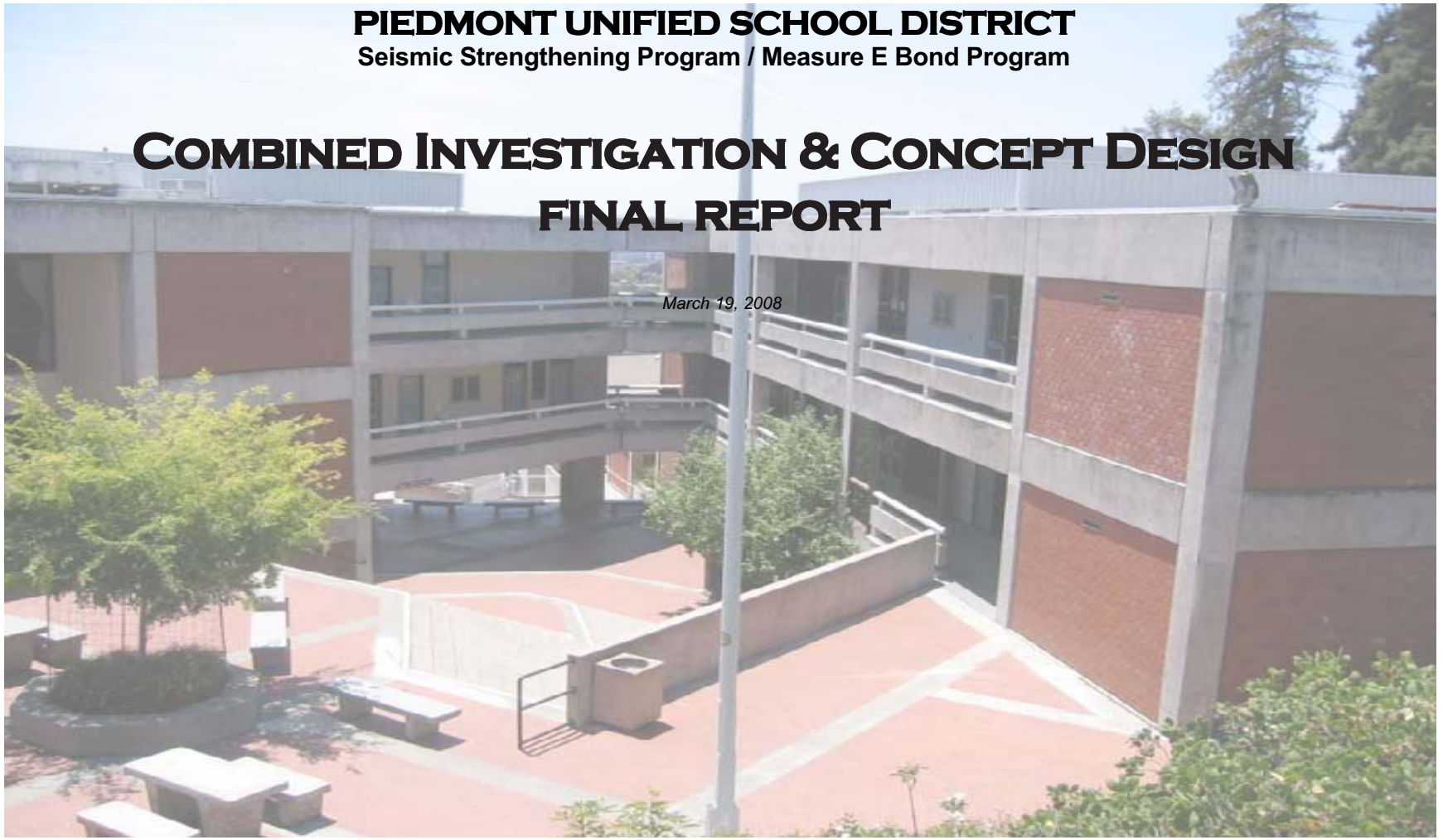
PIEDMONT MIDDLE SCHOOL

PIEDMONT UNIFIED SCHOOL DISTRICT

Seismic Strengthening Program / Measure E Bond Program



COMBINED INVESTIGATION & CONCEPT DESIGN FINAL REPORT

March 19, 2008

R. P. Gallagher Associates, Inc.
Structural Engineering

murakami Nelson
ARCHITECTURAL CORPORATION

PIEDMONT MIDDLE SCHOOL

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SEISMIC STRENGTHENING PROGRAM / MEASURE E BOND PROGRAM

CONCEPT DESIGN

FINAL REPORT

March 18, 2008

Building E - *Gymnasium / Music Building*

Building A, B and C - *Multi Use Buildings / Classroom / Administration Wings*

Building D - *Science Building*

R. P. Gallagher Associates, Inc.
Structural and Earthquake Engineering

murakami / Nelson
ARCHITECTURAL CORPORATION

i. EXECUTIVE SUMMARY

The Concept Designs contained in this report address non-structural seismic hazards, accessibility, and fire/life-safety deficiencies at the buildings at Piedmont Middle School. It follows an investigative report, dated August 16, 2007.

The three buildings: the Classroom Building (noted as Buildings A, B, & C), the Science Building D and the Gymnasium Building E have been evaluated and found to meet the seismic performance standards set by the Piedmont Unified School District Technical Advisory Committee. However, there are numerous non-structural falling hazards that were identified in the investigative report of August 16, 2007. The Concept Design addresses the cost to mitigate the non-structural seismic hazards.

The campus has addressed many of the accessibility deficiencies in its facilities over the years as it upgraded or modified its' facilities. The Science Building D and the Gymnasium Building E are of a younger vintage (1994 and 1995, respectively) and are closer in compliance to current accessibility standard. The three wings of the Classroom building, however, does have numerous accessibility deficiencies (some major) that will need to be corrected. The investigative report of August 16, 2007 identifies the deficiencies. Our Concept Design proposes remediation measures in order to assign a cost. We will need to get definitive responses from DSA in order establish the full magnitude and scope of corrective measures that will be required for each of the three buildings. Although there are obvious deficiencies common to all of the facilities, such as signage, door clearances, accessible counter heights, etc., these issues may be resolved in a number of different ways and by alternative means based on what can be negotiated with DSA.

The major fire and life safety issues that have a large cost impact are the need for a DSA compliant fire alarm system for each building and a DSA compliant fire sprinkler system for Buildings A, B, & C. Confirmation that the existing fire sprinkler system in Building D and E is acceptable to DSA is needed. Other fire and life safety issues include the installation of low-level exit signage, installation of emergency lighting in various locations, and insuring proper fire ratings at corridor openings.

Once a design concept is selected, there may be an opportunity to negotiate accessibility and fire/ life safety alternative solutions with DSA (Department of the State Architect), as this office has jurisdiction over public school construction.

A cost estimate was developed as part of this phase of work. We have included the summary pages in this document. The complete cost estimated is contained under separate cover.

This report will serve as the background for the next phase of work which will be to develop a schematic design.

TABLE OF CONTENTS

A. SUMMARY OF ACCESSIBILITY CONCEPTS

General site accessibility:

The Middle School is on a very steep site and is reflected in the design of the school. The three buildings are spread out on the site with multiple plaza levels connected by numerous stairs and ramps. Only some of the ramps and stairs are accessible based on current standards.

Currently, there is no loading/drop-off zone for the Middle School. There are no accessible parking spaces in front of the school, though two spaces are marked for accessible parking farther up the block at the High School. However, these two spaces are not compliant by current standards. The Middle School does have two locations with on-site accessible parking. One pair is on the west side of the Gymnasium Building E. The other pair is adjacent the tennis courts. At best, the path of travel to the classroom buildings and the gymnasium building is circuitous and not all of the ramps in the required path of travel are compliant. We will need to get DSA's occurrence that these four spaces are acceptable.

The main entries to the Middle School are on Magnolia Avenue There is an accessible ramp that provides entry into the upper level of Building B. However, the elevator in Building A is not accessible. The second entry point is a ramp accessed from Magnolia that leads down to the Middle Level of Building B. This ramp is not a compliant ramp. The ramp lacks intermediate landings. For the length of this ramp, four additional intermediate landing are required. The only current accessible path of travel requires the disabled person to traverse through the accessible ramp system on the east side of the 40's Building, take an elevator down to the Middle School's plaza level, which is the same level as the middle floor of the Building A, B, & C.

The existing elevator in Building A is next to a mechanical duct/electrical raceway shaft. Enlarging the elevator shaft for an accessible elevator would be very disruptive to the building operations and use. We would not recommend enlarging the existing elevator shaft. Our concept design recommends the addition of an accessible elevator at the northeast side of Building C. This new elevator would be centrally located to serve Buildings A, B, & C. It would provide the link to Building D & E.

The ramp adjacent Building B is the accessible path of travel to Building D. Some modifications to the ramp are necessary to bring the ramp to full compliance.

The accessible path of travel to Building E requires traversing through the walkway adjacent the High School's 40's Building and utilizing the ramp/walkway improvement near the High School Gymnasium building to gain access to the Building E. This route is circuitous, but in light of the steep grades at this site, DSA may deem this path of travel acceptable.

General building accessibility:

The following floor plans show how the code deficiencies described in our Investigative Report can be addressed. In many cases, the proposed remediation can be performed without impacting the surrounding area. For example, replacing door hardware for accessibility, or providing a new accessible sink to replace an existing sink. These items are described in key notes, and their location is shown on the plans. In other cases, the remediation has a minor impact on the adjacent area, for example to accommodate an enlarged toilet room, a new ramp, or to provide adequate clearances in front of a door. These changes are shown, and highlighted, in the concept plans. In a few cases, the changes required to accommodate the proposed remediation can have a major impact. In some cases, we have included alternative solutions, and/or approaches to the problem. These options are not always mutually exclusive from one another. They are shown on the plans, and described below.

Building A, B, & C – Classrooms, Multi-purpose, and Administrative Offices

Recommended Solutions:

- Install a new accessible elevator as shown on the plans below. This would meet the requirement for accessible vertical circulation.
- Construct new single use toilet for staff and students in lieu of renovating and enlarging existing non-compliant toilet rooms.
- Overlay the existing walkways that lead to classroom entry doors to lower the height of threshold to accessibility standards.
- Demolish all construction and improvement to the Food Service Area done without DSA approval and reconstruct to comply with DSA requirements and Health Department requirements.
- Remove all sinks and cabinetwork in the former Science classrooms to avoid the cost of modifying cabinets and plumbing to accessible height.
- Provide accessible counter space at various classrooms and administrative spaces.
- Provide accessible signage throughout as required by DSA.

Building D - Sciences

The Science Building, constructed in 1994, is generally in compliance with most accessibility requirements. Needed accessibility upgrades are shown on the plans and as follows:

Recommended Solutions:

- Provide a portable chair lift for the stage in the Multi-Purpose Room 402.
- Provide accessible signage throughout as required by DSA.
- Adjust door closer pressure or replace where adjustment is not achievable.
- Provide handrail extensions to meet accessibility requirements.
- Make available assistive listening devices.

Building E – Gymnasium

The Gymnasium Building, constructed in 1995, is generally in compliance with most accessibility requirements. Needed accessibility upgrades are shown on the plans and as follows:

Recommended Solutions:

- Overlay the existing walkways that lead to music classroom exterior entry doors to lower the height of threshold to accessibility standards.
- Provide grab at staff toilet room.
- Adjust location and mounting height of various toilet room accessories to accessibility standards at all accessible toilet rooms.
- Provide handrail extension at the corridor ramp at the lower level.
- Provide accessible signage throughout as required by DSA.
- Adjust door closer pressure or replace where adjustment is not achievable.
- Convert two existing shower stalls into one accessible shower stall in both the boy's and the girl's locker rooms.

A. SUMMARY OF FIRE AND LIFE SAFETY SCHEMES:

The three buildings are generally life safe. The buildings met exit requirements (except where noted) and have floor and wall assembly resembling and generally equivalent to a rated corridor. Some rated opening are missing the required UL fire label.

Fire Alarm System

Current code requires that all educational facilities have fire alarm system. All three buildings have fire alarm systems, though of varying vintages and sophistication. A cursory review of the existing fire alarm system with maintenance and administrative staff suggests that a replacement fire alarm should be considered at each building to allow for a centralized annunciated system for the campus. In the Schematic Design phase, a comprehensive evaluation by a fire and life safety consultant will be needed.

Supplemental to the Fire Alarm is the need to install magnetic hold-opens at all classroom door. Currently, a majority of the fire rated doors have been outfitted with dog-leg type door stops. These dog-leg stops defeat the self-closing feature of the door and as such, the fire protection. The dog-leg stops will need to be removed.

Fire Sprinkler System

Current code requires that all educational facilities have fire sprinklers throughout. The Sciences Building D and the Gymnasium Building E have fire sprinkler systems. Their acceptability to DSA will need to be confirmed in the Schematic Phase.

The Classroom/Multi-Use/Administrative Offices Building A,B, & C do not have fire sprinklers. A new fire sprinkler system is needed in this building complex.

Low Level Exit Lighting

Current code requires that all educational facilities have low-level exit lighting. Building D and E have low-level exit lighting. Building A, B, & C have exterior exit way and would not need to have low-level exit lighting installed.

Other Fire and Life Safety Issues:

Room 201 was converted from a classroom to a Teacher's Lounge. There is no DSA documentation for this change in occupancy. The change in use has triggered the need for a second exit. In lieu of providing a required second exit, a sign must be posted at Teacher's Lounge to indicate the maximum number of occupants allowed in the room may be adequate. This will need to be confirmed with DSA.

Chemical storage: We were unable to obtain an inventory of the chemicals stored in the Science Building D. The Principal is in the process to initiating an inventory list. An assessment can be made once the inventory list is received.

Signage: Tactile exit signage is required at all exits that require exit signage. Room capacity signage is required in assembly space. Our concept plans calls to provide this required signage.

These and other specific fire and life safety upgrades are noted on the plan diagrams below.

CONCEPT DESIGN NOTES:

GENERAL NOTES:

1. PROVIDE ACCESSIBLE DIRECTIONAL SIGNAGE & ROOM IDENTIFICATION SIGNAGE THROUGHOUT (AT EACH DOOR).
2. PROVIDE PORTABLE FIRE EXTINGUISHER CABINETS AS REQUIRED.
3. (N) S.F.M. APPROVED FIRE ALARM SYSTEM IN ALL BUILDINGS (CBC 305.9).

01 (E) ACCESSIBLE DROP-OFF / LOADING SPACE. PROVIDED UNDER PHS PRIORITY BUILDINGS PROJECT.

02 (N) DIRECTIONAL ACCESSIBILITY SIGNAGE.

03 (N) ACCESSIBLE CONCRETE RAMP WITH CURB & HANDRAILS (MAX. ALLOWABLE SLOPE OF 1:12).

04 PROVIDE (N) MAXIMUM ROOM CAPACITY SIGNAGE (PER CBC 1007.2.6).

05A (N) ACCESSIBLE PAINTED DOOR, FRAME, & HARDWARE IN RESIZED OPENING.

05B (N) THRESHOLD.

05C (N) RATED DOOR.

05D MODIFY (E) CASEWORK, WALLS, ETC. TO PROVIDE CLEAR SPACE ON PUSH / PULL SIDE OF DOOR (24" MIN. EXTERIOR PULL, 18" MIN. INTERIOR PULL, 12" MIN. PUSH SIDE OF DOOR).

05E REMOVE (E) STOREFRONT DOOR & ADJACENT STOREFRONT WINDOW & PROVIDE (N) STOREFRONT DOOR & WINDOW TO ACHEIVE 12" CLEAR SPACE ON PUSH SIDE OF DOOR.

05F ADJUST CLOSING PRESSURE FOR ADA COMPLIANCE.

05G OBTAIN U.L. LABEL FOR (E) DOOR ASSEMBLY.

05H REMOVE (E) DOOR, REVERSE DOOR SWING & PROVIDE (N) WOOD DOOR WITH HARDWARE.

05J PROVIDE (N) DOOR CLOSER.

06 (N) COMPLIANT PAINTED GALVANIZED STEEL HANDRAILS.

06A PROVIDE HANDRAIL EXTENSION.

07 DEMOLISH (E) PEDESTRIAN CONTROL BARRIERS & PROVIDE (N) PEDESTRIAN CONTROL BARRIERS (CUEING LINES) AT FOOD SERVICE AREA. (DESIGN TO BE DETERMINED IN SCHEMATIC.)

08 (N) ACCESSIBLE ELEVATOR IN NEW SHAFT ENCLOSURE TO SERVE BUILDING WING A, B, & C.

09 (N) HI-LO TYPE DRINKING FOUNTAIN WITH STAINLESS STEEL GUARD RAILS AS REQUIRED.

10 DEMO (E) CONCRETE LOW WALL, FORM & EXTEND CONCRETE WALL & LANDING 12". FINISH TO MATCH (E).

11 DESIGNATE ACCESSIBLE SEATING ON (E) BLEACHERS WITH SCIENCE ON BLEACHERS.

12 PROVIDE RECESSED WALK-OFF MAT.

13 (N) ACCESSIBLE CABINETRY & COUNTER OR MODIFY (E) CABINETRY & COUNTERS FOR ACCESSIBILITY.

14 PROVIDE (N) ACCESSIBLE RESTROOM WITH ADEQUATE CLEAR SPACE, HARDWARE, ACCESSORIES, ETC.

14A ADD GRAB BAR.

14B LOWER (E) URINAL TO ACCESSIBLE HEIGHT.

15 DEMOLISH (E) UNAPPROVED IMPROVEMENTS (SHOWN DASHED) INCLUDING WALL, COUNTER, CABINETRY, EQUIPMENT, ETC. & PROVIDE (N) FOOD SERVICE AREA WITH ACCESSIBLE COUNTERS, CABINETRY, EQUIPMENT, ETC.

16 DEMOLISH (E) ROOM & PROVIDE NEW WALL & FINISHES.

17 (N) ACCESSIBLE SINK.

18 PROVIDE (N) COMPLIANT SIGNAGE PER GENERAL NOTE.

19 (N) ASSISTED LISTENING DEVICE.

20 DEMOLISH (E) TWO SHOWER STALL AND PROVIDE ONE ACCESSIBLE SHOWER STALL INCLUDING HAND-HELD SHOWER HEAD, FIXTURES, SEAT, TILE SURROUND, FLOOR LIGHTING & CURTAIN

21 RE-PAINT STAIR WARNING STRIPES AT TREADS AS REQUIRED
EXTERIOR STAIRS: PROVIDE WARNING STRIP AT UPPER APPROACH & EVERY TREAD.
INTERIOR STAIRS: PROVIDE WARNING STRIP AT UPPER APPROACH & LOWER TREAD.

22 MODIFY (E) TRANSACTION COUNTER FOR ACCESSIBILITY (34" MAX HEIGHT, 36" MIN. LENGTH, & KNEE SPACE).

23 PROVIDE ACCESSIBLE STAGE ACCESS VIA PORTABLE PLATFORM LIFT.

24 PROVIDE (N) WALL, DOOR, FRAME, & HARDWARE (LATCH SET, HINGES, CLOSER) IN FRONT OF ELEVATOR OPENING. RELOCATE CALL BUTTONS & FLOOR LEVEL INDICATOR TO (N) WALL.

25 DEMOLISH (E) PLAZA SLAB. REMOVE 3'-0" OF SOIL, RECOMPACT & REINSTALL SLAB OVER 6" OF DRAIN ROCK.

26 RELOCATE DOOR OPENING TO (N) LOCATION SHOWN. PROVIDE (N) DOOR, FRAME, & HARDWARE. PATCH ABANDONED OPENING.

27 PROVIDE SECOND EXIT CONSISTING OF (N) HALLWAY, DOOR & FRAME, (N) HALL LIGHT & TWO EXIT LIGHTS, & (N) FINISHES.

28 DEMOLISH UNAPPROVED WALL & RE-BUILD.

29 (N) FLOOR LEVEL EXIT LIGHTING.

29A (N) EXIT LIGHT.

30 PROVIDE (N) EMERGENCY LIGHTING.

31 ADJUST HEIGHT OF TOILET ACCESSORIES (SOAP DISPENSER, TOWEL DISPENSER, TOILET PAPER DISPENSER) FOR ADA COMPLIANCE.

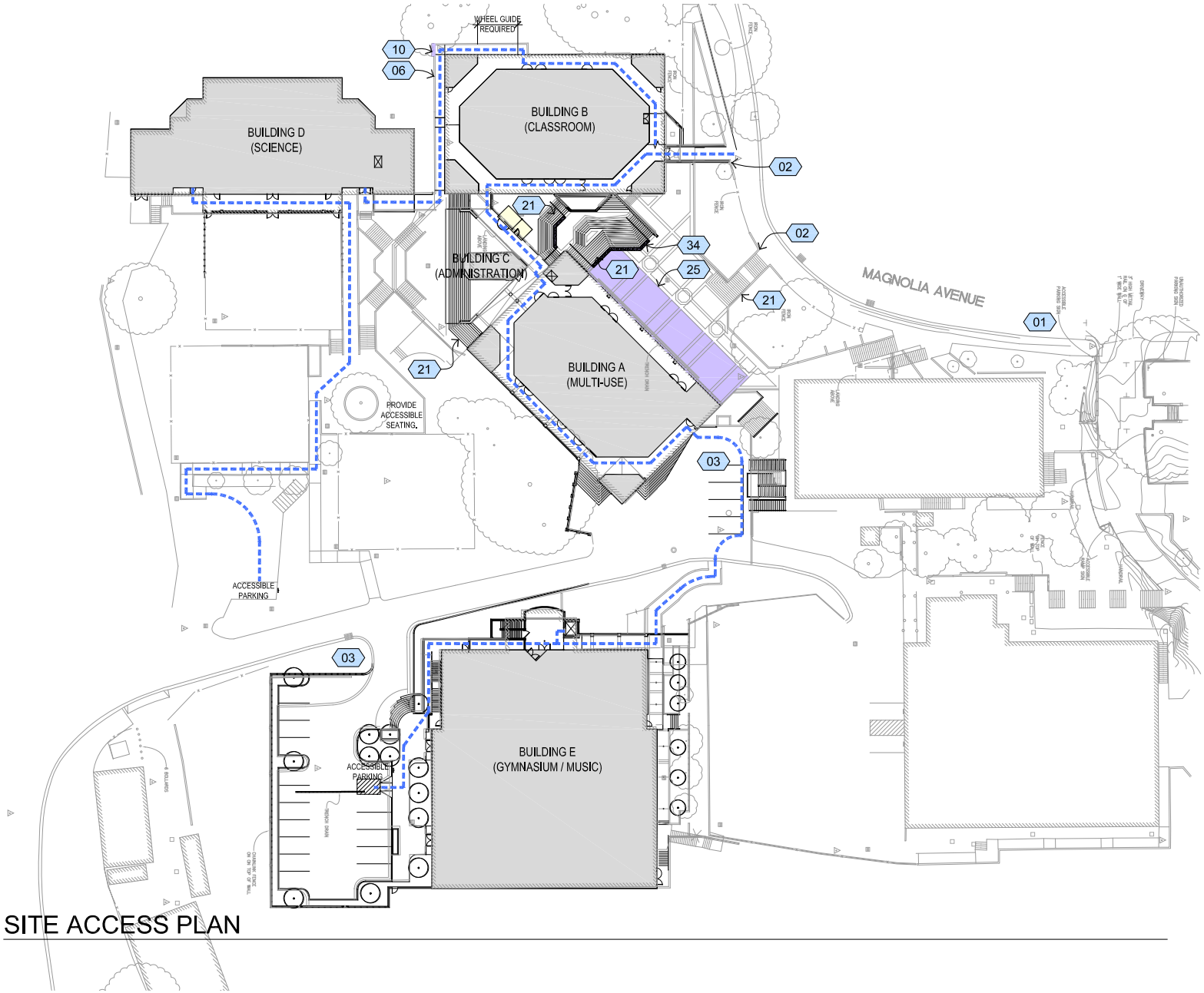
32 RAISE FLOOR LEVEL WITH TOPPING SLAB TO MEET ADA COMPLIANT HEIGHT AT DOOR THRESHOLDS (E.G. USE ARDEX CEMENTITIOUS TRAWLED ON LIGHTWEIGHT TOPPING SLAB.) MAXIMUM 1/4" PER FOOT SLOPE.

33 FILL SEISMIC GAP FOR ADA COMPLIANCE.

34 PROVIDE (N) SEAT WALL BARRIER AT EXTERIOR STAIRS.

35 MODIFY OR REPLACE ONE LOCKER TO BE ACCESSIBLE.

36 ADD NEW FIRE ALARM AND FIRE SPRINKLERS THROUGHOUT.



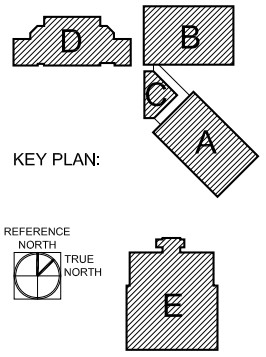
SITE ACCESS PLAN

LEGEND:

- (N) WALL
- (N) ARCHITECTURAL IMPROVEMENT
- (N) BUILDING AREA
- ACCESSIBLE PATH OF TRAVEL

SCALE: 50' = 1'-0"

0 25'-0" 50'-0" 100'-0"



KEY PLAN:

REFERENCE NORTH

TRUE NORTH

PIEDMONT MIDDLE SCHOOL

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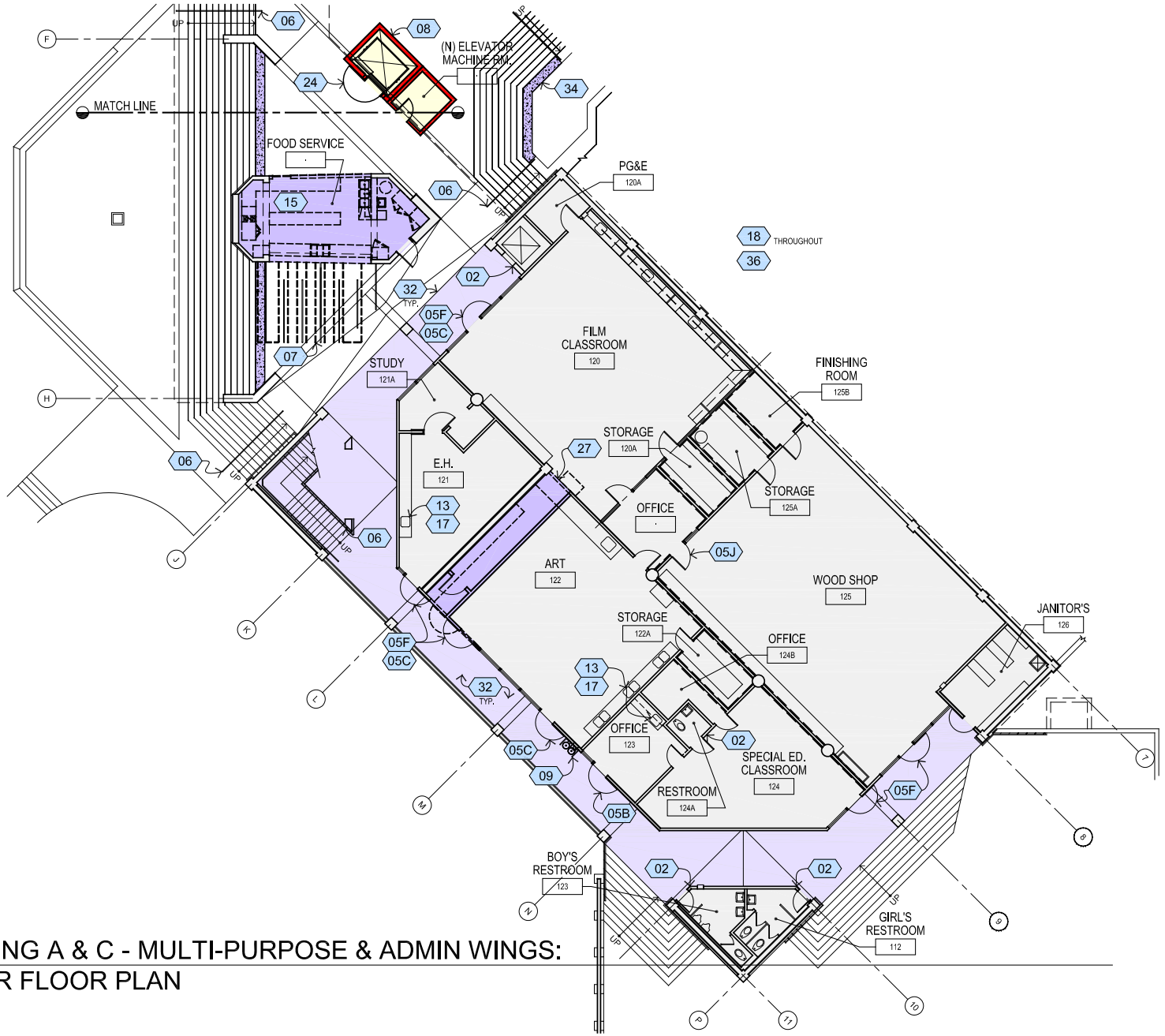
concept design



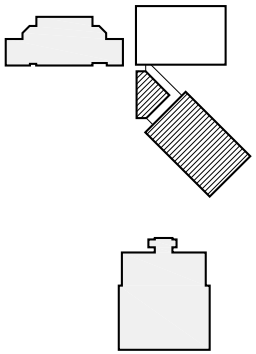
BUILDING A & C - MULTI-PURPOSE & ADMIN WINGS:
LOWER FLOOR PLAN

LEGEND:

- (N) WALL
- (N) ARCHITECTURAL IMPROVEMENT
- (N) BUILDING AREA

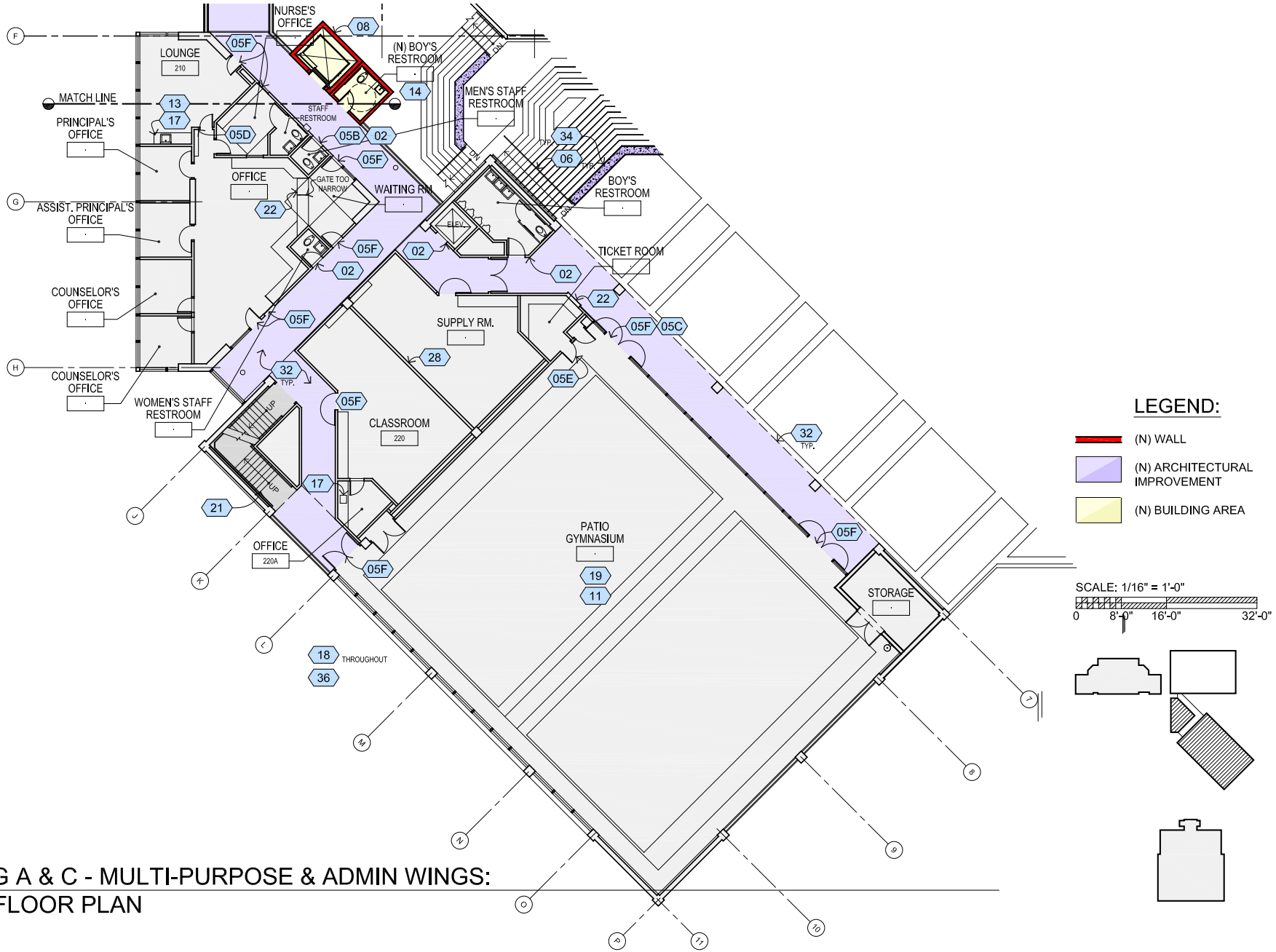
SCALE: 1/16" = 1'-0"

0 8'-0" 16'-0" 32'-0"



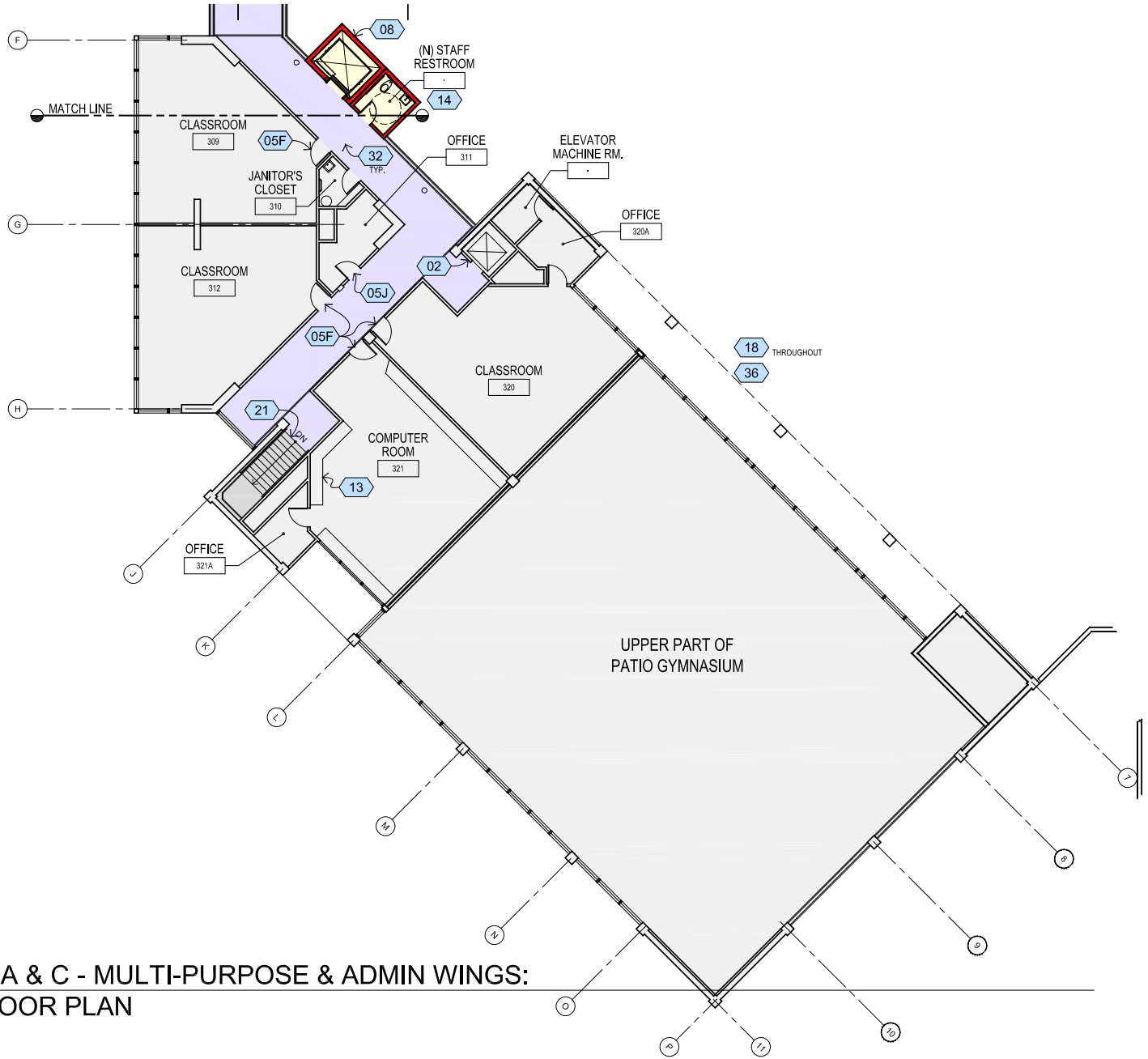
PIEDMONT MIDDLE SCHOOL
PIEDMONT UNIFIED SCHOOL DISTRICT

concept design



BUILDING A & C - MULTI-PURPOSE & ADMIN WINGS:
MIDDLE FLOOR PLAN

concept design



LEGEND:

- (N) WALL
- (N) ARCHITECTURAL IMPROVEMENT
- (N) BUILDING AREA

SCALE: 1/16" = 1'-0"

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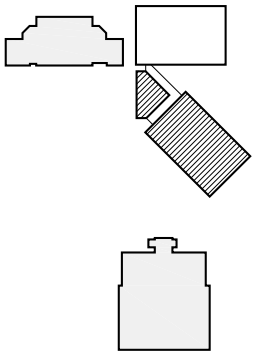
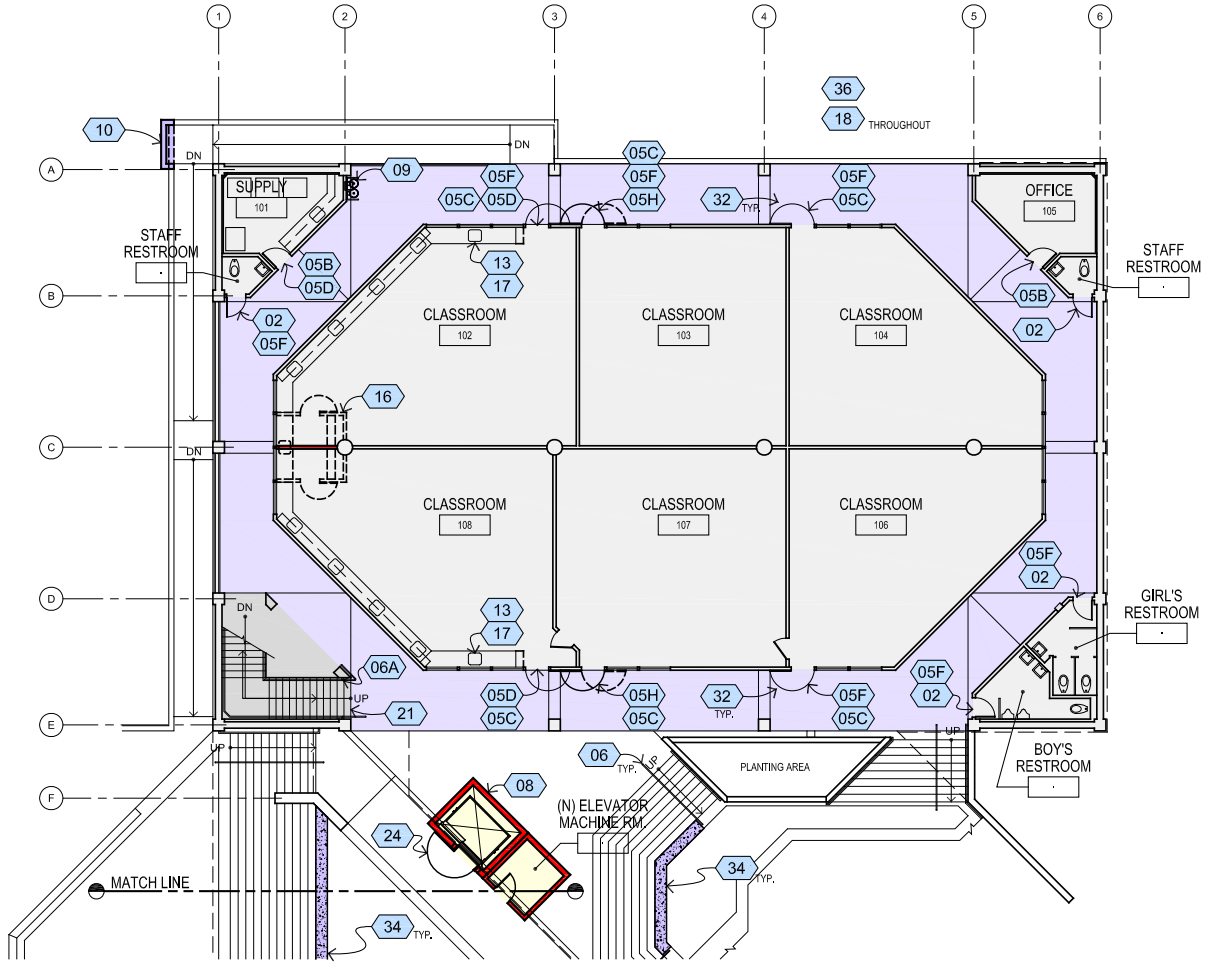


BUILDING A & C - MULTI-PURPOSE & ADMIN WINGS: UPPER FLOOR PLAN

PIEDMONT MIDDLE SCHOOL
PIEDMONT UNIFIED SCHOOL DISTRICT

concept design



LEGEND:

- (N) WALL
- (N) ARCHITECTURAL IMPROVEMENT
- (N) BUILDING AREA

SCALE: 1/16" = 1'-0"

