ASBESTOS ABATEMENT GENERAL NOTES

ABATEMENT CONTRACTOR TO REMOVE AND DISPOSE OF BOTH ACM AND NON-ACM FLOOR TILES AND ASSOCIATED ACM MASTIC TO NON-ACM CONCRETE SUBSTRATE.
ABATEMENT CONTRACTOR TO REMOVE AND DISPOSE OF EXISTING WALL BASE.

(1) ABATEMENT CONTRACTOR TO REMOVE AND DISPOSE OF METAL SINK BASIN WITH ACM ANTI-SWEAT TAR, & NON-ACM BASE CABINET.

(2) ABATEMENT CONTRACTOR TO REMOVE EXISTING CARPET FLOORING (OVERTOP OF ACM FLOOR TILES)

(3) ABATEMENT CONTRACTOR TO REMOVE EXISTING 1'x1' VCT TILES (OVERTOP OF ACM FLOOR TILES)

(4) ABATEMENT CONTRACTOR TO REMOVE AND DISPOSE OF CMU WALL & LEAD CONTAINING DECORATIVE BLOCK AT NEW DOOR LOCATIONS. FINAL LOCATION TO BE COORDINATED WITH G.C.

1

GENERAL ASBESTOS DEMOLITION NOTES:

1. ALL DRAWINGS ARE A GRAPHIC REPRESENTATION OF APPROXIMATE LOCATIONS OF MATERIALS TO BE ABATED. IF THERE ARE ANY DISCREPANCIES WITH WHAT EXISTS TO WHAT IS INDICATED ON THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPORT SAID DISCREPANCIES TO THE ARCHITECT PRIOR TO SUBMITTING A BID. THE INTENT OF THIS PROJECT IS TO COMPLETELY REMOVE ASBESTOS CONTAINING MATERIALS INDICATED AND TO PROVIDE A CLEAN ACM FREE WORK AREA POST ABATEMENT.
2. ALL ABATEMENT PROCEDURES TO BE IN ACCORDANCE WITH STANDARDS SET FORTH BY NEW YORK STATE DEPARTMENT OF LABOR INDUSTRIAL CODE RULE 56 AND ALL APPLICABLE REGULATIONS.
3. THE CONTRACTOR SHALL PATCH TO MATCH ANY DISTURBED AREAS AND FINISHES AS A RESULT OF THEIR ABATEMENT WORK. ANY DAMAGE SHALL BE REPAIRED TO THE OWNER'S AND ARCHITECT'S SATISFACTION AT NO ADDITIONAL COST TO THE OWNER.
4. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF THE ASBESTOS DUMPSTER WITH THE OWNER.
5. THE CONTRACTOR MAY APPLY FOR PROJECT SPECIFIC VARIANCES. USE OF SUCH VARIANCES ARE SUBJECT TO APPROVAL BY THE OWNER AND ARCHITECT.

1 HZ100 **ASBESTOS ABATEMENT PLAN**

1/16" = 1'-0"

TRUE NORTH

11/17/2023 1:17:24 PM <project location> REVIT PROJECT FILES ON BIM360

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Newburgh, NY 12550
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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
1457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- WILLIAM O. SCHAEFER S&L SED#:50-03-01-06-0-012-020
- COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- SOMS OUTDOOR CLASSROOM SED#:50-03-01-06-7-056-001
- CLE OUTDOOR CLASSROOM SED#:50-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#:50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/23	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING ARCHITECT, ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THE ALTERED ITEM HIS/HER SEAL OF THE WORDS "ALTERED BY" FOLLOWED BY HIS/HER SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

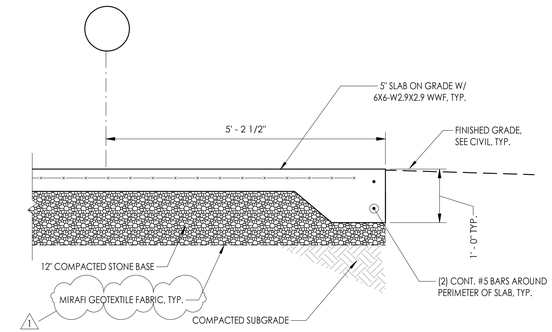
Issued	Scale
10/18/23	As indicated

Project Status
BID DOCUMENTS

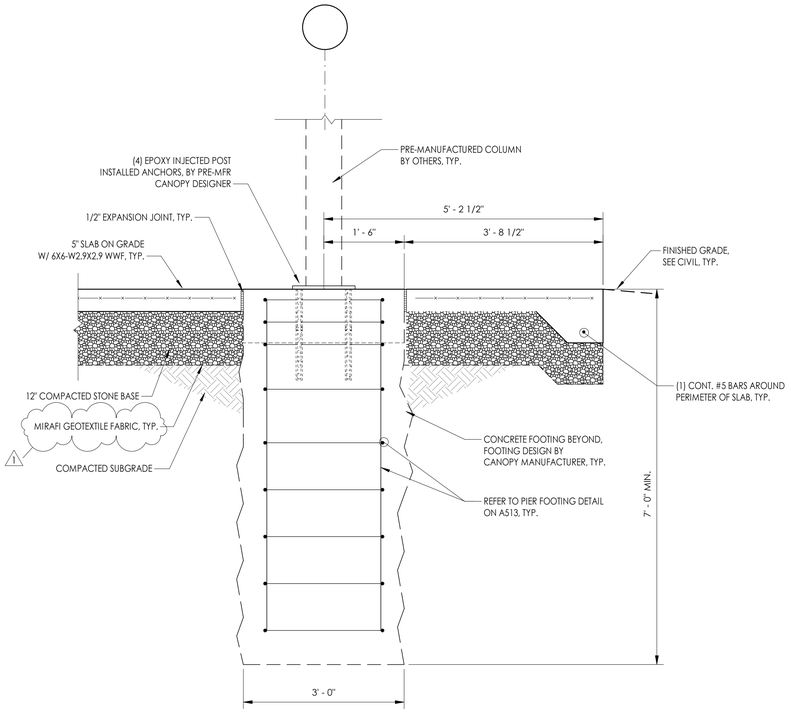
Drawn By	Checked By
CD	LT

Drawing Title
ASBESTOS ABATEMENT PLAN

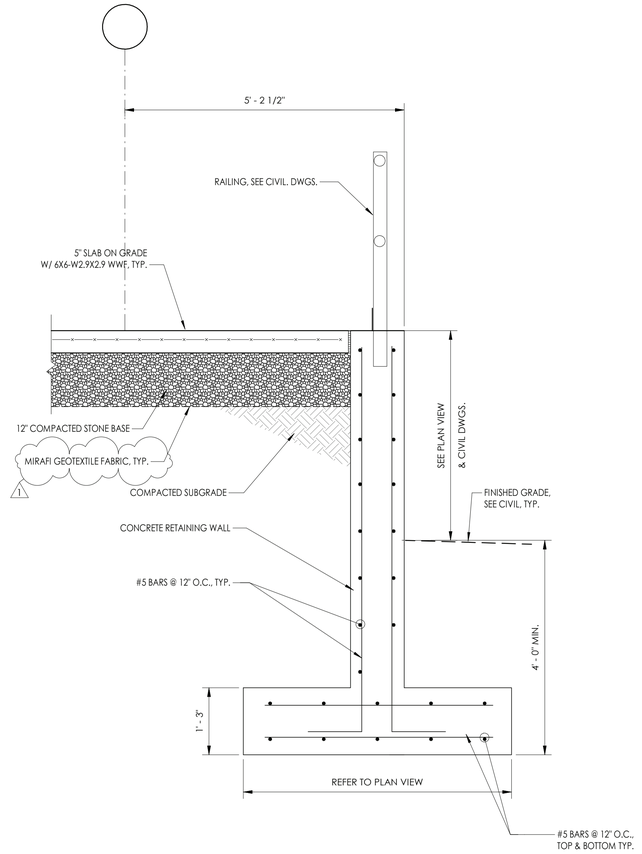
Drawing Number
WOS
HZ100



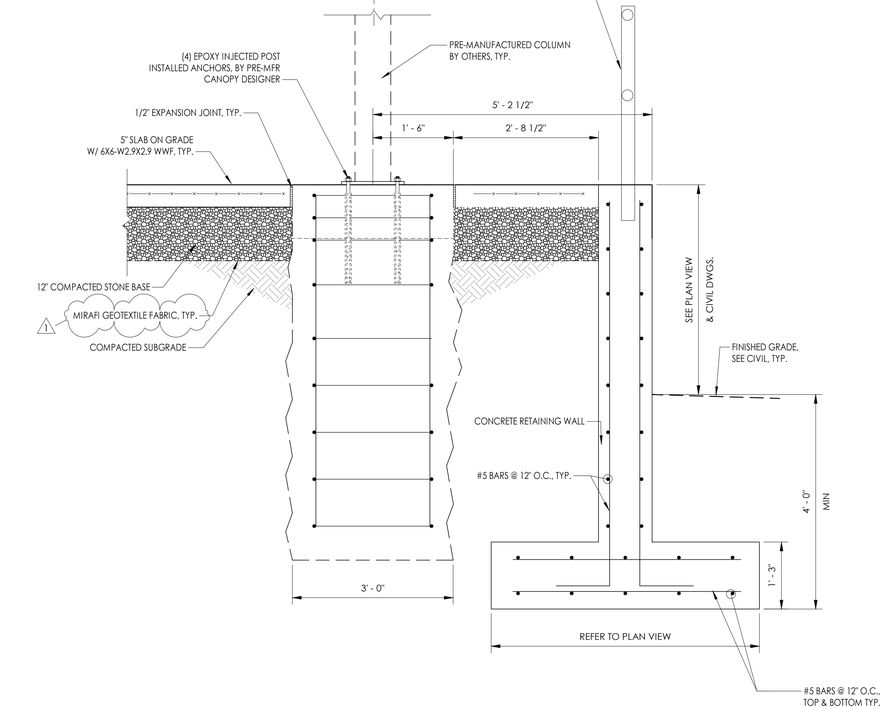
1 S801 **SECTION**
3/4" = 1'-0"



2 S801 **SECTION**
3/4" = 1'-0"



3 S801 **SECTION**
3/4" = 1'-0"



4 S801 **SECTION**
3/4" = 1'-0"

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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
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- ☐ COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- ■ WOS OUTDOOR CLASSROOM SED#:50-03-01-06-7-053-001
- ■ SOMS OUTDOOR CLASSROOM SED#:50-03-01-06-7-056-001
- ■ CLE OUTDOOR CLASSROOM SED#:50-03-01-06-7-054-001
- ■ TZHS OUTDOOR CLASSROOM SED#:50-03-01-06-7-055-001
- ☐

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11-17-23	BID ADDENDUM #04

PROFESSIONAL STAMPS

SHEET INFORMATION

Issued
10/18/2023

Scale
3/4" = 1'-0"

Project Status
BID DOCUMENTS

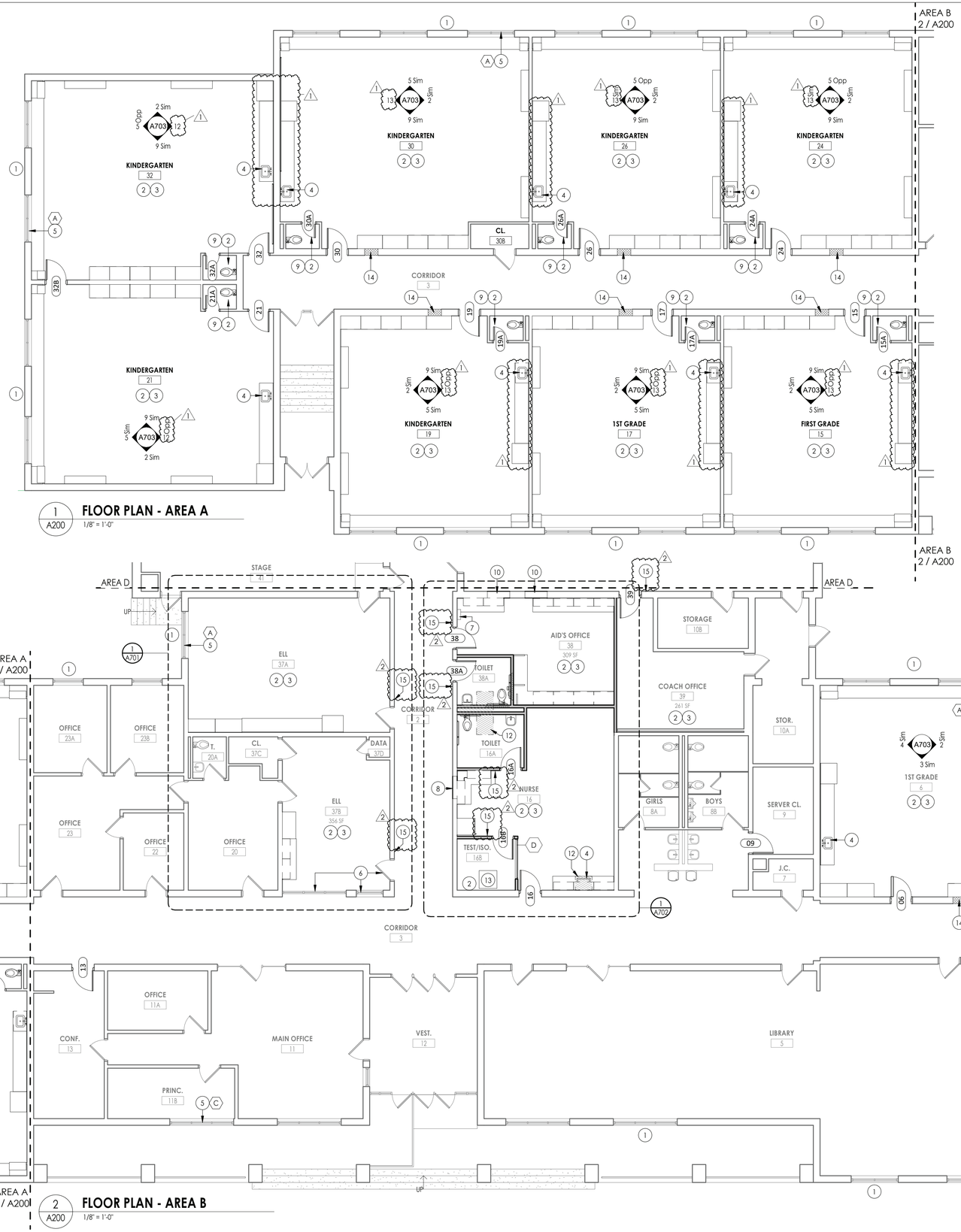
Drawn By
SAW

Checked By
JPR

Drawing Title
STRUCTURAL TYPICAL DETAILS

Drawing Number
GEN
S801

11/16/2023 3:24:06 PM <project location> REVIT PROJECT FILES ON BIM360



1 A200 **FLOOR PLAN - AREA A**
1/8" = 1'-0"

2 A200 **FLOOR PLAN - AREA B**
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATIONS OF EXISTING AND NEW MATERIALS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
2. THE CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING FINISHES AND EQUIPMENT NOT REMOVED UNDER THE SCOPE OF WORK. ANY DAMAGE WILL BE REPAIRED TO THE OWNER/ARCHITECTS SATISFACTION AT NO COST TO THE OWNER.
3. WORK AREAS SHALL BE MAINTAINED AND ALL WORK AREAS SHALL BE LEFT BROOMED CLEAN AT END OF EACH DAY.
4. THE CONTRACTOR SHALL PROVIDE DUST CONTROL BARRIERS AT ALL AREAS OF CONSTRUCTION.
5. THE CONTRACTOR SHALL PATCH ALL SURFACES WHERE EXISTING MATERIALS HAVE BEEN DISTURBED TO MATCH AND BE FLUSH WITH ADJACENT CONSTRUCTION AT ALL FLOOR, WALL, AND CEILING LOCATIONS.
6. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR SEQUENCING OF WORK.

