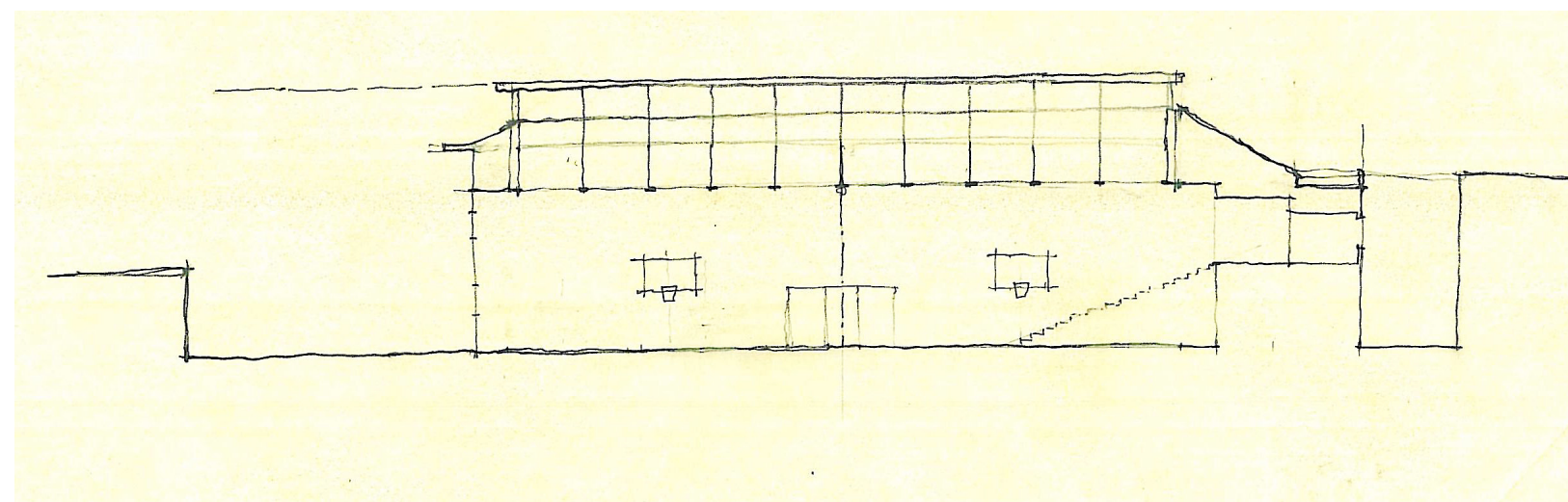
