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215 West 40th Street, 15th Floor
New York, New York 10018

646.435.0660 Office

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BID ADDENDUM #1

Nanuet Union Free School District
103 Church Street
Nanuet, NY 10954

Nanuet Bond Projects Phase 4

Date: March 19, 2024

NOTICE TO CONTRACTORS

This Addendum issued prior to receipt of Bid shall and does hereby become a part of the Construction Documents for the above project.

All principal Contractors shall be responsible for seeing that their Subcontractors are properly apprised of the contents of this Addendum.

All information contained in this Addendum shall supersede and shall take precedence over any conflicting information in the original Bidding Documents dated **June 6, 2023**. and all previous addenda.

All Contractors shall acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may subject Bidder to disqualification.

CLARIFICATIONS:

1. Is signage required for all three schools, including Nanuet Senior HS?
   Response: New signage is required at Barr Middle Schools, noted on sheet BM-A401 and at the High School for alternate #1 noted on sheet HS-A401.1. No new signage has been called for at Miller Elementary School
2. Doors 112 and 113 at Miller ES (ME-A601) note hardware CR01 and CR02. Those headings do not exist in the specs. Also, doors 114 and 115 call for CR01-1 and CR02-1. The headings don't exist either please supply.
   Response: See revised door hardware specification 08 71 00 – Door Hardware attached to this addendum
3. At the site walk through it was mentioned about asbestos in the Plumbing Contract after reviewing the contract in the spec book there is nothing mentioned about the PC1 being responsible for. That in fact it states to notify the Construction Manager and to cease work 011205-20 in the spec book only on core penetrations not coordinated with the Asbestos Prime contractor could you clarify what section states that?
   Response: There is no PC abatement. Abatement is by the GC & MC depending on the project.

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4. Please advise if this is a lump sum bid? Where on the bid form do we write in the grand total? Please quantify quantity and unit required for each line. Please add a column for unit price, please provide excel version.
   Response: Please see the attached revised bid forms. This is a lump sum bid, but totals for each school shall be listed and indicated on the bid form. Schedule of values on bid form must be filled out as well. Failure to list lump sum, school break out, and SOV could result in disqualification.
5. Please clarify, is all abatement in Phase 4, this bid, by contact GC-01
   Response: There is currently line items included on the bid form to list unit pricing. Excel version will not be provided at this time.
6. Please clarify, are all ceiling removal/reinstall by contract GC-01? If MC or other have specific ceiling removals please issue additional coordination documents, drawings.
   a. **Response:** Please review the contract summary for GC-01, Section 1.2-B-3. Abatement drawings GC-01 is responsible for is listed. Not all abatement Is by GC-01
7. Please advise which allowances are to be carried by Contract GC-01. All allowances are named ”General Contract Work” per page 2, 01 21 00.
   a. **Response:** Please review the contract summary for GC-01, Section 1.2-B-3. All new ceilings are by GC-01. In areas of new ceiling, GC shall provide demo of old ceiling if indicated. All areas indicated for existing ceilings to be “temporarily removed and reinstalled” as required to accommodate new HVAC is by MC-01

CHANGES TO SPECIFICATIONS:

1. Updated Specification Section **08 71 00 - DOOR HARDWARE**
   a. Refer to the updated Section 3.05 Door Hardware Schedule on attached specification.
2. Updated Specification Section **02 08 00 - ASBESTOS ABATEMENT PROCEDURES**
   a. Refer to the updated Section 3.17 on attached specification.
3. **00 30 01 - GC-01 BID FORM-UPDATED - PH 4 - BID ADDENDUM 01**
4. **00 30 02 - EC-01 BID FORM-UPDATED - PH 4 - BID ADDENDUM 01**
5. **00 30 03 - MC-01 BID FORM-UPDATED - PH 4 - BID ADDENDUM 01**
6. **00 30 04 - PC-01 BID FORM-UPDATED - PH 4 - BID ADDENDUM 01**

REVISIONS TO DRAWINGS:

ARCHITECTURAL

1. **Sheet HS-AD11: FIRST FLOOR OVERALL RCP DEMOLITION**
   A. Updated hatch to indicate removal of plaster ceiling above suspended ACT ceiling is required for mechanical work in the Super Intendent Office and Conference Room. See attached drawing.

ABATEMENT

1. **Sheet MS-ASB-2**

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a. Updated legend and hatch to indicate removal of second floor faculty bathroom flooring, ceiling, pipe fittings and pipe insulation. See attached drawing.

STRUCTURAL

None

MECHANICAL

None

ELECTRICAL

1. **Sheet HS-E101 - OVERALL FIRST FLOOR PLAN**
   a. Updated mechanical work in the Super Intendent Office and Conference Room. See attached drawing
2. **Sheet HS-E103 - ELECTRICAL ROOF PLAN**
   a. See attached drawing
3. **Sheet HS-E606 - PANEL SCHEDULES - SECOND FLOOR**
   a. See attached drawing

ENCLOSURES:

00 30 01 - GC-01 BID FORM-UPDATED - PH 4 - BID ADDENDUM 01
00 30 02 - EC-01 BID FORM-UPDATED - PH 4 - BID ADDENDUM 01
00 30 03 - MC-01 BID FORM-UPDATED - PH 4 - BID ADDENDUM 01
00 30 04 - PC-01 BID FORM-UPDATED - PH 4 - BID ADDENDUM 01
02 08 00 - ASBESTOS ABATEMENT PROCEDURES - PH 4 - BID ADDENDUM 01
08 71 00 - DOOR HARDWARE - PH 4 - BID ADDENDUM 01

SHEETS

GENERAL	CIVIL	STRUCT	ARCH	MECH	ELEC	PLUMB	ABATEMENT
			HS-AD111		HS-E101		MS-ASB-2
					HS-E103		
					HS-E606		

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END OF BID ADDENDUM No. 1

SECTION 00 30 01 - GC BID FORM

CONTRACT 1 – GENERAL CONSTRUCTION PROPOSAL (GC-01):

CLOSING: (signature)_____

DATE: _____

BY: _____

TITLE: _____

FIRM: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

CONTACT PERSON: _____

E-MAIL: _____

BID TO (Owner): Attention: Purchasing Agent
Nanuet Union Free School District
101 Church Street
Nanuet, New York 10954

SED Project Control No.	Nanuet High School	SED#50-01-08-03-0-003-036
	Barr Middle School	SED#50-01-08-03-0-004-021
	Miller Elementary School	SED#50-01-08-03-0-001-025

1. **Representations**: By making this Bid, the Bidder represents that:

The Bidder (identified above) hereby certifies that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manuals, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement.

To The Board of Education,

The undersigned hereby proposes to furnish all labor, materials, devices, appliances, supplies, equipment, services and other facilities necessary to complete all of the work of the above referenced Contract for the Nanuet Union Free School District, Nanuet, New York, as required by, and in accordance with, the provisions of the Instructions to Bidders, the Supplementary Instructions to Bidders, the Conditions of the Contract, the Drawings and Specifications, all as prepared by KSQ Design designated as Nanuet Union Free School District Phase 4 Projects, dated **February 6, 2024** and that, if this Proposal is accepted, the Undersigned agrees to enter into an Agreement with the owner to perform this work for the lump sum of:

Total Base Bid (All Schools):_____($_____)

Nanuet High School:_____($_____)

Barr Middle School:_____($_____)

Miller Elementary School:_____($_____)

(Words) (Figures)

ALLOWANCES:

The undersigned Contractor has included the Allowance(s) as specified in Section 01 21 00 in their Base Bid.

UNIT PRICE:

A. **Unit Price GC-#1:** $_____ Dollars $ No Cents

B. **Unit Price GC-#2:** $_____ Dollars $ No Cents

C. **Unit Price GC-#3:** $_____ Dollars $ No Cents

D. **Unit Price GC-#4:** $_____ Dollars $ No Cents

E. **Unit Price GC-#5:** $_____ Dollars $ No Cents

F. **Unit Price GC-#6:** $_____ Dollars $ No Cents

G. **Unit Price GC-#7:** $_____ Dollars $ No Cents

H. **Unit Price GC-#8:** $_____ Dollars $ No Cents

I. **Unit Price GC-#9:** $_____ Dollars $ No Cents

ALTERNATES:

Add Alternate GC-01 Alt #1: $_____ Dollar $ No Cents

Add Alternate GC-01 Alt #2: $_____ Dollar $ No Cents

ADDENDA:

The undersigned acknowledges the receipt of the following addenda:

Addendum Number	Date	Addendum Number	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

The Undersigned understands that the Owner reserves the right to accept or reject any or all proposals, but that if notice of the acceptance of the above Proposal is sent via United States Postal Service or any other overnight carrier, with signature required, to the Undersigned within sixty (60) days after the formal opening of Bids or anytime thereafter before this Proposal is withdrawn, the Undersigned will enter into, execute, and deliver a Contract within five (5) days after the date of said notification.

1. Time of Commencement and Completion:

The Undersigned agrees in the Base Bid to complete the work as per the Milestone Schedule provided in the Specifications.

2. Rejection of Bids:

The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

3. Attachments:

Obtain and attach the following documents to each individual Bid.

a. Corporate Resolutions
b. Non-Collusive Bid Certification
c. Iran Divestment Act Affidavit
d. Bid Security
e. Subcontractor List
f. Substitution List

4. Work Cost Breakdown:

This form shall be filled out and submitted by the Contractor. The grand total must equal the BASE BID under Section I (A) “THE BID”. UNIT PRICES are required for the items listed in the Unit Prices section of the work cost breakdown. Unit prices will be provided for use if the required quantities are more or less than the quantities indicated in the plans and specifications. Failure to complete the work cost breakdown may result in the disqualification of the bid. As itemized in the “Instructions to Bidders” for a complete Bid Form include the following which must be filled out completely, failure to comply with any listed below bid will be a rejected bid:

a. Bid Form, all costs must be shown in each CSI section and totaled, failure to breakdown these costs will be subject to disqualification of bid.

b. Unit costs

NANUET HIGH SCHOOL

Contract Number: Contract No. 01 – General Construction (GC-01)

Contract Titles: As noted in the Notec to Bidders 00 03 00

Date:

* Refer to specification Section 012900 Payment Procedures for additional information

Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	$8,000.00
020800 Asbestos Abatement (Labor)			
024100 Selective Demolition (Labor)			
024100 Selective Demolition (Material)			
033400 Self-Leveling Toppings (Labor)			
033400 Self-Leveling Toppings (Material)			
061000 Rough Carpentry (Labor)			
061000 Rough Carpentry (Material)			
064023 Interior Architectural Woodwork (Labor)			
064023 Interior Architectural Woodwork (Material)			
072100 Thermal Insulation (Labor)			
072100 Thermal Insulation (Material)			
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
079200 Joint Sealant (Labor)			
079200 Joint Sealant (Material)			
081113 Hollow Metal Frames (Labor)			
081113 Hollow Metal Frames (Material)			
081116 fire rated aluminum full vision doors and frames (Labor)			
081116 fire rated aluminum full vision doors and frames (Material)			
081416 flush wood door (Labor)			
081416 flush wood door (Material)			
084113 Aluminum Framed Entrances and Storefronts (Labor)			

084113 Aluminum Framed Entrances and Storefronts (Material)			
087100 Door Hardware (Labor)			
087100 Door Hardware (Material)			
092216 non-structural metal framing Labor)			
092216 non-structural metal framing (Material)			
092900 gypsum board (Labor)			
092900 gypsum board (Material)			
095123 acoustical ceiling tile (Labor)			
095123 acoustical ceiling tile (Material)			
096513 resilient base and accessories (Labor)			
096513 resilient base and accessories (Material)			
096519 resilient flooring (Labor)			
096519 resilient flooring (Material)			
096723 resinous flooring (Labor)			
096723 resinous flooring (Material)			
096813 tile carpeting (Labor)			
096813 tile carpeting (Material)			
099100 painting (Labor)			
099100 painting (Material)			
099720 wall coverings (Labor)			
099720 wall coverings (Material)			
101400 interior signage (labor)			
101400 interior signage (Material)			
122413 roller window shades (Labor)			
122413 roller window shades (Material)			

BARR MIDDLE SCHOOL

Contract Number: Contract No. 01 – General Construction (GC-01)

Contract Titles: As noted in the Notec to Bidders 00 03 00

Date:

* Refer to specification Section 012900 Payment Procedures for additional information

Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	$45,000.00
020800 Asbestos Abatement			
024100 Selective Demolition (Labor)			
024100 Selective Demolition (Material)			
037330 Concrete Repair Work (Labor)			
037330 Concrete Repair Work (Material)			
042200 Concrete Unit Masonry (Labor)			
042200 Concrete Unit Masonry (Material)			
055000 metal fabrications (Labor)			
055000 metal fabrications (Material)			
061000 Rough Carpentry (Labor)			
061000 Rough Carpentry (Material)			
072100 Thermal Insulation (Labor)			
072100 Thermal Insulation (Material)			
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
079200 Joint Sealant (Labor)			
079200 Joint Sealant (Material)			
081113 Hollow Frames (Labor)			
081113 Hollow Metal Frames (Material)			
081416 flush wood door (Labor)			
081416 flush wood door (Material)			
083113 access doors and frames (Labor)			
083113 access doors and frames (Material)			
087100 Door Hardware (Labor)			
087100 Door Hardware (Material)			
090370 bonded terrazzo to match existing (Labor)			
090370 bonded terrazzo to match existing (Material)			

092216 non-structural metal framing Labor)			
092216 non-structural metal framing (Material)			
092900 gypsum board (Labor)			
092900 gypsum board (Material)			
093013 ceramic tile (Labor)			
093013 ceramic tile (Material)			
095123 acoustical ceiling tile (Labor)			
095123 acoustical ceiling tile (Material)			
096723 resinous flooring (Labor)			
096723 resinous flooring (Material)			
099100 painting (Labor)			
099100 painting (Material)			
099720 wall coverings (Labor)			
099720 wall coverings (Material)			
101400 interior signage (labor)			
101400 interior signage (Material)			
102100 toilet partitions (Labor)			
102100 toilet partitions (Material)			
102800 toilet and bath accessories (Labor)			
102800 toilet and bath accessories (Material)			
144200 wheelchair lift (Labor)			
144200 wheelchair lift (Material)			

MILLER ELEMENTARY SCHOOL

Contract Number: Contract No. 01 – General Construction (GC-01)

Contract Titles: As noted in the Notec to Bidders 00 03 00

Date:

* Refer to specification Section 012900 Payment Procedures for additional information

Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	$22,000.00
024100 Selective Demolition (Labor)			
024100 Selective Demolition (Material)			
033400 Self-Leveling Toppings (Labor)			
033400 Self-Leveling Toppings (Material)			
037330 Concrete Repair Work (Labor)			
037330 Concrete Repair Work (Material)			
040120 Maintenance and Restoration of Brick Masonry (Labor)			
040120 Maintenance and Restoration of Brick Masonry (Material)			
040305.13 Restoration Mortars (Labor)			
040305.13 Restoration Mortars (Material)			
040305.16 Restoration Masonry Repointing (Labor)			
040305.16 Restoration Masonry Repointing (Material)			
042200 Concrete Unit Masonry (Labor)			
042200 Concrete Unit Masonry (Material)			
051200 structural steel (Labor)			
051200 structural steel (Material)			
053100 steel decking (Labor)			
053100 steel decking (Material)			
055000 metal fabrications (Labor)			
055000 metal fabrications (Material)			
055213 pipe and tube railings (Labor)			
055213 pipe and tube railings (Material)			
061000 Rough Carpentry (Labor)			
061000 Rough Carpentry (Material)			
064023 Interior Architectural Woodwork (Labor)			
064023 Interior Architectural Woodwork (Material)			

072100 Thermal Insulation (Labor)			
072100 Thermal Insulation (Material)			
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
079200 Joint Sealant (Labor)			
079200 Joint Sealant (Material)			
081113 Frames (Labor)			
081113 Frames (Material)			
081116 fire rated aluminum full vision doors and frames (Labor)			
081116 fire rated aluminum full vision doors and frames (Material)			
081416 flush wood door (Labor)			
081416 flush wood door (Material)			
083113 access doors and frames (Labor)			
083113 access doors and frames (Material)			
084113 Aluminum Framed Entrances and Storefronts (Labor)			
084113 Aluminum Framed Entrances and Storefronts (Material)			
085671 Bullet-Resistant Steel Window (Labor)			
085671 Bullet-Resistant Steel Window (Material)			
087100 Door Hardware (Labor)			
087100 Door Hardware (Material)			
088717 safety and security glazing films (Labor)			
088717 safety and security glazing films (Material)			
090370 bonded terrazzo to match existing (Labor)			
090370 bonded terrazzo to match existing (Material)			
092216 non-structural metal framing Labor)			
092216 non-structural metal framing (Material)			
092900 gypsum board (Labor)			
092900 gypsum board (Material)			
095123 acoustical ceiling tile (Labor)			
095123 acoustical ceiling tile (Material)			
096513 resilient base and accessories (Labor)			
096513 resilient base and accessories (Material)			

096519 resilient flooring (Labor)			
096519 resilient flooring (Material)			
096813 tile carpeting (Labor)			
096813 tile carpeting (Material)			
099100 painting (Labor)			
099100 painting (Material)			
099720 wall coverings (Labor)			
099720 wall coverings (Material)			
101400 interior signage (labor)			
101400 interior signage (Material)			
111600 Bullet resistant fiberglass panels (labor)			
111600 Bullet resistant fiberglass panels (Material)			
122413 roller window shades (Labor)			
122413 roller window shades (Material)			
123661 simulated stone countertops (Labor)			
123661 simulated stone countertops (Material)			
124813 entrance mats and frames (Labor)			
124813 entrance mats and frames (Material)			

Submit Bid Form in duplicate.

END OF SECTION 00 30 01

SECTION 00 30 03 - MC BID FORM

CONTRACT 2 – MECHANICAL CONSTRUCTION PROPOSAL (MC-01):

CLOSING: (signature)_____

DATE: _____

BY: _____

TITLE: _____

FIRM: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

CONTACT PERSON: _____

E-MAIL: _____

BID TO (Owner): Attention: Purchasing Agent

Nanuet Union Free School District

101 Church Street

Nanuet, New York 10954

SED Project Control No.	Nanuet High School	SED#50-01-08-03-0-003-036
	Barr Middle School	SED#50-01-08-03-0-004-021
	Miller Elementary School	SED#50-01-08-03-0-001-025

1. **Representations**: By making this Bid, the Bidder represents that:

The Bidder (identified above) hereby certifies that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manuals, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement.

The undersigned hereby proposes to furnish all labor, materials, devices, appliances, supplies, equipment, services and other facilities necessary to complete all of the work of the above referenced Contract for the Nanuet Union Free School District, Nanuet, New York, as required by, and in accordance with, the provisions of the Instructions to Bidders, the Supplementary Instructions to Bidders, the Conditions of the Contract, the Drawings and Specifications, all as prepared by KSQ Design designated as Nanuet Union Free School District Phase 4 Projects, dated **February 6, 2024** and that, if this Proposal is accepted, the Undersigned agrees to enter into an Agreement with the owner to perform this work for the lump sum of:

Total Base Bid (All Schools):_____($_____)

Nanuet High School:_____($_____)

Barr Middle School:_____($_____)

Miller Elementary School:_____($_____)

(Words) (Figures)

ALLOWANCES:

The undersigned Contractor has included the Allowance(s) as specified in Section 01 2100 in their Base Bid.

UNIT PRICE:

A. **Unit Price MC-#1:** $_____ Dollars $ No Cents

B. **Unit Price MC-#2:** $_____ Dollars $ No Cents

ALTERNATES:

Deduct Alternate MC-01 Alt #1: $_____ Dollar $ No Cents

Add Alternate MC-01 Alt #2: $_____ Dollar $ No Cents

Add Alternate MC-01 Alt #3: $_____ Dollar $ No Cents

ADDENDA:

The undersigned acknowledges the receipt of the following addenda:

Addendum Number	Date	Addendum Number	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

The Undersigned understands that the Owner reserves the right to accept or reject any or all proposals, but that if notice of the acceptance of the above Proposal is sent via United States Postal Service or any other overnight carrier, with signature required, to the Undersigned within sixty (60) days after the formal opening of Bids or anytime thereafter before this Proposal is withdrawn, the Undersigned will enter into, execute, and deliver a Contract within five (5) days after the date of said notification.

1. Time of Commencement and Completion:

The Undersigned agrees in the Base Bid to complete the work as per the Milestone Schedule provided in the Specifications.

2. Rejection of Bids:

The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

3. Attachments:

Obtain and attach the following documents to each individual Bid.

a. Corporate Resolutions

b. Non-Collusive Bid Certification

c. Iran Divestment Act Affidavit

d. Bid Security

e. Subcontractor List

f. Substitution List

4. Work Cost Breakdown:

This form shall be filled out and submitted by the Contractor. The grand total must equal the BASE BID under Section I (A) “THE BID”. UNIT PRICES are required for the items listed in the Unit Prices section of the work cost breakdown. Unit prices will be provided for use if the required quantities are more or less than the quantities indicated in the plans and specifications. Failure to complete the work cost breakdown may result in the disqualification of the bid. As itemized in the “Instructions to Bidders” for a complete Bid Form include the following which must be filled out completely, failure to comply with any listed below bid will be a rejected bid:

a. Bid Form, all costs must be shown in each CSI section and totaled, failure to breakdown these costs will be subject to disqualification of bid.

b. Unit costs

NANUET HIGH SCHOOL

Contract Number: Contract No. 02 – Mechanical Construction (MC-01)

Contract Titles: As noted in the Notice to Bidders 00 03 00

Date:

* Refer to specification Section 012900 Payment Procedures for additional information

Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	$285,000.00
024100 Selective Demolition (Labor)			
024100 Selective Demolition (Material)			
028200 Asbestos Abatement			
061000 Rough Carpentry (Labor)			
061000 Rough Carpentry (Material			
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
079200 Joint Sealant (Labor)			
079200 Joint Sealant (Material)			
083113 access doors and frames (Labor)			
083113 access doors and frames (Material)			
095123 acoustical ceiling tile (Labor)			
095123 acoustical ceiling tile (Material)			
096513 resilient base and accessories (Labor)			
096513 resilient base and accessories (Material)			
096519 resilient flooring (Labor)			
096519 resilient flooring (Material)			
096813 tile carpeting (Material)			
096813 tile carpeting (Labor)			
230501 basic hvac materials and methods (Material)			
230501 basic hvac materials and methods (Labor)			
230516 expansion fittings and loops for hvac piping (Material)			
230516 expansion fittings and loops for hvac piping (Labor)			
230519 meters and gauges for hvac piping (Material)			
230519 meters and gauges for hvac piping (Labor)			

230548 vibration controls for hvac piping and equipment (Material)			
230548 vibration controls for hvac piping and equipment (Labor)			
230553 identification for hvac piping and equipment (Material)			
230553 identification for hvac piping and equipment (Labor)			
230593 testing, adjusting, and balancing for hvac (Material)			
230593 testing, adjusting, and balancing for hvac (Labor)			
230713 Duct Insulation (Labor)			
230713 Duct Insulation (Material)			
230716 hvac equipment insulation (Material)			
230716 hvac equipment insulation (Labor)			
230719 hvac piping insulation (Material)			
230719 hvac piping insulation (Labor)			
230800 commissioning of hvac (Material)			
230800 commissioning of hvac (Labor)			
230923 direct-digital control system for hvac (Material)			
230923 direct-digital control system for hvac (Labor)			
232113 hydronic piping (Material)			
232113 hydronic piping (Labor)			
232114 hydronic specialties (Material)			
232114 hydronic specialties (Labor)			
232123 Hydronic Pumps (Labor)			
232123 Hydronic Pumps (Material)			
232213 steam and condensate heating piping (Material)			
232213 steam and condensate heating piping (Labor)			
232300 refrigerant piping (Material)			
232300 refrigerant piping (Labor)			
232500 hvac water treatment (Material)			
232500 hvac water treatment (Labor)			
233100 hvac ducts and casings (Material)			
233100 hvac ducts and casings (Labor)			
233300 air duct accessories (Material)			

233300 air duct accessories (Labor)			
233319 duct silencers (Material)			
233319 duct silencers (Labor)			
233423 hvac power ventilator (Material)			
233423 hvac power ventilator (Labor)			
233600 air terminal units (Material)			
233600 air terminal units (Labor)			
233700 air outlets and inlets (Material)			
233700 air outlets and inlets (Labor)			
233813 Kitchen ventilation hoods (Material)			
233813 Kitchen ventilation hoods (Labor)			
237223 packaged air to air energy recovery units (Material)			
237223 packaged air to air energy recovery units (Labor)			
238126 Small Capacity Split System Air conditioner (Labor)			
238126 Small Capacity Split System Air conditioner (Material)			
238129 variable refrigerant flow hvac systems (Material)			
238129 variable refrigerant flow hvac systems (Labor)			
238200 convection heating and cooling units (Material)			
238200 convection heating and cooling units (Labor)			

BARR MIDDLE SCHOOL

Contract Number: Contract No. 02 – Mechanical Construction (MC-01)

Contract Titles: As noted in the Notice to Bidders 00 03 00

Date:

* Refer to specification Section 012900 Payment Procedures for additional information

Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	$33,000.00
024100 Selective Demolition (Labor)			
024100 Selective Demolition (Material)			
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
079200 Joint Sealant (Labor)			
079200 Joint Sealant (Material)			
083113 access doors and frames (Labor)			
083113 access doors and frames (Material)			
096723 resinous flooring (Labor)			
096723 resinous flooring (Material)			
230501 basic hvac materials and methods (Material)			
230501 basic hvac materials and methods (Labor)			
230516 expansion fittings and loops for hvac piping (Material)			
230516 expansion fittings and loops for hvac piping (Labor)			
230519 meters and gauges for hvac piping (Material)			
230519 meters and gauges for hvac piping (Labor)			
230553 identification for hvac piping and equipment (Material)			
230553 identification for hvac piping and equipment (Labor)			
230593testing, adjusting, and balancing for hvac (Material)			
230593 testing, adjusting, and balancing for hvac (Labor)			
230713 Duct Insulation (Labor)			
230713 Duct Insulation (Material)			

230719 hvac piping insulation (Material)			
230719 hvac piping insulation (Labor)			
230800 commissioning of hvac (Material)			
230800 commissioning of hvac (Labor)			
230923 direct-digital control system for hvac (Material)			
230923 direct-digital control system for hvac (Labor)			
232113 hydronic piping (Material)			
232113 hydronic piping (Labor)			
233100 hvac ducts and casings (Material)			
233100 hvac ducts and casings (Labor)			
233300 air duct accessories (Material)			
233300 air duct accessories (Labor)			
233700 air outlets and inlets (Material)			
233700 air outlets and inlets (Labor)			
238200 convection heating and cooling units (Material)			
238200 convection heating and cooling units (Labor)			

MILLER ELEMENTARY SCHOOL

Contract Number: Contract No. 02 – Mechanical Construction (MC-01)

Contract Titles: As noted in the Notice to Bidders 00 03 00

Date:

* Refer to specification Section 012900 Payment Procedures for additional information

Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	$33,000.00
024100 Selective Demolition (Labor)			
024100 Selective Demolition (Material)			
028200 Asbestos Abatement			
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
079200 Joint Sealant (Labor)			
079200 Joint Sealant (Material)			
083113 access doors and frames (Labor)			
083113 access doors and frames (Material)			
095123 acoustical ceiling tile (Labor)			
095123 acoustical ceiling tile (Material)			
230501 basic hvac materials and methods (Material)			
230501 basic hvac materials and methods (Labor)			
230553 identification for hvac piping and equipment (Material)			
230553 identification for hvac piping and equipment (Labor)			
230593testing, adjusting, and balancing for hvac (Material)			
230593 testing, adjusting, and balancing for hvac (Labor)			
230713 Duct Insulation (Labor)			
230713 Duct Insulation (Material)			
230719 hvac piping insulation (Material)			
230719 hvac piping insulation (Labor)			
230800 commissioning of hvac (Material)			
230800 commissioning of hvac (Labor)			
230923 direct-digital control system for hvac (Material)			
230923 direct-digital control system for hvac (Labor)			

232113 hydronic piping (Material)			
232113 hydronic piping (Labor)			
232114 hydronic specialties (Material)			
232114 hydronic specialties (Labor)			
232300 refrigerant piping (Material)			
232300 refrigerant piping (Labor)			
233100 hvac ducts and casings (Material)			
233100 hvac ducts and casings (Labor)			
233600 air terminal units (Material)			
233600 air terminal units (Labor)			
233700 air outlets and inlets (Material)			
233700 air outlets and inlets (Labor)			
238126 Small Capacity Split System Air conditioner (Labor)			
238126 Small Capacity Split System Air conditioner (Material)			
238300 Radiant Heating and Cooling Units (Labor)			
238300 Radiant Heating and Cooling Units (Material)			

Submit Bid Form in duplicate.