FLOOR PLAN KEY NOTES

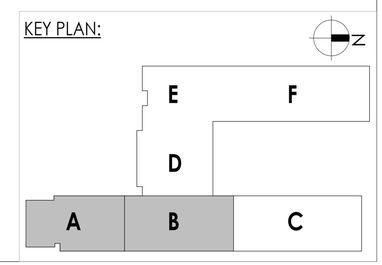
1. INFILL EXTERIOR MASONRY WALL AT DEMOLISHED UV LOCATIONS. REFER TO DETAIL 1/A810
2. NEW FLOORING & WALL BASE AS SPECIFIED, REFER TO I200 SHEETS.
3. NEW CASEWORK - REFER TO ELEVATIONS
4. NEW SINK BY PC
5. REPLACE WINDOW PANE WITH NEW GLAZING AT EXISTING AC REMOVAL
6. APPLY GRAPHIC PRIVACY FILM TO EXISTING GLAZING
7. EXISTING ELEC. PANEL TO REMAIN - REFER TO ELECTRICAL DWGS
8. INFILL DEMOLISHED DOOR OPENING W/ CMU WALL.
9. NEW TOILET BY PC
10. INFILL DEMOLISHED DOOR OPENING W/ CMU WALL TOOTH. IN NEW WORK TO EXISTING APPLY PROTECTIVE PADDING GYM SIDE TO MATCH EXISTING.
11. ALTERNATE 1/ GC-01: INFILL DEMOLISHED UV LOCATION WITH NEW CASEWORK AS SCHEDULED. REFER TO A800 FOR DETAILS.
12. INFILL CONCRETE FLOOR SLAB. REFER TO DETAIL 3/A810
13. NEW METAL FLOOR ACCESS HATCH TO MATCH EXISTING. FINISH FLOORING TO MATCH NEW ADJACENT.
14. INFILL FIRE RATED MASONRY WALL OPENING w/ MATERIALS TO MATCH EXISTING AS REQUIRED FROM THE REMOVAL OF EXISTING LOW AND HIGH AIR RELIEF GRILLES. REFER TO MECHANICAL DRAWINGS.
15. PROVIDE ADA ROOM SIGNAGE. REFER TO SHEET WOS A900.

FLOOR PLAN LEGEND

NOTE: THIS LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PROJECT.

- DOOR — DOOR TARGET, SEE SCHEDULE
- W1 — WINDOW TARGET, SEE SCHEDULE
- 1 / A — COLUMN LINE IDENTIFICATION
- ROOM NAME / H1234.2 / 150 SF / 10'-0" x 10'-0" — ROOM TAG
- XXX — XXX — DENOTES CHANGE IN FLOOR MATERIAL
- 1 / A3.1 — SECTION MARK
- 2 / A701 — INTERIOR ELEVATION MARK
- 3 / A301 — EXTERIOR ELEVATION MARK
- 1 / A4.1 — DETAIL FOR REFERENCE MARK
- DENOTES FINISH FLOOR GRADE ELEVATION
- XXX — WALL TYPE SEE A/400

KEY PLAN:



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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
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- CLE OUTDOOR CLASSROOM SED#:50-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#:50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/09/23	BID ADDENDUM #3
2	11/17/23	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT
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SHEET INFORMATION

Issued
10/18/23

Scale
As indicated

Project Status
BID DOCUMENTS

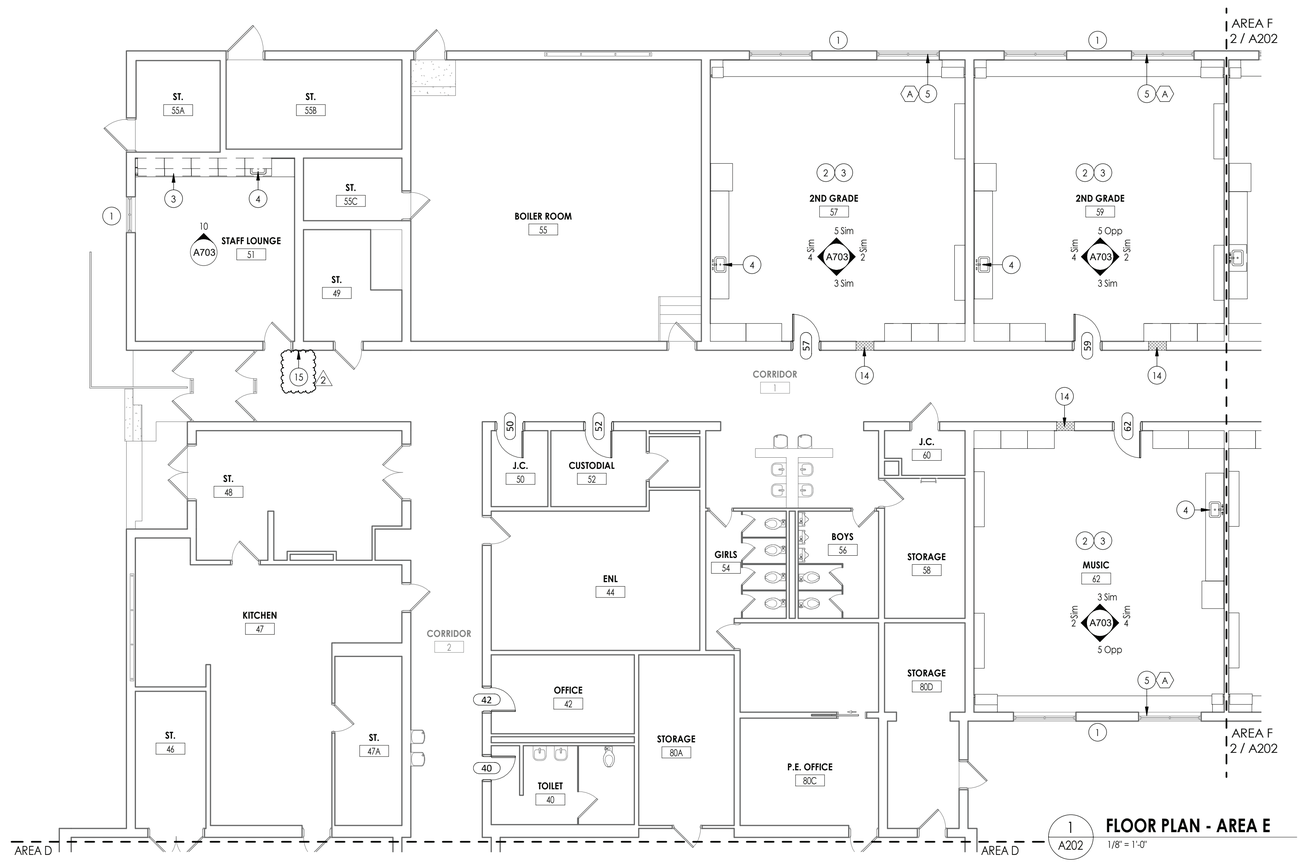
Drawn By
LF

Checked By
LT

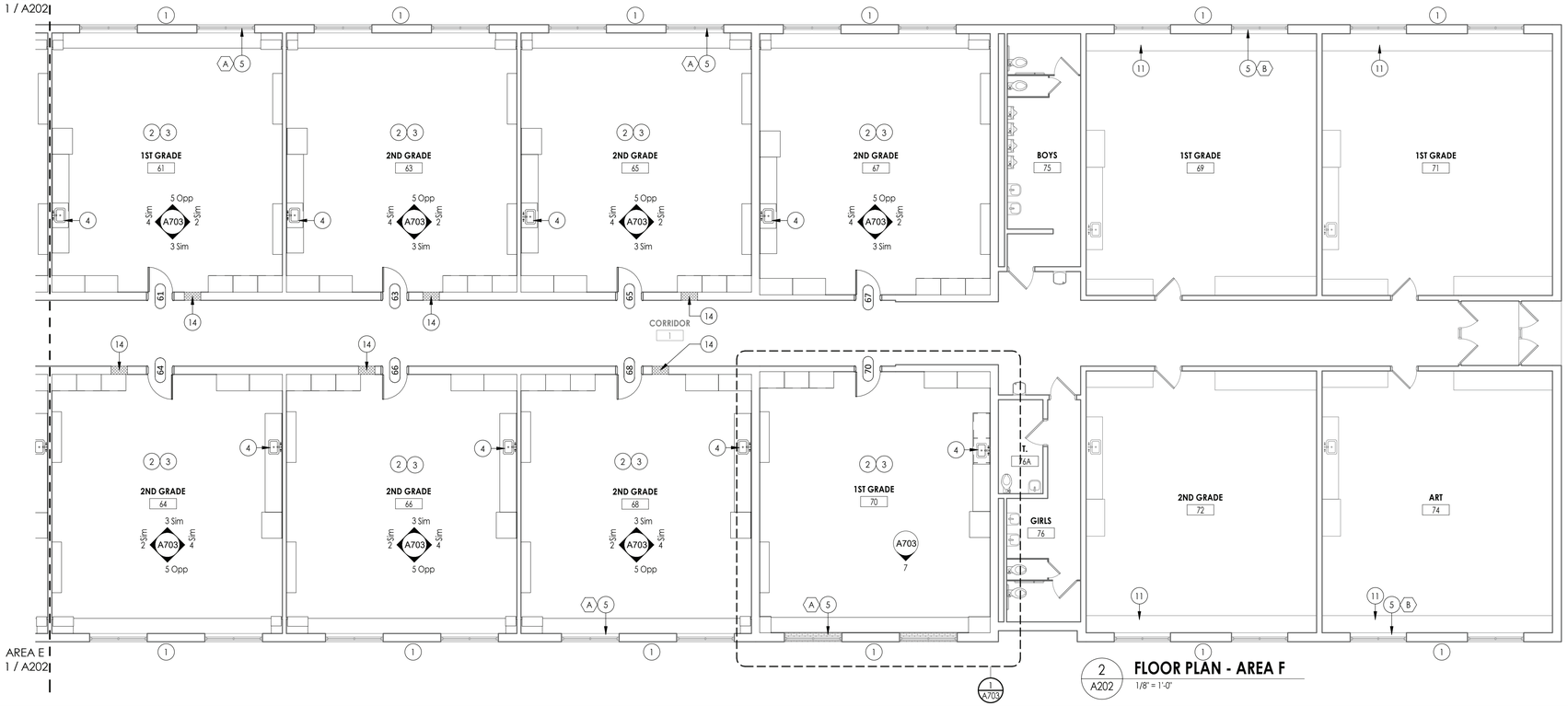
Drawing Title
NEW WORK PLAN - AREA A&B

Drawing Number
WOS
A200

11/15/2023 2:47:08 P.M. <project location> REVIT PROJECT FILES ON BIM360



1 A202 **FLOOR PLAN - AREA E**
1/8" = 1'-0"



2 A202 **FLOOR PLAN - AREA F**
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATIONS OF EXISTING AND NEW MATERIALS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
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5. THE CONTRACTOR SHALL PATCH ALL SURFACES WHERE EXISTING MATERIALS HAVE BEEN DISTURBED TO MATCH AND BE FLUSH WITH ADJACENT CONSTRUCTION AT ALL FLOOR, WALL, AND CEILING LOCATIONS.
6. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR SEQUENCING OF WORK.

FLOOR PLAN KEY NOTES

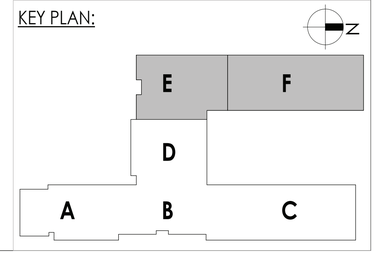
1. INFILL EXTERIOR MASONRY WALL AT DEMOLISHED UV LOCATIONS. REFER TO DETAIL 1/A810
2. NEW FLOORING & WALL BASE AS SPECIFIED, REFER TO I200 SHEETS.
3. NEW CASEWORK - REFER TO ELEVATIONS
4. NEW SINK BY PC
5. REPLACE WINDOW PANE WITH NEW GLAZING AT EXISTING AC REMOVAL
6. APPLY GRAPHIC PRIVACY FILM TO EXISTING GLAZING
7. EXISTING ELEC. PANEL TO REMAIN - REFER TO ELECTRICAL DWGS
8. INFILL DEMOLISHED DOOR OPENING W/ CMU WALL.
9. NEW TOILET BY PC
10. INFILL DEMOLISHED DOOR OPENING W/ CMU WALL TOOTH. IN NEW WORK TO EXISTING APPLY PROTECTIVE PADDING GYM SIDE TO MATCH EXISTING.
11. ALTERNATE 1/ GC-01: INFILL DEMOLISHED UV LOCATION WITH NEW CASEWORK AS SCHEDULED. REFER TO A800 FOR DETAILS. (1)
12. INFILL CONCRETE FLOOR SLAB. REFER TO DETAIL 3/A810
13. NEW METAL FLOOR ACCESS HATCH TO MATCH EXISTING. FINISH FLOORING TO MATCH NEW ADJACENT.
14. INFILL FIRE RATED MASONRY WALL OPENING w/ MATERIALS TO MATCH EXISTING AS REQUIRED FROM THE REMOVAL OF EXISTING LOW AND HIGH AIR RELIEF GRILLES. REFER TO MECHANICAL DRAWINGS. (2)
15. PROVIDE ADA ROOM SIGNAGE. REFER TO SHEET WOS A900.

FLOOR PLAN LEGEND

NOTE: THIS LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PROJECT.