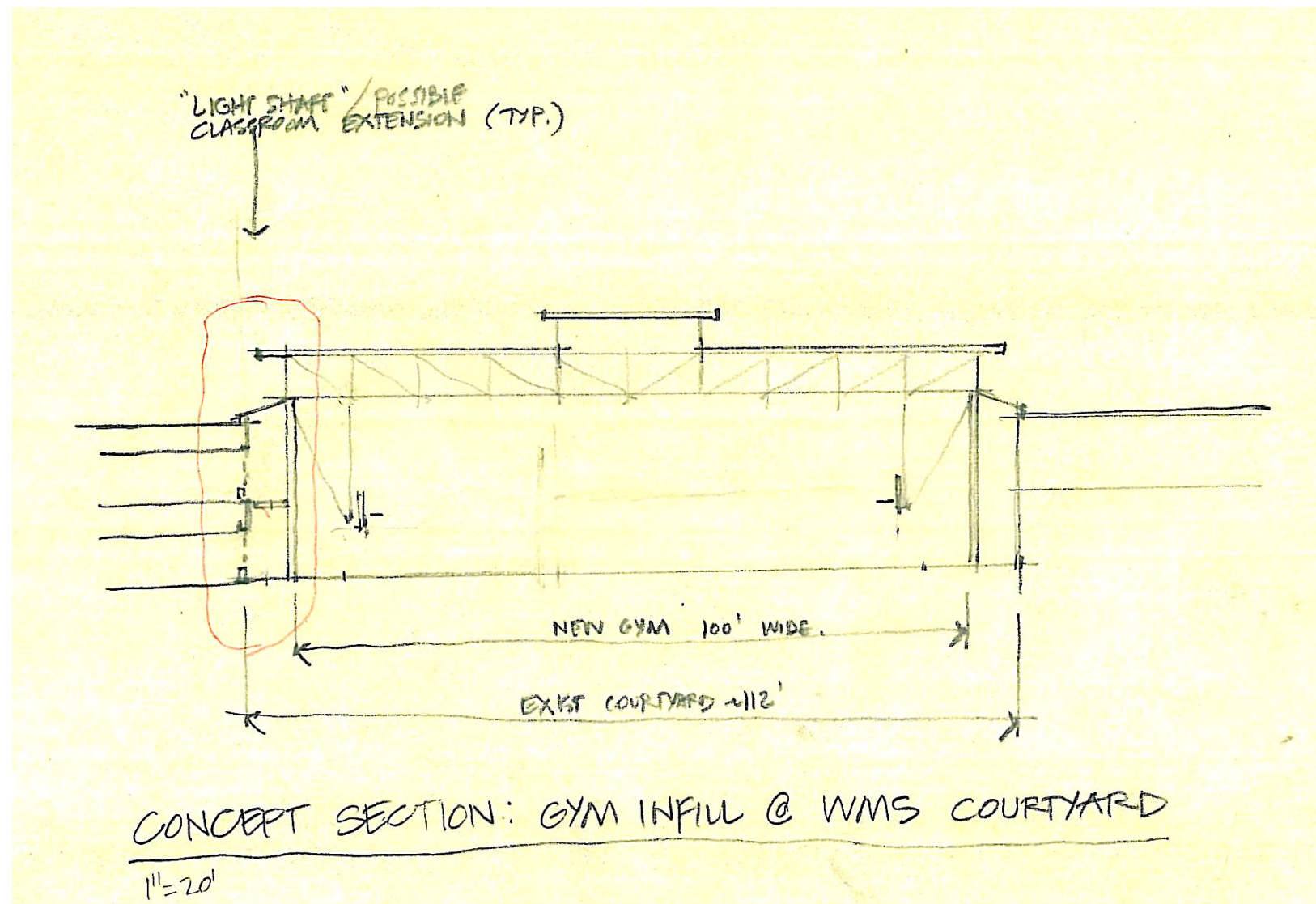