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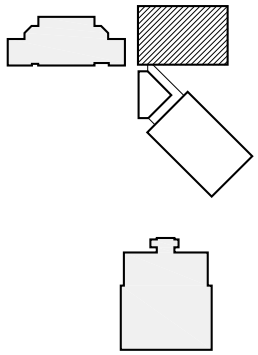
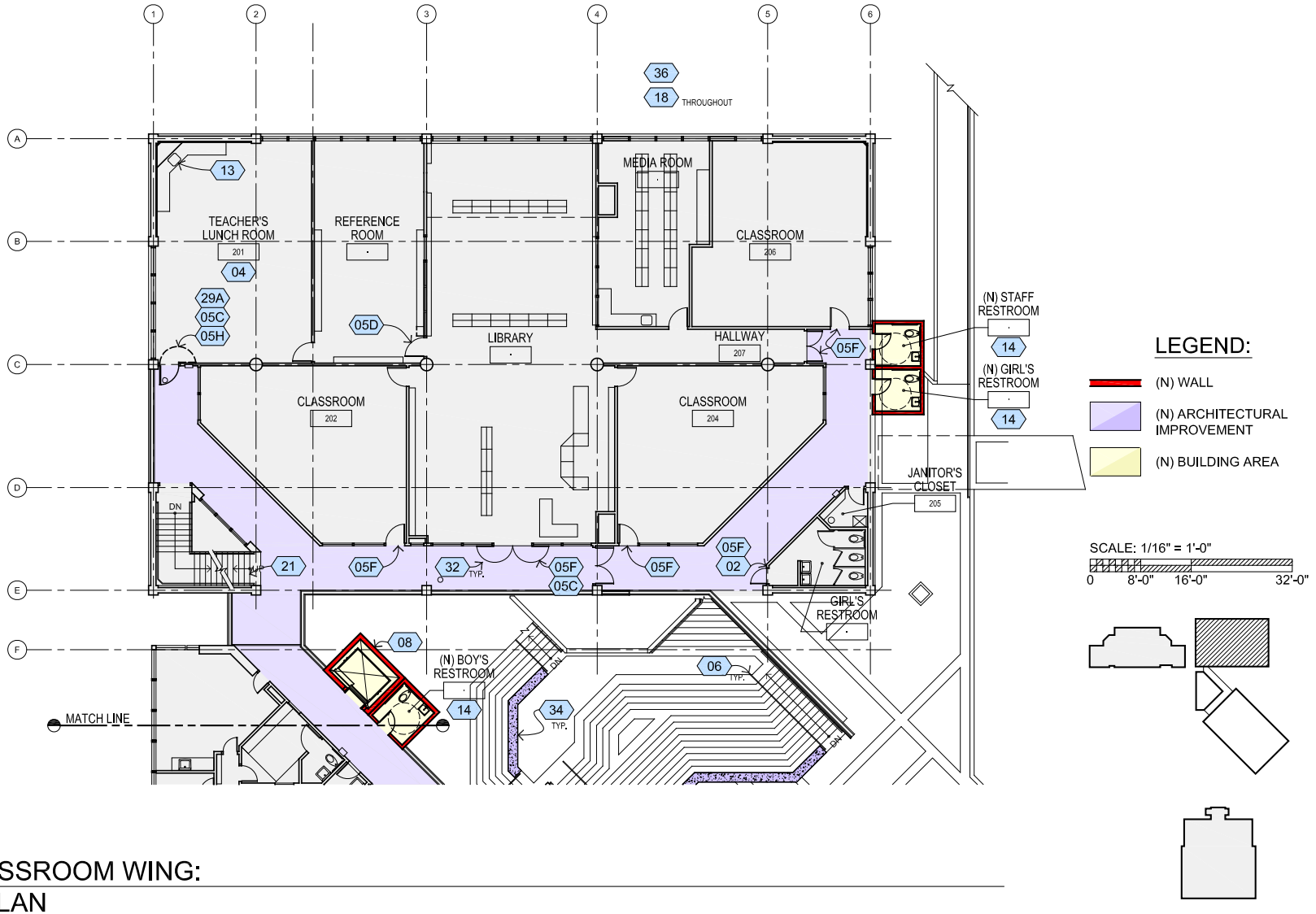


BUILDING B - CLASSROOM WING:
LOWER FLOOR PLAN

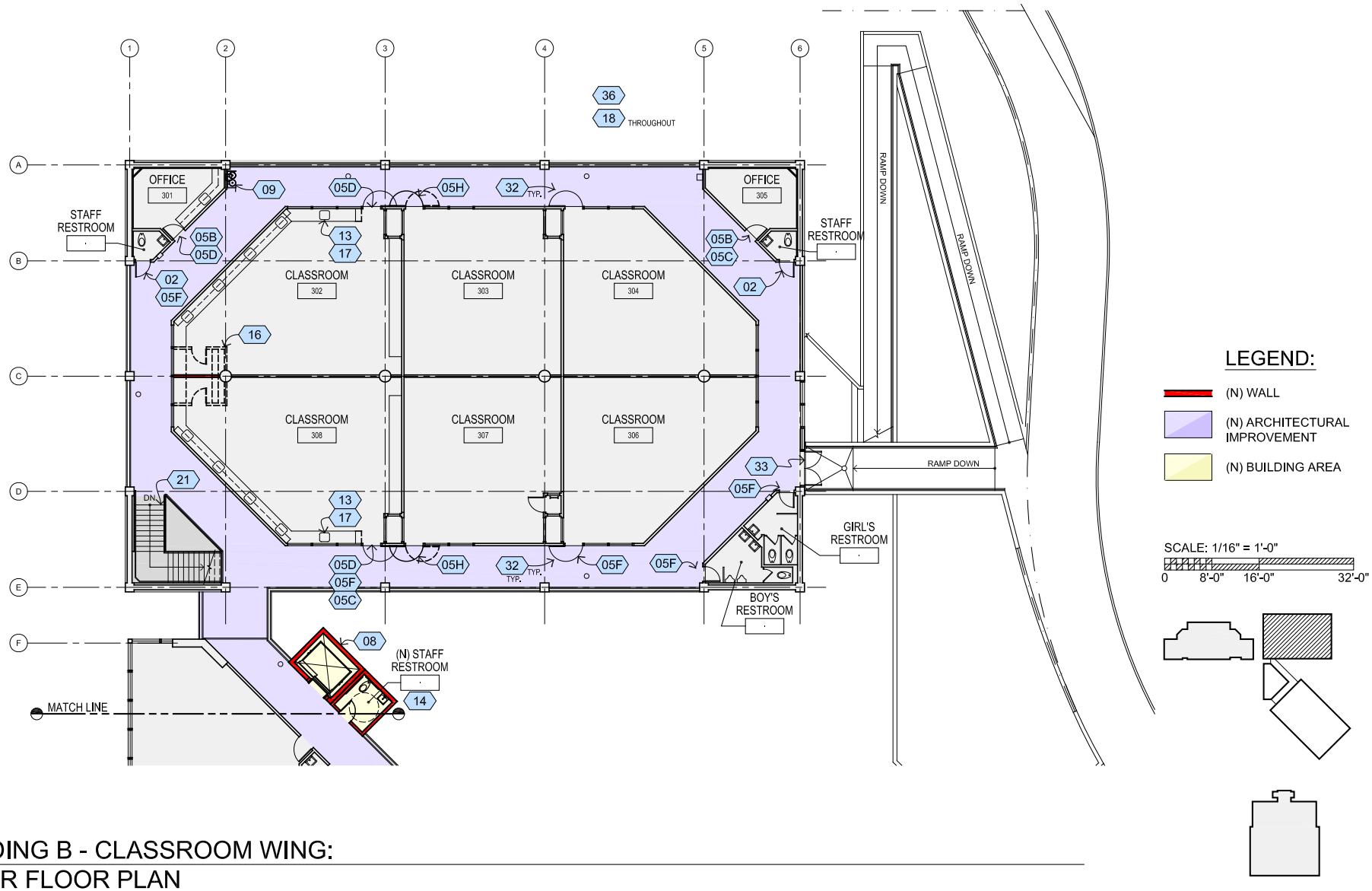
PIEDMONT MIDDLE SCHOOL
PIEDMONT UNIFIED SCHOOL DISTRICT

concept design



BUILDING B - CLASSROOM WING:
MIDDLE FLOOR PLAN

concept design



LEGEND:

- (N) WALL
- (N) ARCHITECTURAL IMPROVEMENT
- (N) BUILDING AREA

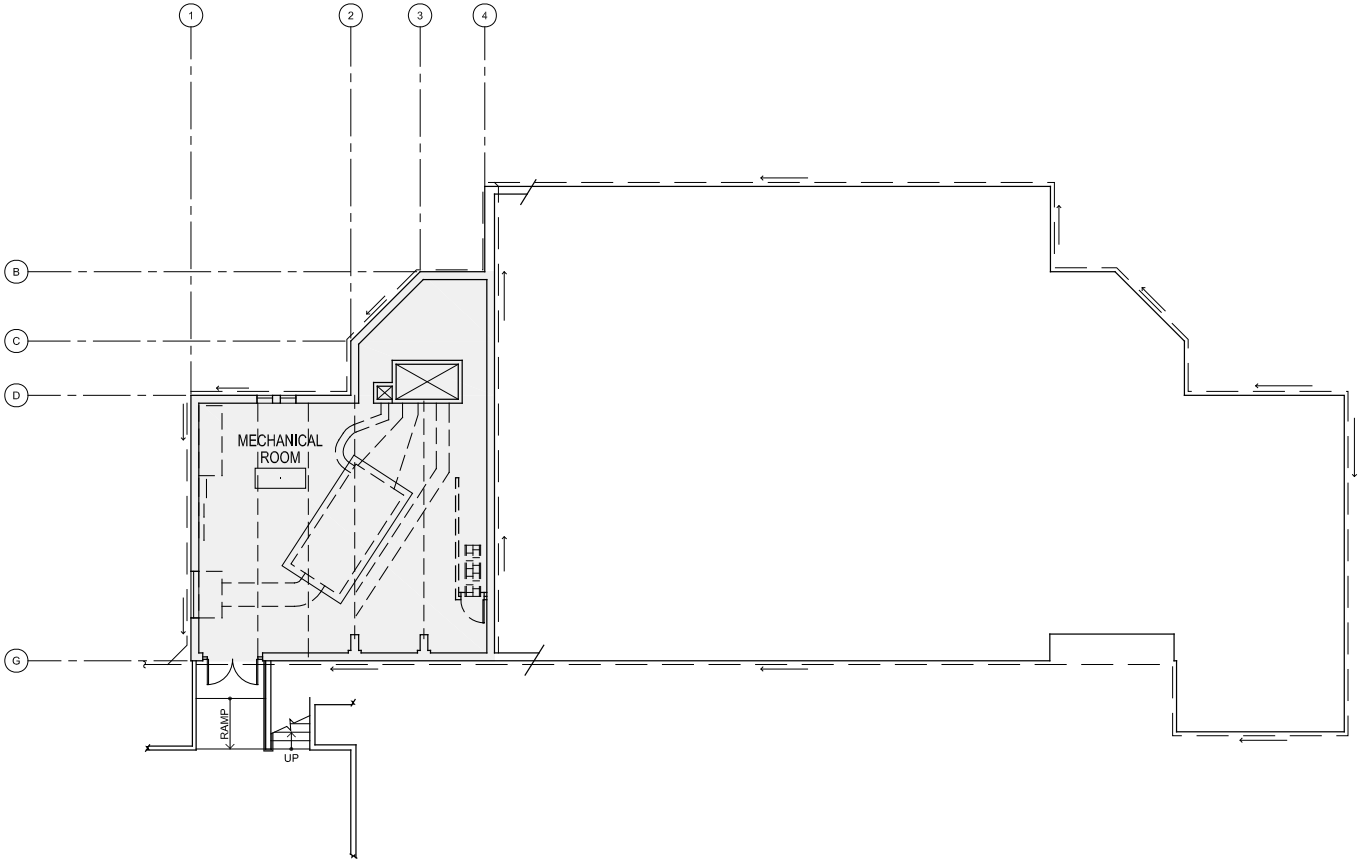
SCALE: 1/16" = 1'-0"

0 8'-0" 16'-0" 32'-0"

BUILDING B - CLASSROOM WING:
UPPER FLOOR PLAN

PIEDMONT MIDDLE SCHOOL
PIEDMONT UNIFIED SCHOOL DISTRICT

concept design



LEGEND:

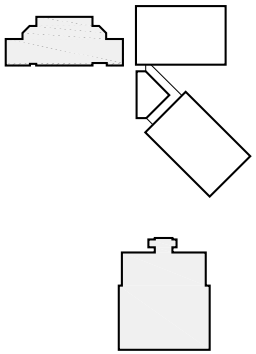
(N) WALL

(N) ARCHITECTURAL IMPROVEMENT

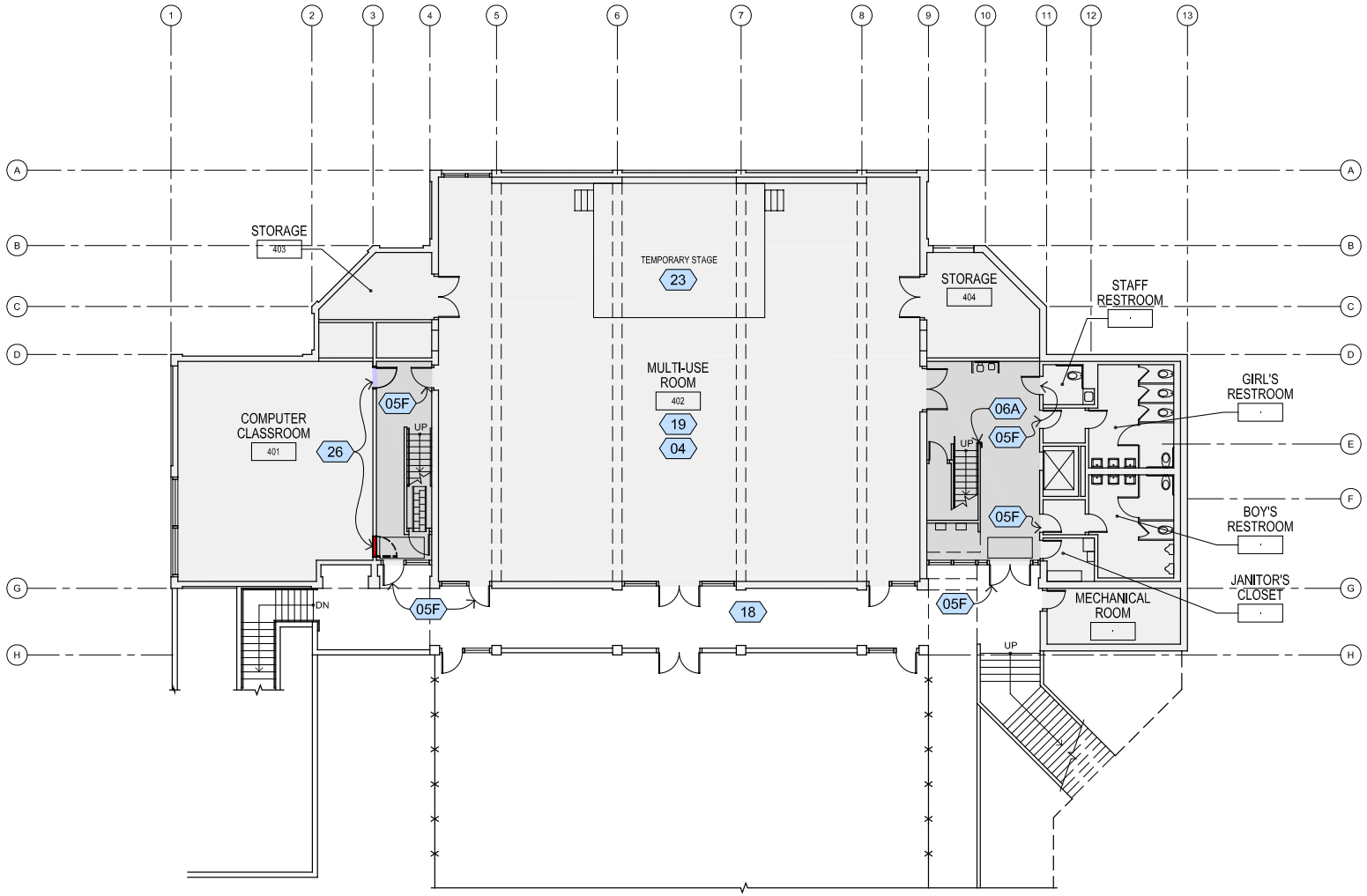
(N) BUILDING AREA

SCALE: 1/16" = 1'-0"

0 8'-0" 16'-0" 32'-0"



BUILDING D - SCIENCE BUILDING:
LOWER FLOOR PLAN



LEGEND:

- (N) WALL
- (N) ARCHITECTURAL IMPROVEMENT
- (N) BUILDING AREA

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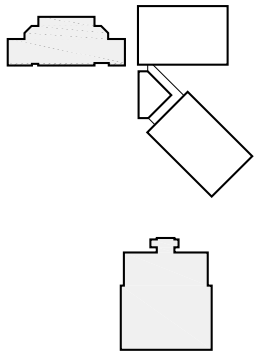

BUILDING D - SCIENCE BUILDING:
MIDDLE FLOOR PLAN

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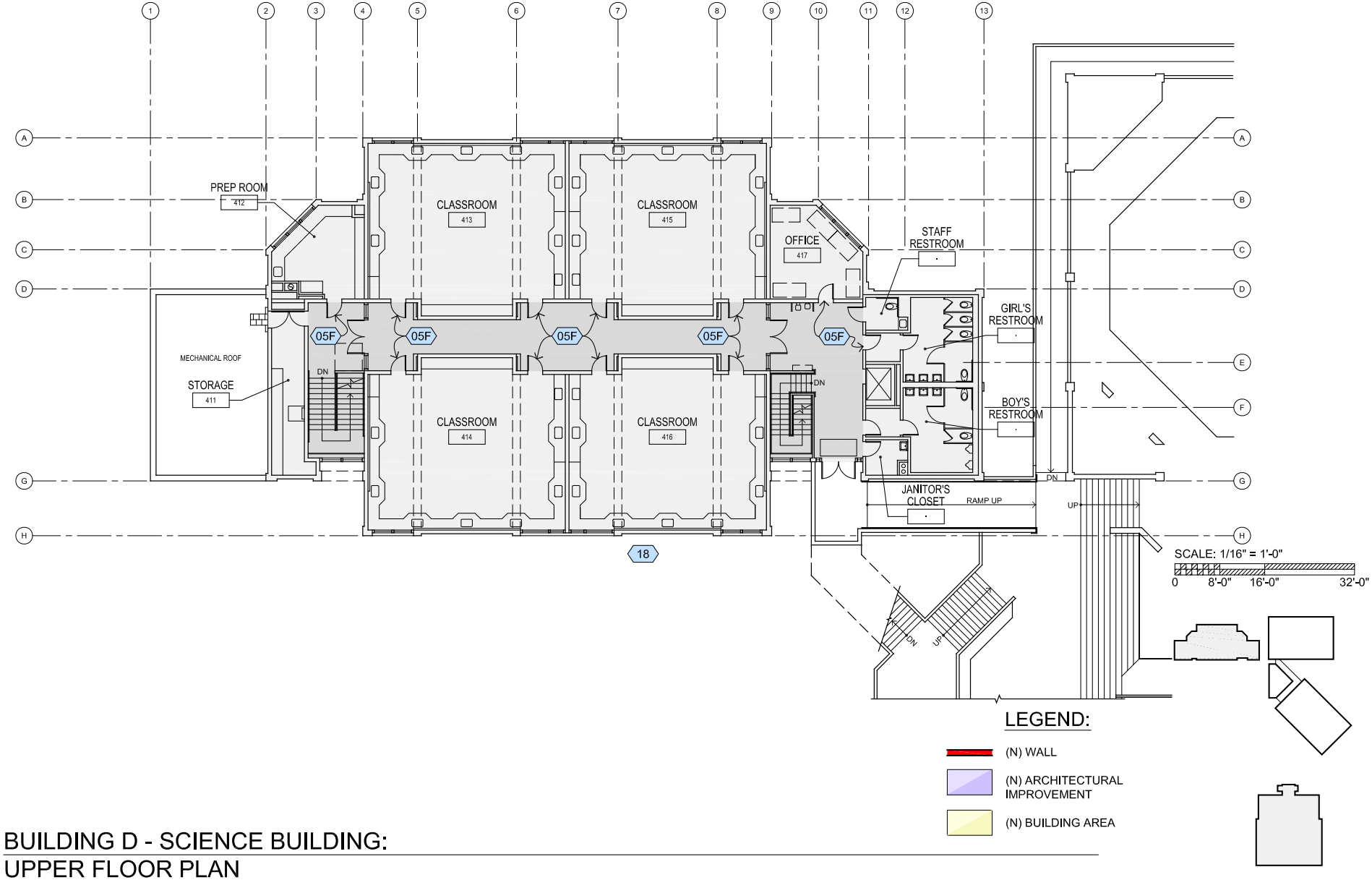
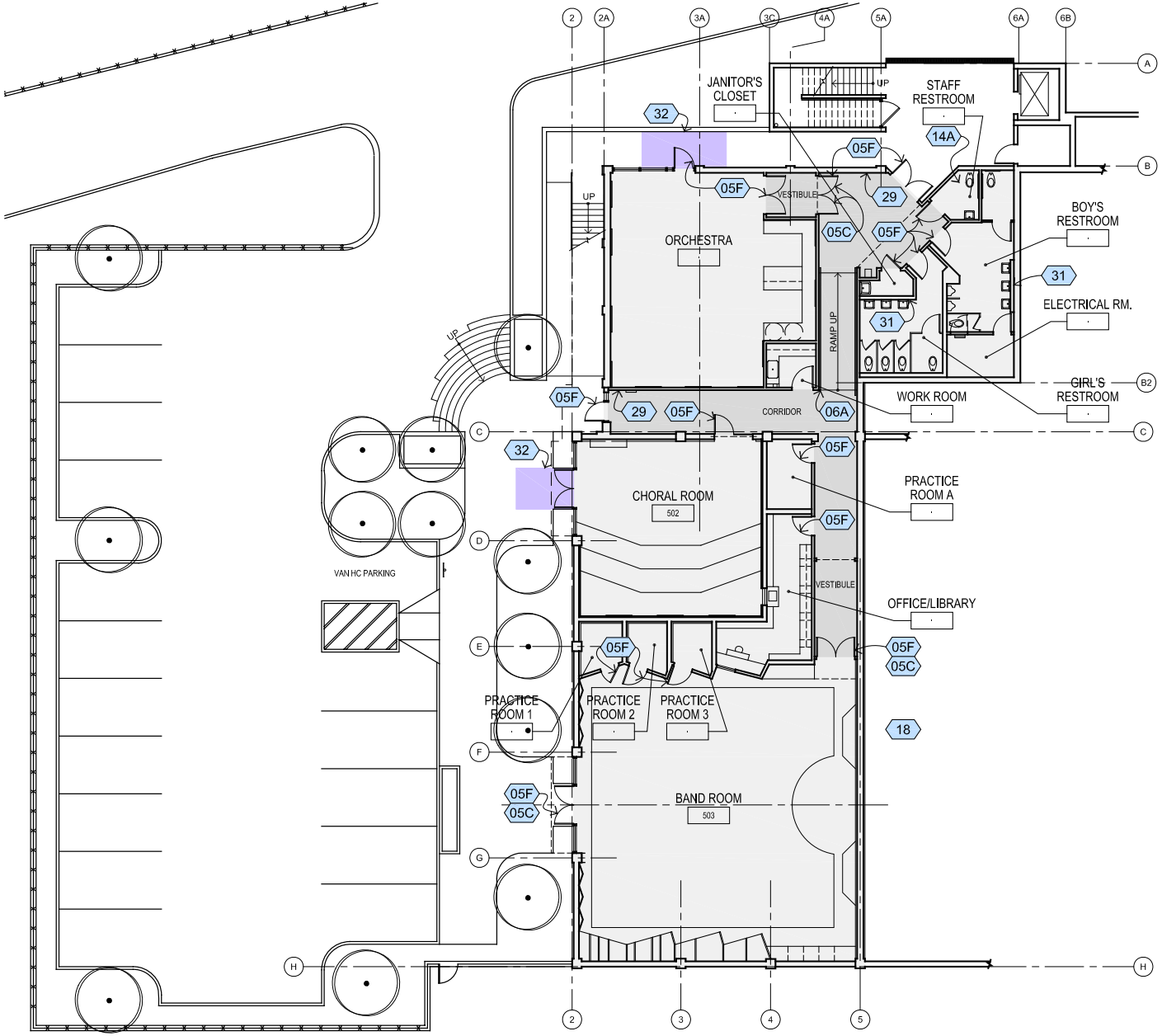
concept design



BUILDING D - SCIENCE BUILDING:
UPPER FLOOR PLAN



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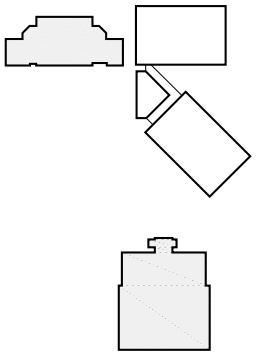
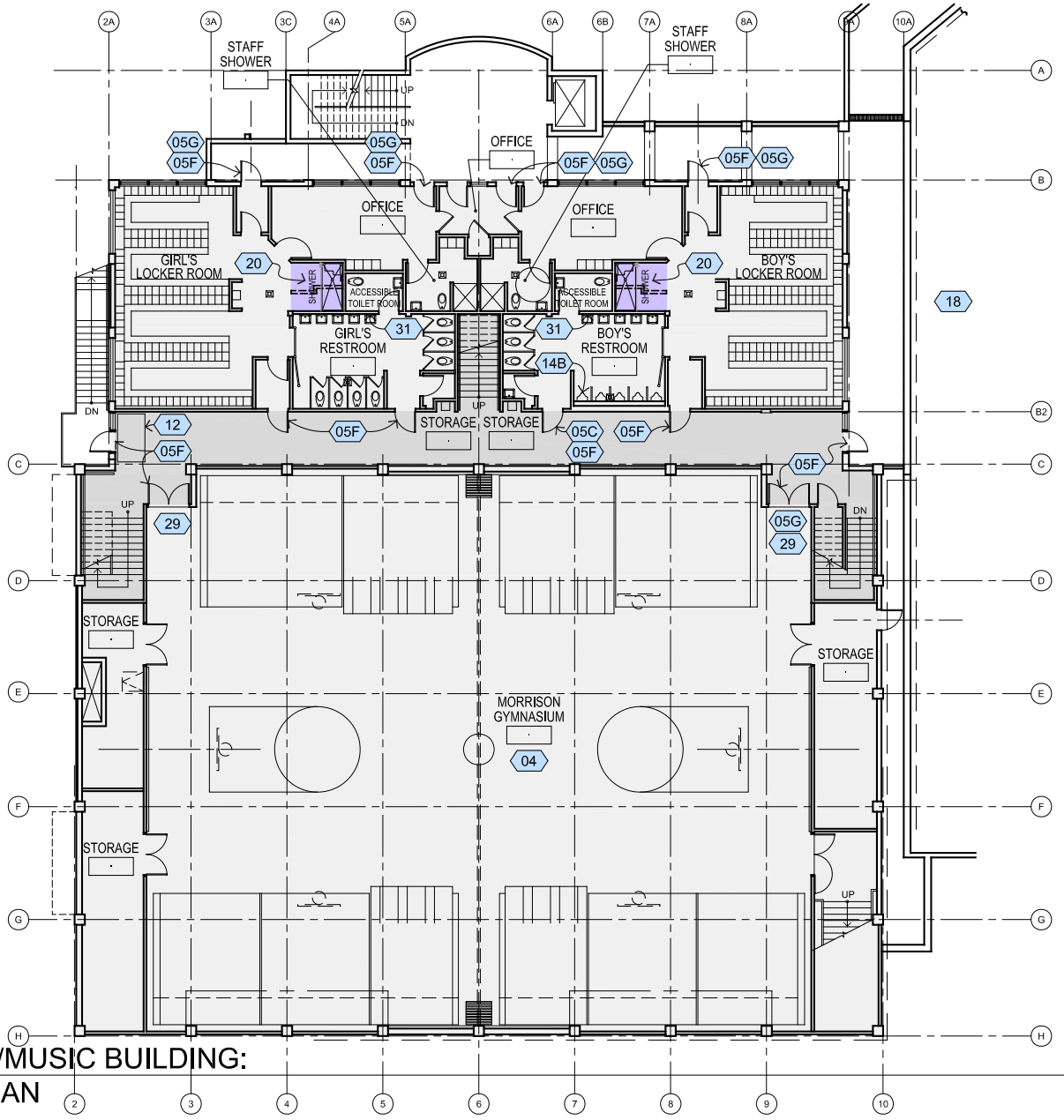


BUILDING E - GYM/MUSIC BUILDING: LOWER FLOOR PLAN

PIEDMONT MIDDLE SCHOOL
PIEDMONT UNIFIED SCHOOL DISTRICT

concept design



LEGEND:

- (N) WALL
- (N) ARCHITECTURAL IMPROVEMENT
- (N) BUILDING AREA

SCALE: 1/16" = 1'-0"

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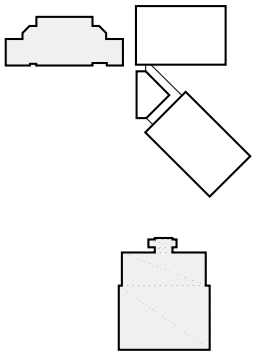
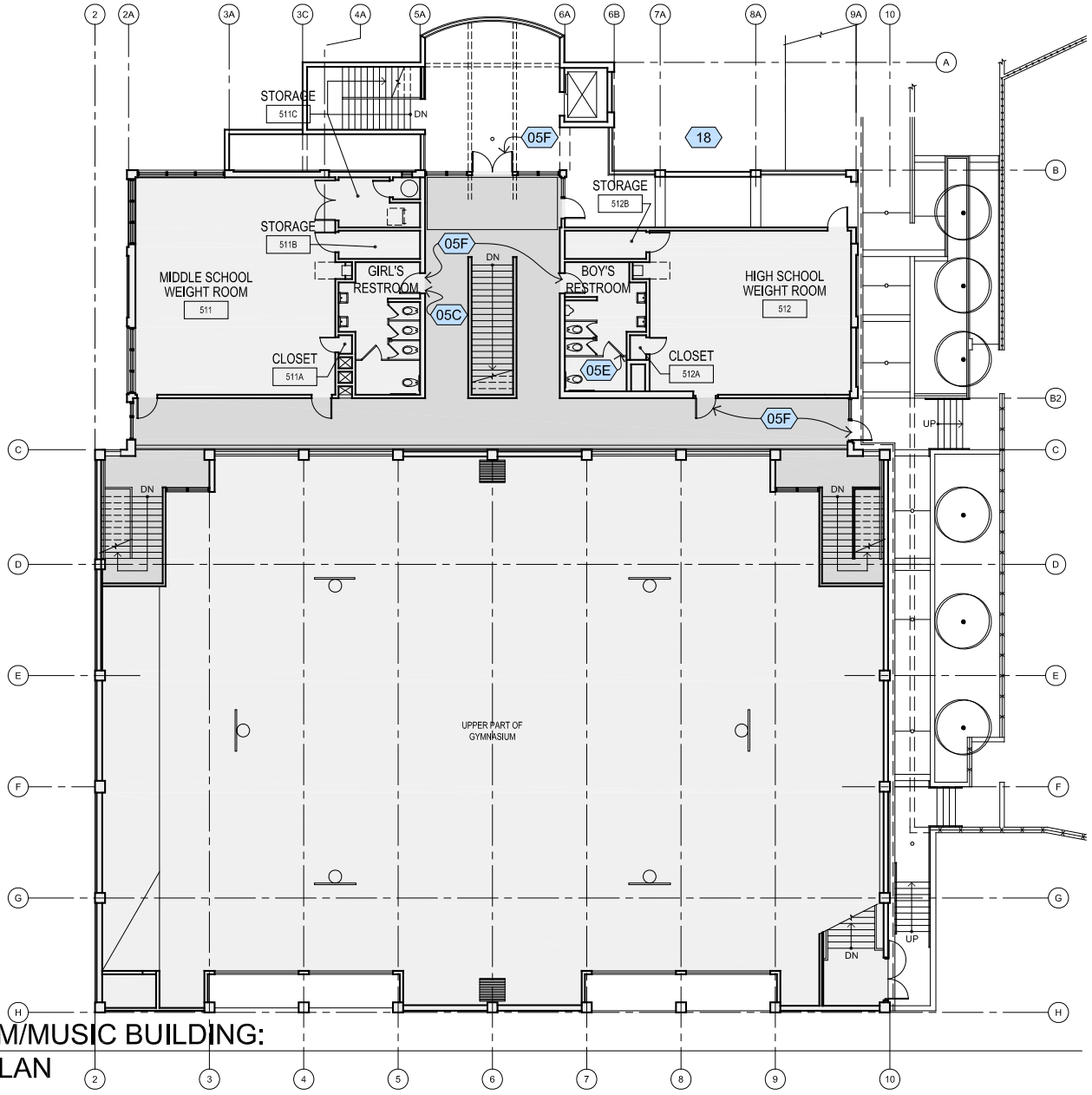


BUILDING E - GYM/MUSIC BUILDING:
MIDDLE FLOOR PLAN

PIEDMONT MIDDLE SCHOOL
PIEDMONT UNIFIED SCHOOL DISTRICT

concept design



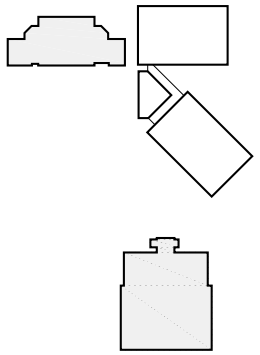
BUILDING E - GYM/MUSIC BUILDING:
UPPER FLOOR PLAN

LEGEND:

- (N) WALL
- (N) ARCHITECTURAL IMPROVEMENT
- (N) BUILDING AREA

SCALE: 1/16" = 1'-0"

0 8'-0" 16'-0" 32'-0"



PIEDMONT MIDDLE SCHOOL
PIEDMONT UNIFIED SCHOOL DISTRICT

concept design

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Conceptual Cost Plan

for

Piedmont Middle School
Piedmont Unified School District

October 30, 2007

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Emeryville, CA 94608
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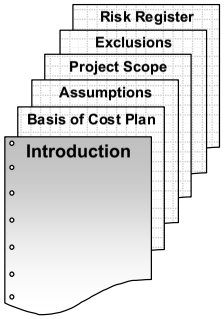
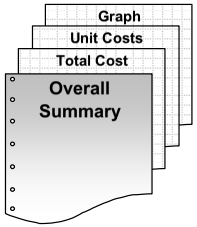
Page

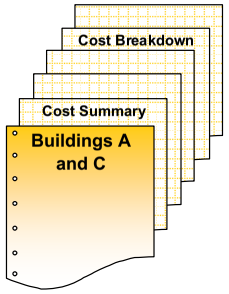


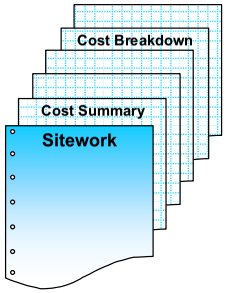
Mack5 was requested to carry out a Conceptual Cost Estimate for the proposed modernization of Piedmont Middle School for the Piedmont Unified School District.

The first part of the Report contains the basis of the report, the assumptions made, description of the project scope, the exclusions to the costs and a risk register which contain items that have potential to impact cost at some point in the future.



Each detail section includes a Cost Summary and a Cost Breakdown with the detail of the scope included within the estimate.





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Commentary | M5-07-196 | October 30, 2007

PROJECT INTRODUCTION:	The project consists of making improvements to the existing Piedmont Middle School including costs for non-structural seismic hazards and accessibility and fire life safety upgrades.
ITEMS USED FOR COST PLAN:	Drawings dated October 3, 2007
civil drawings	None
architectural drawings	By murakami/Nelson, 14 Sheets
structural narrative and sketches	Draft Survey of Piedmont Middle School for Nonstructural Seismic Hazards dated July 12, 2007
mechanical narrative and plans	None
electrical narrative and plans	None
telecommunication drawings	None
specifications	None
project team meetings	Site Visit on September 28, 2007

ASSUMPTIONS

(a) The construction start date is unknown

(b) A construction period of 9 months

(c) The general contract may be bid or negotiated with qualified contractors.

(d) The general contractor will not have full access to the site during business hours.

(e) There will be phasing requirements.

(f) The existing electrical power, fire/life safety systems are adequate for the increased loads; a new fire alarm system will be added.

(g) Owner provide materials in a timely fashion.

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Commentary | M5-07-196 | October 30, 2007

PROJECT SCOPE

The project consists of making improvements to the existing Piedmont Middle School including costs for non-structural seismic hazards and accessibility and fire life safety upgrades.

modernization

The following contains a general description of the scope of work included in each element of the estimate.

substructure

Foundation work is only included at the elevator and toilet room additions.

structure

Allowances are included on a $/SF basis for the new structural support of the building addition.

exterior enclosure

Exterior enclosure work includes patching and repair of finishes disturbed by the accessibility upgrades to doors as required. New exterior wall framing and finish are included at the addition. Costs are included for work to exterior doors as required for accessibility.

roof

Roofing includes new roofing to match existing at the additions. Costs are included for a new topping slab at the exterior walkways.

interiors

Interior partitions include limited framing and sheathing of new partitions and interior doors, frames, and hardware.

finishes

Allowances are included for new floor finishes where disturbed by the modernization work and paint to new wall sheathing.

equipment

Equipment includes limited new casework to match the existing as required for accessibility, signage, and an allowance for bracing or anchoring existing equipment as

stairs and vertical transportation

Stairs include modifications to existing stairs for accessibility and a new elevator.

plumbing

Plumbing work includes removal and replacement of fixtures as required for accessibility and new plumbing fixtures at the additions.

hvac

Allowance for work at new toilet rooms as required.

fire protection	New fire sprinklers at Buildings A, B, and C.
site preparation	Selective demolition as required for modifications to the existing buildings and the additions.
electrical	Electrical includes removal and replacement necessary to facilitate architectural requirements, new work as detailed on the drawings, and a new fire alarm system.
sitework	Sitework includes modifications to gates, paving, steps, and ramps as required for accessibility.
site utilities	No work required.

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Commentary | M5-07-196 | October 30, 2007

EXCLUSIONS

(a)	Owner supplied and installed furniture, fixtures and equipment
(b)	Security equipment and devices
(c)	Design, testing, inspection or construction management fees
(d)	Utility and connection fees
(e)	Scope change and post contract contingencies
(f)	Assessments, taxes, finance, legal and development charges
(g)	Builder's risk, project wrap-up and other owner provided insurance program
(h)	Telephone / data active equipment and switch, sound systems, audio visual equipment and cabling
(i)	Modification to existing HVAC
(j)	Schedule compression
(k)	Commissioning costs associated with CHPS, LEED Certification, or other programs (construction cost included as required)
(l)	Deferred maintenance
(m)	Programmatic changes
(n)	Complete replacement of building finishes except as specifically noted (costs for selective replacement of finishes as required for seismic work is included in the estimate)
(o)	Interim housing
(p)	Cost escalation
(q)	Work beyond close connections for new plumbing fixtures.
(r)	New main service and distribution

risk register

In the course of preparing the Cost Estimate, the following items were noted as areas of possible exposure.

(a) The project is relatively small and the scope limited within a larger area. Consequently contractors bids can vary widely.

(b) Current market conditions are driven by limited supply of metal and consequently cost escalation and bids are unstable.

(c) The design process is early in the conceptual stage. As ideas are more fully developed there may be scope which was not anticipated in this cost estimate.

BUILDINGS A AND C

Floors	Enclosed	Covered	Covered (included at 50%)	Sub-Total	GFA
Building A/C	16,724	0	0	16,724	
Building B	16,954	0	0	16,954	
Building D	13,251	0	0	13,251	
Building E	24,025	0	0	24,025	
	70,954	0	0		70,954 SF

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Overall Summary

M5-07-196
October 30, 2007

	GFA	$/SF	$,000
Buildings A and C	16,724	64	1,069
Building B	16,954	38	640
Building D	13,251	9	126
Building E	24,025	9	223
Sitework	75,200	3	210
Subtotal Construction and Sitework			2,267
Premium for phasing	5.00%		113
TOTAL CONSTRUCTION AND SITEWORK			**2,381**

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Buildings A And C Summary

M5-07-196
October 30, 2007

	GFA: 16,724 SF	%	$/SF	$,000
Substructure		3%	1.79	30
Structure		3%	2.14	36
Exterior Enclosure		10%	6.48	108
Roofing		6%	3.80	64
Sub-total - Shell & Core		*22%*	*14.21*	*238*
Interior Walls		2%	1.50	25
Floor, Wall & Ceiling Finishes		2%	1.43	24
Sub-total - Internal Finishes		*5%*	*2.93*	*49*
Equipment & Specialties		9%	5.62	94
Stairs & Vertical Transportation		11%	7.00	117
Sub-total - Equipment and Stairs		*20%*	*12.61*	*211*
Plumbing		9%	5.56	93
Heating, Ventilating & Air Conditioning		0%	0.30	5
Electrical		8%	4.90	82
Fire Protection		12%	7.54	126
Sub-total - Mechanical and Electrical		*29%*	*18.30*	*306*
Sub-total - Construction		*75%*	*48.06*	*804*
Site Preparation & Demolition		0%	0.21	3
Site Development		0%	0.00	0
Site Utilities		0%	0.00	0
Sub-total - Sitework		*0%*	*0.21*	*3*
Total - Construction and Sitework		*76%*	*48.27*	*807*
General Conditions	12.50%	9%	6.03	101
Contractor's Overhead & Profit or Fee	7.00%	6%	3.80	64
Sub-total		*91%*	*58.10*	*972*
Contingency for Design Development	10.00%	9%	5.81	97
TOTAL CONSTRUCTION BUDGET	***October, 2007***	***100%***	***63.91***	***1,069***

NOTE: Inclusions and Exclusions.