- DOOR — DOOR TARGET, SEE SCHEDULE
- W1 — WINDOW TARGET, SEE SCHEDULE
- A / 1 — COLUMN LINE IDENTIFICATION
- ROOM NAME / H1234.2 / 150 SF / 10'-0" x 10'-0" — ROOM TAG
- XXX — XXX — DENOTES CHANGE IN FLOOR MATERIAL
- 1 / A3.1 — SECTION MARK
- 2 / A701 — INTERIOR ELEVATION MARK
- 3 / A301 — EXTERIOR ELEVATION MARK
- 1 / A4.1 — DETAIL FOR REFERENCE MARK
- DENOTES FINISH FLOOR GRADE ELEVATION
- XXX — WALL TYPE SEE A/400

KEY PLAN:



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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
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- CLE OUTDOOR CLASSROOM SED#:50-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#:50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/09/23	BID ADDENDUM #3
2	11/17/23	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT
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SHEET INFORMATION

Issued
10/18/23

Scale
As indicated

Project Status
BID DOCUMENTS

Drawn By
LF

Checked By
LT

Drawing Title
NEW WORK PLAN - AREA E&F

Drawing Number
WOS
A202

11/17/2023 1:23:54 PM <project location> REVIT PROJECT FILES ON BIM360

DOOR SCHEDULE- NEW

DOOR NUMBER	FIRE RATING (MIN)	ROOM NUMBER/NAME	DOOR PANELS: PANEL TYPE	DOOR PANELS: TOTAL PANEL DIMENSIONS: WIDTH	HEIGHT	THICKNESS	UNDERCUT	DOOR FRAME: FRAME TYPE	FRAME DIMENSIONS: JAMB WIDTH	HEAD HEIGHT	FRAME DEPTH	DOOR FRAME: FRAME FINISH	DOOR: HEAD DTL	JAMB DTL	COMMENTS	DOOR NUMBER
FINISH FIRST FLOOR																
13	45	13 CONF.	PNL-N-WD	3'-0"	6'-10"	0'-1 3/4"	0'-0"	FRM-00HM1	0'-2"	0'-2"	0'-5 3/4"	PNT	6/A900	5/A900		13
16	45	16 NURSE	PNL-G-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-00HM1	0'-2"	0'-2"	0'-5 3/4"	PNT	6/A900	5/A900		16
16A	-	16A TOILET	PNL-F-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-00HM1	0'-2"	0'-2"	0'-5 3/4"	PNT	8/A900	7/A900		16A
16B	-	16B TEST/ISO.	PNL-F-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-00HM1	0'-2"	0'-2"	0'-5 3/4"	PNT	8/A900	7/A900		16B
38	45	38 AID'S OFFICE	PNL-F-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-00HM1	0'-2"	0'-2"	0'-5 3/4"	PNT	6/A900	5/A900		38
38A	45	38A TOILET	PNL-F-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-00HM1	0'-2"	0'-2"	0'-5 3/4"	PNT	6/A900	5/A900		38A
39	-	39 COACH OFFICE	PNL-F-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-00HM1	0'-2"	0'-2"	0'-5 3/4"	PNT	6/A900	5/A900		39
40	45	40 TOILET	PNL-F-WD	2'-8"	7'-0"	0'-1 3/4"	0'-0"	FRM-00HM1	0'-2"	0'-2"	1'-0 7/8"	PNT	4/A900	3/A900		40

DOOR SCHEDULE- ETR FRAMES

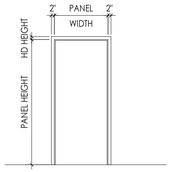
DOOR NUMBER	FIRE RATING (MIN)	ROOM NUMBER/NAME	DOOR PANELS: PANEL TYPE	DOOR PANELS: TOTAL PANEL DIMENSIONS: WIDTH	HEIGHT	THICKNESS	UNDERCUT	DOOR FRAME: FRAME TYPE	DOOR FRAME: FRAME FINISH	COMMENTS	DOOR NUMBER
FINISH FIRST FLOOR											
01	45	1 FIRST GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		01
02	45	2 FIRST GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		02
03	45	3 MAKERSPACE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		03
04	45	4 FIRST GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		04
06	45	6 FIRST GRADE	PNL-N-WD	3'-0"	7'-0"	0'-4 1/256"	0'-0"	FRM-ETR	PNT		06
09	45	9 SERVER CL.	PNL-F-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		09
15	45	15 FIRST GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		15
15A	-	15A FIRST GRADE TOILET ROOM	PNL-V1-WD	2'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		15A
17	45	17 FIRST GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		17
17A	-	17A FIRST GRADE TOILET ROOM	PNL-V1-WD	2'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		17A
19	45	19 FIRST GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		19
19A	-	19A FIRST GRADE TOILET ROOM	PNL-V1-WD	2'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		19A
21	45	21 KINDERGARTEN	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		21
21A	-	21A KINDERGARTEN TOILET ROOM	PNL-V1-WD	2'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		21A
24	45	24 KINDERGARTEN	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		24
24A	-	24A KINDERGARTEN TOILET ROOM	PNL-V1-WD	2'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		24A
26	45	26 KINDERGARTEN	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		26
26A	-	26A KINDERGARTEN TOILET ROOM	PNL-V1-WD	2'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		26A
30	45	30 KINDERGARTEN	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		30
30A	-	30A KINDERGARTEN TOILET ROOM	PNL-V1-WD	2'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		30A
32	45	32 KINDERGARTEN	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		32
32A	-	32A KINDERGARTEN TOILET ROOM	PNL-V1-WD	2'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		32A
32B	-	32 KINDERGARTEN	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		32B
42	45	42 OFFICE	PNL-N-WD	2'-8"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		42
50	45	50 J.C.	PNL-F-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		50
52	45	52 CUSTODIAL	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		52
57	45	57 SECOND GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		57
59	45	59 SECOND GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		59
61	45	61 FIRST GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		61
62	45	62 MUSIC	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		62
63	45	63 SECOND GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		63
64	45	64 SECOND GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		64
65	45	65 SECOND GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		65
66	45	66 SECOND GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		66
67	45	67 SECOND GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		67
68	45	68 SECOND GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		68
70	45	70 FIRST GRADE	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		70
100	45	100 SPEC.ED.	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		100
100A	-	100A SPEC.ED. TOILET ROOM	PNL-V1-WD	2'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		100A
104	45	104 KINDERGARTEN	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		104
104A	-	104A KINDERGARTEN TOILET ROOM	PNL-V1-WD	2'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		104A
105	45	105 KINDERGARTEN	PNL-N-WD	3'-0"	7'-0"	0'-1 3/4"	0'-0"	FRM-ETR	PNT		105

NOTE:
ALL EXISTING TO REMAIN FRAMES RECEIVING NEW DOORS TO BE PREPPED AND PAINTED.

1

SIGNAGE SCHEDULE

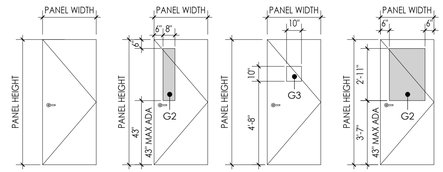
ROOM NAME/NUMBER	DOOR NUMBER	"TEXT"	TYPE	COMMENTS
TOILET 16A	16A	"GENDER NEUTRAL"	B	REFER TO PLAN FOR LOCATION
TEST/ISO. 16B	16B	"ISOLATION ROOM"	A	REFER TO PLAN FOR LOCATION
ELL 37A	EXISTING	"ROOM 37A"	A	REFER TO PLAN FOR LOCATION
ELL 37B	EXISTING	"ROOM 37B"	A	REFER TO PLAN FOR LOCATION
AID'S OFFICE 38	38	"AID'S OFFICE"	A	REFER TO PLAN FOR LOCATION
TOILET 38A	38A	"GENDER NEUTRAL"	B	REFER TO PLAN FOR LOCATION
COACH OFFICE 39	39	"ROOM 39"	A	REFER TO PLAN FOR LOCATION
STAFF LOUNGE 51	EXISTING	"STAFF LOUNGE"	A	REFER TO PLAN FOR LOCATION



FRM-00 HM1 (SINGLE)

DOOR FRAME TYPES

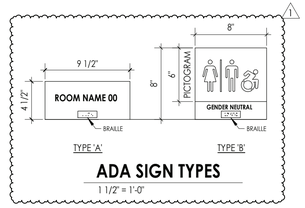
1/4" = 1'-0"



PNL-F-WD | PNL-N-WD | PNL-V1-WD | PNL-G-WD

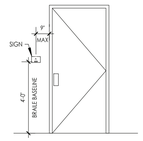
DOOR PANEL TYPES

1/4" = 1'-0"



ADA SIGN TYPES

1 1/2" = 1'-0"



ADA SIGN LOCATION

1/4" = 1'-0"

DOOR AND FRAME NOTES

1. REFER TO A900S FOR DOOR & FRAME SCHEDULE
2. ALL FRAMES ARE TO RECEIVE FULL PERIMETER SEALANT. INTERIOR AND EXTERIOR
3. ALL DOOR AND WINDOW OPENING DIMENSIONS ARE TO BE VERIFIED IN FIELD AND COORDINATED WITH APPROVED SHOP DRAWINGS PRIOR TO FABRICATION.
4. SEE SCHEDULE FOR DOOR & FRAME MATERIAL

DOOR AND FRAME SCHEDULE LEGEND

NOTE: THIS LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PROJECT.

DOOR OR FRAME MATERIAL

ACR	ACROVYN DOOR
ACR-L	ACROVYN LEAD LINED DOOR
ALUM	ALUMINUM
HM	HOLLOW METAL
HM-L	HOLLOW METAL LEAD LINED
IHM	INSULATED HOLLOW METAL
WD	WOOD
WD-L	WOOD LEAD LINED

DOOR OR FRAME FINISH

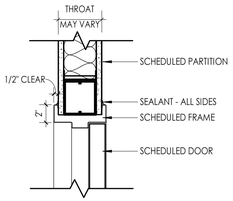
PTD	PAINT
ST	WOOD STAIN
DB	DARK BRONZE(ANODIZED)
SS	STAINLESS STEEL
BE	BAKED ENAMEL

GLAZING TYPES

G1 - INSULATED GLAZING

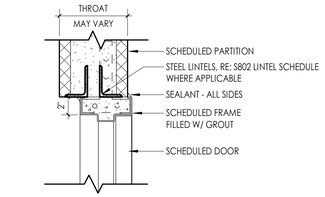
G2 - FIRE RATED GLAZING

G3 - TEMPERED GLAZING



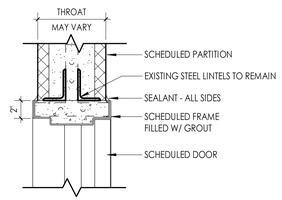
8 A900 **DOOR IN STUD - HEAD DETAIL**

1 1/2" = 1'-0"



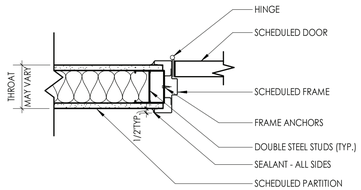
6 A900 **DOOR IN CMU - HEAD DETAIL**

1 1/2" = 1'-0"



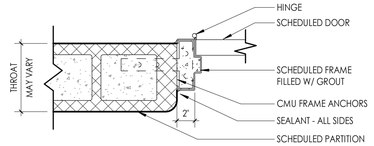
4 A900 **WRAPPED DOOR IN CMU - HEAD DETAIL**

1 1/2" = 1'-0"



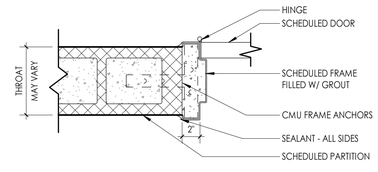
7 A900 **DOOR IN STUD - JAMB DETAIL**

1 1/2" = 1'-0"



5 A900 **DOOR IN CMU - JAMB DETAIL**

1 1/2" = 1'-0"

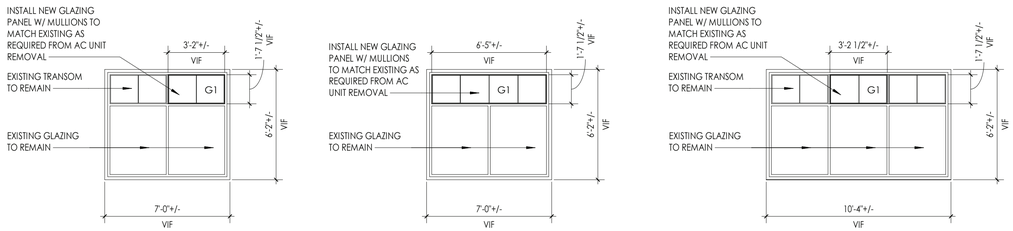


3 A900 **WRAPPED DOOR IN CMU - JAMB DETAIL**

1 1/2" = 1'-0"

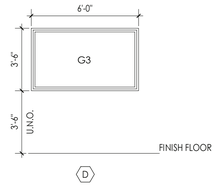
WINDOW GENERAL NOTES

1. COORDINATE ALL FRAME SIZES, TRIM EXTRUSIONS AND SILLS WITH WALL SECTIONS AND DETAILS.
2. ALL FRAMES ARE TO RECEIVE FULL PERIMETER SEALANT. INTERIOR AND EXTERIOR
3. ALL DOOR AND WINDOW DIMENSIONS ARE TO BE VERIFIED IN FIELD PRIOR TO FABRICATION.
4. REFER TO DIMENSION PLANS AND WALL SECTIONS FOR MULLION LAYOUT DIMENSIONS.



2 A900 **WINDOW ELEVATIONS @ AC REMOVAL**

1/4" = 1'-0"



1 A900 **WINDOW TYPES**

1/4" = 1'-0"

CPL | Architecture Engineering Planning
50 Front Street Suite 202,
Newburgh, NY 12550
CPLeam.com

SOUTH ORANGETOWN Central School District

Capital Improvements Bond

Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD

- WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- WILLIAM O. SCHAEFER S&L SED#:50-03-01-06-0-012-020
- COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- SOMS OUTDOOR CLASSROOM SED#:50-03-01-06-7-056-001
- CLE OUTDOOR CLASSROOM SED#:50-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#:50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/23	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

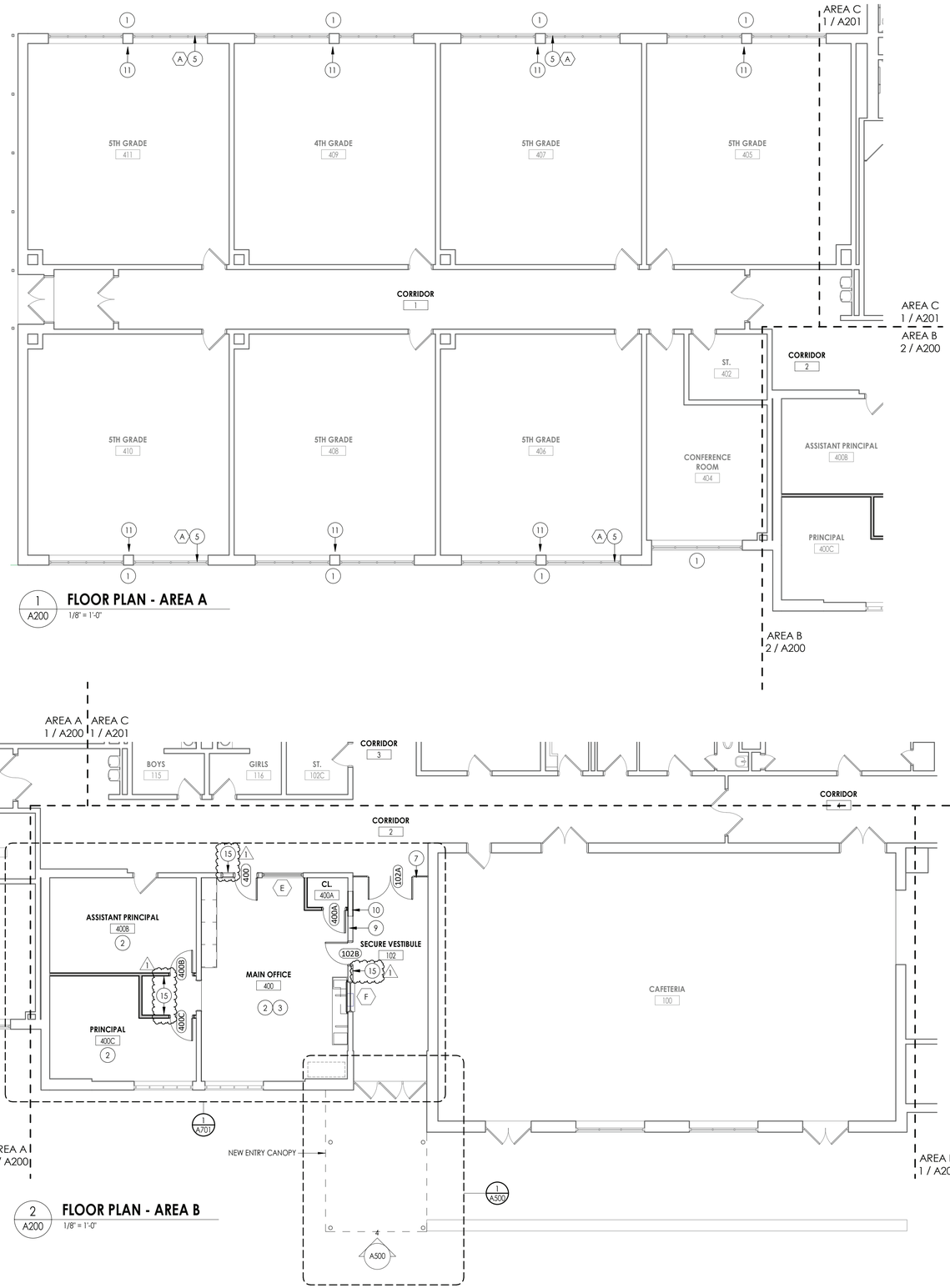
Issued	Scale
10/18/23	As indicated

Project Status
BID DOCUMENTS

Drawn By	Checked By
LF	LT

Drawing Title
DOOR & WINDOW SYSTEMS TYPES & SCHEDULES

Drawing Number
WOS
A900



1 A200 **FLOOR PLAN - AREA A**
1/8" = 1'-0"

2 A200 **FLOOR PLAN - AREA B**
1/8" = 1'-0"

FLOOR PLAN GENERAL NOTES

1. ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATIONS OF EXISTING AND NEW MATERIALS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
2. THE CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING FINISHES AND EQUIPMENT NOT REMOVED UNDER THE SCOPE OF WORK. ANY DAMAGE WILL BE REPAIRED TO THE OWNER/ARCHITECTS SATISFACTION AT NO COST TO THE OWNER.
3. WORK AREAS SHALL BE MAINTAINED AND ALL WORK AREAS SHALL BE LEFT BROOMED CLEAN AT END OF EACH DAY.
4. THE CONTRACTOR SHALL PROVIDE DUST CONTROL BARRIERS AT ALL AREAS OF CONSTRUCTION.
5. THE CONTRACTOR SHALL PATCH ALL SURFACES WHERE EXISTING MATERIALS HAVE BEEN DISTURBED TO MATCH AND BE FLUSH WITH ADJACENT CONSTRUCTION AT ALL FLOOR, WALL, AND CEILING LOCATIONS.
6. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR SEQUENCING OF WORK.