END OF SECTION 00 30 03

SECTION 00 30 02 - EC BID FORM

CONTRACT 3 – ELECTRICAL CONSTRUCTION PROPOSAL (EC-01):

CLOSING: (signature)_____

DATE: _____

BY: _____

TITLE: _____

FIRM: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

CONTACT PERSON: _____

E-MAIL: _____

BID TO (Owner): Attention: Purchasing Agent
Nanuet Union Free School District
101 Church Street
Nanuet, New York 10954

SED Project Control No.	Nanuet High School	SED#50-01-08-03-0-003-036
	Barr Middle School	SED#50-01-08-03-0-004-021
	Miller Elementary School	SED#50-01-08-03-0-001-025

1. **Representations**: By making this Bid, the Bidder represents that:

The Bidder (identified above) hereby certifies that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manuals, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement.

To The Board of Education,

The undersigned hereby proposes to furnish all labor, materials, devices, appliances, supplies, equipment, services and other facilities necessary to complete all of the work of the above referenced Contract for the Nanuet Union Free School District, Nanuet, New York, as required by, and in accordance with, the provisions of the Instructions to Bidders, the Supplementary Instructions to Bidders, the Conditions of the Contract, the Drawings and Specifications, all as prepared by KSQ Design designated as Nanuet Union Free School District Phase 4 Projects, dated **February 6, 2024** and that, if this Proposal is accepted, the Undersigned agrees to enter into an Agreement with the owner to perform this work for the lump sum of:

Total Base Bid (All Schools):_____($_____)

Nanuet High School:_____($_____)

Barr Middle School:_____($_____)

Miller Elementary School:_____($_____)

(Words) (Figures)

ALLOWANCES:

The undersigned Contractor has included the Allowance(s) as specified in Section 01 2100 in their Base Bid.

UNIT PRICE: **NONE**

ALTERNATES:

Add Alternate EC-01 Alt #1: $_____ Dollar $ No Cents

Add Alternate EC-01 Alt #2 $_____ Dollar $ No Cents

Add Alternate EC-01 Alt #3 $_____ Dollar $ No Cents

Add Alternate EC-01 Alt #4 $_____ Dollar $ No Cents

ADDENDA:

The undersigned acknowledges the receipt of the following addenda:

Addendum Number	Date	Addendum Number	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

The Undersigned understands that the Owner reserves the right to accept or reject any or all proposals, but that if notice of the acceptance of the above Proposal is sent via United States Postal Service or any other overnight carrier, with signature required, to the Undersigned within sixty (60) days after the formal opening of Bids or anytime thereafter before this Proposal is withdrawn, the Undersigned will enter into, execute, and deliver a Contract within five (5) days after the date of said notification.

1. Time of Commencement and Completion:

The Undersigned agrees in the Base Bid to complete the work as per the Milestone Schedule provided in the Specifications.

2. Rejection of Bids:

The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

3. Attachments:

Obtain and attach the following documents to each individual Bid.

a. Corporate Resolutions

b. Non-Collusive Bid Certification

c. Iran Divestment Act Affidavit

d. Bid Security

e. Subcontractor List

f. Substitution List

4. Work Cost Breakdown:

This form shall be filled out and submitted by the Contractor. The grand total must equal the BASE BID under Section I (A) “THE BID”. UNIT PRICES are required for the items listed in the Unit Prices section of the work cost breakdown. Unit prices will be provided for use if the required quantities are more or less than the quantities indicated in the plans and specifications. Failure to complete the work cost breakdown may result in the disqualification of the bid. As itemized in the “Instructions to Bidders” for a complete Bid Form include the following which must be filled out completely, failure to comply with any listed below bid will be a rejected bid:

a. Bid Form, all costs must be shown in each CSI section and totaled, failure to breakdown these costs will be subject to disqualification of bid.

b. Unit costs

NANUET HIGH SCHOOL

Contract Number: Contract No. 03 – Electrical Construction (EC-01)

Contract Titles: As noted in the Notice to Bidders 00 03 00

Date:

* Refer to specification Section 012900 Payment Procedures for additional information

Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	$32,000.00
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
260505 selective demolition for electrical (Labor)			
260505 selective demolition for electrical (Material)			
260519 low-voltage electrical power conductors and cables (Labor)			
260519 low-voltage electrical power conductors and cables (Material)			
260526 Grounding and Bonding for Electrical System (Labor)			
260526 Grounding and Bonding for Electrical System (Material)			
260529 hangers and supports for electrical systems (Labor)			
260529 hangers and supports for electrical systems (Material)			
260533.13 conduit for electrical systems (Labor)			
260533.13 conduit for electrical systems (Material)			
260533.16 boxes for electrical systems (Labor)			
260533.16 boxes for electrical systems (Material)			
260533.23 surface raceways for electrical systems (Labor)			
260533.23 surface raceways for electrical systems (Material)			
260553 identification for electrical systems (Labor)			
260553 identification for electrical systems (Material)			
260923 lighting control devices (Labor)			
260923 lighting control devices (Material)			
262416 panelboards (Labor)			
262416 panelboards (Material)			

262421 circuit breakers for existing panelboard (Labor)			
262421 circuit breakers for existing panelboard (Material)			
262726 wiring devices (Labor)			
262726 wiring devices (Material)			
262813 Fuses (Labor)			
262813 Fuses (Maaterial)			
262816.16 enclosed switches (Labor)			
262816.16 enclosed switches (Material)			
262913 enclosed controllers (Labor)			
262913 enclosed controllers (Material)			
262923 variable-frequency motor controllers (Labor)			
262923 variable-frequency motor controllers (Material)			
265100 interior lighting (Labor)			
265100 interior lighting (Material)			
271000 structured cabling-voice and data- inside (Labor)			
271000 structured cabling-voice and data- inside (Material)			
284600 fire detection and alarm (Labor)			
284600 fire detection and alarm (Material)			

BARR MIDDLE SCHOOL

Contract Number: Contract No. 03 – Electrical Construction (EC-01)

Contract Titles: As noted in the Notice to Bidders 00 03 00

Date:

* Refer to specification Section 012900 Payment Procedures for additional information

Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	$55,000.00
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
079200 Joint Sealant (Labor)			
079200 Joint Sealant (Material)			
144200 Wheelchair Lift (Labor)			
144200 Wheelchair Lift (Material)			
260505 selective demolition for electrical (Labor)			
260505 selective demolition for electrical (Material)			
260519 low-voltage electrical power conductors and cables (Labor)			
260519 low-voltage electrical power conductors and cables (Material)			
260526 Grounding and Bonding for Electrical System (Labor)			
260526 Grounding and Bonding for Electrical System (Material)			
260529 hangers and supports for electrical systems (Labor)			
260529 hangers and supports for electrical systems (Material)			
260533.13 conduit for electrical systems (Labor)			
260533.13 conduit for electrical systems (Material)			
260533.16 boxes for electrical systems (Labor)			
260533.16 boxes for electrical systems (Material)			
260533.23 surface raceways for electrical systems (Labor)			
260533.23 surface raceways for electrical systems (Material)			
260553 identification for electrical systems (Labor)			
260553 identification for electrical systems (Material)			

260923 lighting control devices (Labor)			
260923 lighting control devices (Material)			
262726 wiring devices (Labor)			
262726 wiring devices (Material)			
262816.16 enclosed switches (Labor)			
262816.16 enclosed switches (Material)			
262913 enclosed controllers (Labor)			
262913 enclosed controllers (Material)			
265100 interior lighting (Labor)			
265100 interior lighting (Material)			
284600 fire detection and alarm (Labor)			
284600 fire detection and alarm (Material)			

Contract Titles: As noted in the Notice to Bidders 00 03 00

Date:

* Refer to specification Section 012900 Payment Procedures for additional information

Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	$53,000.00
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
079200 Joint Sealant (Labor)			
079200 Joint Sealant (Material)			
260505 selective demolition for electrical (Labor)			
260505 selective demolition for electrical (Material)			
260519 low-voltage electrical power conductors and cables (Labor)			
260519 low-voltage electrical power conductors and cables (Material)			
260526 Grounding and Bonding for Electrical System (Labor)			
260526 Grounding and Bonding for Electrical System (Material)			
260529 hangers and supports for electrical systems (Labor)			
260529 hangers and supports for electrical systems (Material)			
260533.13 conduit for electrical systems (Labor)			
260533.13 conduit for electrical systems (Material)			
260533.16 boxes for electrical systems (Labor)			
260533.16 boxes for electrical systems (Material)			
260533.23 surface raceways for electrical systems (Labor)			
260533.23 surface raceways for electrical systems (Material)			
260553 identification for electrical systems (Labor)			
260553 identification for electrical systems (Material)			
260923 lighting control devices (Labor)			
260923 lighting control devices (Material)			
262416 panelboards (Labor)			
262416 panelboards (Material)			

262726 wiring devices (Labor)			
262726 wiring devices (Material)			
262813 Fuses (Labor)			
262813 Fuses (Maaterial)			
262816.16 enclosed switches (Labor)			
262816.16 enclosed switches (Material)			
262913 enclosed controllers (Labor)			
262913 enclosed controllers (Material)			
265100 interior lighting (Labor)			
265100 interior lighting (Material)			
271000 structured cabling-voice and data- inside (Labor)			
271000 structured cabling-voice and data- inside (Material)			
284600 fire detection and alarm (Labor)			
284600 fire detection and alarm (Material)			

Submit Bid Form in duplicate.

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END OF SECTION 00 30 02

SECTION 00 30 04 - PC BID FORM

CONTRACT 4 – PLUMBING CONSTRUCTION PROPOSAL (PC-01):

CLOSING: (signature)_____

DATE: _____

BY: _____

TITLE: _____

FIRM: _____

ADDRESS: _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

CONTACT PERSON: _____

E-MAIL: _____

BID TO (Owner): Attention: Purchasing Agent

Nanuet Union Free School District

101 Church Street

Nanuet, New York 10954

SED Project Control No.	Nanuet High School	SED#50-01-08-03-0-003-036
	Barr Middle School	SED#50-01-08-03-0-004-021

1. Representations: By making this Bid, the Bidder represents that:

The Bidder (identified above) hereby certifies that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manuals, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement.

To The Board of Education,

The undersigned hereby proposes to furnish all labor, materials, devices, appliances, supplies, equipment, services and other facilities necessary to complete all of the work of the above referenced Contract for the Nanuet Union Free School District, Nanuet, New York, as required by, and in accordance with, the provisions of the Instructions to Bidders, the Supplementary Instructions to Bidders, the Conditions of the Contract, the Drawings and Specifications, all as prepared by KSQ Design designated as Nanuet Union Free School District Phase 4 Projects, dated **February 6, 2024** and that, if this Proposal is accepted, the Undersigned agrees to enter into an Agreement with the owner to perform this work for the lump sum of:

Total Base Bid (All Schools):_____($_____)

Nanuet High School:_____($_____)

Barr Middle School:_____($_____)

ALLOWANCES:

The undersigned Contractor has included the Allowance(s) as specified in Section 01 2100 in their Base Bid.

UNIT PRICE: **NONE**

ALTERNATES:

Add Alternate PC-01 Alt #1: $_____ Dollar $ No Cents

ADDENDA:

The undersigned acknowledges the receipt of the following addenda:

Addendum Number	Date	Addendum Number	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

The Undersigned understands that the Owner reserves the right to accept or reject any or all proposals, but that if notice of the acceptance of the above Proposal is sent via United States Postal Service or any other overnight carrier, with signature required, to the Undersigned within sixty (60) days after the formal opening of Bids or anytime thereafter before this Proposal is withdrawn, the Undersigned will enter into, execute, and deliver a Contract within five (5) days after the date of said notification.

1. Time of Commencement and Completion:

The Undersigned agrees in the Base Bid to complete the work as per the Milestone Schedule provided in the Specifications.

2. Rejection of Bids:

The Bidder acknowledges that the Owner reserves the right to waive any informality in, or to reject any or all Bids.

3. Attachments:

Obtain and attach the following documents to each individual Bid.

a. Corporate Resolutions

b. Non-Collusive Bid Certification

c. Iran Divestment Act Affidavit

d. Bid Security

e. Subcontractor List

f. Substitution List

4. Work Cost Breakdown:

This form shall be filled out and submitted by the Contractor. The grand total must equal the BASE BID under Section I (A) “THE BID”. UNIT PRICES are required for the items listed in the Unit Prices section of the work cost breakdown. Unit prices will be provided for use if the required quantities are more or less than the quantities indicated in the plans and specifications. Failure to complete the work cost breakdown may result in the disqualification of the bid. As itemized in the “Instructions to Bidders” for a complete Bid Form include the following which must be filled out completely, failure to comply with any listed below bid will be a rejected bid:

a. Bid Form, all costs must be shown in each CSI section and totaled, failure to breakdown these costs will be subject to disqualification of bid.

b. Unit costs

NANUET HIGH SCHOOL

Contract Number: Contract No. 04 – Plumbing Construction (PC-01)

Contract Titles: As noted in the Notice to Bidders 00 03 00

Date:

* Refer to specification Section 012900 Payment Procedures for additional information

Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	N/A
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
220719 plumbing piping insulation (Labor)			
220719 plumbing piping insulation (Material)			
221005 plumbing piping (Labor)			
221005 plumbing piping (Material)			

BARR MIDDLE SCHOOL

Contract Number: Contract No. 04 – Plumbing Construction (PC-01)

Contract Titles: As noted in the Notice to Bidders 00 03 00

Date:

* Refer to specification Section 012900 Payment Procedures for additional information

Description	QTY	Unit	Total
General Requirements (Submittals, Punchlist, etc.)			
012100 Allowances - Unforeseen Conditions	1	NA	$13,000.00
078413 Penetration Firestopping (Labor)			
078413 Penetration Firestopping (Material)			
220501 basic plumbing materials and methods (Labor)			
220501 basic plumbing materials and methods (Material)			
220553 identification for plumbing piping and equipment (Labor)			
220553 identification for plumbing piping and equipment (Material)			
220719 plumbing piping insulation (Labor)			
220719 plumbing piping insulation (Material)			
221005 plumbing piping (Labor)			

221005 plumbing piping (Material)			
221006 plumbing piping specialties (Labor)			
221006 plumbing piping specialties (Material)			
224000 plumbing fixtures (Labor)			
224000 plumbing fixtures (Material)			

Submit Bid Form in duplicate.

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END OF SECTION 00 30 04

SECTION 020800
ASBESTOS ABATEMENT PROCEDURES

AT: BARR MIDDLE SCHOOL
143 CHURCH STREET
NANUET, NY 10954
SED #50-01-08-03-0-004-021

OWNER: NANUET UNION FREE SCHOOL DISTRICT
103 CHURCH STREET
NANUET, NY 10954
PH. (845) 627-9880
FX. (845) 624-5338

CONSULTANT: QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC. (QUES&T)
1376 ROUTE 9
WAPPINGERS FALLS, NEW YORK 12590
PH. (845) 298-6031
FX. (845) 298-6251

SPECIFICATION DATED: February 6, 2024
Design conforms to all applicable provisions of the NYS Uniform Fire Prevention and Building Code, NYS Energy Conservation Construction Code and Education Department Building Standards.

PART I – GENERAL

1.01 DESCRIPTION

A. All work under this contract shall be performed in strict accordance with the specifications and all applicable laws for asbestos removal projects. The Abatement Contractor shall furnish all labor, materials, supervision, services, insurance and equipment necessary for the complete and total removal of Asbestos-containing Materials (ACM) as described herein, in attachments to the specification, Job Specific Variance(s) and/or as directed by Nanuet Union Free School District (here-in-after the "Owner") and/or the Owners Representative(s) to support the to the following Nanuet School District projects:

- Barr Middle School
  143 Church Street
  Nanuet, NY 10954
  SED #50-01-08-03-0-004-021

B. Abatement Contractor shall provide for personnel air monitoring to satisfy OSHA regulation 29 CFR Parts 1926.1101(f). All work performed shall be in strict accordance with applicable provisions and regulations promulgated under New York State Department of Labor, Industrial Code 56 (ICR-56).

C. The Abatement Contractor shall satisfy the requirements for asbestos projects issued by the New York State Department of Labor concerning licensing and certification; notification; equipment; removal and disposal procedures; engineering controls; work area preparation; decontamination and clean-up procedures; and personnel air monitoring.

D. The Abatement Contractor shall be responsible for submittal of asbestos project notification(s) and applicable fees to EPA and NYSDOL concerning this project. Project notification(s) shall be made for the cumulative total of ACM to be removed as required by ICR-56-3.4. Work practices for each individual work area established shall be consistent with the quantity of ACM contained within that work area as defined in ICR-56-2.

E. The scope of work under this contract shall include the following:

1. All asbestos-containing materials (ACM) shall be removed in accordance with these specifications. The Abatement Contractor is responsible for field verification of estimated quantities, locations and other site conditions that may affect work.

2. All fixed objects remaining within the work area(s) shall be protected as required by Title 12 NYCRR Section 56-7.10(b) and as described in these specifications.

3. The containerization, labeling and disposal of all asbestos waste in accordance with applicable city, state and federal regulations and these specifications.

4. The Abatement Contractor will be responsible for repairing all building components damaged during abatement including, but not limited to, ceiling tiles, ceiling finishes, wall finishes and/or floor finishes, etc.

5. The Abatement Contractor shall be responsible for any and all demolition required to access materials identified in scope of work and on associated drawings.

6. Concealed conditions that are exposed and may require additional work shall be brought to the attention of the Owner(s) immediately. The Abatement Contractor shall not abate these areas without a written notice to proceed. If the Abatement Contractor removes additional asbestos prior to the order to proceed the additional work will not be acknowledged.

7. Permissible working hours shall be Monday through Friday 7:00 A.M. to 4:00 P.M. with one (1) hour for lunch and/or as defined by the Owner. Holidays shall be considered weekends and not included for working days. Upon written approval from the Owner, the Abatement Contractor may work past these hours. The Abatement Contractor will incur any and all costs associated for work performed beyond the defined schedule including, but not limited to: abatement activities, project/air monitoring, custodial/staffing labor, overtime, mobilizations, etc.

8. Buildings will be turned over to the Abatement Contractor as is. At that time, all electrical services and HVAC systems in the proposed work areas will be shut down. Electricity and water supply will be maintained in the building for use by the Abatement Contractor. The Abatement Contractor is responsible for securing all power in the work area(s) and establishing all temporary GFCI hookups necessary to complete his work.

9. The Abatement Contractor shall remove identified asbestos-containing floor coverings to the building substrate beneath; in areas indicted. Subsequent to final air clearances, the substrate(s) shall be washed with a neutralizing agent to prepare the substrate to accept new floor covering and eliminate residual odors.

10. The Abatement Contractor must coordinate location of waste containers with the Facility and the Owner. Deliveries and storage of equipment must be coordinated with the Facility and the Owner.

11. All “Large” and “Small” asbestos abatement projects, as defined by 12 NYCRR56 shall not be performed while the building is occupied. The term “building” means a wing or major section of a building that can be completely isolated from the rest of the building with sealed non-combustible construction. The isolated portion of the building must contain exists that do not pass through the occupied portion(s) and ventilation systems must be physically separated and sealed at the isolation barriers.

1.02 PRE-CONTRACT SUBMITTALS

Within three (3) days after bids are opened, the three (3) apparent low bidders shall be required to submit the following documentation:

A. Resume: Shall include the following:

1. Provide a list of projects of similar nature performed within the past two (2) years and include the dollar value of all projects. Provide project references to include owner, consultant, and air monitoring firms' name, contact person, address, and phone number, include location of project and date of completion.

2. Abatement Contractor license issued by New York State Department of Labor for asbestos work in accordance with ICR-56-3.

3. A list of owned equipment available to be used in the performance of the project.

4. The number of years engaged in asbestos removal.

5. An outline of the worker training courses and medical surveillance program conducted by the Abatement Contractor.

6. A standard operating procedures manual describing work practices and procedures, equipment, type of decontamination facilities, respirator program, special removal techniques, etc.

7. Documentation to the satisfaction of the Owner pertaining to the Abatement Contractor's financial resources available to perform the project. Such data shall include, but not be limited to, the firm's balance sheet for the last fiscal year.

B. Citations/Violations/Legal Proceedings

1. Submit a notarized statement describing any citations, violations, criminal charges, or legal proceedings undertaken or issued by any law enforcement, regulatory agency, or consultant concerning performance on previous asbestos abatement contracts. Briefly describe the circumstances citing the project and involved persons and agencies as well as the outcome of any actions.

2. Answer the question: "Has your firm or its agents been issued a Stop Work order on any project within the last two years?" If "Yes" provide details as discussed above.

3. Answer the question: "Are you now, or have you been in the past, a party to any litigation or arbitrations arising out of your performance on Asbestos Abatement Contracts?" If "Yes" provide details as discussed in 1. above.

4. Describe any liquidated damages assessed within the last two years.

C. Preliminary Schedule

1. Provide a detailed schedule including work dates, work shift times, estimate of manpower to be utilized and the start and completion date for completion of each major work area.

1.03 DOCUMENTATION

A. The Abatement Contractor shall be required to submit the following and receive the Consultant's approval prior to commencing work on this project:

1. Provide documentation of worker training for each person assigned to the project. Documentation shall include copies of each workers valid New York State asbestos handler certificates (for those employees who may perform asbestos removal), documentation of current respirator fit test and current OSHA required training and medical examination.

2. The attached "Asbestos Employee Medical Examination Statement" and "Asbestos Employee Training Statement" forms shall be completed, signed and submitted for each worker assigned to the project. Records of all employee training and medical surveillance shall be maintained for at least forty (40) years. Copies of the records shall be submitted to the Consultant prior to commencement.

3. The Abatement Contractor shall submit proof of a current, valid license issued by the New York State Department of Labor pursuant to the authority vested in the Commissioner by section 906 of the Labor Laws, and that the employees performing asbestos related work on this project are certified by the State of New York as required in Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York latest edition. Copies of all licenses shall be submitted prior to the commencement of the project.

4. The Abatement Contractor shall submit a written respiratory protection program meeting the requirements of 29 CFR 1910.134 to the Consultant.

5. The name, address, social security number and NYS DOL certificate number of the person(s) who will supervise the asbestos project.

6. The name and address of the deposit or waste disposal site or sites where the asbestos materials are to be deposited or disposed of. This site must be approved by the Owner. The manifesting procedure must also be specified.

7. The name, address and New York State Dept. of Environmental Conservation ID Number of any transporters that are to be used to transport waste.

8. A written Standard Operation Procedure (SOP) that is designed and implemented to maximize protection against human exposure to asbestos dust. The SOP shall take into consideration the workers, visitors, building employees, general public and environment. As a minimum the procedures must include the following:

   a. Security for all work areas on an around-the-clock basis against unauthorized access.

   b. Project organization chart including the phone numbers of at least two responsible persons who shall be authorized to dispatch men and equipment to the project in the event of an emergency; including weekends.

   c. Description of protective clothing and NIOSH approved respirators to be used.

   d. Description of all removal methods to be used, including HEPA air filtration and decontamination sequence with special emphasis on any procedure that may deviate from these specifications.

   e. A list of manufacturers' certificates stating that all vacuums, negative air filtration equipment, respirators and air supply equipment meet OSHA and EPA requirements.

   f. A list of all materials proposed to be furnished and used under this contract.

   g. Emergency evacuation procedures in the event of fire, smoke or accidents such as injury from falling, heat exposure, electrical shock, etc.

   h. The name, address and ELAP number of the New York State Department of Health Certified Analytical Testing Laboratory the Contractor proposes to use for the OSHA monitoring.

9. A detailed plan, in triplicate, for the phasing of the project, division of work areas and location of decontamination facilities, waste containers and temporary office.

10. Work schedule, identifying firm dates and completion for actual areas. Bar chart or critical path chart indicating phases is required.

B. The Abatement Contractor shall post their NYS DOL contractor's license and maintain a daily log documenting the dates and time of the following items within each personal decontamination unit:

1. Meetings; purpose, attendants, discussion (brief)

2. Sign-in and sign-out of all persons entering the work area including name, date, time, social security number, position or function and general description of daily activity.

3. Testing of barriers and enclosure systems using smoke tubes prior to the beginning of abatement activities and at least once a day thereafter until satisfactory clearance air monitoring results have been achieved.

4. Inspection of all plastic barriers, twice daily, by the asbestos supervisor.

5. Loss of enclosure integrity; special or unusual events, barrier breaches, equipment failures, etc.

6. Daily cleaning of enclosures.

7. Personnel air monitoring test results for OSHA Compliance. Results shall be posted at the work site within 24 hours of testing and copies supplied to the Owner within five (5) days of testing. Abnormalities shall be supplied to the Owner immediately.

C. Documentation with confirmation signature of Consultant's representative of the following shall be provided by the Abatement Contractor at the final closeout of the project.

1. Testing of barriers and enclosure systems using smoke tubes shall be performed prior to the beginning of abatement activities and at least once a day thereafter until satisfactory clearance air monitoring results have been achieved.