SUBSTRUCTURE	Quantity	Unit	Rate	Total ($)
Foundations for new addition				
Reinforced concrete foundations tied to existing	50	LF	300.00	15,000
Elevator pit	1	EA	15,000.00	15,000
Sub-Total for Substructure:				**30,000**

STRUCTURE	Quantity	Unit	Rate	Total ($)
Structure at addition				
Reinforced concrete slab on grade, tied to existing	64	SF	15.00	960
Vertical structure including steel columns, framing, and sheathing	2,250	SF	10.00	22,500
Floor framing and sheathing, tied to existing - allow	128	SF	30.00	3,840
Roof framing and sheathing at addition - allow	136	SF	25.00	3,400
Seismic joint and cover	51	LF	100.00	5,100
Sub-Total for Structure:				**35,800**

EXTERIOR ENCLOSURE	Quantity	Unit	Rate	Total ($)
Exterior walls				
Patch exterior finish to match existing where removed for door work	1	LS	1,500.00	1,500
New framing at exterior wall	2,250	SF	10.00	22,500
Exterior wall finish to match existing	2,250	SF	25.00	56,250
Batt insulation in new walls	2,250	SF	1.50	3,375
Gypsum board to inside face of new exterior walls	2,250	SF	3.00	6,750

Exterior doors				
New door, frame, and hardware	6	LVS	1,800.00	10,800
Premium for closer on door	3	LVS	300.00	900
Adjust closing pressure on existing door	21	EA	250.00	5,250
New threshold to existing door	2	EA	500.00	1,000
Sub-Total for Exterior Enclosure:				**108,325**

ROOFING		Unit	Rate	Total ($)
Roof coverings				
New roofing and underlayment at addition, to match existing	136	SF	10.00	1,360
Flashings and sheetmetal at addition - allow	136	SF	5.00	680
New concrete topping slab to for accessible entry at exterior walkways	4,103	SF	15.00	61,545
Sub-Total for Roofing:				**63,585**

INTERIOR WALLS		Unit	Rate	Total ($)
Interior partitions				
Interior partition framing and sheathing at addition	120	SF	17.50	2,100
Interior shaft wall framing and sheathing at added elevator	360	SF	25.00	9,000
Modify speed lines as required at food service	1	LS	12,500.00	12,500
Interior doors				
New door closer	2	EA	750.00	1,500
Sub-Total for Interior Walls:				**25,100**

FLOOR, WALL & CEILING FINISHES		Unit	Rate	Total ($)
Floor finishes				
Ceramic tile floor and base at toilet room additions	112	SF	25.00	2,800
Wall finishes				
Patch and repair existing finishes as required for accessibility upgrades	1	LS	1,500.00	1,500
Ceramic wall tile	480	SF	15.00	7,200
Paint to new partitions	960	SF	1.00	960
Ceiling finishes				
Painted gypsum board ceilings at addition	112	SF	15.00	1,680
Miscellaneous				
Modify existing finishes as required for new food service area	392	SF	25.00	9,800
Sub-Total for Floor, Wall & Ceiling Finishes:				**23,940**

EQUIPMENT & SPECIALTIES		Unit	Rate	Total ($)
Cabinets and casework				
Modify existing casework as required for accessibility	28	LF	300.00	8,400
New casework, including blocking as necessary, to match existing	28	LF	350.00	9,800
Signage				
Code-required signage throughout building	16,724	SF	0.40	6,690
Toilet partitions and accessories				
Toilet accessories in new toilet rooms	1	LS	1,000.00	1,000
Grab bars	1	PR	350.00	350
Mirrors	1	EA	200.00	200

Food service equipment - allow	1	LS	60,000.00	60,000
Brace and anchor existing cabinets, televisions and speakers as required	1	LS	5,000.00	5,000
Miscellaneous equipment and specialties	16,724	SF	0.15	2,509
Sub-Total for Equipment & Specialties:				**93,948**

STAIRS & VERTICAL TRANSPORTATION		Unit	Rate	Total ($)
Staircase flights				
Warning stripes on existing building stairs	2	FLT	1,000.00	2,000
Modify handrails as required for accessibility at existing building stairs	2	FLT	7,500.00	15,000
Elevators and lifts				
Elevator in addition, 3 stop	1	EA	100,000.00	100,000
Sub-Total for Stairs & Vertical Transportation:				**117,000**

PLUMBING		Unit	Rate	Total ($)
Sanitary fixtures, connection piping, including rough-in				
Sink (N) w/(N) rough-in	4	EA	2,741.28	10,965
WC (N) w/(N) rough-in	3	EA	5,121.60	15,365
LAV (N) w/(N) rough-in	3	EA	2,456.88	7,371
Food Service Area	1	LS	29,764.80	29,765
FCO	3	EA	314.10	942
FD w/TP	3	EA	1,320.48	3,961
Demolition and cleaning	1	LS	3,432.96	3,433
Utility relocation	1	LS	3,977.28	3,977
Sump pump	1	EA	1,928.64	1,929

Pipework and accessories				
Sewer, waste and vent:				
Under slab w/ excavation	60	LF	69.62	4,177
Above slab	40	LF	58.02	2,321
Point of connection to existing	3	EA	512.16	1,536
Domestic water				
Water above w/ insulation to 2"	120	LF	38.57	4,629
Point of connection	5	EA	392.16	1,961
Valves and specialties	1	LS	708.24	708
Sub-Total for Plumbing :				**93,040**

HEATING, VENTILATING & AIR CONDITIONING		Unit	Rate	Total ($)
Allow at toilet room additions	1	LS	5,000.00	5,000
Sub-Total for Heating, Ventilating & Air Conditioning:				**5,000**

ELECTRICAL		Unit	Rate	Total ($)
Electrical work within building				
Remove and replace electrical systems to facilitate architectural modifications	16,724	SF	1.25	20,905
Fire alarm system	16,724	SF	2.50	41,810
Provide assisted listening system	1	EA	7,500.00	7,500
Bathroom light fixture	2	EA	675.00	1,350
Receptacle - GFI	2	EA	600.00	1,200
Food service connections as required	1	LS	2,480.00	2,480
Elevator connections as required	1	LS	6,750.00	6,750
Sub-Total for Electrical:				**81,995**

FIRE PROTECTION		Unit	Rate	Total ($)
Fire sprinklers				
Fire protection system-wet	16,724	SF	7.54	126,099
Sub-Total for Fire Protection:				**126,099**

SITE PREPARATION & DEMOLITION		Unit	Rate	Total ($)
Selective demolition and removal				
Remove existing; recycle				
Speed lines	130	LF	20.00	2,600
General demolition and preparation	16,724	SF	0.05	836
Premium for hazmat abatement	16,724	SF	0.00	
Sub-Total for Site Preparation & Demolition:				**3,436**

SITE DEVELOPMENT		Unit	Rate	Total ($)
No work anticipated (see Sitework section)				
Sub-Total for Site Development:				

SITE UTILITIES		Unit	Rate	Total ($)
No work anticipated (see Sitework section)				
Sub-Total for Site Utilities:				

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Building B Summary

M5-07-196
October 30, 2007

		GFA: 16,954 SF	%	$/SF	$,000
Substructure			2%	0.81	14
Structure			2%	0.77	13
Exterior Enclosure			9%	3.56	60
Roofing			0%	0.13	2
Sub-total - Shell & Core			*14%*	*5.27*	*89*
Interior Walls			4%	1.56	26
Floor, Wall & Ceiling Finishes			4%	1.58	27
Sub-total - Internal Finishes			*8%*	*3.14*	*53*
Equipment & Specialties			6%	2.33	40
Stairs & Vertical Transportation			3%	1.00	17
Sub-total - Equipment and Stairs			*9%*	*3.33*	*57*
Plumbing			12%	4.34	74
Heating, Ventilating & Air Conditioning			1%	0.29	5
Electrical			11%	4.05	69
Fire Protection			20%	7.54	128
Sub-total - Mechanical and Electrical			*43%*	*16.23*	*275*
Sub-total - Construction			*74%*	*27.97*	*474*
Site Preparation & Demolition			1%	0.54	9
Site Development			0%	0.00	0
Site Utilities			0%	0.00	0
Sub-total - Sitework			*1%*	*0.54*	*9*
Total - Construction and Sitework			*76%*	*28.51*	*483*
General Conditions	12.50%		9%	3.56	60
Contractor's Overhead & Profit or Fee	7.00%		6%	2.25	38
Sub-total			*91%*	*34.32*	*582*
Contingency for Design Development	10.00%		9%	3.43	58
TOTAL CONSTRUCTION BUDGET		***October, 2007***	***100%***	***37.75***	***640***

NOTE: Inclusions and Exclusions.

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Building B

M5-07-196
October 30, 2007

SUBSTRUCTURE	Quantity	Unit	Rate	Total ($)
Foundations for new addition				
Reinforced concrete foundations tied to existing	46	LF	300.00	13,800
Sub-Total for Substructure:				**13,800**

STRUCTURE	Quantity	Unit	Rate	Total ($)
Structure at addition				
Reinforced concrete slab on grade, tied to existing	105	SF	15.00	1,575
Vertical structure including steel columns, framing, and sheathing	690	SF	10.00	6,900
Roof framing and sheathing at addition - allow	120	SF	25.00	3,000
Seismic joint and cover	15	LF	100.00	1,500
Sub-Total for Structure:				**12,975**

EXTERIOR ENCLOSURE	Quantity	Unit	Rate	Total ($)
Exterior walls				
Patch exterior finish to match existing where removed for door work	1	LS	1,500.00	1,500
New framing at exterior wall	690	SF	10.00	6,900
Exterior wall finish to match existing	690	SF	25.00	17,250
Batt insulation in new walls	690	SF	1.50	1,035
Gypsum board to inside face of new exterior walls	690	SF	3.00	2,070

Exterior doors				
New door, frame, and hardware	11	LVS	1,800.00	19,800
Adjust closing pressure on existing door	19	EA	250.00	4,750
New threshold to existing door	4	EA	500.00	2,000
Modify existing door and frame to reverse door swing	5	EA	1,000.00	5,000
Sub-Total for Exterior Enclosure:				**60,305**

ROOFING		Unit	Rate	Total ($)
Roof coverings				
New roofing and underlayment at addition, to match existing	120	SF	10.00	1,200
Flashings and sheetmetal at addition - allow	120	SF	5.00	600
Fill seismic gap as required for ADA compliance	6	LF	75.00	450
Sub-Total for Roofing:				**2,250**

INTERIOR WALLS		Unit	Rate	Total ($)
Interior partitions				
Interior partition framing and sheathing at classrooms	1,078	SF	17.50	18,865
Patch abandoned door opening as required	1	EA	525.00	525
Guardrails at drinking fountain, stainless steel	2	PR	1,200.00	2,400
Interior glazing				
New side lite	1	EA	650.00	650

Interior doors				
New door, frame, and hardware, glazed storefront	1	EA	2,500.00	2,500
Reinstall salvaged door to new opening	1	EA	1,500.00	1,500
Sub-Total for Interior Walls:				**26,440**

FLOOR, WALL & CEILING FINISHES		Unit	Rate	Total ($)
Floor finishes				
Vinyl composition tile and carpet with topset rubber base to match existing, including preparation of floor to receive new finish	340	SF	7.50	2,550
Ceramic tile floor and base at toilet room additions	112	SF	25.00	2,800
Wall finishes				
Patch and repair existing finishes as required for accessibility upgrades	1	LS	1,500.00	1,500
Ceramic wall tile	480	SF	15.00	7,200
Paint to new partitions	2,156	SF	1.00	2,156
Ceiling finishes				
New classroom ceilings as required to accommodate partition changes	890	SF	10.00	8,900
Painted gypsum board ceilings at addition	112	SF	15.00	1,680
Sub-Total for Floor, Wall & Ceiling Finishes:				**26,786**

EQUIPMENT & SPECIALTIES		Unit	Rate	Total ($)
Cabinets and casework				
Modify existing casework as required for accessibility	34	LF	300.00	10,200
New casework, including blocking as necessary, to match existing	34	LF	350.00	11,900

Signage				
Code-required signage throughout building	16,954	SF	0.40	6,782
Toilet partitions and accessories				
Toilet accessories in new toilet rooms	1	LS	2,000.00	2,000
Grab bars	2	PR	350.00	700
Mirrors	2	EA	200.00	400
Brace and anchor existing cabinets, televisions and speakers as required	1	LS	5,000.00	5,000
Miscellaneous equipment and specialties	16,954	SF	0.15	2,543
Sub-Total for Equipment & Specialties:				**39,525**

STAIRS & VERTICAL TRANSPORTATION		Unit	Rate	Total ($)
Staircase flights				
Warning stripes on existing building stairs	2	FLT	1,000.00	2,000
Modify handrails as required for accessibility at existing building stairs	2	FLT	7,500.00	15,000
Sub-Total for Stairs & Vertical Transportation:				**17,000**

PLUMBING		Unit	Rate	Total ($)
Sanitary fixtures, connection piping, including rough-in				
DF (N) w/(N) rough-in	2	EA	5,177.28	10,355
Sink (N) w/(N) rough-in	5	EA	2,741.28	13,706
WC (N) w/(N) rough-in	3	EA	5,121.60	15,365
LAV (N) w/(N) rough-in	3	EA	2,456.88	7,371
FCO	2	EA	314.10	628
FD w/TP	3	EA	1,320.48	3,961
Demolition and cleaning	1	LS	3,432.96	3,433
Utility relocation	1	LS	3,977.28	3,977

Pipework and accessories				
Sewer, waste and vent:				
Under slab w/ excavation	60	LF	69.62	4,177
Above slab	40	LF	58.02	2,321
Point of connection to existing	2	EA	512.16	1,024
Domestic water				
Water above w/ insulation to 2"	120	LF	38.57	4,629
Point of connection	5	EA	392.16	1,961
Valves and specialties	1	LS	708.24	708
Sub-Total for Plumbing :				**73,617**

HEATING, VENTILATING & AIR CONDITIONING		Unit	Rate	Total ($)
Allow at toilet room additions	1	LS	5,000.00	5,000
Sub-Total for Heating, Ventilating & Air Conditioning:				**5,000**

ELECTRICAL		Unit	Rate	Total ($)
Electrical work within building				
Remove and replace electrical systems to facilitate architectural modifications	16,954	SF	1.25	21,193
Fire alarm system	16,954	SF	2.50	42,385
Bathroom light fixture	4	EA	675.00	2,700
Receptacle - GFI	2	EA	600.00	1,200
Exit sign	1	EA	1,250.00	1,250
Sub-Total for Electrical:				**68,728**

FIRE PROTECTION		Unit	Rate	Total ($)
Fire sprinklers				
Fire protection system-wet	16,954	SF	7.54	127,833
Sub-Total for Fire Protection:				**127,833**

SITE PREPARATION & DEMOLITION		Unit	Rate	Total ($)
Selective demolition and removal				
Remove existing; recycle				
Cut opening for door in existing wall	2	EA	500.00	1,000
Door, frame, and hardware	2	LVS	115.00	230
Interior partition	91	LF	25.00	2,275
Floor and ceiling finishes - allow	890	SF	2.00	1,780
Casework	84	LF	35.00	2,940
General demolition and preparation	16,954	SF	0.05	848
Premium for hazmat abatement	16,954	SF	0.00	
Sub-Total for Site Preparation & Demolition:				**9,073**

SITE DEVELOPMENT		Unit	Rate	Total ($)
No work anticipated (see Sitework section)				
Sub-Total for Site Development:				

SITE UTILITIES		Unit	Rate	Total ($)
No work anticipated (see Sitework section)				
Sub-Total for Site Utilities:				

		GFA: 13,251 SF	%	$/SF	$,000
Substructure			0%	0.00	0
Structure			0%	0.00	0
Exterior Enclosure			2%	0.15	2
Roofing			0%	0.00	0
Sub-total - Shell & Core			*2%*	*0.15*	*2*
Interior Walls			3%	0.28	4
Floor, Wall & Ceiling Finishes			1%	0.08	1
Sub-total - Internal Finishes			*4%*	*0.36*	*5*
Equipment & Specialties			24%	2.25	30
Stairs & Vertical Transportation			0%	0.04	1
Sub-total - Equipment and Stairs			*24%*	*2.29*	*30*
Plumbing			0%	0.00	0
Heating, Ventilating & Air Conditioning			0%	0.00	0
Electrical			46%	4.32	57
Fire Protection			0%	0.00	0
Sub-total - Mechanical and Electrical			*46%*	*4.32*	*57*
Sub-total - Construction			*75%*	*7.11*	*94*
Site Preparation & Demolition			1%	0.05	1
Site Development			0%	0.00	0
Site Utilities			0%	0.00	0
Sub-total - Sitework			*1%*	*0.05*	*1*
Total - Construction and Sitework			*76%*	*7.16*	*95*
General Conditions	12.50%		9%	0.90	12
Contractor's Overhead & Profit or Fee	7.00%		6%	0.56	7
Sub-total			*91%*	*8.62*	*114*
Contingency for Design Development	10.00%		9%	0.86	11
TOTAL CONSTRUCTION BUDGET		***October, 2007***	***100%***	***9.48***	***126***

NOTE: Inclusions and Exclusions.

SUBSTRUCTURE	Quantity	Unit	Rate	Total ($)
No work anticipated				
Sub-Total for Substructure:				

STRUCTURE	Quantity	Unit	Rate	Total ($)
No work anticipated				
Sub-Total for Structure:				

EXTERIOR ENCLOSURE	Quantity	Unit	Rate	Total ($)
Exterior walls				
Patch exterior finish to match existing where removed for door work	1	LS	1,000.00	1,000
Exterior doors				
Adjust closing pressure on existing door	4	EA	250.00	1,000
Sub-Total for Exterior Enclosure:				**2,000**

ROOFING	Unit	Rate	Total ($)
No work anticipated			
Sub-Total for Roofing:			

INTERIOR WALLS		Unit	Rate	Total ($)
Interior doors				
Adjust closing pressure on existing door	15	EA	250.00	3,750
Sub-Total for Interior Walls:				**3,750**

FLOOR, WALL & CEILING FINISHES		Unit	Rate	Total ($)
Wall finishes				
Patch and repair existing finishes as required for accessibility upgrades	1	LS	1,000.00	1,000
Sub-Total for Floor, Wall & Ceiling Finishes:				**1,000**

EQUIPMENT & SPECIALTIES		Unit	Rate	Total ($)
Signage				
Code-required signage throughout building	13,251	SF	0.40	5,300
Portable platform lift - allow	1	EA	20,000.00	20,000
Brace and anchor existing cabinets, televisions and speakers as required	1	LS	2,500.00	2,500
Miscellaneous equipment and specialties	13,251	SF	0.15	1,988
Sub-Total for Equipment & Specialties:				**29,788**

STAIRS & VERTICAL TRANSPORTATION		Unit	Rate	Total ($)
Staircase flights				
Extension to existing handrail	1	EA	500.00	500
Sub-Total for Stairs & Vertical Transportation:				**500**

PLUMBING		Unit	Rate	Total ($)
No work anticipated				
Sub-Total for Plumbing :				

HEATING, VENTILATING & AIR CONDITIONING		Unit	Rate	Total ($)
No work anticipated				
Sub-Total for Heating, Ventilating & Air Conditioning:				

ELECTRICAL		Unit	Rate	Total ($)
Electrical work within building				
Remove and replace electrical systems to facilitate architectural modifications	13,251	SF	1.25	16,564
Fire alarm system	13,251	SF	2.50	33,128
Provide assisted listening system	1	EA	7,500.00	7,500
Sub-Total for Electrical:				**57,191**

FIRE PROTECTION		Unit	Rate	Total ($)
No work anticipated				
Sub-Total for Fire Protection:				

SITE PREPARATION & DEMOLITION		Unit	Rate	Total ($)
General demolition and preparation	13,251	SF	0.05	663
Premium for hazmat abatement	13,251	SF	0.00	
Sub-Total for Site Preparation & Demolition:				**663**

SITE DEVELOPMENT		Unit	Rate	Total ($)
No work anticipated (see Sitework section)				
Sub-Total for Site Development:				

SITE UTILITIES		Unit	Rate	Total ($)
No work anticipated (see Sitework section)				
Sub-Total for Site Utilities:				

	GFA: 24,025 SF	%	$/SF	$,000
Substructure		0%	0.00	0
Structure		0%	0.00	0
Exterior Enclosure		5%	0.47	11
Roofing		0%	0.00	0
Sub-total - Shell & Core		*5%*	*0.47*	*11*
Interior Walls		7%	0.66	16
Floor, Wall & Ceiling Finishes		3%	0.27	7
Sub-total - Internal Finishes		*10%*	*0.94*	*23*
Equipment & Specialties		11%	1.06	25
Stairs & Vertical Transportation		0%	0.02	1
Sub-total - Equipment and Stairs		*12%*	*1.08*	*26*
Plumbing		6%	0.60	14
Heating, Ventilating & Air Conditioning		0%	0.00	0
Electrical		42%	3.85	93
Fire Protection		0%	0.00	0
Sub-total - Mechanical and Electrical		*48%*	*4.45*	*107*
Sub-total - Construction		*75%*	*6.94*	*167*
Site Preparation & Demolition		1%	0.07	2
Site Development		0%	0.00	0
Site Utilities		0%	0.00	0
Sub-total - Sitework		*1%*	*0.07*	*2*
Total - Construction and Sitework		*76%*	*7.00*	*168*
General Conditions	12.50%	9%	0.88	21
Contractor's Overhead & Profit or Fee	7.00%	6%	0.55	13
Sub-total		*91%*	*8.43*	*203*
Contingency for Design Development	10.00%	9%	0.84	20
TOTAL CONSTRUCTION BUDGET	***October, 2007***	***100%***	***9.28***	***223***

NOTE: Inclusions and Exclusions.

DRAFT FOR REVIEW
Building E
M5-07-196
October 30, 2007

SUBSTRUCTURE	Quantity	Unit	Rate	Total ($)
No work anticipated				
Sub-Total for Substructure:				

STRUCTURE	Quantity	Unit	Rate	Total ($)
No work anticipated				
Sub-Total for Structure:				

EXTERIOR ENCLOSURE	Quantity	Unit	Rate	Total ($)
Exterior walls				
Patch exterior finish to match existing where removed for door work	1	LS	1,000.00	1,000
Exterior doors				
New door, frame, and hardware	3	LVS	1,800.00	5,400
Adjust closing pressure on existing door	14	EA	250.00	3,500
Add UL label to existing door	4	EA	350.00	1,400
Sub-Total for Exterior Enclosure:				**11,300**

ROOFING		Unit	Rate	Total ($)
No work anticipated				
Sub-Total for Roofing:				

INTERIOR WALLS		Unit	Rate	Total ($)
Interior doors				
New door, frame, and hardware	6	EA	1,500.00	9,000
Adjust closing pressure on existing door	25	EA	250.00	6,250
Add UL label to existing door	2	EA	350.00	700
Sub-Total for Interior Walls:				**15,950**

FLOOR, WALL & CEILING FINISHES		Unit	Rate	Total ($)
Wall finishes				
Patch and repair existing finishes as required for accessibility upgrades	1	LS	1,000.00	1,000
Miscellaneous				
Modify existing finishes as required for new accessible showers	224	SF	25.00	5,600
Sub-Total for Floor, Wall & Ceiling Finishes:				**6,600**

EQUIPMENT & SPECIALTIES		Unit	Rate	Total ($)
Signage				
Code-required signage throughout building	24,025	SF	0.40	9,610
Toilet partitions and accessories				
Modify existing toilet partition door as required for accessibility	1	EA	400.00	400
New grab bar in existing toilet room	1	EA	250.00	250
Shower bench	4	EA	850.00	3,400
Grab bars	4	PR	350.00	1,400
Recessed walk off mat in existing floor	28	SF	150.00	4,200

DRAFT FOR REVIEW
Building E
M5-07-196
October 30, 2007

Brace and anchor existing cabinets, televisions and speakers as required	1	LS	2,500.00	2,500
Miscellaneous equipment and specialties	24,025	SF	0.15	3,604
Sub-Total for Equipment & Specialties:				**25,364**

STAIRS & VERTICAL TRANSPORTATION		Unit	Rate	Total ($)
Staircase flights				
Extension to existing handrail	1	EA	500.00	500
Sub-Total for Stairs & Vertical Transportation:				**500**

PLUMBING		Unit	Rate	Total ($)
Sanitary fixtures, connection piping, including rough-in				
Shower (N) w/(N) rough-in	4	EA	2,832.96	11,332
Miscellaneous modifications	1	LS	3,000.00	3,000
Sub-Total for Plumbing :				**14,332**

HEATING, VENTILATING & AIR CONDITIONING	Unit	Rate	Total ($)
No work anticipated			
Sub-Total for Heating, Ventilating & Air Conditioning:			

ELECTRICAL		Unit	Rate	Total ($)
Electrical work within building				
Remove and replace electrical systems to facilitate architectural modifications	24,025	SF	1.25	30,031
Fire alarm system	24,025	SF	2.50	60,063
Low level exit sign	2	EA	1,250.00	2,500
Sub-Total for Electrical:				**92,594**

FIRE PROTECTION		Unit	Rate	Total ($)
No work anticipated				
Sub-Total for Fire Protection:				

SITE PREPARATION & DEMOLITION		Unit	Rate	Total ($)
Selective demolition and removal				
Remove existing; recycle				
Floor and ceiling finishes - allow	224	SF	2.00	448
General demolition and preparation	24,025	SF	0.05	1,201
Premium for hazmat abatement	24,025	SF	0.00	
Sub-Total for Site Preparation & Demolition:				**1,649**

SITE DEVELOPMENT		Unit	Rate	Total ($)
No work anticipated (see Sitework section)				
Sub-Total for Site Development:				

SITE UTILITIES		Unit	Rate	Total ($)
No work anticipated (see Sitework section)				
Sub-Total for Site Utilities:				

DRAFT FOR REVIEW

Sitework Summary

M5-07-196
October 30, 2007

		GFA: 75,200 SF	%	$/SF	$,000
Substructure			0%	0.00	0
Structure			0%	0.00	0
Exterior Enclosure			0%	0.00	0
Roofing			0%	0.00	0
Sub-total - Shell & Core			*0%*	*0.00*	*0*
Interior Walls			0%	0.00	0
Floor, Wall & Ceiling Finishes			0%	0.00	0
Sub-total - Internal Finishes			*0%*	*0.00*	*0*
Equipment & Specialties			0%	0.00	0
Stairs & Vertical Transportation			0%	0.00	0
Sub-total - Equipment and Stairs			*0%*	*0.00*	*0*
Plumbing			0%	0.00	0
Heating, Ventilating & Air Conditioning			0%	0.00	0
Electrical			0%	0.00	0
Fire Protection			0%	0.00	0
Sub-total - Mechanical and Electrical			*0%*	*0.00*	*0*
Sub-total - Construction			*0%*	*0.00*	*0*
Site Preparation & Demolition			20%	0.55	41
Landscaping			56%	1.56	117
Site Utilities			0%	0.00	0
Sub-total - Sitework			*76%*	*2.11*	*159*
Total - Construction and Sitework			*76%*	*2.11*	*159*
General Conditions	12.50%		9%	0.26	20
Contractor's Overhead & Profit or Fee	7.00%		6%	0.17	12
Sub-total			*91%*	*2.54*	*191*
Contingency for Design Development	10.00%		9%	0.25	19
TOTAL CONSTRUCTION BUDGET		***October, 2007***	***100%***	***2.79***	***210***

NOTE: Inclusions and Exclusions.

DRAFT FOR REVIEW

Sitework

M5-07-196
October 30, 2007

SITE PREPARATION & DEMOLITION	Quantity	Unit	Rate	Total ($)
Site demolition and earthwork				
Remove existing plaza paving	1,810	SF	5.00	9,050
Excavate and recompact earth for new plaza paving	200	CY	50.00	10,000
Remove portion of low concrete wall	5	LF	60.00	300
Remove, salvage, and store mature trees	6	EA	3,500.00	21,000
Remove existing sidewalk paving for new accessible curb cuts and ramps	200	SF	5.00	1,000
Sub-Total for Site Preparation & Demolition:				**41,350**

LANDSCAPING	Quantity	Unit	Rate	Total ($)
Vehicular paving and curbs				
Signage and striping for new accessible parking space at street	2	EA	500.00	1,000
Pedestrian paving				
Concrete plaza paving to match existing	1,810	SF	12.00	21,720
Concrete curb cut ramp	96	SF	35.00	3,360
Concrete ramp paving including curbs and rails	300	SF	135.00	40,500
New handrails at existing site stair	156	LF	150.00	23,400
Warning stripes at existing site stairs	1,884	LF	10.00	18,840
Miscellaneous accessories				
Concrete seat wall at top of stairs	75	LF	100.00	7,500
Site signage	1	LS	1,000.00	1,000
Sub-Total for Landscaping:				**117,320**

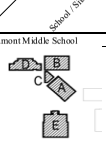
SITE UTILITIES	Quantity	Unit	Rate	Total ($)
Sub-Total for Site Utilities:				

APPENDIX: PROJECT STATUS & INFORMATION AVAILABILITY MATRIX

PIEDMONT SEISMIC SAFETY PROGRAM
PIEDMONT UNIFIED SCHOOL DISTRICT
PROJECT STATUS
MARCH 31, 2008

murakami/Nelson Architectural Corp.
Job No.: 0629 - PUSD Seismic

School / Site	Abbreviation	Building Designation	Building Name	Seismic Tier 1	Revised Seismic Tier 1	Letter From Fouril & Elsesser on Seismic Performance*	ATC Report (Accessibility / Seismic Performance)	Included in Scope Of Work (for m/N)	Qualitative Seismic Assessment by R.P. Gallagher	Quantitative Seismic Assessment (for m/N)	Benchmark Building	Seismic Tier 2	Seismic Non-Structural Hazard Report	ADA / Access Evaluation	Life Safety Evaluation	Materials Testing Spring 2007	Materials Testing Summer 2007	Materials Testing Fall 2007	Materials Testing Winter 2007	Destructive Testing Spring 2007	Destructive Testing Summer 2007	Destructive Testing Fall 2007	Slope Stability Analysis	Post Review at Investigation and Analysis	Post Review Site Specific Spectra	Post Review Non Structural	Post Review at Concept Design	Post Review at Schematic Design	Post Review at Design Development	Post Review at 100% Construction Documents	Existing Hazardous Materials Reports in m/N Possession	Hazardous Materials Report by Haward Management Services, Inc.	Topographical Survey	Title Report	Boundary Survey	Existing Geotechnical Reports	Existing Structural Calculations in m/N possession	Existing Specifications in m/N possession	Measured Drawings - Architectural	Measured Drawings - Structural	DSA Dsign in m/N possession	DSA Drawing Date	DSA Number for Drawings	Drawings	Architect	Concept Plan	Cost Estimate (1)	Refined Concept Plan - Value	Cost Estimate (2)	Comments
Piedmont Middle School	PMS																																														
		A	Multi-Purpose Building	●		○	●	●	●	○			×	●	●	●	×					×				●	×	●						●	○	●	○	×	×	×	×	×	×	●	10/25/1973	36354	original	Marshall-Bowles		●	●	×	×	
		B	Classroom Building	●		○	●	●	●	○			×	●	●	●	×					×				●	×	●						●	○	●	○	×	×	×	×	×	×	●	10/25/1973	36354	original	Marshall-Bowles		●	●	×	×	
		C	Administration Building	●		○	●	●	●	○			×	●	●	●	×					×				●	×	●						●	○	●	○	×	×	×	×	×	×	●	10/25/1973	36354	original	Marshall-Bowles		●	●	×	×	
		D	Science Building	●		○	●	●	●	○	●	×	×	●	●	●	×					×				●	×	●						●	○	●	○	×	×	×	●	×	×	●	8/25/1994	61310	original	David Wade Byrens		●	●	×	×	
		E	Gymnasium / Music Bldg.	●		○	●	●	●	○	●	×	×	●	●	●	×					×				●	×	●						●	○	●	○	×	×	×	×	×	×	●	5/17/1995	62448	original	David Wade Byrens		●	●	×	×	



LEGEND
- ○ NEEDED/IN PROGRESS
- ● YES / OK / COMPLETE
- ○ DO NOT HAVE
- ● NON CONCLUSIVE
- × NOT NECESSARY
- ○ Pending Authorization
- ● NO

Shaded Area Indicates Tier 2 Seismic Analysis.

PIEDMONT MIDDLE SCHOOL

PIEDMONT UNIFIED SCHOOL DISTRICT

SEISMIC STRENGTHENING PROGRAM / MEASURE E BOND PROGRAM

INVESTIGATION AND ANALYSIS

FINAL REPORT

January 22, 2008

Building E - *Gymnasium / Music Building*

Building A, B and C - *Multi Use Buildings / Classroom / Administration Wings*

Building D - *Science Building*

R. P. Gallagher Associates, Inc.
Structural and Earthquake Engineering

murakami Nelson
ARCHITECTURAL CORPORATION

Executive Summary
Piedmont Middle School
Evaluation and Analysis

murakami/Nelson has been retained by the Piedmont Unified School District to evaluate buildings at the five school campuses and district corporation yard for seismic safety and related accessibility and fire & life safety deficiencies and to design corrections of those deficiencies as part of the Measure E Bond Program. As part of this global objective we have evaluated the three buildings at Piedmont Middle School for ADA/accessibility and Fire/Life-Safety. Each building, the Classroom Wing (Building B), the Administration Wing (Building C), the Multi-Use Wing (Building A), the Science Building (Building D) and the Gymnasium/Music Building (Building E) have barriers to accessibility as well as life-safety deficiencies

The project is divided into three phases - Evaluation and Analysis, Concept Design and Design/ Construction Document/Construction. This Evaluation and Analysis phase has identified deficiencies; later phases of the project will conceptualize and design corrections of those deficiencies.

To assist us in this effort we have assembled a consultant team comprised of R. P. Gallagher Associates for structural engineering, and Sandis for surveying. We have been assisted by Capital Program Management (CPM), the District's Program Manager; District staff and maintenance staff.

Accessibility Evaluation

The buildings were evaluated for accessibility conformance with the ADA and the related ADAAG regulations and the 2001 California Building Code. The evaluation process included review of applicable codes, review of existing documents and site investigations to verify actual field conditions. The buildings in general had some deficiencies and in particular the older wings have barriers to access that will likely have to be corrected as part of any projects requiring DSA review and approval.

Building A (Multi-Use Wing) – This structure is part of a complex of three wings that make up the original Middle School. We have designated these three wings as Building A, B and C for ease of discussion. Building A contains the elevator used to access both Building B and Building C. Unfortunately this elevator is not accessible. There are also no accessible restrooms for either staff or students although there are a few semi-ambulatory stalls. Most door thresholds throughout this complex exceed the maximum allowable height per ADA code and door pressure needs to be adjusted. The bleacher seating needs to accommodate a percentage of wheelchair accessible spaces along with companion seating.

Building B (Classroom Wing) – Originally the only classroom wing, Building B was designed with an exterior exit balcony surrounding a central core of classrooms. Similar to Building A, this exterior balcony floor level is lower than the classroom floor level which causes each door threshold to be significantly (up to 1") greater then the 1/2" total rise allowed by accessibility code. In addition, none of the bathrooms are accessible in this wing although some qualify as semi-ambulatory stalls. There are old science classrooms that have since been moved to Building D but the sinks and cabinetry remain and are not accessible. Door pressures need adjusting and signage is required throughout the three wing complex.

Building C (Administration Wing) – This wing has similar accessibility problems as Building A and B. The door thresholds are too high, door pressure needs adjusting, there are no accessible restrooms and there are some sinks and cabinetry that are not accessible. In addition, the transaction counter in the administration office is not accessible and the gate providing access to the back offices does not provide sufficient width for wheelchair access. There is also a food service counter on the lower level that was not included in the original plans and no DSA approved plans have been found for it. There are significant problems (such as insufficient clearances, threshold height, counter accessibility, etc.) with the food prep kitchen and transaction counter as well as the queuing barriers to the service counter.

Building D (Science Building) – This two story structure is generally in compliance with current accessibility code. There is a compliant elevator to access each floor and restrooms are mostly accessible although some toilet accessory heights need to be adjusted. In addition, some cabinetry and sinks do not properly meet accessibility requirements.

Building E (Gymnasium / Music Building) – Although mostly in compliance, this three story structure does lack some accessible amenities. The locker rooms on the middle level provide showers that are not compliant, accessible lockers are needed, door pressures need adjusting and signage is needed throughout. The bleacher seating in the gymnasium needs to accommodate a wheelchair space along with companion seating.

Fire & Life Safety Evaluation

The buildings were evaluated for life safety in conformance with the 2001 California Building Code. In general the three buildings are substantially in compliance for fire and life safety, but do have a few life safety deficiencies, particularly the older wings (Buildings A, B and C). The evaluation process included review of applicable codes, review of existing documents and site investigations to verify actual field conditions.

Specific building fire and life safety deficiencies noted are as follows:

Building A (Multi-Use Wing) – There is one classroom on the lower level, Classroom 120, which is required to have two exits according to the occupancy calculations but only one of the two exits is compliant. This will need to be discussed with DSA.

Building B (Classroom Wing) – The Teacher's Lunch Room does not comply with exiting requirements per the occupancy load calculation. This room was originally a classroom but is now used as a lunch room thus triggering a change in occupancy. Directional exit signage needs to be supplemented.

Building C (Administration Wing) – The Food Service remodel at the original vending machine area appears to have been done without DSA approval (no drawings have been located). DSA may require verification of As-Built conditions.

Building D (Science Building) – The Computer Classroom 401 was remodeled, resulting in the classroom relocated exit door obstructing the stairwell exit door. No DSA approved drawings were located for the remodel. DSA may require verification of As-Built conditions.

Building E (Gymnasium / Music Building) – There were only minor fire and life safety deficiencies in this building.

Non-Structural Seismic Hazard Evaluation

RP Gallagher conducted a non-structural seismic hazards survey of the Middle School. The evaluation criteria used was ASCE Standard 31 "Seismic Evaluation of Existing Buildings". This document is the generally recognized national standard for assessing the life safety risk of existing buildings, including non-structural hazards. The Tier 1 procedures of ASCE 31 which involve site review and completion of a checklist were used. The findings of the non-structural evaluation report are as follows:

The three buildings were surveyed for nonstructural hazards and found to be relatively compliant throughout. Most equipment was found to be braced and most, though not all gas appliances, had flexible gas lines. Most notably a kiln, some tall metal storage cabinets and some tall wooden bookcases were unrestrained and pose an overturning risk.

Building A (Multi-Use Wing) – There is an electric kiln that is unrestrained and is highly vulnerable. There are also a number of free standing power tools that are not anchored and could slide or overturn.

Building B (Classroom Wing) – There are some unrestrained bookshelves and cabinets that pose an overturning threat. There are also several non-flexible gas lines to an HVAC unit. In addition, there are also televisions strapped to wheeled carts that can tip over. Several refrigerators are unrestrained and pose a high risk of overturning.

Building C (Administration Wing) – Numerous file cabinets that could overturn were noted.

Building D (Science Building) – Unanchored cabinets and television carts were noted.

Building E (Gymnasium / Music Building) – Televisions strapped to wheeled stand that pose an overturning risk were noted.

Conclusions

- It is recommended that the buildings be upgraded to accommodate accessibility, fire life-safety and non structural hazards deficiencies.
- Based on structural, accessibility and fire & life safety evaluations, we believe it is feasible to mitigate the deficiencies in the buildings and at the same time preserve their basic functional and architectural character.

TABLE OF CONTENTS

1. INTRODUCTION

1. INTRODUCTION

A. Project Scope

In March of 2006, the City of Piedmont voters passed Measure E, a $56 million bond to address seismic safety in the Piedmont Unified School District (PUSD).

To assist the District in managing the seismic program, the PUSD has engaged Capital Program Management, Inc. (CPM), to oversee program planning and implementation. The School Board has formed a Steering Committee to oversee the management of all bond projects and serve as a communications hub; a Technical Advisory Committee to advise the Steering Committee and about the technical aspects of the project and a Citizens Oversight Committee to ensure that funds are appropriately and prudently spent. Additionally, an extensive public engagement effort has been set up to both educate the community about the progress of the project and to elicit comments and feedback.

murakami/Nelson was selected to evaluate the school buildings, develop design solutions, prepare construction documents and oversee construction of the projects. Assisting us in this effort is R. P. Gallagher Associates. The initial work effort has focused on the evaluation of each of the buildings at Piedmont Middle School. They are the Classroom Wing (Building B), the Administration Wing (Building C), the Multi-Use Wing (Building A), the Science Building (Building D) and the Gymnasium/Music Building (Building E). This report summarizes the investigative efforts of the design team to understand the existing conditions of these buildings. *murakami*/Nelson has reviewed the buildings and identified accessibility and life safety deficiencies. R. P. Gallagher has completed a Tier 1 non-structural hazards analysis of these buildings. This report documents our findings.

The basis of this report are existing approved drawings from the Department of the State Architect (DSA), field investigations conducted by *murakami*/Nelson, R.P. Gallagher Associates, and the ATI "Accessibility Review" dated 09/01/05 provided by the District and an existing conditions topographic survey by Sandis. After reviewing existing documentation and verifying existing conditions, *murakami*/ Nelson created electronic base drawings to serve as the framework for the project.

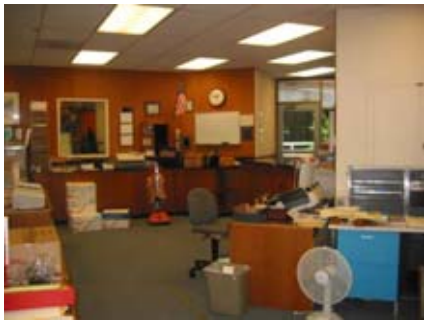
B. Application of California Building Code

Since there are often code interpretations with use of the California Building Code, the School District engaged DSA in a discussion about the PUSD Voluntary Seismic Upgrade Program. In May 2006 DSA representatives attended a special meeting of the School Board to discuss the District's program and how individual projects would involve compliance with fire, life safety and accessibility requirements of the California Building Code. *murakami*/Nelson continued that discussion with a follow on meeting with DSA on February 9, 2007. At that meeting DSA indicated a willingness to work with the District on the extent of compliance with the current California Building Code. Such determinations would be made on a case by case basis and relate to the specifics of each project.

C. Future Considerations

During the next Concept Design phase of the project, programmatic, maintenance and sustainability issues will be considered where those issues can be solved as an integral part of the Bond project. Where those issues are not integrally linked to the seismic work, the District may decide to use Modernization or other funding sources to solve those problems.

Looking North at Buildings B, D and C



Administration Offices

Typi cal Classroom

D. Building Descriptions

Piedmont Middle School (PMS) was originally built in 1973 with additional buildings added in 1994 and 1995. This report has, for ease of analysis, divided the original 1973 PMS structure into three wings identified as Buildings A, B, & C. The other two stand-alone structures will be referred to as the Science Building (Building D) and the Gymnasium / Music Building (Building E).

The location poses a major challenge to accessibility as it is located on a very steep site. There are a series of stairs and ramps but, due to the significant grade change, there is no direct accessible route. The older portion of the school will need substantial modernization both within the buildings and to their adjacent paths of travel. The newer buildings are in substantial compliance although the accessible route to and from the buildings will need work.

Aerial view

Building A. **The Multi-Use Wing** was designed by Richard C. Marshall and Chester Bowles Jr. in the early 1970's as part of the main campus which included Building B (the Classroom Wing) and Building C (the Administration Wing). This three story structure houses the original gymnasium, the industrial arts and special education facilities. There have been a few minor changes of which no drawings were found since the original DSA approved drawing. Building A is part of the original school made up of Buildings B and C. Building A contains the elevator from which the multiple levels of each of the buildings in this complex may be accessed. However, the path to the elevator poses several accessibility issues as the route from the street to this primary entrance is accessed by a long, non-compliant ramp.

Building B. **The Classroom Wing** was designed by the same architects as Building A in the early 1970's. Originally the only classroom wing, Building B was designed with an exterior hallway surrounding a central core of classrooms. This core was designed to accommodate different classroom size needs by having movable partitions as interior walls. These walls divide the overall space into six classrooms on the upper and lower floors. The middle floor contains the library along with some classrooms that have permanent walls. The exterior hallway level is constructed lower than the classroom level probably to mitigate water intrusion, but this caused each door threshold to be significantly greater then the ¼" rise allowed by the accessibility code. Some fire sprinklers were added to the exterior hallways, but they do not comply.

Building C. **The Administration Wing** was also included in the complex of buildings that made up the main campus in the early 1970's. This administration wing houses the schools offices as well as two classrooms and a food service counter on the lower level. The addition of the food prep kitchen does not seem to be recorded by DSA as no approved drawings were found. This Administration wing bridges the Multi-Use and Classroom wings in the original, main campus building. Deficiencies are similar to those found in Buildings A and B.

Building D. **The Science Building** was designed by David Wade Byrens and built in the early 1990's. This building supplements the main classroom wing of Building B and now contains all the science rooms on the second level and a Multi-Use room at the first floor. This is a two story structure although it also has a third basement level which is a mechanical room. This building is generally in compliance with current code although some deficiencies were found.

Building E. **The Gymnasium / Music Building** was also designed by David Wade Byrens and built in the mid 1990's. This is now the main gymnasium with full locker rooms and instructor offices on the middle level. The upper level contains weight rooms which the High School shares. The lower level houses all music activities. There is a compliant elevator which allows access to all levels as well as to the accessible parking adjacent to the building.

2. ADA/ ACCESSIBILITY

2. ADA /ACCESSIBILITY.

A. Background:

School facilities in California are required by federal and state law to provide equal access for students, teachers, staff and visitors. At the Federal level the empowering legislation is the Americans with Disabilities Act or ADA. Under that law ADAAG regulations were written to describe the accessibility requirements for the entire country. The ADAAG regulations are enforced by civil action. At the State level accessibility is governed by the California Building Code. In the case of public school buildings the California Building Code is enforced by the Division of the State Architect or DSA.

The State of California is in the process of getting the California Building Code certified by the Department of Justice as meeting ADAAG. Until that occurs architects must comply with both the ADAAG and the California Building Code. *murakami*/Nelson has used both documents in evaluating the priority buildings at Havens.

The California Building Code requires whenever more than $120,000 (*adjusted for inflation each year*) worth of work other than for maintenance or replacement of finishes is done in any three year period for an existing building, access compliance work be included as part of that project. Section 1134B of the California Building Code requires that alteration work within an existing building comply with the current Code and that additional access work, as stipulated in the Code, be done beyond the area of the alteration.

Because seismic upgrade projects often affect areas throughout a school the State Attorney General has issued an interpretation (DSA Document 96-01) that access work triggered by a seismic strengthening project need only provide an accessible primary entrance, sanitary facilities, signs, telephone (if provided), drinking fountain and an accessible path of travel to those facilities, but not a accessible path of travel to the area of all the alterations as Section 1134B.2 of the Building Code requires. Use of this interpretation by DSA on the Piedmont Seismic project remains to be resolved.

In any event the voluntary seismic strengthening work the District is planning will trigger substantial compliance with the access requirements of Section 1134. Furthermore, if State modernization funds are used for the projects, then all the requirements of Section 1134 would be triggered.

Exterior Stairs Lack Intermediate Handrails

Exterior Stairs Lack Intermediate Handrails

Compliant Handrails

B. Summary & Analysis

This report has made use of the ATI report, with field verification of existing conditions.