FLOOR PLAN LEGEND

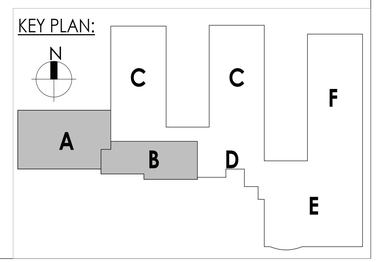
NOTE: THIS LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PROJECT.

- DOOR — DOOR TARGET, SEE SCHEDULE
- W1 — WINDOW TARGET, SEE SCHEDULE
- 1 / A — COLUMN LINE IDENTIFICATION
- ROOM NAME / H1234.2 / 150 SF / 10'-0" x 10'-0" — ROOM TAG
- XXX ◄ ► XXX — DENOTES CHANGE IN FLOOR MATERIAL
- 1 / A3.1 — SECTION MARK
- 2 / A701 — INTERIOR ELEVATION MARK
- 3 / A301 — EXTERIOR ELEVATION MARK
- 1 / A4.1 — DETAIL FOR REFERENCE MARK
- DENOTES FINISH FLOOR GRADE ELEVATION
- XXX — WALL TYPE SEE A/400

FLOOR PLAN KEY NOTES

1. INFILL EXTERIOR MASONRY WALL AT DEMOLISHED UV LOCATIONS, REFER TO DETAIL 2/A810
2. NEW VCT FLOORING & WALL BASE, FULL EXTENT OF ROOM
3. NEW CASEWORK
4. NEW SINK - REFER TO PLUMBING
5. REPLACE WINDOW PANE W/ NEW GLAZING AT EXISTING AC OPENING
6. INFILL DEMOLISHED DOOR OPENING W/ STUD WALL
7. NEW STOREFRONT SYSTEM
8. NEW METAL PAN STAIR & HANDRAIL
9. FIRE RATED TRANSACTION WINDOW
10. INFILL DEMOLISHED DOOR OPENING W/ CMU WALL
11. ALTERNATE 2/ GC-02: INFILL DEMOLISHED UV LOCATION WITH NEW CASEWORK TO MATCH EXISTING. SEE DETAIL 5/A800
12. INFILL CONCRETE FLOOR SLAB. REFER TO DETAIL
13. PATCH WALL AS REQ'D AT DEMOLISHED SPLIT SYSTEM
14. INFILL DEMOLISHED FIRE SHUTTER OPENING W/ STUD WALL
15. PROVIDE ADA SIGNAGE. REFER TO CLE A900.

KEY PLAN:



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Newburgh, NY 12550
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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

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1457.20

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SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

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- ☐ COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- ☐ WOS OUTDOOR CLASSROOM SED#:50-03-01-06-7-053-001
- ☐ SOMS OUTDOOR CLASSROOM SED#:50-03-01-06-7-056-001
- ☐ CLE OUTDOOR CLASSROOM SED#:50-03-01-06-7-054-001
- ☐ TDHS OUTDOOR CLASSROOM SED#:50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/23	BID ADDENDUM #4

PROFESSIONAL STAMPS

SHEET INFORMATION

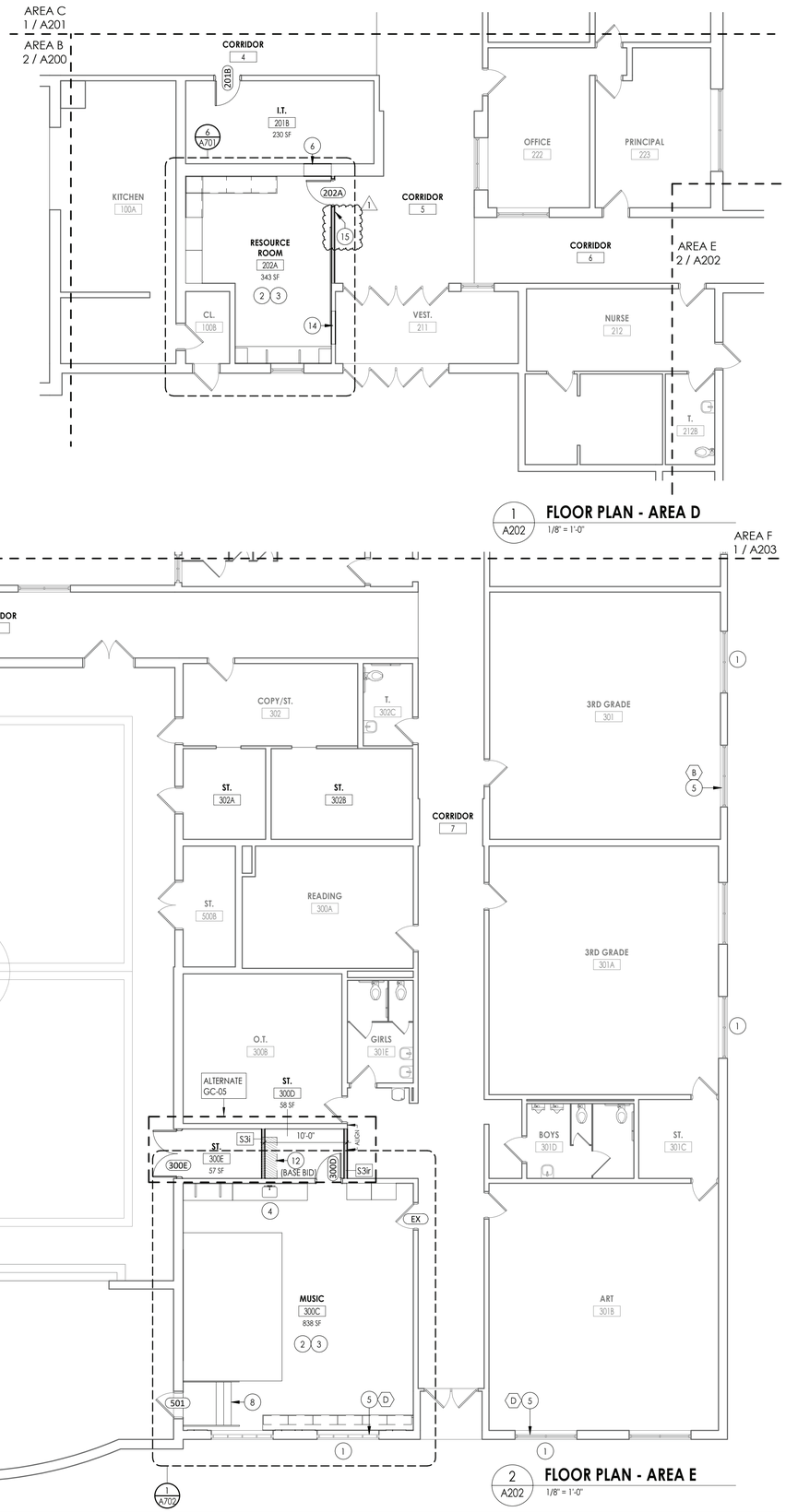
Issued	Scale
10/18/23	As indicated

Project Status
BID DOCUMENTS

Drawn By	Checked By
LF	LT

Drawing Title
NEW WORK PLAN - AREA A&B

Drawing Number
CLE
A200



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9. FIRE RATED TRANSACTION WINDOW
10. INFILL DEMOLISHED DOOR OPENING W/ CMU WALL
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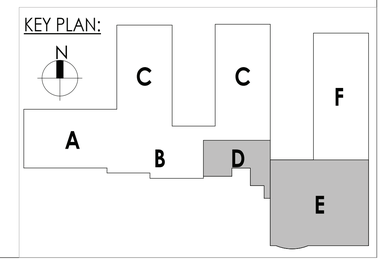
13. PATCH WALL AS REQ'D AT DEMOLISHED SPLIT SYSTEM
14. INFILL DEMOLISHED FIRE SHUTTER OPENING W/ STUD WALL
15. PROVIDE ADA SIGNAGE. REFER TO CLE A900. (1)

KEY PLAN:



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50 Front Street Suite 202,
Newburgh, NY 12550
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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
1.457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- [ ] WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- [x] COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- [ ] TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- [ ] WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- [ ] COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- [ ] COTTAGE LANE LIBRARY S&L SED#.: 50-03-01-06-8-023-002
- [ ] WOS OUTDOOR CLASSROOM SED#:50-03-01-06-7-053-001
- [ ] SOMS OUTDOOR CLASSROOM SED#:50-03-01-06-7-056-001
- [ ] CLE OUTDOOR CLASSROOM SED#:50-03-01-06-7-054-001
- [ ] TDHS OUTDOOR CLASSROOM SED#:50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/23	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued
10/18/23

Scale
As indicated

Project Status
BID DOCUMENTS

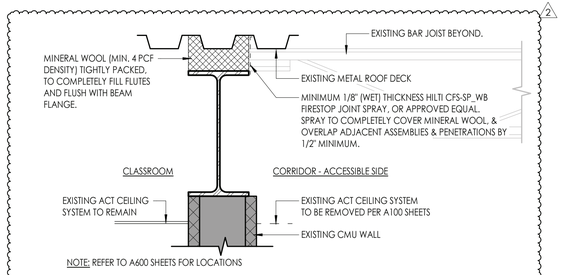
Drawn By
LF

Checked By
LT

Drawing Title
NEW WORK PLAN - AREA D&E

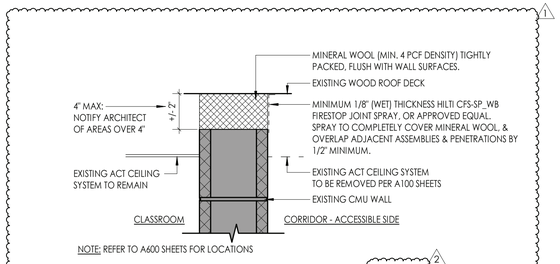
Drawing Number
CLE
A202

11/15/2023 2:42:59 PM <project location> REVIT PROJECT FILES ON BIM360



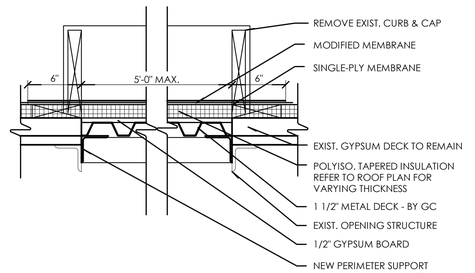
8 A810 **CORRIDOR WALL SMOKE SEAL DETAIL - AREA F**

1 1/2" = 1'-0"



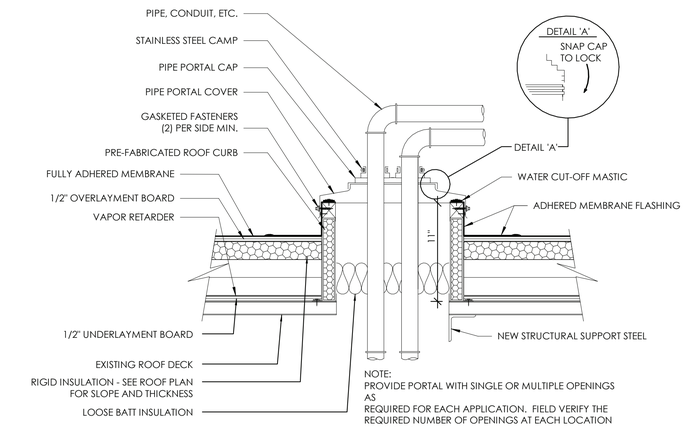
7 A810 **CORRIDOR WALL SMOKE SEAL DETAIL - AREA C**

1 1/2" = 1'-0"



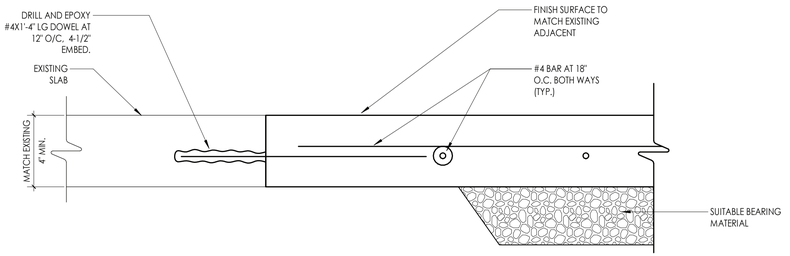
6 A810 **TYPICAL ROOF DECK INFILL DETAIL**

1 1/2" = 1'-0"



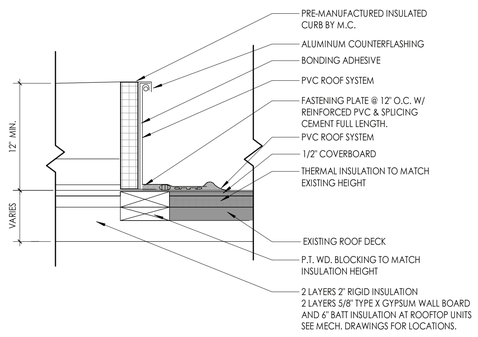
5 A810 **PIPE PORTAL DETAIL**

1 1/2" = 1'-0"