2. Inspection of all plastic barriers.

3. Removal of all polyethylene barriers.

4. Consultant's inspections prior to encapsulation.

5. Removal of waste materials.

6. Decontamination of equipment (list items).

7. Consultant's final inspection/final air tests.

D. The Abatement Contractor shall provide records of all project information, to include the following which shall be submitted upon completion of the project and prior to approval of the Abatement Contractor's payment application:

1. The location and description of the abatement project.

2. The name, address and social security number of the person(s) who supervised the asbestos project.

3. Certified payroll documentation Pursuant to Article 8, Section 220 of the NYS Labor Law

4. Copies of EPA/NYSDOL Asbestos Certificates for all Workers and Supervisors employed on the Project.

5. Copies of Medical Approval and Respirator Fit-testing for all Asbestos Workers and Supervisors employed on the Project.

6. Copies of Abatement Contractors Daily Sign-In Sheets & Logs for persons entering and leaving the work area. – Title 12 NYCRR Part 56-7.3.

7. Copies of Abatement Contractor's personal air sampling laboratory results.

8. The amounts and type of asbestos materials that was removed, enclosed, encapsulated, or disturbed.
9. The name and address of the deposit or waste disposal site or sites where the asbestos waste materials were deposited or disposed of and all related manifests, receipts and other documentation associated with the disposal of asbestos waste.

10. The name and address of any transporters used to transport waste and all related manifests, receipts and other documentation associated with the transport of asbestos waste.

11. All other information that may be required by state, federal or local regulations.

12. Copy of the Supervisor's Daily Project Log of events as described in 1.03 B, above.

1.04 NOTIFICATIONS AND PERMITS

A. The Abatement Contractor shall be required to prepare and submit notifications to the following agencies at least ten (10) days prior to the commencement of the project:

1. Asbestos NESHAPS Contact
   U.S. Environmental Protection Agency
   NESHAPS Coordinator, Air Facilities Branch
   26 Federal Plaza
   New York, New York 10007
   (212) 264-7307

2. State of New York Department of Labor
   Division of Safety and Health
   Asbestos Control Bureau
   State Office Building Campus, Building 12, Room 454
   Albany, New York 12240

3. Owner(s): Nanuet Union Free School District
   103 Church Street
   Nanuet, NY 10954
   ATTN: Rudy Villanyi
   Ph. (845) 620-3999
   Fx. (845) 620-3934
   E-mail: rvillanyi@nanuetsd.net

4. Owner's Representative(s): KSQ Design
   215 W 40th Street 15th Floor
   New York, Ny 10018
   ATTN: Ofe Clarke
   Ph. (646) 435-0660
   E-mail. oclarke@ksq.design

5. Environmental Consultant(s): Quality Environmental Solutions & Technologies, Inc. (QuES&T)
   1376 Route 9
   Wappingers Falls, New York 12590
   ATTN: Todd McAfee
   Ph. (845) 298-6031
   Fx. (845) 298-6251
   E-mail. tmcafee@qualityenv.com

B. The notification shall include but not be limited to the following information:

1. Name and address of Owner.

2. Name, address and asbestos handling license number of the Abatement Contractor.

3. Address and description of the building, including size, age, and prior use of the building or area; the amount, in square feet or linear feet of asbestos material to be removed; room designation numbers or other local information where asbestos material is found, including the type of asbestos material (friable or non-friable).

4. Scheduled starting and completion dates for removal.

5. Methods to be employed in abating asbestos containing materials.

6. Procedures and equipment, including ventilating/exhaust systems, that will be employed to comply with the Code of Federal Regulation (CFR) Title 40, Part 61 of the U.S. Environmental Protection Agency.

7. The name and address of the carting company and of the waste disposal site where the asbestos waste will be deposited.

NOTE: Notifications shall be submitted using standard forms as may be used by the respective agency.

For DOL (NYS) include "Asbestos Project Notification" form (DOSH-483) with proper fee, if required. For EPA include "Notification of Demolition and Renovation"; 40 CFR Part 61.

C. The Abatement Contractor shall secure any permits required by the city, town, county, or state that may be required and the cost for obtaining the permit shall be included in his base bid.

D. The Abatement Contractor shall erect warning signs around the work space at every point of potential entry into the work area in accordance with OSHA 1926.58k (2), (i). These signs shall bear the following information:

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY

In addition, where the use of respirators and protective clothing is required in the regulated area under this section, the warning signs shall include the following:

WEAR RESPIRATORS PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA

E. The Abatement Contractor shall post at entrances to the work place and immediate adjacent areas, notifications to building occupants, which include the name and license number of the contractor, project location and size, amount and type of ACM, abatement procedures, dates of expected occurrence and name and address of the air monitor and laboratory in compliance with ICR 56-3.6.

F. The Abatement Contractor shall post a list of emergency telephone numbers at the job site which shall include the Owner's Representative, police, emergency squad, local hospital, Environmental Protection Agency, N.Y. State Department of Labor, Occupational Safety and Health Administration and the local Department of Health.

1.05 APPLICABLE STANDARDS

Except to the extent that more explicit or more stringent requirements are written directly into the contract documents, applicable standards of the construction industry have the same force and effects (and are made a part of contract documents by reference) as if copied directly into contract documents, or as if published copies were bound herewith. Resolution of overlapping and conflicting requirements, which result from the application of several different industry standards to the same unit of work, shall be by adherence to the most stringent requirement.

A. Applicable standards listed in these Specifications form a part of this Specification and include, but are not necessarily limited to, standards promulgated by the following agencies and organizations:

1. ANSI:
   American National Standards Institute
   1430 Broadway
   New York, New York 10018

2. ASHRAE:
   American Society for Heating, Refrigerating
   and Air Conditioning Engineers
   1791 Tullie Circle NE
   Atlanta, Georgia 30329

3. ASTM:
   American Society for Testing and Materials
   1916 Race Street
   Philadelphia, Pennsylvania 19103

4. CFR
   Code of Federal Regulations Available
   from Government Printing Office
   Washington, District of Columbia 20402

5. CGA
   Compressed Gas Association
   1235 Jefferson Davis Highway
   Arlington, Virginia 22202

6. CS
   Commercial Standard of NBS
   (US Dept. of Commerce)
   Government Printing Office

7. EPA
   Environmental Protection Agency, Region II
   26 Federal Plaza
   New York, New York 10007
   Asbestos Coordinator - Room 802
   (212) 264-9538
   Part 61, Sub-Parts A & B
   National Emission Standard for Asbestos

8. FEDERAL SPECS
   Federal Specification (General Services Administration)
   7th and D Street, SW
   Washington, District of Columbia 20406

9. NBS
   National Bureau of Standards
   (US Department of Commerce)
   Gaithersburg, Maryland 20234

10. NEC
    National Electrical Code (by NFPA)

11. NFPA
    National Fire Protection Association
    Batterymarch Park
    Quincy, Massachusetts 02269

12. NIOSH
    National Institute for Occupational Safety and Health
    26 Federal Plaza
    New York, New York 10007

13. NYSDOH
    New York State Department of Health
    Bureau of Toxic Substance Assessment
    Room 359 - 3rd Floor
    Tower Building Empire State Plaza
    Albany, New York 12237

14. NYSDEC
    New York State Department of Environmental Conservation
    Room 136
    50 Wolf Road
    Albany, New York 12233-3245

15. NYSDOL
    State of New York Department of Labor
    Division of Safety and Health
    Asbestos Control Program
    State Campus
    Building 12
    Albany, New York 12240

16. OSHA
    Occupational Safety and Health Administration
    (US Department of Labor)
    New York Regional Office - room 3445
    1515 Broadway
    New York, New York 10036

17. UL

Underwriters Laboratories
333 Pfingsten Road
Northbrook, Illinois 60062

B. Federal Regulations: Those which govern asbestos abatement work or hauling and disposal of asbestos waste materials:

1. U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA):

a. Asbestos Regulations
Title 29, Part 1910, of the Code of Federal Regulations.

b. Respiratory Protection
Title 29, Part 1910, Section 134 of the Code of Federal Regulations.

c. Construction Industry
Title 29, Part 1926, of the Code of Federal Regulations.

d. Access to Employee Exposure & Medical Records
Title 29, Part 1910, Section 20 of the Code of Federal Regulations.

e. Hazard Communication
Title 29, Part 1910, Section 1200 of the Code of Federal Regulations.

f. Specifications for Accident Prevention Signs and Tags
Title 29, Part 1910, section 145 of the Code of Federal Regulations.

2. U.S. Environmental Protection Agency (EPA):

a. Asbestos Hazard Emergency Response Act (AHERA) Regulation Asbestos Containing Materials in Schools Final Rule & Notice Title 40, Part 763, Subpart E of the Code of Federal Regulations.

b. Worker Protection Rule
40 CFR Part 763, Subpart G, CPTS 62044, FLR 2843-9
Federal Register, Vol. 50, No. 134, 7/12/85, P28530-28540

c. Regulation for Asbestos
Title 40, Part 61, Subpart A of the Code of Federal Regulations

d. National Emission Standard for Asbestos
Title 40, Part 61, Subpart M (Revised Subpart B) of the Code of Federal Regulations

e. Resource Conservation and Recovery Act (RCRA) 1976, 1980
Hazardous and Solid Waste Amendments (HSWA) 1984
Subtitle D, Subtitle C

3. U.S. Department of Transportation (DOT):

a. Hazardous Substances: Final Rule Regulation 49 CFR, Part 171 and 172.

C. State Regulations: Those which govern asbestos abatement work or hauling and disposal of asbestos waste materials:

1. New York State Department of Environmental Conservation (DEC) Regulations regarding waste collection registration. Title 6, Part 364 of the New York State Official Compilation of Codes, Rules and Regulations - 6NYCRR 364.

2. New York State Right-To-Know Law

3. New York State Department of Labor Asbestos Regulations Industrial Code Rule 56.

D. Standards: Those which govern asbestos abatement work or hauling and disposal of asbestos waste materials:

1. American National Standards Institute (ANSI)

a. Fundamentals Governing the Design and Operation of Local Exhaust Systems
Publication Z9.2-79

b. Practices for Respiratory Protection
Publication Z88.2-80

E. Guidance Documents: Those that discuss asbestos abatement work or hauling and disposal of asbestos waste materials are listed below only for the Abatement Contractor's information. These documents do not describe the work and are not a part of the work of this contract.

EPA:

1. Guidance for Controlling Asbestos Containing Materials in Buildings (Purple Book) EPA560/5-85-024.

2. Asbestos Waste Management Guidance EPA 530-SW-85-007.

F. Patents and Royalties: The Abatement Contractor shall pay all royalties and/or license fees. The Abatement Contractor shall defend all suits and claims for infringement of any patent rights and save the Owner and Consultant harmless from loss including attorney fees on account thereof.

1.06 DEFINITIONS

As used in or in connection with these specifications the following are terms and definitions.

Abatement - Procedure to control release from asbestos material. This includes removal, encapsulation and enclosure.

Aggressive sampling - A method of sampling in which the person collecting the air sample creates activity by the use of mechanical equipment during the sampling period to stir up settled dust and simulate activity in that area of the building.

AIHA - The American Industrial Hygiene Association, 475 Wolf Ledges Parkway, Akron, Ohio 44311.

Airlock - A system for permitting entrance and exit while restricting air movement between a containment area and an uncontaminated area. It consists of two curtained doorways separated by a distance of at least three feet such that one passes through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.

Air sampling - The process of measuring the content of a known volume of air collected during a specific period of time.

Amended water - Water to which a surfactant has been added.

Approved asbestos safety program - A program approved by the Commissioner of Health providing training in the various disciplines that may be involved in an asbestos project.

Area air sampling - Any form of air sampling or monitoring where the sampling device is placed at some stationary location.

Asbestos - Any naturally occurring hydrated mineral silicate separable into commercially usable fibers, including chrysotile (serpentine), amosite (cumingtonite-gunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite.

Asbestos contract - An oral or written agreement contained in one or more documents for the performance of work on an asbestos project and includes all labor, goods and service.

Asbestos handler - An individual who installs, removes, applies, encapsulates, or encloses asbestos or asbestos material, or who disturbs friable asbestos. Only individuals certified by NYS Department of Labor shall be acceptable for work under this specification.

Asbestos handling certificate - A certificate issued by the Commissioner of Labor of the State of New York, to a person who has satisfactorily completed an approved asbestos safety program.

Asbestos project - Work undertaken by a contractor which involves the installation, removal, encapsulation, application or enclosure of any ACM or the disturbance of friable ACM.

Asbestos Safety Technician (AST) - Individual designated to represent the Consultant, perform third party monitoring and perform compliance monitoring at the job site during the asbestos project.

Asbestos waste material - Asbestos material or asbestos contaminated objects requiring disposal.

Authorized visitor - The building owner, his or her representative or any representative of a regulatory or other agency having jurisdiction over the project.

Background level monitoring - A method used to determine ambient airborne concentrations inside and outside of a building or structure prior to starting an abatement project.

Building owner - The person in whom legal title to the premises is vested unless the premises are held in land trust, in which instance Building Owner means the person in whom beneficial title is vested.

Clean room - An uncontaminated area or room that is a part of the personal decontamination enclosure with provisions for storage of persons' street clothes and protective equipment.

Cleanup - The utilization of HEPA vacuuming to control and eliminate accumulations of asbestos material and asbestos waste material.

Clearance air monitoring - The employment of aggressive sampling techniques with a volume of air collected to determine the airborne concentration of residual fibers upon conclusion of an asbestos abatement project.

Commissioner - Commissioner of the New York State Department of Labor.

Contractor - A company, unincorporated association, firm, partnership or corporation and any owner or operator thereof, which engages in an asbestos project or employs persons engaged in an asbestos project.

Curtained doorway - A device that consists of at least three overlapping sheets of plastic over an existing or temporarily framed doorway. One sheet shall be secured at the top and left side, the second sheet at the top and right side, and the third sheet at the top and the left side. All sheets shall have weights attached to the bottom to insure that the sheets hang straight and maintain a seal over the doorway when not in use.

Decontamination enclosure system - A series of connected rooms, separated from the work area and from each other by air locks, for the decontamination of persons, materials, equipment, and authorized visitors.

Encapsulant (sealant) or encapsulating agent - A liquid material that can be applied to asbestos material and which prevents the release of asbestos from the material by creating a membrane over the surface.

Enclosure - The construction of airtight walls, ceilings and floors between the asbestos material and the facility environment, or around surfaces coated with asbestos materials, or any other appropriate procedure that prevents the release of asbestos materials.

Equipment room - A contaminated area or room that is part of the personal decontamination enclosure system with provisions for the storage of contaminated clothing and equipment.

Fixed object - A unit of equipment, furniture or other fixture in the work area which cannot be readily removed from the work area.

Friable Asbestos Material - That condition of crumbled, pulverized, powdered, crushed or exposed asbestos capable of being released into the air by hand pressure.

Friable material containment - The encapsulation or enclosure of any friable asbestos material.

Glovebag technique - A method for removing asbestos material from heating, ventilating, and air conditioning (HVAC) ducts, piping runs, valves, joints, elbows, and other nonplanar surfaces in a noncontained work area. The glovebag assembly is a manufactured device consisting of a glovebag constructed of at least six mil transparent plastic, two inward-projecting longsleeve gloves, which may contain an inward projecting waterwand sleeve, an internal tool pouch, and an attached, labeled receptacle or portion for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and to contain all asbestos fibers released during the abatement process.

HEPA filter - A high efficiency particulate air filter capable of trapping and retaining 99.97 percent of particulate greater than 0.3 microns equivalent aerodynamic diameter.

HEPA vacuum equipment - Vacuuming equipment with a high efficiency particulate air filtration system.

Holding area - A chamber in the waste decontamination enclosure located between the washroom and an adjacent uncontaminated area.

Homogeneous work area - A site within the abatement work area that contains one type of asbestos material and where one type of abatement is used.

Large asbestos project - An asbestos project involving the installation, removal, disturbance, enclosure, or encapsulation of 160 square feet or more of asbestos or asbestos material or 260 linear feet or more of asbestos or asbestos material.

Minor asbestos project - An asbestos project involving the installation, removal, disturbance, enclosure, or encapsulation of 10 square feet or less of asbestos or asbestos material, or 25 linear feet or less of asbestos or asbestos material.

Movable object - A unit of equipment, furniture or fixture in the work area that can be readily removed from the work area.

Negative air pressure equipment - A local exhaust system equipped with HEPA filtration. The system shall be capable of creating and maintaining a negative pressure differential between the outside and the inside of the work area.

Non-asbestos material - Any material containing one percent or less asbestos by weight.

Occupied area - Any frequented portion of the work site where abatement is not taking place.

Outside air - The air outside the building or structure.

Personal air monitoring - A method used to determine an individuals exposure to airborne contaminants. The sample is collected outside the respirator in the person's breathing zone.

Plasticize - To cover floors, walls, ceilings and other surfaces with 6 mil fire retardant plastic sheeting as herein specified.

Project - Any form of work performed in connection with the abatement of asbestos or alteration, renovation, modification or demolition of a building or structure that may disturb asbestos or asbestos material.

Removal - The stripping of any asbestos material.

Repair - Corrective action using required work practices to control fiber release from damaged areas.

Respiratory protection - Respiratory protection required of licensed asbestos workers and authorized visitors in accordance with the applicable laws.

Satisfactory clearance air monitoring results - For all post- abatement samples, airborne concentrations of total fibers that are less than 0.01 fibers per cubic centimeter or background levels, whichever are greater, using phase contrast microscopy (PCM).

Shower room - A room between the clean room and the equipment room in the personal decontamination enclosure with hot and cold running water controllable at the top and arranged for complete showering during decontamination.

Small asbestos project - An asbestos project involving the installation, removal, disturbances, enclosure, or encapsulation of more than 10 and less than 160 square feet of asbestos or asbestos material of more than 25 and less than 260 linear feet of asbestos or asbestos material.

Staging area - The area near the waste transfer airlock where containerized asbestos waste has been placed prior to removal from the work area.

Surfactant - A chemical wetting agent added to water to improve its penetration.

Visible emissions - An emissions of particulate material that can be seen without the aid of instruments.

Washroom - A room between the work area and the holding area in the waste decontamination enclosure system, where equipment and waste containers are wet cleaned and/or HEPA vacuumed.

Waste decontamination enclosure system - An area, consisting of a washroom and a holding area, designated for the controlled transfer of materials and equipment.

Wet cleaning - The process of eliminating asbestos contamination from surfaces, equipment or other objects by using cloths, mops, or other cleaning tools.

Work area - Designated rooms, spaces, or areas where asbestos abatement takes place.

Work site - Premises where asbestos abatement is taking place.

Work Surface - Substrate surface from which asbestos-containing material has been removed.

1.07 UTILITIES, SERVICE AND TEMPORARY FACILITIES

A. The Owner shall make available to the Abatement Contractor all reasonable amounts of water and electrical power at no charge.

B. The Abatement Contractor shall provide, at his own expense, all electrical, water, and waste connections, extensions, and construction materials, supplies, etc. All connections must be approved in advance by the Owner and all work relative to the utilities must be in accordance with the applicable building codes.

C. The Abatement Contractor shall provide scaffolding, ladders and staging, etc. as necessary to accomplish the work of this contract. The type, erection and use of all scaffolding, ladders and staging, etc. shall comply with all applicable OSHA provisions.

D. All connections to the Owner's water system shall include reduced pressure backflow protection or double check and double gate valves. Valves shall be temperature and pressure rated for operation of the temperatures and pressures encountered. After completion of use, connections and fittings shall be removed without damage or alteration to existing water piping and equipment. Leaking or dripping valves shall be piped to the nearest drain or located over an existing sink or grade where water will not damage existing finishes or equipment.

E. The Abatement Contractor shall use only heavy duty abrasion resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system to provide water to each work area and to each decontamination unit. Provide fittings as required to allow for connection to existing wall hydrants or spouts, as well as temporary water heating equipment, branch piping,

showers, shut-off nozzles and equipment. All water must be shut off at the end of each shift.

F. The Abatement Contractor shall provide service to decontamination unit electrical subpanel with minimum 60 amp, 2 pole circuit breaker or fused disconnect and ground-fault circuit interrupters (GFCI), reset button and pilot light, connected to the building's main distribution panel. Subpanel and disconnect shall be sized and equipped to accommodate all electrical equipment required for completion of the work. This electrical subpanel shall be used for hot water heater, PAPR battery recharging and air sampling pumps.

G. The Abatement Contractor shall provide UL rated 40-gallon electric hot water heater to supply hot water for the decontamination unit shower. Activate from 30 amp circuit breaker on the electrical subpanel located within the decontamination unit. Provide with relief valve compatible with water heater operation; relief valve down to drip pan on floor with type L copper. Wiring of the hot water heater shall be in compliance with NEMA, NEC, and UL standards.

H. The Abatement Contractor shall provide identification warning signs at power outlets, which are other than 110-120 volt power. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110-120 plugs into higher voltage outlets. Dry transformers shall be provided where required to provide voltages necessary for work operations. All outlets or power supplies shall be protected by ground fault circuit interrupter (GFCI) at the power source.

I. The Abatement Contractor shall use only grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Use single lengths or use waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas of work.

J. The Abatement Contractor shall provide general service incandescent lamps of wattage indicated or required for adequate illumination; Protect lamps with guard cages or tempered glass enclosures; Provide exterior fixtures where fixtures are exposed to moisture.

K. The Abatement Contractor shall provide temporary heat or air conditioning as necessary to maintain comfortable working temperatures inside and immediately outside the work areas. Heating and A/C equipment shall have been tested and labeled by UL, FM or another recognized trade association related to the fuel being used. Fuel burning heaters shall not be used inside containment areas. The Contractor shall also provide a comfortable working environment for occupied areas that are impacted by the asbestos removal.

L. The Abatement Contractor shall comply with recommendations of the NFPA standard in regard to the use and application of fire extinguishers. Locate fire extinguishers where they are most convenient and effective for their intended purpose, but provide not less than one extinguisher in each work area, equipment room, clean room and outside the work area.

1.08 REMOVAL OF FIXTURES

A. In locations where the Abatement Contractor is directed to dispose of fixtures he shall either decontaminate the fixtures and dispose of them as non-asbestos containing materials or he shall place them in an appropriate container and dispose of them as asbestos containing material.

B. In locations where the Abatement Contractor is directed to remove and reinstall fixtures, the fixtures shall be removed, decontaminated, labeled, protected with plastic and stored by the contractor in a location as directed by the Owner.

C. Upon completion of the asbestos removal and upon receiving satisfactory clearance air monitoring results, all items to be replaced shall be restored to their original location and reinstalled by the Abatement Contractor.

PART 2 – PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. GENERAL REQUIREMENTS

1. Materials shall be stored off the ground, away from wet or damp surfaces and under protective cover to prevent damage or contamination.

2. Damaged or deteriorating materials shall not be used and shall be removed from the premises.

3. Power tools used to drill, cut into, or otherwise disturb asbestos material shall be equipped with HEPA filtered local exhaust ventilation.

4. The Abatement Contractor shall make available to authorized visitors, ladders and/or scaffolds of sufficient dimension and quantity so that all work surfaces can be easily and safely reached for inspection. Scaffold joints and ends shall be sealed with tape to prevent incursion of asbestos. Scaffolds and ladders shall comply with all applicable codes.

B. PLASTIC BARRIERS (POLYETHYLENE)

1. In sizes and shapes to minimize the number of joints.

   a. Six mil. (.006") fire-retardant for vertical protection (walls, entrances and openings).

   b. Six mil. (.006") fire-retardant for horizontal protection (fixed equipment) and heating grilles.

   c. Six mil. (.006") reinforced fire-retardant for floors of decon units.

2. Provide two (2) layers over all roof, wall and ceiling openings. Floor penetrations shall be sealed with a rigid material prior to plasticizing to prevent tripping and fall hazards. All seams within a layer shall be separated by a minimum distance of six feet and sealed airtight. All seams between layers shall be staggered.

3. Barrier Attachment - Commercially available duct tape (fabric or paper) and spray-on adhesive. Duct tape shall be capable of sealing joints of adjacent sheets of plastic, facilitating attachment of plastic sheets to finished or unfinished surfaces of dissimilar materials and adhering under both dry and wet conditions.

C. SIGNS

1. Danger signs shall be provided and shall conform to 29 CFR 1926.1101 and be 14" x 20". These signs shall bear the following information:

DANGER **ASBESTOS** **MAY CAUSE CANCER** **CAUSES DAMAGE TO LUNGS** **AUTHORIZED PERSONNEL ONLY**

In addition, where the use of respirators and protective clothing is required in the regulated area under this section, the warning signs shall include the following:

WEAR RESPIRATORS PROTECTION AND PROTECTIVE CLOTHING IN THIS AREA

D. DANGER LABELS AND TAPE

1. Labels shall be affixed to any asbestos contaminated material in accordance with the requirements of 29 CFR 1910.1200 (f) of OSHA's Hazard Communication Standard, and shall contain the following information:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID BREATHING DUST
CANCER AND LUNG DISEASE HAZARD

2. A label shall be affixed on each container of asbestos waste in accordance with the requirements of 49 CFR Parts 171 and 172, Hazardous Substances; Final Rule (U.S. Department of Transportation), and shall contain the following information:

RQ HAZARDOUS SUBSTANCE
SOLID, NOS, ORM-E, NA 9188
(ASBESTOS)

3. A label shall be affixed on each container of asbestos waste in accordance with the requirements of 40 CFR Part 61.150, NESHAP; Asbestos; Final Rule (USEPA) and shall contain the name of the waste generator and the location at which the waste was generated.

   NOTE: All containers marked as above (1, 2 and 3) shall be disposed of as asbestos waste.

4. Provide 3" red barrier tape printed with black lettered "DANGER ASBESTOS REMOVAL". Locate barrier tape across all corridors, entrances and access routes to asbestos work area.

PROTECTIVE EQUIPMENT

1. Respiratory Requirements

   a. Where fiber levels permit, and in compliance with regulatory requirements, Powered Air Purifying Respirators are the minimum allowable respiratory protection permitted to be utilized during removal operations.

   b. Where not in violation of NIOSH, OSHA, and any other regulatory requirements, the Abatement Contractor shall provide the following minimum respiratory protection to the maximum use concentrations indicated:

MSHA/NIOSH Approved Respiratory Protection	Maximum Use Concentration
Half-Mask Air Purifying with HEPA Filters	10x PEL
Full-Facepiece Air Purifying HEPA Filters and Quantitative Fit Test	10x PEL
Powered Air Purifying (PAPR), Loose fitting Helmet or Hood, HEPA Filter	25x PEL
Powered Air Purifying (PAPR), Full Facepiece, HEPA Filter	50x PEL
Supplied Air, Continuous Flow Loose fitting Helmet or Hood	25x PEL
Supplied Air, Continuous Flow Full Facepiece, HEPA Filter	50x PEL
Full Facepiece-Supplied Air Pressure Demand, HEPA Filter	100x PEL
Full Facepiece-Supplied Air Pressure Demand, with Aux. SCBA, Pressure Demand or Continuous Flow	>100x PEL

2. Disposable Clothing -"Tyvek" manufactured by Dupont or approved equal.

3. NIOSH approved safety goggles to protect eyes.

4. Polyethylene bags, 6 mil. (.006") thick (use double bags).

NOTE: Workers must wear disposable coveralls and respirator masks at all times while in the work area. Contaminated coveralls or equipment must be left in work area and not worn into other parts of the building.

