# NEW CENTURY SCHOOL

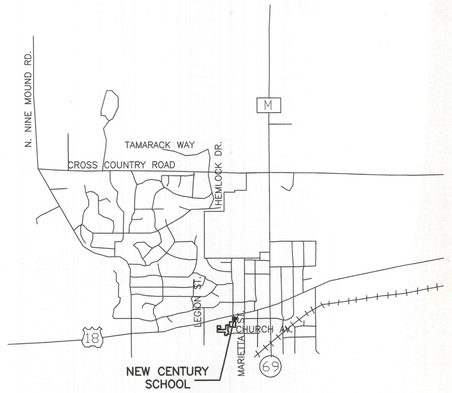
## MAINTENANCE AND REMODELING

## VERONA AREA SCHOOL DISTRICT
## VERONA, WISCONSIN

### DRAWING INDEX


GENERAL
CD01 COVER DRAWING

ARCHITECTURAL/MPE
A201 FLOOR PLANS
A202 REFLECTED CEILING PLANS
A203 SPECIFICATIONS


PARTIAL VERONA MAP

NORTH


Potter Lawson

Offices in Madison, Appleton & Beloit

15 Ellis Potter Court
Madison, Wisconsin
53711
(608) 274-2741
fax: 274-3674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Consultants:

Notes:

| Date | Issuance/Revisions | Symbol |
|---|---|---|
| 2/28/00 | Issued for Construction | |

NEW CENTURY SCHOOL
VERONA AREA SCHOOL DISTRICT

VERONA, WISCONSIN

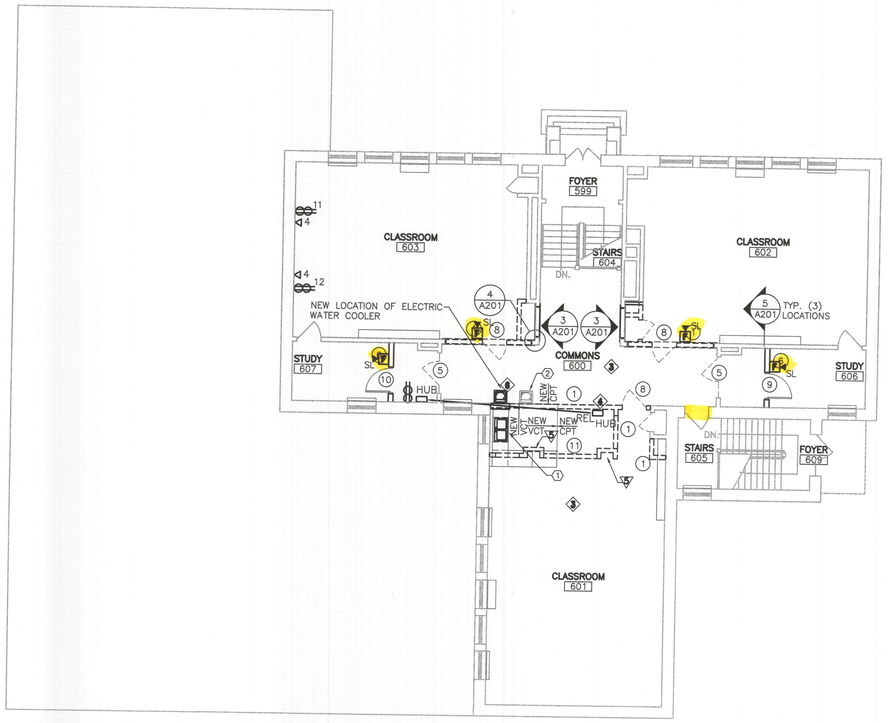
Drawing Title:
COVER DRAWING

PLJ Project Number: 9904101

Drawn By: MK

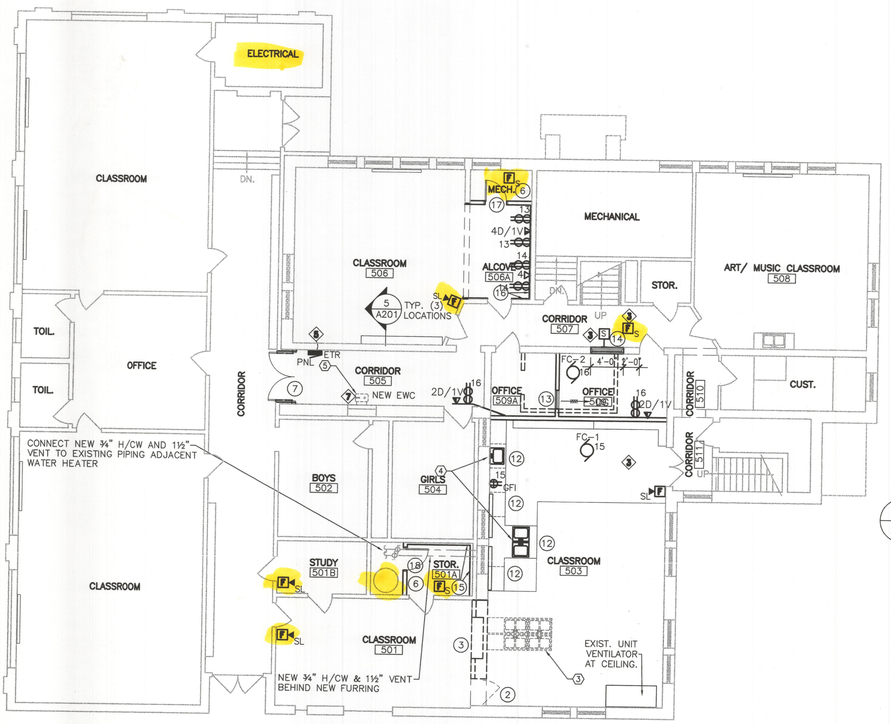
Drawing No. CD01

J:\1990\9904101\9904101CD01.DWG Fri Mar 03 10:47:06 2000



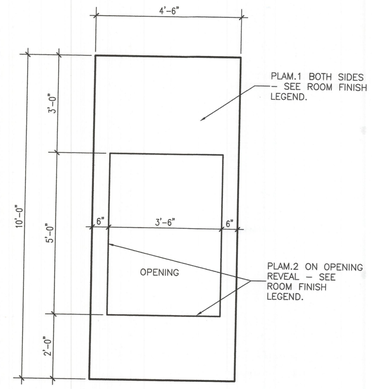

1 A201 SECOND FLOOR PLAN
1/8" = 1'-0"

NORTH

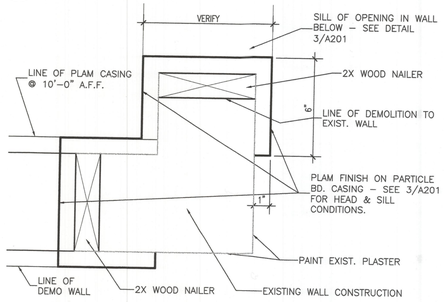



2 A201 FIRST FLOOR PLAN
1/8" = 1'-0"

NORTH

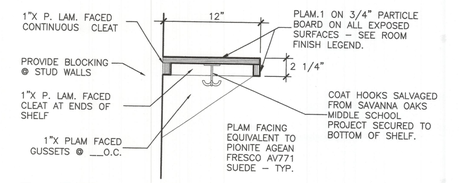



3 A201 TYP. CASING ELEVATION
1/2" = 1'-0"



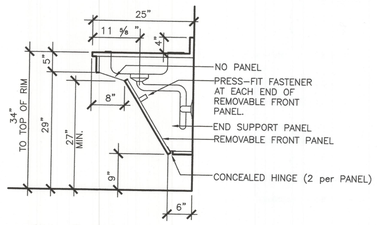

4 A201 TYP. CASING PLAN DETAIL
3" = 1'-0"

HEAD SIMILAR

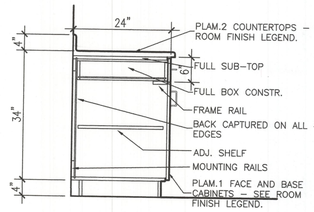



5 A201 TYP. COAT SHELF DETAIL
1 1/2" = 1' – 0"

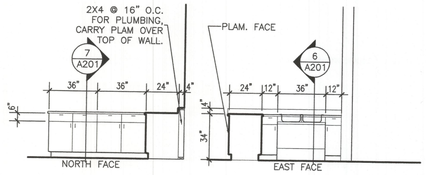
10' LONG – TYP.