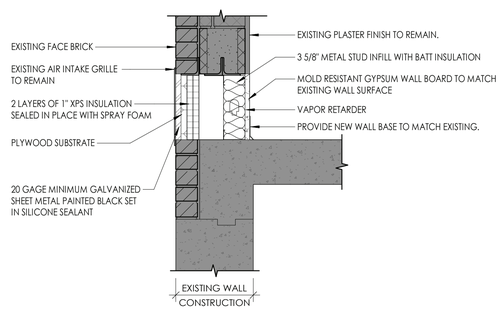
4 A810 **SLAB INFILL DETAIL**

3" = 1'-0"



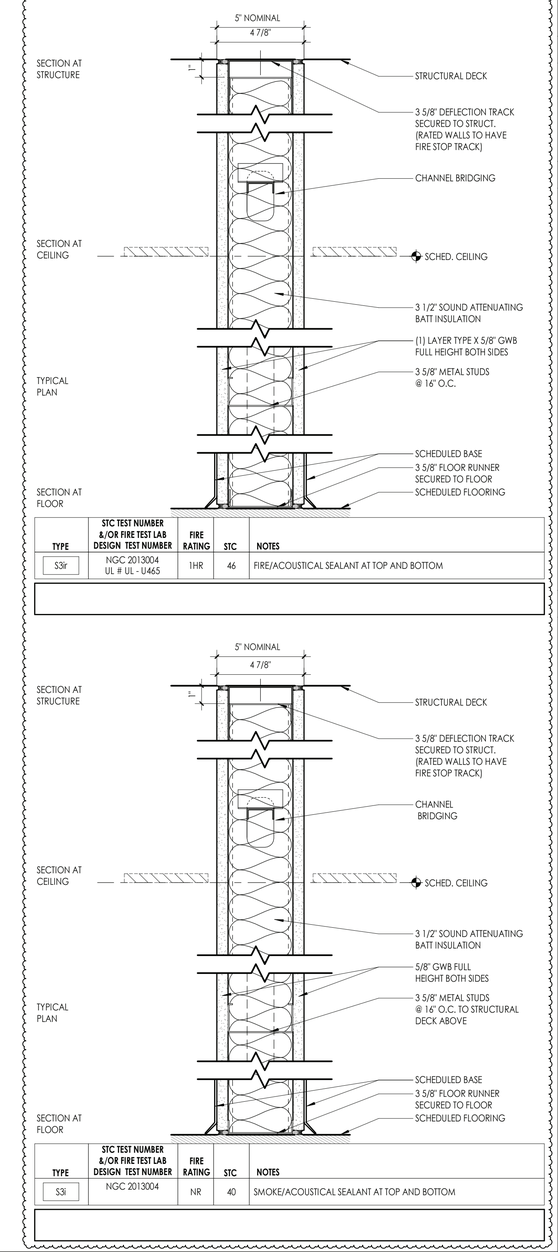
3 A810 **TYPICAL ROOF CURB DETAIL**

1 1/2" = 1'-0"



2 A810 **INFILL DETAIL**

1" = 1'-0"



TYPE	STC TEST NUMBER &/OR FIRE TEST LAB DESIGN TEST NUMBER	FIRE RATING	STC	NOTES
S3ir	NGC 2013004 UL # UL - U465	1HR	46	FIRE/ACOUSTICAL SEALANT AT TOP AND BOTTOM

TYPE	STC TEST NUMBER &/OR FIRE TEST LAB DESIGN TEST NUMBER	FIRE RATING	STC	NOTES
S3i	NGC 2013004	NR	40	SMOKE/ACOUSTICAL SEALANT AT TOP AND BOTTOM

PARTITION GENERAL NOTES

1. ALL WALL TYPES MAY NOT BE USED ON THIS PROJECT.
2. UNLESS NOTED OTHERWISE ALL PARTITIONS ARE FULL HEIGHT, EXTEND & SECURE TO UNDERSIDE OF CONCRETE OR METAL DECK ABOVE.
3. PROVIDE UL APPROVED JOINT AT ALL TOP OF WALL AND WALL TO WALL CONDITIONS AT ALL RATED WALLS.
4. PROVIDE DEFLECTION TRACKS AT METAL STUD PARTITIONS THAT TERMINATE AT THE UNDERSIDE OF STRUCTURE AND DECK.
5. REFER TO CODE/LIFE SAFETY DRAWINGS FOR RATED PARTITIONS AND UL ASSEMBLIES.
6. REFER TO INTERIOR DRAWINGS FOR LOCATIONS OF WALL TILE, AND OTHER SPECIALTY WALL FINISHES. PROVIDE 5/8" TILE BACKER BOARD AT ALL WALLS RECEIVING TILE.
7. PROVIDE MOISTURE RESISTANT GYP. BD. AT ALL TOILET ROOMS, JANITOR'S CLOSETS AND OTHER WET LOCATIONS WHERE TILE AND TILE BACKER BOARD ARE NOT INSTALLED.
8. PARTITION TYPES WITH ONE SIDE OF DOUBLE DRYWALL TO BE PLACED SO THAT THE DOUBLE SIDE IS ON CORRIDOR AND/OR HIGH TRAFFIC SIDE OF WALL.
9. REFER TO SPECIFICATIONS FOR METAL STUD GAUGE REQUIREMENTS.
10. COORDINATE ALL PARTITION ACCESSORIES (APPLIED FINISHES, RESILIENT CHANNEL, ADDITIONAL LAYERS OF SHEATHING, SHIELDING, ETC.) ITEMS SHOWN IN TYPICAL WALL CONSTRUCTION DETAILS MAY HAVE TO BE ARRANGED ON DIFFERENT SIDES OF WALL ASSEMBLY TO ACHIEVE FLUSH CONTINUOUS WALL SURFACES. ANY CONFLICTS SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
11. FIRESTOP/ SMOKE STOP ALL REQUIRED WALL PARTITIONS, SLABS, AND PENETRATIONS THROUGH NEW AND EXISTING WALLS WITHIN THE PROJECT LIMITS IN COORDINATION WITH CODE PLAN, OR WHERE COORDINATED SYSTEMS CONNECTION POINTS ARE LOCATED OUTSIDE THE PROJECT LIMIT AREA. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING DRAWINGS AND SPECIFICATION DIVISION 7.
12. NOTIFY OWNER AND ARCHITECT IF EXISTING NON-COMPLIANT PENETRATIONS ARE DISCOVERED NOT FIRESTOPPPED IN COORDINATION WITH CODE PLAN.
13. PROVIDE CONTROL JOINT WHERE NEW PARTITIONS BUTT EXISTING CONSTRUCTION.
14. PROVIDE CONTROL JOINTS A MAXIMUM OF 30'-0" APART UNLESS NOTED OTHERWISE, PER ASTM C 840-17A, LOCATE ABOVE DOOR FRAMES WHERE POSSIBLE.
15. PROVIDE SUPPORT BLOCKING AND STRAPPING FOR ALL MILLWORK, CASEWORK, AND WALL MOUNTED ACCESSORIES.

PARTITION TYPE TAG LEGEND

PARTITION CONSTRUCTION TYPE & SIZE SEE LEGEND BELOW — RATING SUFFIX

S3 i t r

ACCESSORY SUFFIX(S) SEE LEGEND BELOW

PARTITION CONSTRUCTION TYPE & SIZE LEGEND

S# STEEL STUDS, FINISH BOTH SIDES
- 1 = 1 5/8" C STUD
- 2 = 2 1/2" C STUD
- 3 = 3 5/8" C STUD
- 4 = 4" C STUD
- 6 = 6" C STUD
- 8 = 8" C STUD

F# STEEL STUD FURRING, FINISH ONE SIDE
- 1 = 1 5/8" C STUD
- 2 = 2 1/2" C STUD
- 3 = 3 5/8" C STUD
- 4 = 4" C STUD
- 6 = 6" C STUD
- 8 = 8" C STUD

W# STEEL STUD SHAFT WALL ASSEMBLY, FINISH ONE SIDE
- 2 = 2 1/2" CH SHAFT WALL STUD
- 4 = 4" CH SHAFTWALL STUD
- 6 = 6" CH SHAFTWALL STUD

B# CONSTRUCTION BARRIER/TEMP WALL
- 1 = 1 5/8" C STUD
- 2 = 2 1/2" C STUD
- 3 = 3 5/8" C STUD
- 4 = 4" C STUD
- 6 = 6" C STUD
- 8 = 8" C STUD

M# CONCRETE MASONRY UNIT
- 4 = 4" NOMINAL CMU
- 6 = 6" NOMINAL CMU
- 8 = 8" NOMINAL CMU
- 10 = 10" NOMINAL CMU
- 12 = 12" NOMINAL CMU

A APPLIED FINISH, NON SELF SUPPORTING/ATTACHED TO OTHER STRUCTURE

C# RESILIENT CHANNEL, NON SELF SUPPORTING/ATTACHED TO OTHER STRUCTURE
- 1 = 1/2" RC-1 RESILIENT CHANNEL
- 2 = 1/2" RC-2 RESILIENT CHANNEL

H# HAT CHANNEL, NON SELF SUPPORTING/ATTACHED TO OTHER STRUCTURE
- 1 = 7/8" HAT CHANNEL
- 2 = 1 1/2" HAT CHANNEL

Z# ZEE-FURRING, NON SELF SUPPORTING/ATTACHED TO OTHER STRUCTURE
- 1 = 1" ZEE FURRING
- 1.5 = 1 1/2" ZEE FURRING
- 2 = 2" ZEE FURRING
- 2.5 = 2 1/2" ZEE FURRING
- 3 = 3" ZEE FURRING

PARTITION TYPE SUFFIX

ACCESSORIES SUFFIX:

i - SOUND ATTENUATING BATT INSULATION (FIBERGLASS) FRICTION FIT BETWEEN STUDS TO FILL CAVITY

w - SOUND ATTENUATING FIRE BATT INSULATION (ROCK WOOL) FRICTION FIT BETWEEN STUDS TO FILL CAVITY

t - CERAMIC WALL TILE (1) SIDE W/ THINSET MORTAR BED, 5/8" CEMENT BACKER BOARD IN LIEU OF 5/8" GYP. AT TILE LOCATIONS - SEE INTERIOR ELEVATIONS FOR TILE EXTENTS

tt - CERAMIC WALL TILE (2) SIDES W/ THINSET MORTAR BED, 5/8" CEMENT BACKER BOARD IN LIEU OF 5/8" GYP. AT TILE LOCATIONS - SEE INTERIOR ELEVATIONS FOR TILE EXTENTS

b - INTERIOR VENEER MASONRY/STONE APPLIED FINISH, REFER TO DETAILS FOR CONSTRUCTION, AND INTERIOR ELEVATIONS FOR EXTENTS

g - CMU WALL GROUT CORES SOLID

s - ADD 1/2" RC1 RESILIENT SOUND CHANNEL BEHIND SPECIFIED SHEATHING

k - ADD ADDITIONAL (1) LAYER OF 5/8" GYP BOARD, TO ONE SIDE OF WALL

kk - ADD ADDITIONAL (2) LAYERS OF 5/8" GYP BOARD, (1) EA. SIDE OF WALL

e - ADD ADDITIONAL (1) LAYER OF 5/8" FRT PLYWOOD BOLTED TO WALL FOR MOUNTING OF ELECTRICAL PANELS/ EQUIPMENT WHERE NOTED ON ELEC. DWGS.

v - SUBSTITUE (1) LAYER OF 5/8" SOUNDBLOCK GYP. W/ INTEGRAL VISCOELASTIC POLYMER CORE FOR (1) LAYER OF SPECIFIED 5/8" TYPE X GYP.

vv - SUBSTITUE 5/8" SOUNDBLOCK GYP. W/ INTEGRAL VISCOELASTIC POLYMER CORE FOR ALL LAYER OF SPECIFIED 5/8" TYPE X GYP.

p - LEAD SHIELDING REFER TO PHYSICIST REPORT FOR REQUIREMENTS

x - COPPER MAGNETIC/RF SHIELDING REFER TO PHYSICIST REPORT FOR REQUIREMENTS

c - WALL FINISH TO TERMINATE 6" ABV. HIGHEST ADJACENT CEILING STUDS TO RUN TO UNDERSIDE OF DECK ABOVE.

y - WALL STRUCTURE TERMINATES 12" ABV. HIGHEST ADJACENT CEILING, PROVIDE STRUCTURAL BRACING AT TOP OF WALL AS REQUIRED.

n - KNEE WALL, REFER TO INTERIOR ELEVATIONS FOR HEIGHT & SILL CONDITION, REFER TO STRUCTURAL DETAILS FOR REQUIRED SUPPLEMENTAL STEEL AND ANCHORING REQUIREMENTS

RATING SUFFIX:

r - 1 HR RATED ASSEMBLY REFER TO UL DETAILS FOR RATED CONSTRUCTION REQUIREMENTS

d - 2 HR RATED ASSEMBLY REFER TO UL DETAILS FOR RATED CONSTRUCTION REQUIREMENTS

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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- ☐ WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- ☐ COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- ☐ TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- ☐ WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- ☐ COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- ☐ COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- ☐ WOS OUTDOOR CLASSROOM SED#:50-03-01-06-7-053-001
- ☐ SOMS OUTDOOR CLASSROOM SED#:50-03-01-06-7-056-001
- ☐ CLE OUTDOOR CLASSROOM SED#:50-03-01-06-7-054-001
- ☐ TDHS OUTDOOR CLASSROOM SED#:50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/09/23	BID ADDENDUM #3
2	11/17/23	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT
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SHEET INFORMATION

Issued	Scale
10/18/23	As indicated

Project Status
BID DOCUMENTS

Drawn By	Checked By
Author	Checker

Drawing Title
WALL TYPES & MISC. DETAILS

Drawing Number
CLE A810

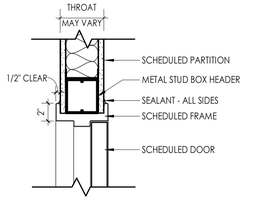
DOOR SCHEDULE- NEW

DOOR NUMBER	FIRE RATING (MIN)	ROOM NUMBER/NAME	DOOR PANELS: PANEL TYPE: PANEL 1	PANEL TYPE: PANEL 2	SINGLE PANEL DIMENSIONS: WIDTH: PANEL 1	PANEL 2	TOTAL PANEL DIMENSIONS: WIDTH	HEIGHT	THICKNESS	DOOR FRAME: FRAME TYPE	FRAME DIMENSIONS: JAMB WIDTH	HEAD HEIGHT	FRAME DEPTH	FRAME FINISH	DOOR: HEAD DTL	JAMB DTL	COMMENTS	DOOR NUMBER
FINISH FIRST FLOOR																		
102A	-	102 SECURE VESTIBULE	PNL-G2-AL	PNL-G2-AL	3'-0"	3'-0"	6'-0"	7'-0"	0'-1 3/4"	FRM-00AL(CW)	0'-0"	0'-0"	0'-0"	MFR	7/A900	8/A900	REFER TO CW1	102A
102B	45	400 MAIN OFFICE	PNL-N-WD		3'-0"		3'-0"	7'-0"	0'-1 3/4"	FRM-00HM1	0'-2"	0'-2"	0'-8 7/8"	PNT	5/A900	6/A900		102B
201B	45	201B I.T.	PNL-F-WD		3'-0"		3'-0"	7'-0"	0'-1 3/4"	FRM-00HM1	0'-2"	0'-2"	0'-8 7/8"	PNT	5/A900	6/A900		201B
202A	45	202A RESOURCE ROOM	PNL-N-WD		3'-0"		3'-0"	7'-0"	0'-1 3/4"	FRM-00HM1	0'-2"	0'-2"	0'-5 3/4"	PNT	1/A900	2/A900		202A
300D	--	300D ST.	PNL-F-WD		3'-0"		3'-0"	7'-0"	0'-1 3/4"	FRM-00HM1	0'-2"	0'-2"	0'-7 7/8"	PNT	5/A900	6/A900	ALTERNATE GC-05	300D
300E	--	300E ST.	PNL-F-WD	PNL-F-WD	2'-10"	2'-10"	5'-8"	7'-0"	0'-1 3/4"	FRM-00HM1	0'-2"	0'-2"	0'-8 3/4"	PNT	3/A900	4/A900	ALTERNATE GC-05	300E
400	45	400 MAIN OFFICE	PNL-G2-WD		3'-0"		3'-0"	7'-0"	0'-1 3/4"	FRM-20HM1	0'-2"	0'-2"	0'-8 7/8"	PNT	5/A900	6/A900		400
400A	--	400A CL.	PNL-F-WD		3'-0"		3'-0"	7'-0"	0'-1 3/4"	FRM-00HM1	0'-2"	0'-2"	0'-5 3/4"	PNT	1/A900	2/A900		400A
400B	--	400B ASSISTANT PRINCIPAL	PNL-N-WD		3'-0"		3'-0"	7'-0"	0'-1 3/4"	FRM-00HM1	0'-2"	0'-2"	0'-5 3/4"	PNT	1/A900	2/A900		400B
400C	--	400C PRINCIPAL	PNL-N-WD		3'-0"		3'-0"	7'-0"	0'-1 3/4"	FRM-00HM1	0'-2"	0'-2"	0'-5 3/4"	PNT	1/A900	2/A900		400C