TOOLS AND EQUIPMENT

1. Airless Sprayer - An airless sprayer, suitable for application of encapsulating material, shall be used.

2. Scaffolding - Scaffolding, as required to accomplish the specified work, shall meet all applicable safety regulations.

3. Transportation Equipment - Transportation equipment, as required, shall be suitable for loading, temporary storage, transport and unloading of contaminated waste without exposure to persons or property. Water tight, hard wall containers shall be provided to retain and dispose of any asbestos waste material with sharp-edged components that may tear plastic bags or sheeting. The containers shall be marked with danger labels.

4. Surfactant - Wetting Agents - "Asbestos-Wet" - Aquatrols Corp. of America or approved equal, and shall be non- carcinogenic.

5. Portable (negative air pressure) asbestos filtration system - by Micro-Trap, or approved equal.

6. Vacuum, HEPA type equal to "Nilfisk" #GA73, or "Pullman/Holt" #75 ASA.

7. Amended Water Sprayer - The water sprayer shall be an airless or other low-pressure sprayer for amended water application.

8. Other Tools and Equipment - The Abatement Contractor shall provide other suitable tools for the stripping, removal, encapsulation, and disposal activities including but not limited to: hand-held scrapers, nylon brushes, sponges, rounded edge shovels, brooms, and carts.

PART 3 – EXECUTION

3.01 PRE-ABATEMENT WORK AREA PREPARATION

A. The work area shall be vacated by the occupants prior to work area preparation and not reoccupied until satisfactory clearance air monitoring results have been achieved.

B. Caution signs shall be posted at all locations and approaches to a location where airborne concentrations of asbestos may exceed ambient background levels. Signs shall be posted that permit a person to read the sign and take the necessary protective measures to avoid exposure.

C. Shut down and lock out electric power to all work areas. The Abatement Contractor shall provide temporary power and lighting and ensure safe installation of temporary power sources and equipment used where high humidity and/or water shall be sprayed in accordance with all applicable codes. All power to work areas shall be brought in from outside the area through a ground-fault interrupter at the source.

D. Isolate the work area HVAC system.

E. The personnel decontamination enclosure system shall be installed or constructed prior to preparatory work in the work area and in particular before the disturbance of asbestos material. The waste decontamination enclosure system shall be installed or constructed prior to commencement of abatement activities.

F. Movable objects within the work area shall be pre-cleaned using HEPA filtered vacuum equipment

an/or wet cleaning and such objects shall be removed from the work area to an uncontaminated location. If disposed of as asbestos waste material, cleaning is not required.

G. Fixed objects and other items, which are to remain within the work area, shall be pre-cleaned using HEPA filtered vacuum equipment and/or wet cleaning. Such objects shall be enclosed with two layers of at least six mil plastic sheeting and sealed with tape.

H. The work area shall be pre-cleaned using HEPA filtered vacuum equipment and/or wet cleaning. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters, shall be prohibited. Asbestos material shall not be disturbed during pre-cleaning.

I. Isolation barriers that seal off all openings, including windows, corridors, doorways, ducts, and any other penetrations of the work area, shall be constructed using two layers of at least six mil fire-retardant plastic sheeting sealed with tape. Also, all seams in mechanical system components that pass through the work area shall be sealed. Doorways and corridors, which shall not be used for passage during work, shall also be sealed.

J. Removal of mounted objects. After isolation barriers are in place, objects such as light fixtures, electrical track, alarm systems, ventilation equipment and other items not previously sealed, shall be double sealed with six mil fire-retardant plastic sheeting. Localized HEPA filtered vacuum equipment shall be used during fixture removal to reduce asbestos dispersal.

K. Individual roof and floor drains shall be sealed watertight using two layers of 6-mil fire-retardant plastic sheeting and tape prior to plasticizing. Openings in floor shall be fully covered with plywood sheeting secured to the floor in such a way as to minimize a tripping hazard prior to plasticizing.

L. Emergency and fire exits from the work area shall be maintained or alternate exits shall be established according to all applicable codes.

M. Adequate toilet facilities shall be supplied by the Abatement Contractor and shall be located either in the clean area of the personnel decontamination enclosure or shall be readily accessible to the personnel decontamination enclosure.

3.02 LARGE ASBESTOS PROJECT PERSONNEL DECONTAMINATION ENCLOSURE SYSTEM (ICR 56-7.5)

A. The personnel decontamination enclosure shall be constructed prior to preparatory work in the work area and in particular before the disturbance of asbestos material.

1. Construction and use of personnel decontamination enclosure systems shall be in accordance with ICR-56 and any Applicable or Site Specific Variances utilized on this project. Such systems may consist of existing rooms outside of the work area, if the layout is appropriate, that can be enclosed is plastic sheeting and are accessible from the work area. When this situation does not exist, enclosure systems may be constructed out of metal, wood or plastic support.

2. The personnel decontamination enclosure system shall consist of a clean room, a shower room, and an equipment room, in series, separated from each other and from the work area by three airlocks.

3. There shall be one shower per six full shift abatement persons calculated on the basis of the largest shift.

4. The personnel decontamination enclosure system shall be fully framed, sheathed for safety and constructed to prevent unauthorized entry.

5. Personnel decontamination enclosure systems constructed at the work site shall utilize at least six mil fire-retardant opaque plastic sheeting. At least two layers of six mil fire-retardant reinforced plastic sheeting shall be used for the flooring of this area.

6. All prefabricated decontamination units shall be completely decontaminated and sealed prior to separation and removal from the work area. Mobile decontamination units shall remain in place until satisfactory clearance results have been attained.

7. The clean room shall be sized to accommodate all authorized persons. Benches, lockers and hooks shall be provided for street clothes. Shelves for storing respirators shall also be provided. Clean clothing, replacement filters for respirators, towels and other necessary items shall be provided. The clean room shall not be used for the storage of tools, equipment or materials. It shall not be used for office space. A lockable door shall be provided to permit access to the clean room from outside the work area or enclosure. It shall be used to secure the work area and decontamination enclosure during off-shift hours.

8. The shower room shall contain one or more showers. Each shower head shall be supplied with hot and cold water adjustable at the tap. The shower enclosure shall be constructed to ensure against leakage of any kind. Uncontaminated soap, shampoo and towels shall be available at all times. Shower water shall be drained, collected and filtered through a system with at least 5.0 micron particle size collection capability. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filtration system by large particles. Filtered wastewater shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste. The shower room shall be constructed in such way that travel through the decontamination unit shall be through the shower.

9. The equipment room shall be used for the storage of equipment and tools after decontamination using a HEPA filtered vacuum and/or wet cleaning. A one day supply of replacement filters, in sealed containers, for HEPA vacuums and negative pressure ventilation equipment, extra tools, containers of surfactant and other materials and equipment that may be required during the abatement project may also be stored here. A walk-off pan filled with water shall be located in the work area just outside the equipment room for persons to clean foot covering when leaving

the work area. A drum lined with a labeled, at least six mil plastic bag is required for collection of clothing and shall be located in this room. Contaminated footwear and work clothes shall be stored in this area.

3.03 WASTE DECONTAMINATION ENCLOSURE SYSTEM (ICR 56-7.5)

A. General Requirements

1. A waste decontamination enclosure system shall consist of the following:

   a. A washroom/cleanup room shall be constructed with an airlock doorway to the work area and another airlock doorway to the holding area.

   b. The holding area shall be constructed with an airlock doorway to the washroom/cleanup room and another lockable door to the outside.

2. Where there is only one egress from the work area, the holding area of the waste decontamination enclosure system may branch off from the equipment decontamination room, which doubles as a waste washroom, of the personnel decontamination enclosure.

3. The waste washroom shall be equipped with a drain installed to collect water and deliver it to the shower drain where it shall be filtered through a system with at least 5.0 micron particle size collection capability. A system containing a series of several filters with progressively smaller pore sizes shall be used to avoid rapid clogging of the filtration system by large particles. Filtered wastewater shall be discharged in accordance with applicable codes. Contaminated filters shall be disposed of as asbestos waste.

4. The waste washroom shall be constructed in such a way that travel through the rooms shall be through the waste washroom

3.04 WORK AREA ENTRY AND EXIT PROCEDURES

A. The following procedures shall be followed throughout the asbestos abatement project until satisfactory clearance air monitoring results have been achieved:

1. All persons shall enter and exit the work area through the personnel decontamination enclosure system.

2. All persons who enter the work area or an enclosure shall sign the entry/exit log, located in the clean room, upon every entry and exit.

3. All persons, before entering the work area, or an enclosure shall read and be familiar with all posted regulations, personal protection requirements, including work area entry and exit procedures, and emergency procedures. The entry/exit log headings shall indicate, and the signatures shall be used to acknowledge, that these have been reviewed and understood by all persons prior to entry.

4. All persons shall proceed first to the clean room, remove all street clothing, store these items in clean sealable plastic bags or lockers and don coveralls, head covering, foot covering and gloves. All persons shall also don NIOSH approved respiratory protection. Clean respirators and protective clothing shall be utilized, by each person, for each separate entry into the work area. Respirators shall be inspected prior to each use and tested for proper seal using quantitative or qualitative fit checks.

5. Persons wearing designated personal protective equipment shall proceed from the clean room through the shower room to the equipment room, where necessary tools are collected and any additional clothing shall be donned, before entry into the work area.

6. Before leaving the work area, all persons shall remove gross contamination from the outside of respirators and protective clothing by brushing, wet cleaning, and/or HEPA vacuuming.

7. Persons shall proceed to the equipment room where all coveralls, head covering, foot covering and gloves shall be removed. Disposable clothing shall be deposited into labeled containers for disposal. Reusable contaminated clothing, footwear, head gear and gloves shall be stored in the equipment room when not being used in the work area.

8. Still wearing respirators, persons shall proceed to the shower area, clean the outside of the respirator and the exposed face area under running water prior to removal of the respirator, and then fully and vigorously shower and shampoo to remove residual asbestos contamination. Respirators shall be washed thoroughly with soap and water. Some types of respirators will require slight modification of these procedures. An airline respirator with HEPA filtered disconnect protection shall be disconnected in the equipment room and worn into the shower. A powered air-purifying respirator facepiece shall be disconnected from the filter/power pack assembly prior to entering the shower.

9. After showering and drying, all persons shall proceed to the clean room and don clean personal protective equipment if returning to the work area or street clothing if exiting the enclosure.

3.05 EQUIPMENT AND WASTE CONTAINER DECONTAMINATION & REMOVAL PROCEDURES

A. The following procedures shall be followed throughout the asbestos abatement project until satisfactory clearance air monitoring results have been achieved.

1. External surfaces of contaminated containers and equipment shall be cleaned by wet cleaning and/or HEPA vacuuming in the work area before moving such items into the waste decontamination enclosure system airlock by persons assigned to this duty. These work area persons shall not enter the airlock.

2. These contaminated items shall be removed from the airlock by persons stationed in the washroom during waste removal operations. These washroom persons shall remove gross contamination from the exterior of their respirators and protective clothing by brushing, HEPA vacuuming and/or wet cleaning.

3. Once in the waste decontamination enclosure system, external surfaces of contaminated containers and equipment shall be cleaned a second time by wet cleaning.

4. The cleaned containers of asbestos material and equipment are to be dried of any excessive pooled or beaded liquid, placed in uncontaminated plastic bags or sheeting and sealed airtight.

5. The clean recontainerized items shall be moved into the airlock that leads to the holding area. The washroom persons shall not enter this airlock or the work area until waste removal is finished for that period.

6. Containers and equipment shall be moved from the airlock and into the holding area by persons dressed in clean personal protective equipment, who have entered from uncontaminated areas.

7. The cleaned containers of asbestos material and equipment shall be placed in water tight carts with doors or tops that shall be closed and secured. These carts shall be held in the holding area pending removal. The carts shall be wet cleaned and/or HEPA vacuumed at least once each day.

8. The exit from the decontamination enclosure system shall be secured to prevent unauthorized entry.

9. Where the waste removal enclosure is part of the personnel decontamination enclosure, waste removal shall not occur during shift changes or when otherwise occupied. Precautions shall be taken to prevent short circuiting and cycling of air outward through the shower and clean room.

10. Containers labeled with Asbestos hazard warnings shall not be used to dispose of non asbestos waste.

3.06 ENGINEERING CONTROLS

A. Ventilation.

1. The Abatement Contractor shall employ HEPA equipped vacuums or negative air pressure equipment for ventilation as required.

2. All negative air pressure equipment ventilation units shall be equipped with HEPA filtration. The Contractor shall provide a manufacturer's test certificate for each unit documenting the capability of trapping and retaining 99.97 percent of asbestos fibers greater than 0.3 microns equivalent aerodynamic diameter.

3. A power supply shall be available to satisfy the requirements of the total of all ventilating units.

4. On electric power failure, abatement shall stop immediately and shall not resume until power is restored and exhaust units are operating fully. On extended power failure, longer than one hour, the decontamination facilities, after the evacuation of all persons from the work area, shall be sealed airtight.

5. If extending the exhaust of the ventilation units 50 feet from the building would result in an exhaust location either in the road, blocking driveway access to the facility or within 50 feet of other buildings, a second unit will be run in series with the primary unit.

3.07 MAINTENANCE OF DECONTAMINATION ENCLOSURE SYSTEMS AND WORK AREA BARRIERS

A. GENERAL REQUIREMENTS

1. The Consultant must review and approve installation before commencement of work. Upon completion of the construction of all plastic barriers and decontamination system enclosures and prior to beginning actual abatement activities.

2. All plastic barriers inside the work area, in the personnel decontamination enclosure system, in the waste decontamination enclosure system and at partitions constructed to isolate the work area from occupied areas, shall be inspected by the asbestos supervisor at least twice daily. The barriers shall be inspected before the start of and following the completion of the day's abatement activities. Inspections and observations shall be documented in the project log.

3. Damage and defects in the barriers and/or enclosure systems shall be repaired immediately upon discovery and prior to resumption of abatement activities.

4. At any time during the abatement activities, if visible emissions are observed outside of the work area of if damage occurs to the barriers, work shall be stopped, repairs made and visible residue immediately cleaned up using HEPA vacuuming methods prior to the resumption of abatement activities.

5. The Abatement Contractor shall HEPA vacuum and/or wet clean the waste decontamination enclosure system and the personnel decontamination enclosure system at the end of each day of abatement activities.

3.08 HANDLING AND REMOVAL PROCEDURES

The Abatement Contractor may utilize existing provisions of ICR-56, Applicable Variances or a Site Specific Variance, approved by the Owner's Consultant, to permit the conduct of this work.

3.09 ABATEMENT PROCEDURES

A. AIR SAMPLING - By Owner

1. Air sampling and analysis shall be conducted according to the requirements of Subpart 56-4 before the start, during and after the completion of the asbestos removal project.

2. In addition to the requirements of Subpart 56-4, air monitoring shall be conducted in accordance with any approved job specific variance(s) or applicable variance utilized.

3. Clearance samples may be analyzed using PCM to maintain compliance with ICR-56.

4. If applicable, clearance samples will be analyzed using TEM to maintain compliance with ICR-56 and 40 CFR 763.90[i].

B. The provisions of the Applicable Variances or a Job Specific Variance shall apply only in those areas where approval has been granted by the NYS DOL and the Contractor has obtained concurrence from the Owner's Consultant. All other applicable provisions of Industrial Code Rule 56-1 through 56-12 shall be complied.

C. A copy of the NYS DOL Job Specific or Applicable Variance, if applicable, shall be conspicuously posted at the work area(s).

D. The Abatement Contractor shall construct a decontamination unit at the work site. The Abatement Contractor shall, as a minimum, comply with the requirements of 29 CFR 1926.1101(j); Hygiene facilities and practices for employees.

3.10 ENCAPSULATION PROCEDURES

The following procedures shall be followed to seal in non-visible residue, after obtaining satisfactory clearance air monitoring results, while conducting lockdown encapsulation on any surfaces which were the subject of removal or other remediation activities:

A. Only encapsulants rated as acceptable or marginally acceptable on the basis of Battelle Columbus Laboratory test procedures and rating requirements developed under the 1978 USEPA contract shall be used for lockdown encapsulation.

B. Sealants considered for use in encapsulation shall first be tested to ensure that the sealant is adequate for its intended use. A section of the work surface shall be evaluated following this initial test application of the sealant to quantitatively determine the sealant's effectiveness in terms of penetrating and locking down the asbestos fibers. The American Society of Testing and Materials (ASTM) Committee E06.21.06E on Encapsulation of Building Materials has developed a guidance document to assist in the selection of an encapsulant.

C. The encapsulant solvent or vehicle shall not contain a volatile hydrocarbon.

D. Encapsulants shall be applied using airless spray equipment.

1. Spraying is to occur at the lowest pressure range possible to minimize fiber release from encapsulant impact at the surface. It shall be applied with a consistent horizontal or vertical motion.

E. Encapsulation shall be utilized as a surface sealant once all asbestos containing materials have been removed in a work area. In no event shall encapsulant be applied to any surface that was the subject of removal or other remediation activities prior to obtaining satisfactory clearance air monitoring.

3.11 CLEANUP PROCEDURES

A. The following cleanup procedures shall be required.

1. Cleanup of accumulations of loose asbestos material shall be performed whenever enough loose asbestos materials have been removed to fill a single leak tight container of the type commensurate with the material properties. In no case shall cleanup be performed less than once prior to the close of each working day. Asbestos material shall be kept wet until cleaned up.

2. Accumulations of dust shall be cleaned off all surfaces on a daily basis using HEPA vacuum cleaning methods.

3. Decontamination enclosures shall be HEPA vacuumed at the end of each shift.

4. Accumulations of asbestos waste material shall be containerized utilizing HEPA vacuums or rubber or plastic dust pans, squeegees or shovels. Metal shovels shall not be used to pick up or move waste.

5. Excessive water accumulation or flooding in the area shall require work to stop until the water is collected and disposed of properly.

B. The following cleanup procedures shall be required after completion of all removal activities.

1. All accumulations of asbestos waste material shall be containerized utilizing HEPA vacuums or rubber or plastic dust pan, squeegees or shovels. Metal shovels shall not be used to pick up or move waste. HEPA vacuums shall be used to clean all surfaces after gross cleanup.

2. Cleaning. All surfaces in the work area shall be HEPA vacuumed. To pick up excess liquid and wet debris, a wet purpose shop vacuum may be used and shall be decontaminated prior to removal from the work area.

3. Windows, doors, HVAC system vents and all other openings shall remain sealed. Decontamination enclosure systems shall remain in place and be utilized.

4. All containerized waste shall be removed from the work area and the holding area.

5. All tools and equipment shall be decontaminated and removed from the work area.

6. A final visual inspection and clearance air monitoring, as per the schedule for air sampling and analysis, shall be conducted.

7. The isolation barriers and decontamination unit shall be removed only after satisfactory

8. clearance air monitoring results have been achieved.

3.12 SAFETY MONITORING – CONSULTANT:

The Consultant will designate an Asbestos Safety Technician (AST) to represent the Owner during the removal program. The AST must be on the job site at all times during abatement work. Absolutely no abatement or preparation work will occur without the presence of the AST.

The AST will conduct four (4) milestone inspections.

1. Pre-commencement inspection shall be conducted as follows:

   a. Notification in writing to the Consultant shall be made by the Abatement Contractor to request a pre-commencement inspection at least 48 hours in advance of the desired date of inspection. This inspection shall be requested prior to beginning preparatory work in another work area.

   b. The AST shall ensure that:

      i. The job site is properly prepared and that all containment measures are in place;

      ii. The designated supervisor shall present to the inspector a valid supervisor's license issued by the New York Department of Labor;

      iii. All workers shall present to the inspector a valid handler's license issued by the New York Department of Labor;

      iv. Measures for the disposal of removed asbestos material are in place and shall conform to the adopted standards;

      v. The Abatement Contractor has a list of emergency telephone numbers at the job site which shall include the monitoring firm employed by the Owner and telephone numbers for fire, police, emergency squad, local hospital and health officer.

   c. If all is in order, the AST shall issue a written notice to proceed in the field. If the job site is not in order, then any needed corrective action must be taken before any work is to commence. Conditional approvals shall not be granted.

Progress inspection shall be conducted as follows:

   a. Primary responsibility for ensuring that the abatement work progresses in accordance with these technical specifications and regulatory requirements rests with the Abatement Contractor. The AST shall continuously be present to observe the progress of work and perform required tests.

   b. If the AST observes irregularities at any time, he shall direct such corrective action as may be necessary. If the Abatement Contractor fails to take the corrective action required, or if the Abatement Contractor or any of their employees habitually and/or excessively violate the requirements of any regulation, then the AST shall inform the Owner who shall issue a Stop Work Order to the Abatement Contractor and have the work site secured until all violations are abated.

Clean-up inspections shall be conducted as follows:

   a. Notice for clean-up inspection shall be requested by the Abatement Contractor at least 24 hours in advance of the desired date of inspection;

   b. The clean-up inspection shall be conducted prior to the removal of any isolation or critical

barriers and before final air clearance monitoring;

c. The AST shall ensure that:

i. The work site has been properly cleaned and is free of visible asbestos containing material and debris.

ii. All removed asbestos has been properly placed in a locked secure container outside of the work area.

d. If all is in order, the AST shall issue a written notice of authorization to remove surface barriers from the work area. All isolation barriers shall remain in place until satisfactory clearance air sampling has been completed.

4. Clearance Visual Inspection shall be conducted after the removal of non-critical plastic sheeting. The AST shall insure that:

a. The work area is free of all visible asbestos or suspect asbestos debris and residue.

b. All waste has been properly bagged and removed from the work area.

c. Should clearance visual inspection identify residual debris, as determined by the AST, the Abatement Contractor is responsible for recleaning the area at his own cost and shall bear all costs of reinspection until acceptable levels are achieved.

B. The Abatement Contractor shall be required to receive written approval before proceeding after each milestone inspection.

3.13 PERSONNEL AIR MONITORING – CONTRACTOR (29 CFR 1926.1101)

A. Personnel air monitoring shall be provided to determine both short-term (STEL) and full shift during when abatement activities occur. Personnel sampling shall be performed in each work area in order to accurately determine the concentrations of airborne asbestos to which workers may be exposed.

B. The Abatement Contractor shall have a qualified "Competent Person" (as specified in 29 CFR 1926 OSHA) to conduct personnel air monitoring.

C. The laboratory performing the air sample analysis shall be certified by NYS DOH ELAP and approved by the consultant.

D. Personnel air monitoring test results for OSHA Compliance. Results shall be posted at the work site within 24 hours of testing and copies supplied to the Owner within five (5) days of testing. Abnormalities shall be supplied to the Owner immediately.

3.14 CLEARANCE AIR MONITORING

A. Air samples will be collected in and around the work areas at the completion of abatement activities.

B. Clearance samples may be analyzed using PCM to maintain compliance with ICR-56.

C. If applicable, clearance samples will be analyzed using TEM to maintain compliance with ICR-56 and 40 CFR part 763 “Asbestos-Containing Materials in Schools; Final Rule and Notice” section 763.90.

D. ***RETESTING***
Should clearance air monitoring yield fiber concentrations above the “Clearance” criteria of either 0.01 fibers per CC and/or background levels (PCM) –OR- seventy (70) structures per square millimeter (TEM/AHERA), the Abatement Contractor is responsible for re-cleaning the area at his own cost and shall bear all costs associated with the retesting of the work area(s) including monitoring labor, sampling, analysis, etc. until such levels are achieved.

3.15 RESPIRATORY PROTECTION REQUIREMENT

A. Respiratory protection shall be worn by all individuals inside the work area from the initiation of the asbestos project until all areas have successfully passed clearance air monitoring in accordance with these specifications. The Abatement Contractor shall keep available at all times two PAPR's with new filters and charged batteries for use by authorized visitors.

B. All respiratory protection shall be MSHA/NIOSH approved in accordance with the provisions of 30 CFR Part II. All respiratory protection shall be provided by the Abatement Contractor, and used by workers in conjunction with the written respiratory protection program.

C. The Abatement Contractor shall provide respirators that meet the requirements of 29 CFR Parts 1910 and 1926.

1. Full facepiece Type C supplied-air respirators operated in pressure demand mode equipped with an auxiliary self- contained breathing apparatus, operated in pressure demand or continuous flow, shall be worn during gross removal, demolition, renovation and/or other disturbance of ACM whenever airborne fiber concentrations inside the work area are greater than 10.0 f/cc.

2. Full facepiece Type C supplied-air respirators operated in pressure demand mode with HEPA filter disconnect protection shall be work during gross removal, demolition, renovation and/or other disturbance of ACM with an amphibole content and/or whenever airborne fiber concentrations inside the work area are equal to or greater than 0.5 f/cc and less than or equal to 10.0 f/cc.

3. Full facepiece powered air-purifying respirators (PAPR) equipped with HEPA filters shall be worn during the removal, encapsulation, enclosure, repair and/or other disturbance of friable ACM if airborne fiber concentrations inside the work area are less than 0.5 f/cc. A supply of charged replacement batteries, HEPA filters and flow test meter shall be available in the clean room for use with powered air-purifying respirators. HEPA filters shall be changed daily or as flow testing indicates change is necessary. Any Type C supplied-air respirator operated in continuous flow, with HEPA filter disconnect protection, may be substituted for a powered air-purifying respirator.

4. Loose fitting helmets or hoods with powered air-purifying respirators (PAPR) equipped with HEPA filters may be worn during the removal, encapsulation, enclosure, repair and/or other disturbance of friable ACM if airborne fiber concentrations inside the work area are less than 0.25 f/cc. A supply of charged replacement batteries, HEPA filters and flow test meter shall be available in the clean room for use with powered air-purifying respirators. HEPA filters shall be changed daily or as flow testing indicates change is necessary. Any Type C supplied-air respirator operated in continuous flow may be substituted for a powered air- purifying respirator.

5. Half-mask or full-face air-purifying respirators with HEPA filters shall be worn only during the preparation of the work area and final clean up procedures provided airborne fiber concentrations inside the work area are less than 0.1 f/cc.

6. Use of single use dust respirators is prohibited for the above respiratory protection.

D. Workers shall be provided with personally issued and individually marked respirators. Respirators shall not be marked with any equipment that will alter the fit of the respirator in any way. Only waterproof identification markers shall be used.

E. The Abatement Contractor shall ensure that the workers are qualitatively or quantitatively fit tested by an Industrial Hygienist initially and every six months thereafter with the type of respirator he/she will be using.

F. Whenever the respirator design permits, workers shall perform the positive and negative air pressure fit test each time a respirator is worn. Powered air-purifying respirators shall be tested for adequate flow as specified by the manufacturer.