6 A201 NEW B.F. LAV COUNTER
3/4" = 1' – 0"




7 A201 TYP. BASE CABINET
3/4" = 1' – 0"




8 A201 CASEWORK ELEVATION
1/4" = 1' – 0"

## ELECTRICAL NOTES:

1. PROVIDE FIRE ALARM STROBES IN ALL COMMON USE ROOMS (12 TOTAL). VERIFY BATTERY CAPABILITY AT MAIN PANEL FOR ADDED DEVICES.
2. RELOCATE EXISTING SMOKE DETECTORS TO NEW CEILING.
3. RELOCATE SPEAKER, CLOCK, & EMERGENCY WALL PACK TO BELOW NEW CEILING. ALL EXIT LIGHTS TO BE REPLACED WITH NEW LED BATTERY BACKUP TYPE. RELOCATE EXIT LIGHTS TO BELOW NEW CEILING.
4. RELOCATE EXISTING FIBER HUB. RE-USE EXISTING FIBER. RE-TERMINATE EXISTING CAT 5 CABLES TO EXISTING OUTLETS. ALL NEW DATA ON THIS DRAWING FROM THIS HUB. PROVIDE NEW RECEPTACLE AT NEW LOCATION AND RE-USE EXISTING CIRCUIT.
5. PROVIDE (6) CIRCUIT BREAKERS IN EXISTING PANEL FOR NEW CIRCUITS.
6. RELOCATE RECPETACLE TO NEW ECS LOCATION.
7. PROVIDE RECEPTACLE AT NEW EWC. USE EXISTING ADJACENT CIRCUIT.

## PLUMBING NOTES:

1. DOUBLE COMPARTMENT STAINLESS STEEL SINK S-1 CONNECT 1½" WASTE AND VENT TO EXISTING PIPING. CONNECT ½" COLD WATER TO EXISTING PIPING AND RUN NEW ½" HOT WATER FROM FLOOR BELOW
2. REMOVE EXISTING ELECTRIC WATER COOLER, INCLUDING "P" TRAP AND SUPPLIES. PROVIDE NEW ROUGH-INS IN NEW LOCATION AND CONNECT PIPING TO EXISTING. CUT PIPING FLUSH WITH FLOOR AND PATCH.
3. REMOVE EXISTING FOUR (4) COUNTER MOUNTED DOUBLE COMPARTMENT STAINLESS STEEL SINK INCLUDING WASTE, VENT AND WATER PIPING.
4. EXISTING SINKS-3 (RELOCATED FROM SAVANNAH OAKS SCHOOL) INSTALL IN CASEWORK AND CONNECT 1½" WASTE AND VENT, ¾" HOT AND COLD WATER TO EXISTING PIPING.
5. REMOVE EXISTING CHINA DRINKING FOUNTAIN AND INSTALL NEW ELECTRIC WATER COOLER – EWC-1 AND CONNECT 1¼" WASTE AND VENT TO EXISTING PIPING. PATCH WALL AS NECCESSARY.
6. RUN NEW 1½" VENT PIPING EXPOSED ON WALL. USE SCH 40 STEEL. PAINT TO MATCH WALL.

## GENERAL DEMOLITION NOTES

1. GENERAL CONTRACTOR (GC) SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO DEMOLITION. IF DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT FOR CLARIFICATION BEFORE COMMENCING WITH THE WORK.
2. GC AND SUBCONTRACTORS FOR EACH TRADE ARE ADVISED THAT INFORMATION PERTINENT TO THEIR WORK MAY BE INDICATED OR DESCRIBED IN OTHER PORTIONS OF THE CONTRACT DOCUMENTS.
3. GC AND SUBCONTRACTORS ARE RESPONSIBLE FOR PROVIDING ALL DEMOLITION AND PATCHING WORK REQUIRED TO COMPLETE THEIR WORK IN ACCORDANCE WITH THE DESIGN INTENT, WHETHER FULLY INDICATED OR NOT IN THE CONTRACT DOCUMENTS.
4. THESE DEMOLITION DRAWINGS HAVE BEEN PREPARED BASED UPON EXISTING CONSTRUCTION DOCUMENT DRAWINGS AND FIELD OBSERVATIONS. THE EXACT LOCATION OF THE BUILDING STRUCTURAL ELEMENTS (COLUMNS, BEAMS, LOAD BEARING WALLS, ETC.) MAY BE DIFFERENT IN THE FIELD THAN WHAT IS INDICATED OR ASSUMED ON THESE DRAWINGS. GC SHALL FIELD VERIFY THE LOCATION OF ALL BUILDING STRUCTURAL ELEMENTS. ALL BUILDING STRUCTURAL ELEMENTS SHALL REMAIN UNLESS INDICATED TO BE REMOVED ON THE STRUCTURAL DRAWINGS. ANY BUILDING STRUCTURAL ELEMENT INDICATED AS BEING REMOVED ON THIS DRAWING SHALL BE CONFIRMED WITH THE ARCHITECT PRIOR TO COMMENCING DEMOLITION.
5. PROVIDE NEW STEEL LINTELS AT NEW OPENINGS IN EXISTING WALLS.
6. REPLACE OR REPAIR ANY EXISTING CONSTRUCTION SCHEDULED TO REMAIN WHICH IS DAMAGED DURING DEMOLITION.
7. GC SHALL PROVIDE REQUIRED SHORING OR TEMPORARY BRACING DURING DEMOLITION.
8. REMOVE EXISTING CEILINGS AND SUPPORTS WHERE NEW CEILINGS ARE SCHEDULED IN THE ROOM FINISH SCHEDULE.
9. REMOVE PARTITIONS, SHELVING, CABINETRY AND ALL MISCELLANEOUS ITEMS SHOWN WITH DASHED LINES.
10. PATCH ALL FLOORS, WALLS, BASE AND CEILINGS WHERE PARTITIONS, OR MISCELLANEOUS ITEMS ARE REMOVED.
11. REMOVE DOORS, FRAMES AND SIDELIGHTS SHOWN WITH DASHED LINES, UNLESS OTHERWISED NOTED.

## GENERAL REMODELING NOTES

1. REPAIR ANY CONSTRUCTION OR FINISHES AFFECTED BY ADJACENT CONSTRUCTION. MATCH EXISTING FINISHES.

## SPECIFIC NOTES

1. REMOVE EXISTING WALL SHOWN DASHED TO ALLOW FOR 10'-0" FINISHED OPENING ABOVE – PROVIDE STEEL HEADER AS REQUIRED & CASE OPENING WITH PLASTIC LAMINATE CLAD CASING.
2. REMOVE EXISTING DOOR AND FRAME.
3. REMOVE EXISTING WALLS AND PROVIDE STEEL LINTEL AS REQUIRED TO SUPPORT EXISTING FLOOR SYSTEM ABOVE. LOCATE LINTEL AS HIGH AS POSSIBLE IN FLOOR STRUCTURE.
4. REMOVE EXISTING WALL, PROVIDE HEADER FOR 7'-11" HIGH FINISHED OPENING.
5. REMOVE EXISTING DOOR AND FRAME – PATCH TO MATCH EXISTING WALL.
6. PROVIDE NEW 6" METAL STUDS @ 16" O.C. WITH 5/8" GWB EACH SIDE AND ACOUSTICAL BATT INSULATION UP TO EXISTING CEILING.
7. PROVIDE NEW PAIR OF AWI PC-5, SOLID CORE WOOD DOORS WITH VENEER AND FINISH TO MATCH EXISTING DOORS. PROVIDE HOLLOW METAL FRAME PAINTED TO MATCH ADJACENT WALLS. PROVIDE HINGES, PANIC DEVICES, PULLS, SURFACE MOUNTED VERTICAL ROD DEVICE AND CLOSERS WITH HOLD-OPENS.
8. RELOCATE DOOR AND HARDWARE.
9. DOOR & HARDWARE RELOCATED FROM ROOM 603.
10. DOOR & HARDWARE RELOCATED FROM ROOM 602.
11. REMOVE WALL.
12. NEW CASEWORK SECTION SALVAGED FROM SAVANNA OAKS MIDDLE SCHOOL, CLAY ARTS ROOM 124 – PATCH/REPAIR ANY DAMAGED OR EXPOSED SURFACES.
13. NEW 2'-8"W. X 4'-0"H. H.M. BORROWED LIGHT W/ 1/4" TEMP. GL.
14. NEW 4'-0"W. X 4'-0"H. H.M. BORROWED LIGHT W/ 1/4" TEMP. GL.
15. 3 5/8" METAL STUD FURRING @ 16" O.C. W/ 5/8" GWB.
16. 7/8" FURRING STRIPS @ 16" O.C. W/ 5/8" GWB.
17. DOOR & HARDWARE RELOCATED FROM ROOM 601.
18. PROVIDE NEW AWI PC-5, SOLID CORE WOOD DOOR WITH VENEER AND FINISH TO MATCH EXISTING DOORS. PROVIDE HOLLOW METAL FRAME PAINTED TO MATCH ADJACENT WALLS. PROVIDE HINGES AND LOCKSET.