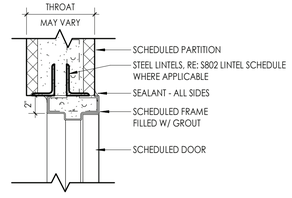
OFCI DOOR SCHEDULE - NEW FRAMES

DOOR NUMBER	FIRE RATING (MIN)	ROOM NUMBER/NAME	DOOR PANELS: PANEL TYPE: PANEL 1	SINGLE PANEL DIMENSIONS: WIDTH: PANEL 1	DOOR FRAME: FRAME TYPE	FRAME DIMENSIONS: JAMB WIDTH	HEAD HEIGHT	FRAME DEPTH	FRAME FINISH	DOOR: HEAD DTL	JAMB DTL	COMMENTS	DOOR NUMBER
FINISH FIRST FLOOR													
112	45	112 GIRLS	PNL-F-WD	3'-0"	FRM-00HM1	0'-2"	0'-2"	0'-8 7/8"	PNT	5/A900	6/A900	OFCI - DOOR, HW AND HC OPERATOR. PROVIDE NEW FRAME AS SCHEDULED	112
114	45	114 BOYS	PNL-F-WD	3'-0"	FRM-00HM1	0'-2"	0'-2"	0'-8 7/8"	PNT	5/A900	6/A900	OFCI - DOOR, HW AND HC OPERATOR. PROVIDE NEW FRAME AS SCHEDULED	114
219	45	219 GIRLS	PNL-F-WD	3'-0"	FRM-00HM1	0'-2"	0'-2"	0'-8 7/8"	PNT	5/A900	6/A900	OFCI - DOOR, HW AND HC OPERATOR. PROVIDE NEW FRAME AS SCHEDULED	219
220	45	220 BOYS	PNL-F-WD	3'-0"	FRM-00HM1	0'-2"	0'-2"	0'-8 7/8"	PNT	5/A900	6/A900	OFCI - DOOR, HW AND HC OPERATOR. PROVIDE NEW FRAME AS SCHEDULED	220

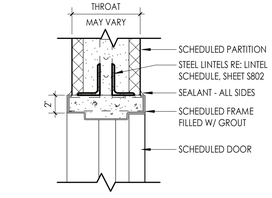
NOTE: DOOR 501 TO RECEIVE A NEW ALUMINUM COVER PLATE AT THE SILL - REFER TO HARDWARE SPEC



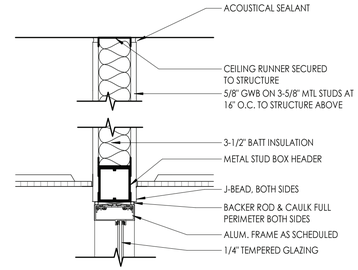
1 A900 **DOOR IN STUD - HEAD DETAIL**
1 1/2" = 1'-0"



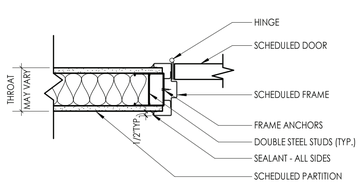
3 A900 **DOOR IN CMU - HEAD DETAIL**
1 1/2" = 1'-0"



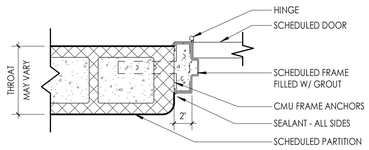
5 A900 **WRAPPED DOOR IN CMU - HEAD DETAIL**
1 1/2" = 1'-0"



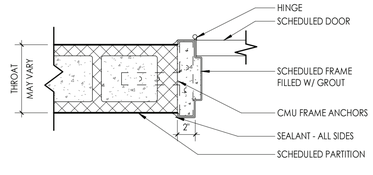
7 A900 **ALUM. STOREFRONT - HEAD DETAIL**
1 1/2" = 1'-0"



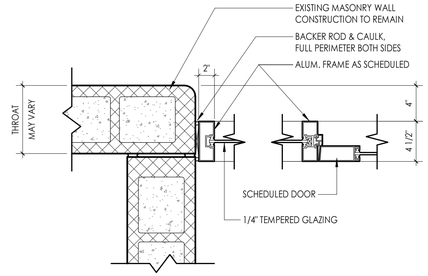
2 A900 **DOOR IN STUD - JAMB DETAIL**
1 1/2" = 1'-0"



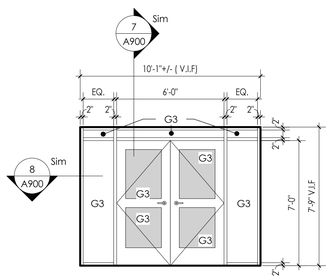
4 A900 **DOOR IN CMU - JAMB DETAIL**
1 1/2" = 1'-0"



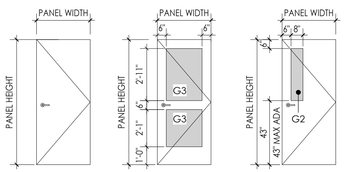
6 A900 **WRAPPED DOOR IN CMU - JAMB DETAIL**
1 1/2" = 1'-0"



8 A900 **ALUM. STOREFRONT - JAMB DETAIL**
1 1/2" = 1'-0"

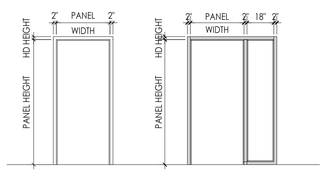


9 A900 **ALUM. STOREFRONT ELEVATION**
1/4" = 1'-0"



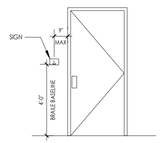
PNL-F-WD PNL-G2-WD PNL-G2-AL PNL-N-WD

DOOR PANEL TYPES
1/4" = 1'-0"

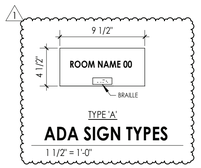


FRM-00 HM.1 (SINGLE) FRM-20 HM.1 (SINGLE W/ SIDELITE)

DOOR FRAME TYPES
1/4" = 1'-0"



ADA SIGN LOCATION
1/4" = 1'-0"



TYPE 'A'

ADA SIGN TYPES
1 1/2" = 1'-0"

SIGNAGE SCHEDULE

ROOM NAME/NUMBER	DOOR NUMBER	"TEXT"	TYPE	COMMENTS
RESOURCE ROOM 202A	202A	"ROOM 202A"	A	REFER TO PLAN FOR LOCATION
MAIN OFFICE 400	102B	"MAIN OFFICE"	A	REFER TO PLAN FOR LOCATION
MAIN OFFICE 400	400	"MAIN OFFICE"	A	REFER TO PLAN FOR LOCATION
MAIN OFFICE 400	400B	"OFFICE 400B"	A	REFER TO PLAN FOR LOCATION
MAIN OFFICE 400	400C	"OFFICE 400C"	A	REFER TO PLAN FOR LOCATION

DOOR AND FRAME NOTES

1. ALL FRAMES ARE TO RECEIVE FULL PERIMETER SEALANT. INTERIOR AND EXTERIOR
2. ALL DOOR AND WINDOW OPENING DIMENSIONS ARE TO BE VERIFIED IN FIELD AND COORDINATED WITH APPROVED SHOP DRAWINGS PRIOR TO FABRICATION.
3. SEE SCHEDULE FOR DOOR & FRAME MATERIAL

DOOR AND FRAME SCHEDULE LEGEND

NOTE: THIS LEGEND MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PROJECT.

DOOR OR FRAME MATERIAL

ACR	ACROVYN DOOR
ACR-L	ACROVYN LEAD LINED DOOR
ALUM	ALUMINUM
HM	HOLLOW METAL
HM-L	HOLLOW METAL LEAD LINED
IHM	INSULATED HOLLOW METAL
WD	WOOD
WD-L	WOOD LEAD LINED

DOOR OR FRAME FINISH

PTD	PAINT
ST	WOOD STAIN
DB	DARK BRONZE(ANODIZED)
SS	STAINLESS STEEL
BE	BAKED ENAMEL
MFR	MANUFACTURER

GLAZING TYPES

G1 - INSULATED GLAZING

G2 - FIRE RATED GLAZING

G3 - TEMPERED GLAZING

NOTE: NEW FRAMES TO BE PAINTED TO MATCH EXISTING ADJACENT.

CPL | Architecture Engineering Planning
50 Front Street Suite 202,
Newburgh, NY 12550
CPLeam.com

SOUTH ORANGETOWN Central School District

Capital Improvements Bond

Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- ☐ WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- ■ COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- ☐ TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- ☐ WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- ☐ COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- ☐ COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- ☐ WOS OUTDOOR CLASSROOM SED#:50-03-01-06-7-053-001
- ☐ SOMS OUTDOOR CLASSROOM SED#:50-03-01-06-7-056-001
- ☐ CLE OUTDOOR CLASSROOM SED#:50-03-01-06-7-054-001
- ☐ TZHS OUTDOOR CLASSROOM SED#:50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/23	BID ADDENDUM #4

PROFESSIONAL STAMPS

SHEET INFORMATION

Issued	Scale
10/18/23	As indicated

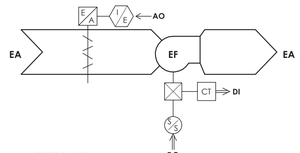
Project Status
BID DOCUMENTS

Drawn By	Checked By
LF	LT

Drawing Title
DOOR TYPES & SCHEDULES

Drawing Number
CLE
A900

11/15/2023 2:43:00 PM <project location> REVIT PROJECT FILES ON BIM360



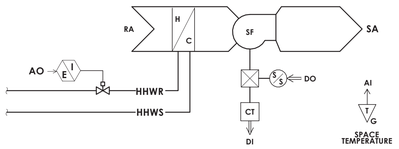
A. RELIEF FANS:

1. OCCUPIED MODE:
   a. ENABLE FAN AND OPEN DAMPER WHEN ASSOCIATED UNIT VENTILATOR IS ON.
   b. ENABLE FAN AT MINIMUM SCHEDULED AIRFLOW UNLESS ANY OF THE ASSOCIATED UNIT VENTILATORS ARE IN ECONOMIZER MODE.
   c. WHEN THE ASSOCIATED UNIT VENTILATORS ARE IN ECONOMIZER MODE, MODULATE FAN BEYOND IT'S MINIMUM SCHEDULED AIR FLOW BASED ON THE AVERAGE OUTDOOR AIR DAMPER POSITION OF THE ASSOCIATED UNITS.
   1) UN-OCCUPIED MODE:
      a. DISABLE FAN, CLOSE DAMPER.

2) ALARMS
   a. FAN FAILS TO RUN AFTER 30 SECONDS OF BEING COMMANDED ON.
   b. FAN FAILS TO STOP AFTER 30 SECONDS OF BEING COMMANDED OFF.

1 H500 RELIEF FAN CONTROLS

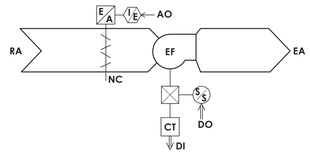
NOT TO SCALE



A. HYDRONIC UNIT HEATERS:
   1. MODULATE THE CONTROL VALVE AS NECESSARY TO MAINTAIN SPACE TEMPERATURE HEATING SET POINT.
   2. ALARMS
      a. SPACE TEMPERATURE HIGH/LOW LIMITS.

2 H500 UNIT HEATER CONTROLS SCHEMATIC

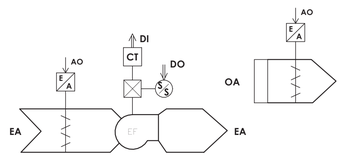
NOT TO SCALE



A. EXHAUST FANS:
   a. OCCUPIED MODE: OPEN DAMPER AND ENABLE FAN AFTER 15-SECOND DELAY.
   b. UNOCCUPIED MODE: DISABLE FAN AND MODULATE DAMPER TO FULL CLOSED POSITION AFTER 15-SECOND DELAY.
2. ALARMS
   a. FAN FAILS TO RUN AFTER 30 SECONDS OF BEING COMMANDED ON.
   b. FAN FAILS TO STOP AFTER 30 SECONDS OF BEING COMMANDED OFF.

3 H500 TOILET EXHAUST CONTROLS DIAGRAM

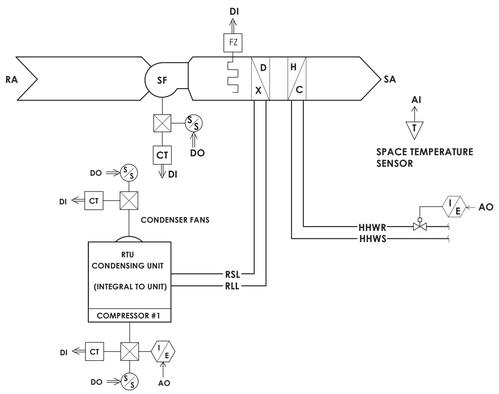
SCALE: NOT TO SCALE



A. EXHAUST FANS:
   a. OCCUPIED MODE: OPEN DAMPER AND ENABLE FAN AFTER 15-SECOND DELAY.
   b. UNOCCUPIED MODE: DISABLE FAN AND MODULATE DAMPER TO FULL CLOSED POSITION AFTER 15-SECOND DELAY.
2. ALARMS
   a. FAN FAILS TO RUN AFTER 30 SECONDS OF BEING COMMANDED ON.
   b. FAN FAILS TO STOP AFTER 30 SECONDS OF BEING COMMANDED OFF.