G. No facial hair, which interferes with the face-to-mask sealing surface, shall be permitted to be worn when wearing respiratory protection that requires a mask-to-face seal.

H. Contact lenses shall not be worn in conjunction with respiratory protection.

I. If a worker wears glasses, a spectacle kit to fit their respirator shall be provided by the Abatement Contractor at the Abatement Contractor's expense.

J. Respiratory protection maintenance and decontamination procedures shall meet the following requirement:

1. Respiratory protection shall be inspected and decontaminated on a daily basis in accordance with OSHA 29 CFR 1910.134(b); and

2. HEPA filters for negative pressure respirators shall be changed after each shower; and

3. Respiratory protection shall be the last piece of worker protection equipment to be removed. Workers must wear respirators in the shower when going through decontamination procedures; and

4. Airline respirators with HEPA filtered disconnect shall be disconnected in the equipment room and worn into the shower. Powered air-purifying respirator facepieces shall be worn into the shower. Filtered/power pack assemblies shall be decontaminated in accordance with manufacturers' recommendations; and

5. Respirators shall be stored in a dry place and in such a manner that the facepiece and exhalation valves are not distorted; and

6. Organic solvents shall not be used for washing of respirators.

K. No visitors shall be allowed to enter the contaminated area if they do not have their medical certification and training certificate. Authorized visitors shall be provided with suitable PAPR respirators and instructions on the proper use of respirators whenever entering the work area.

3.16 DISPOSAL OF WASTE

A. APPLICABLE REGULATIONS

1. All asbestos waste shall be stored, transported and disposed of as per, but not limited to, the following Regulations:

   a. NYS Code Rule 56

   b. U.S. Department of Transportation (DOT)
   Hazardous Substances
   Title 29, Part 171 and 172 of the code of Federal Regulations
   regarding waste collector registration

   c. Regulations regarding waste collector registration Title 6, part 364 of the New York State Official Compilation of Codes, Rules and Regulations – 6 NYCRR 364

   d. USEPA NESHAPS 40 CRF 61

   e. USEPA ASBESTOS WASTE MANAGEMENT GUIDANCE EPA/530-SW-85-007

B. TRANSPORTER OR HAULER - The Abatement Contractor shall bear full responsibility for proper characterization, transportation and disposal of all solid or liquid waste, generated during the project, in a legal manner. The Owner shall approve all transportation and disposal methods.

1. The Abatement Contractor's Transporter (hauler) and disposal site shall be approved by the Owner. The Abatement Contractor shall remove within 48 hours all asbestos waste from the site after completing the clean up.

2. The Transporter must possess and present to the Owner's representative a valid New York State Department of Environmental Conservation Part 364 asbestos hauler's permit to verify license plate and permit numbers. The Owner's representative will verify the authenticity of the hauler's permit with the proper authority.

3. The Abatement Contractor shall give 24 hour notification prior to removing any waste from the site. All waste shall be removed from site only during normal working hours. No waste may be taken from the site without authorization from the Owner's representative.

4. The Abatement Contractor shall have the Transporter give the date and time of arrival at the disposal site.

5. The Transporter with the Abatement Contractor and Owner's consultant shall inspect all material in the transport container prior to taking possession and signing the Waste Manifest. The Transporter shall not have any off site transfers or be combined with any other off-site asbestos material.

6. The Transporter must travel directly to the disposal site with no unauthorized stops.

C. WASTE STORAGE CONTAINER

1. During loading and on site storage, the asbestos waste container shall be labeled with EPA Danger signage:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

2. The NYS DEC Hauler's Permit number shall be on both sides and back of the container.

3. The Container will not be permitted to leave the site without the proper signage.

4. A copy of the completed waste manifest shall be forwarded directly to the Owner's Consultant by the disposal facility.

5. Packaging of Non-friable Asbestos. Use of an open top container shall require written request, by the Contractor, and written approval by the Owners Representative, and be performed in compliance with all applicable regulations.

   a) A chute, if used, shall be air/dust tight along its lateral perimeter and at the terminal connection to the dumpster at ground level (solid wall and top container). The upper end of the chute shall be furnished with a hinged lid, to be closed when the chute is not being used.

   b) The container shall be lined with a minimum of two (2) layers of 6 mil. Fire-retardant polyethylene draped loosely over the sides so as to facilitate being wrapped over the top of the load and sealed prior to transport from the site.

   c) Prior to transport from the work site the Dumpster will be disconnected from the chute and sealed air/dust tight utilizing six mil plastic and tape. The waste material will be transported as an asbestos containing material by appropriate legal methods.

6. Packaging Friable Asbestos.

   a) The container shall be a solid wall, hard top and lockable container.

   b) The container shall be locked upon arrival at the site to restrict access. Security shall be provided at the entrance to the container during the loading process and immediately locked upon completion.

   c) The interior walls, floor and ceiling shall be lined with two (2) layers of 6 mil. Fire-retardant polyethylene.

   d) The waste shall be loaded in such a manner as to protect the integrity of the individual waste packages.

   e) Prior to transport from the work site the interior of the Dumpster will sealed air/dust tight utilizing six mil plastic and tape. The waste material will be transported as an asbestos containing material by appropriate legal methods.

D. WASTE DISPOSAL MANIFEST

1. The Asbestos Waste Manifest shall be equivalent to the “Waste Shipment Record” included in 40 CFR 61. A copy of the Contractor’s manifest shall be reviewed by the Owner’s Consultant and shall be the only manifest used.

2. The Manifest shall be verified by the Owner’s Consultant indicating that all the information and amounts are accurate and the proper signatures are in place.

3. The Manifest shall have the signatures of the Abatement Contractor and the Transporter prior to any waste being removed from the site.

4. The Manifest shall be signed by the Disposal Facility owner or operator to certify receipt of asbestos containing materials covered by the manifest.

5. A copy of the completed manifest shall be provided by the Abatement Contractor to the Owner’s Consultant and remain on site for inspection.

6. Abatement Contractor shall maintain a waste disposal log which indicates load number, date and time left site, container size, type of waste, quantity of waste, name of hauler, NYS DES permit number, trailer and tractor license number, and date manifest was returned to Consultant.

7. The Disposal Facility owner or operator shall return a signed copy of the Waste Manifest directly to:

Nanuet Union Free School District

103 Church Street

Nanuet, New York 10954

ATTN: Rudy Villanyi

8. Copies of the completed Waste Manifest are to be sent by the disposal facility to the Hauler and Abatement Contractor.

9. Submit signed dump tickets and manifests with final payment request.

10. Final payment request will not be honored without signed dump ticket or manifests accounting for all asbestos waste removed from the site.

E. VIOLATIONS OF SPECIFICATIONS

1. Violations of the safety, hygiene, environmental, procedures herein, any applicable federal, state of local requirement s or failure to cooperate with the Owner’s representative shall be grounds for dismissal and/or termination of this contract.

F. VIOLATIONS OF NO SMOKING POLICY

1. The Federal Pro Children Act of 1994 prohibits School District Officials from smoking in any buildings or on the grounds that is property of the School District. The District shall be considered smoke free. The School District strongly enforces its' No Smoking Policy. It is the Contractor's responsibility to inform all workers of this policy. Any worker(s) involved with this project that are found smoking or using tobacco products will be informed that they are in violation of the Federal and State Law and School Board Policy and will be removed from site.

3.17 LOCATION OF "BARR MIDDLE SCHOOL – PHASE 4" WORK –
(Please see attached Drawings for approximate locations)

1) <u>Barr Middle School – 1st & 2nd Floors Bathrooms – Concealed ACM Pipe Insulation – Base Bid</u>

- Asbestos Abatement Contractor responsible for probing non-ACM masonry walls, non-ACM sheetrock/splined ceilings and/or non-ACM terrazzo floors for concealed Asbestos-containing Pipe Insulation and/or Asbestos-containing Mudded Joint Packing on metal piping. If ACM Pipe Insulation and/or ACM Mudded Joint Packing is discovered, Abatement Contractor shall remove and dispose of ACM Pipe Insulation and/or ACM Mudded Joint Packing to facilitate upcoming bathroom renovations. Prior to abatement activities and as required, the Owner and/or General Contractor to shall perform all required non-asbestos plumbing disconnects of building components potentially affected. Areas of concealed ACM Piping Probes/abatement:
  1) Boy's Toilet C139
  2) Girl's Toilet C140
  3) Girl's Toilet 258
  4) Boy's Toilet 259
  5) Staff/ADA Toilet 260

  *Note: Abatement contractor to coordinate with General Contractor for exact locations of probes prior to work area preparation.

2) <u>Barr Middle School –2nd Floors Bathroom – Staff/ADA Toilet 260 – Base Bid</u>

- Asbestos Abatement Contractor responsible for total and complete removal and disposal of approximately 120 SF (total) non-friable asbestos-containing 9"x9" Floor Tile to Non-ACM Cementitious Slab Floor Substrate. Prior to abatement activities and as required, the Owner and/or General Contractor to shall perform all required non-asbestos plumbing disconnects of building components potentially affected. The Owner and/or General Contractor are responsible for re-installations of non-asbestos floor coverings/mastics/etc.

END OF LOCATION OF WORK

3.18 GENERAL

A. The Abatement Contractor will be responsible for repairing all building components damaged during abatement including, but not limited to: ceiling tiles, ceiling finishes, wall finishes, floor finishes, etc.

B. The Abatement Contractor shall be responsible for all demolition required to access materials identified in scope of work and on associated drawings.

C. Concealed conditions that are exposed and may require additional work shall be brought to the attention of the Owner immediately. The Abatement Contractor shall not abate these areas without a written notice to proceed. Additional asbestos abatement performed prior to the order to proceed will not be acknowledged.

D. The Abatement Contractor shall remove asbestos-containing floor covering to the building substrate beneath; in areas indicted. Subsequent to final air clearance the substrate shall be washed with a neutralizing agent to prepare the substrate to accept new floor covering and eliminate residual odors.

E. Power tools used to drill, cut into or otherwise disturb asbestos containing material shall be equipped with HEPA filtered local exhaust ventilation.

F. The Abatement Contractor shall provide access to GFCI electrical power, required to perform the area air monitoring for this project, within and immediately adjacent to each work area.

G. Unwrapped or unbagged ACM shall be immediately placed in an impermeable waste bag or wrapped in plastic sheeting.

H. Coordinate all removal operations with the Owner.

RETURN THIS EXECUTED FORM WITH COMPLETED BID SHEET

Asbestos Employee Medical Examination Statement

Certificate of Worker Release
Asbestos Employee Training Statement
CERTIFICATE OF WORKERS'S ACKNOWLEDGEMENT

PROJECT NAME: **Barr Middle School**

CONTRACTOR'S NAME:_____

WORKING WITH ASBESTOS INVOLVES POTENTIAL EXPOSURE TO AIRBORNE ASBESTOS FIBERS. INHALING ASBESTOS FIBERS HAS BEEN LINKED WITH VARIOUS TYPES OF CANCER AND RESPIRATORY DISEASES. SMOKING CIGARETTES AND INHALATION OF ASBESTOS FIBERS INCREASES THE RISK THAT YOU WILL DEVELOP LUNG CANCER ABOVE THAT OF THE NON-SMOKING PUBLIC.

The Contract for this project requires the Abatement Contracting Company to: 1) supply proper respiratory protection devices, and training on their use, to their employees; 2) provide training on safe work practices, and on use of the equipment used on the project, to their employees; and, 3) provide annual medical examinations to their employees meeting the requirements of 29 CFR 1926.1101. The Abatement Contracting Company's signature on this certificate, documents that these contractual obligations are fulfilled, and that you understand the information presented to you.

**************DO NOT SIGN THIS FORM UNLESS YOU FULLY UNDERSTAND THIS INFORMATION**************

RESPIRATORY PROTECTION: I have been trained in the proper use and limitations of the type of respiratory protection devices to be used on this project. I have reviewed the written respiratory protection program manual and a copy is available for my use. Respiratory protection equipment has been proved, by the Contractor, at no cost to me.

TRAINING COURSE: I have been trained in the risks and dangers associated with handling asbestos, breathing asbestos dust, proper work procedures, personal protection and engineering controls. I have satisfactorily completed and Asbestos Safety Training Program for New York State and have been issued a New York State Department of Health Certificate of Asbestos Safety Training.

MEDICAL EXAMINATION: I have satisfactorily completed a medical examination within the last 12 months that meets the OSHA requirement for an asbestos worker and included at least 1) medical history 2) pulmonary function 3) medical examination 4) approval to wear respiratory protection devises and may have included an evaluation of a chest x-ray.

Signature:_____Date_____

Printed Name:_____SS#:_____

Witness:_____Date:_____

RETURN THIS EXECUTED FORM WITH COMPLETED BID SHEET

RETURN THIS EXECUTED FORM WITH COMPLETED BID SHEET

ESTIMATE OF ACM QUANTITIES

PROJECT NAME: **Barr Middle School**

****

EACH ABATEMENT CONTRACTOR SHALL READ AND ACKNOWLEDGE THE FOLLOWING NOTICE. A SIGNED AND DATED COPY OF THIS ACKNOWLEDGMENT SHALL BE SUBMITTED WITH THE ABATEMENT CONTRACTOR'S BID FOR THIS PROJECT. FAILURE TO DO SO MAY, AT THE SOLE DISCRETION OF THE OWNER, RESULT IN THE BID BEING CONSIDERED NON-RESPONSIVE AND RESULT IN DISQUALIFICATION OF THE ABATEMENT CONTRACTOR'S BID ON THIS PROJECT.

****

***** NOTICE *****

The linear and square footages listed within this specification are approximates. Abatement Contractor is required to visit the work locations prior to bid submittal in order to take actual field measurements within each listed location. The Abatement Contractor shall base their bid on actual quantities determined, by them, at the site walkthrough. Estimates provided in these specifications are for informational purposes only and shall not be considered a basis for Change Orders on this project.

****

Acknowledgment: I have read and understand the above **NOTICE** regarding removal quantity estimates and understand that estimates provided in these specifications are for informational purposes only and shall not be considered a basis for Change Orders on this project. The Abatement Contractor's signatory represents to the Owner that he/she has the authority of the entity he/she represents to sign this agreement on its behalf.

Company Name: _____
Type or Print

BY: _____ _____ _____
Signature Title Date

Print Name: _____

RETURN THIS EXECUTED FORM WITH COMPLETED BID SHEET

ASSOCIATED ASBESTOS REMOVAL LOCATION DRAWINGS

- ***Nanuet Union Free School District: Barr Middle School***
  DRAWING #ASB-01 – 1st Floor Abatement
  DRAWING #ASB-02 – 2nd Floor Abatement

END OF SPECIFICATION
SECTION 02080

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Mechanical and electrified door hardware
2. Electronic access control system components
3. Field verification, preparation and modification of existing doors and frames to receive new door hardware.

B. Section excludes:

1. Windows
2. Cabinets (casework), including locks in cabinets
3. Signage
4. Toilet accessories
5. Overhead doors

C. Related Sections:

1. Division 01 Section "Alternates" for alternates affecting this section.
2. Division 06 Section "Rough Carpentry"
3. Division 06 Section "Finish Carpentry"
4. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
5. Division 08 Sections:

    a. "Metal Doors and Frames"
    b. "Flush Wood Doors"
    c. "Stile and Rail Wood Doors"
    d. "Interior Aluminum Doors and Frames"
    e. "Aluminum-Framed Entrances and Storefronts"
    f. "Stainless Steel Doors and Frames"
    g. "Special Function Doors"
    h. "Entrances"

6. Division 09 sections for touchup, finishing or refinishing of existing openings modified by this section.
7. Division 26 "Electrical" sections for connections to electrical power system and for low-voltage wiring.
8. Division 28 "Electronic Safety and Security" sections for coordination with other components of electronic access control system and fire alarm system.

1.02 REFERENCES

A. UL LLC

1. UL 10B - Fire Test of Door Assemblies
2. UL 10C - Positive Pressure Test of Fire Door Assemblies
3. UL 1784 - Air Leakage Tests of Door Assemblies
4. UL 305 - Panic Hardware

B. DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Keying Systems and Nomenclature
4. Installation Guide for Doors and Hardware

C. NFPA – National Fire Protection Association

1. NFPA 70 – National Electric Code
2. NFPA 80 – 2016 Edition – Standard for Fire Doors and Other Opening Protectives
3. NFPA 101 – Life Safety Code
4. NFPA 105 – Smoke and Draft Control Door Assemblies
5. NFPA 252 – Fire Tests of Door Assemblies

D. ANSI - American National Standards Institute

1. ANSI A117.1 – 2017 Edition – Accessible and Usable Buildings and Facilities
2. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties
3. ANSI/BHMA A156.28 - Recommended Practices for Keying Systems
4. ANSI/WDMA I.S. 1A - Interior Architectural Wood Flush Doors
5. ANSI/SDI A250.8 - Standard Steel Doors and Frames

1.03 SUBMITTALS

A. General:

1. Submit in accordance with Conditions of Contract and Division 01 Submittal Procedures.
2. Prior to forwarding submittal:

   a. Comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, ''EXAMINATION'' article, herein.
   b. Review drawings and Sections from related trades to verify compatibility with specified hardware.
   c. Highlight, encircle, or otherwise specifically identify on submittals: deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.

B. Action Submittals:

1. Product Data: Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:

a. Wiring Diagrams: For power, signal, and control wiring and including:
   1) Details of interface of electrified door hardware and building safety and security systems.
   2) Schematic diagram of systems that interface with electrified door hardware.
   3) Point-to-point wiring.
   4) Risers.

3. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated and tagged with full description for coordination with schedule.

   a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

4. Door Hardware Schedule:

   a. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work critical in Project construction schedule.
   b. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule published by DHI.
   c. Indicate complete designations of each item required for each opening, include:
      1) Door Index: door number, heading number, and Architect's hardware set number.
      2) Quantity, type, style, function, size, and finish of each hardware item.
      3) Name and manufacturer of each item.
      4) Fastenings and other pertinent information.
      5) Location of each hardware set cross-referenced to indications on Drawings.
      6) Explanation of all abbreviations, symbols, and codes contained in schedule.
      7) Mounting locations for hardware.
      8) Door and frame sizes and materials.
      9) Degree of door swing and handing.
      10) Operational Description of openings with electrified hardware covering egress, ingress (access), and fire/smoke alarm connections.

5. Key Schedule:

   a. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.
   b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
   c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
   d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.

e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

C. Informational Submittals:

1. Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant.
2. Provide Product Data:

a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
b. Include warranties for specified door hardware.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:

a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
b. Catalog pages for each product.
c. Final approved hardware schedule edited to reflect conditions as installed.
d. Final keying schedule
e. Copy of warranties including appropriate reference numbers for manufacturers to identify project.
f. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.

E. Inspection and Testing:

1. Submit written reports to the Owner and Authority Having Jurisdiction (AHJ) of the results of functional testing and inspection for:

a. fire door assemblies, in compliance with NFPA 80.
b. required egress door assemblies, in compliance with NFPA 101.

1.04 QUALITY ASSURANCE

A. Qualifications and Responsibilities:

1. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to that indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project’s vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
2. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project.

3. Architectural Hardware Consultant: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:

    a. For door hardware: DHI certified AHC or DHC.
    b. Can provide installation and technical data to Architect and other related subcontractors.
    c. Can inspect and verify components are in working order upon completion of installation.
    d. Capable of producing wiring diagram and coordinating installation of electrified hardware with Architect and electrical engineers.

4. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

B. Certifications:

1. Fire-Rated Door Openings:

    a. Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction.
    b. Provide only items of door hardware that are listed products tested by UL LLC, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.

2. Smoke and Draft Control Door Assemblies:

    a. Provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105
    b. Comply with the maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.

3. Electrified Door Hardware

    a. Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.

4. Accessibility Requirements:

    a. Comply with governing accessibility regulations cited in "REFERENCES" article 087100, 1.02.D3 herein for door hardware on doors in an accessible route. This project must comply with all Federal Americans with Disability Act regulations and all Local Accessibility Regulations.

C. Pre-Installation Meetings

1. Keying Conference

    a. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:

1) Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
2) Preliminary key system schematic diagram.
3) Requirements for key control system.
4) Requirements for access control.
5) Address for delivery of keys.

2. Pre-installation Conference

a. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
b. Inspect and discuss preparatory work performed by other trades.
c. Inspect and discuss electrical roughing-in for electrified door hardware.
d. Review sequence of operation for each type of electrified door hardware.
e. Review required testing, inspecting, and certifying procedures.
f. Review questions or concerns related to proper installation and adjustment of door hardware.

3. Electrified Hardware Coordination Conference:

a. Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site. Promptly replace products damaged during shipping.
B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each article of hardware in manufacturer's original packaging.
C. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
D. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
E. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
F. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

1.06 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.
B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.
E. Existing Openings: Where existing doors, frames and/or hardware are to remain, field verify existing functions, conditions and preparations and coordinate to suit opening conditions and to provide proper door operation.

1.07 WARRANTY

A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within published warranty period.

1. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.
2. Warranty Period: Beginning from date of Substantial Completion, for durations indicated in manufacturer's published listings.

a. Mechanical Warranty
   1) Locks
      a) Schlage ND Series: 10 years
   2) Exit Devices
      a) Von Duprin: 3 years
   3) Closers
      a) LCN 4000 Series: 30 years

b. Electrical Warranty
   1) Locks
      a) Schlage: 1 year
   2) Exit Devices
      a) Von Duprin: 1 year

1.08 MAINTENANCE

A. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
B. Turn over unused materials to Owner for maintenance purposes.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. The Owner requires use of certain products for their unique characteristics and project suitability to ensure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: "No Substitute."

1. Where "No Substitute" is noted, submittals and substitution requests for other products will not be considered.

B. Approval of manufacturers and/or products other than those listed as ''Scheduled Manufacturer'' or ''Acceptable Manufacturers'' in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.
C. Approval of products from manufacturers indicated in ''Acceptable Manufacturers'' is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.
D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

A. Fabrication

1. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. provide screws according to manufacturer’s recognized installation standards for application intended.
2. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
3. Provide concealed fasteners wherever possible for hardware units exposed when door is closed. Coordinate with “Metal Doors and Frames”, “Flush Wood Doors”, “Stile and Rail Wood Doors” to ensure proper reinforcements. Advise the Architect where visible fasteners, such as thru bolts, are required.

B. Modification and Preparation of Existing Doors: Where existing door hardware is indicated to be removed and reinstalled.

1. Provide necessary fillers, Dutchmen, reinforcements, and fasteners, compatible with existing materials, as required for mounting new opening hardware and to cover existing door and frame preparations.
2. Use materials which match materials of adjacent modified areas.
3. When modifying existing fire-rated openings, provide materials permitted by NFPA 80 as required to maintain fire-rating.

C. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

D. Cable and Connectors:

1. Where scheduled in the hardware sets, provide each item of electrified hardware and wire harnesses with number and gage of wires enough to accommodate electric function of specified hardware.
2. Provide Molex connectors that plug directly into connectors from harnesses, electric locking and power transfer devices.
3. Provide through-door wire harness for each electrified locking device installed in a door and wire harness for each electrified hinge, electrified continuous hinge, electrified pivot, and electric power transfer for connection to power supplies.

2.03 HINGES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

    a. Ives 5BB series

2. Acceptable Manufacturers and Products:

    a. Hager BB1191/1279 series
    b. Stanley FBB series

B. Requirements:

1. Provide hinges conforming to ANSI/BHMA A156.1.
2. Provide five knuckle, ball bearing hinges.
3. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:

    a. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
    b. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high

4. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:

    a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
    b. Interior: Heavy weight, steel, 5 inches (127 mm) high

5. 2 inches or thicker doors:

    a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
    b. Interior: Heavy weight, steel, 5 inches (127 mm) high

6. Adjust hinge width for door, frame, and wall conditions to allow proper degree of opening.
7. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
8. Where new hinges are specified for existing doors or existing frames, provide new hinges of identical size to hinge preparation present in existing door or existing frame.
9. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:

    a. Steel Hinges: Steel pins
    b. Non-Ferrous Hinges: Stainless steel pins
    c. Out-Swinging Exterior Doors: Non-removable pins
    d. Out-Swinging Interior Lockable Doors: Non-removable pins
    e. Interior Non-lockable Doors: Non-rising pins

10. Provide hinges with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware. Locate electric hinge at second hinge from bottom or nearest to electrified locking component. Provide mortar guard for each electrified hinge specified.

2.04 CONTINUOUS HINGES

A. Manufacturers:

1. Scheduled Manufacturer:

a. Ives

2. Acceptable Manufacturers:

a. Select
b. Roton

B. Requirements:

1. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26, Grade 1.
2. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum.
3. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
4. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
5. On fire-rated doors, provide aluminum geared continuous hinges classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
6. Provide aluminum geared continuous hinges with electrified option scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.
7. Provide hinges 1 inch (25 mm) shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

2.05 CYLINDRICAL LOCKS – GRADE 1

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. Schlage ND series

B. Requirements:

1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3-hour fire doors.
2. Cylinders: Refer to "KEYING" article, herein.
3. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2-inch latch throw. Provide proper latch throw for UL listing at pairs.
4. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
5. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
6. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
7. Provide electrified options as scheduled in the hardware sets.
8. Lever Trim: Solid cast levers without plastic inserts and wrought roses on both sides.

a. Lever Design: RHO

2.06 EXIT DEVICES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

   a. Von Duprin 98/35A series

2. Acceptable Manufacturers and Products:

   a. Precision APEX 2000 series
   b. Falcon 24/25 series

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1 and UL listed for Panic Exit or Fire Exit Hardware.
2. Cylinders: Refer to "KEYING" article, herein.
3. Provide smooth touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
4. Touchpad must extend a minimum of one half of door width. No plastic inserts are allowed in touchpads.
5. Provide exit devices with deadlatching feature for security and for future addition of alarm kits and/or other electrified requirements.
6. Provide exit devices with weather resistant components that can withstand harsh conditions of various climates and corrosive cleaners used in outdoor pool environments.
7. Provide flush end caps for exit devices.
8. Provide exit devices with manufacturer's approved strikes.
9. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
10. Mount mechanism case flush on face of doors or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
11. Provide cylinder or hex-key dogging as specified at non fire-rated openings.
12. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
13. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
14. Provide electrified options as scheduled.
15. Top latch mounting: double- or single-tab mount for steel doors, face mount for aluminum doors eliminating requirement of tabs, and double tab mount for wood doors.
16. Provide exit devices with optional trim designs to match other lever and pull designs used on the project.

2.07 CYLINDERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

   a. Schlage Everest 29 Primus XP

2. Acceptable Manufacturers and Products:

    a. No Substitute

B. Requirements:

1. Provide cylinders/cores, compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset, manufacturer's series as indicated. Refer to "KEYING" article, herein.
2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.

    a. High Security: dual-locking cylinder with permanent core requiring restricted, patented keyway. Dual-locking mechanism with interlocking finger pin(s) to check for patented features on keys.