## Potter Lawson — ROOM FINISH SCHEDULE

NEW CENTURY SCHOOL
VERONA, WISCONSIN

| ROOM NO. | ROOM NAME | FLOOR Matl. | FLOOR Fin. | BASE Matl. | BASE Fin. | NORTH WALL Matl. | NORTH WALL Fin. | EAST WALL Matl. | EAST WALL Fin. | SOUTH WALL Matl. | SOUTH WALL Fin. | WEST WALL Matl. | WEST WALL Fin. | CEILING Matl. | CEILING Fin. | CEIL. HT. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 501 | CLASSROOM | F1 | B | B3 | A | W3 | A | -- | | W3 | A | W3 | C | C8 | | 10'-6" | *2,*3 |
| 501A | STORAGE | F1 | B | B3 | A | W3 | A | W3 | A | W3 | A | W1 | A | C2 | | 9'-0" | |
| 501B | STUDY | F1 | B | B3 | A | W3 | A | W3 | A | W3 | A | W3 | A | C2 | | 9'-0" | |
| 502 | BOYS TOILET | F8 | | B8 | | W3 | A | W3 | A | W3 | A | W3 | A | C8 | | | |
| 503 | CLASSROOM | F1 | B | B3 | A | W3 | A | W3 | A | W3 | A | W3 | C | C1 | A | 9'-0" | *1,*4 |
| 504 | GIRLS TOILET | F8 | | B8 | | W3 | A | W3 | A | W3 | A | W3 | A | C8 | | | |
| 505 | CORRIDOR | F1 | B | B3 | A | W3 | A | W3 | A | W3 | A | W1 | A | C8 | | | *1 |
| 506 | CLASSROOM | F1 | B | B3 | A | W3 | A | W1 | A | W3 | A | W3 | A | C8 | | | *1,*5 |
| 506A | ALCOVE | F1 | B | B3 | A | W1 | A | W3 | A | W3 | A | -- | A | C2 | | 8'-0" | |
| 507 | CORRIDOR | F1 | B | B3 | A | W3 | A | W3 | A | W3 | A | W3 | A | C2 | | 8'-6" | *1 |
| 508 | OFFICE | F1 | B | B3 | A | W3 | A | W1 | A | W1 | A | W3 | A | C2 | | 8'-0" | |
| 509 | OFFICE | F1 | B | B3 | A | W3 | A | W3 | A | W1 | A | W1 | A | C2 | | 8'-0" | *2 |
| 510 | CORRIDOR | F1 | B | B3 | A | W3 | A | W3 | A | W3 | A | W3 | A | C2 | | 8'-0" | |
| 511 | CORRIDOR | F1 | B | B3 | A | W3 | A | W3 | A | W3 | A | W3 | A | C2 | | 9'-0" | |
| 599 | FOYER | F16 | | B8 | | W3 | A | W3 | A | W3 | A | W3 | A | C8 | | | *1 |
| 600 | COMMONS | F1,F3 | A,B | B8 | | W3 | A | W3 | A | W3 | A | W3 | A | C1 | B | 9'-0" | *2,*8 |
| 601 | CLASSROOM | F1 | A,B | B8 | | W1 | A | W3 | A | W3 | A | W3 | B | C1 | A | 10'-9" | *2,*6,*7 |
| 602 | CLASSROOM | F1 | A,B | B8 | | W3 | A | W3 | A | W1 | A | W3 | B | C1 | A | 10'-9" | *2,*6,*7 |
| 603 | CLASSROOM | F1 | A,B | B8 | | W3 | A | W3 | A | W1 | A | W3 | B | C1 | A | 10'-9" | *2,*6,*7 |
| 604 | STAIRS | F9 | | B9 | | W3 | A | W3 | A | W3 | A | W3 | A | C8 | | | |
| 605 | STAIRS | F9 | | B9 | | W3 | A | W3 | A | W3 | A | W3 | A | C8 | | | |
| 606 | STUDY | F1 | B | B8 | | W3 | A | W3 | A | W3 | A | W3 | A | C2 | | 10'-9" | *2 |
| 607 | STUDY | F1 | B | B8 | | W3 | A | W3 | A | W3 | A | W3 | A | C2 | | 10'-9" | *2 |
| 609 | FOYER | F16 | | B8 | | W3 | A | W3 | A | W3 | A | W3 | A | C8 | | | |

## Potter Lawson — ROOM FINISH SYMBOLS LEGEND

NEW CENTURY SCHOOL
VERONA, WISCONSIN

### Floor

**F1** Carpet Broadloom
a. Collins & Aikman
Pattern: Explorer
Color: 25015 Red Sands
Powerbond RS Backing
b. Collins & Aikman
Pattern: Explorer
Color: 25012 Seafarer
Powerbond RS Backing

**F3** Vinyl Composition Tile
a. Armstrong Premium Excelon
Color: 52500 Carnival White

**F9** Stair Treads & Landing Tile
a. Norament Systems
Pattern: 8250 Round
Color: 0733 Steel Blue

**F16** Heuga Tile
a. Interface
Base Style: 6003002504
Base Color: 603156 Havana

### Base

**B3** Vinyl Base
a. Johnsonite
Size: 4" Cove Base
Color: 70 Bluest

**B8** Existing To Remain

### Wall

**W1** Paint on GWB
a. Mautz
Color: CW022W Soft Gold
Latex Eggshell Finish

**W3** Paint on Concrete (Plaster)
a. Mautz
Color: CW022W Soft Gold
Latex Eggshell Finish

### Ceiling

**C1** Ceiling Grid System
a. Armstrong
15/16" Grid Face
Prelude XL 360 Painted Grid
Color: RAL 5019 (Blue)
Powder Coated Paint
b. Armstrong
15/16" Grid Face
Prelude XL 360 Painted Grid
Color: RAL 1003 (Yellow)
Powder Coated Paint

**C2** 2' X 4' Lay-in Panel
a. Armstrong #1834
15/16" Angled Tegular
Color: To Match Existing

**C8** Existing to Remain

**Remarks:**
1 Exisiting VAT Shall Remain Where New Carpet is Being Installed.
2 Remove Existing Carpet Where New Carpet is Being Installed.
3 Plaster Ceiling To Remain.
4 Secure Existing Ceiling At Perimeter Where Exposed.
5 Secure Existing Ceiling Where Applicable.
6 Existing Plaster Ceiling To Remain At Perimeter. Typical Height Approximately 12'-0".
7 Install 6' Border of F1b, Field Carpet Shall Be F1a.
8 Please Refer to Drawing A201 For Floor Finish Details.

**General Notes:**
1 Wooden Shoe Moulding Shall Be Removed for Installation of New Carpet. 4" Wooden Base To Remain.
2 Paint All Trim (Including Window Frames and Doors) Color To Match : Mautz 7056N Endless Blue (Latex Eggshell Finish)
3 All Base and Face Cabinets Shall Be P. Lam 1 and Countertops Shall Be 2.

**Plastic Laminates:**
P. Lam 1: Pionite Agean Fresco AV771 Suede
P. Lam 2: Pionite Chamomile Fiber AT291 Suede

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Consultants:

Notes:

## GENERAL PLAN NOTES

1. ALL DRAWINGS ARE OF EQUAL IMPORTANCE IN DEFINING THE WORK OF THE CONTRACT DOCUMENTS. CONTRACTORS SHALL REVIEW ALL DRAWINGS BEFORE THE INSTALLATION OF THEIR WORK. SHOULD THERE BE A DISCREPANCY WITHIN AND BETWEEN THE DRAWINGS THAT WOULD CAUSE AN AWKWARD OR IMPROPER INSTALLATION NOTIFY ARCHITECT FOR CLARIFICATION PRIOR TO INSTALLATION OF SAID WORK. ANY WORK INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY CONTRACTOR AT ITS EXPENSE AND AT NO ADDITIONAL COST TO OWNER OR ARCHITECT.
2. DO NOT SCALE DRAWINGS. THE DRAWINGS ARE NOT NECESSARILY TO SCALE – USE GIVEN DIMENSIONS. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE PRIOR TO THE START OF CONSTRUCTION. IF DESCREPANCIES ARE FOUND, NOTIFY ARCHITECT FOR CLARIFICATION BEFORE COMMENCING THE WORK. ALL DIMENSIONS ARE GIVEN TO FACE OF WALL ( ⊥ ) OR CENTERLINES ( ⊕ ). ALL WALL AND PARTITION THICKNESS DIMENSIONS ARE NOMINAL. SEE WALL SECTIONS AND PARTITION TYPES FOR EXACT CONSTRUCTION.
3. REPLACE HORIZONTAL BLINDS ON ALL EXTERIOR WINDOWS WITH PRODUCT EQUIVALENT TO LEVOLOR RIVIERA 1" CONTRACT BLIND.