COURTYARD ADDITION 2

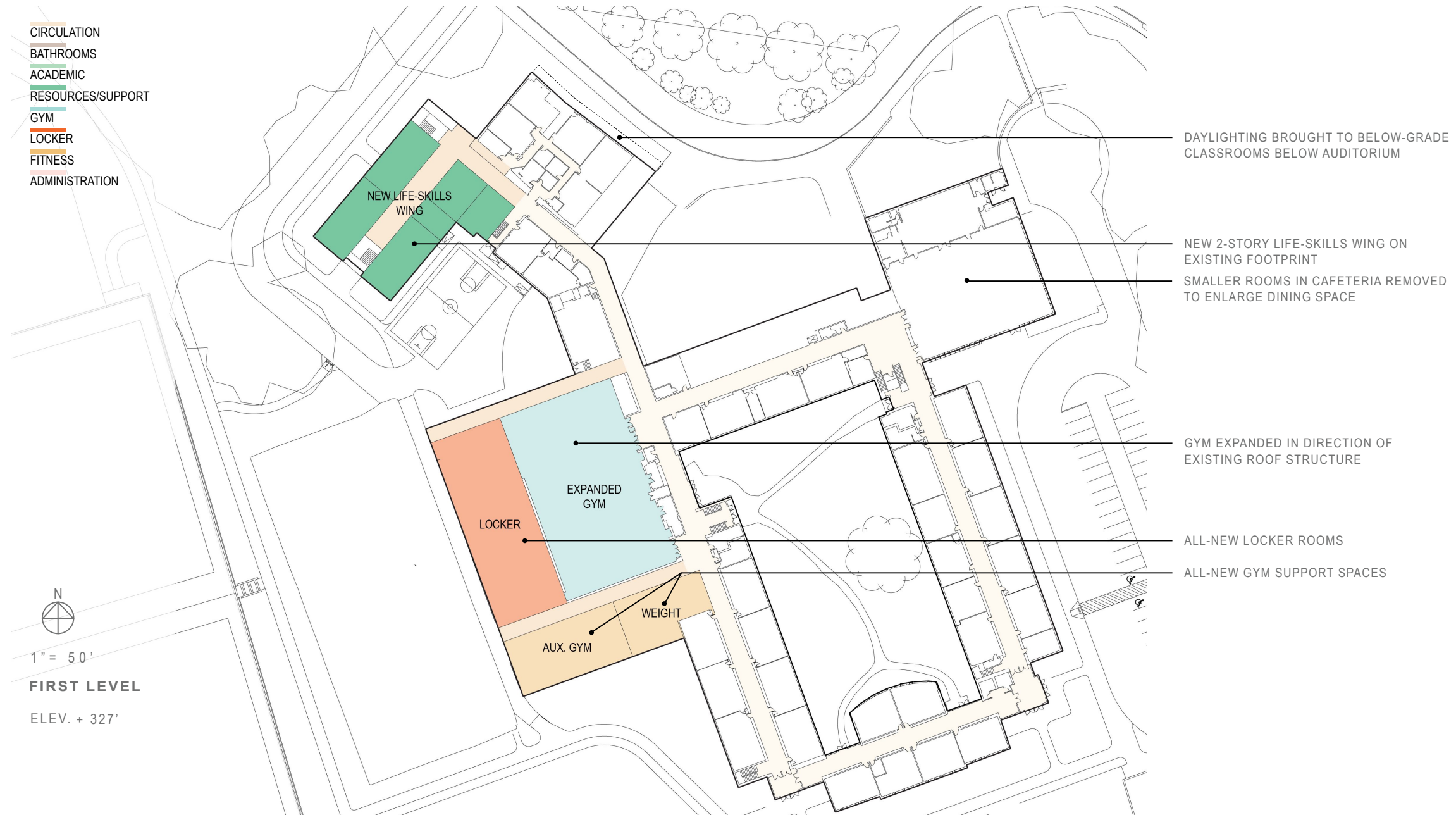




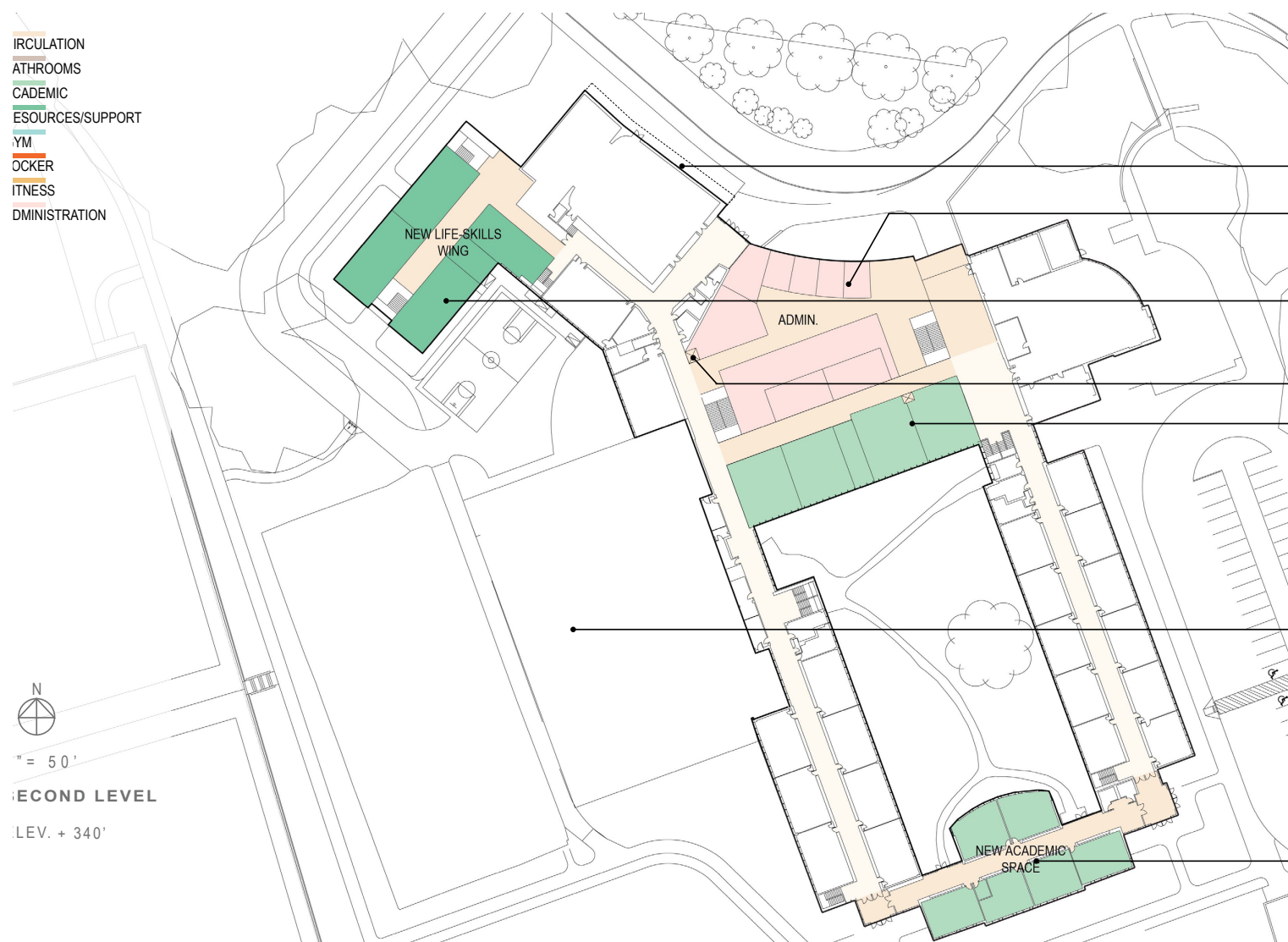




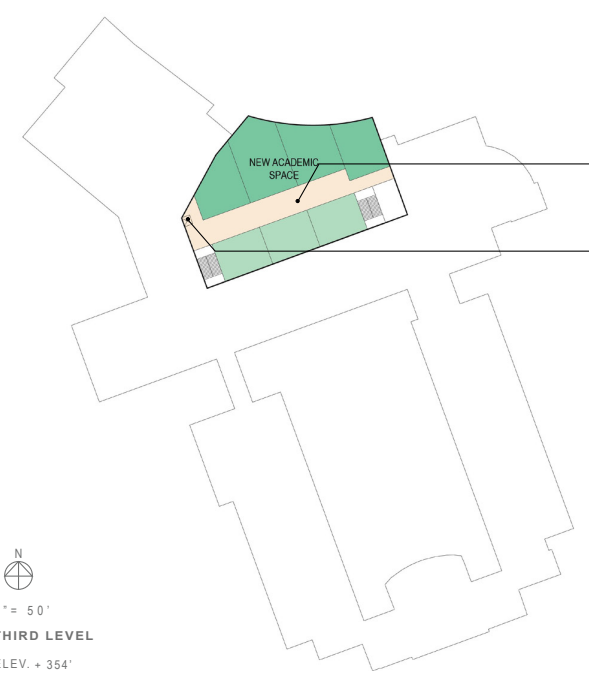
- CIRCULATION
- BATHROOMS
- ACADEMIC
- RESOURCES/SUPPORT
- GYM
- LOCKER
- FITNESS
- ADMINISTRATION



- IRCULATION
- ATHROOMS
- CADEMIC
- ESOURCES/SUPPORT
- YM
- OCKER
- ITNESS
- DMINISTRATION



- DAYLIGHTING BROUGHT TO BELOW-GRADE CLASSROOMS BELOW AUDITORIUM
- NEW ADMINISTRATIVE SUITE
- NEW 2-STORY LIFE-SKILLS WING ON EXISTING FOOTPRINT
- NEW ELEVATOR FROM LEVEL 200 TO 300
- RENOVATED CLASSROOM SPACE
- NEW GYM AND SUPPORT SPACES BELOW
- NEW ACADEMIC SPACE
- SECOND STORY ADDITION OF ACADEMIC SPACE ABOVE EXISTING ONE-STORY WING



- NEW ACADEMIC SPACE ABOVE NEW ADMIN. SUITE ADDITION
- NEW ELEVATOR FROM LEVEL 200 TO 300

03.26.14 SCHEME C