3. Patent Protection: Cylinders/cores requiring use of restricted, patented keys, patent protected.
4. Nickel silver bottom pins.

2.08 KEYING

A. Scheduled System:

1. Existing factory registered system:

    a. Provide cylinders/cores keyed into Owner's existing factory registered keying system. Comply with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

B. Requirements:

1. Construction Keying:

    a. Replaceable Construction Cores.
        1) Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
            a) 3 construction control keys
            b) 12 construction change (day) keys.
        2) Owner or Owner's Representative will replace temporary construction cores with permanent cores.

2. Permanent Keying:

    a. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
        1) Master Keying system as directed by the Owner.

    b. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
    c. Provide keys with the following features:

1) Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
2) Patent Protection: Keys and blanks protected by one or more utility patent(s).
3) Geographically Exclusive: Where High Security or Security cylinders/cores are indicated, provide nationwide, geographically exclusive key system complying with the following restrictions.

d. Identification:
1) Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not provide blind code marks with actual key cuts.
2) Identification stamping provisions must be approved by the Architect and Owner.
3) Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
4) Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
5) Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.

e. Quantity: Furnish in the following quantities.
1) Change (Day) Keys: 3 per cylinder/core.
2) Permanent Control Keys: 3.
3) Master Keys: 6.

2.09 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. LCN 4040XP series

2. Acceptable Manufacturers and Products:

a. Corbin-Russwin DC8000 series
b. Sargent 281 series

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2-inch (38 mm) diameter with 5/8-inch (16 mm) diameter double heat-treated pinion journal.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.

7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.10 PROTECTION PLATES

A. Manufacturers:

1. Scheduled Manufacturer:

a. Ives

2. Acceptable Manufacturers:

a. Burns
b. Trimco

B. Requirements:

1. Provide protection plates with a minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Sizes plates 2 inches (51 mm) less width of door on single doors, pairs of doors with a mullion, and doors with edge guards. Size plates 1 inch (25 mm) less width of door on pairs without a mullion or edge guards.
3. At fire rated doors, provide protection plates over 16 inches high with UL label.

2.11 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

1. Scheduled Manufacturers:

a. Glynn-Johnson

2. Acceptable Manufacturers:

a. Rixson
b. Sargent

B. Requirements:

1. Provide overhead stop at any door where conditions do not allow for a wall stop or floor stop presents tripping hazard.
2. Provide friction type at doors without closer and positive type at doors with closer.

2.12 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer:

   a. Ives

2. Acceptable Manufacturers:

   a. Trimco
   b. Burns

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide concave type where lockset has a push button of thumbturn.
2. Where a wall stop cannot be used, provide universal floor stops.
3. Where wall or floor stop cannot be used, provide overhead stop.
4. Provide roller bumper where doors open into each other and overhead stop cannot be used.

2.13 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer:

   a. Zero International

2. Acceptable Manufacturers:

   a. National Guard
   b. Reese

B. Requirements:

1. Provide thresholds, weather-stripping, and gasketing systems as specified and per architectural details. Match finish of other items.
2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
3. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.
4. Size thresholds 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width unless otherwise specified in the hardware sets or detailed in the drawings.

2.14 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer:

    a. Ives

2. Acceptable Manufacturers:

    a. Burns
    b. Trimco

B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.15 DOOR POSITION SWITCHES

A. Manufacturers:

1. Scheduled Manufacturer:

    a. Schlage

2. Acceptable Manufacturers:

    a. GE-Interlogix
    b. Sargent

B. Requirements:

1. Provide recessed or surface mounted type door position switches as specified.
2. Coordinate door and frame preparations with door and frame suppliers. If switches are being used with magnetic locking device, provide minimum of 4 inches (102 mm) between switch and magnetic locking device.

2.16 FINISHES

A. FINISH: BHMA 626/652 (US26D); EXCEPT:

1. Hinges at Exterior Doors: BHMA 630 (US32D)
2. Aluminum Geared Continuous Hinges: BHMA 628 (US28)
3. Push Plates, Pulls, and Push Bars: BHMA 630 (US32D)
4. Protection Plates: BHMA 630 (US32D)
5. Overhead Stops and Holders: BHMA 630 (US32D)
6. Door Closers: Powder Coat to Match
7. Wall Stops: BHMA 630 (US32D)
8. Latch Protectors: BHMA 630 (US32D)
9. Weatherstripping: Clear Anodized Aluminum
10. Thresholds: Mill Finish Aluminum

B. FINISH: BHMA 643E/716 (US11); EXCEPT:

1. Door Closers: Powder Coat to Match.
2. Weatherstripping: Dark Bronze Anodized Aluminum.
3. Thresholds: Extruded Architectural Bronze, Oil-Rubbed

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance. Verify doors, frames, and walls have been properly reinforced for hardware installation.
B. Field verify existing doors and frames receiving new hardware and existing conditions receiving new openings. Verify that new hardware is compatible with existing door and frame preparation and existing conditions.
C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
D. Submit a list of deficiencies in writing and proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.
3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
4. Installation Guide for Doors and Hardware: DHI TDH-007-20

B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post-install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.
C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.
D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.
E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.
H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated.
I. Lock Cylinders:

1. Install construction cores to secure building and areas during construction period.

2. Replace construction cores with permanent cores as indicated in keying section.
3. Furnish permanent cores to Owner for installation.

J. Wiring: Coordinate with Division 26, ELECTRICAL and Division 28 ELECTRONIC SAFETY AND SECURITY sections for:

1. Conduit, junction boxes and wire pulls.
2. Connections to and from power supplies to electrified hardware.
3. Connections to fire/smoke alarm system and smoke evacuation system.
4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
5. Connections to panel interface modules, controllers, and gateways.
6. Testing and labeling wires with Architect's opening number.

K. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.
L. Closer/Holders: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.
M. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.
N. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
O. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.
P. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
Q. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
R. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.

3.03 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Spring Hinges: Adjust to achieve positive latching when door can close freely from an open position of 30 degrees.
2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
3. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

3.04 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.
B. Clean operating items per manufacturer's instructions to restore proper function and finish.
C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.05 DOOR HARDWARE SCHEDULE

A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.
B. Discrepancies, conflicting hardware, and missing items are to be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application.
C. Hardware items are referenced in the following hardware schedule. Refer to the above specifications for special features, options, cylinders/keying, and other requirements.

Abbreviation	Name
GLY	Glynn-Johnson Corp
IVE	H.B. Ives
LCN	Lcn Commercial Division
MIS	Misc - Out-Sourced Items
SCE	Schlage Electronic Security
SCH	Schlage Lock Company
VON	Von Duprin
ZER	Zero International Inc

102101 OPT0349176 Version 1

Hw# 01 - RATED IN PASSAGE MOP WS

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	PASSAGE SET	ND10S RHO		626	SCH
1	EA	SURFACE CLOSER	4040XP		689	LCN
1	EA	MOP PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hw# 02 - RATED L-BE WS

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-BE-F-LBRAFL-06-499F		626	VON
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hw# 02-1 - RATED IN L-BE OH

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-BE-F-LBRAFL-06-499F		626	VON
2	EA	OH STOP	90S		630	GLY
2	EA	SURFACE CLOSER	4040XP		689	LCN
2	EA	MOUNTING PLATE	4040XP-18 SRT		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

A CONFLICT MAY OCCUR BETWEEN THE GJ O/H STOP AND THE CLOSER BODY, THE DROP PLATE MAY NEED TO BE DRILLED OUT TO ALLOW THE THRU-BOLTS OF THE O/H STOP TO BE INSTALLED.

Hw# 02-2 - RATED IN L-BE WS

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-BE-F-LBRAFL-06-499F		626	VON
2	EA	SURFACE CLOSER	4040XP		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hw# 02-3 - RATED OUT L-BE SCUSH

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-BE-F-LBRAFL-06-499F		626	VON
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hw# 02-4 - RATED OUT L-BE SCUSH X WS

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-BE-F-LBRAFL-06-499F		626	VON
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hw# 03 - RATED MAG HOLD OPEN

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-BE-F-LBRAFL-06-499F		626	VON
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7840 AS REQ (12/24/120V AC/DC TRI-VOLT)		689	LCN
1	EA	GASKETING	488SBK PSA		BK	ZER

OPERATIONAL DESCRIPTION:MAGNETIC HOLD OPEN TIED INTO FIRE ALARM SYSTEM TO RELEASE UPON FIRE ALARM ACTIVATION.

Hw# 03-1 - RATED WIDE MAG HOLD OPEN

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-BE-F-LBRAFL-06-499F		626	VON
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7840 AS REQ (12/24/120V AC/DC TRI-VOLT)		689	LCN
1	EA	GASKETING	488SBK PSA		BK	ZER

OPERATIONAL DESCRIPTION:MAGNETIC HOLD OPEN TIED INTO FIRE ALARM SYSTEM TO RELEASE UPON FIRE ALARM ACTIVATION.

Hw# 03-2 - RATED MAG HOLD OPEN MULLION

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
2	EA	FIRE EXIT HARDWARE	98-L-BE-F-06		626	VON
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7840 AS REQ (12/24/120V AC/DC TRI-VOLT)		689	LCN
1	EA	GASKETING	488SBK PSA		BK	ZER

OPERATIONAL DESCRIPTION:MAGNETIC HOLD OPEN TIED INTO FIRE ALARM SYSTEM TO RELEASE UPON FIRE ALARM ACTIVATION.

Hw# 04 - RATED IN STAFF TOILET WS

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	FAC RESTRM W/IND CYL	ND85P6D RHO	643e	SCH
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	MOP PLATE	8400 10" X 1" LDW B-CS	630	IVE
1	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER

Hw# 05 - RATED IN LOCKABLE WS

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	ND70TD RHO	626	SCH
1	EA	FSIC CORE	23-030 CKC EV D	626	SCH
1	EA	SURFACE CLOSER	4040XP	689	LCN
1	EA	MOUNTING PLATE	4040XP-18 SRT (IF TOP RAIL LESS THAN 3-3/4")	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER

Hw# 05-1 - RATED OUT LOCKABLE SCUSH

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	CLASSROOM LOCK	ND70TD RHO		626	SCH
1	EA	FSIC CORE	23-030 CKC EV D		626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
1	EA	PA MOUNTING PLATE	4040XP-18PA SRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hw# 05-2 - RATED IN LOCKABLE OH

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	CLASSROOM LOCK	ND70TD RHO		626	SCH
1	EA	FSIC CORE	23-030 CKC EV D		626	SCH
1	EA	OH STOP	90S		630	GLY
1	EA	SURFACE CLOSER	4040XP		689	LCN
1	EA	MOUNTING PLATE	4040XP-18 SRT (IF TOP RAIL LESS THAN 3-3/4")		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hw# 05-3 - RATED OUT LOCKABLE WS

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	CLASSROOM LOCK	ND70TD RHO		626	SCH
1	EA	FSIC CORE	23-030 CKC EV D		626	SCH
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hw# 06 - PUSH PULL SCUSH

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	224XY		628	IVE
2	EA	PUSH PLATE	8200 4" X 16"		630	IVE
2	EA	PULL PLATE	8303 10" 4" X 16"		630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH		689	LCN
2	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	SILENCER	SR64		GRY	IVE

Hw# 07 - DE RATED PASSAGE WIDE HOLD OPEN

Provide each DE door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
6	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-BE-F-LBRAFL-06-499F		626	VON
2	EA	SURFACE CLOSER	4040XP EDA		689	LCN
4	EA	KICK PLATE	8400 10" X 1" LDW B-CS		630	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7840 AS REQ (12/24/120V AC/DC TRI-VOLT)		689	LCN
1	EA	GASKETING	488SBK PSA		BK	ZER

OPERATIONAL DESCRIPTION: MAG HOLD OPEN TIED INTO FIRE ALARM SYSTEM TO RELEASE UPON FIRE ALARM ACTIVATION.

Hw# 08 - RATED L-BE WS

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	FIRE EXIT HARDWARE	98-L-BE-F-06		626	VON
1	EA	SURFACE CLOSER	4040XP		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hw# 08-1 - RATED OUT L-BE WS

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	FIRE EXIT HARDWARE	98-L-BE-F-06		626	VON
1	EA	SURFACE CLOSER	4040XP EDA		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hw# 09 - RATED OUT STOREROOM WS WIDE

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP			652	IVE
1	EA	STOREROOM LOCK	ND80TD RHO			643e	SCH
1	EA	PRIMUS CORE	20-740 EV D			626	SCH
1	EA	SURFACE CLOSER	4040XP EDA			689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS			630	IVE
1	EA	WALL STOP	WS406/407CCV			630	IVE
1	EA	GASKETING	488SBK PSA			BK	ZER

Hw# CR01 - EXT NL X EO SCUSH AL

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	CONT. HINGE	224XY			628	IVE
1	EA	CONT. HINGE	224XY TWP CON		✓	628	IVE
1	EA	POWER TRANSFER	EPT10 CON		✓	689	VON
1	EA	PANIC HARDWARE	9847-DT			626	VON
1	EA	ELEC PANIC HARDWARE	RX-LC-QEL-9847-NL-CON 24 VDC		✓	626	VON
1	EA	RIM CYLINDER	20-057 ICX			626	SCH
1	EA	PRIMUS CORE	20-740 EV D			626	SCH
2	EA	SURFACE CLOSER	4040XP SCUSH			689	LCN
2	EA	PA MOUNTING PLATE	4040XP-18PA SRT			689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 SRT			689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 SRT			689	LCN
2	EA	DOOR SWEEP	328BK			BK	ZER
1	EA	THRESHOLD	655A			A	ZER
1	EA	WIRE HARNESS	CON-XX-P LENGTH AS REQUIRED FOR USE WITH DOOR		✓		SCH
1	EA	WIRE HARNESS	CON-6W FOR USE WITH HINGE		✓		SCH
2	EA	DOOR CONTACT	7764		✓	628	SCE
1	SET	WEATHERSTRIPPING	BY ALUM FRAME MANUFACTURER				MIS
1	EA	POWER SUPPLY	BY SECURITY CONTRACTOR		✓		MIS
1	EA	CARD READER	BY SECURITY CONTRACTOR				MIS

OPERATIONAL DESCRIPTION: ALWAYS READY FOR IMMEDIATE EGRESS, ACCESS BY KEY OR CARD READER TO RETRACT LATCHBOLT, DOOR CONTACT AND REQUEST TO EXIT CONNECTED TO BUILDING SECURITY.

Hw# CR01-1 - INT NL X EO SCUSH AL

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	CONT. HINGE	224XY			628	IVE
1	EA	CONT. HINGE	224XY TWP CON			628	IVE
1	EA	POWER TRANSFER	EPT10 CON			689	VON
1	EA	PANIC HARDWARE	9847-DT			626	VON
1	EA	ELEC PANIC HARDWARE	RX-LC-QEL-9847-NL-CON 24 VDC			626	VON
1	EA	RIM CYLINDER	20-057 ICX			626	SCH
1	EA	PRIMUS CORE	20-740 EV D			626	SCH
2	EA	SURFACE CLOSER	4040XP SCUSH			689	LCN
2	EA	MOUNTING PLATE	4040XP-18 SRT			689	LCN
2	EA	CUSH SHOE SUPPORT	4040XP-30 SRT			689	LCN
2	EA	BLADE STOP SPACER	4040XP-61 SRT			689	LCN
1	EA	WIRE HARNESS	CON-XX-P LENGTH AS REQUIRED FOR USE WITH DOOR				SCH
1	EA	WIRE HARNESS	CON-6W FOR USE WITH HINGE				SCH
2	EA	DOOR CONTACT	7764			628	SCE
1	EA	POWER SUPPLY	BY SECURITY CONTRACTOR				MIS
1	EA	CARD READER	BY SECURITY CONTRACTOR				MIS

OPERATIONAL DESCRIPTION: ALWAYS READY FOR IMMEDIATE EGRESS, ACCESS BY KEY OR CARD READER TO RETRACT LATCHBOLT, DOOR CONTACT AND REQUEST TO EXIT CONNECTED TO BUILDING SECURITY.

Hw# CR02 - EXT NL SCUSH AL

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	CONT. HINGE	224XY TWP CON		✓	628	IVE
1	EA	ELEC PANIC HARDWARE	RX-LC-QEL-9847-NL-CON 24 VDC		✓	626	VON
1	EA	RIM CYLINDER	20-057 ICX			626	SCH
1	EA	PRIMUS CORE	20-740 EV D			626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH			689	LCN
1	EA	PA MOUNTING PLATE	4040XP-18PA SRT			689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 SRT			689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 SRT			689	LCN
1	EA	DOOR SWEEP	328BK			BK	ZER
1	EA	THRESHOLD	655D			D	ZER
1	EA	DOOR CONTACT	7764		✓	628	SCE
1	EA	GASKETING	BY FRAME MANUFACTURER				
1	EA	POWER SUPPLY	BY SECURITY CONTRACTOR		✓		MIS
1	EA	CARD READER	BY SECURITY CONTRACTOR				MIS

OPERATIONAL DESCRIPTION: ALWAYS READY FOR IMMEDIATE EGRESS, ACCESS BY KEY OR CARD READER TO RETRACT LATCHBOLT, DOOR CONTACT AND REQUEST TO EXIT CONNECTED TO BUILDING SECURITY.

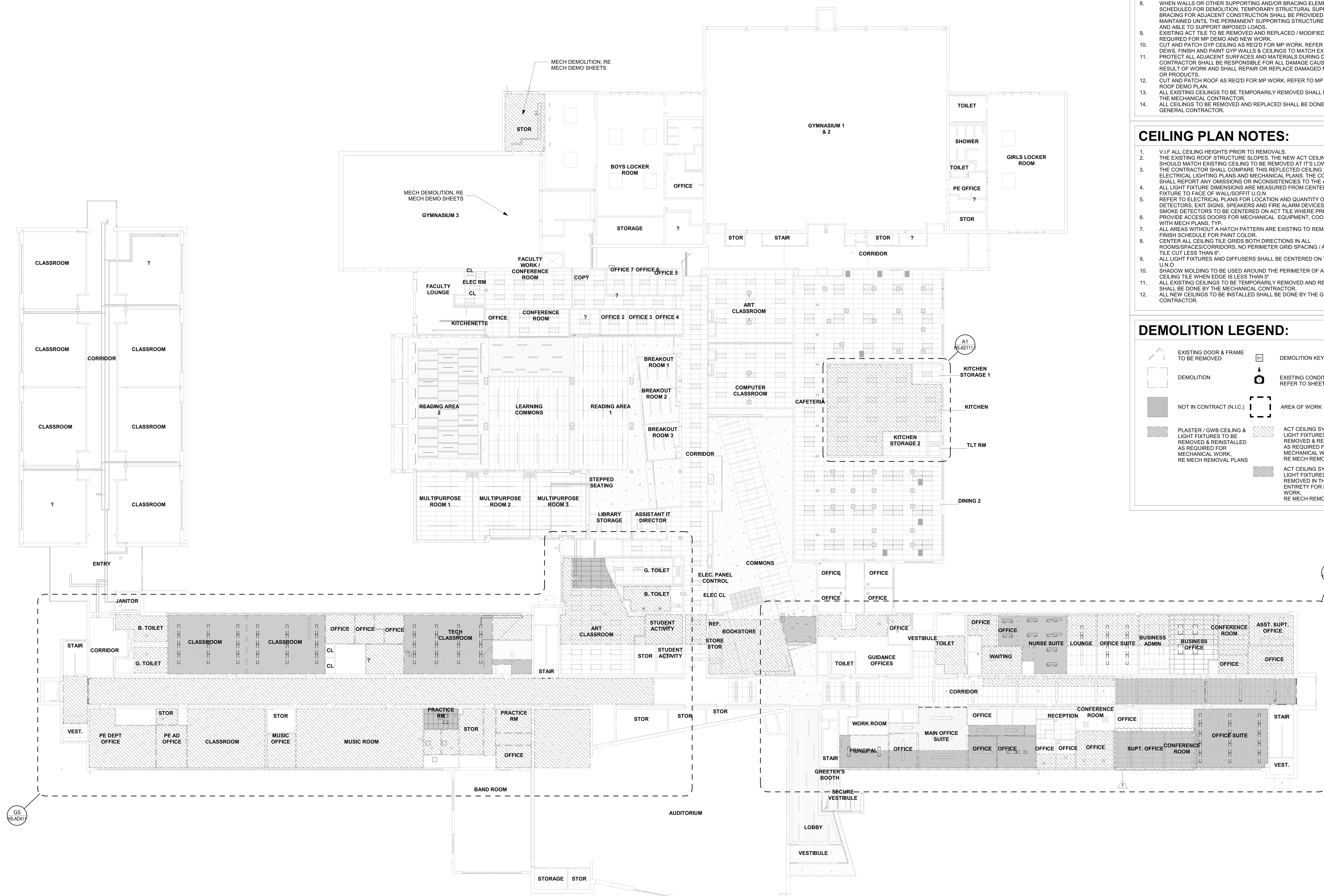
Hw# CR02-1 - INT NL SCUSH AL

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	CONT. HINGE	224XY TWP CON		✓	628	IVE
1	EA	ELEC PANIC HARDWARE	RX-LC-QEL-9847-NL-CON 24 VDC		✓	626	VON
1	EA	RIM CYLINDER	20-057 ICX			626	SCH
1	EA	PRIMUS CORE	20-740 EV D			626	SCH
1	EA	SURFACE CLOSER	4040XP SCUSH			689	LCN
1	EA	PA MOUNTING PLATE	4040XP-18PA SRT			689	LCN
1	EA	CUSH SHOE SUPPORT	4040XP-30 SRT			689	LCN
1	EA	BLADE STOP SPACER	4040XP-61 SRT			689	LCN
1	EA	THRESHOLD	655D			D	ZER
1	EA	DOOR CONTACT	7764		✓	628	SCE
1	EA	POWER SUPPLY	BY SECURITY CONTRACTOR		✓		MIS
1	EA	CARD READER	BY SECURITY CONTRACTOR				MIS

OPERATIONAL DESCRIPTION: ALWAYS READY FOR IMMEDIATE EGRESS, ACCESS BY KEY OR CARD READER TO RETRACT LATCHBOLT, DOOR CONTACT AND REQUEST TO EXIT CONNECTED TO BUILDING SECURITY.

END OF SECTION



FIRST FLOOR OVERALL CEILING DEMOLITION PLAN

A1

1/16" = 1'-0"

DEMOLITION NOTES:

1. VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING WITH DEMOLITION WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
2. ALL DIMENSIONS ARE TO BE VERIFIED IN THE FIELD.
3. INTERIOR WALL DIMENSIONS ARE MEASURED FROM FINISH FACE OF GYP BOARD, CMU OR PLASTER UNO
4. ALL DEMO WORK SHOULD BE COORDINATED WITH THE NEW WORK PLANS. ABATEMENT SCOPE IS TO BE COMPLETED FIRST AND SIGNED OFF BY THE INSPECTOR OR ANY GOVERNED AGENT BEFORE ANY OTHER DEMO WORK IS STARTED.
5. ALL NEW OPENINGS FOR DOORS AND WINDOWS SHALL BE COORDINATED WITH NEW WORK PLANS FOR LOCATIONS AND SIZES.
6. DEMO KEYNOTES ARE TYPICAL AND APPLY TO MATERIALS OF THE LIKE SHOWN IN PLAN.
7. IT IS NOT THE INTENT TO SHOW EVERY PIECE OR ITEM TO BE REMOVED IN DEMOLITION WORK. MECHANICAL, ELECTRICAL, AND OTHER WORK RELATED TO A WALL OR AREA SCHEDULED FOR DEMOLITION AND REMOVAL, SHALL BE PERFORMED WHETHER SO NOTED OR NOT. PROTECT ALL ITEMS INTENDED FOR SALVAGE AND REUSE, OR SCHEDULED TO REMAIN.
8. WHEN WALLS OR OTHER SUPPORTING AND/OR BRACING ELEMENTS ARE SCHEDULED FOR DEMOLITION, TEMPORARY STRUCTURAL SUPPORTS AND BRACING FOR ADJACENT CONSTRUCTION SHALL BE PROVIDED AND MAINTAINED UNTIL THE PERMANENT SUPPORTING STRUCTURE IS IN PLACE AND ABLE TO SUPPORT IMPOSED LOADS.
9. EXISTING ACT TILE TO BE REMOVED AND REPLACED / MODIFIED AS REQUIRED FOR MP DEMO AND NEW WORK.
10. CUT AND PATCH GYP CEILING AS REQ'D FOR MP WORK. REFER TO MP DEWS. FINISH AND PAINT GYP WALLS & CEILINGS TO MATCH EXISTING.
11. PROTECT ALL ADJACENT SURFACES AND MATERIALS DURING DEMOLITION, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE CAUSED AS A RESULT OF WORK AND SHALL REPAIR OR REPLACE DAMAGED MATERIALS OR PRODUCTS.
12. CUT AND PATCH ROOF AS REQ'D FOR MP WORK. REFER TO MP DEWS AND ROOF DEMO PLAN.
13. ALL EXISTING CEILINGS TO BE TEMPORARILY REMOVED SHALL BE DONE BY THE MECHANICAL CONTRACTOR.
14. ALL CEILINGS TO BE REMOVED AND REPLACED SHALL BE DONE BY THE GENERAL CONTRACTOR.

CEILING PLAN NOTES:

1. V.I.F ALL CEILING HEIGHTS PRIOR TO REMOVALS.
2. THE EXISTING ROOF STRUCTURE SLOPES. THE NEW ACT CEILING HEIGHT SHOULD MATCH EXISTING CEILING TO BE REMOVED AT IT'S LOWEST POINT.
3. THE CONTRACTOR SHALL COMPARE THIS REFLECTED CEILING PLAN WITH ELECTRICAL LIGHTING PLANS AND MECHANICAL PLANS. THE CONTRACT SHALL REPORT ANY OMISSIONS OR INCONSISTENCIES TO THE ARCHITECT.
4. ALL LIGHT FIXTURE DIMENSIONS ARE MEASURED FROM CENTERLINE OF FIXTURE TO FACE OF WALL/SOFFIT U.O.N
5. REFER TO ELECTRICAL PLANS FOR LOCATION AND QUANTITY OF SMOKE DETECTORS, EXIT SIGNS, SPEAKERS AND FIRE ALARM DEVICES. ALL SMOKE DETECTORS TO BE CENTERED ON ACT TILE WHERE PRESENT.
6. PROVIDE ACCESS DOORS FOR MECHANICAL EQUIPMENT, COORDINATE WITH MECH PLANS, TYP.
7. ALL AREAS WITHOUT A HATCH PATTERN ARE EXISTING TO REMAIN. SEE FINISH SCHEDULE FOR PAINT COLOR.
8. CENTER ALL CEILING TILE GRIDS BOTH DIRECTIONS IN ALL ROOMS/SPACES/CORRIDORS, NO PERIMETER GRID SPACING / ACOUSTICAL TILE CUT LESS THAN 6".
9. ALL LIGHT FIXTURES AND DIFFUSERS SHALL BE CENTERED ON THE TILE U.N.O
10. SHADOW MOLDING TO BE USED AROUND THE PERIMETER OF ACOUSTIC CEILING TILE WHEN EDGE IS LESS THAN 5"
11. ALL EXISTING CEILINGS TO BE TEMPORARILY REMOVED AND REINSTALLED SHALL BE DONE BY THE MECHANICAL CONTRACTOR.
12. ALL NEW CEILINGS TO BE INSTALLED SHALL BE DONE BY THE GENERAL CONTRACTOR.