## MECHANICAL & ELECTRICAL SYMBOLS & ABBREVIATIONS

| | | |
|---|---|---|
| | DG | DOOR GRILLE |
| | EWC | ELECTRIC WATER COOLER |
| MT. HT. | | |
| 16" | | DUPLEX – RECESS MOUNTED |
| | | DUPLEX – RECESS MOUNTED ABOVE COUNTER |
| 16" | | TWO DUPLEX RECEPTACLES IN TWO GANG BOX |
| | | ELECTRICAL POWER PANEL |
| 80" | F | FIRE ALARM HORN WITH VISUAL STOBE LIGHT (SL INDICATES STROBE LIGHT ONLY) |
| | F S | FIRE ALARM SMOKE DETECTOR – CEILING MOUNTED |
| | S | SPEAKER – WALL MOUNTED |
| 16" | | DATA OUTLET IN WALL. |
| 16" | | DATA/TELEPHONE OUTLETS IN TWO GANG BOX. ONE ACTIVE DATA AND ONE ACTIVE TELEPHONE OUTLET UNLESS OTHERWISE NOTED. |

**NOTE:**
THIS COMPUTER GENERATED FLOOR PLAN WAS PRODUCED FROM EXISTING CONSTRUCTION DOCUMENTS. THE COMPUTER DRAWING IS NOT GRAPHICALLY ACCURATE. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO STARTING DEMOLITION OR NEW CONSTRUCTION WORK.

| Date | Issuance/Revisions | Symbol |
|---|---|---|
| 2/28/00 | Issued for Construction | |
| 2/18/00 | Re-Issued For GMP | |
| 2/14/00 | Final Concept Plan | |
| 2/8/00 | Issued for GMP | |

# NEW CENTURY SCHOOL

VERONA AREA SCHOOL DISTRICT

VERONA, WISCONSIN

Drawing Title:

FLOOR PLANS

PLJ Project Number: 9904101

Drawn By: MK

Drawing No. A201

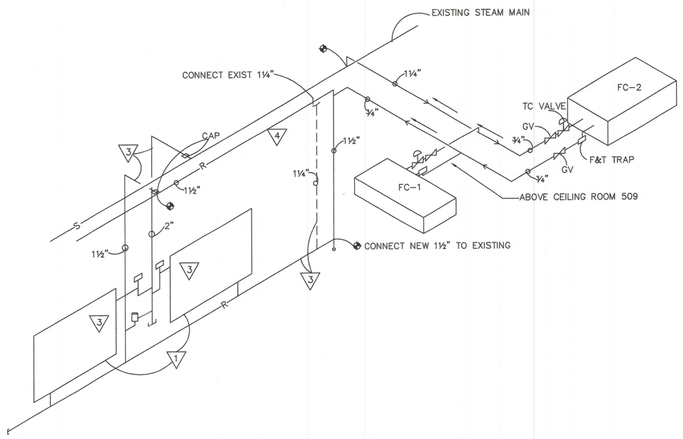
## GRILLE, REGISTER, DIFFUSER SCHEDULE

| | | | | |
|---|---|---|---|---|
| SYMBOL | – CD–1 | – RG–1 | – EG–1 | |
| MANUFACTURER | – CARNES | – CARNES | – CARNES | |
| MODEL NO. | – SKTA | – RAPAH | – RAPAH | |
| DESCRIPTION | – 4 WAY | – EGG GRATE | – EGG GRATE | |
| MOUNTING | – LAY INN | – LAY INN | – CLG | |
| MATERIAL | – | – | – | |
| DAMPER | – NO | – NO | – NO | |
| REMARKS | | | | |

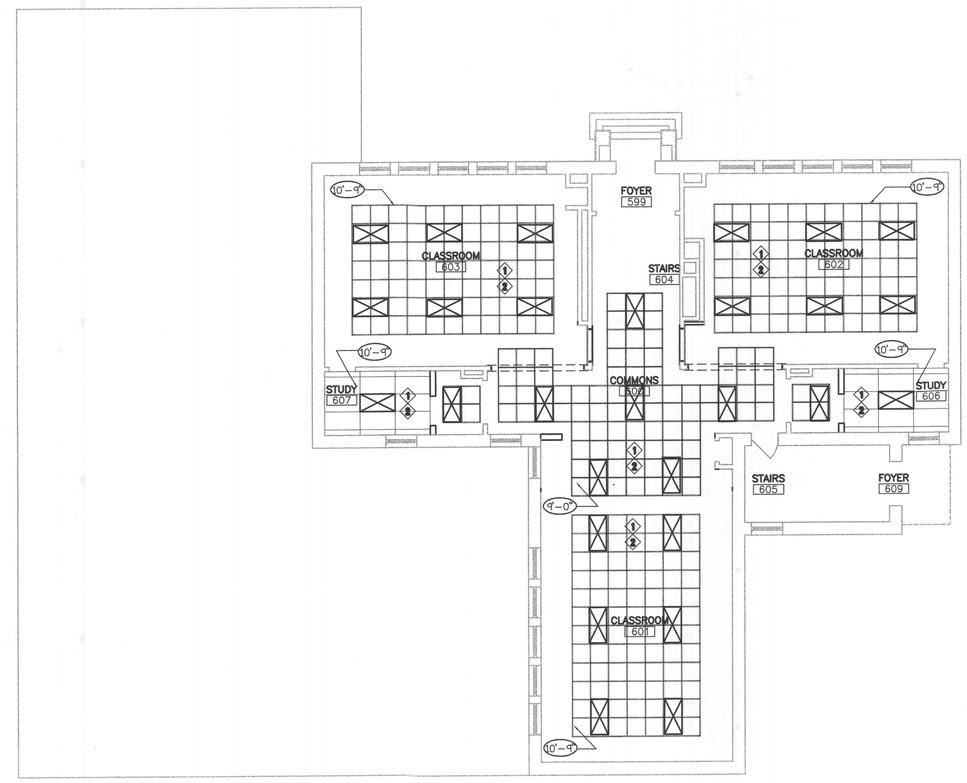
## STEAM CABINET UNIT HEATER SCHEDULE

| | | | | |
|---|---|---|---|---|
| SYMBOL | – FC–1 | – FC–2 | – | – |
| LOCATION | – 503 | – 509 | – | – |
| MANUFACTURER | – TRANE | – TRANE | – | – |
| MODEL | – FFDB 040 | – FFCB 020 | – | – |
| MOUNTING | – HORIZ | – HORIZ–CONCEAL | – | – |
| RECESS (IN) | – NONE | – NONE | – | – |
| FLOW DIRECTION | – ROUTED | – ROUTED | – | – |
| AIRFLOW (CFM) | – 393(NOM) | – 208(NOM) | – | – |
| E.A.T. (°F) | – 70 | – 70 | – | – |
| CAPACITY (MBH) | – 16.2 | – 9.3 | – | – |
| #/HR STEAM – 2PSI. | – 16.7 | – 9.6 | – | – |
| – | – | – | – | – |
| – | – | – | – | – |
| MOTOR SIZE (HP) | – 1/10–115V | – 1/15–115V | – | – |
| FAN SPEED | – | – | – | – |
| REMARKS | – 2,3,4 | – 1,3,4 | – | – |

1. DUCTED INLET & OUTLET.
2. BOTTOM STAMPED GRILLE INLET, DUCTED OUTLET.
3. ACTUAL CFM MAY BE LESS DO TO E.S.P.
4. PROVIDE SPACE THERMOSTAT, CONTROL VALVE, UNIT DISCONNECTS, CONTROL TRANSFORMER.