Piedmont Middle School has had a few changes implemented over its 34 year history. The major changes have been the addition of a Science Building in 1994 and a Gymnasium / Music Building in 1995. These buildings enhanced the access throughout the site. However the site and buildings are not fully compliant with current code and ADA requirements.

Code Compliant LIbrary Stacks

Code Compliant Boy's Restroom

Code Compliant SInk

C. Site

Piedmont Middle School is bounded by the Piedmont High School on its east, Piedmont Park to the south, the District Corporation Yard and playing fields to the west and residential houses to the north. The primary access to the school site is via Magnolia Avenue on the northeast. There are two accessible on-street parking stalls located near the High School to the east and four at different locations near the Gymnasium / Music Building. The two on-street parking spaces are not compliant. The four on-site parking spaces are remote and not near the primary entries to the site. Magnolia Avenue is the main drop-off and loading zone for the majority of the students. No accessible drop-off/loading zone has been provided for the physically impaired student. There is one accessible entry point onto the school campus. The school utilizes a series of ramps to provide accessibility to most of the buildings. Access to Building A, B and C has the most direct route as there is a ramp from Magnolia Avenue to the central plaza at the middle level of each of the buildings. From this middle level, there is access to a non-compliant elevator in Building A (the Multi-Use Wing) which provides access to every level of each building. There is a ramp around the back side of Building B that provides access to Building D. There is an accessible parking space at the bottom of the playing courts and a series of ramps that allows access to Building D. The accessible parking space is accessed along a fire lane that skirts the playing fields. Although this parking space is near Building E, it cannot be accessed as the slope is too steep. Access to Building E can be attained from the main entrance on Magnolia Avenue through a convoluted path and through a series of ramps and an elevator. There is also an accessible parking space on the western end of the building which is accessed via the fire road along the playing fields. In addition, there are two accessible parking spaces next to the High School's gymnasium that provide access to the upper level of Building E.

Many of the exterior stairs are compliant although some lack appropriate handrails or intermediate railings, proper extensions, and/or proper contrasting striping on the stair treads. The ramps are generally compliant although in places they exceed maximum allowable slope.

There is very little directional or informational signage throughout the site. Accessibility will need to be provided.

D. Buildings

The newer structures, Buildings D and E are substantially in compliance with ADA code. Generally signage is needed and door pressure needs adjusting. Buildings A, B and C will require more accessibility upgrades. Buildings A, B and C do not have accessible restrooms, door thresholds exceed height requirements, door pressure needs adjusting and some stairs require upgraded handrails or warning strips on the treads. Although the threshold deficiency is identified as a minor barrier in this report, the accumulative impact is significant. In addition, the elevator that accesses each floor of Building A, B and C is not compliant. Sinks and cabinetry will require improvements to provide for access and signage is lacking throughout the project. In addition to these common accessibility issues throughout the site, each building's specific problems are listed below.

Building A - Multi-Use Wing

Assisted listening device is required in the Multi-Use room.

The bleacher seating will need wheelchair accessible seating along with companion seating.

Building B - Classroom Wing

The drinking fountains in the hallway are not compliant. Current requirements call for a Hi/Low fountain. In addition, since the fountains project more than 4-inches from the wall, guardrails are required on each side of the fountains.

Building B - Ramp not compliant

Building A - Stair railing not compliant

Building B - Seismic Joint gap not filled

Building A - Drinking fountain not compliant

Building A - Door threshold not compliant

Building E - Ramp handrails not compliant

Building A - Not compliant food prep facility

Building D - mostly compliant lobby

Building E - Missing recessed walk-off mat

Building C - Administration Wing

The Administration Wing has two occupancies. The middle level contains all administrative offices, the upper level provides two classrooms and the lower level houses the food service area. Based on current functions, the building has several accessibility deficiencies.

In the Food Prep / Service area, service counters are not accessible. The queue line railing spacing is too narrow and no turning width is provided.

The service counter in the administration office is not accessible.

Building D - Science Building

Assistive listening device may be required in the Multi-Use room.

Building E - Gymnasium / Music Building

Assistive listening device may be required in gymnasium.

ACCESSIBILITY NOTES:

GENERAL NOTES:

1. SITE ACCESSIBLE PATH OF TRAVEL TO PRIMARY ENTRANCE IS GENERALLY IN COMPLIANCE. EXCEPTIONS ARE: 1)
2. SIGNAGE THROUGHOUT IS NOT COMPLIANT. DIRECTIONAL SIGNAGE IS MISSING. MOST ROOM IDENTIFICATION SIGNAGE WHERE PROVIDED IS NON COMPLIANT.
3. NO ACCESSIBLE PATH OF TRAVEL SIGNAGE.

01 ACCESSIBLE PARKING SPACE DOES NOT COMPLY, NO ACCESSIBLE DROP-OFF / LOADING SPACE.

02 PRIMARY ENTRANCE - ACCESSIBILITY SITE SIGNAGE IS NOT COMPLIANT.

03 RAMP EXCEEDS MAX. ALLOWABLE SLOPE (1:12).

04 NO ACCESSIBLE ROUTE (RAMP) @ STAIR.

05A ENTRANCE / EXIT DOOR ASSEMBLY NOT FULLY ACCESSIBLE: MAJOR BARRIERS SUCH AS INSUFFICIENT WIDTH OF OPENING, LANDINGS TOO SMALL, INSUFFICIENT CLEAR SPACE, ETC./ MAY ALSO INCLUDE 05B DEFICIENCIES.

05B ENTRANCE / EXIT DOOR ASSEMBLY NOT ACCESSIBLE: MINOR BARRIER SUCH AS OPERATING HARDWARE, EXCESSIVE CLOSING FORCE, THRESHOLD, ETC.

06 HANDRAILS NOT ACCESSIBLE.

07 PEDESTRIAN CONTROL BARRIERS (OR CUEING LINES) NOT ACCESSIBLE.

08 ELEVATOR NOT ACCESSIBLE.

09 DRINKING FOUNTAIN NOT ACCESSIBLE.

10 STAIR NOT ACCESSIBLE.

11 BLEACHERS DO NOT HAVE ACCESSIBLE SEATING.

12 TELEPHONE NOT ACCESSIBLE.

13 CABINETRY & COUNTERS NOT ACCESSIBLE.

14 RESTROOM NOT ACCESSIBLE.

15 KITCHEN NOT ACCESSIBLE.

16 LANDING TOO SMALL.

17 SINK NOT ACCESSIBLE.

18 SIGNAGE NOT COMPLIANT.

19 NO ASSISTED LISTENING PROVIDED.

20 SHOWER NOT ACCESSIBLE.

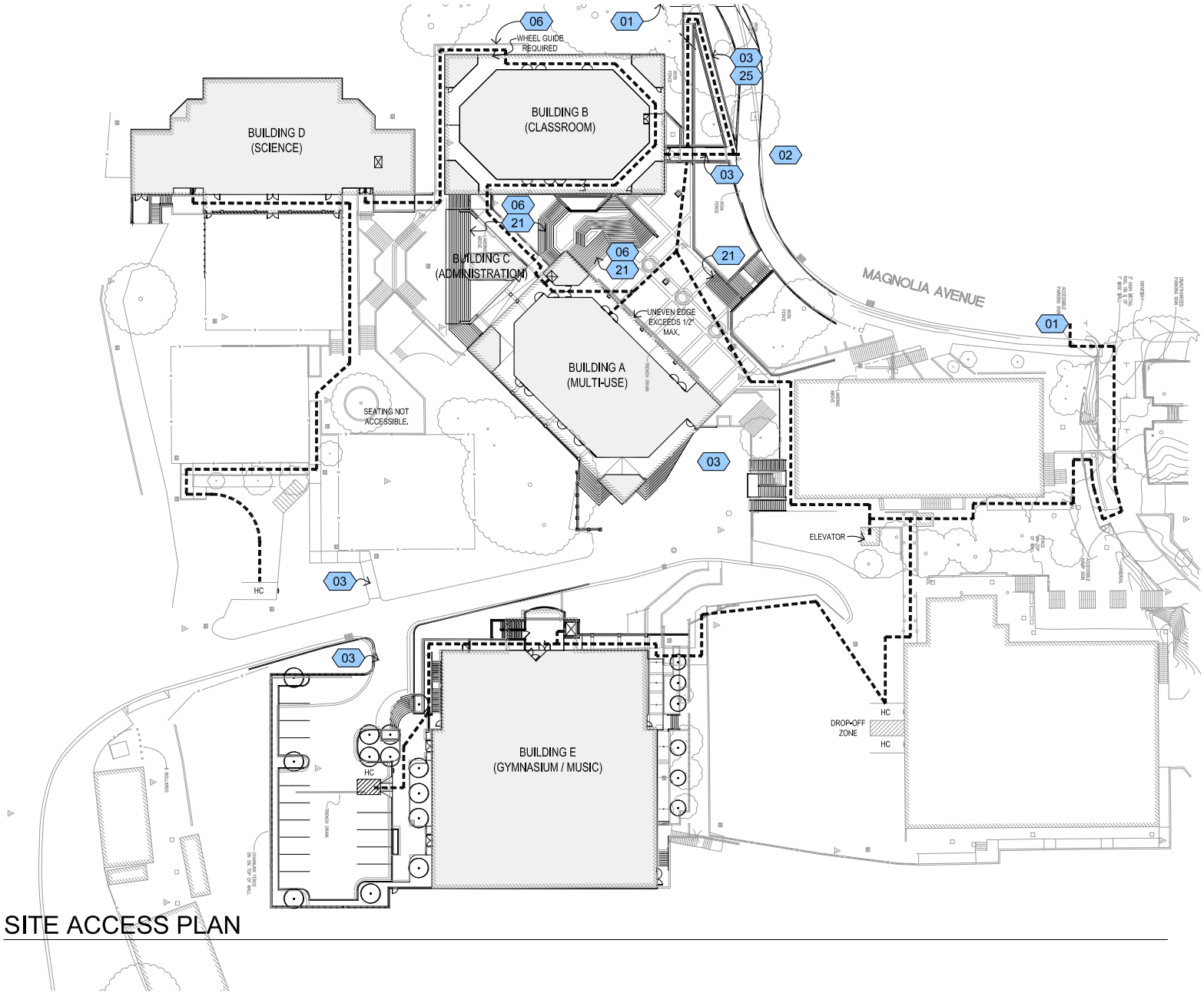
21 LACKING OR WORN STAIR WARNING STRIPES AT TOP AND BOTTOM TREADS.

22 TRANSACTION COUNTER NOT ACCESSIBLE.

23 STAGE NOT ACCESSIBLE.

24 DSA MAY REQUIRE NO SPECIAL ACESS KEY TO ACCESS ELEVATOR.

25 RAMP EXCEEDS MAX. ALLOWABLE LENGTH (30').



ACCESSIBLE PATH OF TRAVEL

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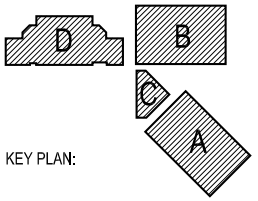
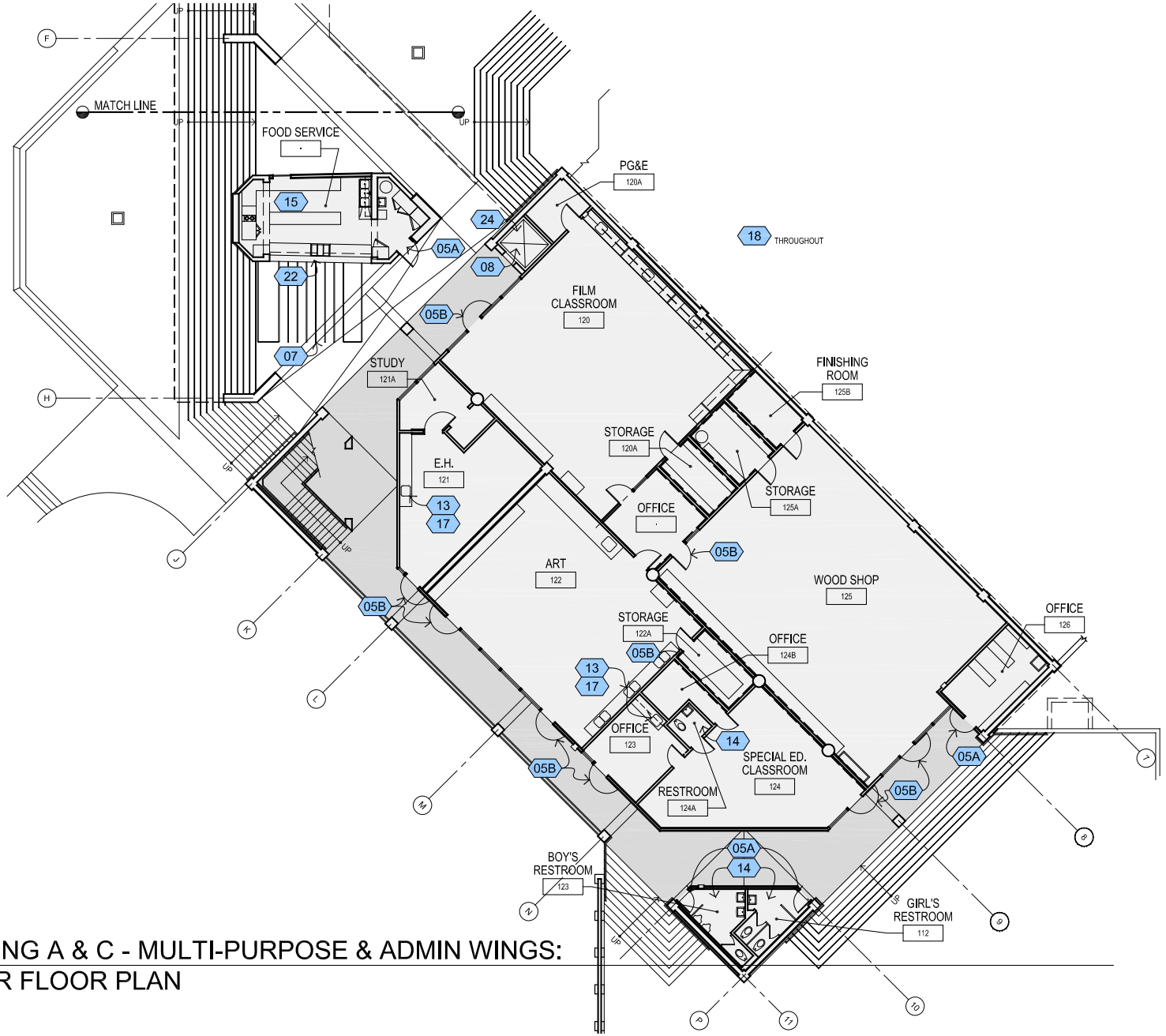


KEY PLAN:

REFERENCE NORTH

TRUE NORTH

SITE ACCESS PLAN



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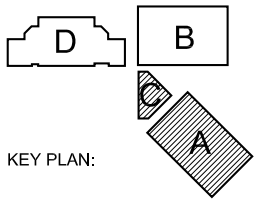
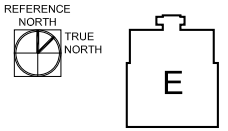
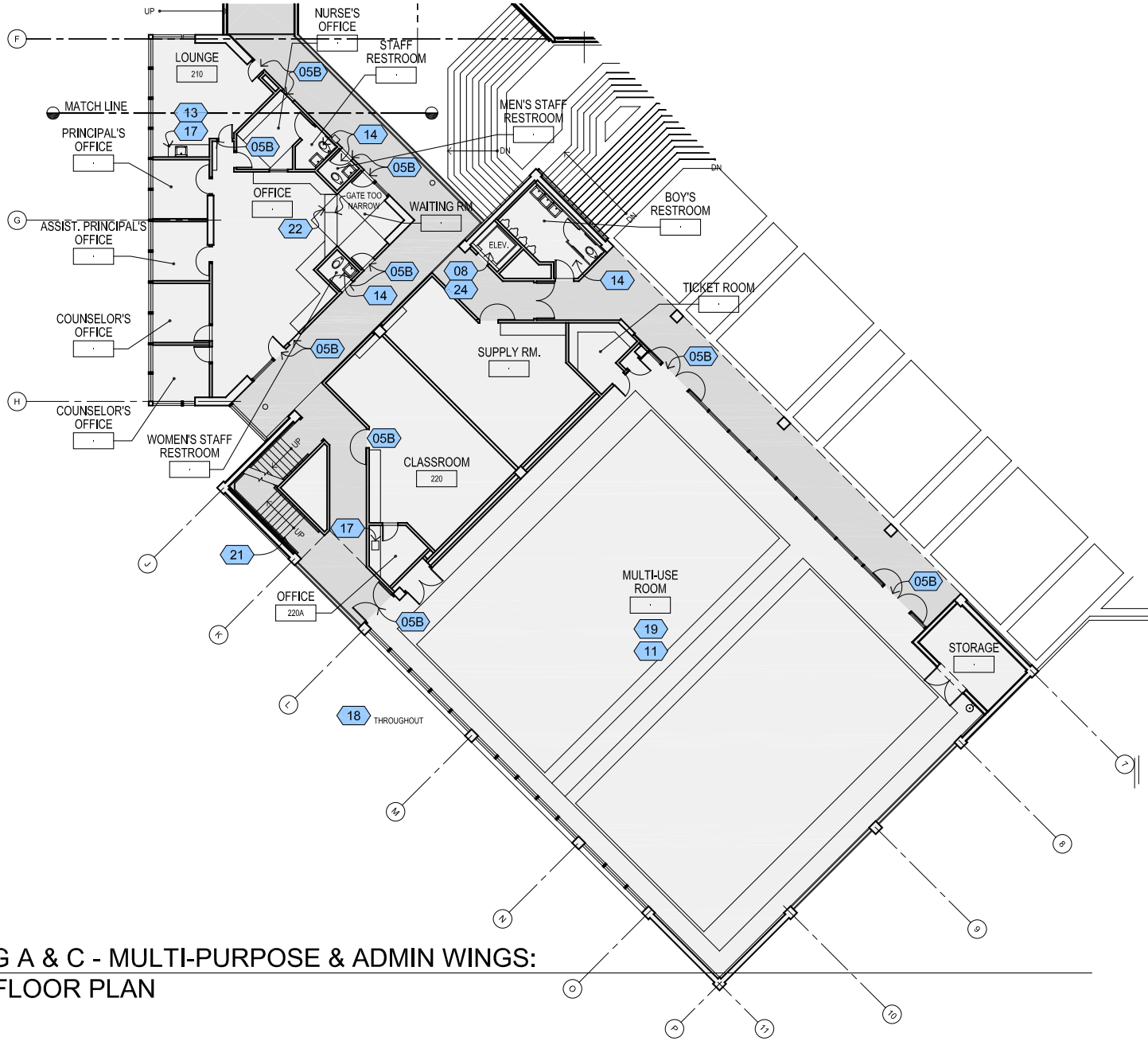
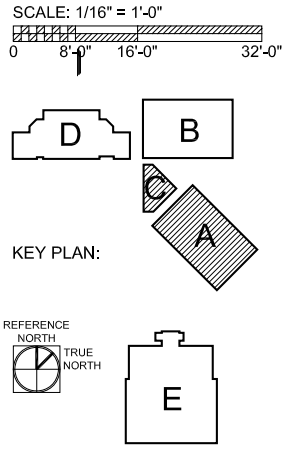


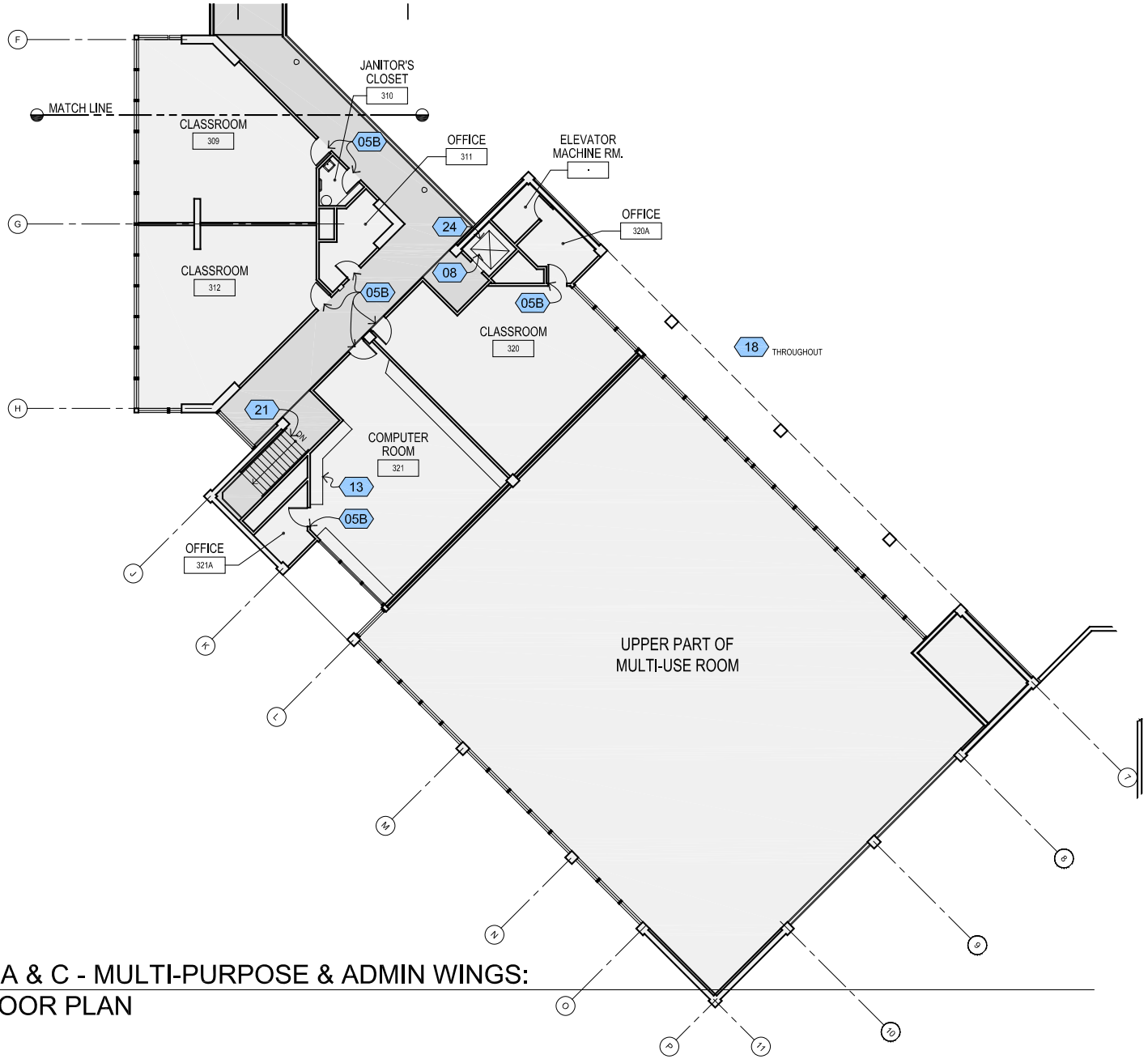


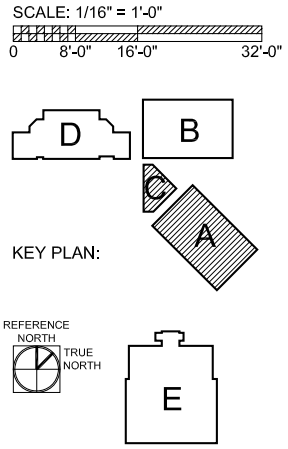
BUILDING A & C - MULTI-PURPOSE & ADMIN WINGS:
LOWER FLOOR PLAN



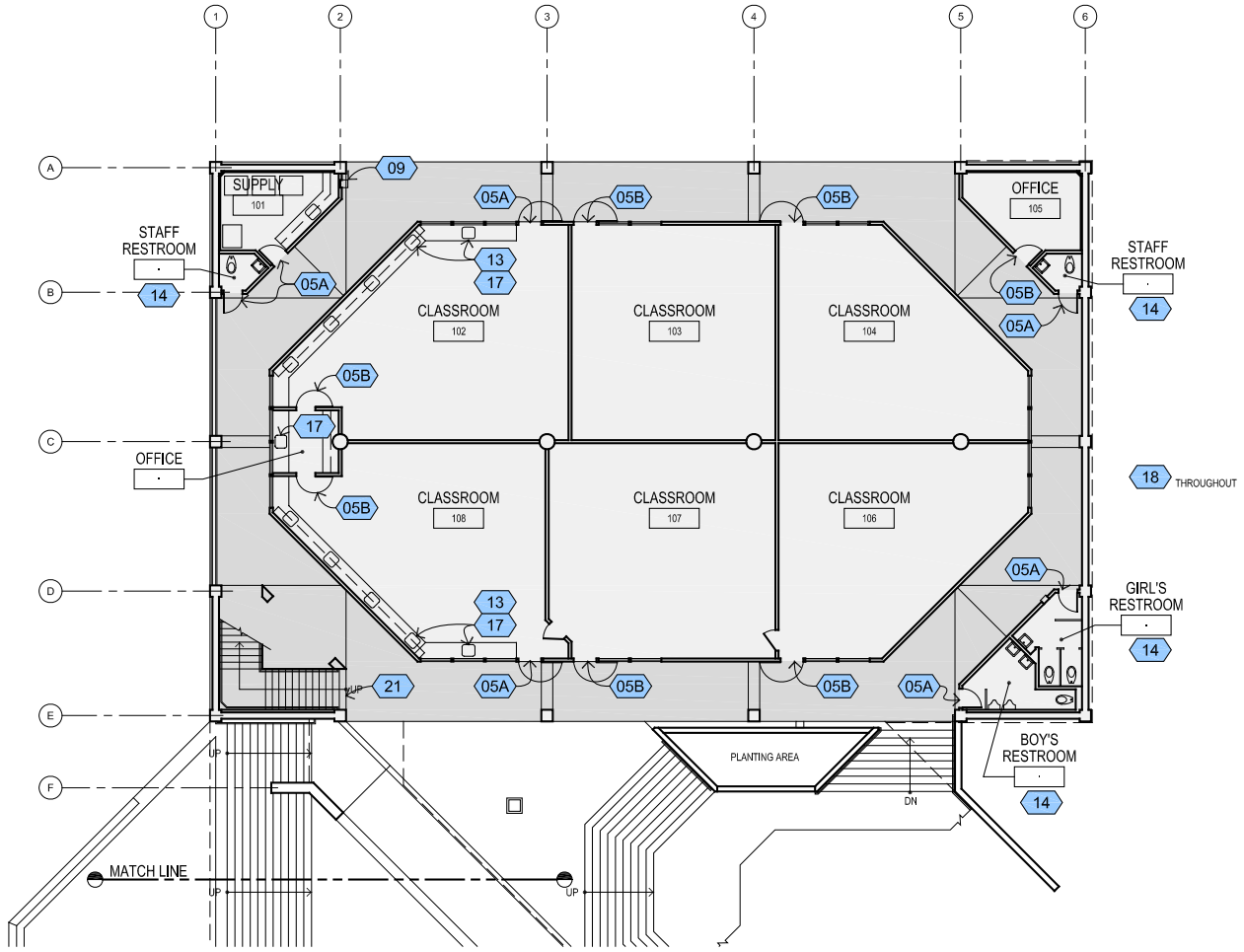


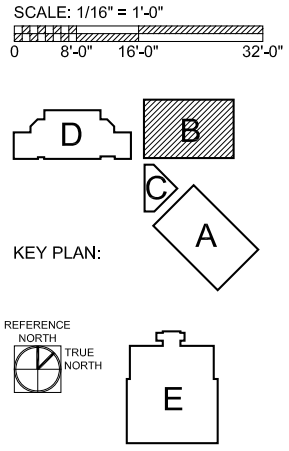
BUILDING A & C - MULTI-PURPOSE & ADMIN WINGS: MIDDLE FLOOR PLAN



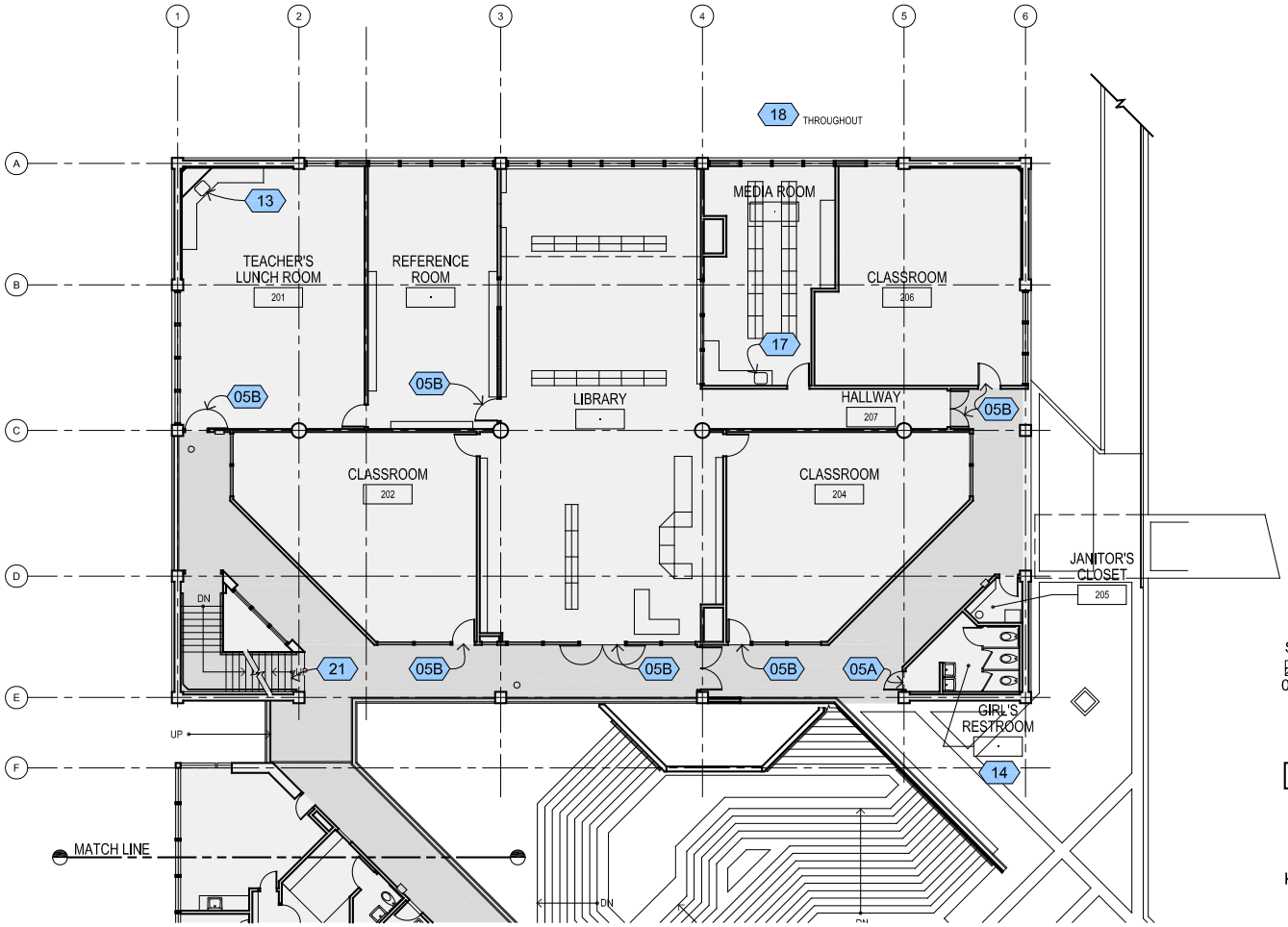


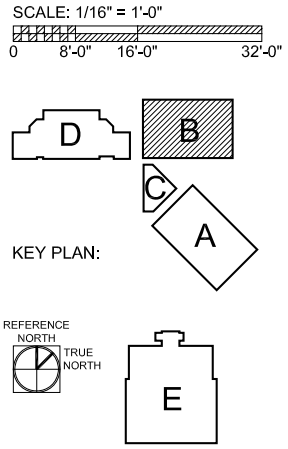
BUILDING A & C - MULTI-PURPOSE & ADMIN WINGS: UPPER FLOOR PLAN



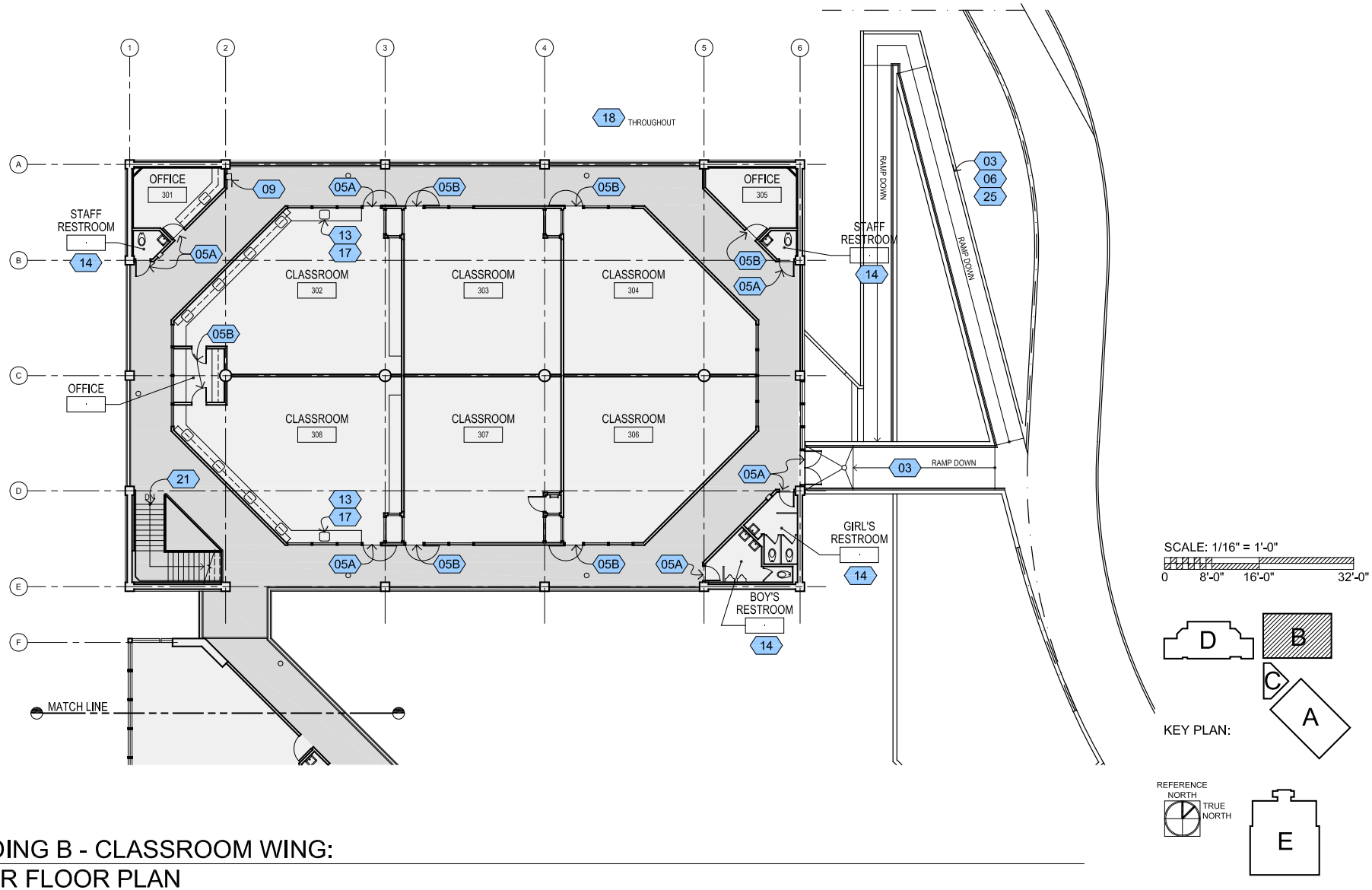


BUILDING B - CLASSROOM WING:
LOWER FLOOR PLAN





BUILDING B - CLASSROOM WING:
MIDDLE FLOOR PLAN



SCALE: 1/16" = 1'-0"

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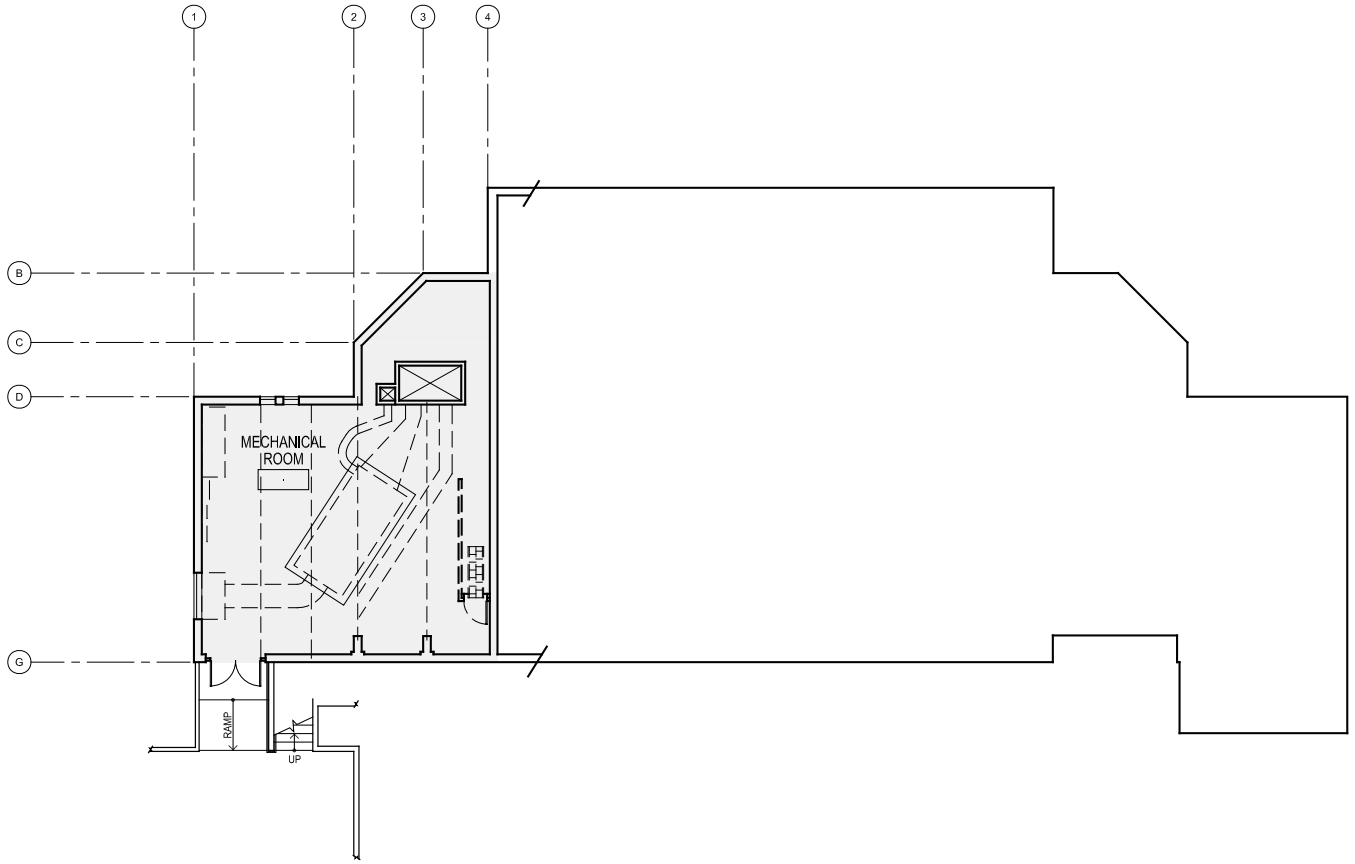
KEY PLAN:

REFERENCE NORTH

TRUE NORTH

E

BUILDING B - CLASSROOM WING:
UPPER FLOOR PLAN



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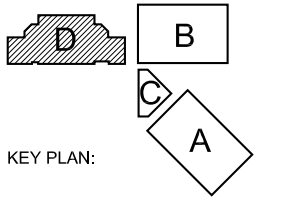

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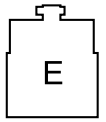
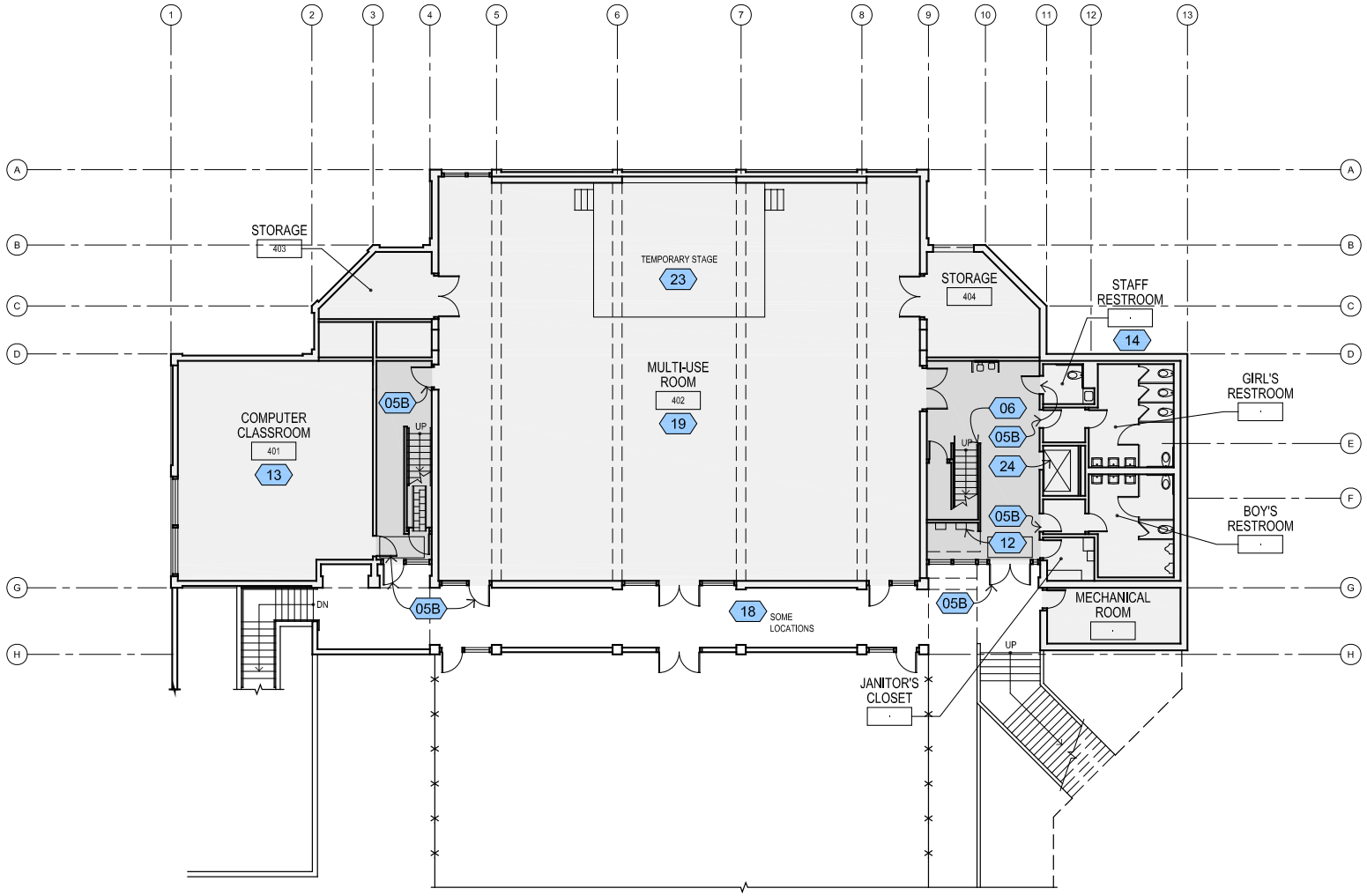
TRUE NORTH