DEMOLITION LEGEND:

- EXISTING DOOR & FRAME TO BE REMOVED
- D1 — DEMOLITION KEYNOTE
- DEMOLITION
- EXISTING CONDITION PHOTO, REFER TO SHEET HS-A000
- NOT IN CONTRACT (N.I.C.)
- AREA OF WORK
- PLASTER / GWB CEILING & LIGHT FIXTURES TO BE REMOVED & REINSTALLED AS REQUIRED FOR MECHANICAL WORK, RE MECH REMOVAL PLANS
- ACT CEILING SYSTEM & LIGHT FIXTURES TO BE REMOVED & REINSTALLED AS REQUIRED FOR MECHANICAL WORK, RE MECH REMOVAL PLANS
- ACT CEILING SYSTEM & LIGHT FIXTURES TO BE REMOVED IN THEIR ENTIRETY FOR MECHANICAL WORK, RE MECH REMOVAL PLANS

ARCHITECT

ksqdesign

NEW YORK OKLAHOMA

KSQ Design
215 W 40th Street 15th Floor
New York, NY 10018
646.435.0660 office
www.ksq.design

Owner

Nanuet Union Free School District
103 Church St, Nanuet, NY 10954
845.627.9880 office
http://www.nanuetsd.org/

Structural Engineer

Clapper Structural Engineering
160 Partition Street
Saugerties, NY 12477
845.943.9601
www.clapperstructural.com

MEP Engineer

Sage Engineering Associates, LLP
9 Columbia Circle
Albany NY 12203
518.453.6091 office
518.453.6092 fax
www.sagellp.com

Environmental Engineer

Quest Environmental Solutions
1376 Route 9
Wappingers Falls, NY 12590
845.298.6251
www.qualityenv.com

Construction Manager

Jacobs
One Penn Plaza
54th Floor, Suite 5420
New York, NY 10119
646.908.6550
www.jacobs.com

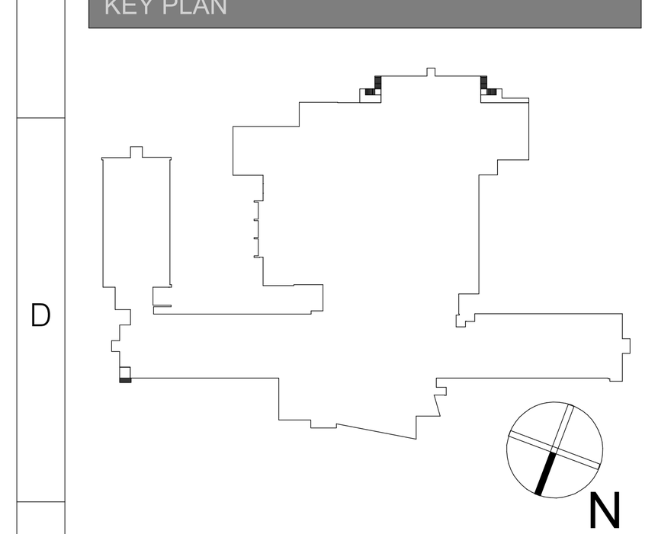
NUFSD BOND PROJECTS PH 4 - NANUET HS

■ SE[illegible]
☐ SED#50-01-08-03-0-004-020 (BARR MIDDLE SCHOOL)

High School
103 Church St.
Nanuet, NY 10954

Barr Middle School
50 Blauvelt Rd #1
Nanuet, NY 10954

KEY PLAN



REVISIONS

No.	Description	Date
1	ADDENDUM #1	03/19/24

ISSUED: BID SET ISSUANCE

DATE: 2/6/24

SCALE: As indicated

SHEET NAME:
FIRST FLOOR OVERALL RCP DEMOLITION

SHEET NUMBER:
HS-AD111

ISSUE FOR BID SET

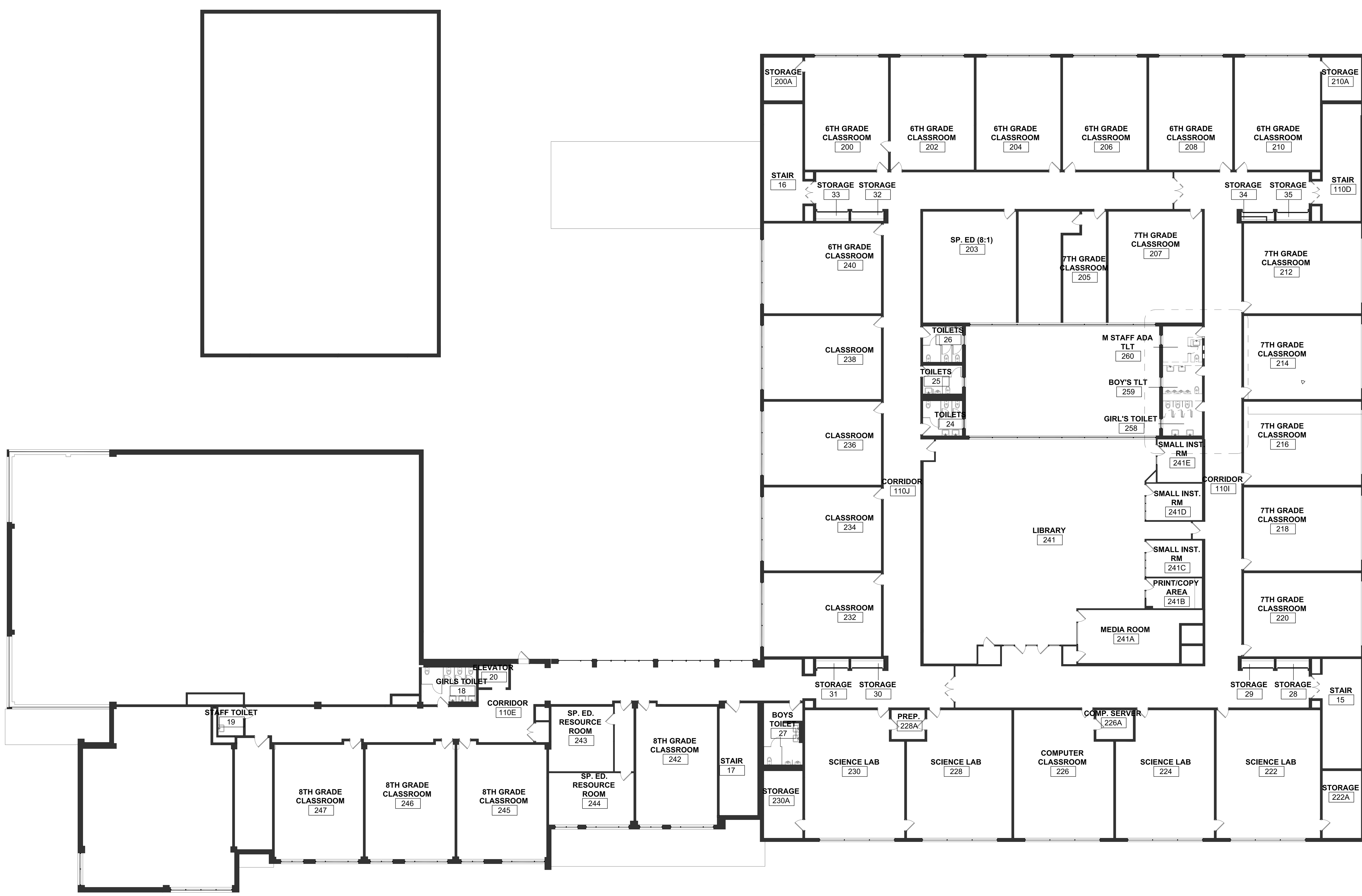
ACM LEGEND:

Asbestos Abatement Contractor to remove and dispose of Non-ACM Sheetrock Ceiling and any concealed ACM Mudded Pipe Fittings and/or PACM Pipe Insulation above.

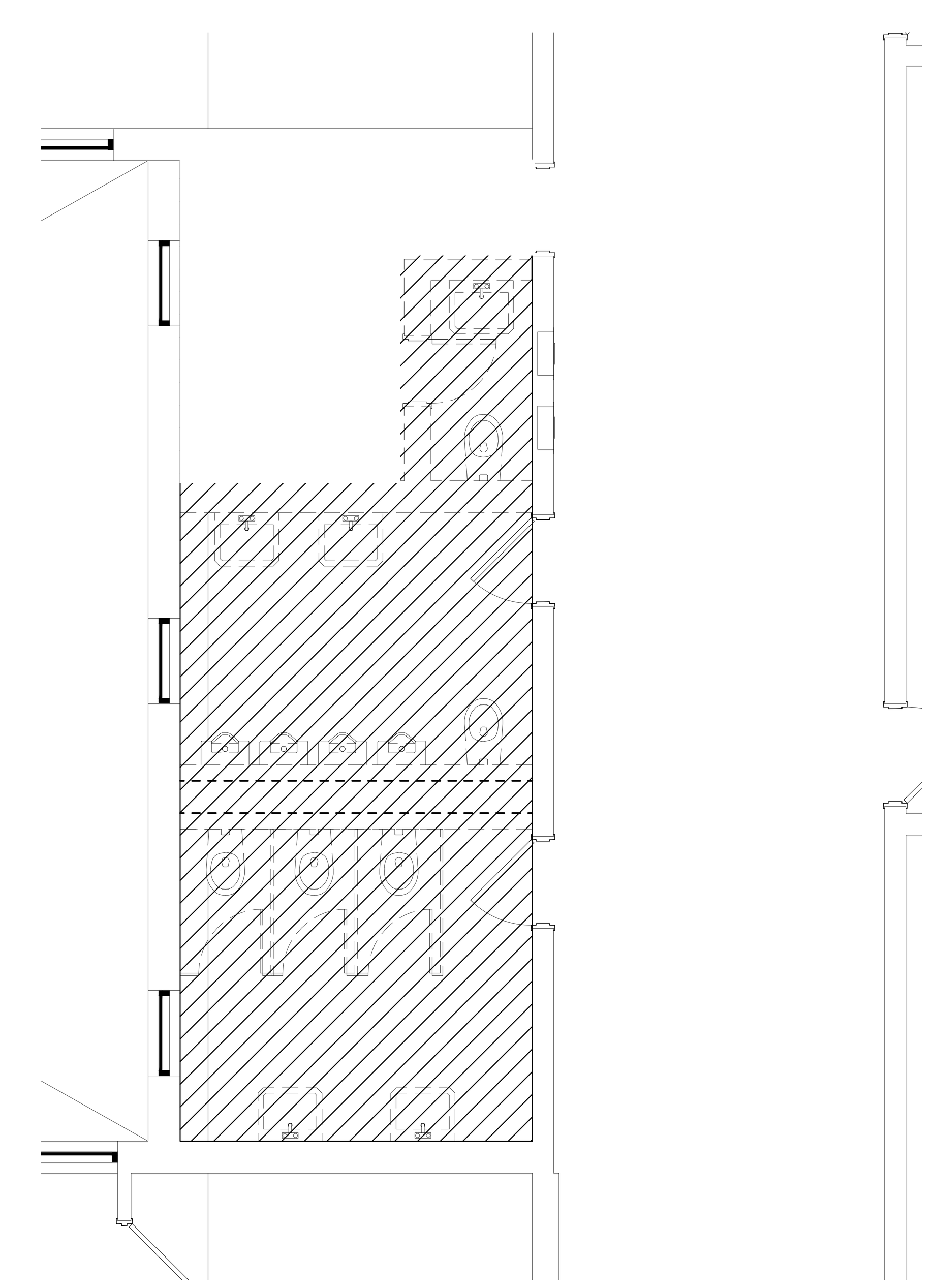
See Asbestos Specification Part 3.17 for Details

Note:Asbestos Abatement Contractor to Probe Walls and Floors for concealed ACM Pipe Insulation. Abatement Contractor to remove and dispose of any discovered PACM Pipe Insulation. Coordinate with General Contractor or Owner's Representatives for Probe Locations.

Asbestos Abatement Contractor to remove and dispose of ACM Floor Tile and ACM Mastic to non-ACM Concrete Floor Substrate AND remove and dispose of Non-ACM Splined Ceiling Ceiling and any concealed ACM Mudded Pipe Fittings and/or PACM Pipe Insulation



SECOND FLOOR OVERALL DEMOLITION PLAN 1A
1/16" = 1'-0"



2ND FLOOR TOILET DEMO 1B
1/4" = 1'-0"

ARCHITECT

ksqdesign

NEW YORK OKLAHOMA

KSQ Design
215 W 40th Street 15th Floor
New York, NY 10018
646.435.0660 office
www.ksq.design

Owner
Nanuet Union Free School District
101 Church Street
Nanuet, NY 10954
845.627.9880
www.nanuetsd.org

Structural Engineer
Clapper Structural Engineering
160 Partition Street
Saugerties, NY 12477
845.943.9601
www.clapperstructural.com

MEP Engineer
Sage Engineering Associates, LLP
9 Columbia Circle
Albany NY 12203
518.453.6091
www.sagellp.com

Environmental Engineer
Quest Environmental Solutions
1376 Route 9
Wappingers Falls, NY 12590
845.298.6251
www.qualityenv.com

Construction Manager
Jacobs
One Penn Plaza
24th Floor, Suite 2400
New York, NY 10119
646.908.6550
www.jacobs.com

STATE OF NEW YORK
ANTHONY NICHOLAS MELINO
067037
LICENSED PROFESSIONAL ENGINEER
Exp. 11/30/25

NANUET

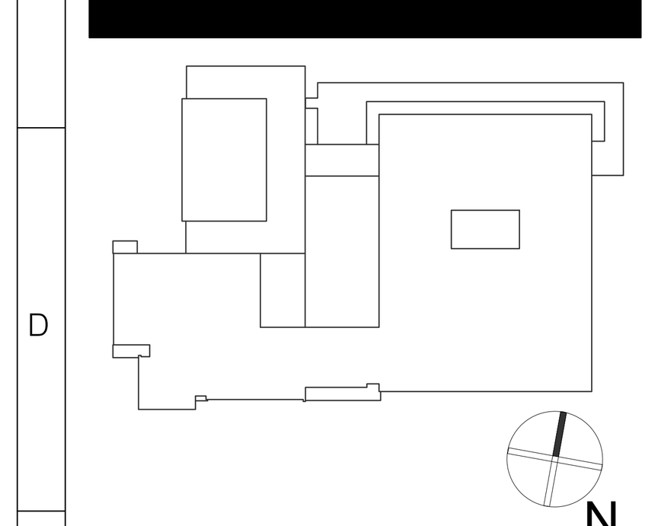
NUFSD BOND PROJECTS PH 4 - BARR MS

☐ SED#50-01-08-03-0-003-036 (NANUET HS)
■ SED#50-01-08-03-0-004-021 (BARR MS)
■ SED#50-01-08-03-0-001-025 (MILLER ES)

Nanuet High School
103 Church St
Nanuet, NY 10954

A MacArthur Barr Middle School
143 Church St
Nanuet, NY 10954

Miller Elementary School
50 Blauvelt Rd Unit1
Nanuet, NY 10954



REVISIONS

No.	Description	Date
1	Added Floor Tile Removal	3/18/2024

ISSUED: BID SET ISSUANCE

DATE: 2/6/2024

SCALE: As indicated

SHEET NAME:
SECOND FLOOR ASBESTOS ABATEMENT PLAN

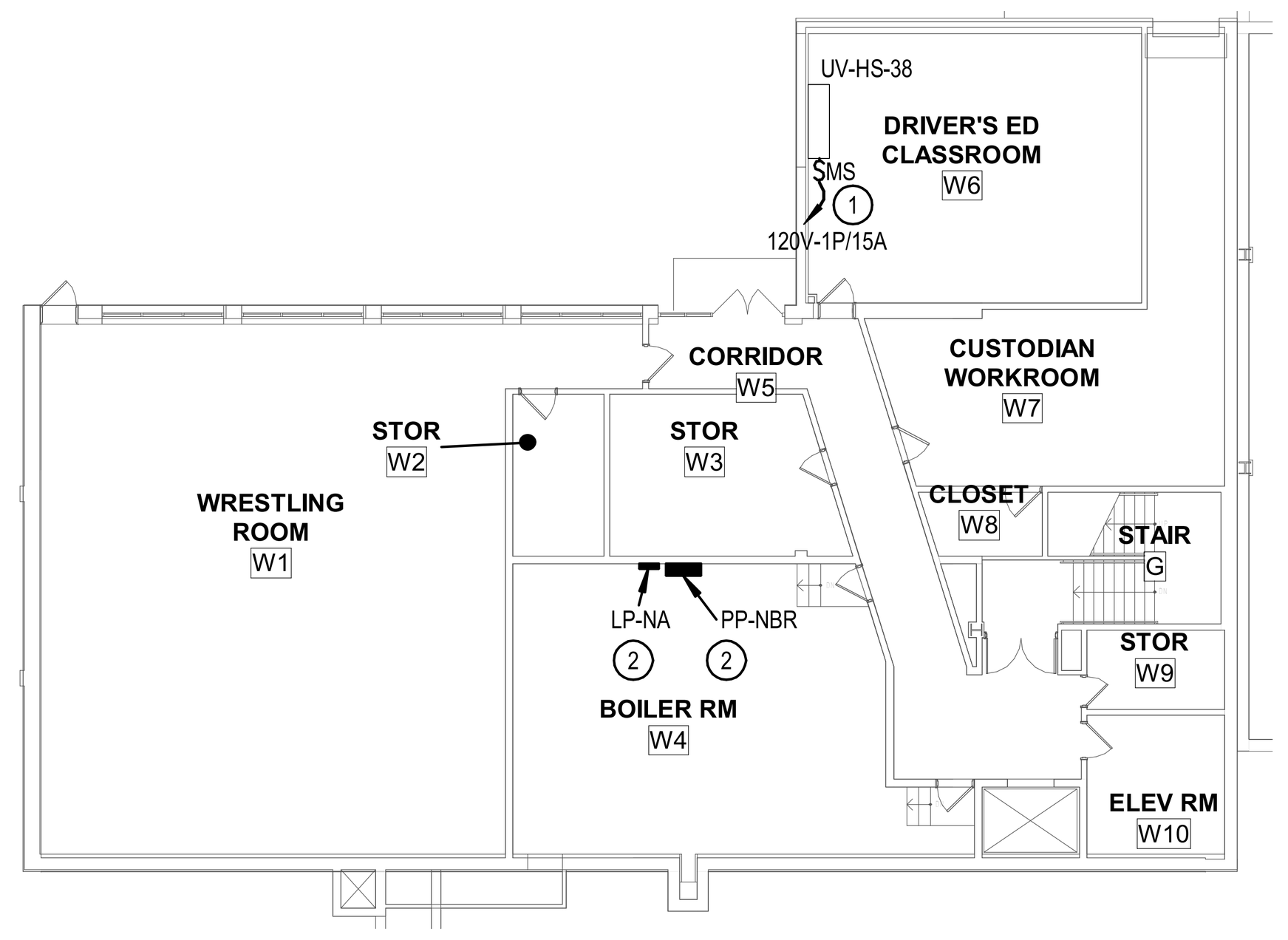
SHEET NUMBER:
MS-ASB-2

GENERAL REMOVAL NOTES:

1. REFER TO SHEET HS-E001 FOR GENERAL NOTES.

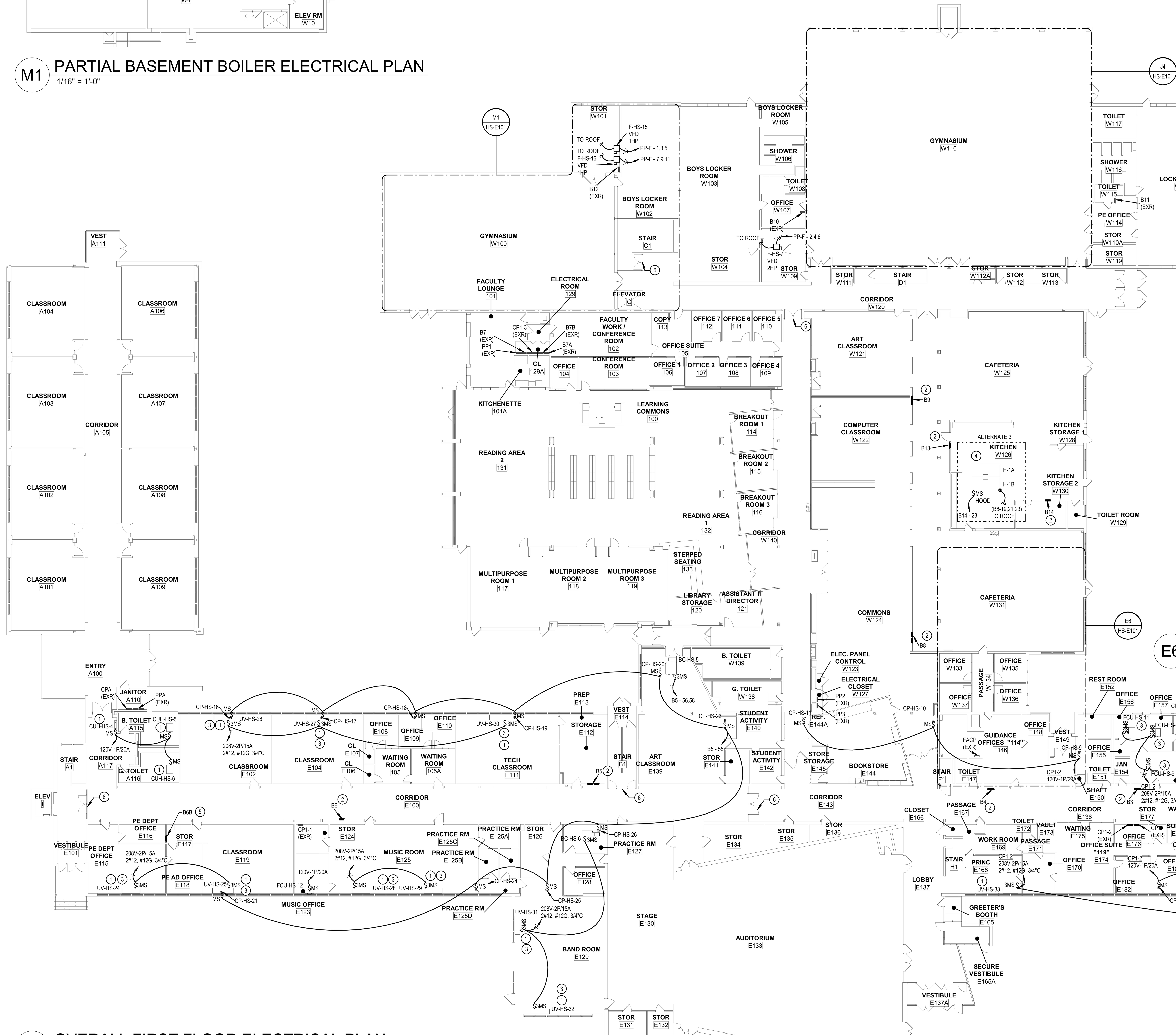
KEYED NOTES:

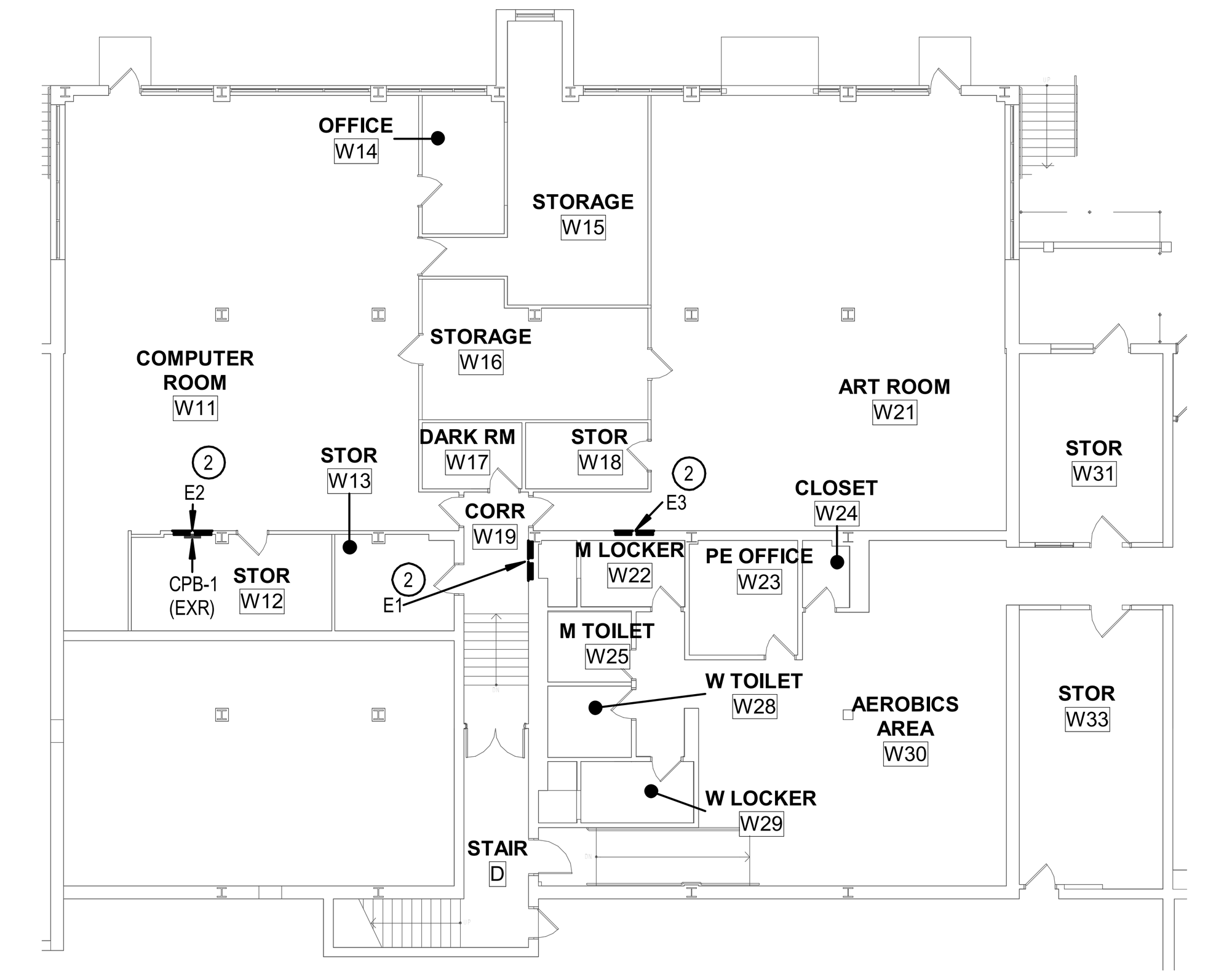
1. DISCONNECT AND REMOVE EXISTING UNIT VENTILATOR CIRCUITING BACK TO SOURCE.
2. REPLACE PANEL. SEE RISER DIAGRAM PANEL SCHEDULE DRAWINGS FOR MORE INFORMATION.
3. PROVIDE FIRE ALARM CONTROL RELAY TO SHUT DOWN INDICATED HVAC EQUIPMENT UPON ALARM OF FIRE ALARM SYSTEM.
4. PROVIDE FIRE ALARM MONITOR MODULE AND CONNECT TO HOOD CONTROL PANEL TO TRANSMIT ALARM SIGNAL TO FIRE ALARM SYSTEM UPON DISCHARGE OF FIRE SUPPRESSION SYSTEM
5. REMOVE EXISTING PANEL. EXTEND EXISTING CIRCUITS THAT WERE FED FROM PANEL B6B TO PANEL B6. COMBINE 2-EXISITING KITCHEN LIGHTING CIRCUITS. MODIFY EXISTING PANEL BACKBOX TO SERVE AS JUNCTION BOX FOR CIRCUITS TO REMAIN. MAINTAIN EXISTING 400A BREAKER IN MDP FOR REUSE.
6. REMOVE AND REINSTALL FIRE ALARM DOOR HOLDS TO FACILITATE REPLACEMENT OF DOORS.