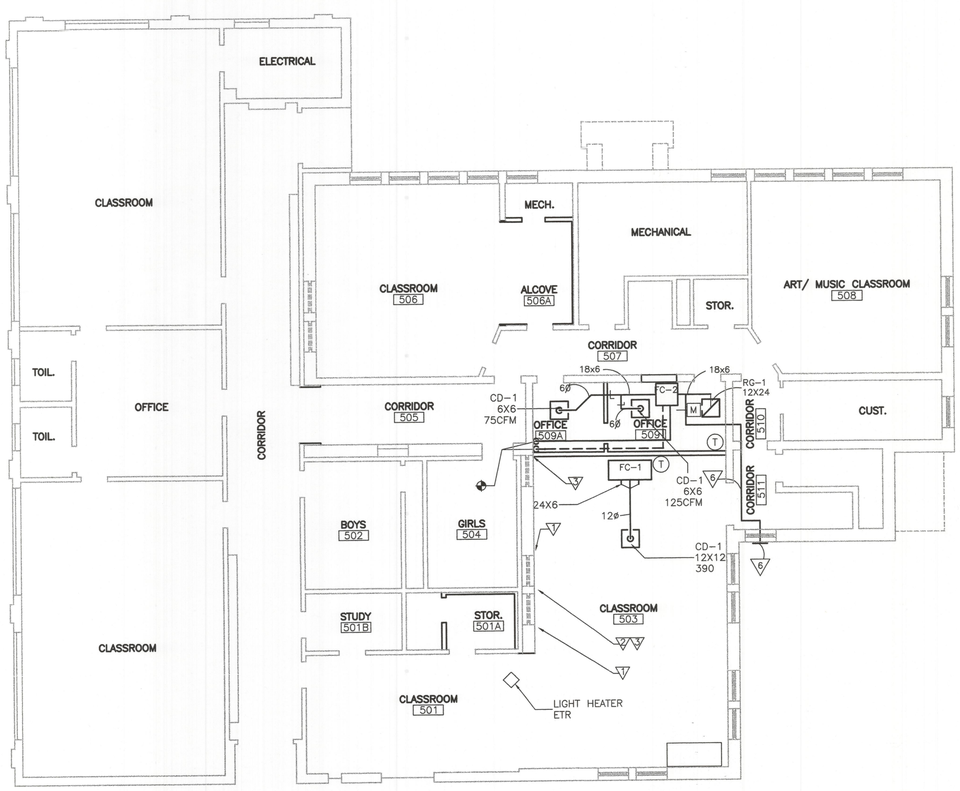



4 / A202 STEAM PIPING DAIGRAM



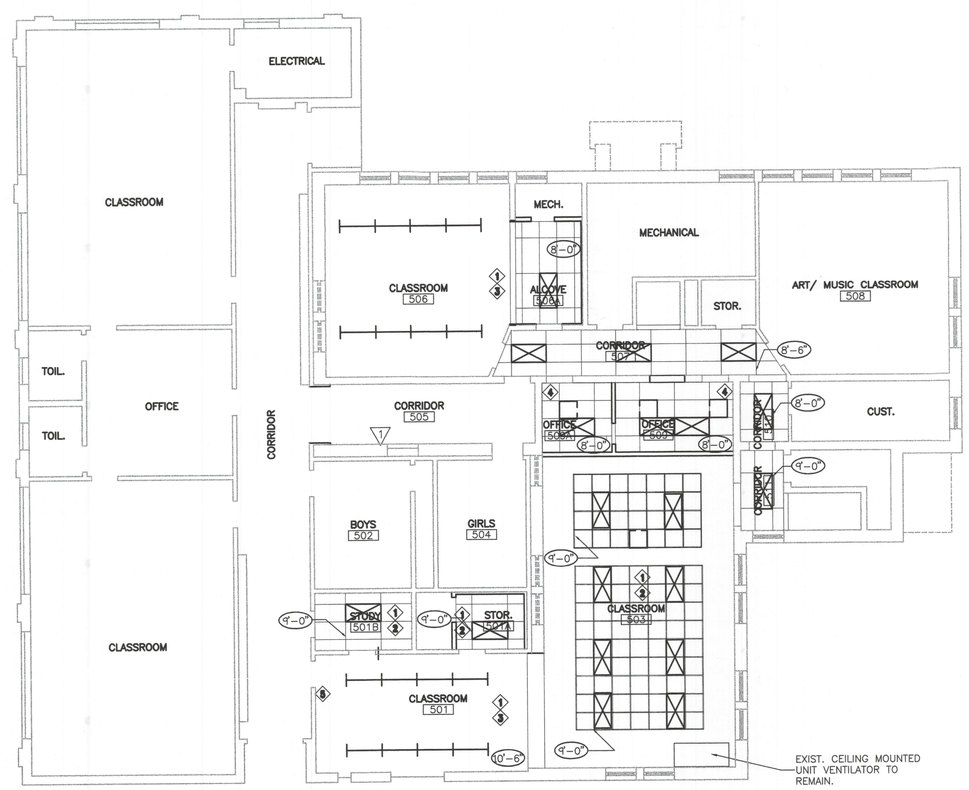

1 / A202 SECOND FLOOR RCP
1/8" – 1'–0"

NORTH




3 / A202 FIRST FLOOR HVAC
1/8" – 1'–0"

NORTH




2 / A202 FIRST FLOOR RCP
1/8" – 1'–0"

NORTH

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Notes:
GENERAL REFI
1. NEW CEILING SU SECURED DIREC

ELECTRICAL
1 REMOVE EXIST
2 PROVIDE NEW (LITHONIA 2S EQUIVALENT). CIRCUITS.
3 PROVIDE NEW FIXTURES (LI EXISTING SWI AIRCRAFT CA
4 RE–WIRE (1) IN OFFICE. P OTHER SWITC
5 RE–WIRE SWI CLASSROOMS.

HVAC NOTES
1 REMOVE CAST
2 REMOVE STEAM RADIATION.
3 REMOVE STEAM REMOVE STEAM NORTH LOCATIO
4 EXTEND STEAM PIPING DROPS EXISTING. CONN DROP.
5 REMOVE GRILLE CEILING ELEVATI GRILLE IN NEW
6 RUN 6"ø OUTS RETURN DUCT WINDOW. INSUL OPERATED DAM

ELECTRIC
2X4
PEN

NOTE:
THIS COMPU PRODUCED DOCUMENTS GRAPHICALL EXISTING CO DEMOLITION

| Date | |
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Drawing Title:
REFLE PLANS HVAC

PLJ Project Number: 9904101

Drawn By: DRZ, PLE

# ARCHITECTURAL

LAMINATE CLAD ARCHITECTURAL CABINETS

Quality Standards: Comply with AWI Section 1600 modular casework, and Division 1600B "Laminate Clad Cabinets", and as specified herein.
Type of Cabinet Construction: Flush overlay.
Core Material: ANSI A208.1, Type M–3 particleboard.

Laminate Cladding: High pressure decorative laminate complying with NEMA LD3 and as follows:

Colors, Patterns and Finishes: As Finish Schedule.

Exposed Surfaces (other than edges): HPL Grade–32/VGF.

Semi–Exposed Surfaces (other than edges): Decorative surface of thermally fused polyester or melamine laminated to core under pressure and complying with NEMA LD3 GP28 and LD3 CL20 standards. Vinyl overlays not acceptable. Painted material not acceptable.

Exposed Edges of Laminated Components

Body Members and Shelves: (Solid 3mm PVC edging, color as selected by A/E from not less than 15 colors.)
Doors and Drawers: (Solid 3mm PVC edging, color as selected by A/E from not less than 15 colors.)

Concealed Laminate: Where balancing sheet is indicated or required by referenced quality standards, provide backer type laminate, grade designation BK–20 (0.020" nominal thickness) complying with NEMA LD3 CL20 standards.

ARCHITECTURAL CABINET TOPS, COUNTERS AND SHELVES

General:

Quality Standards: Comply with AWI Section 400 and its Division 400C "Tops".

Laminate Clad Tops:

Grade: Custom.

Core Material: ANSI A208.1, Type 2–M–2 particleboard (1" thick).
Provide balancing sheet (BK–20) on all surfaces which do not have high pressure decorative laminate.

Laminate Cladding: High pressure decorative laminate complying with NEMA LD 3 and as follows:

Colors, Patterns and Finishes: As scheduled in Room Finish Schedule.

Horizontal Surfaces: Grade 51/HGS (0.050" nominal thickness).
Postformed Surfaces: Grade 52/HGP (0.042" nominal thickness).
Edge Treatment: Same as laminate cladding on horizontal surfaces.

CABINET HARDWARE

Drawer Slides Accuride 7432; except Accuride 4000 Series for drawers over 24" wide.
Pulls Stanley 4484 x finish to match existing.
Hinges Grass 1203 Series, self–closing, number of hinges per door as follows:
2 per door up to 24" wide by 351/2" high
3 per door up to 24" wide by 63" high
4 per door up to 24" wide by 783/4" high
5 per door up to 24" wide by 941/2" high
Hinges Heavy–duty, five knuckle 23/4" institutional type hinge complying with ANSI/BHMA A156.9, Grade 1 requirements. Finish: Epoxy coated.

Hinges (B.F. Sink Cab.) Blum Clip 170, free–swing, 2 hinges per panel.
Press–Fit Fasteners HAFELE Keku press–fit fasteners, 2 fasteners per panel, black.
Standards KV 255 ZC
Supports KV 256 ZC
Catches Stanley SP 46

INSTALLATION

General:

Condition architectural woodwork to average prevailing humidity conditions in installation areas prior to installing.

Quality Standard: Install woodwork to comply with AWI Section 1700 for the same grade specified in PART TWO of this Section for type of woodwork involved.

INTERIOR METAL STUD FRAMING AND CEILING FRAMING

GENERAL:
PROVIDE COMPONENT SIZES AND SPACINGS NOT LESS THAN THAT REQUIRED TO COMPLY WITH ASTM C754 UNDER THE MAXIMUM DEFLECTION AND LATERAL LOADING CONDITIONS OF L/240 AT 5 LBS. PER SQUARE FOOT.

METAL STUDS AND RUNNERS:
ASTM C645, WITH FLANGE EDGES OF STUDS BENT BACK 90° AND DOUBLED OVER TO FORM 3/16" WIDE MINIMUM LIP (RETURN), GALVANIZED, 25 GAUGE. SPACE STUDS AT 24" O.C. MAXIMUM. AT DOOR FRAMES PROVIDE TWO 20 GA. STUDS BACK TO BACK AT HEAD AND SIDE JAMBS. PROVIDE SLIP OR CUSHION–TYPE JOINT BETWEEN PARTITION AND STRUCTURE TO PREVENT THE TRANSFER OF STRUCTURAL LOADS TO PARTITIONS.

PROVIDE FOR INTERIOR GWB CEILING SUSPENSION, STEEL STUD FRAMING OR CHICAGO METALLIC 640 FURRING SYSTEM TO SUPPORT 20 PSF SUPERIMPOSED LOAD. DO NOT EXCEED 24" SPACING FOR COMPONENTS TO WHICH GWB IS ATTACHED.