BUILDING D - SCIENCE BUILDING:
LOWER FLOOR PLAN



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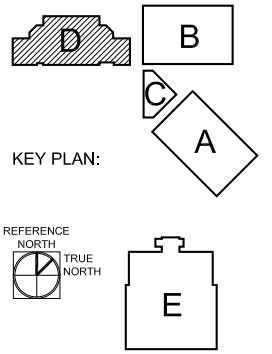
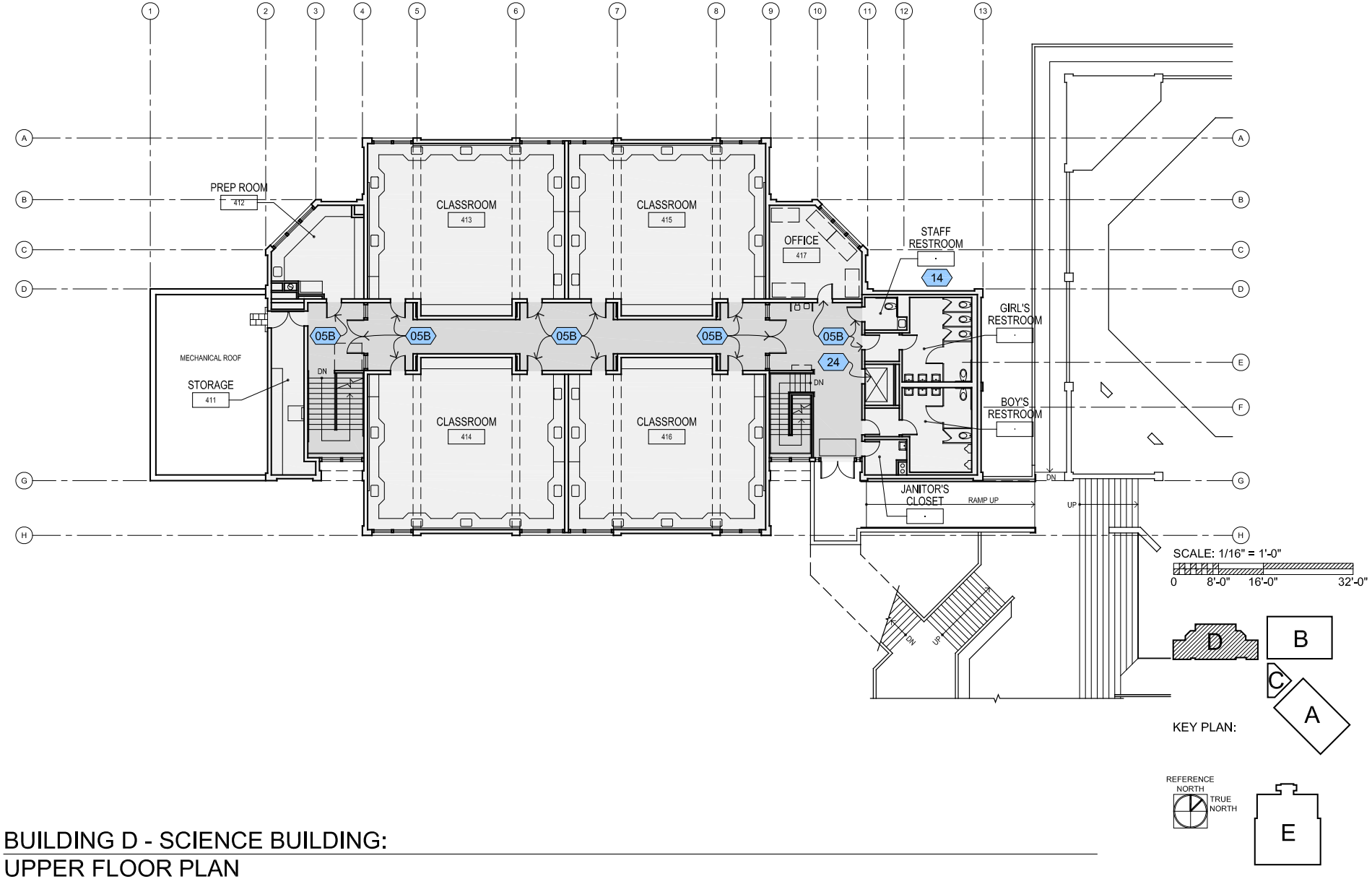
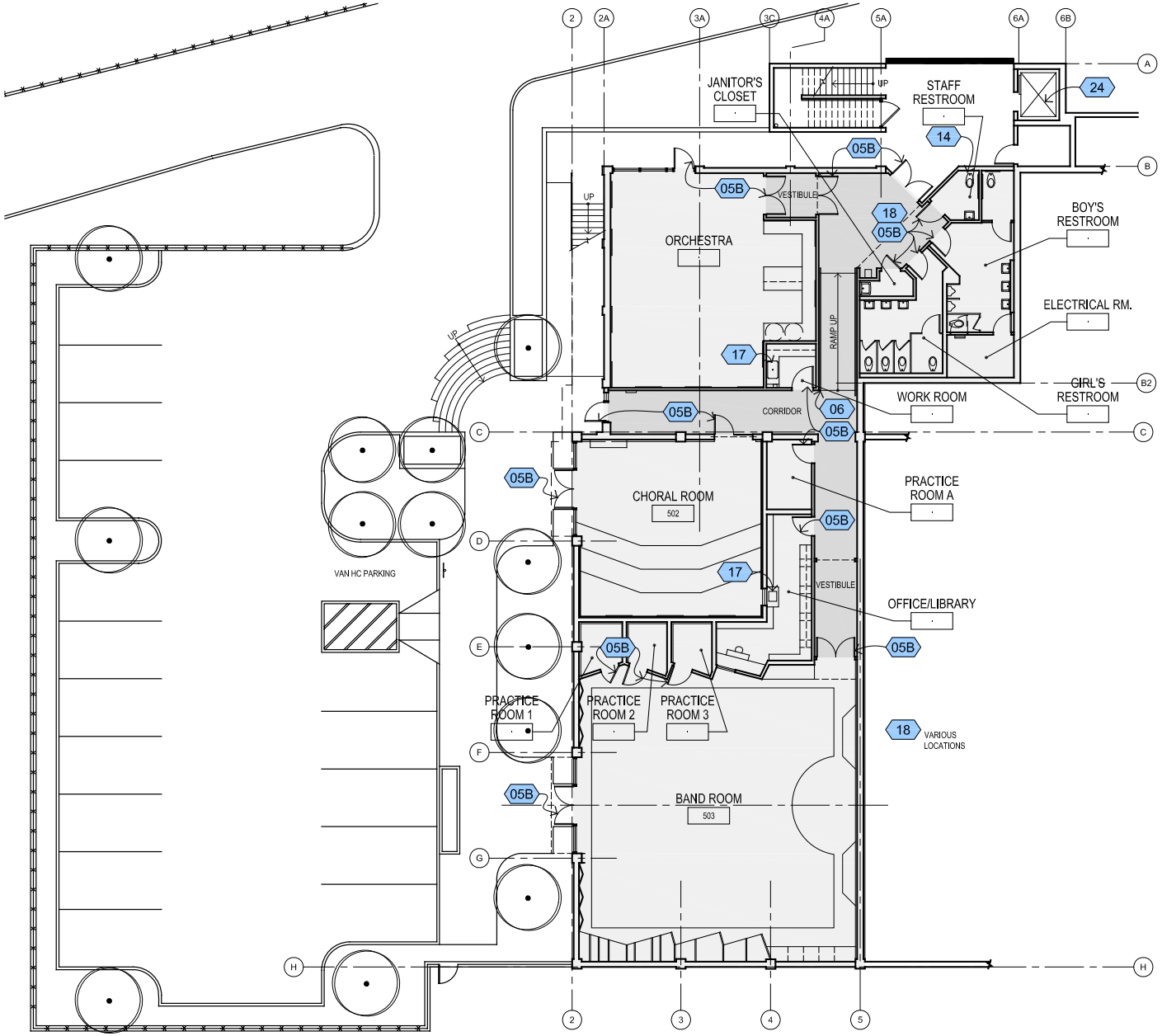


BUILDING D - SCIENCE BUILDING:
MIDDLE FLOOR PLAN



BUILDING D - SCIENCE BUILDING:
UPPER FLOOR PLAN



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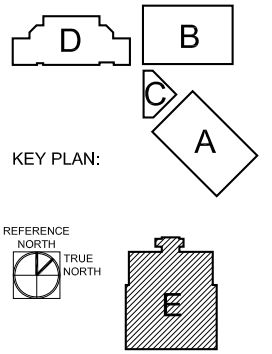
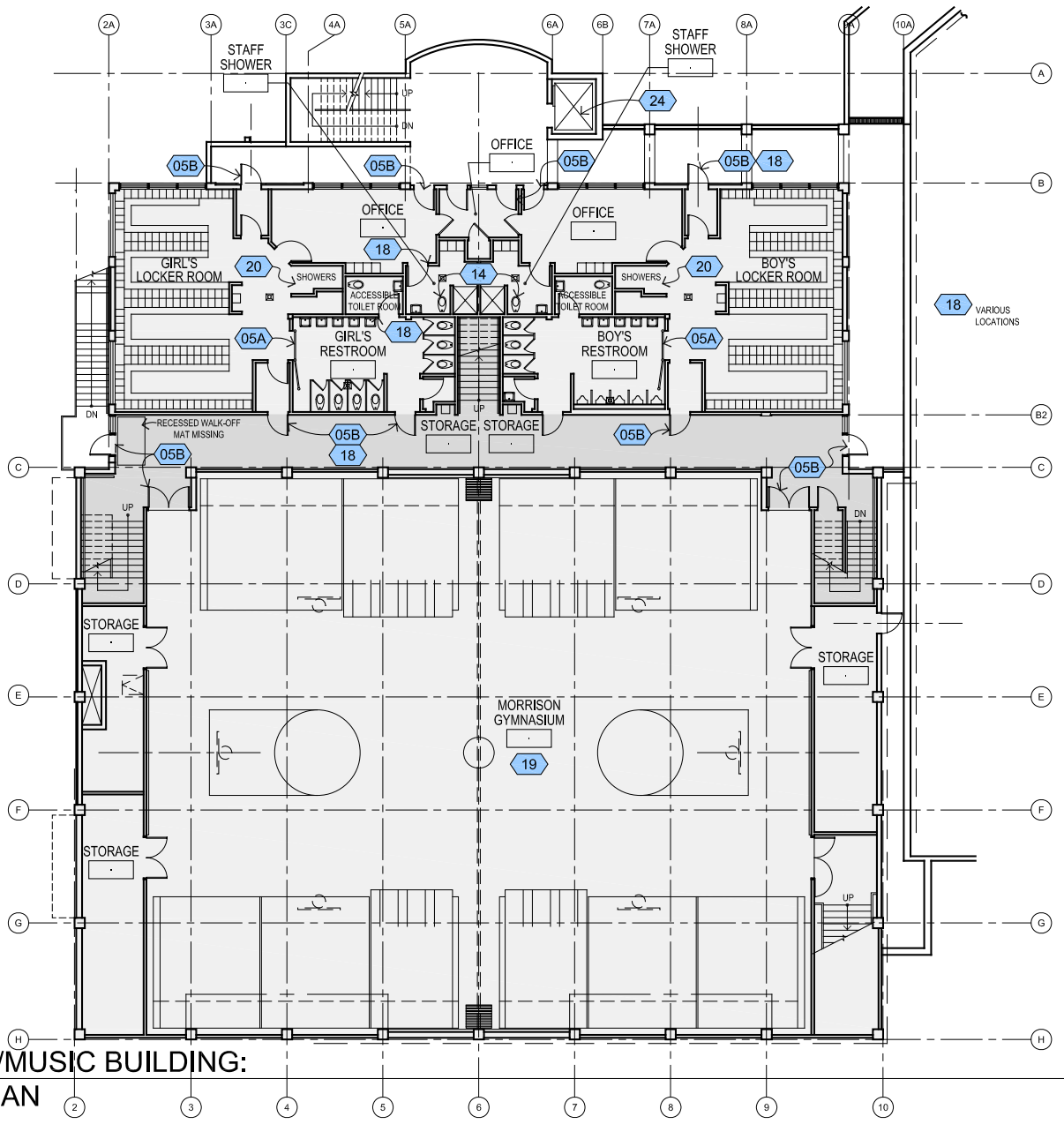


BUILDING E - GYM/MUSIC BUILDING: LOWER FLOOR PLAN



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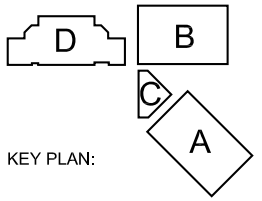
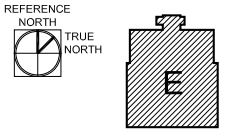
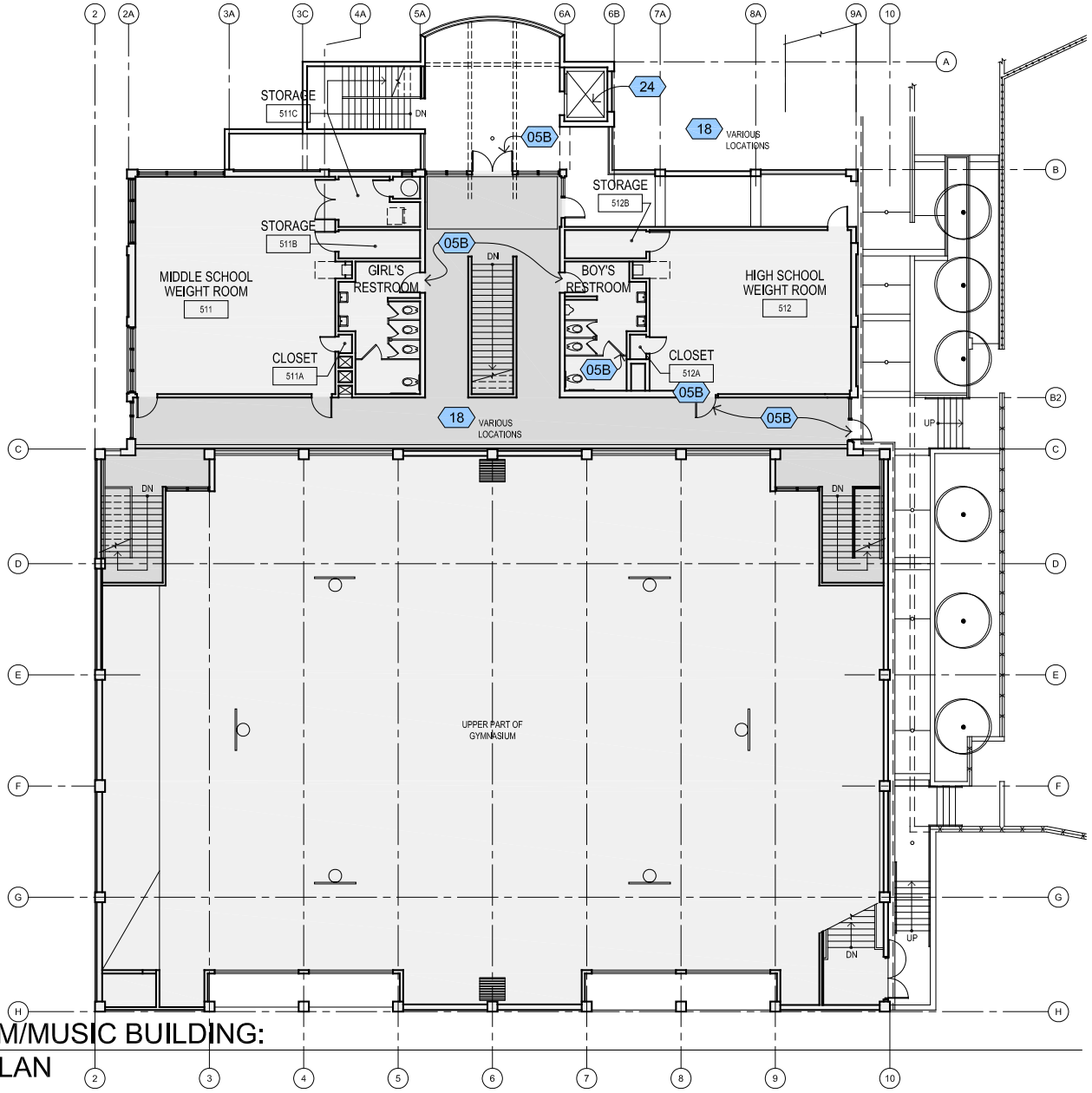


KEY PLAN:



BUILDING E - GYM/MUSIC BUILDING: MIDDLE FLOOR PLAN



SCALE: 1/16" = 1'-0"

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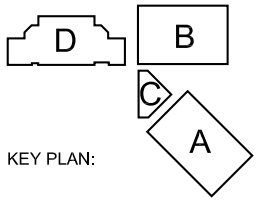


KEY PLAN:

REFERENCE NORTH

TRUE NORTH

E

BUILDING E - GYM/MUSIC BUILDING:
UPPER FLOOR PLAN

3. FIRE/ LIFE SAFETY

3. FIRE/LIFE-SAFETY

A. Background:

As with accessibility, fire and life-safety is governed by the California Building Code and is enforced by the Division of the State Architect (DSA). Unlike the accessibility regulations the fire and life-safety regulations are spread throughout the Code; however, most of the pertinent regulations are in Chapters 5 and 10. There is no overarching life safety regulation like ADAAG for fire and life safety. Life Safety is not an area where the School District, the design professional or DSA would compromise; however, there will be areas of negotiation about what is acceptable given the fact that the existing buildings may be constructed differently from what would be built today under current codes. Nonetheless, a primary objective of the project, in addition to seismic safety and accessibility will be to increase fire and life-safety at the schools.

B. Summary & Analysis

The Buildings A, B, C, D, & E were analyzed for fire/life safety code compliance. These findings are summarized in Appendix B: Code Analysis, as well as on the drawings in this section. This report identifies deficiencies. The next phase of the project will offer conceptual solutions to these deficiencies.

Of critical importance are construction type and allowable floor areas; individual and cumulative occupancies and occupant loads, which determine required exiting and area separations. See Appendix B for the code review summary

C. Site

There is an interior road that comes off of El Cerrito Avenue that provides access for the Fire Department. We will be meeting with the Piedmont Fire Department to review the school for fire department access, as well as any other concerns of the Fire Department.

Building D Upper Floor Exit from Corridor


Building E Upper Floor Exit


Building D Upper Floor Corridor

D. Buildings

In general the three buildings (the original 1973 building, the Science building, and the Gymnasium/Music building) are substantially in compliance for fire and life safety. However, a modernization project could trigger additional fire and life safety upgrades.

Section 305.9 of the 2001 California Building Code requires that all educational facilities known as E-occupancy, have a State Fire Marshal approved and listed fire alarm system. The buildings on the Piedmont Middle School campus have a fire alarm system although it's compliance with current life safety standards will need to be evaluated and confirmed with DSA.

None of the buildings have tactile exit signage required by CBC Section 1003.2.8.6.

As previously mention, Buildings A, B, & C are considered one building for the purposes of code analysis. The building appears to be substantially in compliance. The exiting is generally from a room on to an exterior exit balcony. There is adequate exit width in the exterior exit balconies, door swings do not obstruct the exit path, the stairs that serve as exits are clearly indicated with exit lights, and walls are constructed of non-combustible materials. The adequacy of the exit light placement, the number of exit lights may be less than required by CBC Section 1003.2.8.2 and should be evaluated and reviewed with DSA. The following are noted fire and life safety deficiencies specific to the three wings of this building.


Building E Locker Room Exit


Building E Signage, Alarm


Building E Signage, Alarm

Building A - Multi-Use Wing

The Film Classroom requires two exits based on use and occupant load. Code allows one exit to pass through one intervening room. The Film Classroom's second exit passes through two intervening rooms and as such, is not compliant.

Building B - Classroom Wing

The Teacher's Lunch Room 201 has an occupant load that requires two exits. Only one exit is available. The room appears to have been a classroom in the original plans.

Building C - Administration Wing

The Food Service was added after the original construction. No DSA-approved drawings were located. DSA approval and health code compliance is required for such an addition. DSA may require verification of As-Built conditions.

Building D - Science Building

The Science Building is generally in compliance for fire and life safety.

Computer Classroom 401 exit door obstructs the exit door leading to the exterior. The original plan showed that Room 401 exiting directly to the exterior. The obstructing door was done as a remodel. No DSA-approved drawings were located for this remodel. DSA approval is required for such a change and may require verification of As-Built conditions.

Building E - Gymnasium / Music Building

A few of the interior doors to corridors did not have a fire label required by CBC Section 1004.3.2.1.

In the Morrison Gymnasium, the required posting of the room capacity was missing. In addition, the exit door in the folding partition needs to be reviewed for compliance. Door was unavailable for review during our site visits.

Building A - Not compliant door

Building E - Music Office / Library

Building E - Exit stair

Building A - Food Service Facility

Building B - Panic Hardware

LIFE SAFETY NOTES:

1. SIGNAGE THROUGHOUT IS NOT COMPLIANT. MOST ROOM IDENTIFICATION SIGNAGE WHERE PROVIDED IS NON COMPLIANT.

01 ROOM CAPACITY NOT POSTED OR INACCURATE (CBC 1007.2.6).

02 NO DSA APPROVAL DRAWINGS LOCATED FOR ROOM REMODEL.

03 HANDRAILS AT STAIRS NOT COMPLIANT (CBC 1003.3.3).

04 ROOM EXIT INTERFERES WITH STAIRWELL EXIT DOOR.

05 ROOM'S SECOND EXIT IS NON-COMPLIANT.

06 NO DSA APPROVAL DRAWINGS LOCATED FOR ADDITION OF FOOD FACILITY.

07 SMOKE DETECTOR REQUIRED DUE TO INTERVENING ROOM (1007.3.4).

08 LACKING OR DAMAGED FLOOR LEVEL EXIT LIGHTING.

09 CONFIRM MEANS OF EGRESS LIGHTING (MIN. 1 FC) COMPLIES WITH CBC.

10 NO EMERGENCY LIGHTING.

11 NO SFM APPROVED FIRE ALARM SYSTEM (CBC 305.9).

12 DOOR NOT RATED.

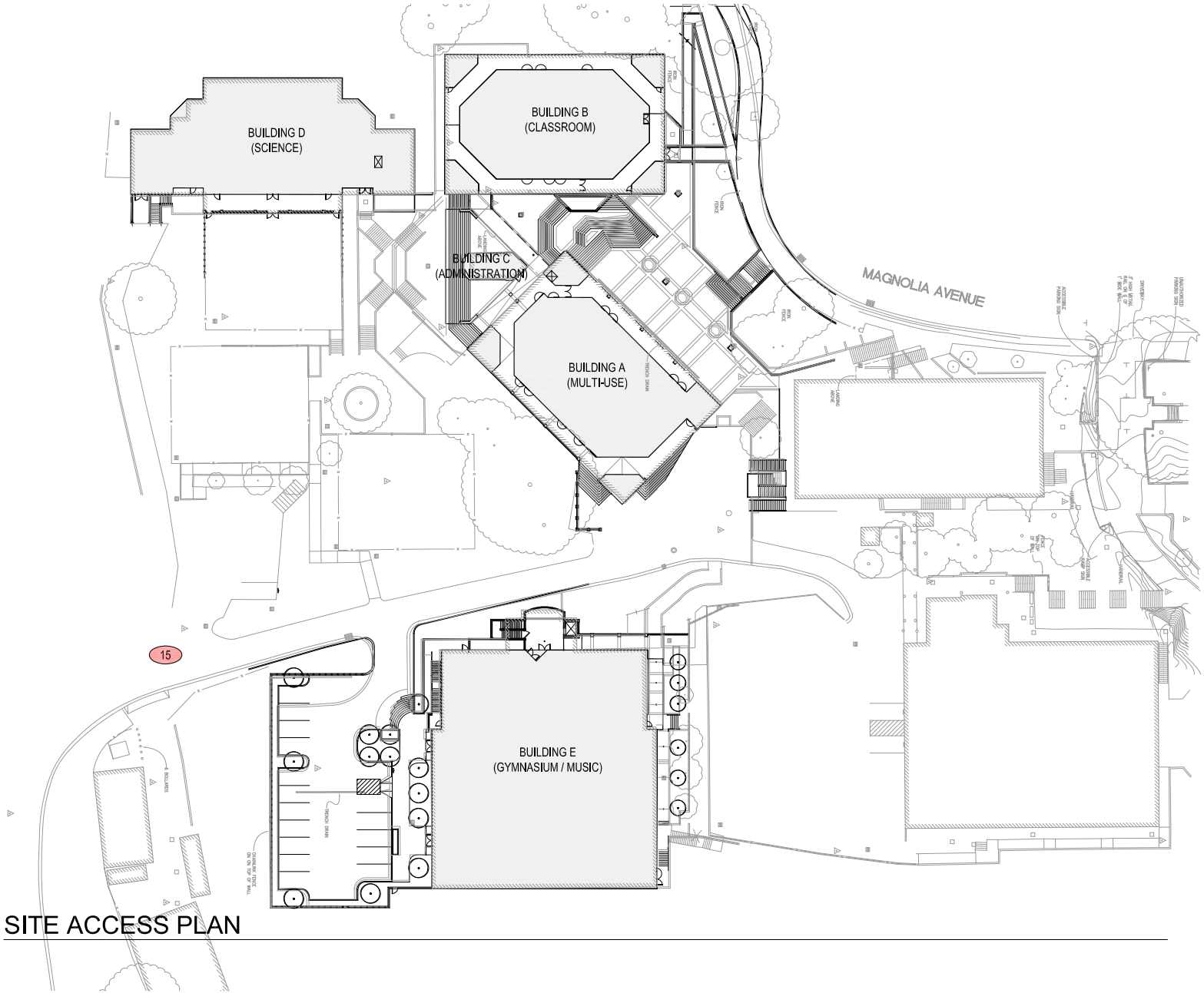
13 CONFIRM FIRE SPRINKLERS COMPLY WITH CBC.

14 NO PANIC HARDWARE PROVIDED.

15 FIRE LANE MAY BE REQUIRED BY PIEDMONT FIRE DEPT. WILL CONFIRM WITH PIEDMONT FIRE DEPT.

ABBREVIATIONS:

F.E. EXISTING FIRE EXTINGUISHER
P.H. EXISTING PANIC HARDWARE



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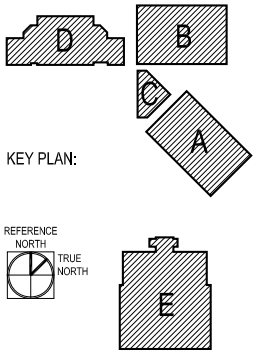
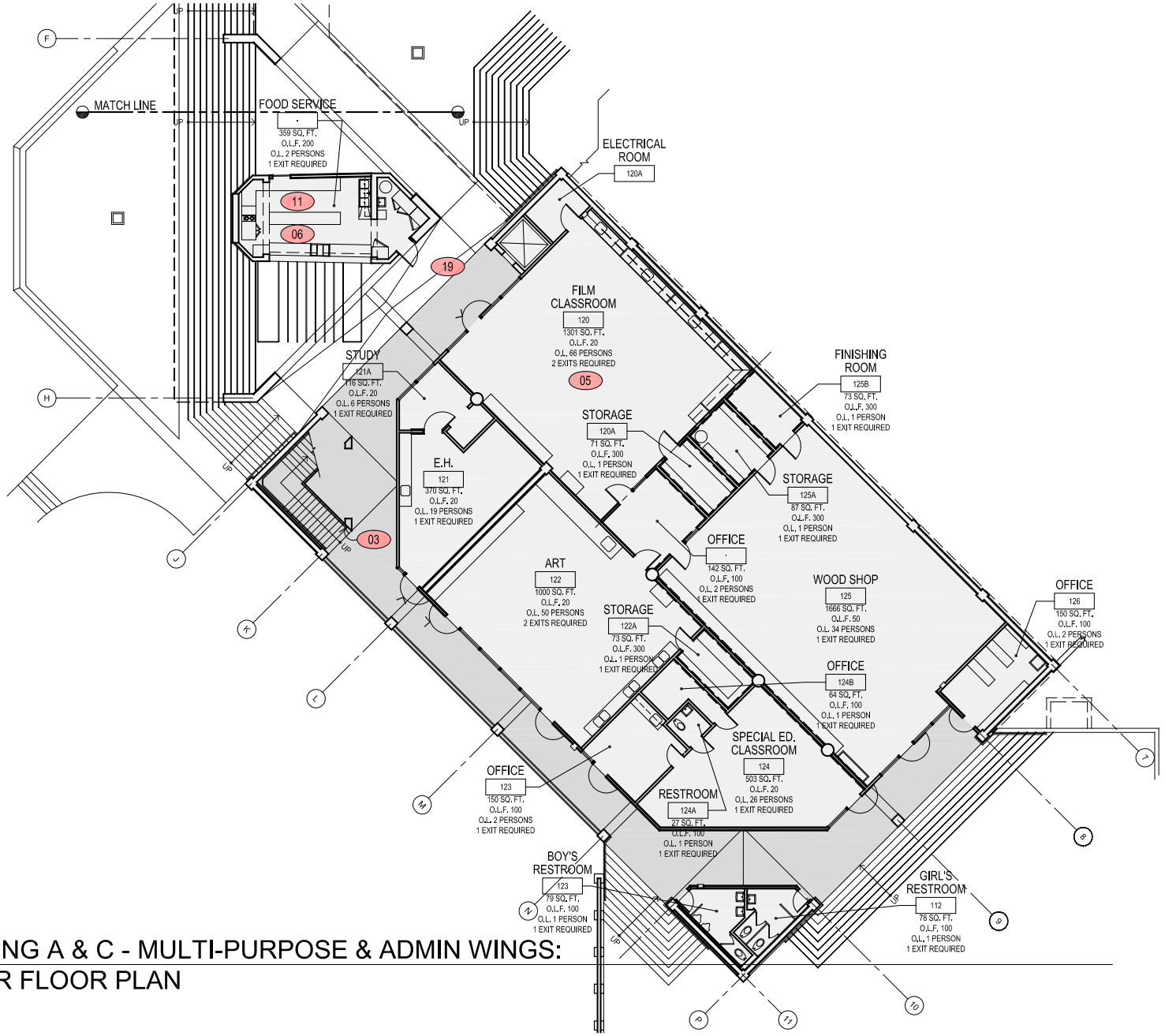


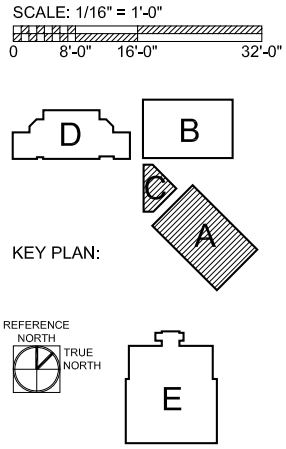
KEY PLAN:

REFERENCE NORTH

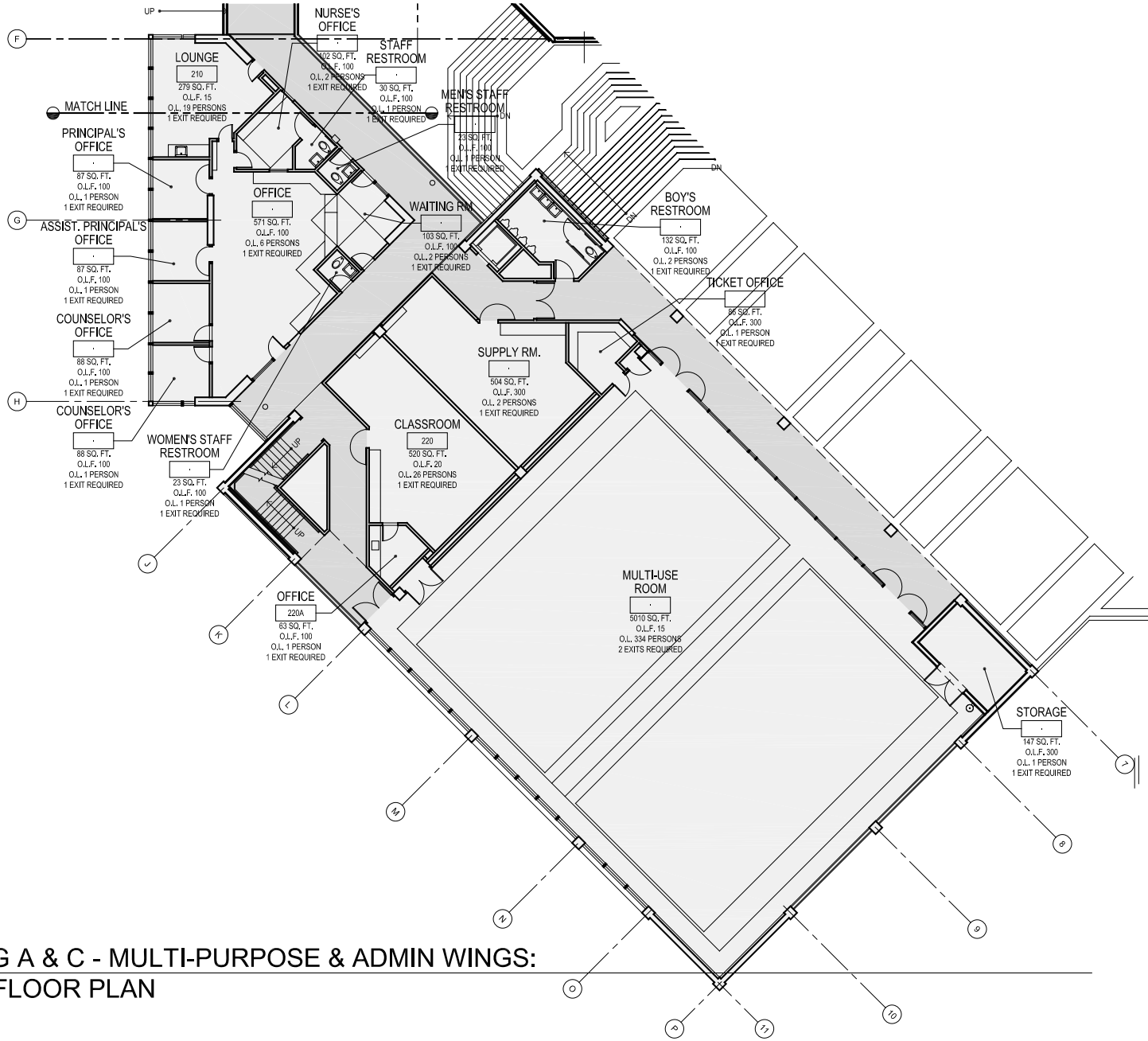
TRUE NORTH

SITE ACCESS PLAN





BUILDING A & C - MULTI-PURPOSE & ADMIN WINGS:
LOWER FLOOR PLAN



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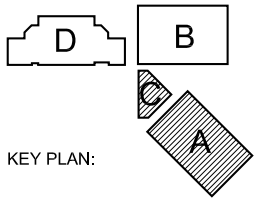

KEY PLAN:

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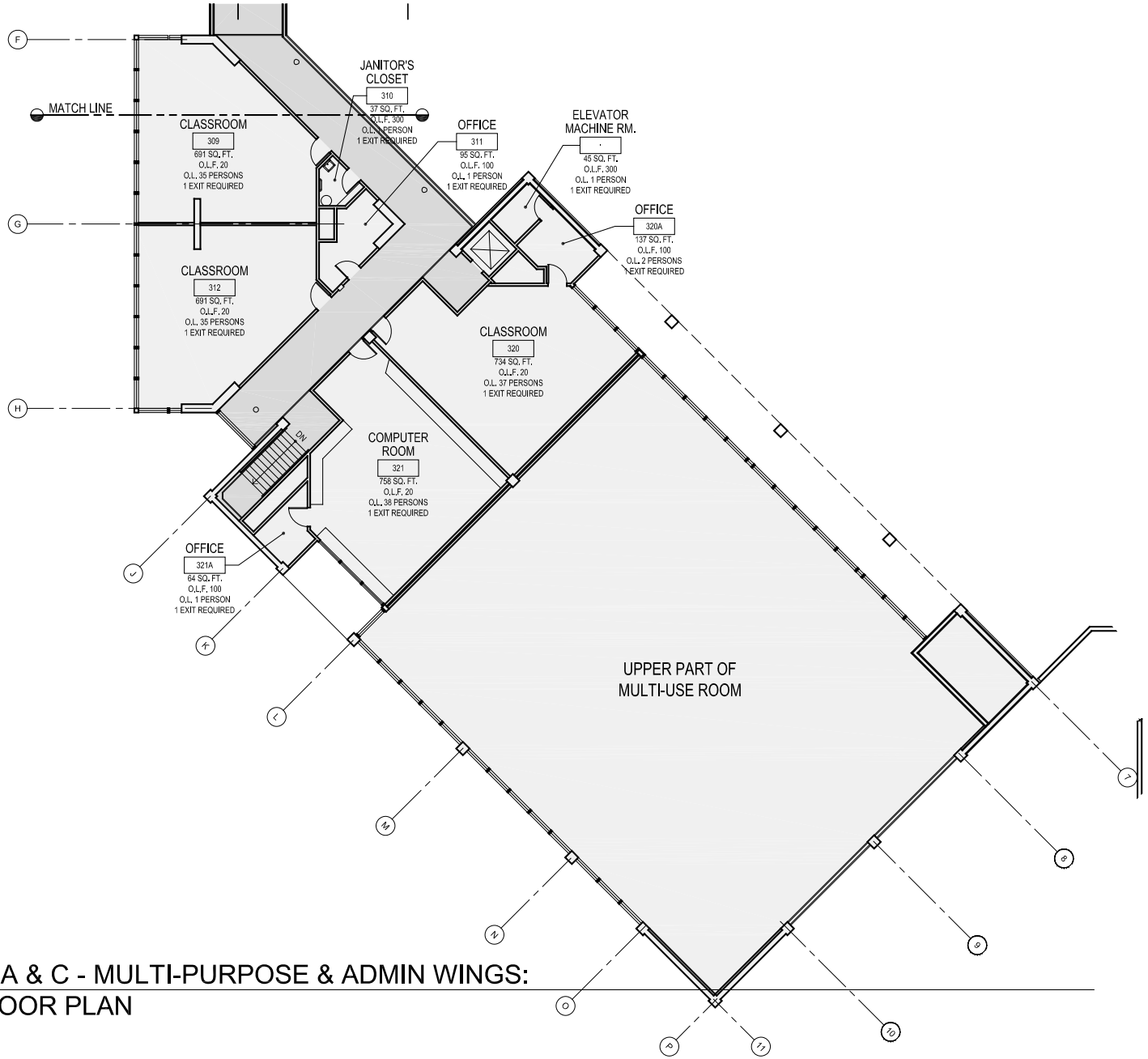
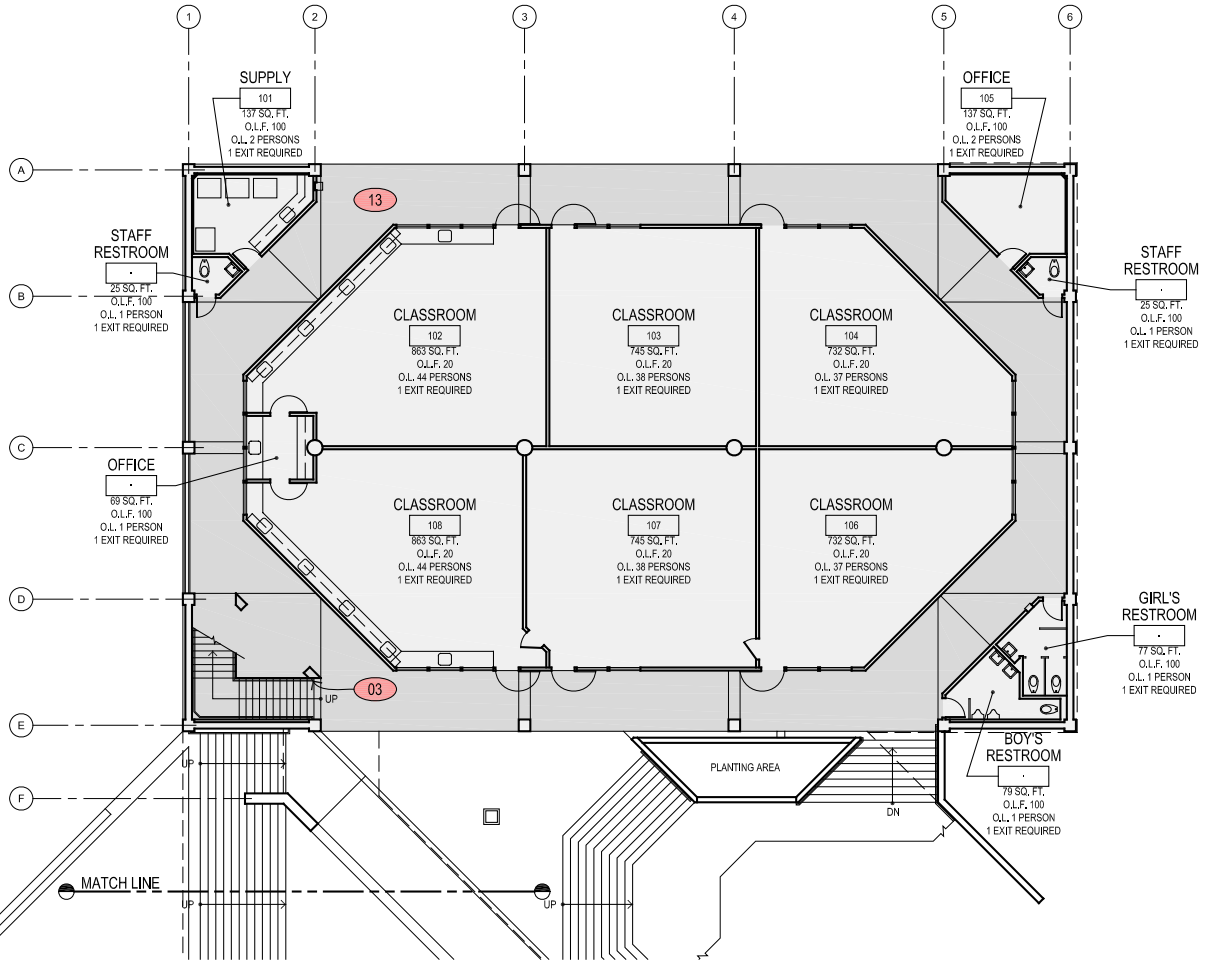
BUILDING A & C - MULTI-PURPOSE & ADMIN WINGS: MIDDLE FLOOR PLAN



BUILDING A & C - MULTI-PURPOSE & ADMIN WINGS: UPPER FLOOR PLAN



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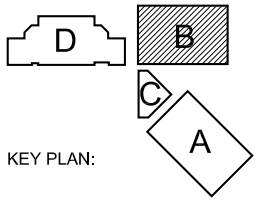

KEY PLAN:

REFERENCE NORTH

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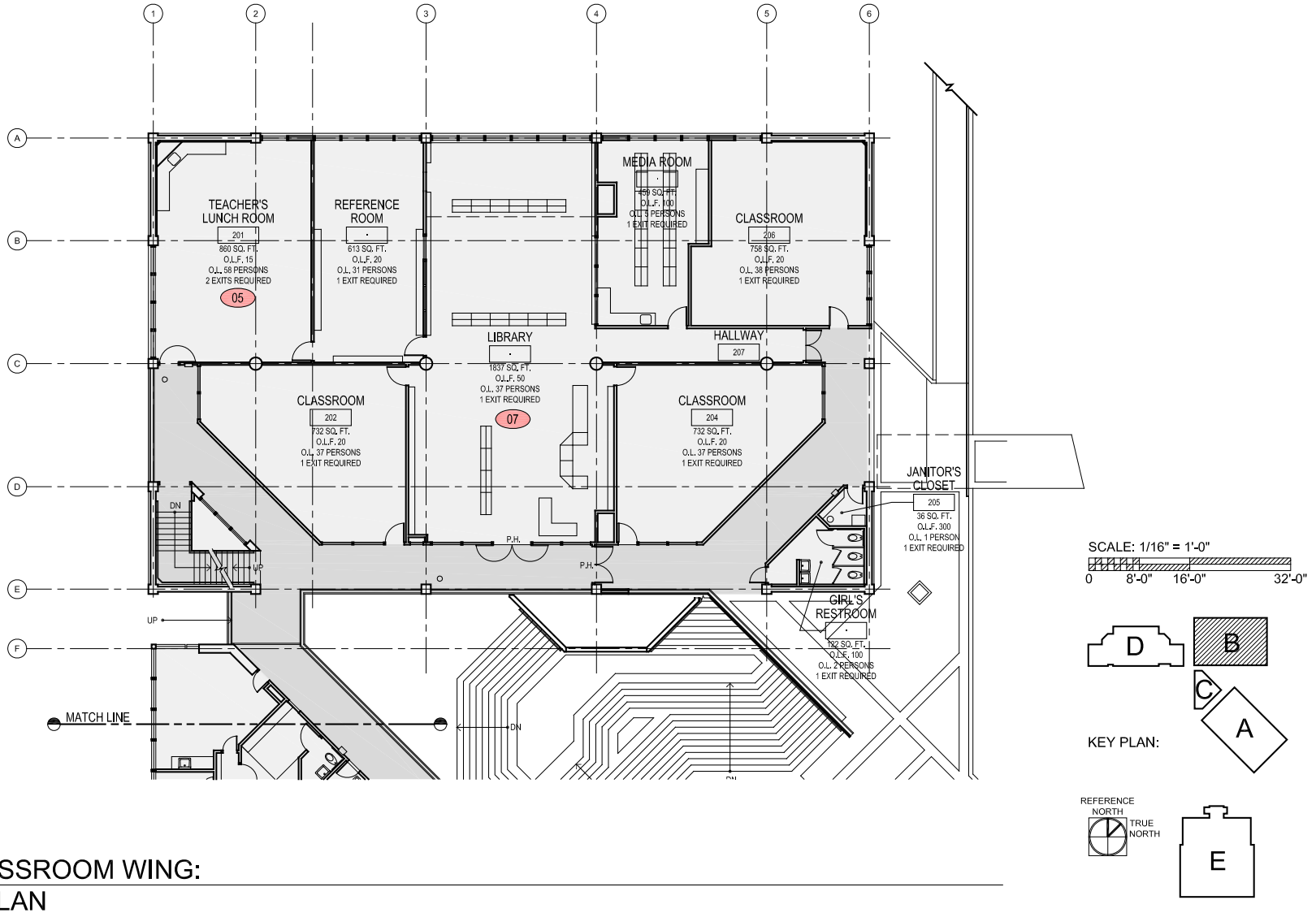
BUILDING B - CLASSROOM WING:
LOWER FLOOR PLAN



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KEY PLAN:

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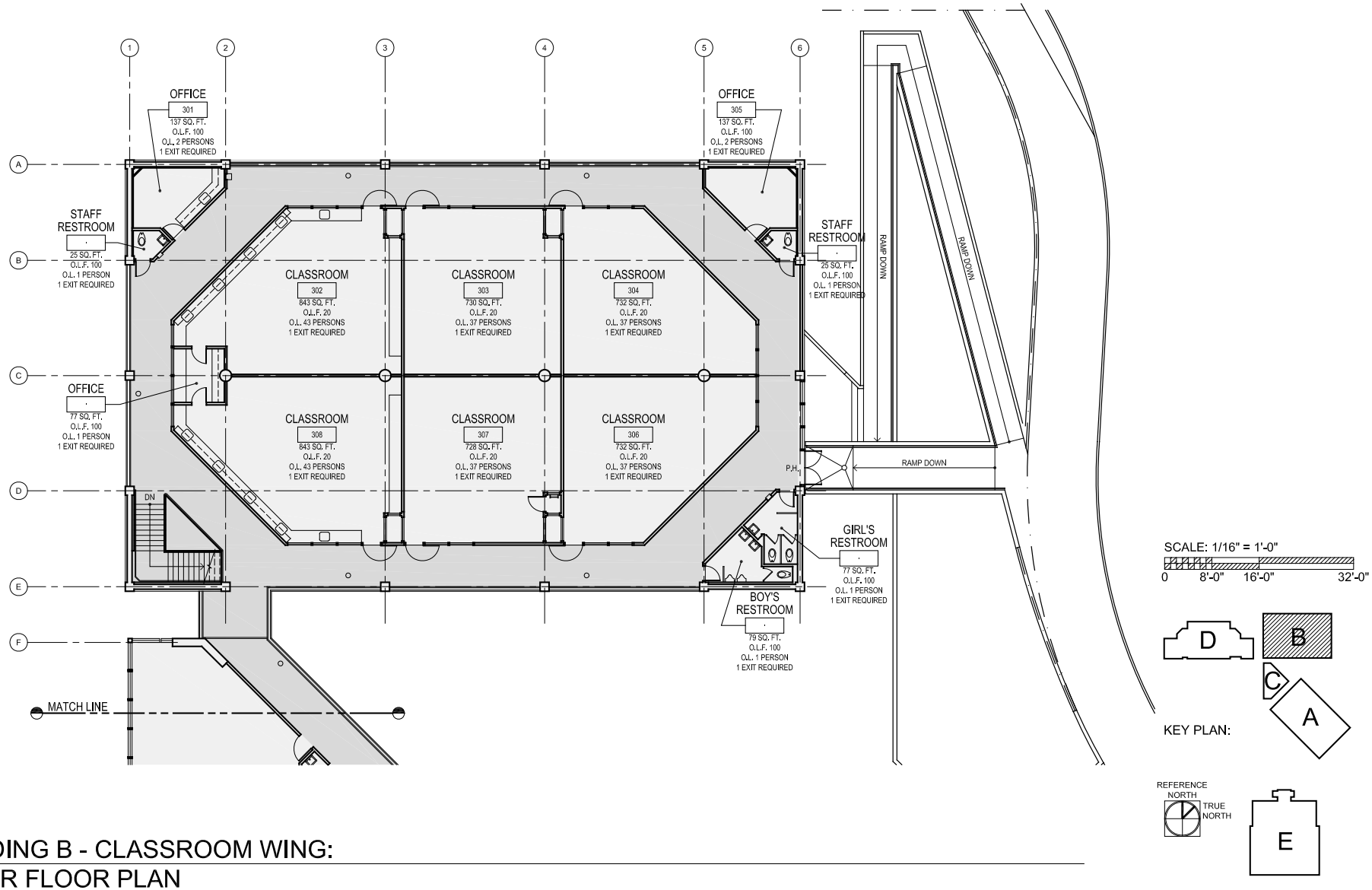
TRUE NORTH

E

BUILDING B - CLASSROOM WING:
MIDDLE FLOOR PLAN

life safety



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KEY PLAN:

REFERENCE NORTH
TRUE NORTH

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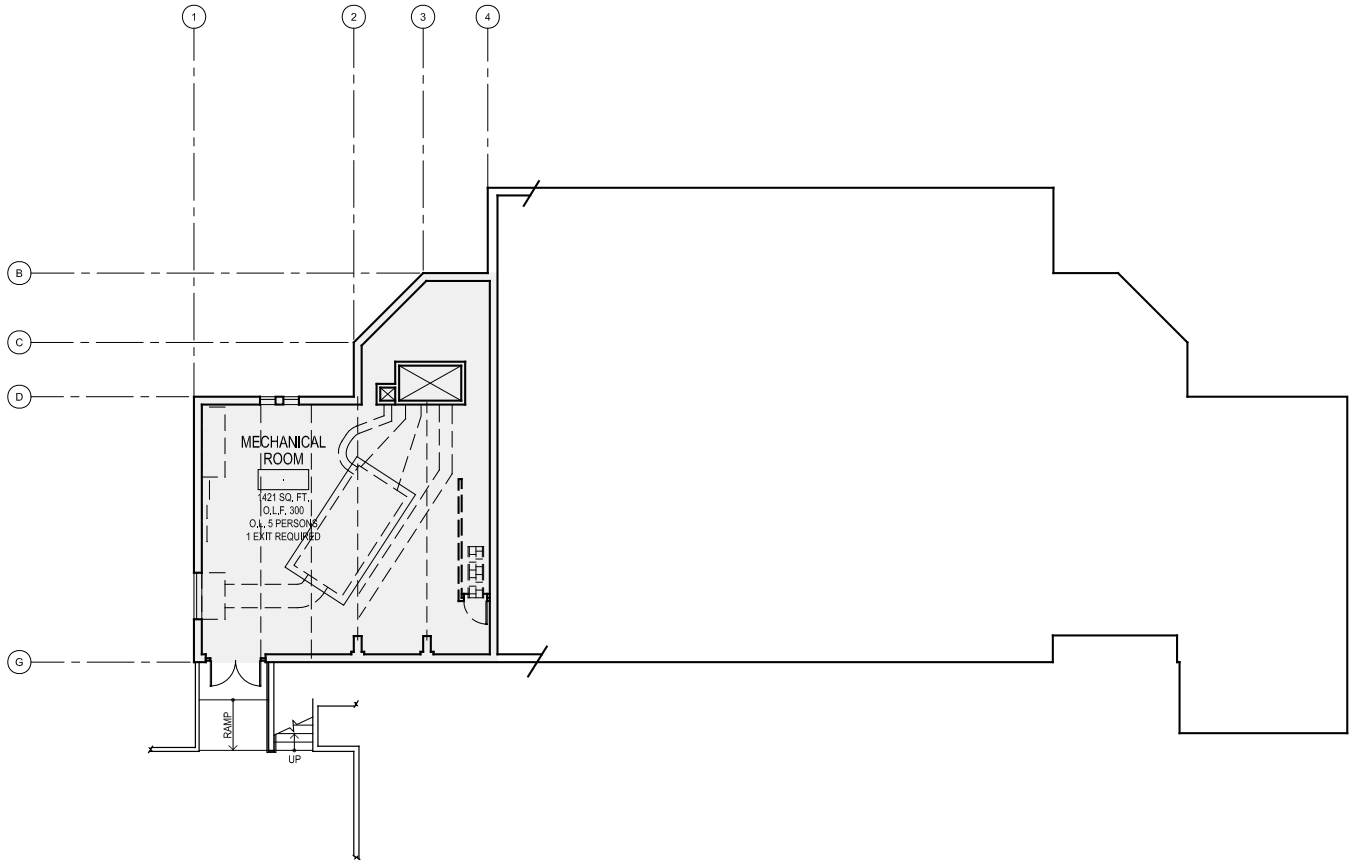
BUILDING B - CLASSROOM WING:
UPPER FLOOR PLAN

life safety



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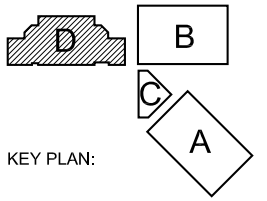

KEY PLAN:

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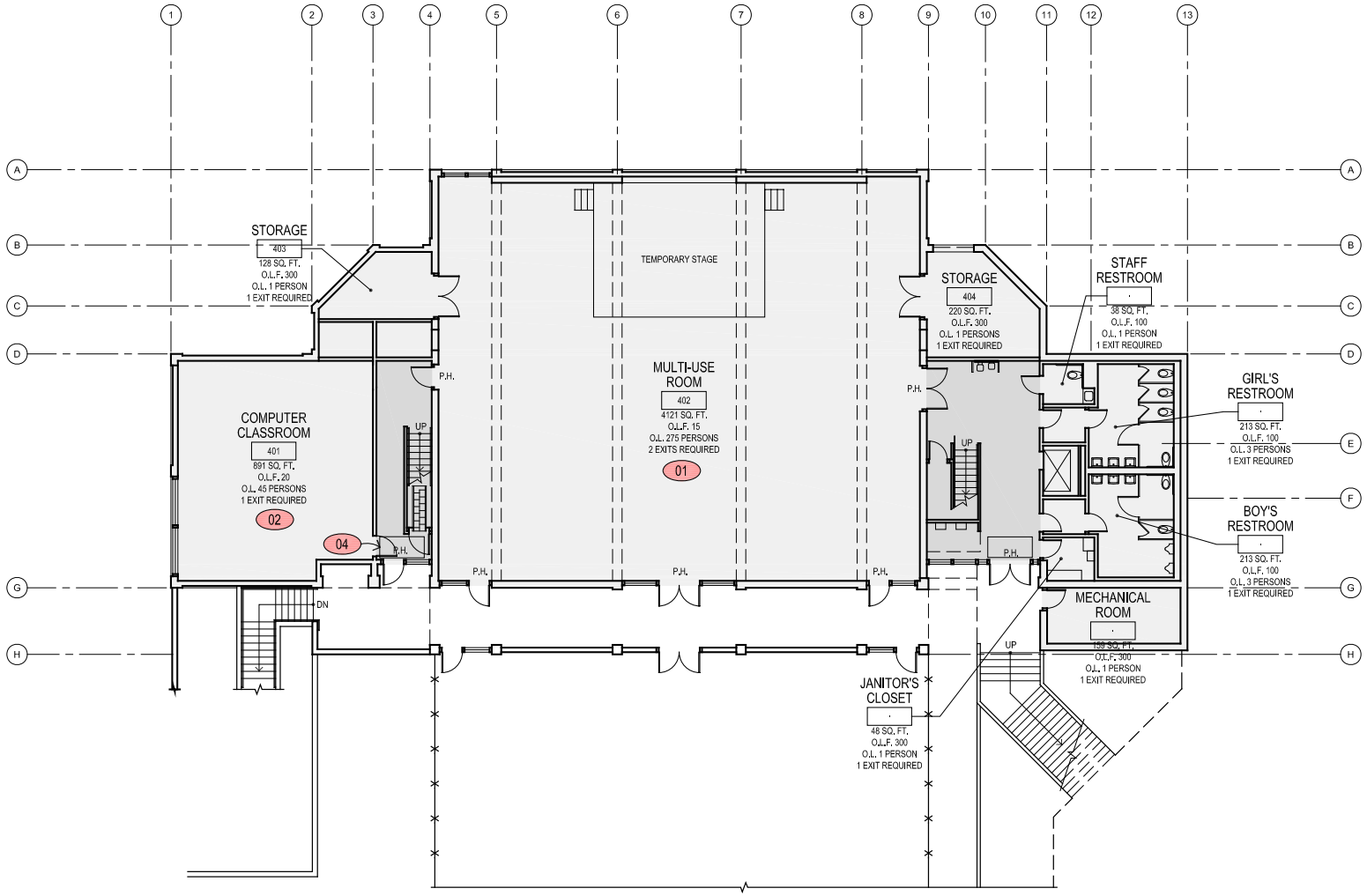
TRUE NORTH

E

BUILDING D - SCIENCE BUILDING:
LOWER FLOOR PLAN



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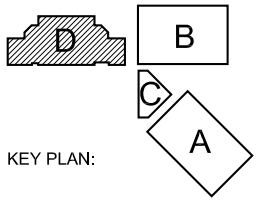

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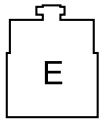
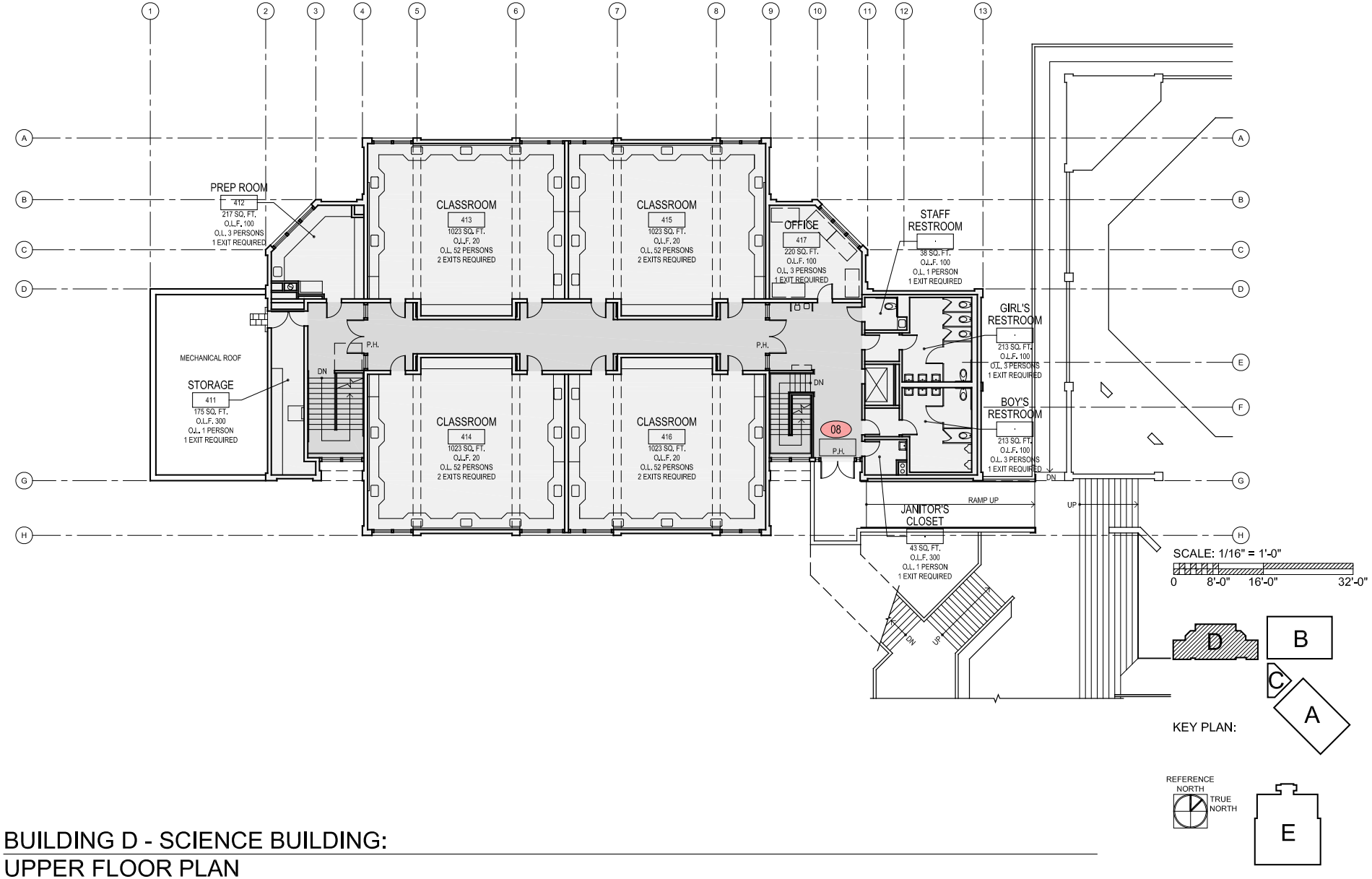
TRUE NORTH



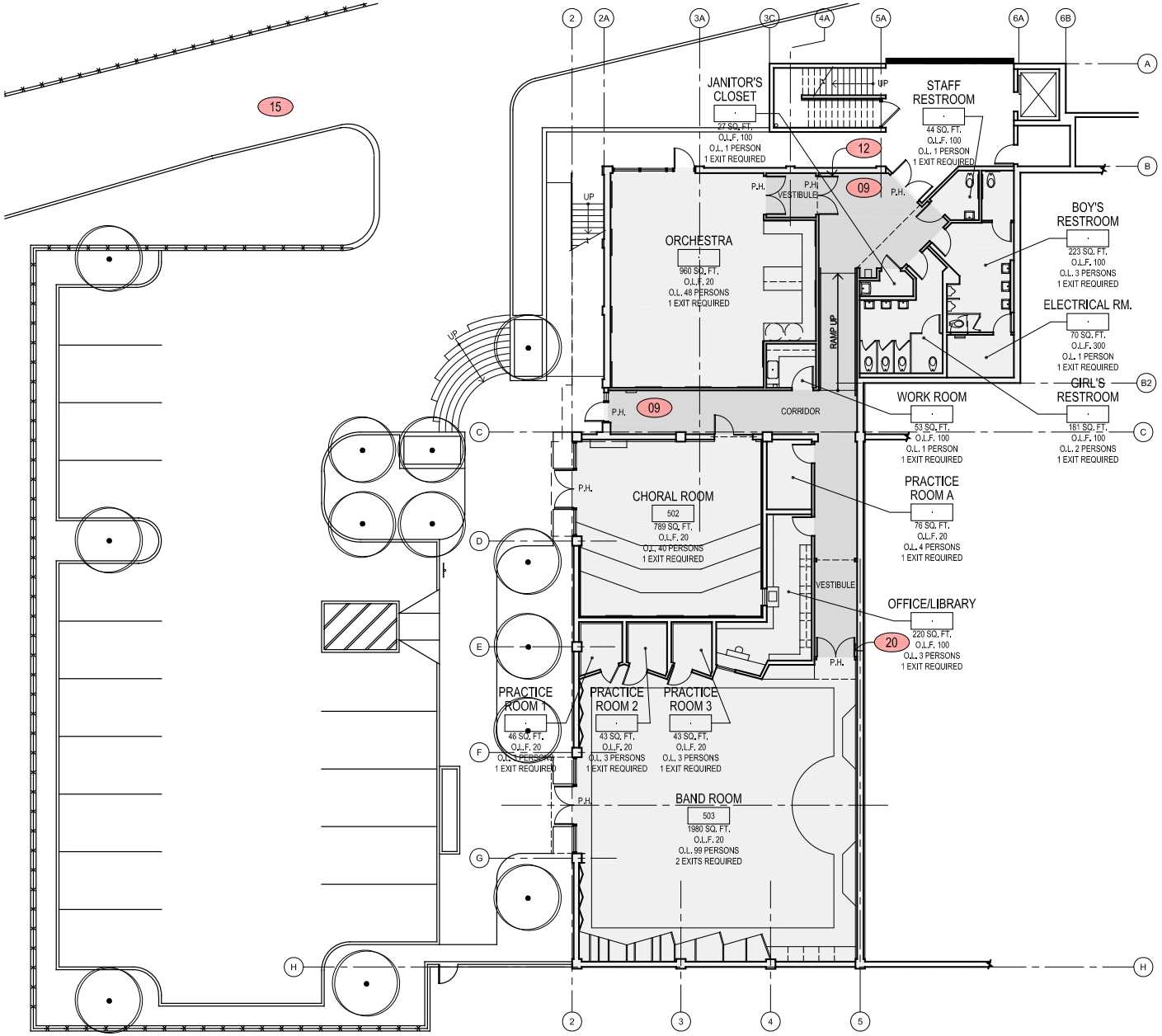
BUILDING D - SCIENCE BUILDING:
MIDDLE FLOOR PLAN

life safety



BUILDING D - SCIENCE BUILDING:
UPPER FLOOR PLAN

life safety



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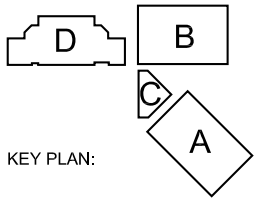

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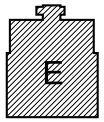
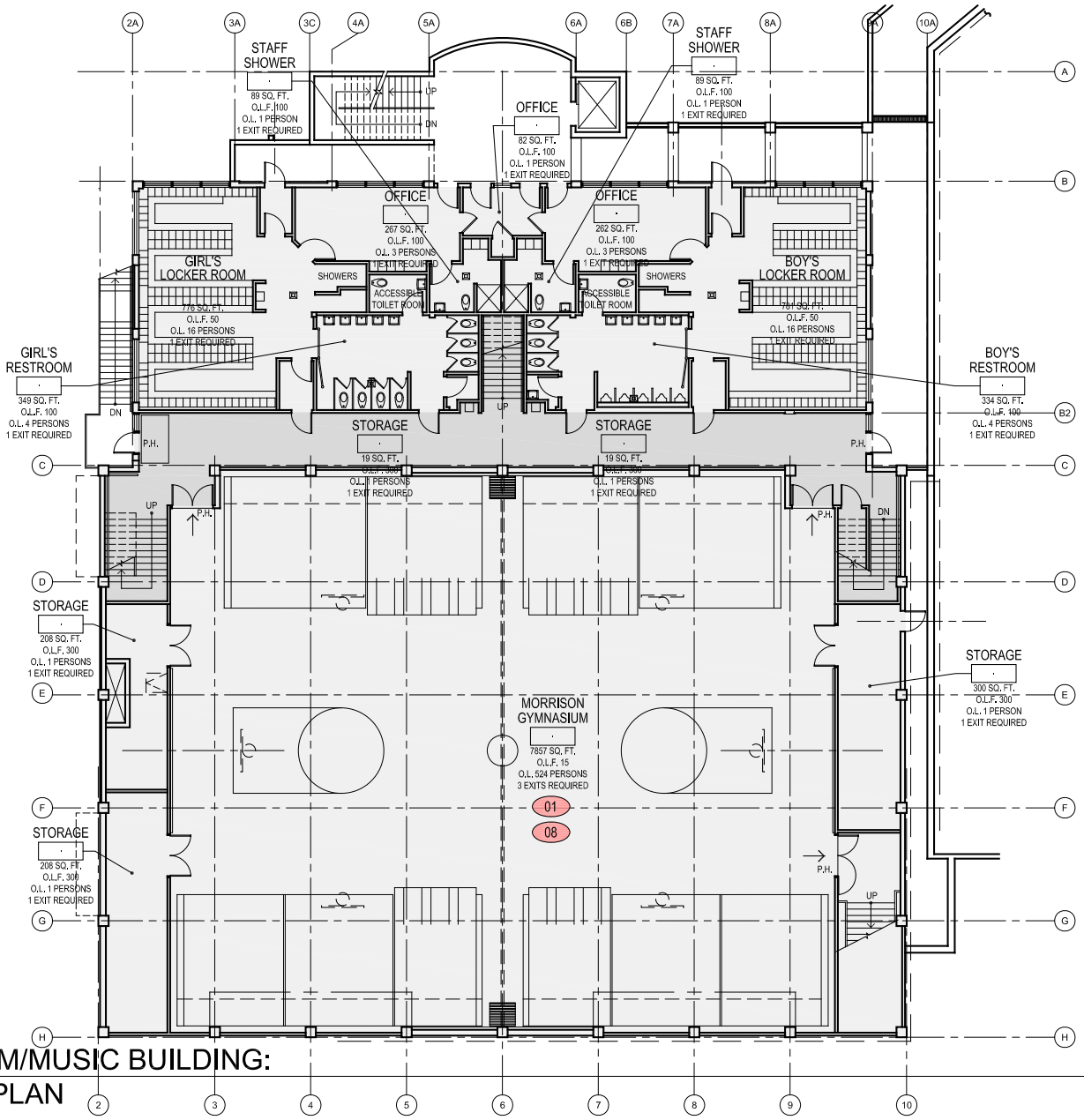


BUILDING E - GYM/MUSIC BUILDING: LOWER FLOOR PLAN

life safety



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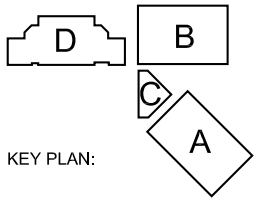

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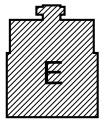
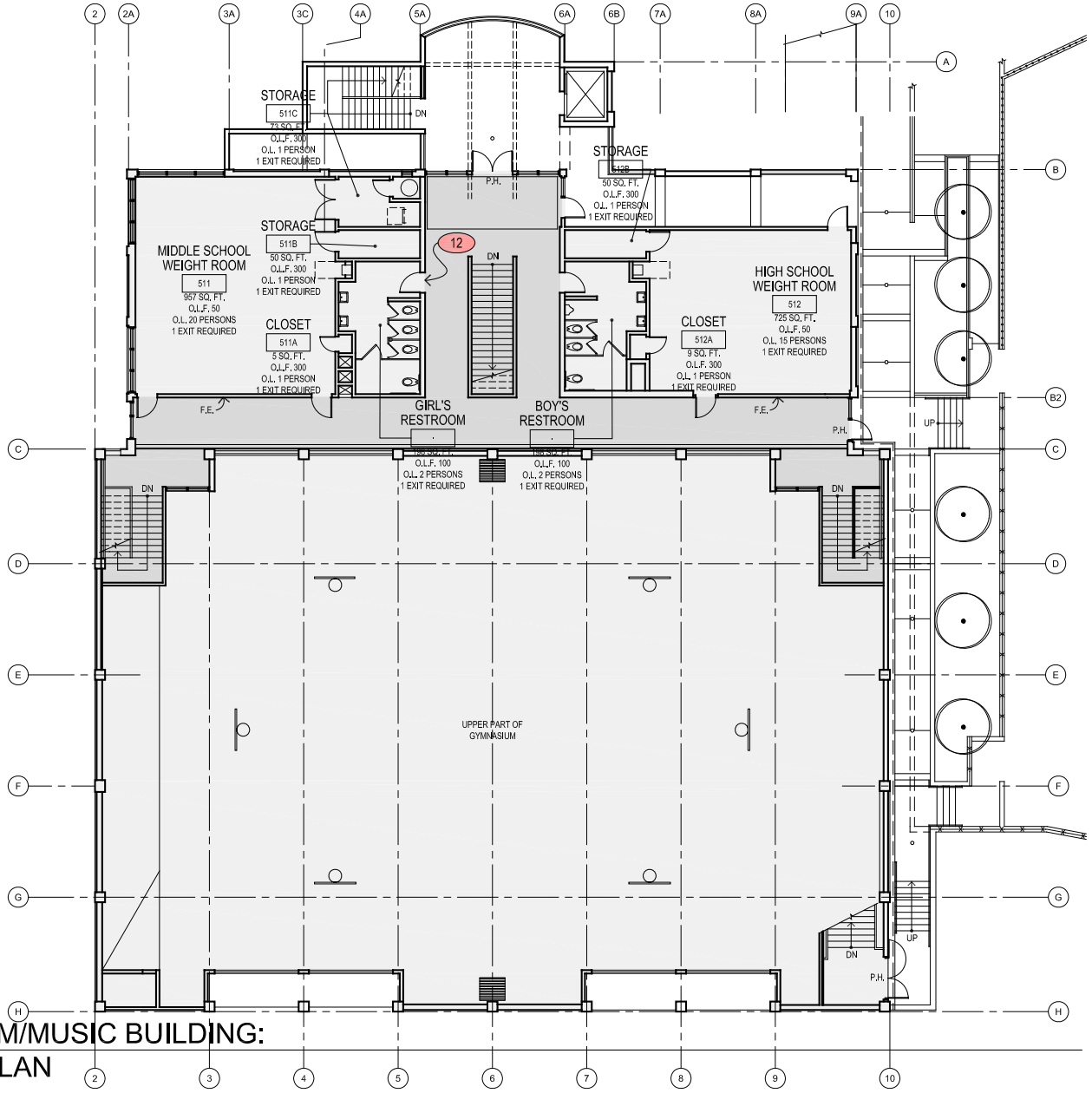
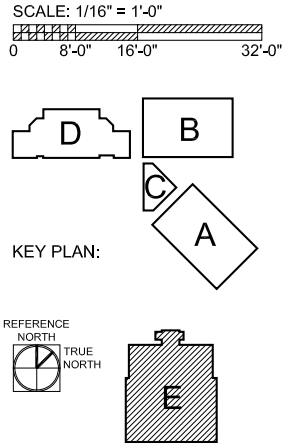


BUILDING E - GYM/MUSIC BUILDING: MIDDLE FLOOR PLAN





BUILDING E - GYM/MUSIC BUILDING:
UPPER FLOOR PLAN

4. STRUCTURAL TIER 2 REPORT

Survey of Piedmont Middle School for Nonstructural Seismic Hazards, Piedmont Unified School District

Prepared for
murakami/Nelson Architects, Inc.
Oakland, CA

January 2, 2008

Prepared by
R. P. Gallagher Associates, Inc.
Structural Engineers
Oakland, CA

Executive Summary

A survey of Piedmont Middle School for nonstructural seismic hazards was conducted. The evaluation criteria used was ASCE Standard 31 "Seismic Evaluation of Existing Buildings," published in 2003 by the American Society of Civil Engineers. This document is the generally recognized national standard for assessing the life safety risk of existing buildings, including nonstructural hazards.

The school consists of five buildings: Building A (Multi-purpose), Building B (Classroom), Building C (Administration), Building D (Science), and Building E (Gym/Music). A survey consisting of a room-by-room examination of nonstructural elements was conducted by a structural engineer experienced in seismic design and postearthquake damage reconnaissance. The Tier 1 procedures of ASCE 31 were used. This involves an examination of the various nonstructural items and completion of a checklist. Review of construction drawings and preparation of calculations is generally not done in a Tier 1 evaluation. Results are summarized below.

(1) In general, there are relatively few nonstructural hazards in the five buildings.

(2) Most tall bookcases and storage cabinets are restrained against overturning.

(3) Gas-fired equipment was found to be seismically braced and most equipment, but not all, had flexible gas lines.

(4) Most glazing is either tempered glass or plastic and considered low risk.

(5) The buildings are sprinklered and the sprinkler piping is braced. Piping in the Buildings A, B and C may not meet ASCE 31 requirements, but there does not appear to be any falling hazard associated with it.

(6) A few large items such as a kiln, some tall metal storage cabinets, and some tall wood bookcases are unrestrained and can overturn.

The nonstructural hazards identified should either be given an ASCE 31 Tier 2 evaluation and/or abated, particularly those items designed as having a high vulnerability that can cause injury to persons in the vicinity. The criteria of ASCE 41 "Seismic Rehabilitation of Existing Buildings", published by the American Society of Civil Engineers in 2006, can be used.

CONTENTS

1. Introduction

This report summarizes a survey of Piedmont Middle School for nonstructural seismic hazards. The school is located at 740 Magnolia Avenue in Piedmont.

The school has five buildings: Building A (Multi-purpose), Building B (Classroom), Building C (Administration), Building D (Science) and Building E (Gym/Music). Construction of each was done under the jurisdiction of the California Division of State Architect (DSA). The Buildings A, B, and C (Figure 1) were constructed in the mid-1970's. The Building D (Figure 2) and Building E (Figure 3) were built in the mid-1990's.

The work presented in this report summarizes the results of the survey. The purpose of the survey was to identity potential falling and other hazards that may be triggered in a major earthquake, particularly those items that may cause injury or death, and those items that can cause postearthquake fire or hazardous material release.

The report is organized as follows. The criteria used in the evaluations are described in Section 2. Results of the nonstructural hazard survey are presented and discussed in Section 3. A summary and recommendations are given in Section 4.

Figure 1 – Buildings A, B and C

Figure 2 – Building D

Figure 3 – Building E

2. Evaluation Criteria

Nonstructural Components

The nonstructural elements, equipment, and contents in the five buildings were evaluated using the criteria of ASCE Standard 31-03 "Seismic Evaluation of Existing Buildings" (Ref. 1). This is the state-of-the-art criteria used for the seismic evaluation of existing buildings. It is used to establish whether there is a significant life safety risk. Items were evaluated in a site survey using the Tier 1 criteria of ASCE 31, supplemented by additional guidance developed by DSA and other state agencies (Ref. 2).

According to Table 2-1 of ASCE 31, the site is situated in an area of "high seismicity", and the Basic Nonstructural and the Intermediate Nonstructural Component Checklists must be used for the Life Safety performance level.

Earthquake Ground Motions

Earthquake ground motions for the site were obtained from the seismic ground shaking maps found on the CD-ROM Seismic Design Parameters (Ref. 3). These ground shaking maps were developed by the U. S. Geological Survey under the National Earthquake Hazards Reduction Program (NEHRP). Ground motions at the site were determined for the Maximum Considered Earthquake (MCE). This represents an earthquake with only 2-percent chance of being exceeded in 50 years (i.e., an earthquake with a 2,500 year return period). However, only 2/3 of this level of motion is required to be used. At this location, the design short-period spectral response parameter (SDS) is 1.28g. "High seismicity" is defined by ASCE 31 as a SDS value 0.50g or greater.

3. Nonstructural Hazard Survey

Survey Methodology

This section describes the survey of Piedmont Middle School for nonstructural seismic hazards and presents the results. The purpose of the survey was to identify potential falling and other hazards that may cause life safety risk, or result in other hazards such as postearthquake fire or hazardous materials release.

Nonstructural components consist of things that are brought into a building after it has been constructed (e.g., furnishings, bookshelves, and building contents) as well as items that were installed when the building was built (e.g., mechanical and electrical equipment and fixtures, ceilings, and partitions). These can become hazards when they break, fall, slide or overturn. When this happens they can cause injury, block exits, and create secondary hazards such as chemical spills, gas leaks and postearthquake fires.

A nonstructural hazard survey of the five buildings was done using the ASCE 31 Tier 1 procedures. The Basic and Intermediate Nonstructural Component Checklists were used. The survey involved a room-by-room inspection of the buildings by a structural engineer experienced in seismic design. The survey was conducted on June 20, July 3 and July 11, 2007.

Table 1 summarizes results for the Buildings A, B and C. Table 2 summarizes results for Building D and Table 3 for Building E. The tables identify the items examined, the estimated vulnerability of the item, and observations about each. The survey was entirely visual, and no drawings were reviewed or calculations prepared. The levels of vulnerability used are defined as follows:

Vulnerability	Characteristics
High (H)	Noncompliant under ASCE 31 Tier 1 procedures. Possesses little or no seismic resistance; item may break, fall, slide or overturn during strong shaking. High probability of damage under strong shaking. May cause injury to persons in vicinity.
Moderate (M)	Possesses some seismic resistance, but not as much as an item rated low.
Low (L)	Compliant under ASCE 31 Tier 1 procedures. Possesses good seismic resistance, should resist moderate shaking without damage. Low probability of damage under strong shaking. Unlikely to cause injury to persons in vicinity.

Building Contents on Tables and Shelves

In addition to the survey results given in Tables 1, 2, and 3 it should be noted that in many areas of the school there are unrestrained contents. These include such things as stored materials and books on shelves (Figure 1) and computer monitors on desks. While these are a threat to fall to the floor and may result in economic loss, they are generally not considered serious life-safety-hazards. Exceptions are unrestrained relatively heavy items stored overhead (Figures 2 and 3) and pointed or sharp objects (Figure 4) that can easily topple.

Bookcases and Storage Cabinets

There are many bookcases and storage cabinets located throughout the school. Most of these are secured to walls (Figure 5) and are unlikely to overturn, although contents may fall out. Some cabinets and bookcases are free-standing and unanchored. Those over 4 feet tall with height to depth ratios of 3.0 or greater are considered a hazard to overturn (Refs. 1 and 2).

File Cabinets

There are a number of file cabinets located throughout the school. The great majority of these are four drawer cabinets with locks on the drawers. There are a few file cabinets without drawer locks (for example see Figure 6), and these are a definite hazard to overturn when the drawers slide outward (see Figure 7). Those without drawer locks were rated as high risk (H) because of the overturning hazard.

Many file cabinets (but not all) are situated where they are a low risk of injury to persons in the vicinity or are “wedged in” or otherwise placed such that it is very unlikely that they will overturn. The ASCE 31 Tier 1 Supplemented Nonstructural Checklist requires that “file cabinets arranged in groups shall be attached to one another.” This requirement, however, is for the Immediate Occupancy (I/O) performance level. None of the file cabinets we observed were connected together or required to be under ASCE 31 life safety requirements.

Fluorescent Light Fixtures

Many fluorescent light fixtures in the school are installed in suspended ceilings. Several in each building were examined and found to have the required two independent wires at opposite diagonal corners. These meet Tier 1 criteria. Other fluorescent fixtures were either mounted directly to a rigid ceiling (ceiling-mounted), hung on chains (chain-hung), or hung on cables (cable-hung). The latter two types are not a threat to fall, provided they do not swing and strike a wall.

Fluorescent fixtures that are ceiling-mounted and connected to concrete slabs or wall board ceilings are considered low risk. Chain and cable-hung (Figure 8) are also considered low risk.

Suspended Acoustic Ceilings

These were spot-checked in several locations in each of the buildings, and the results are discussed below.

The Buildings A, B and C were constructed in the mid-1970’s, and the ceilings are not constructed with the compression strut and diagonal wire brace system used today. Individual

light fixtures in the ceilings have two wires at diagonally opposite corners, and ceiling runners are supported by suspension wires. The ceilings in these buildings are considered to comply with ASCE 31 Tier 1 requirements, even though they are not braced, because they weight less than 2 psf.

The Science building (Building D) and the Gym/Music building (Building E) were both constructed in the mid-1990's. Both have suspended ceilings that are braced with compression struts and splay wires. Fixtures typically have wires for suspension and the two diagonally opposite diagonal wires. The suspended ceilings in both the Science and Gym/Music buildings comply with ASCE 31 requirements, except for lay-in tile clips. None of the buildings have clips on lay-in tiles as required by ASCE 31 for exits and corridors, and the tiles may fall out during an earthquake.

Moveable Room Dividers

In Building B, several classrooms at the Upper Level (Rooms 302-308) and Lower Level (Rooms 102-108) are separated by movable room dividers (i.e., moveable partitions). These are secured at the tops by several steel brackets (see Figure 9 for example) that are bolted to concrete beams. The room dividers do not appear to be seismic hazards.

Emergency Gas Shutoff

The buildings have gas lines that supply gas to HVAC units on the roofs. We were unable to observe lines other than those on the roof because they are concealed. While the buildings have fire sprinklers and do not have wood frame construction, it may be desirable to install an earthquake-activated gas shutoff valve at the PG&E meter. This would automatically shutoff the flow of gas and could prevent a possible postearthquake fire. One possible source of postearthquake fire is the unanchored kiln (Figure 10) in Room 122 of Building A.

Sprinkler Piping

The five buildings have fire sprinklers. In Buildings A, B and C, the drops that penetrate the suspended ceiling do not appear to allow for ceiling movement. It is doubtful that the sprinkler piping in these buildings complies with ASCE 31 requirements, and postearthquake water leaks may occur, but it does not appear to be a falling hazard. The two newer buildings (Buildings D and E) appear to comply with ASCE 31.

Brick Veneer

Brick tile veneer is used on the exterior walls of the five buildings. On Buildings A, B and C, the drawings show the tile set on a mortar bed on a concrete shear wall. On the Science and Gym/Music buildings, the drawings indicate 1/2" tile on a 1/2" mortar bed. For the Science building, the tile is entirely backed by the concrete shear walls. On the Gym/Music building, it is mostly also backed by concrete shear wall, but some panels consist of a tile and mortar bed on exterior gypsum board backed by 6 inch metal studs spaced at 16" oc.

The veneer appears to be in good condition, although some efflorescence was noted on Buildings A, B and C. It is difficult to determine the extent to which the veneer can become a falling hazard, but massive spalling seems unlikely. ASCE 31 does not cover tile veneer. DSA approved the Science and Gym/Music building designs in 1994 and 1995, respectively, and these should not be hazardous.

Table 1 – Nonstructural Survey Results for the Buildings A, B and C (Multi-purpose, Classroom and Administration)

Item	Vulnerability	Comments
Grounds		
1. PG&E meter	L	Gas meter is located at the front of the school in a shallow underground vault.
North Roof		
1. Trane HVAC units	L	Six units, all are anchored.
2. Large gas lines	L	3-inch diameter welded steel lines. These are anchored to the roof.
3. Small gas lines to HVAC Units	H	No flexible connection between the larger gas distribution lines and the Trane units.
4. Flood lights	L	Two of these, both anchored to roof.
South Roof		
1. Trane HVAC units	L	Three units, all are anchored.
2. Reznor HVAC units	L	Two units, both are anchored.
3. Large gas lines	L	3-inch diameter welded steel lines. These are anchored to the roof.
4. Small gas lines to HVAC units	H	No flexible connection to HVAC units.
5. Flood lights	L	Two of these, both anchored to roof.
Elevator		
1. Elevator	L	Hydraulic unit, considered low risk.
Classrooms 320 and 321 (Upper Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	Mounted in suspended ceiling.
3. Speakers (Rm. 321)	H	Two small speakers on small shelves, both are not restrained and are a definite falling hazard.