4 H500 HOOD EXHAUST FAN CONTROLS DIAGRAM EF-1

NOT TO SCALE

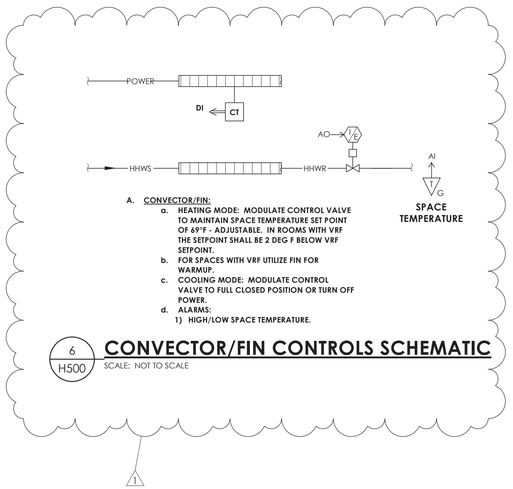


5 H500 FAN COIL TYPICAL CONTROLS DIAGRAM

SCALE: NOT TO SCALE

A. HYDRONIC FAN COIL UNIT:
   1. ASSIGN EACH FAN COIL UNIT A STAGGER START NUMBER TO KEEP TOO MANY UNITS FROM STARTING AT THE SAME TIME. IN EFFECT, THIS FLATTENS LOAD PEAKS.
   2. WARM-UP MODE CONTROL:
      a. OPTIMUM START DURATION SHALL BE DETERMINED BASED ON OUTSIDE AIR TEMPERATURE.
      b. DURING THE OPTIMUM START PERIOD, THE HEATING SET-POINT WILL BE LINEARLY RAMPED UP FROM UNOCCUPIED HEATING SET-POINT TO OCCUPIED HEATING SET-POINT.
      c. WHEN THE HEATING SET-POINT CROSSES ABOVE THE SPACE TEMPERATURE, THE SUPPLY FAN WILL BE COMMANDED ON. THE MIXING DAMPERS SHALL REMAIN IN THE FULL RETURN AIR POSITION AND THE HEATING VALVE WILL MODULATE TO MAINTAIN HEATING SET-POINT.
   3. COOL-DOWN MODE CONTROL:
      a. OPTIMUM START DURATION SHALL BE DETERMINED BASED ON OUTSIDE AIR TEMPERATURE.
      b. DURING THE OPTIMUM START PERIOD, THE COOLING SET-POINT WILL BE LINEARLY RAMPED DOWN FROM UNOCCUPIED COOLING SET-POINT TO OCCUPIED COOLING SET-POINT.
      c. WHEN THE COOLING SET-POINT CROSSES BELOW THE SPACE TEMPERATURE, THE SUPPLY FAN WILL BE COMMANDED ON. THE MIXING DAMPERS SHALL MODULATE TO THE FULL RETURN AIR POSITION AND THE CONDENSING UNIT SHALL MODULATE TO MAINTAIN THE SPACE COOLING SET-POINT.
   4. OCCUPIED MODE:
      a. SUPPLY FAN:
         1) ENABLE CONTINUOUSLY.
      b. MIXED AIR DAMPER:
         1) OPEN TO MAINTAIN OUTSIDE AIR QUANTITY AS SCHEDULED, OUTSIDE AIR DAMPER SHALL NEVER BE POSITIONED BELOW THIS MINIMUM EXCEPT IN CASE OF EMERGENCY.
      c. OCCUPIED HEATING MODE (OAT IS ABOVE 55°F AND SPACE TEMPERATURE BELOW SET POINT)
         1) MODULATE HHW COIL CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE SET POINT AND MINIMUM DISCHARGE AIR SET POINT.
            a) MINIMUM LEAVING AIR TEMPERATURE RESET SCHEDULE:
               65 DEGREE LAT AT 0 DEGREE OAT.
               55 DEGREE LAT AT 55 DEGREE OAT.
         2) MODULATE THE CONDENSING UNIT TO THE OFF POSITION.
      d. OCCUPIED COOLING MODE (OAT IS ABOVE 60°F AND SPACE TEMPERATURE IS ABOVE SET POINT)
         1) MODULATE THE HHW COIL CONTROL VALVE TO THE FULL CLOSED POSITION.
         2) MODULATE THE CONDENSING UNIT TO MAINTAIN THE SPACE TEMPERATURE SETPOINT.
   5. UNOCCUPIED MODE:
      a. SUPPLY FAN:
         START (2°F BELOW HEATING SET POINT) AND STOP (1°F ABOVE HEATING SET POINT) TO MAINTAIN SPACE TEMPERATURE SET POINT.
      b. MIXED AIR DAMPER:
         FULLY RETURN AIR POSITION.
      c. HOT WATER COIL CONTROL VALVE:
         SAME AS OCCUPIED MODE.
      d. CONDENSING UNIT
         - MODULATE TO FULL CLOSED POSITION UNLESS NIGHT COOLING IS REQUIRED. WHEN NIGHT COOLING IS REQUIRED, MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT.
   6. ALARMS - PROVIDE AN ALARM FOR EACH OF THE FOLLOWING:
      a. FAN FAILS TO RUN AFTER 30 SECONDS OF BEING COMMANDED ON.
      b. FAN FAILS TO STOP AFTER 30 SECONDS OF BEING COMMANDED OFF.
      c. SOFTWARE SAFETY TRIP.
      d. SOFTWARE SAFETY LOCKOUT (4 SAFETY TRIPS IN 3 HOURS).
      e. LOW OR HIGH DISCHARGE AIR TEMPERATURES.
      f. LOW OR HIGH SPACE TEMPS.

A. UNIT VENTILATORS WITH COOLING:
   1. ASSOCIATED EQUIPMENT IS FIN-TUBE RADIATION WHERE INDICATED ON PLANS.
   2. UNIT VENTILATOR SHALL OPERATE IN OCCUPIED/UNOCCUPIED MODES AS DETERMINED BY THE DDC BUILDING TIME CLOCK SYSTEM AND BY OCCUPANCY SENSOR.
   3. ASSIGN EACH UNIT VENTILATOR A STAGGER START NUMBER TO KEEP TOO MANY UNITS FROM STARTING AT THE SAME TIME. IN EFFECT, THIS FLATTENS LOAD PEAKS.
   4. OCCUPIED HEATING SET-POINT, UNOCCUPIED HEATING SET-POINT, UNOCCUPIED COOLING SET-POINT AND PURGE ENABLE/DISABLE SHALL BE GLOBAL AND FULLY ADJUSTABLE FROM ANY INTERFACE.
   5. OUTSIDE AIR IS ADMITTED TO MEET VENTILATION AND COOLING REQUIREMENTS AS OUTLINED IN THE INDIVIDUAL UNIT SEQUENCES. MECHANICAL COOLING, IF EQUIPPED IS UTILIZED AS OUTLINED IN THE INDIVIDUAL UNIT SEQUENCES.
   6. EACH UNIT VENTILATOR SHALL HAVE A SOFTWARE HOA FOR CONTROL OF THE SUPPLY FAN.
   7. WIRE THE SUPPLY FAN NORMALLY OPEN AT THE CONTROL RELAY AND FAIL OFF.
   8. CONTROL CYCLE TO FOLLOW ASHRAE CYCLE II STANDARD.
   9. OCCUPIED ECONOMIZER COOLING MODE - WHEN THERE IS CALL FOR COOLING AND THE OUTDOOR AIR TEMPERATURE IS BELOW THE SPACE TEMPERATURE.
      a. ECONOMIZER COOLING SET POINT: 74°F.
      b. FULLY OPEN RECIRCULATION DAMPER.
      c. IF THE SPACE TEMPERATURE RISES ABOVE THE COOLING SETPOINT OF 75 DEGREES F (ADJUSTABLE), AND THE CONTROLS INDICATES THAT ECONOMIZER OPERATION IS NOT APPROPRIATE, THE OUTSIDE AIR DAMPERS WILL MODULATE CLOSE TO MINIMUM POSITION AND THE COOLING CONTROL VALVE WILL MODULATE.
      d. ECONOMIZER OPERATION SHALL USE AN ALGORITHM COMPARING INDOOR AIR AND OUTDOOR AIR ENTHALPY TO DETERMINE IF COOLING OR ASSISTED COOLING IS VIABLE. COOLING AND ECONOMIZER COOLING WILL BE ALLOWED TO OPERATE SIMULTANEOUSLY IF THE ALGORITHM CONFIRMS ASSISTED COOLING IS VIABLE.
      e. THE CONTROLS WILL MONITOR FAN STATUS AND GENERATE AN ALARM WHENEVER THE FAN IS COMMANDED ON BUT THE STATUS INDICATES OFF. ALARMS WILL ALSO BE GENERATED IF A FREEZE CONDITION EXISTS OR IF A LOW SPACE TEMPERATURE IS DETECTED.
   10. PURGE MODE CONTROL:
      a. PURGE MODE (FRESH AIR CHANGEOVER) SHALL ONLY BE PERMITTED DURING AN UNOCCUPIED PERIOD.
      b. IF THE OUTSIDE AIR IS BETWEEN 45°F AND 60°F AND THE SPACE TEMPERATURE RISES ABOVE 75°F, THE SUPPLY FAN SHALL BE COMMANDED ON. THE MIXING DAMPERS SHALL BE FULLY OPEN. THE HEATING COIL SHALL BE FULLY CLOSED AND THE INTEGRAL RELIEF FAN OR ASSOCIATED EXHAUST FAN SHALL BE ENABLED AT THE MAXIMUM AIRFLOW. WHEN THE SPACE TEMPERATURE DROPS TO 70°F, THE FANS SHALL BE COMMANDED OFF AND THE MIXING DAMPERS SHALL RETURN TO THE NORMAL POSITION.
   11. WARM-UP MODE CONTROL:
      a. OPTIMUM START DURATION SHALL BE DETERMINED BASED ON OUTSIDE AIR TEMPERATURE.
      b. DURING THE OPTIMUM START PERIOD, THE HEATING SET-POINT WILL BE LINEARLY RAMPED UP FROM UNOCCUPIED HEATING SET-POINT TO OCCUPIED HEATING SET-POINT.
      c. WHEN THE HEATING SET-POINT CROSSES ABOVE THE SPACE TEMPERATURE, THE SUPPLY FAN WILL BE COMMANDED ON, THE MIXING DAMPERS SHALL REMAIN CLOSED AND THE HEATING VALVE WILL MODULATE TO MAINTAIN HEATING SET-POINT.
   12. COOL-DOWN MODE CONTROL:
      a. OPTIMUM START DURATION SHALL BE DETERMINED BASED ON OUTSIDE AIR TEMPERATURE.
      b. DURING THE OPTIMUM START PERIOD, THE COOLING SET-POINT WILL BE LINEARLY RAMPED DOWN FROM UNOCCUPIED COOLING SET-POINT TO OCCUPIED COOLING SET-POINT.
      c. WHEN THE COOLING SET-POINT CROSSES BELOW THE SPACE TEMPERATURE, THE SUPPLY FAN WILL BE COMMANDED ON, THE MIXING DAMPERS SHALL MODULATE TO MAINTAIN COOLING SET-POINT.
   13. OCCUPIED MODE:
      a. UNIT VENTILATOR:
         1) SUPPLY FAN:
            a) ENABLE CONTINUOUSLY.
         2) OUTSIDE AIR DAMPER:
            a) OPEN TO MAINTAIN OUTSIDE AIR QUANTITY AS SCHEDULED, OUTSIDE AIR DAMPER SHALL NEVER BE POSITIONED BELOW THIS MINIMUM EXCEPT IN CASE OF EMERGENCY.
            b) MODULATE OUTSIDE AIR DAMPER BEYOND SCHEDULED MINIMUM POSITION AS FOLLOWS:
               MAINTAIN VENTILATION COOLING TEMPERATURE SET POINT.
         3) HOT WATER COIL CONTROL VALVE:
            a) LAT SCHEDULE
               UTILIZE DISCHARGE AIR MINIMUM TEMPERATURE RESET SCHEDULE AS OUTLINED BELOW.
               55°F LAT AT 55°F OAT
               65°F LAT AT 0°F OAT.
               UTILIZE DISCHARGE AIR TEMPERATURE PID LOOP TO MAINTAIN SPACE TEMPERATURE SET POINT AND MINIMUM LAT.
            b) OUTSIDE AIR TEMPERATURE DROPS BELOW 35 DEGREES:
               MODULATE FULL OPEN. (VALVE SHALL STAY FULL OPEN UNTIL O.A. RISES ABOVE 38 DEGREES).
            c) OUTSIDE AIR TEMPERATURE ABOVE 38 DEGREES:
               MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT. MODULATE TO MAINTAIN 65 DEGREE MINIMUM DISCHARGE AIR TEMPERATURE DURING HEATING MODE.
         4) COIL FACE AND BY-PASS DAMPER :
            a) OUTSIDE AIR TEMPERATURE DROPS BELOW 35 DEGREES:
               MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT. MODULATE TO MAINTAIN 65 DEGREE MINIMUM DISCHARGE AIR TEMPERATURE.
               MODULATE UNTIL O.A. RISES ABOVE 38 DEGREES.
            b) OUTSIDE AIR TEMPERATURE ABOVE 38 DEGREES:
               POSITION TO FULL COIL FACE POSITION.
         5) RA DAMPER:
            a) MODULATE WITH OUTSIDE AIR DAMPER TO MAINTAIN THE FOLLOWING BALANCE: RA CFM = SA CFM - OA CFM.
         6) COOLING COIL (AS INDICATED ON THE DRAWINGS):
            a) MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT.
   14. UNOCCUPIED MODE BY OCCUPANCY SENSOR DURING DDC SCHEDULED OCCUPIED PERIOD
      a. DURING THE SCHEDULED OCCUPIED MODE, WHEN THE SPACE IS UNOCCUPIED AS SENSED BY THE ROOM OCCUPANCY SENSOR, THE DAMPER WILL BE CLOSED TO OUTSIDE AIR.
      b. IN HEATING MODE, THE SPACE TEMPERATURE SET-POINT SHALL BE RESET TO 2°F (ADJUSTABLE) LOWER THAN THE OCCUPIED SET-POINT. IN COOLING MODE, THE SPACE TEMPERATURE SET-POINT SHALL BE RESET TO 2°F (ADJUSTABLE) HIGHER THAN THE OCCUPIED SET-POINT.
      c. THE SUPPLY FAN SHALL CYCLE ON AND OFF TO MAINTAIN THE SPACE TEMPERATURE SET-POINT. IN HEATING MODE, THE FINNED-TUBE CONTROL VALVE SHALL CONTINUE TO MODULATE TO MAINTAIN THE SPACE TEMPERATURE SET POINT. IF THE SPACE TEMPERATURE DROPS 1°F BELOW IN THE RESET HEATING SET-POINT, THE SUPPLY FAN SHALL BE COMMANDED ON, THE MIXING DAMPER SHALL REMAIN CLOSED AND THE HEATING VALVE SHALL MODULATE OPEN. WHEN THE SPACE TEMPERATURE RISES 1°F ABOVE THE RESET HEATING SET-POINT, THE SUPPLY FAN SHALL BE COMMANDED OFF. IN COOLING MODE, IF THE SPACE TEMPERATURE RISES 1°F ABOVE IN THE RESET COOLING SET-POINT, THE SUPPLY FAN SHALL BE COMMANDED ON, THE MIXING DAMPER SHALL REMAIN CLOSED AND THE COOLING VALVE SHALL MODULATE OPEN. WHEN THE SPACE TEMPERATURE DROPS 1°F BELOW THE RESET COOLING SET-POINT, THE SUPPLY FAN SHALL BE COMMANDED OFF.
      d. WHEN THE SPACE IS OCCUPIED AS SENSED BY THE ROOM OCCUPANCY SENSOR, THE SEQUENCE SHALL BE INDEXED TO THE OCCUPIED MODE.
   15. UNOCCUPIED MODE BY DDC SCHEDULE:
      a. UNIT VENTILATORS
         1) SUPPLY FAN:
            START (2°F BELOW HEATING SET POINT) AND STOP (1°F ABOVE HEATING SET POINT) TO MAINTAIN SPACE TEMPERATURE SET POINT.
         2) OUTSIDE AIR DAMPER:
            FULLY CLOSED.
         3) HOT WATER COIL CONTROL VALVE:
            SAME AS OCCUPIED MODE.
         4) COIL FACE AND BY-PASS DAMPER:
            SAME AS OCCUPIED MODE.
         5) RA DAMPER:
            FULLY OPEN.
         6) COOLING CONTROL:
            - MODULATE TO FULL CLOSED POSITION UNLESS NIGHT COOLING IS REQUIRED. WHEN NIGHT COOLING IS REQUIRED, MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT.
   16. ALARMS - PROVIDE AN ALARM FOR EACH OF THE FOLLOWING:
      a. FAN FAILS TO RUN AFTER 30 SECONDS OF BEING COMMANDED ON.
      b. FAN FAILS TO STOP AFTER 30 SECONDS OF BEING COMMANDED OFF.
      c. SOFTWARE SAFETY TRIP.
      d. SOFTWARE SAFETY LOCKOUT (4 SAFETY TRIPS IN 3 HOURS).
      e. LOW OR HIGH DISCHARGE AIR TEMPERATURES.
         1) IF THE DISCHARGE AIR TEMPERATURE FALLS BELOW 40°F (ADJUSTABLE) IN HEATING MODE, OPEN THE HEATING HOT WATER CONTROL VALVE, CLOSE THE OUTDOOR AIR DAMPER AND TURN OFF ALL FANS.
      f. LOW OR HIGH SPACE TEMPERATURES.