GYPSUM WALLBOARD

5/8 INCH THICK, USG SHEETROCK SW GYPSUM PANELS OR OTHER THICKNESS AS REQUIRED TO MATCH EXISTING WALL WIDTHS.
FASTENERS: BUGLE HEAD SCREWS RECOMMENDED BY WALL BOARD MANUFACTURER.
ADHESIVE: USG DURABOND 500
CONTROL JOINTS: USG #093
TRIM ACCESS: USG DUR–A–BEAD #103
USG #200 SERIES
METAL FURRING: USG 7/8 INCH FURRING CHANNELS (HAT SHAPED).
ACOUSTICAL SEALANT: USG ACOUSTICAL SEALANT COMPLYING WITH ASTM C919.
JOINT TAPES: PERFORATED COMPLYING WITH ASTM C475
APPLY ALL MATERIALS IN ACCORDANCE WITH GYPSUM CONSTRUCTION HANDBOOK, CURRENT EDITION, UNITED STATES GYPSUM CO.
PROVIDE CONTROL JOINTS WHERE REQUIRED TO PREVENT CRACKING OF FINISHED DRYWALL.
GYPSUM BOARD FINISH LEVELS: FINISH GYPSUM BOARD TO LEVELS INDICATED BELOW, ACCORDING TO ASTM C840, FOR LOCATIONS INDICATED:
ALL EXPOSED TO VIEW SURFACES: LEVEL 4; EMBED TAPE AND APPLY SEPARATE FIRST, FILL AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES.
ALL SURFACES NOT EXPOSED TO VIEW: LEVEL 1; EMBED TAPE AT JOINTS UNLESS A HIGHER LEVEL OF FINISH IS REQUIRED FOR FIRE–RESISTANCE RATED ASSEMBLIES AND SOUND RATED ASSEMBLIES.

ACOUSTICAL CEILINGS

SUSPENSION SYSTEMS: EQUIVALENT TO NATIONAL ROLLING MILLS ML SERIES EXPOSED TEE GRID (INTERMEDIATE DUTY, ASTM C635), COLOR WHITE.
HANGER WIRE: STEEL 12 GAGE GALVANIZED.

LAY–IN ACOUSTICAL PANELS:
CELOTEX "FINE FISSURED CELUTONE", ITEM NO. MC–454, 2'X4'X3/4" THICK, REVEAL EDGE.
COLOR: WHITE.

PROVIDE FOR CEILING PENETRATIONS OF MECH. AND ELECT. WORK AND ANY ITEMS WHICH PIERCE THE PLANE OF THE CEILING. INSTALL SUSPENSION SYSTEM CAPABLE OF SUPPORTING ALL SUPER–IMPOSED LOADS, WITH MAXIMUM DEFLECTION OF 1/360 OF SPAN AND MAXIMUM SURFACE DEVIATION OF 1/8 INCH IN 10 FEET.

# PLUMBING

General

Plumbing systems shall conform to all local and State codes which are in force at the time of execution of work.

Verify the location and size of existing plumbing services which are relevant to the installation of new systems.

Basic Materials and Methods

Interior Services – General:

Pipe sleeves shall be set for all pipes passing through new masonry or concrete walls.

Coordinate the location of sleeves, openings, chases, furred spaces, etc. with the other Contractors. Provide all sleeves, hangers and inserts that are to be built into the structure during the progress of construction.

Pipe sleeves shall be Schedule 40 black steel pipe and shall extend completely through the construction.

Sleeves for pipe 4" and smaller shall be at least two pipe sizes larger than the pipe passing though. Sleeves for insulated piping shall be 1" larger in diameter than the insulated pipe.

Grout openings through concrete or masonry, including space between sleeves and walls, with Dow 8640 or 8641 sealant.

Pack annular space between sleeves and insulation or pipe with rock wool. Where penetrations occur though smoke or fire rated walls or floors, fill space with fire–resistive insulation.

Provide offset and transition fittings as required.

Water Piping Suspended – General:

Type L copper water tube, H (drawn) temper, ASTM B88; with cast copper pressure fittings, ANSI B16.18; wrought copper pressure fittings, ANSI B16.22; lead free (less .2%) solder ASTM B32; flux, ASTM B813 for piping 3" and smaller.

Valves – Nibco S–585–70, threaded end, bronze body and ball and teflon seats.

Pipe Insulation – 1" thick fiberglass insulation with flame retardant vapor barrier jacket.

Water Piping Suspended – Execution:

Test new piping by sections, before connecting fixtures with hydrostatic pressure of 100 psi without loss of pressure for at least two hours.

Disinfection: Provide chlorine disinfection as outlined in Administrative Code Section COMM 82.40. Other approved disinfection methods may be used with prior approval of the Engineer.

Sanitary, Soil, Waste and Vent Piping System – Materials:

Galvanized steel pipe ASTM–A120 with cast iron recessed drainage fittings.

Service weight cast iron soil pipe and fittings, tarred, hub and spigot or "No–Hub" CS–188–59.

Polyvinyl Chloride (PVC pipe, schedule 40, ASTM specification D–2665 and D–2661, DWV socket fittings, ASTM specification D–2466 with PVC solvent cement, ASTM specification D–2564. ABS pipe shall not be used (Polyvinyl Chloride (PVC) shall not be installed above floor).

Sanitary, Soil, Waste and Vent Piping System – Execution (Sanitary):

Connect all soil, waste and vent lines to each fixture and install all required piping as shown on the drawings.

Grade all soil and waste horizontal liens with minimum of 1/8" per foot. Install overhead piping as high as possible. All vent pipe graded for complete drainage by gravity to soil or waste pipes.

Install cast iron pipe and fittings, hubless pattern, as recommended by CISPI in their publication, "Installation Suggestions for Cast Iron No–Hub Pipe and Fittings".

Plumbing Fixtures

General:

Fixtures must conform to general requirements given below and to specified requirement for each type.

Connections for wastes and supplies, unless otherwise specified or required, shall be turned back into walls as high as possible under fixture. Piping shall be free from cross connection and of such design that back siphonage is impossible.

S–1 – Counter mounted 18 ga. Type 302 stainless steel double compartment sink with 3 faucet openings 8" on center deck mounted two handle mixing faucet with 4" wrist blade handles, high arc swing spout and tailpiece for ADA compliance.

Fixtures: Elkay LR3319
Faucet: Chicago Faucet 201A–GN8A–E3–317.
Drain: Elkay LK–18
Trap: 1–1/2" x 1–1/2"
Supplies & Stops 1/2" chrome plated cast brass angle stops with wheel handle, 3/8" chrome flexible tube riser and chrome escutcheon.

EWC–1 Elkay EBFATL–8 electric water cooler finish selected by Architect.

Execution

All plumbing fixtures shall be installed as recommended by the respective manufacturer. Point up around all wall fixtures.

All individual supplies to fixtures shall be provided with adequate support to prevent movement. Additional supports should be added as required.

After installation, but before acceptance by Owner, all fixtures shall be protected to prevent scratches or other construction damage.

Before acceptance by Owner, all fixtures shall be cleaned with compounds recommended by the respective manufacturer.

# HVAC

TESTING AND BALANCING AIR SYSTEMS

The measurement and setting of air and water flow devices provided for the systems, making tests, recording data and report submission.
All testing, adjusting and balancing work shall be performed under the direct supervision of a certified NEBB or AABC manager in accordance with the agency standards and procedures.
Instruments used for measurements shall be accurate and calibration shall be calibrated by the manufacturer or an AABC approved method.
Adjust total air quantity to 110% of design, as measured by duct traverse, by adjusting branch duct volume dampers.
Read and record on the balance sheets the air velocities and volumes obtained. (Do not change any volume dampers while reading and recording.)
If air quantities are not within 10 percent of design values, readjust the duct terminal dampers to proportion the air.
Adjust the fan speed or the branch duct damper to adjust the air volume, and then reread and record.
Final air volumes shall be within 10 percent of design values except that specified room air pressure relationships must be provided. Provide reports on pressure relationships.
Following completion of testing, adjusting and balancing, submit in triplicate a complete testing, adjusting and balancing report.

MECHANICAL MATERIALS AND METHODS

Obtain and pay for all required installation inspections and permits.
Submit originals of these certificates to the Architect/Engineers construction representative. Include copies of the certificates in the Operating and Maintenance Instructions.

COORDINATION
Verify that all devices are compatible for the surfaces on which they will be used. This includes, but is not limited to, plumbing fixtures and equipment, diffusers, register, grilles, and recessed or semi–recessed heating and/or cooling terminal units installed in/on architectural surfaces.
Coordinate all work with other contractors prior to installation. Any installed work that is not coordinated and that interferes with other contractor's work shall be removed or relocated at the installing contractor's expense.