M1 PARTIAL BASEMENT BOILER ELECTRICAL PLAN

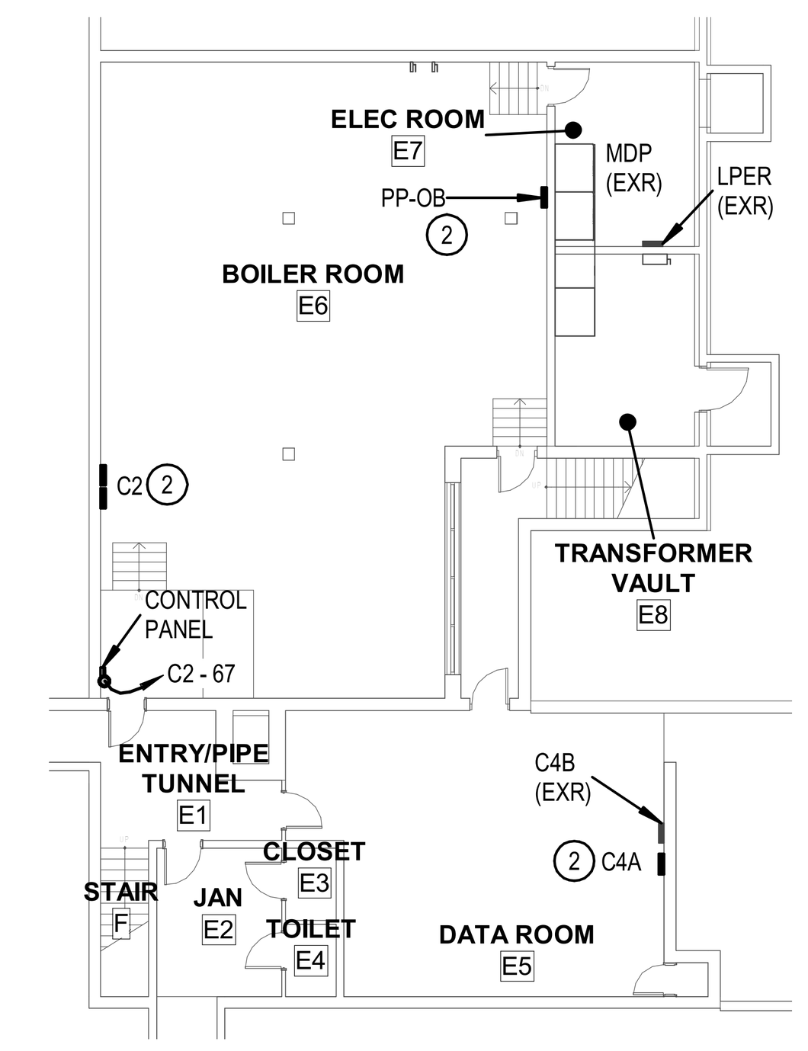
1/16" = 1'-0"





J4 PARTIAL BASEMENT ELECTRICAL PLAN

1/16" = 1'-0"



E6 PARTIAL BASEMENT ELEC/BOILER ELECTRICAL PLAN

1/16" = 1'-0"

A18 OVERALL FIRST FLOOR ELECTRICAL PLAN

1/16" = 1'-0"

ARCHITECT

ksqdesign

NEW YORK OKLAHOMA

KSQ Design
215 W 40th Street 15th Floor
New York, NY 10018
646.435.0660 office
www.ksq.design

Owner

Nanuet Union Free School District
103 Church St, Nanuet, NY 10954
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MEP Engineer

Sage Engineering Associates, LLP
9 Columbia Circle
Albany NY 12203
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518.453.6092 fax
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Construction Manager

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NUFSD BOND PROJECTS PH4

SED#50-01-08-03-0-003-036 (NANUET HS)
SED#50-01-08-03-0-004-021 (BARR MS)
SED#50-01-08-03-0-001-025 (MILLER ES)

Nanuet High School
103 Church St
Nanuet, NY 10954

A MacArthur Barr Middle School
143 Church St
Nanuet, NY 10954

Miller Elementary School
50 Blauvelt Rd Unit1
Nanuet, NY 10954

KEY PLAN

REVISIONS

No.	Description	Date
1	BID ADDENDUM #1	03/19/24

ISSUED: BID SET ISSUANCE

DATE: FEB 6, 2024

SCALE: As indicated

SHEET NAME: OVERALL FIRST FLOOR PLAN

SHEET NUMBER: HS-E101

ISSUE FOR BID SET

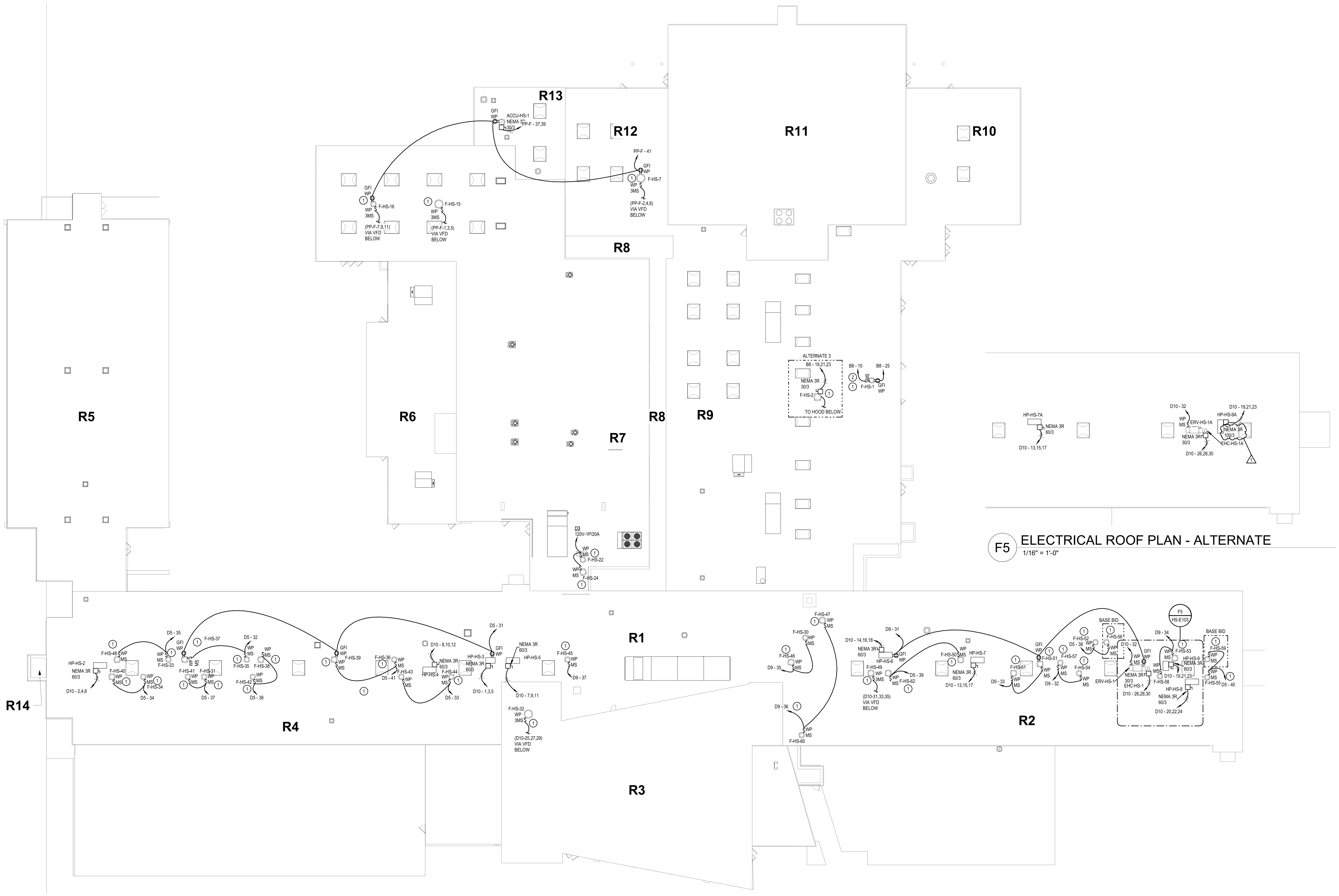
PROJECT NUMBER: 2211003.00

GENERAL REMOVAL NOTES:

1. REFER TO SHEET HS-E001 FOR GENERAL NOTES.

KEYED NOTES:

1. PROVIDE FIRE ALARM CONTROL RELAY TO SHUT DOWN INDICATED HVAC EQUIPMENT UPON ALARM OF FIRE ALARM SYSTEM.
2. EXISTING EXHAUST FAN TO BE REMOVED/REPLACED. DE-ENERGIZE, DISCONNECT AND REMOVE BRANCH CIRCUIT BACK TO SOURCE.



F5 ELECTRICAL ROOF PLAN - ALTERNATE
1/16" = 1'-0"

A18 ELECTRICAL ROOF PLAN
1/16" = 1'-0"

ARCHITECT

ksqdesign

NEW YORK OKLAHOMA

KSQ Design
215 W 40th Street 15th Floor
New York, NY 10018
646.435.0660 office
www.ksq.design

Owner

Nanuet Union Free School District
103 Church St, Nanuet, NY 10954
845.627.9880 office
http://www.nanuetsd.org/

MEP Engineer

Sage Engineering Associates, LLP
9 Columbia Circle
Albany NY 12203
518.453.6091 office
518.453.6092 fax
www.sagellp.com

Environmental Engineer

Quest Environmental Solutions
1376 Route 9
Wappingers Falls, NY 12590
845.298.6251
www.qualityenv.com

Construction Manager

Jacobs
One Penn Plaza
54th Floor, Suite 5420
New York, NY 10119
646.908.6550
www.jacobs.com

REGISTRATION EXPIRES: 10/31/2025

NUFSD BOND PROJECTS PH4

- ■ SED#50-01-08-03-0-003-036 (NANUET HS)
- ☐ SED#50-01-08-03-0-004-021 (BARR MS)
- ☐ SED#50-01-08-03-0-001-025 (MILLER ES)

Nanuet High School
103 Church St
Nanuet, NY 10954

A MacArthur Barr Middle School
143 Church St
Nanuet, NY 10954

Miller Elementary School
50 Blauvelt Rd Unit1
Nanuet, NY 10954

KEY PLAN

REVISIONS

No.	Description	Date
1	BID ADDENDUM #1	03/19/24

ISSUED: BID SET ISSUANCE

DATE: FEB 6, 2024

SCALE: As indicated

SHEET NAME:
ELECTRICAL ROOF PLAN

SHEET NUMBER:
HS-E103

ISSUE FOR BID SET

PROJECT NUMBER: 2211003.00

NAME: PP-F			EXISTING PANEL TO BE REMOVED		
MOUNTING:	SURFACE	VOLTS: 208Y/120	PHASE: 3	WIRE: 4	
MAIN RATING:	200 A	MCB: MLO	MIN AIC RATING:	AMPS RMS SYM	
OTHER:			LOCATION:		
NOTES:					

CKT	DESCRIPTION	LOAD	WIRE	BKR	P	A	B	C	A	B	C	P	BKR	WIRE	LOAD	DESCRIPTION	CKT
1	SPARE	--	--	20	3	0			0			3	20	--	--	SPARE	2
3	--	--	--	--	--		0			0		--	--	--	--	--	4
5	--	--	--	--	--			0			0	--	--	--	--	--	6
7	SPARE	--	--	20	3	0			0			3	20	--	--	EXH. FAN GYM UNIT #4	8
9	--	--	--	--	--		0			0		--	--	--	--	--	10
11	--	--	--	--	--			0			0	--	--	--	--	--	12
13	UNIT #2 & BOY'S GYM	--	--	20	3	0			0			3	20	--	--	AHU-1	14
15	--	--	--	--	--		0			0		--	--	--	--	--	16
17	--	--	--	--	--			0			0	--	--	--	--	--	18
19	UNIT #1 & GIRL'S GYM	--	--	20	3	0			0			3	20	--	--	EXH. FAN GIRL'S LOCKER RM	20
21	--	--	--	--	--		0			0		--	--	--	--	--	22
23	--	--	--	--	--			0			0	--	--	--	--	--	24
25	EXH. FAN BOY'S LOCKER RM	--	--	15	3	0			0			3	20	--	--	SUPPLY FAN BOY'S LOCKER	26
27	--	--	--	--	--		0			0		--	--	--	--	--	28
29	--	--	--	--	--			0			0	--	--	--	--	--	30
31	UNIT #5 & BOY'S LOCKER RM SUPPLY	--	--	15	3	0			0			3	20	--	--	GYM ROLLING DOOR	32
33	--	--	--	--	--		0			0		--	--	--	--	--	34
35	--	--	--	--	--			0			0	--	--	--	--	--	36

NAME: PP-F			PANEL SCHEDULE		
MOUNTING:	SURFACE	VOLTS: 208Y/120	PHASE: 3	WIRE: 4	
MAIN RATING:	200 A	MCB: MLO	MIN AIC RATING: 10,000	AMPS RMS SYM	
OTHER:			LOCATION: GYM FAN ROOM E		
NOTES:					

CKT	DESCRIPTION	LOAD	WIRE	BKR	P	A	B	C	A	B	C	P	BKR	WIRE	LOAD	DESCRIPTION	CKT
1	**F-HS-15**	**1656**	**3#10, #10G,3/4"C**	**20**	**3**	**552**			**900**			**3**	**20**	**3#10, #10G,3/4"C**	**2700**	**F-HS-7**	**2**
3	**--**	**--**	**--**	**--**	**--**		**552**			**900**		**--**	**--**	**--**	**--**	**--**	**4**
5	**--**	**--**	**--**	**--**	**--**			**552**			**900**	**--**	**--**	**--**	**--**	**--**	**6**
7	**F-HS-16**	**1656**	**3#10, #10G,3/4"C**	**20**	**3**	**552**			0			3	20	--	--	EXH. FAN GYM UNIT #4	8
9	**--**	**--**	**--**	**--**	**--**		**552**			0		--	--	--	--	--	10
11	**--**	**--**	**--**	**--**	**--**			**552**			0	--	--	--	--	--	12
13	UNIT #2 & BOY'S GYM	--	--	20	3	0			0			3	20	--	--	AHU-1	14
15	--	--	--	--	--		0			0		--	--	--	--	--	16
17	--	--	--	--	--			0			0	--	--	--	--	--	18
19	UNIT #1 & GIRL'S GYM	--	--	20	3	0			0			3	20	--	--	EXH. FAN GIRL'S LOCKER RM	20
21	--	--	--	--	--		0			0		--	--	--	--	--	22
23	--	--	--	--	--			0			0	--	--	--	--	--	24
25	EXH. FAN BOY'S LOCKER RM	--	--	15	3	0			0			3	20	--	--	SUPPLY FAN BOY'S LOCKER	26
27	--	--	--	--	--		0			0		--	--	--	--	--	28
29	--	--	--	--	--			0			0	--	--	--	--	--	30
31	UNIT #5 & BOY'S LOCKER RM SUPPLY	--	--	15	3	0			0			3	20	--	--	GYM ROLLING DOOR	32
33	--	--	--	--	--		0			0		--	--	--	--	--	34
35	--	--	--	--	--			0			0	--	--	--	--	--	36
37	**ACCU-HS-1**	**3443**	**2#10, #10N, #10G,3/4"C**	**30**	**2**	**1722**			**0**			**1**	**20**	**--**	**--**	**SPARE**	**38**
39	**--**	**--**	**--**	**--**	**--**		**1722**			**0**		**1**	**20**	**--**	**--**	**SPARE**	**40**
41	**RECEPT ROOF**	**540**	**#12**	**20**	**1**			**540**			**0**	**1**	**20**	**--**	**--**	**SPARE**	**42**

NAME: PP-NFR			EXISTING PANEL TO BE REMOVED		
MOUNTING:	SURFACE	VOLTS: 208Y/120	PHASE: 3	WIRE: 4	
MAIN RATING:	400 A	MCB: 400 A	MIN AIC RATING: 10,000	AMPS RMS SYM	
OTHER:			LOCATION: FAN ROOM W208		
NOTES: 1 OF 1					

CKT	DESCRIPTION	LOAD	WIRE	BKR	P	A	B	C	A	B	C	P	BKR	WIRE	LOAD	DESCRIPTION	CKT
1	REF 5	--	--	30	3	0			0			3	30	--	--	REF 1, 2, 3, 6, 7, 8, 9	2
3	--	--	--	--	--		0			0		--	--	--	--	--	4
5	--	--	--	--	--			0			0	--	--	--	--	--	6
7	REF 11	--	--	30	3	0			0			3	30	--	--	REF 4, 10, 12, 13	8
9	--	--	--	--	--		0			0		--	--	--	--	--	10
11	--	--	--	--	--			0			0	--	--	--	--	--	12
13	AH 6 & 7	--	--	30	3	0			0			3	30	--	--	F-HS-3 GYM FAN ROOM E	14
15	--	--	--	--	--		0			0		--	--	--	--	--	16
17	--	--	--	--	--			0			0	--	--	--	--	--	18
19	AH 5	--	--	30	3	0			0			3	30	--	--	REF 9, 14, 15, 17	20
21	--	--	--	--	--		0			0		--	--	--	--	--	22
23	--	--	--	--	--			0			0	--	--	--	--	--	24
25	AH 3	--	--	30	3	0			0			3	30	--	--	2 COND	26
27	--	--	--	--	--		0			0		--	--	--	--	--	28
29	--	--	--	--	--			0			0	--	--	--	--	--	30
31	AH 2	--	--	30	3	0			0			2	20	--	--	P-HS-4, P-HS-5 GYM FAN ROOM E	32
33	--	--	--	--	--		0			0		--	--	--	--	--	34
35	--	--	--	--	--			0			0	3	20	--	--	AHU-HS-3 GYM FAN ROOM E	36
37	AH 1	--	--	60	3	0			0			--	--	--	--	--	38
39	--	--	--	--	--		0			0		--	--	--	--	--	40
41	--	--	--	--	--			0									42
43	-	--	--	--	3	--			--			3	--	--	--	-	44
45	--	--	--	--	--		--			--		--	--	--	--	--	46
47	--	--	--	--	--			--			--	--	--	--	--	--	48

NAME: PP-NFR			PANEL SCHEDULE		
MOUNTING:	SURFACE	VOLTS: 208Y/120	PHASE: 3	WIRE: 4	
MAIN RATING:	400 A	MCB: 400 A	MIN AIC RATING: 10,000	AMPS RMS SYM	
OTHER:			LOCATION: FAN ROOM W208		
NOTES:					

CKT	DESCRIPTION	LOAD	WIRE	BKR	P	A	B	C	A	B	C	P	BKR	WIRE	LOAD	DESCRIPTION	CKT
1	REF 5	--	--	30	3	0			0			3	30	--	--	REF 1, 2, 3, 6, 7, 8, 9	2
3	--	--	--	--	--		0			0		--	--	--	--	--	4
5	--	--	--	--	--			0			0	--	--	--	--	--	6
7	REF 11	--	--	30	3	0			0			3	30	--	--	REF 4, 10, 12, 13	8
9	--	--	--	--	--		0			0		--	--	--	--	--	10
11	--	--	--	--	--			0			0	--	--	--	--	--	12
13	AH 6 & 7	--	--	30	3	0			0			3	30		0	F-HS-3 GYM FAN ROOM E	14
15	--	--	--	--	--		0			0		--	--	--	--	--	16
17	--	--	--	--	--			0			0	--	--	--	--	--	18
19	AH 5	--	--	30	3	0			0			3	30	--	--	REF 9, 14, 15, 17	20
21	--	--	--	--	--		0			0		--	--	--	--	--	22
23	--	--	--	--	--			0			0	--	--	--	--	--	24
25	AH 3	--	--	30	3	0			0			3	30	--	--	2 COND	26
27	--	--	--	--	--		0			0		--	--	--	--	--	28
29	--	--	--	--	--			0			0	--	--	--	--	--	30
31	AH 2	--	--	20	3	0			0			2	20		0	P-HS-4, P-HS-5 GYM FAN ROOM E	32
33	--	--	--	--	--		0			0		--	--	--	--	--	34
35	--	--	--	--	--			0			0	3	70		0	AHU-HS-3 GYM FAN ROOM E	36
37	AH 1	--	--	60	3	0			0			--	--	--	--	--	38
39	--	--	--	--	--		0			0		--	--	--	--	--	40
41	--	--	--	--	--			0									42
43	**SPARE**	**--**	**--**	**60**	**3**	**0**			**0**			**3**	**30**	**--**	**--**	**SPARE**	**44**
45	**--**	**--**	**--**	**--**	**--**		**0**			**0**		**--**	**--**	**--**	**--**	**--**	**46**
47	**--**	**--**	**--**	**--**	**--**			**0**			**0**	**--**	**--**	**--**	**--**	**--**	**48**

NAME: D10			PANEL SCHEDULE		
MOUNTING:	SURFACE	VOLTS: 208Y/120	PHASE: 3	WIRE: 4	
MAIN RATING:	400 A	MCB: 400 A	MIN AIC RATING: 10,000	AMPS RMS SYM	
OTHER:			LOCATION: STORAGE E237		

NOTES:
* INDICATES ALTERNATE
ALTERNATE HP-HS-7A BREAKER IS 60A/3P, AND WIRE 3#6,#10G,1"C
ALTERNATE HP-HS-9A BREAKER IS 70A/3P, AND WIRE 3#4,#8G,1 1/4"C (1)

CKT	DESCRIPTION	LOAD	WIRE	BKR	P	A	B	C	A	B	C	P	BKR	WIRE	LOAD	DESCRIPTION	CKT
1	HP-HS-3	9400	3#8,#10G,3/4"C	45	3	3133			6387			3	60	3#8,#10G,3/4"C	19160	HP-HS-2	2
3	--	--	--	--	--		3133			6387		--	--	--	--	--	4
5	--	--	--	--	--			3133			6387	--	--	--	--	--	6
7	HP-HS-5	19160	3#8,#10G,3/4"C	60	3	6387			6387			3	60	3#8,#10G,3/4"C	19160	HP-HS-4	8
9	--	--	--	--	--		6387			6387		--	--	--	--	--	10
11	--	--	--	--	--			6387			6387	--	--	--	--	--	12
13	*** HP-HS-7 - ALTERNATE HP-HS-7A**	**23485**	**3#4,#8G,1 1/4"C**	**80**	**3**	7828			6387			3	60	3#8,#10G,3/4"C	19160	HP-HS-6	14
15	**--**	**--**	**--**	**--**	**--**		7828			6387		--	--	--	--	--	16
17	**--**	**--**	**--**	**--**	**--**			7828			6387	--	--	--	--	--	18
19	*** HP-HS-9 - ALTERNATE HP-HS-9A**	**17590**	**3#6,#10G,1"C**	**60**	**3**	5863			7177			3	70	3#8,#10G,3/4"C	21531	HP-HS-8	20
21	**--**	**--**	**--**	**--**	**--**		5863			7177		--	--	--	--	--	22
23	**--**	**--**	**--**	**--**	**--**			5863			7177	--	--	--	--	--	24
25	F-HS-32	3816	3#10, #10G,3/4"C	20	3	1272			**2500**			**3**	**30**	**3#10, #10G,3/4"C**	**7500**	*** EHC-HS-1 - ALTERNATE EHC-HS-1A**	**26**
27	--	--	--	--	--		1272			**2500**		**--**	**--**	**--**	**--**	**--**	**28**
29	--	--	--	--	--			1272			**2500**	**--**	**--**	**--**	**--**	**--**	**30**
31	F-HS-49	2376	3#10, #10G,3/4"C	20	3	792			**1922**			**1**	**20**	**#12**	**1922**	*** ERV-HS-1 - ALTERNATE ERV-HS-1A**	**32**
33	--	--	--	--	--		792			0		3	20	--	--	SPARE	34
35	--	--	--	--	--			792			0	--	--	--	--	--	36
37	SPARE	--	--	20	3	0			0			--	--	--	--	--	38
39	--	--	--	--	--		0										40
41	--	--	--	--	--			0									42
43																	44
45																	46
47																	48
49																	50
51																	52
53																	54
55																	56
57																	58
59																	60

TOTAL CONNECTED	TOTAL CONNECTED AMPS	DIVERSIFIED	DIVERSIFIED AMPS
164260 VA	456 A	164260 VA	456 A

ARCHITECT

ksqdesign

NEW YORK OKLAHOMA

KSQ Design
215 W 40th Street 15th Floor
New York, NY 10018
646.435.0660 office
www.ksq.design

Owner

Nanuet Union Free School District
103 Church St, Nanuet, NY 10954
845.627.9880 office
http://www.nanuetsd.org/

MEP Engineer

Sage Engineering Associates, LLP
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NYSED CERTIFICATE AUTHORIZATION NUMBER 0018644

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REGISTRATION EXPIRES: 10/31/2025

NUFSD
BOND
PROJECTS
PH4

■ SED#50-01-08-03-0-003-036 (NANUET HS)
☐ SED#50-01-08-03-0-004-021 (BARR MS)
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Nanuet, NY 10954

KEY PLAN

REVISIONS

No.	Description	Date
1	BID ADDENDUM #1	03/19/24

ISSUED: BID SET ISSUANCE

DATE: FEB 6, 2024

SCALE: As indicated

SHEET NAME:
PANEL SCHEDULES - SECOND FLOOR

SHEET NUMBER:
HS-E606

ISSUE FOR BID SET