Item	Vulnerability	Comments
4. Bookshelves (Rm. 321)	L	Anchored to wall.
5. Cabinets	L	Units 7-feet tall, anchored to wall.
6. Bookshelf (Rm. 320)	H	Unrestrained unit 72" H x 30" W x 12" D, H/D=6.0.
Office in Room 321 (Upper Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
Classrooms 302,303,304,305,306 307,308(Upper Level)		
1. Suspended acoustical ceilings	L	
2. Fluorescent light fixtures	L	Mounted in suspended ceiling.
3. Metal storage cabinets (Rm. 304)	H	Unrestrained units. One is 78" H x 36" W x 18" D, H/D = 4.3 and the other is 72" H x 36" W x 24" D, H/D =3.0.
4. Built-in book shelves	L	
5. Built-in cabinets	L	
6. Wooden book shelf (Rm. 303)	H	Unrestrained unit 72" H x 48" W x 13" D, H/D = 5.5.
7. File cabinet (Rm. 303)	M	
8. Tall bookcase	L	Anchored to wall.
9. Wood storage cabinets (Rms. 302, 306, and 307)	M	Unrestrained units on rollers, 65" H x 48" W x 25" D, H/D = 2.6. Units can roll/slide.
10. TV's	H	TV's are strapped to stands, but stands are on rollers and can tip over.
11. File cabinets (Rm. 306)	M	Two 4-drawer units with drawer locks.
12. File cabinet (Rm. 306)	H	One 4-drawer unit without drawer locks.

Item	Vulnerability	Comments
13. Smart Board	M	Light-weight electronic blackboard on roller base. Difficult to assess.
14. Moveable room dividers	L	See discussion in text.
Room 305-Office (Upper Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. File cabinet	M	Drawers have locks.
4. Metal storage cabinet	H	Unrestrained unit 78" H x 36" W x18" D, H/D = 4.3.
Room 301-Office (Upper Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. TV's	H	Two TV's on stands. TV's are strapped to stands, but stands are on rollers and can tip over.
4. Built-in bookshelves	L	Anchored to wall.
Office Area (Middle Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. Wood storage cabinet	M	Similar units to Rms. 302, 306, and 307.
4. Metal storage cabinets	H	Unrestrained units.
5. File cabinets	M	Several 4-drawer units. All have drawer locks.
6. Metal storage racks	L	Prefab, open type racks about 7 feet tall, braced in both directions and anchored to wall.

Item	Vulnerability	Comments
Gym (Middle Level)		
1. Lights	Unknown	Individual incandescent fixtures anchored to concrete roof slab, could not see anchorage.
2. Basketball backboards	L	Six of these, fastened to concrete.
3. Windows	L	Plastic glazing used.
4. Speaker	L	One unit, anchored.
5. Doors	L	Wire glass
Room 220 (Middle Level)		
1. Acoustic ceiling tile	L	
2. Fluorescent light fixtures	L	Ceiling-mounted.
3. File cabinet	M	4 drawers unit with drawer locks.
4. Built-in wood cabinets	L	Units 7-feet tall, anchored to wall.
Storage Room (Middle Level)		
1. Acoustic ceiling tile	L	
2. Fluorescent light fixtures	L	Ceiling-mounted.
3. Steel storage racks	H	A number of these against wall, also some free-standing. Units are not anchored or restrained.
4. Built-in wood cabinets	L	Similar to Rm. 220.
Room 201-Teacher's Lounge (Middle Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. Tall wood storage cabinets	H	Unrestrained

Item	Vulnerability	Comments
Room 202 (Middle Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. Book shelves	L	Two of these, secured to wall.
4. Wood storage cabinet	M	Similar to Rms. 302,306 and 307.
Library (Middle Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. Book shelves	L	Many 7' high units up against walls, anchored to walls.
4. Windows	L	Tempered glass.
5. TV's	H	Three TV's. These are strapped to stands, but stands are on rollers and can tip over.
6. Wood storage cabinets * (*in Teacher's Work Room)	L	Three units in room off main room, anchored to walls.
7. Wood bookcases *	L	7' high, secured to wall.
8. Telecon equipment*	L	Units secured to small wall-mounted rack.
9. Doors	L	Plastic glazing
Classroom 206 (Middle Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. Metal storage cabinet	H	Unanchored

Item	Vulnerability	Comments
4. File cabinets	L-H	Two 4-drawer cabinets. One can fall sideways and rated high (H) risk; the other low (L) risk. Both have drawer locks.
5. Wood storage cabinets	M	Similar to Rms. 302,306, and 307
6. Built-in cabinets	L	Anchored to wall.
Room 205 - Janitor's Closet (Middle Level)		
1. Incandescent light fixture	L	Ceiling-mounted.
2. Ruud water heater	L	Electric unit braced to wall.
Classroom 204 (Middle Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. Metal storage cabinets	H	Unanchored
4. File cabinet	M	One 4-drawer unit with drawer locks
Classrooms 102,103,104,106,107,108 (Lower Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. Metal storage cabinet (Rms. 102,106,107,108).	H	Unrestrained units 78" H x 36" W x 24" D, H/D=3.3.
4. TV's (Rms. 102,104,107)	H	TV's strapped to stands, but stands are on rollers and can tip over.
5. Folding doors (Rms.102,103, 104,106,107,108)	L	See discussion in text.
6. File cabinets (Rms.102,106)	L	4-drawer units with drawers locks.
7. File cabinet (Rm. 102)	H	One 4-drawer unit without drawer locks.
8. Built-in book cases (Rm.108)	L	Anchored to wall.

Item	Vulnerability	Comments
9. Doors (Rm. 102)	L	Plastic glazing.
Room 101-Supply (Lower Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. Refrigerators	H	Five tall units, all unrestrained.
4. Built-in wood shelves	L	3' high wall-mounted units, secured to wall.
Room 120 (Lower Level)		
1. Acoustic tile ceiling	L	
2. Fluorescent light fixtures	L	Ceiling-mounted.
3. Wall-mounded wood cabinets	L	A number of these, anchored to walls.
4. Metal storage cabinet	H	Tall, unrestrained unit.
5. Wood storage cabinets	L	Several of these, anchored to walls.
6. Windows	L	Plastic glazing
PG&E Room (off Room 120 at Lower Level)		
1. Large electrical cabinets	Unknown	Probably low risk.
Classroom 121 (Lower Level)		
1. Fluorescent light fixtures	L	Ceiling-mounted
2. Wood storage cabinets	Unknown	Tall unit, not sure if anchored to wall
3. Wall-mounted wood cabinets	L	Secured to wall with angle brackets
4. File cabinet (in room off classroom)	M	4-drawer unit with drawer locks
Classroom 122 (Lower Level)		
1. Acoustic ceiling tile	L	
2. Fluorescent light fixtures	L	Ceiling-mounted

Item	Vulnerability	Comments
3. Kiln	H	Electric unit not anchored to floor.
4. Storage shelves	L	Anchored to wall
Wood Shop (Lower Level)		
1. Fluorescent light fixtures	L	Ceiling-mounted
2. Shop power tools (large, floor-standing equipment).	L-H	A number of free-standing power tools, many not anchored to floor and rated high (H) risk to slide and/or overturn. Anchored units are rated low (L) risk.
3. Water heater	L	Very large electric unit, strapped to wall
4. Wood storage cabinets	L	Two of these, anchored to wall.
Classroom 124 (Lower Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. Book shelves	H	Two unrestrained tall units 80" H x 88" W x 9" D, H/D = 8.8. These are next to door and can tip over and block the doorway.
4. File cabinets	M	Two 4-drawer units with drawer locks.
5. Wood bookcase	H	Unrestrained unit 72" H x 25" W x 11.5" D, H/D = 6.3.
6. Wood storage cabinets (in room off main room)	M	Two of these, similar to those in Rms. 302, 307 and 308.
7. File cabinets	M	Two 4-drawer units with drawer locks.
8. File cabinets	H	Two 4-drawer units without drawer locks.
Room 126 (Lower Level)		
1. Fluorescent light fixtures	M	Cable-hung from ceiling.

Table 2 – Nonstructural Survey Results for the Building D (Science)

Item	Vulnerability	Comments
High Roof		
1. Exhaust fan EF-2	L	Anchored
Low Roof		
1. York HVAC units	L	Six of these, all appear to be anchored.
2. York condenser unit CU-1	L	Anchored
Elevator		
1. Elevator	L	Hydraulic unit, considered low risk.
Classrooms 413,414,415,416 (Upper Level)		
1. Suspended acoustical ceilings	L	
2. Fluorescent light fixtures	L	
3. Wall-mounted cabinets	L	Wood cabinets mounted on walls with sliding glass doors.
4. Glass doors in wall-mount cabinets	H	Potential glass-breakage from toppling contents.
5. Book shelves	L	Wall-mounted to concrete wall with angle brackets.
6. Doors	L	Wire glass used.
Room 417-Office (Upper Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. File cabinet	M	One 4-drawer unit with drawer locks.

Item	Vulnerability	Comments
4. Wood storage cabinet	M	Unrestrained unit on rollers, 65" H x 48" W x 25" D H/D=2.6. Unit can roll/slide.
Restrooms (Upper Level)		
1. Lights	L	Mounted in wall board ceiling.
Hallways (Upper Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
Room 412-Prep Room (Upper Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. TV's	H	Four TV's. TV's are strapped to stands, but stands are on rollers and can tip over.
Room 411- Storage (Upper Level)		
1. Fluorescent light fixtures	L	Mounted on unistrut and threaded rod.
2. Cabinets	L	Anchored to wall.
3. York HVAC unit	L-M	Electric unit.
4. Wood storage cabinets	M	Unrestrained units on rollers, 65" H x 48" W x 25" D, H/D=2.6. Units can roll/slide.
5. Wood cabinets	L	Units anchored to wall.
Multi-use Room (Lower Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. Speakers	L	Two of these, both suspended from pipe brackets.

Item	Vulnerability	Comments
Room 404- Storage (Lower Level)		
1. Ducts	L	Braced
2. Storage cabinets	H	Two of these, both are not restrained.
Room 403-Storage (Lower Level)		
1. Fluorescent light fixtures	L	Attached to underside of metal deck.
Classroom 401 (Lower Level)		
1. Suspended ceiling	L	
2. Fluorescent light fixtures	L	
Hallways (Lower Level)		
1. Suspended ceiling	L	
2. Fluorescent light fixtures	L	
3. Doors and windows	L	Tempered glass used.
Restrooms (Lower Level)		
1. Lights	L	Mounted in wall board ceiling.

Table 3 – Nonstructural Survey Results for the Building E (Gym/Music)

Item	Vulnerability	Comments
Roof		
1. Reznor HVAC units	L	Two of these, both anchored to roof on vibration mounts and have flexible gas lines.
2. Carrier HVAC units	L	Six units of various sizes, all are anchored to roof.
3. Carrier A/C units	L	Three of these, all anchored.
4. Carrier heat pump	L	Anchored
5. Ducts	L	Braced
Room 511 (Upper Level)		
1. Gypsum board ceiling	L	
2. Fluorescent light fixtures	L	Built-in fixtures.
3. File cabinet	L	One 4-drawer unit with drawer locks.
4. TV	H	TV strapped to stand, but stand is on rollers and can tip over.
5. Water heater	L	Gas-fired unit in closet off Rm. 511. Strapped to wall, has flexible gas line.
Elevator		
1. Elevator	L	Hydraulic elevator, considered low risk. Pump and panel in room at lower level.
Room 512 (Upper Level)		
1. Gypsum board ceiling	L	
2. Fluorescent light fixtures	L	Built-in fixtures.

Item	Vulnerability	Comments
Hallway (Upper Level)		
1. Suspended ceilings	L	
2. Fluorescent light fixtures	L	
Morrison Gym (Middle Level)		
1. Lights	Unknown	Individual fixtures hung on conduit from ceiling. Difficult to rate, but probably low risk.
2. Backboards	L	Several of these, all secured to roof trusses.
3. Speakers	L	Secured to roof truss.
4. Score boards	L	Secured to roof truss.
5. Exit doors	L	Wire glass.
Rooms off Gym (Middle Level)		
1. Gypsum board ceiling	L	
2. Fluorescent light fixtures	L	Cable-hung.
3. Metal storage shelves	L	A number of these, anchored to walls.
4. Metal storage shelf	H	One unit is not anchored.
PE Offices (Middle Level)		
1. Suspended acoustical ceiling	L	
2. Fluorescent light fixtures	L	
3. Metal storage cabinets	H	Two units not restrained, 72" H x 36" W x 24" D, H/D= 3.0.
4. File cabinets	M	Several 4-drawer units with drawer locks.
Girls and Boys Locker Rooms (Middle Level)		
1. Gypsum board ceiling	L	

Item	Vulnerability	Comments
2. Lights	L	Built-in fixtures.
3. Lockers	L	
Large Music Room (Lower Level)		
1. Ceiling	L	
2. Fluorescent light fixtures	L	Cable-hung.
3. File cabinets	M	A number of 4-drawer units, all with drawer locks.
4. File cabinet	H	One 4-drawer unit without drawer locks.
5. Wood cabinets	L	Many of these built-in units.
Four Practice Rooms (Lower Level)		
1. Acoustic tile ceiling	L	
2. Fluorescent light fixtures	L	Ceiling-mounted.
Hallways (Lower Level)		
1. Acoustic tile ceiling	L	
2. Fluorescent light fixtures	L	Ceiling-mounted.
3. Wood cabinet	M	Unrestrained units on rollers, 65" H x 48" W x 25" D, H/C= 2.6. Units can roll/slide.
4. Wood clothes closets	H	Three of these, units are not anchored to wall. 74" H x 48W" x 25"D, H/D=3.0. These can potentially block exit way.
Music Storage Room (Lower Level)		
1. Acoustic tile ceiling	L	
2. Fluorescent light fixtures	L	Ceiling-mounted.

Item	Vulnerability	Comments
3. Storage shelves	L	Floor-to-ceiling wood cabinets with much unrestrained material on shelves, but cabinets secured to walls.
Room 502 (Lower Level)		
1. Ceiling	L	
2. Fluorescent light fixtures	L	Cable-hung.
3. Doors and windows	L	Tempered glass.
4. Wood cabinets	L	Built-in.
5. Lateral file cabinet	H	4-drawer lateral file without drawer locks, can easily tip over and injure someone.
6. File cabinet	M	Three 4-drawer units with drawer locks.
Supply Room (Lower Level)		
1. Acoustic tile ceiling	L	
2. Fluorescent light fixtures	L	Ceiling-mounted.
3. Wood storage shelves	L	Anchored to wall.
Room 503 (Lower Level)		
1. Ceiling	L	
2. Fluorescent light fixtures	L	Cable-hung.
3. Wood cabinets	L	Built-in.
4. Doors and windows	L	Tempered glass.
5. Speakers	L	Two units anchored to walls.
Restrooms (Lower Level)		
1. Gypsum board ceiling	L	
2. Fluorescent light fixtures	L	Ceiling-mounted.

Item	Vulnerability	Comments
Janitor Closet (Lower Level)		
1. Gypsum board ceiling	L	
2. Fluorescent light fixtures	L	
3. Wood storage cabinet	H	Unrestrained unit 72" H x 25" W x 11" D, H/D = 6.5.
Electrical Room (Lower level)		
1. Fluorescent light fixtures	L	
2. Electrical panels	Unknown	Two large panels, could not see anchorage, but probably anchored and low risk.

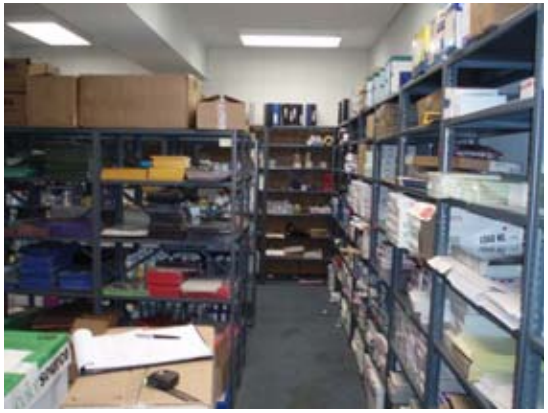


Figure 1 – These storage shelves are braced together or anchored to the walls and are unlikely to overturn. The contents on the shelves, however, can fall out.

Figure 2 – Some unrestrained contents stored on the tops of storage cabinets. These are falling hazards in the exit way from the room.

Figure 3 – These small speakers in Room 321 of the Building A are unrestrained and can become falling hazards during an earthquake.

Figure 4 – The trophies stored on the top of the bookshelf behind this desk in the Gymnasium/Music building are a falling hazard.

Figure 5 – Angle bracket used to secure bookshelf to wall. This is one of the types of restraints used to keep bookcases from falling over.

Figure 6 – This lateral file in Room 502 of the Gym/Music building does not have drawer locks and can easily top over.

Figure 7 –This file cabinet did not have drawer locks and overturned in a San Jose office building during the 1989 Loma Prieta earthquake.

Figure 8 –This fluorescent light fixture in the Gym/Music building is hung on a small cables (cable-hung) and is not considered a falling hazard.

Figure 9 – Typical bracket used to secure the moveable partitions to the structure in the Building B. The tops of each partition are restrained by several of these.

Figure 10 – Unanchored kiln in Room 122 of the Building A.

4. Summary and Recommendations

Summary

Piedmont Middle School was surveyed for nonstructural seismic hazards. The criteria used was ASCE 31, and a Tier 1 evaluation was preformed. Findings are summarized below.

(1) In general, there are relatively few nonstructural seismic hazards in the five buildings surveyed.

(2) Many of the larger nonstructural elements are anchored and/or braced against sliding and/or overturning. For example the majority of tall bookcases and storage cabinets throughout the school are secured against overturning.

(3) Roof top mechanical and electrical equipment was found to be seismically anchored or braced.

(4) There are several file cabinets, and one lateral file, without drawer locks. These are a hazard to overturn.

(5) Gas-fired equipment is seismically braced, and most equipment (but not all) has flexible gas lines as required by ASCE 31.

(6) Most glazing is either tempered glass or plastic. Wire glass is used in small windows in some of the doors.

(7) The buildings are sprinklered. The sprinkler piping in Buildings A, B and C is probably not braced according to today's requirements, but this does not appear to create a falling hazard.

(8) Several large items are not anchored or otherwise restrained. These include a kiln, several tall metal storage cabinets, and some tall bookcases.

Recommendations

The nonstructural hazards identified in Tables 1, 2, and 3 should be given a Tier 2 evaluation and/or abated, particularly those items designated as having a high (H) vulnerability that can cause injury to persons in the vicinity. The criteria of ASCE 41 "Seismic Rehabilitation of Existing Buildings" (Ref. 4) can be used.

5. References

1. ASCE/SEI Standard 31-03, "Seismic Evaluation of Existing Buildings," Structural Engineering Institute, American Society of Civil Engineers, 2003.

2. "Guide and Checklist for Nonstructural Earthquake Hazards in California Schools" a Project of the California Governor's Office of Emergency Services, Division of State Architect, Seismic Safety Commission, and Department of Education, January 2003.

3. "Seismic Design Parameters," prepared by U.S. Geological Survey, Federal Emergency Management Agency, and Building Seismic Safety Council, Version 3.10, February 2001 (CD-ROM).

4. ASCE/SEI Standard 41-06, "Seismic Rehabilitation of Existing Buildings", Structural Engineering Institute, American Society of Civil Engineers, 2006.

Seismic Evaluation of Buildings A, B, C, D and E at Piedmont Middle School, Piedmont Unified School District

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Executive Summary

Five buildings at Piedmont Middle School were evaluated for seismic safety. They are Building A (Classroom), Building B (Administration), Building C (Multi-purpose), Building D (Science) and Building E (Gym/Music).

An ASCE 31 Tier 1 evaluation of each structure was performed. ASCE 31 "Seismic Evaluation of Existing Buildings", published in 2003, is the generally recognized national standard for assessing the life safety risk of existing buildings. Nonstructural hazards were evaluated in another study and are not reported here.

All buildings were found to meet the life safety requirements of ASCE 31, and no seismic strengthening is required.

CONTENTS

1. Introduction

This report summarizes the seismic evaluation of the buildings at the Piedmont Middle School. The school is located at 740 Magnolia Avenue in Piedmont. The purpose of the study was to assess the vulnerability of the structures for life safety risk in a major earthquake.

The school has five buildings: Building A (Classroom), Building B (Administration), Building C (Multi-purpose), Building D (Science) and Building E (Gym/Music). Construction of each was done under the jurisdiction of the California Division of State Architect (DSA). Buildings A, B and C (Figure 1) were constructed in the mid-1970's. The Buildings D and E (Figures 2 and 3) were built in the mid-1990's.

The evaluations summarized in this report represent an assessment of the structures using the latest seismic evaluation methodology. The study consisted of an ASCE 31 evaluation for the life safety performance level.

The report is organized as follows. The criteria used in the evaluations are described in Section 2. Descriptions of Buildings A, B and C and the results of their evaluations are presented in Section 3. Section 4 presents a description and the results for Buildings D and E. Section 5 provides a summary.

Figure 1 – Buildings A, B and C (from Southwest)

Figure 2 – Building D

Figure 3 – Building E

2. Evaluation Criteria

Building Structural Evaluation

The buildings were evaluated using the criteria of ASCE Standard 31-03 "Seismic Evaluation of Existing Buildings" (Ref. 1). This is the state-of-the-art criteria for the seismic evaluation of existing buildings. It is used to establish whether there is a significant life safety risk.

All structures were given a Tier 1 evaluation for the life safety performance level. Nonstructural hazards were studied and reported in another report (Ref. 2).

Earthquake Ground Motions

Earthquake ground motions for the site were obtained from the seismic ground shaking maps found on the CD-ROM Seismic Design Parameters (Ref. 3). These ground shaking maps were developed by the U.S. Geological Survey under the National Earthquake Hazards Reduction Program (NEHRP). Ground motions at the site were determined for the Maximum Considered Earthquake (MCE). This represents an earthquake with only 2-percent chance of being exceeded in 50 years (i.e., an earthquake with a 2,500 year return period). At this location, the MCE has a peak ground acceleration of 0.77g; however, only 2/3 of this level of motion (0.51g) is required to be used in the evaluations done under ASCE 31. Site class D (default class) was used.

The school is located approximately 1 mile west of the Hayward fault. This is a large fault and believed capable of a magnitude 7.0 or larger earthquake. This would produce very strong shaking at the site.

3. Buildings A, B and C

Buildings A, B, and C are original buildings for the new Piedmont Middle School built in the mid-1970's. The buildings are believed to have been designed to the requirements of the 1970 UBC. They were approved by DSA in 1973.

The drawings for the three structures (Ref. 4) were available and were used in the Tier 1 evaluations. Descriptions of each building and results of the Tier 1 evaluations are presented below.

Building A

Building A, the Classroom building, is a three-story reinforced concrete structure. It has overall dimensions of approximately 71' x 115' in plan. The roof, upper and middle level floors have concrete slab and joist construction. Joists span from the north and south exterior walls to an E/W running concrete beam and column system in the center of the building. Exterior walls are reinforced concrete and are 12 to 15 inches thick. All concrete columns contain spiral reinforcement. Foundations consist of spread footings and deep belled pier footings.

A concrete bridge, near the northeast end, provides access to the upper floor across a 15 foot cantilever span supported by two retaining walls. It is not attached to or supported by Building A. It is in conformance with Tier 1 requirements.

Lateral forces in both directions are resisted by the exterior perimeter concrete walls acting as shear walls.

An ASCE 31 Tier 1 evaluation was performed. The Building type is C2 – Reinforced Concrete Shear Walls. The Basic and Supplemental Structural checklists were completed as well as the required "quick check" calculations. Results indicate the building meets the Tier 1 life safety performance level requirements. The maximum demand to capacity ratio (D/C) for the shear walls was 0.79 in shear.

Building B

Building B, the Administration building, is a three-story structure located between Buildings A and C. It is separated from each by a separation joint. The building is roughly triangular in plan with overall dimensions of approximately 54' x 60'.

The middle and upper level floor and roof are 6 inch, 6 inch, and 5 inch thick concrete slabs, respectively. Walls on the perimeter are 16 inches thick and located at the corners on all three sides, with an additional wall on the middle of the west side. Foundations consist of strip footings interconnected by grade beams.

Lateral forces in both directions are resisted by the perimeter exterior concrete walls acting as shear walls.

The ASCE 31 Building Type is C2. The structure was found to meet the life safety performance level requirements of ASCE 31. Both the Basic and Supplemental Structural checklists were completed as well as the required "quick check" calculations. The maximum shear wall shear stress D/C ratio was 0.83.

Building C

Building C, the Multi-purpose building, is a three-story concrete structure with overall plan dimensions of approximately 73' x 115'.

The roof consists of a 5 inch slab and post-tensioned beam system over most of the roof area with a smaller concrete slab and joist system over the area at the north-west end. The upper level floor has a slab and conventional concrete beam system. The middle level floor has a slab and joist system. Columns contain spiral reinforcement. Foundations consist of spread footings interconnected by grade beams.

Concrete walls 12 and 15 inches thick are situated at the four corners of the buildings and along one interior grid line in the north-south direction. These act as shear walls to resists lateral forces in both directions.

The building's ASCE 31 classification is C2. The ASCE 31 Tier 1 Basic and Supplemental Structural checklists and the required "quick check" calculations were completed. Building C was found to meet the Tier 1 life safety performance level requirements. The maximum shear stress D/C ratio in the shear walls was 0.65.

4. Buildings D and E

Building D

Building D, the Science building, is a two-story structure with a partial basement. It has overall dimensions of approximately 71' x 149' in plan (Ref. 5). It was designed to the 1991 CBC and built in the mid-1990's.

The roof consists of a steel beam and girder framing system with a 1½ inch 18 gage metal deck diaphragm. A part of the roof is supported on four large tapered steel plate girdlers that span 70 feet. The second floor has a steel beam floor system that is overlain by 3 inch metal deck with 3¼ inch of light-weight concrete fill. Similar to the roof, there are four large steel girders spanning 70 feet. These are 30 inch deep wide flange beams. The first floor consists either of a 5 inch slab on grade or a slab on drilled pier system, except at the basement. Over the basement is a steel beam and metal deck system with light-weight concrete fill. Foundations consist of spread and strip footings and drilled piers. Allowable dead plus live load bearing pressures used in design were 8,000 psf.

Lateral forces in both directions are resisted by reinforced concrete shear walls. These range from 8 to 14 inch thick. The exterior faces of the shear walls are covered with a brick veneer.

Because the building was designed to the 1991 CBC, it is considered a "benchmark" building under ASCE 31 and meets the Tier 1 life safety requirements. The Building Type is C2 - Reinforced Concrete Shear Walls.

Building E

Building E, the Gym/Music building, is a three-story structure with overall dimensions of approximately 118' by 141' in plan (Ref. 6). It was designed to the 1991 CBC and constructed in the mid-1990's.

Structurally, the building is two structures above the middle foundation level. There is a 7 inch wide E/W running separation joint that separates the high bay gym area on the south side from the remainder of the building to the north.

The gym portion is a two-story high-bay structure with the gym floor at the middle level. The roof of the gym has seven steel trusses spanning 83 feet with the roof diaphragm consisting of 1½ inch 16 gage decking. The middle level floor consists of a 5 inch concrete slab on grade under the gym and a steel frame floor system with 8 inch slab elsewhere. Lateral forces in both directions are resisted by 8 and 9 inch thick concrete shear walls located around the perimeter. Foundations consist of spread and strip footings. The drawings indicate the allowable dead plus live load bearing pressures used in design were 4,500 psf.

The portion of the building north of the gym is three-story. The roof has a steel frame beam and girder system with 2 inch deep 18 gage deck topped with 2½ inches of light-weight concrete fill. The upper level floor system consists of steel beams and 3 inch 18 gage deck with 3¼ inches of light-weight concrete fill. At the middle floor level, the floor system consists of steel beams and an 8 inch regular-weight concrete slab over 3 inch deep deck. Foundations consist of strip footings. Lateral forces in both directions are resisted by 8, 10 and 12 inch thick concrete shear walls.

Under ASCE 31, the gym is classified Building Type C2 - Reinforced Concrete Shear Walls. Because it was designed to the 1991 CBC, it is considered to be a "benchmark" building and therefore meets the ASCE 31 life safety performance level criteria.

A small lobby and restroom addition has been added on the north side of the gym. This was not studied because it was very recently reviewed and approved by DSA.

5. Summary

Five buildings at the Piedmont Middle School were given an ASCE 31 Tier 1 seismic evaluation for the life safety performance level. These are: Building A (Classroom); Building B (Administration); Building C (Multi-purpose); Building D (Science); and Building E (Gym/Music). Nonstructural hazards were previously examined using the ASCE 31 Tier 1 procedures, and the results of that study are presented in Reference 2.

All buildings were found to meet the life safety requirements of ASCE 31, and seismic strengthening is not required.

6. References

1. ASCE/SEI Standard 31-03, “Seismic Evaluation of Existing Buildings,” Structural Engineering Institute, American Society of Civil Engineers, 2003.

2. Survey of Piedmont Middle School for Nonstructural Seismic Hazards, Piedmont Unified School District,” report prepared by R. P. Gallagher Associates, Inc., Structural Engineers, Oakland, January 2, 2008.

3. “Seismic Design Parameters,” prepared by U.S. Geological Survey, Federal Emergency Management Agency, and Building Seismic Safety Council, Version 3.10, February 2001 (CD-ROM).

4. Architectural and structural drawings for Piedmont Junior High School (Buildings A, B and C) prepared by Marshall and Bowles, Architects, San Francisco, and Forell/Elsesser, Structural Engineers, San Francisco, 1973, DSA Application No. 36354.

5. Architectural and structural drawings for the Science Building (Building D) prepared by David Wade Byrens Architects, Oakland, and GKO/Messinger & Associates, Structural Engineers, Oakland, 1995.

6. Architectural and structural drawings for the Gym/Music Building (Building E) prepared by David Wade Byrens Architects, Oakland, and GKO/Messinger & Associates, Structural Engineers, Oakland, 1995, DSA Application No. 62448.

5. APPENDIX

PIEDMONT SEISMIC SAFETY PROGRAM

PIEDMONT UNIFIED SCHOOL DISTRICT

PROJECT STATUS

MARCH 31, 2008

murakami/Nelson Architectural Corp.
Job No.: 0629 - PUSD Seismic

School / Site	Abbreviation	Building Designation	Building Name	Seismic Tier 1	Revised Seismic Tier 1	Letter From Fotoff & Hussein on Seismic Performance	ATI Report (Accessibility / Seismic Performance)	Included in Scope of Work (for mN)	Qualitative Seismic Assessment by R.P. Gallagher	Qualitative Seismic Assessment by Peer Reviewer	Benchmark Building	Seismic Tier 2	Seismic Non-Structural Hazard Report	ADA / Access Evaluation	Life Safety Evaluation	Materials Testing Spring 2007	Materials Testing Summer 2007	Materials Testing Fall 2007	Materials Testing Winter 2007	Destructive Testing Spring 2007	Destructive Testing Summer 2007	Destructive Testing Fall 2007	Destructive Testing Winter 2007	Slope Stability Analysis - Site Specific Spectra	Peer Review of Investigation and Analysis	Peer Review Non-Structural	Peer Review of Concept Design	Peer Review of Design Development	Peer Review of 100% Construction Documents	Hazardous Materials Reports in mN possession	Topographical Survey	Title Report	Boundary Survey	Existing Geotechnical Reports	Existing Structural Calculations in mN possession	Existing Specifications in mN possession	Measured Drawings - Architectural	Measured Drawings - Structural	DSA Drawings in mN possession	DSA Drawing Date	DSA Number for Drawings	Drawings	Architect	Concept Plan	Cost Estimate (1)	Refined Concept Plan / Vision	Cost Estimate (2)	Comments
Piedmont Middle School	PMS																																													
		A	Multi-Purpose Building	●		○	●	●	●	○		×	●	●	●	×				×				●	×	●				●	○	●	○	×	×	×	×	×	●	10/25/1973	36354	original	Marshall-Bowles	●	●	×	×	
		B	Classroom Building	●		○	●	●	●	○		×	●	●	●	×				×				●	×	●				●	○	●	○	×	×	×	×	×	●	10/25/1973	36354	original	Marshall-Bowles	●	●	×	×	
		C	Administration Building	●		○	●	●	●	○		×	●	●	●	×				×				●	×	●				●	○	●	○	×	×	×	×	×	●	10/25/1973	36354	original	Marshall-Bowles	●	●	×	×	
		D	Science Building	●		○	●	●	●	○	●	×	●	●	●	×				×				●	×	●				●	○	●	○	×	●	×	×	×	●	8/25/1994	61310	original	David Wade Byrens	●	●	×	×	
		E	Gymnasium / Music Bldg.	●		○	●	●	●	○	●	×	●	●	●	×				×				●	×	●				●	○	●	○	×	×	×	×	×	●	5/17/1995	62448	original	David Wade Byrens	●	●	×	×	

LEGEND

- ○ NEEDED/IN PROGRESS
- ● YES / OK / COMPLETE
- ○ DO NOT HAVE
- ● NON CONCLUSIVE
- × NOT NECESSARY
- ○ Pending Authorization
- ● NO

Shaded Area Indicates Tier 2 Seismic Analysis.

APPENDIX B: BUILDING CODE ANALYSIS

CALCULATION OF BUILDING AREA

Building A:	12,573 sf
Building B:	23,886 sf
Building C:	4,568 sf
Total of A, B, &C:	50,027 sf
Building D:	15,624 sf (including mechanical room basement)
Building E:	24,178 sf

CHAPTER 3: USE OR OCCUPANCY

Main Occupancy Group:

Classrooms:	E1	K-12 Educational (Sec 305)
Gymnasium:	A2.1	Assembly

Accessory Occupancy Groups:

Administrative:	B	Offices (less than 25% exception)

No occupancy separation required between **E** and **A2.1** Occupancies (per Table 3-B).

No occupancy separation required between **E** and **B** Occupancies (per Table 3-B) with exception, or 1 hr. separation required between E and B if no exception

CBC 302.1. Exception 2.2: "Administrative and Clerical offices & similar rooms which do not exceed 25 percent of the floor area of the major use."

CHAPTER 5: BUILDING LIMITATIONS

Building A – Multi-Use Wing / Building B – Classroom Wing./ Building C – Administration Wing

Buildings A, B, & C are considered one building. The total floor area of the building is 50,027 sf. Based on CBC Table 5-B, the building is classified as a Type I-fire resistive (FR) construction type. Type I-FR allows an unlimited floor area.

	Total allowable floor area:	Unlimited
✓	Total actual floor area:	50,027 sf

Allowable Height

✓ Unlimited (Type I-FR) (Table 5-B)
✓ Existing: approx. 40 feet, 3 stories

Wall and Opening Protection (Table 5-A)

✓	Walls:	Four hour N/C at bearing and non- bearing less than 5 ft.
✓	Walls:	Two-hour N/C less than 20 ft.
✓	Walls:	One-hour N/C less than 40 ft
✓	Openings:	Protected less than 20 ft., not permitted less than 5 ft.

Building D – Science Building

The Science Building is a multiple occupancy building with classrooms (E1) occupancy, an office (B) occupancy (less than 25%), and an assembly (A3) occupancy. The A3 occupancy excludes Type V-N hr. construction

Allowable Floor Area for E1

	Allowance	Running Total
-Construction Type V-N hr: (Table 5-B)	10,500 sf	15,700 sf
-Separation increase: (open 2 sides)	25%	19,625 sf
-Fire Protection (508):	0%	19,625 sf
-Multi-Story Factor:	100%	39,250 sf
Total allowable floor area:		39,250 sf
✓ Total actual floor area:		15,624 sf

Allowable Floor Area for A3

	Allowance	Running Total
-Construction Type V-1 hr: (Table 5-B)	10,500 sf	10,500 sf
-Separation increase: (open 2 sides)	25%	13,125 sf
-Fire Protection (508):	0%	13,125 sf
-Multi-Story Factor:	100%	26,250 sf
Total allowable floor area:		26,250 sf
✓ Total actual floor area:		15,624 sf

Allowable Height

☒ 50 feet, 2 stories (Type V -N hr) (Table 5-B)

Wall and Opening Protection (Table 5-A)

✓	Walls:	Two-hour less than 5 ft.
✓	Walls:	One-hour elsewhere.
✓	Openings:	Protected less than 10 ft., not permitted less than 5 ft.

Building E – Gymnasium / Music Building

Allowable Floor Area

	Allowance	Running Total
-Construction Type V-1 hr: (Table 5-B)	10,500 sf	10,500 sf
-Fire Protection (508):	100%	10,500 sf
-Multi-Story Factor:	100%	21,000 sf
Total allowable floor area:		42,000 sf
✓ Total actual floor area:		24,178 sf

Allowable Height

☒ 50 feet, 2 stories (Type V -1 hr) (Table 5-B)

Wall and Opening Protection (Table 5-A)

✓ Walls: Two-hour less than 10 ft.
✓ Walls: One-hour elsewhere
✓ Openings: Protected less than 10 ft., not permitted less than 5 ft.

CHAPTER 9: FIRE PROTECTION SYSTEMS

Sprinklers are required for Group E Occupancy (Sec 904.2.4.1).
Exception 1: Not required when ground floor exits are provided at each classroom and assembly space.
Sprinklers not required for Group A2 Occupancy

Building A – Multi-Use Wing is an A2.1 / E-1 occupancy.

Building B – Classroom Wing is an E-1 occupancy.

Building C – Administration Wing is a B / E-1 occupancy.

Building A/B/C denoted in this report are the three wings of one building. The building is a mixed occupancy. The E-occupancy classrooms are located in all three wings. By code, the entire building should have a fire sprinkler system. Presently, only selected areas are sprinklered.

Building D – Science Building is fully sprinklered and appears to complies.

Building E – Gymnasium / Music Building is an A2.1 / E-1 occupancy. The main building is not fully sprinklered. The entry lobby addition is fully sprinklered.

CHAPTER 10: MEANS OF EGRESS

Exits Required: See plans for room exiting requirements. Cumulative occupant load exiting requirements will be calculated during future concept design phase.

Maximum travel distance to exit in non-sprinklered hallway is 150' (Section 1007.3.3).

Hallway width shall be two feet wider than required by Sec. 1003, but not less than 6'. Except when less than 100 occupants 44" min. (Section 1007.3.5).

Stair width shall not be less than 5'. Except <100 occupants (Section 1007.3.6).

Panic hardware required where occupant load is over 50.

Basement Rooms shall exit directly to the exterior without entering the first floor (Section 1007.3.9)

Building A – Multi-Use Wing
The exits, corridors, and stairs appear to be in compliance with means of egress. The room exiting from Film Classroom is non-compliant as exiting requires traveling through two intervening rooms.

Building B – Classroom Wing
The exits, corridors, and stairs appear to be in compliance with means of egress. Room exiting from the Teacher's Lunch Room is non-compliant. Based on occupant load, two exits are required. Exiting through the Library is not acceptable as exiting requires traveling through two intervening rooms.

Building C – Administration Wing
The exits, corridors, and stairs appear to be in compliance with means of egress.

Building D – Science Building
The exits, corridors, and stairs appear to be in compliance with means of egress.

Building E – Gymnasium / Music Building
The exits, corridors, and stairs appear to be in compliance with means of egress. Exiting through the folding accordion doors in the Morrison Gymnasium may need to be revisited for exit door hardware, door width, exit signage, etc. Low level exit lights were damaged in some locations.

FIRST UPDATED REPORT

First American Title Insurance Company National Commercial Services

3721 Douglas Blvd., Suite 151
Roseville, CA 95661

This report has been amended/updated to reflect the following matters:

[ ] No changes made to the report other than the Effective Date

[ ] Property address has been revised

[X] Vesting has been revised

[X] Legal Description has been revised

[X] Taxes have been updated

[ ] Original item number(s) have been removed

[X] New item number(s) Exception 9 have been added

[ ] Original item number(s) have been revised

[X] Other: Updated to report on additional lands.

First American Title

3721 Douglas Blvd., Suite 151
Roseville, CA 95661

Sasha Parker
Sandis Development
605 Castro Street
Mountain View, CA 94041-2011
Phone: (650)969-6900

Escrow Officer:	Carolyn Hunt
Phone:	(916)677-8005
Title Officer:	David Pratt
Phone:	(916)218-6631
Owner:	City of Piedmont
Property:	PIEDMONT HIGH SCHOOL ON MAGNOLIA AVENUE, PIEDMONT, CA 94611

PRELIMINARY REPORT

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage of said Policy or Policies are set forth in Exhibit A attached. Copies of the Policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit A of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of January 31, 2008 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

ALTA Extended Owner's Policy 1402.06 (6-17-06)

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

PIEDMONT UNIFIED SCHOOL DISTRICT, FORMERLY PIEDMONT HIGH SCHOOL DISTRICT OF ALAMEDA COUNTY. AS TO PARCELS ONE THROUGH EIGHT;

CITY OF PIEDMONT, A MUNICIPAL CORPORATION, AS TO PARCEL NINE.

The estate or interest in the land hereinafter described or referred to covered by this Report is:

A FEE.

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and assessments for the fiscal year 2007-2008 are exempt. If the exempt status is terminated an additional tax may be levied. Account No. 051-4680-001-02, 03 and 04

2. ANY ESCAPED TAX THAT MAY BECOME DUE BY REASON OF ANY NON-EXEMPT USE OR LOSS OF EXEMPT STATUS.

3. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

4. Any and all offers of dedication, conditions, restrictions, easements, fenceline/boundary discrepancies, notes and/or provisions shown or disclosed by the filed or recorded map referred to in the legal description.

5. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.

6. Easements, claims of easement or encumbrances which are not shown by the public records.

7. Any facts, rights, interests or claims which would be disclosed by a correct ALTA/ACSM survey.

8. Rights of parties in possession.

9. The legal description of record recites an acreage figure, however, any claims for loss or damage by reason of an inaccurate figure will not be covered. Should this transaction be based on acreage, a survey by a licensed entity is recommended.

INFORMATIONAL NOTES

1. According to the latest available equalized assessment roll in the office of the county tax assessor, there is located on the land a(n) EDUCATIONAL FACILITY known as PIEDMONT HIGH SCHOOL AND 800 MAGNOLIA AVENUE, PIEDMONT, CALIFORNIA 94611.

2. According to the public records, there has been no conveyance of the land within a period of twenty-four months prior to the date of this report, except as follows:

   None

3. Should this report be used to facilitate your transaction, we must be provided with the following prior to the issuance of the policy:

   A. WITH RESPECT TO A CORPORATION:
      a. A certificate of good standing of recent date issued by the Secretary of State of the corporation's state of domicile.

      b. A certificate copy of a resolution of the Board of Directors authorizing the contemplated transaction and designating which corporate officers shall have the power to execute on behalf of the corporation.

      c. Requirements which the Company may impose following its review of the above material and other information which the Company may require.

   B. WITH RESPECT TO A CALIFORNIA LIMITED PARTNERSHIP:
      a. A certified copy of the certificate of limited partnership (form LP-1) and any amendments thereto (form LP-2) to be recorded in the public records;

      b. A full copy of the partnership agreement and any amendments;

      c. Satisfactory evidence of the consent of a majority in interest of the limited partners to the contemplated transaction;

d. Requirements which the Company may impose following its review of the above material and other information which the Company may require.

C. WITH RESPECT TO A FOREIGN LIMITED PARTNERSHIP:

a. A certified copy of the application for registration, foreign limited partnership (form LP-5) and any amendments thereto (form LP-6) to be recorded in the public records;

b. A full copy of the partnership agreement and any amendment;

c. Satisfactory evidence of the consent of a majority in interest of the limited partners to the contemplated transaction;

d. Requirements which the Company may impose following its review of the above material and other information which the Company may require.