MOTORS AND ELECTRICAL WORK

ELECTRICAL COORDINATION
All starters, overload relay heater coils, disconnect switches and fuses, relays, wire, conduit, pushbuttons, pilot lights, and other devices required for the control of motors or electrical equipment are furnished and installed by the Electrical Contractor, except as specifically noted elsewhere in the specifications, in the motor schedule on the electrical drawings or in the mechanical equipment schedules.

PRODUCT CRITERIA
Motors to conform to all applicable requirements of NEMA, IEEE, ANSI, and NEC standards and shall be listed by U.L. for the service specified.

SINGLE PHASE, SINGLE SPEED MOTORS
Use NEMA rated 115 volt, single phase, 60 hertz motors for all motors 1/3 HP and smaller unless noted otherwise.
If certain equipment, such as fan powered VAV boxes, cabinet unit heaters, etc. use a different motor voltage that 115 volt, this should be indicated on the schedules.Use permanent split capacitor or capacitor start, induction run motors equipped with permanently lubricated and sealed ball or sleeve bearings and Class A insulation. Service factor to be not less than 1.35.

MECHANICAL INSULATION

FLEXIBLE FIBERGLASS INSULATION:
Minimum density of 1.5 lb. per cu. ft., thermal conductivity of not more than 0.25 at 75?F mean temperature, and be suitable for temperature to 350?F (unfaced) and 250?F (with jacket). Equal to Owens–Corning "Faced Duct Wrap Insulation Commercial Grade" or Manville "R" Series Microlite.

Jacket shall be glass fiber reinforced foil kraft laminate, factory applied to insulation. Permeance shall not exceed .04 perms. Beach puncture resistance shall be 15 units minimum.

RIGID FIBERGLASS INSULATION:
Inside applications: Minimum nominal density of 3 lbs. per cu. ft., and thermal conductivity of not more than 0.23 at 75oF mean temperature.
Exterior applications: 6 lbs. per cu. ft. nominal density. All material must be suitable for temperatures to 450oF.

Jacket shall be heavy duty fire retardant material with glass fiber reinforcing and self–sealing lap, and white kraft finish suitable for painting. Beach puncture resistance to be 50 units minimum. Vapor barrier shall be .001" aluminum foil adhered to the inner surface of the jacket. Permeance shall not exceed 0.02 perms. Securing staples must be coated with vapor barrier mastic. Jacket shall be equal to Owens–Corning "ASJ–SSL", or Manville "AP–T".

PIPING, VALVE, AND FITTING INSULATION
One piece, insulated PVC covers may be used for fittings and valves if insulation thickness and thermal performance is the same as adjoining insulation. Seams, joints between PVC cover and adjoining pipe insulation, and any staples or tacks used to secure seams in PVC covers, must be covered with 2 inch wide, 10 mil PVC tape and one coat of vapor barrier mastic.

Provide insulation as indicated in the following schedule:

| Service | Insulation Thickness by Pipe Size | | |
|---|---|---|---|
| Type * | 1" and smaller | 11/4" to 2" | 21/2" and 5" to 6" |
| Low Pressure Steam rigid fiberglass | 11/2" | 11/2" | 2" |
| Low Pressure Cond. rigid fiberglass | 11/2" | 11/2" | 2" |

DUCT INSULATION
All duct insulation shall have vapor barrier. Pins shall be covered with jacket material matching that of duct insulation, sealed vapor tight, and covered with vapor barrier mastic.

| Service | Insulation Thickness |
|---|---|
| Outside air ducts flexible fiberglass | 2" |

CABINET UNIT HEATERS

Acceptable Manufacturers: Airtherm, American Air Filter, McQuay, Trane, or approved equivalent.

Construct vertical unit casings with 16 gauge steel front panels and minimum 18 gauge steel end and side panels. Horizontal units located in concealed spaces or mounted in ceiling to have minimum 18 gauge front, end, and side panels.

Furnish exposed cabinets in a primed finish. Final finish shall be by the G.C.
Furnish ceiling mounted units with a hinged front panel to allow access to all internal components.
Construct heating elements of copper tubes with aluminum fins, tested at 200 psig. Units to have steam heating.
Use centrifugal type fans, statically and dynamically balanced to operate without objectionable noise and vibration.
Motors to be 120 volt, single phase, permanently lubricated, with thermal overload protection and disconnect switch at unit.
Furnish each unit with filter rack and 1" filter frame for use with replaceable media. Use 1" thick fiber blanket media. Media nominal rating to be 500 FPM face velocity, 0.15 inch WG initial resistance, 0.50 inches WG recommended final resistance. Average arrestance of filter media shall be 80%.

DUCTWORK

All sheet metal used for construction of duct shall be 26 gauge or heavier as required by specific applications in this specification or by SMACNA Standards.

MATERIALS
Galvanized Steel Sheet:
Use ASTM A525 or ASTM A527 galvanized steel sheet of lock forming quality. Galvanized coating to be 1.25 ounces per square foot, both sides of sheet, G90 in accordance with ASTM A90.

FLEXIBLE DUCT
Factory fabricated , UL 181 listed as a class 1 duct, and having a flame spread of 25 or less and a smoke developed rating of 50 or under in accordance with NFPA 90A.

Suitable for pressures and temperatures involved but not less than a 180?F service temperature and ±2 inch pressure class, depending on the application.

Duct to be composed of polyester film, aluminum laminate or woven and coated fiberglass fabric bonded permanently to corrosion resistant coated steel wire helix. Two–ply, laminated, and corrugated aluminum construction may also be used.

Where duct is specified to be insulated, provide a minimum 1 inch fiberglass insulation blanket with maximum thermal conductance of 0.23 K (75 degrees F.) and vapor barrier jacket of polyethylene or metalized reinforced film laminate. Maximum perm rating of vapor barrier jacket to be 0.1 perm.

LOW PRESSURE DUCTWORK (Maximum 2 inch pressure class)
Fabricate and install ductwork in sizes indicated on the drawings and in accordance with SMACNA Standards.
Use elbows and tees with a center line radius to width or diameter ratio of 1.5 wherever space permits. When a shorter radius must be used due to limited space, install single wall sheet metal turning vanes in accordance with Section 15910. Where space will not allow and the C value of the radius elbow, as given in SMACNA publications, exceeds 0.31, use rectangular elbows with turning vanes as specified in Section 15910. Square throat–radius heel elbows will not be acceptable.

Where rectangular elbows are used, provide turning vanes.

INSTALLATION
Verify dimensions at the site, making field measurements and drawings necessary for fabrication and erection. Check plans showing work of other trades and consult with Architect in the event of any interference.

Install all motor operated dampers and connect to or install all equipment furnished by others. Blank off all unused portions of louvers, as indicated on the drawings, with 1–1/2 inch board insulation with galvanized sheet metal backing on both sides.

FLEXIBLE DUCT
Flexible duct may be used for final connection of air outlets, diffusers and grilles. Where flexible duct is used, it shall be the minimum length required to make the final connections, but no greater than 5 feet in length.

LOW PRESSURE DUCT (Maximum 2 inch pressure class)
Seal all duct in accordance with SMACNA seal class "B"; all seams, joints, and penetrations shall be sealed.

Install a manual balancing damper in each branch duct and for each diffuser or grille.

DUCTWORK ACCESSORIES

MANUAL VOLUME DAMPERS
Dampers must be constructed in accordance with SMACNA Fig. 2–14, Fig. 2–15, and notes relating to these figures.

TURNING VANES
Construct turning vanes and runners for square elbows in accordance with SMACNA Fig. 2–3 and Fig. 2–4 except use only airfoil type vanes.
Construct turning vanes for short radius elbows and elbows where one dimension changes in the turn in accordance with SMACNA Fig. 2–5 and Fig. 2–6.

ACCESS DOORS
Construction to be suitable for the pressure class of the duct in which the door is to be installed. Materials of construction to be identical to adjacent ductwork. Doors shall be hinged type with sash lock. Gasket all access doors. Use insulated doors when installed in insulated ductwork.
INSTALLATION

MANUAL VOLUME DAMPERS
Install manual volume dampers in each branch duct and for each grille, register, or diffuser as far away from the outlet as possible while still maintaining accessibility to the damper.

TURNING VANES
Install turning vanes in all rectangular, mitered elbows in accordance with SMACNA standards and/or manufacturer's recommendations.

ACCESS DOORS
Install access doors where specified, indicated on the drawings, and in locations where maintenance, service, cleaning or inspection is required. Examples include, but are not limited to motorized dampers.

GRILLES, REGISTERS, AND DIFFUSERS

Acceptable Manufacturers: Carnes, Price, Titus, Metalaire, Krueger

CEILING AIR DIFFUSERS
Performance: Provide ceiling air diffusers that have, as minimum, temperature and velocity traverses, throw and drop, and noise criteria ratings for each size device as listed in manufacturer's current data.
Diffuser Faces:
Square: Square housing, core of square concentric louvers, square or round duct connection.
Diffuser Finishes: Semi–gloss white enamel finish.

REGISTERS AND GRILLES
Performance: Provide registers and grilles that have, as minimum, temperature and velocity traverses, throw and drop, and noise criteria ratings for each size device and listed in manufacturer's current data.

Register and Grille Materials:
Steel Construction: Manufacturer's standard stamped sheet steel frame and adjustable blades.
Aluminum Construction: Manufacturer's standard extruded aluminum frame and adjustable blades.

Register and Grille Faces:
Horizontal Straight Blades: Horizontal blades, individually adjustable, at manufacturer's standard spacing.
Vertically Straight Blades: Vertical blades, individually adjustable, at manufacturer's standard spacing.
Horizontal 45 Degree Fixed Blades (H–45 Degrees): Horizontal blades, fixed at 45 degrees, at manufacturer's standard spacing.
Register and Grille Finishes: Semi–gloss white enamel finish.

CONTROLS

FAN COIL UNITS
General.
Fan coil units may have electric/electronic controls capable of being controlled in the future with the Andover DDC system for occupied/unoccupied cycles and temperature setpoints. Controls may be factory packaged controls or field installed controls by the mechanical/control contractor providing the specified sequence.

The units occupied/unoccupied modes will be controlled by the existing day night control serving the area of the building in which the unit is installed.

FAN COIL UNIT FC–1
Unit consists of a fan coil unit with a steam heating coil.

In the occupied cycle the unit fan shall run continuous and the space temperature shall be maintained by the space sensor modulating the steam control valve.

In the unoccupied cycle the unit fan shall operate on a call for night setback heat. The outside air damper shall be closed.

FAN COIL UNIT FC–2
Unit consists of a fan coil unit with a hot water heating coil and duct mounted outside air damper.

In the occupied cycle the unit fan shall run continuous, the outside air damper shall be open and the space temperature shall be maintained by the space sensor modulating the hot water control valve.

In the unoccupied cycle the unit fan shall operate on a call for night setback heat. The outside air damper shall be closed.

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# ELECTRICAL

SECTION 16050 – BASIC MATERIALS AND METHODS
A. Requirements of Division 1 shall govern all work of this section.
B. It is intended that these specifications and drawings call for a complete, finished project including all work and testing. Work designated in other divisions of these specifications to be done under Division 16 shall be included the same is if work was included in Division 16.
C. All materials shall be new, of best quality and grade with UL labels or listing. All requirements of the Americans with Disabilities Act shall be complied with. All material and labor shall be under warrantied for a period of one year from the date of final acceptance of the project by owner.
D. Submit manufacturers drawings, product data, etc. for all material used on this project.
1. Manufacturer's operating and maintenance instructions and parts list of all items or equipment. Where manufacturer's data includes several types or models, the applicable type or model shall be designated.
2. Wiring diagrams for all systems.
3. Additional information diagrams or explanations as designated under the respective equipment or systems section.
4. Factory and field test reports.
5. Instruct the Owner's representative in the operation and maintenance of all equipment. The instruction shall include a complete operating cycle on all apparatus.
6. The operation manuals and instructions to the Owner are of prime importance and shall be provided prior to request for final payment.
E. Drawings are diagrammatic and should not be scaled. Verify all locations before starting rough in.
F. Contractor shall schedule and coordinate his work with Owner and other Contractors. Contractor shall notify Owner of any code violations or improper installations uncovered throughout the duration of project.
G. All materials shall be clearly labeled including switchboards, panelboards, motor control centers, motors, disconnects, starters and junction boxes. All wiring shall be color coded. Provide permanent engraved nameplates for switchboards, panelboards and motor control centers. Provide typed directories in all panelboards.
1. The nameplates shall have 1/2 inch high lettering, except where space is limited, letters may be 1/4 inch high.
2. Face of nameplate to be black and letters to be white, except emergency power equipment nameplates are to have blue face and letters to be white.
3. Receptacle cover plates to be label with panel and circuit number.
I. Comply with all requirements of all applicable codes, utilities requirements and any other codes or rules having jurisdiction.
J. All systems shall be tested and shall be free of grounds and short circuits. Insulation shall test to minimum standards of the IPCEA.
K. Include all cleanup and painting of all electrical equipment.
N. All work and material shall be guaranteed per Division 1 requirements.
O. Include all cutting and patching.
P. Demolition: Electrical contractor shall remove all present devices, fixtures, conduit, connections, wire, boxes, etc. which are not being reused. If owner does not wish to retain these items, Electrical contractor shall remove them from the site and dispose of them legally. Where present device locations are shown to be reused, provide new wiring and devices. Provide any wiring which is required to keep present electrical equipment energized.
This building is to remain in operation during entire construction period. Coordinate any power outages or other disruptions with Owner before starting any work. Any outages and/or other disruptions must be approved by owner.
Q. Contractor may use any in–place raceways of existing electrical system if properly sized and supported, to assist in the installation of new portions of the electrical system. All other material or devices removed from existing system may not be reused.
R. All alternate equipment manufacturer's indicated shall meet or exceed the performance and quality of equipment listed in the schedules, specifications or drawings to be considered.
S. On completion of work all systems installed shall test entirely free of grounds and short circuits. 500 volt megger insulation test shall be made and recorded for all branch circuits before the systems is energized. The insulation shall test to minimum levels set forth by the IPCEA.

SECTION 16110 – RACEWAYS, FITTINGS and BOXES
A. Raceways and boxes shall be supported independently of other mechanical trades work. Shared conduit racks may be utilized where electrical raceways and boxes are installed to prevent the intrusion of liquid or foreign material onto the installed system. Contractor shall be responsible for providing racks designed to accommodate the weight of all equipment being supported by racks.
B. RACEWAY SYSTEMS:
1. All wiring shall be run in conduit.
2. All interior wiring shall be in metallic conduit.
3. Thinwall EMT conduit shall be used in interior, dry, protected locations up to 2" diameter for 120 volt and higher wiring. Larger sizes of EMT may be used for communications wiring. Heavywall steel conduit shall be used for all sizes of unprotected conduits and sizes 2" and larger.
4. Minimum conduit size shall be 3/4 inch. 1/2 inch raceway may be used for single branch circuit of 20 Amps or less.
5. Flexible connections to all motors shall be with sealtite. Maximum length of 4'–0".
6. Conceal all conduits in finished areas.
7. Separate raceway systems shall be dedicated to a specific system. Systems include, but not limited to 480/277V power, 208/120V power, emergency power, controls, fire alarm, sound, automation and security.
8. Support all raceways and boxes as required by the State of Wisconsin Electrical Code.
C. BOXES:
1. All boxes shall be standard galvanized for interior locations.
2. Size all boxes per NEC.
3. Back to back and through–the–wall boxes are not allowed. Ganged sectional type boxes are not acceptable without the permission of engineer or Owner.
4. Junction boxes 6" x 6" and smaller shall have painted covers as well as identification by permanent marking indicating originating source and circuit. Appropriate colors are: Yellow – Power; Blue – Emergency; Red – Fire alarm; Green – Automation.
D. CONDUIT FITTINGS:
1. All fittings shall be galvanized, all steel (not cast).
2. Compression or steel set screw (not cast) fittings with insulated throat may be used for EMT.

SECTION 16120 – WIRES and CABLES
A. CONDUCTORS:
1. All new copper, 600 volt insulation, minimum size #12 AWG.
2. Sizes #10 and smaller shall be type THHN or THWN, sizes #8 and larger shall be stranded type THW.
3. Stranded wires with compression connectors shall be used for motor connections.
4. Wiring for motors and lighting shall be 90øC THHN.
5. Minimum conductor sizes shall be as follows:
No. 12 AWG – Branch circuits of any kind.
No. 14 AWG – Alarm and signal circuits, single light fixture taps (fixture whips).
No. 16 AWG – Alarm and signal circuits, motor control circuits.

SECTION 16140 – WIRING DEVICES
A. All devices shall be specification grade with the color matching existing devices.
1. All duplex outlets to be 20 amp.
2. Device plates in offices, conference rooms and other areas of non–corrosive use shall have smooth plastic plates of a color selected by Architect.
3. GFI type receptacles shall be used in all damp/wet locations and within 6' of any sink.

SECTION 16721 – EXISTING FIRE ALARM

A. Furnish new devices shown on drawings which are compatible with existing system. Provide booster or additional batterys as required.

SECTION 16740 – TELEPHONE AND DATA RACEWAY

A. Include a complete raceway and outlet system to accommodate Owner's communications and data cables.
1. Minimum 3/4" conduit from each telephone and data outlet to cable tray or central equipment locations.
2. All outlets to consist of two gang boxes with single gang rings.

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Consultants:

Notes:

| Date | Issuance/Revisions | Symbol |
|---|---|---|
| 2/28/00 | Issued for Construction | |

NEW CENTURY SCHOOL
VERONA AREA SCHOOL DISTRICT

VERONA, WISCONSIN

Drawing Title:
SPECIFICATIONS

PLI Project Number: 9904101
Drawn By: MK,TM,DAH,GRW
Drawing No. A203