D. WITH RESPECT TO A GENERAL PARTNERSHIP:

a. A certified copy of a statement of partnership authority pursuant to Section 16303 of the California Corporation Code (form GP-I), executed by at least two partners, and a certified copy of any amendments to such statement (form GP-7), to be recorded in the public records;

b. A full copy of the partnership agreement and any amendments;

c. Requirements which the Company may impose following its review of the above material required herein and other information which the Company may require.

E. WITH RESPECT TO A LIMITED LIABILITY COMPANY:

a. A copy of its operating agreement and any amendments thereto;

b. If it is a California limited liability company, a certified copy of its articles of organization (LLC-1) and any certificate of correction (LLC-11), certificate of amendment (LLC-2), or restatement of articles of organization (LLC-10) to be recorded in the public records;

c. If it is a foreign limited liability company, a certified copy of its application for registration (LLC-5) to be recorded in the public records;

d. With respect to any deed, deed of trust, lease, subordination agreement or other document or instrument executed by such limited liability company and presented for recordation by the Company or upon which the Company is asked to rely, such document or instrument must be executed in accordance with one of the following, as appropriate:

(i) If the limited liability company properly operates through officers appointed or elected pursuant to the terms of a written operating agreement, such documents must be executed by at least two duly elected or appointed officers, as follows: the chairman of the board, the president or any vice president, and any secretary, assistant secretary, the chief financial officer or any assistant treasurer;

(ii) If the limited liability company properly operates through a manager or managers identified in the articles of organization and/or duly elected pursuant to the terms of a written operating agreement, such document must be executed by at least two such managers or by one manager if the limited liability company properly operates with the existence of only one manager.

e. Requirements which the Company may impose following its review of the above material and other information which the Company may require.

F. WITH RESPECT TO A TRUST:

a. A certification pursuant to Section 18500.5 of the California Probate Code in a form satisfactory to the Company.

b. Copies of those excerpts from the original trust documents and amendments thereto which designate the trustee and confer upon the trustee the power to act in the pending transaction.

c. Other requirements which the Company may impose following its review of the material require herein and other information which the Company may require.

G. WITH RESPECT TO INDIVIDUALS:

a. A statement of information.

The map attached, if any, may or may not be a survey of the land depicted hereon. First American Title Insurance Company expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

LEGAL DESCRIPTION

Real property in the City of PIEDMONT, County of ALAMEDA, State of CALIFORNIA, described as follows:

PARCEL ONE: (PTN 051-4680-001-02)

COMMENCING AT A POINT IN THE NORTHERN BOUNDARY LINE OF LOT 3, IN BLOCK F, DISTANT THEREON SOUTH 64° 4' WEST 48.80 FEET FROM THE MOST NORTHERN CORNER THEREOF, AS SAID LOT AND BLOCK ARE DELINEATED AND SO DESIGNATED ON THAT CERTAIN MAP ENTITLED "REVISED MAP OF PIEDMONT PARK", HEREINAFTER REFERRED TO, AND RUNNING THENCE SOUTH 40° 26' EAST 583.40 FEET; THENCE NORTH 49° 34' EAST 480 FEET; THENCE NORTH 6° 54' 30" WEST 162.82 FEET; THENCE NORTH 25° 19' 40" EAST 329.20 FEET; THENCE NORTH 58° 47' EAST 341.37 FEET; THENCE NORTH 44° 45' EAST 345 FEET; THENCE NORTH 45° 15' WEST 247.63 FEET TO A POINT ON THE SOUTHEASTERN LINE OF MAGNOLIA AVENUE, FORMERLY PIEDMONT AVENUE, AS IT NOW EXISTS IN THE CITY OF PIEDMONT, AND AS SHOWN ON THE AFORESAID MAP; THENCE ALONG THE SAID SOUTHEASTERN LINE OF MAGNOLIA AVENUE, SOUTHWESTERLY ON THE ARC OF A CURVE TO THE LEFT WITH A RADIUS OF 425.60 FEET A DISTANCE OF 45.08 FEET; THENCE ON A LINE TANGENT TO THE LAST NAMED CURVE SOUTH 44° 45' WEST 372.10 FEET; THENCE SOUTHWESTERLY ON THE ARC OF A CURVE TO THE RIGHT TANGENT TO THE LAST NAMED COURSE WITH A RADIUS OF 447.80 FEET A DISTANCE OF 125.31 FEET TO THE NORTHEASTERN CORNER OF LOT "A" IN SAID BLOCK F AS SHOWN ON AFORESAID MAP; THENCE LEAVING SAID SOUTHEASTERN LINE OF MAGNOLIA AVENUE AND ALONG THE EASTERN BOUNDARY LINE OF SAID LOT "A", SOUTH 29° 48' WEST 238.10 FEET TO THE CORNER COMMON TO SAID LOT "A" AND LOTS 13 AND 5 IN SAID BLOCK F, AS SHOWN ON THE AFORESAID MAP AND THENCE ALONG THE NORTHERN BOUNDARY LINE OF THE SAID LOT 6, LOT 4, AND LOT 3 IN SAID BLOCK F, SOUTH 64° 04' WEST 790.60 FEET TO THE POINT OF COMMENCEMENT, AND BEING PORTIONS OF LOTS 3, 4, 5, 6 AND 13 IN BLOCK F, AND A PORTION OF LOT 5 IN BLOCK E, AND ALSO A PORTION OF BUSHY DELL AVENUE, AS SAID LOTS, BLOCKS AND AVENUE ARE DELINEATED AND SO DESIGNATED ON THAT CERTAIN MAP ENTITLED "REVISED MAP OF PIEDMONT PARK", FILED APRIL 25, 1883, IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY, CALIFORNIA.

EXCEPTING THEREFROM ALL THAT PORTION DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST EASTERN CORNER OF LOT "a" ON THE SOUTH EASTERN LINE OF MAGNOLIA AVENUE (FORMERLY PIEDMONT AVENUE), AS THE SAID LOT AND AVENUE ARE SHOWN UPON A MAP ENTITLED "REVISED MAP OF PIEDMONT PARK", HEREINAFTER REFERRED TO; AND RUNNING THENCE ALONG THE EASTERN BOUNDARY LINE OF THE SAID LOT "a" SOUTH 29° 48′ WEST 178.50 FEET; THENCE LEAVING SAID BOUNDARY LINE OF SAID LOT "a", SOUTH 60° 12′ EAST 143.30 FEET TO AN ANGLE IN THE SOUTH EASTERN BOUNDARY LINE OF THAT CERTAIN 11.497 ACRE TRACT OF LAND HERETOFORE CONVEYED BY WALLACE M. AND MARY B. ALEXANDER TO PIEDMONT HIGH SCHOOL DISTRICT OF ALAMEDA COUNTY BY DEED DATED AUGUST 15, 1920, RECORDED SEPTEMBER 1, 1920, IN VOLUME 2964 OF DEEDS, AT PAGE 261, RECORDS OF ALAMEDA COUNTY, CALIFORNIA; THENCE ALONG SAID SOUTHEASTERN BOUNDARY LINE NORTH 58° 47′ EAST 267.10 FEET; THENCE LEAVING THE LAST SAID BOUNDARY LINE NORTH 45° 15′ WEST 231.80 FEET TO A POINT ON THE AFORESAID SOUTHEASTERN LINE OF MAGNOLIA AVENUE; AND THENCE ALONG THE LAST SAID LINE SOUTHWESTERLY ON THE ARC OF A CURVE TO THE RIGHT, THE CHORD OF WHICH

BEARS SOUTH 32° 46′ WEST WITH A RADIUS OF 447.80 FEET, A DISTANCE OF 125.31 FEET TO THE POINT OF COMMENCEMENT.

PARCEL TWO: (PTN 051-4680-001-02)

PORTIONS OF LOTS 5, 6 AND 13, BLOCK F, AND A PORTION OF BUSHY DELL AVENUE, "REVISED MAP OF PIEDMONT PARK" FILED APRIL 25, 1883, IN BOOK 6 OF MAPS, PAGE 24, ALAMEDA COUNTY RECORDS; ALSO BEING A PORTION OF THE PARCEL OF LAND DESCRIBED IN THE DEED FROM W. M. ALEXANDER, ET UX., TO THE CITY OF PIEDMONT, A MUNICIPAL CORPORATION, RECORDED MARCH 3, 1922, INSTRUMENT NO. S-188608, BOOK 179, PAGE 62, ALAMEDA COUNTY RECORDS, DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE SOUTHWESTERN LINE OF THE AFOREMENTIONED PARCEL DEEDED TO THE CITY OF PIEDMONT WITH THE NORTHERN LINE OF WILDWOOD AVENUE, FORMERLY HIGHLAND AVENUE, AS SAID AVENUE IS SHOWN ON THE AFOREMENTIONED REVISED MAP OF PIEDMONT PARK; THENCE ALONG SAID SOUTHWESTERN LINE OF THE CITY OF PIEDMONT PARCEL NORTH 6° 54' 30" WEST 464.83 FEET TO AN ANGLE POINT IN THE SAID SOUTHWESTERN LINE; THENCE ALONG THE WESTERN AND NORTHWESTERN LINES OF SAID PARCEL NORTH 25° 19' 40" EAST 329.20 FEET, NORTH 58° 47' EAST 341.37 FEET AND NORTH 44° 45' EAST 312.97 FEET; THENCE SOUTH 45° 15' EAST 22.00 FEET; THENCE SOUTH 44° 45' WEST 161.00 FEET; THENCE SOUTH 37° 50' WEST 19.00 FEET; THENCE SOUTH 44° 45' WEST 420.00 FEET; THENCE SOUTH 20° 45' WEST 310.00 FEET; THENCE SOUTH 69° 15' EAST 45.00 FEET; THENCE SOUTH 24° 15' EAST 25.00 FEET; THENCE SOUTH 69° 15' EAST 102.81 FEET; THENCE SOUTH 33° 24' WEST 419.27 FEET TO THE POINT OF BEGINNING.

PARCEL THREE: (051-4680-001-03)

PORTION OF LOT 13 IN BLOCK F, REVISED MAP OF PIEDMONT PARK, FILED APRIL 25, 1883, IN BOOK 6 OF MAPS, PAGE 24, ALAMEDA COUNTY RECORDS, DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST EASTERN CORNER OF THE PARCEL OF LAND DESCRIBED IN THE DEED FROM THE CITY OF PIEDMONT, A MUNICIPAL CORPORATION, TO PIEDMONT UNIFIED SCHOOL DISTRICT OF ALAMEDA COUNTY, RECORDED DECEMBER 21, 1954, INSTRUMENT NO. AK115792, BOOK 7515, PAGE 585, ALAMEDA COUNTY RECORDS; THENCE ALONG THE EASTERN LINE OF SAID PARCEL NORTH 38° 43' 40" WEST 102.32 FEET; THENCE SOUTH 45° 15' EAST 101.64 FEET; THENCE SOUTH 44° 45' WEST 11.62 FEET TO THE POINT OF BEGINNING.

PARCEL FOUR: (PTN 051-4680-001-02)

PORTION OF LOT 13 IN BLOCK "F", AS SAID LOT AND BLOCK ARE SHOWN ON THE "REVISED MAP OF PIEDMONT PARK", FILED APRIL 25, 1883, IN BOOK 6 OF MAPS, PAGE 24, IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST EASTERN CORNER OF THE 11.49 ACRE TRACT OF LAND DESCRIBED IN THE DEED BY WALLACE M. ALEXANDER AND MARY B. ALEXANDER TO PIEDMONT HIGH SCHOOL DISTRICT OF ALAMEDA COUNTY, DATED AUGUST 15, 1920, RECORDED SEPTEMBER 1, 1920, IN BOOK 2964 OF DEEDS, AT PAGE 261, ALAMEDA COUNTY RECORDS; AND RUNNING THENCE ALONG THE NORTHEASTERN LINE OF SAID 11.49 ACRE TRACT NORTH 45° 15′ WEST 207 FEET; THENCE NORTH 54° 12′ 53″ EAST 72.99 FEET; THENCE NORTH 89° 10′ EAST 28 FEET; THENCE SOUTH 38° 43′ 40″ EAST 176.54 FEET; AND THENCE SOUTH 44° 45′ WEST 72 FEET TO THE POINT OF BEGINNING.

PARCEL FIVE: (PTN 051-4680-001-02)

BEGINNING AT A POINT ON THE NORTHERN BOUNDARY LINE OF LOT 3 IN BLOCK "F", DISTANT THEREON SOUTH 64° 4' WEST 48.80 FEET FROM THE NORTHEASTERN CORNER THEREOF, AS THE SAID LOT AND BLOCK ARE SHOWN UPON "REVISED MAP OF PIEDMONT PARK", HEREINAFTER REFERRED TO, AND RUNNING THENCE ALONG SAID NORTHERN BOUNDARY LINE OF SAID LOT 3, SOUTH 64° 4' WEST 103.30 FEET TO THE SOUTHWESTERN BOUNDARY OF A STRIP OF LAND 100 FEET WIDE, NOTED IN EXCEPTION IN DEED FROM J. B. LANKTREE, COMMISSIONER, TO THE ANGLO-CALIFORNIA TRUST COMPANY, DATED JULY 1, 1918, RECORDED IN VOLUME 2682 OF DEEDS AT PAGE 65, ALAMEDA COUNTY RECORDS; THENCE LEAVING SAID BOUNDARY LINE AND ALONG SAID SOUTHWESTERN LINE OF SAID 100 FOOT STRIP OF LAND SOUTH 40° 26' EAST 435.83 FEET TO A POINT ON THE NORTHERN LINE OF A PROPOSED ROAD 40 FEET IN WIDTH; THENCE ALONG THE NORTHERN BOUNDARY LINE OF SAID PROPOSED ROAD ON THE ARC OF A CURVE TO THE LEFT, THE CHORD OF WHICH BEARS SOUTH 89° 42' 40" EAST WITH A RADIUS OF 1020 FEET, A DISTANCE OF 132.06 FEET TO A POINT ON THE NORTHEASTERN BOUNDARY LINE OF SAID 100 FOOT STRIP OF LAND; THENCE LEAVING SAID PROPOSED ROAD AND ALONG THE NORTHEASTERN BOUNDARY LINE OF SAID 100 FOOT STRIP OF LAND NORTH 40° 26' WEST 496.05 FEET TO THE POINT OF COMMENCEMENT.

BEING A PORTION OF LOTS 3 AND 4 IN BLOCK "F", PORTION OF LOTS 4 AND 5 IN BLOCK "E", AND A PORTION OF BUSHY DELL AVENUE, AS SAID LOTS, BLOCKS AND AVENUE ARE DELINEATED AND SO DESIGNATED UPON THAT CERTAIN MAP ENTITLED "REVISED MAP OF PIEDMONT PARK" FILED IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY, APRIL 23, 1883.

PARCEL SIX: (PTN 051-4680-001-02)

BEGINNING AT THE MOST EASTERN CORNER OF LOT "a" ON THE SOUTH EASTERN LINE OF MAGNOLIA AVENUE (FORMERLY PIEDMONT AVENUE), AS THE SAID LOT AND AVENUE ARE SHOWN UPON A MAP ENTITLED "REVISED MAP OF PIEDMONT PARK", HEREINAFTER REFERRED TO; AND RUNNING THENCE ALONG THE EASTERN BOUNDARY LINE OF THE SAID LOT "a" SOUTH 29° 48' WEST 178.50 FEET; THENCE LEAVING SAID BOUNDARY LINE OF SAID LOT "a", SOUTH 60° 12' EAST 143.30 FEET TO AN ANGLE IN THE SOUTH EASTERN BOUNDARY LINE OF THAT CERTAIN 11.497 ACRE TRACT OF LAND HERETOFORE CONVEYED BY WALLACE M. AND MARY B. ALEXANDER TO PIEDMONT HIGH SCHOOL DISTRICT OF ALAMEDA COUNTY BY DEED DATED AUGUST 15, 1920, RECORDED SEPTEMBER 1, 1920, IN VOLUME 2964 OF DEEDS, AT PAGE 261, RECORDS OF ALAMEDA COUNTY, CALIFORNIA; THENCE ALONG SAID SOUTHEASTERN BOUNDARY LINE NORTH 58° 47' EAST 267.10 FEET; THENCE LEAVING THE LAST SAID BOUNDARY LINE NORTH 45° 15' WEST 231.80 FEET TO A POINT ON THE AFORESAID SOUTHEASTERN LINE OF MAGNOLIA AVENUE; AND THENCE ALONG THE LAST SAID LINE SOUTHWESTERLY ON THE ARC OF A CURVE TO THE RIGHT, THE CHORD OF WHICH BEARS SOUTH 32° 46' WEST WITH A RADIUS OF 447.80 FEET, A DISTANCE OF 125.31 FEET TO THE POINT OF COMMENCEMENT.

BEING A PORTION OF LOT 13 IN BLOCK "F" AS THE SAID LOT AND BLOCK ARE DELINEATED AND SO DESIGNATED UPON THAT CERTAIN MAP ENTITLED "REVISED MAP OF PIEDMONT PARK" FILED APRIL 25, 1883, IN THE OFFICE OF THE COUNTY RECORDER OF SAID ALAMEDA COUNTY, AND BEING ALSO A PORTION OF THE AFORESAID 11.497 ACRE TRACT OF LAND.

PARCEL SEVEN: (PTN 051-4680-001-02)

BEGINNING AT THE MOST EASTERN CORNER OF THAT CERTAIN PIECE OR PARCEL OF LAND ONE HUNDRED (100) FEET IN WIDTH,NOTED IN THE EXCEPTION IN THE DEED FROM J. B. LANKTREE, COMMISSIONER, TO THE ANGLO-CALIFORNIA TRUST COMPANY, DATED JULY 1ST, 1918, RECORDED IN VOLUME 2662 OF DEEDS AT PAGE 65, ALAMEDA COUNTY RECORDS, AND ON THE NORTHWESTERN LINE OF WILDWOOD AVENUE, FORMERLY HIGHLAND AVENUE, AS SAID AVENUE IS SHOWN UPON REVISED MAP OF PIEDMONT PARK, HEREINAFTER REFERRED TO; SAID POINT BEING THE MOST SOUTHERN CORNER OF THAT CERTAIN PIECE OR PARCEL OF LAND CONTAINING 27.236 ACRES, HERETOFORE CONVEYED BY THE ANGLO-CALIFORNIA TRUST COMPANY TO WALLACE M. ALEXANDER BY DEED DATED JULY 22, 1920, RECORDED AUGUST 12, 1920, IN VOLUME 2955 OF DEEDS AT PAGE 234 OF SAID ALAMEDA COUNTY RECORDS; AND RUNNING THENCE ALONG THE LINE DIVIDING THE SAID STRIP OF LAND 100 FEET IN WIDTH FROM THE SAID 27.236 ACRE TRACT NORTH 40° 26' WEST 307.35 FEET TO THE MOST EASTERN CORNER OF THAT CERTAIN PIECE OR PARCEL OF LAND CONTAINING 1.047 ACRES, HERETOFORE CONVEYED BY LILA R. HAVENS, TRUSTEE FOR PIEDMONT DEVELOPMENT COMPANY, TO PIEDMONT HIGH SCHOOL DISTRICT OF ALAMEDA COUNTY BY DEED DATED FEBRUARY 8TH, 1921, AND RECORDED MARCH 30TH, 1921, IN VOLUME 3047 OF DEEDS, AT PAGE 395, ALAMEDA COUNTY RECORDS; THENCE ALONG THE SOUTHERN BOUNDARY LINE OF THE SAID 1.047 ACRE TRACT WESTERLY ON THE ARC OF A CURVE TO THE RIGHT, THE CHORD OF WHICH BEARS NORTH 89° 42' 40" WEST WITH A RADIUS OF 1020 FEET, A DISTANCE OF 132.06 FEET TO THE SOUTHWESTERN CORNER THEREOF ON THE SOUTHWESTERN BOUNDARY LINE OF THE AFORESAID STRIP OF LAND 100 FEET IN WIDTH; THENCE ALONG THE LAST SAID SOUTHWESTERN BOUNDARY LINE, SOUTH 40° 26" EAST 393.66 FEET TO THE MOST SOUTHERN CORNER OF SAID STRIP OF LAND 100 FEET IN WIDTH AND ON THE AFORESAID NORTHWESTERN LINE OF WILDWOOD AVENUE; THENCE ALONG THE SAID LINE OF SAID AVENUE, NORTHEASTERLY ON THE ARC OF A CURVE TO THE LEFT WITH A RADIUS OF 108.35 FEET, A DISTANCE OF 64.45 FEET; AND THENCE ON A LINE TANGENT TO THE LAST NAMED CURVE, NORTH 41° 39" EAST 46.91 FEET TO THE POINT OF COMMENCEMENT.

BEING A PORTION OF THE AFORESAID STRIP OF LAND 100 FEET IN WIDTH AND ALSO PORTIONS OF LOTS 4 AND 5 IN BLOCK "E", AS SAID LOTS AND BLOCK ARE DELINEATED AND SO DESIGNATED UPON THAT CERTAIN MAP ENTITLED "REVISED MAP OF PIEDMONT PARK", FILED IN THE RECORDER'S OFFICE OF ALAMEDA COUNTY, APRIL 25TH, 1883.

PARCEL EIGHT: (PTN 051-4680-001-02)

COMMENCING AT A POINT ON THE NORTHERN LINE OF WILDWOOD AVENUE, FORMERLY HIGHLAND AVENUE, DISTANT THEREON NORTHWESTERLY 120.78 FEET FROM THE SOUTHEASTERN CORNER OF LOT 6 IN BLOCK "F", AS SAID AVENUE, LOT AND BLOCK ARE DELINEATED AND SO DESIGNATED ON REVISED MAP OF PIEDMONT PARK, HEREINAFTER REFERRED TO; RUNNING THENCE ALONG SAID NORTHERN LINE OF WILDWOOD AVENUE WESTERLY AND SOUTHWESTERLY ON THE ARC OF A CURVE TO THE LEFT WITH A RADIUS OF 191.33 FEET, A DISTANCE OF 174.81 FEET; THENCE ON A LINE TANGENT TO THE LAST NAMED CURVE SOUTH 41° 39' WEST 154.60 FEET; THENCE LEAVING WILDWOOD AVENUE NORTH 40° 23' WEST 220.0 FEET; THENCE NORTH 49° 34' EAST 480.0 FEET AND THENCE SOUTH 6° 54' 30" EAST 301.18 FEET TO POINT OF COMMENCEMENT.

BEING PORTIONS OF LOT 6 IN BLOCK "F", LOT 5 IN BLOCK "E", AND A PORTION OF BUSHY DELL AVENUE, AS SAID LOTS, BLOCKS AND AVENUE ARE DELINEATED AND SO DESIGNATED ON THAT CERTAIN MAP ENTITLED "REVISED MAP OF PIEDMONT PARK", FILED IN RECORDER'S OFFICE OF ALAMEDA COUNTY, APRIL 25, 1883.

PARCEL NINE: (051-4680-001-04)

COMMENCING AT THE SOUTHEASTERN CORNER OF LOT 6 IN BLOCK "F", AND ON THE NORTHEASTERN LINE OF WILDWOOD AVENUE, FORMERLY HIGHLAND AVENUE, AS SAID LOT, BLOCK AND AVENUE ARE DELINEATED AND SO DESIGNATED ON REVISED MAP OF PIEDMONT PARK, HEREINAFTER REFERRED TO, AND RUNNING THENCE ALONG THE EASTERN BOUNDARY LINE OF THE SAID LOT 6 NORTH 33° 35' EAST 603.80 FEET TO THE CORNER COMMON TO SAID LOT 6, LOT 7 AND LOT 13 IN THE SAID BLOCK "F", AS SHOWN ON THE AFORESAID MAP; THENCE ALONG THE NORTHERN BOUNDARY LINE OF SAID LOT 7 AND SOUTHERN BOUNDARY LINE OF LOT 12 AND LOT 13 SOUTH 80° 35' EAST 90.27 FEET TO THE SOUTHWESTERN CORNER OF THAT CERTAIN 0.287 ACRE TRACT OF LAND HERETOFORE CONVEYED BY MISS RANSOM AND MISS BRIDGES SCHOOL TO PIEDMONT DEVELOPMENT COMPANY BY DEED DATED FEBRUARY 17, 1914, AND RECORDED MARCH 19, 1914, IN VOLUME 2205 OF DEEDS AT PAGE 436,. RECORDS OF ALAMEDA COUNTY; THENCE ALONG THE WESTERN BOUNDARY LINE OF THE SAID 0.287 ACRE TRACT NORTH 27° 49' WEST 129.09 FEET; NORTH 12° 4' EAST 133.91 FEET; NORTH 23° 58' EAST 81.18 FEET; NORTH 30° 27' EAST 169.50 FEET; NORTH 47° 46' 30" EAST 39.65 FEET; NORTH 88° 1' EAST 15.40 FEET TO THE MOST NORTHERN CORNER OF THE SAID 0.287 ACRE TRACT AND ON THE NORTHWESTERN BOUNDARY LINE OF THAT CERTAIN PIECE OR PARCEL OF LAND HERETOFORE CONVEYED BY THE PIEDMONT DEVELOPMENT COMPANY TO MISS RANSOM AND MISS BRIDGES SCHOOL BY DEED DATED MARCH 16, 1914, AND RECORDED APRIL 13, 1914, IN VOLUME 2230 OF DEEDS AT PAGE 450, RECORDS OF ALAMEDA COUNTY; THENCE ALONG THE SAID NORTHWESTERN BOUNDARY LINE OF THE SAID LAND OF MISS RANSOM AND MISS BRIDGES SCHOOL NORTH 47° 52' EAST 16.30 FEET; THENCE LEAVING SAID LAND OF MISS RANSOM AND MISS BRIDGES SCHOOL NORTH 41° 42' 10" EAST 211.50 FEET; THENCE NORTH 45° 42' EAST 155.90 FEET; THENCE NORTH 58° 3' 30" EAST 257.25 FEET TO A POINT ON THE WESTERN BOUNDARY LINE OF THAT CERTAIN PIECE OR PARCEL OF LAND HERETOFORE CONVEYED BY THE PIEDMONT DEVELOPMENT COMPANY TO THE OAKLAND TRACTION COMPANY BY DEED DATED NOVEMBER 19, 1907, RECORDED DECEMBER 5, 1907, IN VOLUME 1412 OF DEEDS, AT PAGE 288, RECORDS OF ALAMEDA COUNTY; THENCE ALONG THE WESTERN BOUNDARY OF THE LAST SAID LAND NORTH 32° WEST 214.87 FEET; THENCE ALONG THE ARC OF A CURVE TO THE LEFT NORTHWESTERLY TANGENT TO THE LAST NAMED COURSE WITH A RADIUS OF 283 FEET, A DISTANCE OF 84.46 FEET TO A POINT ON THE SOUTHERN LINE OF HIGHLAND AVENUE, AS IT NOW EXISTS IN THE CITY OF PIEDMONT; THENCE ALONG SAID LINE OF HIGHLAND AVENUE SOUTH 66° 23' WEST 337.50 FEET TO ITS JUNCTION WITH THE SOUTHERN LINE OF MAGNOLIA AVENUE AS IT NOW EXISTS IN THE CITY OF PIEDMONT; THENCE ALONG SAID LINE OF MAGNOLIA AVENUE SOUTHWESTERLY ON THE ARC OF A CURVE TO THE LEFT TANGENT TO THE LAST NAMED COURSE WITH A RADIUS OF 81.50 FEET, A DISTANCE OF 15.91 FEET; THENCE SOUTHWESTERLY ON THE ARC OF A CURVE TO THE RIGHT REVERSING FROM THE LAST NAMED CURVE WITH A RADIUS OF 80.00 FEET, A DISTANCE OF 32.39 FEET; THENCE SOUTHWESTERLY ON THE ARC OF A CURVE TO THE LEFT REVERSING FROM THE LAST NAMED CURVE WITH A RADIUS OF 425.60 FEET, A DISTANCE OF 204.92 FEET; THENCE LEAVING SAID SOUTHERN LINE OF MAGNOLIA AVENUE SOUTH 45° 15' EAST 247.63 FEET; THENCE SOUTH 44° 45' WEST 345 FEET; THENCE SOUTH 58° 47' WEST 341.37 FEET; THENCE SOUTH 25° 19' 40" WEST 329.20 FEET; THENCE SOUTH 6° 54' 30" EAST 464 FEET TO A POINT ON THE AFORESAID NORTHEASTERN LINE OF WILDWOOD AVENUE; THENCE ALONG SAID LINE OF WILDWOOD AVENUE EASTERLY ON THE ARC OF A CURVE TO THE RIGHT WITH A RADIUS OF 191.33 FEET, A DISTANCE OF 107.58 FEET, AND THENCE ON A LINE TANGENT TO THE LAST NAMED CURVE SOUTH 58° 48' EAST 13.25 FEET TO POINT OF COMMENCEMENT.

BEING PORTIONS OF LOTS 11, 12, 13, 5 AND 6 IN BLOCK "F" AND PORTIONS OF HAZEL

AVENUE AND BUSHY DELL AVENUE, AS SAID LOTS, BLOCK AND AVENUES ARE DELINEATED AND SO DESIGNATED ON THAT CERTAIN MAP ENTITLED "REVISED MAP OF PIEDMONT PARK", FILED APRIL 25, 1883, IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY, CALIFORNIA.

EXCEPTING THEREFROM THE FOLLOWING PARCELS:
PARCEL A:
PORTIONS OF LOTS 5, 6 AND 13, BLOCK F, AND A PORTION OF BUSHY DELL AVENUE, "REVISED MAP OF PIEDMONT PARK" FILED APRIL 25, 1883, IN BOOK 6 OF MAPS, PAGE 24, ALAMEDA COUNTY RECORDS; ALSO BEING A PORTION OF THE PARCEL OF LAND DESCRIBED IN THE DEED FROM W. M. ALEXANDER, ET UX., TO THE CITY OF PIEDMONT, A MUNICIPAL CORPORATION, RECORDED MARCH 3, 1922, AS INSTRUMENT NO. 2-188608, BOOK 179, PAGE 62, ALAMEDA COUNTY RECORDS, DESCRIBED AS FOLLOWS:
BEGINNING AT THE INTERSECTION OF THE SOUTHWESTERN LINE OF THE AFOREMENTIONED PARCEL DEEDED TO THE CITY OF PIEDMONT WITH THE NORTHERN LINE OF WILDWOOD AVENUE, FORMERLY HIGHLAND AVENUE, AS SAID AVENUE IS SHOWN ON THE AFOREMENTIONED REVISED MAP OF PIEDMONT PARK; THENCE ALONG SAID SOUTHWESTERN LINE OF THE CITY OF PIEDMONT PARCEL NORTH 6° 54' 30" WEST 464.83 FEET TO AN ANGLE POINT IN THE SAID SOUTHWESTERN LINE; THENCE ALONG THE WESTERN AND NORTHWESTERN LINES OF SAID PARCEL NORTH 25° 19' 40" EAST 329.20 FEET, NORTH 58° 47' EAST 341.37 FEET AND NORTH 44° 45' EAST 312.97 FEET; THENCE SOUTH 45° 15' EAST 22.00 FEET; THENCE SOUTH 44° 45' WEST 161.00 FEET; THENCE SOUTH 37° 50' WEST 19.00 FEET; THENCE SOUTH 44° 45' WEST 420.00 FEET; THENCE SOUTH 20° 45' WEST 310.00 FEET; THENCE SOUTH 69° 15' EAST 45.00 FEET; THENCE SOUTH 24° 15' EAST 25.00 FEET; THENCE SOUTH 69° 15' EAST 102.81 FEET; THENCE SOUTH 33° 24' WEST 419.27 FEET TO THE POINT OF BEGINNING.

PARCEL B:
PORTION OF LOT 13 IN BLOCK F, REVISED MAP OF PIEDMONT PARK, FILED APRIL 25, 1883, IN BOOK 6 OF MAPS, PAGE 24, ALAMEDA COUNTY RECORDS, DESCRIBED AS FOLLOWS:
BEGINNING AT THE MOST EASTERN CORNER OF THE PARCEL OF LAND DESCRIBED IN THE DEED FROM THE CITY OF PIEDMONT, A MUNICIPAL CORPORATION, TO PIEDMONT UNIFIED SCHOOL DISTRICT OF ALAMEDA COUNTY, RECORDED DECEMBER 21, 1954, INSTRUMENT NO. AK115792, BOOK 7515, PAGE 585, ALAMEDA COUNTY RECORDS; THENCE ALONG THE EASTERN LINE OF SAID PARCEL NORTH 38° 43' 40" WEST 102.32 FEET; THENCE SOUTH 45° 15' EAST 101.64 FEET; THENCE SOUTH 44° 45' WEST 11.62 FEET TO THE POINT OF BEGINNING.

PARCEL C:
PORTION OF LOT 13 IN BLOCK "F", AS SAID LOT AND BLOCK ARE SHOWN ON THE "REVISED MAP OF PIEDMONT PARK", FILED APRIL 25, 1883, IN BOOK 6 OF MAPS, PAGE 24, IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY, DESCRIBED AS FOLLOWS:
BEGINNING AT THE MOST EASTERN CORNER OF THE 11.49 ACRE TRACT OF LAND DESCRIBED IN THE DEED BY WALLACE ME. ALEXANDER AND MARY B. ALEXANDER TO PIEDMONT HIGH SCHOOL DISTRICT OF ALAMEDA COUNTY, DATED AUGUST 15, 1920, RECORDED SEPTEMBER 1, 1920, IN BOOK 2964 OF DEEDS, AT PAGE 261, ALAMEDA COUNTY RECORDS; AND RUNNING THENCE ALONG THE NORTHEASTERN LINE OF SAID 11.49 ACRE TRACT NORTH 45° 15' WEST 207 FEET; THENCE NORTH 54° 12' 53" EAST 72.99 FEET; THENCE NORTH 89° 10' EAST 28 FEET; THENCE SOUTH 38° 43' 40" EAST 176.54 FEET; AND THENCE SOUTH 44° 45' WEST 72 FEET TO THE POINT OF BEGINNING.

APN: 051-4680-001

NOTICE I

Section 12413.1 of the California Insurance Code, effective January 1, 1990, requires that any title insurance company, underwritten title company, or controlled escrow company handling funds in an escrow or sub-escrow capacity, wait a specified number of days after depositing funds, before recording any documents in connection with the transaction or disbursing funds. This statute allows for funds deposited by wire transfer to be disbursed the same day as deposit. In the case of cashier's checks or certified checks, funds may be disbursed the next day after deposit. In order to avoid unnecessary delays of three to seven days, or more, please use wire transfer, cashier's checks, or certified checks whenever possible.

If you have any questions about the effect of this new law, please contact your local First American Office for more details.

NOTICE II

As of January 1, 1991, if the transaction which is the subject of this report will be a sale, you as a party to the transaction, may have certain tax reporting and withholding obligations pursuant to the state law referred to below:

In accordance with Sections 18662 and 18668 of the Revenue and Taxation Code, a buyer may be required to withhold an amount equal to three and one-third percent of the sales price in the case of the disposition of California real property interest by either:

1. A seller who is an individual with a last known street address outside of California or when the disbursement instructions authorize the proceeds be sent to a financial intermediary of the seller, OR
2. A corporate seller which has no permanent place of business in California.

The buyer may become subject to penalty for failure to withhold an amount equal to the greater of 10 percent of the amount required to be withheld or five hundred dollars ($500).

However, notwithstanding any other provision included in the California statutes referenced above, no buyer will be required to withhold any amount or be subject to penalty for failure to withhold if:

1. The sales price of the California real property conveyed does not exceed one hundred thousand dollars ($100,000), OR
2. The seller executes a written certificate, under the penalty of perjury, certifying that the seller is a resident of California, or if a corporation, has a permanent place of business in California, OR
3. The seller, who is an individual, executes a written certificate, under the penalty of perjury, that the California real property being conveyed is the seller's principal residence (as defined in Section 1034 of the Internal Revenue Code).

The seller is subject to penalty for knowingly filing a fraudulent certificate for the purpose of avoiding the withholding requirement.

The California statutes referenced above include provisions which authorize the Franchise Tax Board to grant reduced withholding and waivers from withholding on a case-by-case basis.

The parties to this transaction should seek an attorney's, accountant's, or other tax specialist's opinion concerning the effect of this law on this transaction and should not act on any statements made or omitted by the escrow or closing officer.

The Seller May Request a Waiver by Contacting:
Franchise Tax Board
Withhold at Source Unit
P.O. Box 651
Sacramento, CA 95812-0651
(916) 845-4900

Privacy Policy

We Are Committed to Safeguarding Customer Information
In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our parent company, The First American Corporation, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability
This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its *Fair Information Values*, a copy of which can be found on our website at www.firstam.com.

Types of Information
Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information
We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies, and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers
Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security
We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's *Fair Information Values*. We

currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

EXHIBIT A
LIST OF PRINTED EXCEPTIONS AND EXCLUSIONS (BY POLICY TYPE)

1. CALIFORNIA LAND TITLE ASSOCIATION STANDARD COVERAGE POLICY - 1990
SCHEDULE B

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notice of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the public records.

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by their policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

2. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions of area of the land, or the effect of any violation of any such law, ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant; (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy and not disclosed in writing by the insured claimant to the Company prior to the

date such insured claimant became an insured hereunder; (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy; or (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.

3. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 2 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:
Part One

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

4. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions or area of the land, or the effect of any violation of any such law ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant, (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy or acquired the insured mortgage and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder, (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy (except to the extent insurance is afforded herein as to any statutory lien for labor or material or to the extent insurance is afforded herein as to assessments for street improvements under construction or completed at Date of Policy).
4. Unenforceability of the lien of the insured mortgage because of failure of the insured at Date of Policy or of any subsequent owner of the indebtedness to comply with applicable "doing business" laws of the state in which the land is situated.

5. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association Lenders Policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy, the exclusions set forth in paragraph 4 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:
Part One

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

6. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy;
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material or the extent insurance is afforded herein as to assessments for street improvements under construction or completed at date of policy); or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any statutory lien for services, labor or materials (or the claim of priority of any statutory lien for services, labor or materials over the lien of the insured mortgage) arising from an improvement or work related to the land which is contracted for and commenced subsequent to Date of Policy and is not financed in whole or in part by proceeds of the indebtedness secured by the insured mortgage which at Date of Policy the insured has advanced or is obligated to advance.
7. Any claim, which arises out of the transaction creating the interest of the mortgagee insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
   (i) the transaction creating the interest of the insured mortgagee being deemed a fraudulent conveyance or fraudulent transfer; or
   (ii) the subordination of the interest of the insured mortgagee as a result of the application of the doctrine of equitable subordination; or
   (iii) the transaction creating the interest of the insured mortgagee being deemed a preferential transfer except where the preferential transfer results from the failure:
   (a) to timely record the instrument of transfer; or
   (b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

7. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 6 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

8. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
   (a) created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.
4. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
   (i) the transaction creating the estate or interest insured by this policy being deemed a fraudulent conveyance or fraudulent transfer; or
   (ii) the transaction creating the estate or interest insured by this policy being deemed a preferential transfer except where the preferential transfer results from the failure:
   (a) to timely record the instrument of transfer; or
   (b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

9. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 8 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:
Part One:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

10. AMERICAN LAND TITLE ASSOCIATION RESIDENTIAL
TITLE INSURANCE POLICY - 1987
EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:
   * land use
   * land division
   * improvements on the land
   * environmental protection

   This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date.
   This exclusion does not limit the zoning coverage described in items 12 and 13 of Covered Title Risks.
2. The right to take the land by condemning it, unless:
   * a notice of exercising the right appears in the public records on the Policy Date
   * the taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking.
3. Title Risks:
   * that are created, allowed, or agreed to by you
   * that are known to you, but not to us, on the Policy Date - unless they appeared in the public records
   * that result in no loss to you
   * that first affect your title after the Policy Date - this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks
4. Failure to pay value for your title.
5. Lack of a right:
   * to any land outside the area specifically described and referred to in Item 3 of Schedule A, or
   * in streets, alleys, or waterways that touch your land

   This exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

11. EAGLE PROTECTION OWNER'S POLICY

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 1998
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 1998

Covered Risks 14 (Subdivision Law Violation). 15 (Building Permit). 16 (Zoning) and 18 (Encroachment of boundary walls or fences) are subject to Deductible Amounts and Maximum Dollar Limits of Liability

EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes ordinances, laws and regulations concerning:
   a. building
   b. zoning
   c. land use
   d. improvements on the land
   e. land division
   f. environmental protection

   This exclusion does not apply to violations or the enforcement of these matters if notice of the violation or enforcement appears in the Public Records at the Policy Date.
   This exclusion does not limit the coverage described in Covered Risk 14, 15, 16, 17 or 24.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not apply to violations of building codes if notice of the violation appears in the Public Records at the Policy Date.
3. The right to take the Land by condemning it, unless:
   a. a notice of exercising the right appears in the Public Records at the Policy Date; or
   b. the taking happened before the Policy Date and is binding on You if You bought the Land without Knowing of the taking.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they appear in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they appear in the Public Records at the Policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.d, 22, 23, 24 or 25.
5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any Land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.
   This exclusion does not limit the coverage described in Covered Risk 11 or 18.

12. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992 WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
WITH EAGLE PROTECTION ADDED

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the Land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the Land; (iii) a separation in ownership or a change in the dimensions or area of the Land or any parcel of which the Land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the Land has been recorded in the Public Records at Date of Policy. This exclusion does not limit the coverage provided under insuring provisions 14, 15, 16 and 24 of this policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the Public Records at Date of Policy. This exclusion does not limit the coverage provided under insuring provisions 14, 15, 16 and 24 of this policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the Public Records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without Knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) created, suffered, assumed or agreed to by the Insured Claimant;
   (b) not known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (this paragraph (d) does not limit the coverage provided under insuring provisions 7, 8, 16, 17, 19, 20, 21, 23, 24 and 25); or
   (e) resulting in loss or damage which would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of the Insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable doing business laws of the state in which the Land is situated.
5. Invalidity or unenforceability of the lien of the Insured Mortgage, or claim thereof, which arises out of the transaction evidenced by the Insured Mortgage and is based upon:
   (a) usury, except as provided under insuring provision 10 of this policy; or
   (b) any consumer credit protection or truth in lending law.
6. Taxes or assessments of any taxing or assessment authority which become a lien on the Land subsequent to Date of Policy.
7. Any claim, which arises out of the transaction creating the interest of the mortgagee insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
   (a) the transaction creating the interest of the insured mortgagee being deemed a fraudulent conveyance or fraudulent transfer; or
   (b) the subordination of the interest of the insured mortgagee as a result of the application of the doctrine of equitable subordination; or
   (c) the transaction creating the interest of the insured mortgagee being deemed a preferential transfer except where the preferential transfer results from the failure:
   (i) to timely record the instrument of transfer; or
   (ii) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.
8. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This exclusion does not limit the coverage provided under insuring provision 7.
9. Lack of priority of the lien of the Insured Mortgage as to each and every advance made after Date of Policy, and all interest charged thereon, over liens, encumbrances and other matters affecting title, the existence of which are Known to the Insured at:
   (a) The time of the advance; or
   (b) The time a modification is made to the terms of the Insured Mortgage which changes the rate of interest charged, if the rate of interest is greater as a result of the modification than **it would have** been before the modification**.**
   This exclusion does not limit the coverage provided under insuring provision 7.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Environmental protection liens provided for by the following existing statutes, which liens will have priority over the lien of the Insured Mortgage when they arise: NONE.

13. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH EAGLE PROTECTION ADDED
WITH REGIONAL EXCEPTIONS

When the American Land Title Association loan policy with EAGLE Protection Added is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 12 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:
Part One:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

Part Two:

1. Environmental protection liens provided for by the following existing statutes, which liens will have priority over the lien of the Insured Mortgage when they arise: NONE