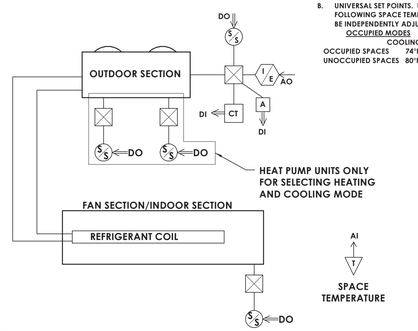
A. CONVECTOR/FIN:
   a. HEATING MODE: MODULATE CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE SET POINT OF 69°F - ADJUSTABLE. IN ROOMS WITH VRF THE SETPOINT SHALL BE 2 DEG F BELOW VRF SETPOINT.
   b. FOR SPACES WITH VRF UTILIZE FIN FOR WARMUP.
   c. COOLING MODE: MODULATE CONTROL VALVE TO FULL CLOSED POSITION OR TURN OFF POWER.
   d. ALARMS:
      1) HIGH/LOW SPACE TEMPERATURE.

6 H500 CONVECTOR/FIN CONTROLS SCHEMATIC

SCALE: NOT TO SCALE

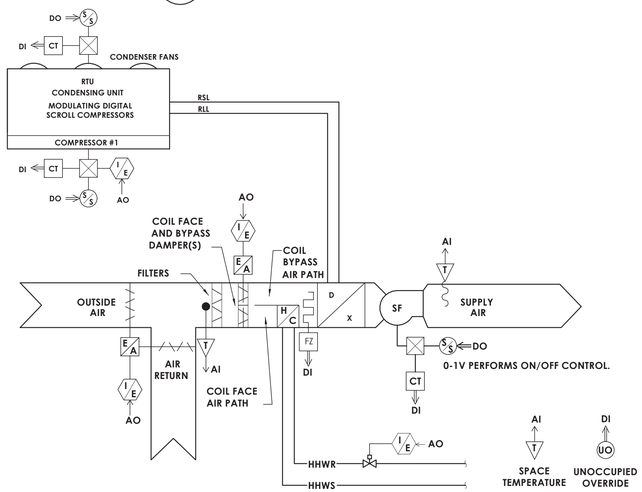
A. SPLIT SYSTEM AIR CONDITIONING UNITS:
   1. COOLING MODE
      a. ENABLE SPLIT SYSTEM
      b. MODULATE TO MAINTAIN SPACE TEMPERATURE SET POINT.
   2. ALARMS
      a. EQUIPMENT FAILURE
      b. HIGH/LOW SPACE TEMP.
      c. HIGH WATER LEVEL IN DRAIN PAN

COORDINATE WITH VRF MANUFACTURER TO PROVIDE BMS CONTROL OF SPACE TEMPERATURE SET POINTS, OCCUPIED/UNOCCUPIED MODES, HEATING COOLING MODES AND LOAD DEMAND.



7 H500 SPLIT SYSTEMS

NOT TO SCALE



8 H500 UNIT VENTILATOR CONTROL SCHEMATIC

SCALE: NOT TO SCALE

ALTERNATE MC-01 - PROVIDE NEW FULL BUILDING CONTROLS AND ALL ASSOCIATED COMPONENTS TO HAVE A NEW HEAD END AND FULLY OPERATIONAL SYSTEM. PROVIDE CONTROLS TO ALL EXISTING TO REMAIN EQUIPMENT.
BASE BID - PROVIDE CONTROLS AND NEW HEAD END FOR THE NEW EQUIPEMENT.
SEE PLANS FOR QUANTITY AND LOCATION, FOR BOTH SCHOOLS.
VERIFY ALL EXISTING CONTROL SEQUENCES BEFORE THE COMMENCEMENT OF ANY DEMOLITION WORK.

GENERAL NOTES:

1. SEQUENCES OF OPERATION SPECIFIED HEREIN, WHICH INDICATE THE FUNCTIONAL INTENT OF HVAC SYSTEMS, SUBSYSTEMS, AND/OR COMPONENTS OPERATION, ARE GENERAL IN NATURE AND MAY NOT FULLY DEFINE EVERY ASPECT OF PROGRAMMING THAT MAY BE REQUIRED TO FULFILL THE DESIGN INTENT. CONTRACTOR SHALL PROVIDE ALL PROGRAMMING AND HARDWARE NECESSARY TO OBTAIN THE SEQUENCES/SYSTEM OPERATION INDICATED, RESULTING IN STABLE HVAC SYSTEM OPERATION IN ACCORDANCE WITH THE DESIGN INTENT. THE SYSTEM SHALL COMMUNICATE WITH THE EXISTING BMS.

1.1 HVAC CONTROL SEQUENCES :

A. GENERAL
   1. ALL SET POINTS, CHANGEOVER POINTS AND RESET SCHEDULES SHALL BE USER ADJUSTABLE.
   2. CONTROL ALGORITHMS SHALL UTILIZE TUNED PID LOOPS TO MAINTAIN SET POINTS AND MINIMUM/MAXIMUM LEAVING AIR TEMPERATURES OPTIMALLY.
   3. COORDINATE INDIVIDUAL ALARM NOTIFICATIONS WITH OWNER.
   4. ALARMS SHALL BE CONFIGURED AS STATUS ONLY OR CRITICAL. STATUS ONLY ALARMS SHALL DISPLAY ALARM ON THE OWNER COORDINATED WORKSTATION(S) AND DEVICE(ES). CRITICAL ALARMS SHALL INCORPORATE COORDINATED UNIT SHUTDOWN ALONG WITH DISPLAYING ALARMS ON THE OWNER COORDINATED DEVICES AND REQUIRE THE ALARM TO BE CLEARED PRIOR TO RESTARTING THE EQUIPMENT.
   5. ALL HVAC EQUIPMENT SHALL OPERATE IN OCCUPIED/UNOCCUPIED MODES AS DETERMINED BY THE DDC BUILDING TIME CLOCK SYSTEM. OBTAIN THE BUILDING OCCUPANCY SCHEDULE FROM THE OWNER.
   6. ALL EQUIPMENT SHALL UTILIZE OPTIMUM START/STOP PROGRAMS.
   7. ASSIGN ALL EQUIPMENT A STAGGER START NUMBER TO KEEP TO MANY UNITS FROM STARTING AT THE SAME TIME. IN EFFECT, THIS FLATTENS LOAD PEAKS. THIS INCLUDES START-UP ON EMERGENCY POWER.
   8. UNOCCUPIED OVERRIDE BUTTONS SHALL PLACE THE SPACE EQUIPMENT IN OCCUPIED MODE FOR A PERIOD OF ONE-HOUR (ADJUSTABLE).
   9. COORDINATE CHILLED WATER VALVE AND CHILLED WATER PUMP RESPONSE TIME WITH THE CHILLER MANUFACTURER'S MAXIMUM RATE OF CHANGE IN CHILLED WATER FLOW.
8. UNIVERSAL SET POINTS. UNLESS OTHERWISE NOTED, USE THE FOLLOWING SPACE TEMPERATURE SET POINTS. SET POINTS SHALL BE INDEPENDENTLY ADJUSTABLE BY SPACE THROUGH THE BMS.

	OCCUPIED MODES		UNOCCUPIED MODES	
	COOLING	HEATING	COOLING	HEATING
OCCUPIED SPACES	74°F	69°F	85°F	55°F
UNOCCUPIED SPACES	80°F	60°F	85°F	55°F

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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
1457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
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- COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT

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SHEET INFORMATION

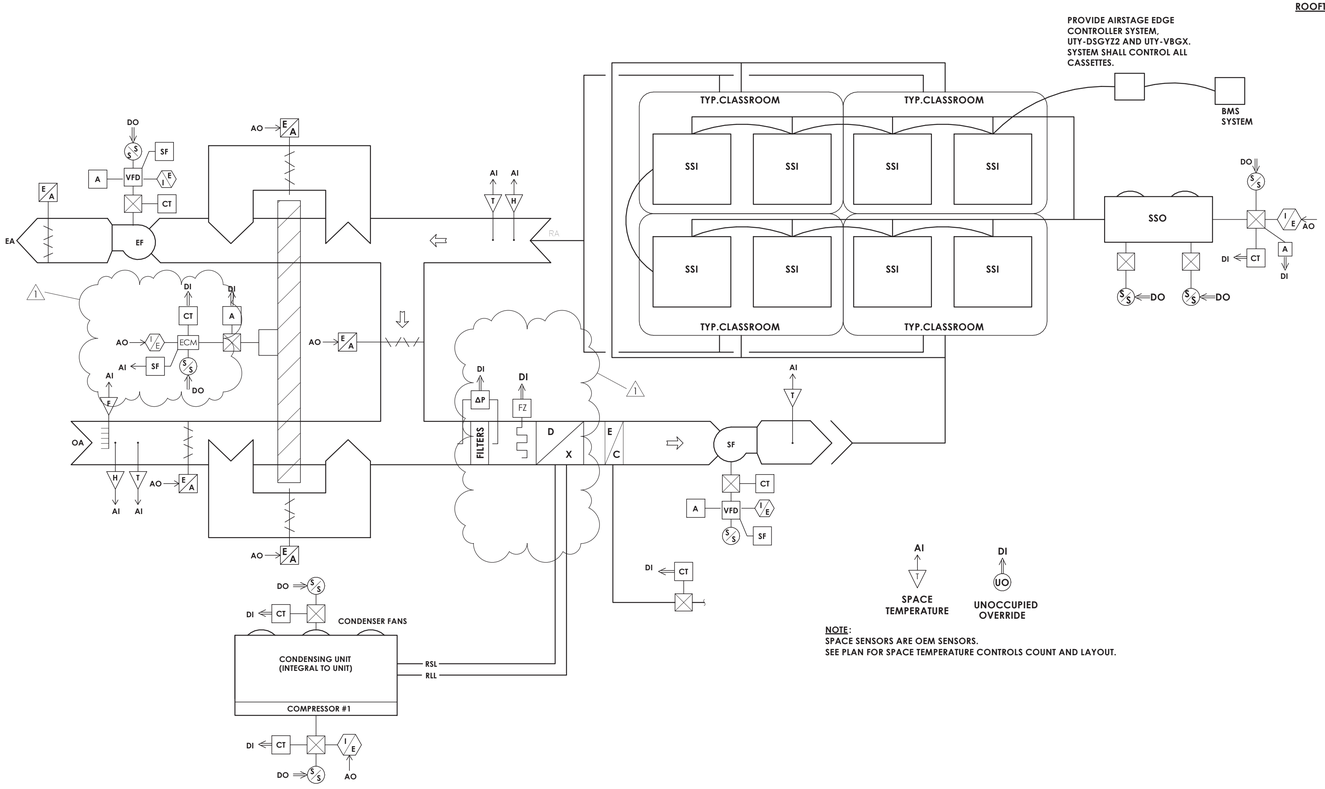
Issued	Scale
10/18/2023	12" = 1'-0"

Project Status
BID DOCUMENTS

Drawn By	Checked By
KCM	JJM

Drawing Title
MECHANICAL CONTROLS

Drawing Number
GEN
H500

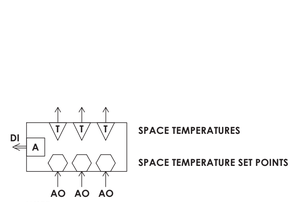


NOTE:
SPACE SENSORS ARE OEM SENSORS.
SEE PLAN FOR SPACE TEMPERATURE CONTROLS COUNT AND LAYOUT.

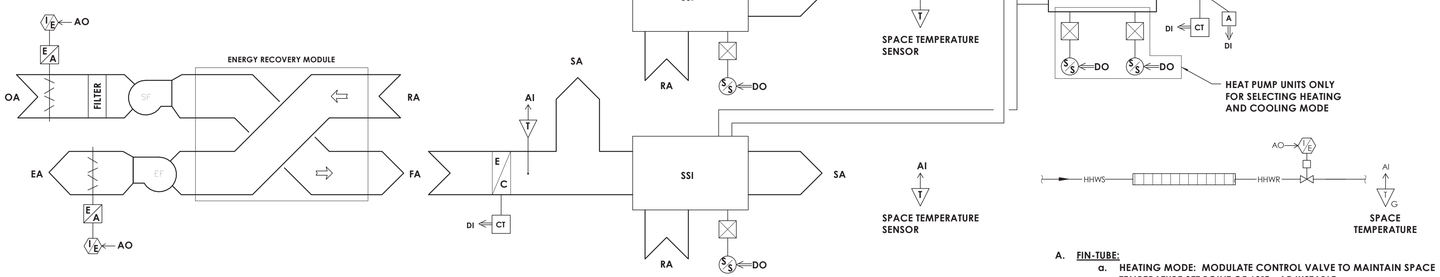
1 H501 TYPICAL CLASSROOM DOAS CONTROLS DIAGRAM

SCALE: NOT TO SCALE

A. ENERGY RECOVERY UNITS:
1. OCCUPIED MODE
   a. ENABLE SUPPLY AND EXHAUST EC FAN MOTORS AT ALL TIMES.
      1) ENERGIZE THE DUCT MOUNTED HEATING COIL TO MAINTAIN THE DUCT TEMPERATURE SET POINT.
2. UNOCCUPIED MODES
   a. SEQUENCE OF OPERATIONS IN UNOCCUPIED MODE IS THE SAME AS OCCUPIED MODE EXCEPT THE ERU SHALL BE DISABLED UNLESS THERE IS A CALL FOR HEATING OR COOLING. CONTROL VALVES SHALL BE CLOSED UNLESS THE ERU IS ENABLED.
3. ALARMS
   a. FAN START FAILURE.
   b. FAN STOP FAILURE.
   c. HIGH/LOW DISCHARGE AIR TEMPS.
   d. HIGH/LOW COIL ENTERING AIR TEMPS
   e. HIGH WATER LEVEL IN DRAIN PAN
   f. DIRTY FILTER



NOTE:
SPACE SENSORS ARE VRF OEM SENSORS.
REFERENCE PLANS FOR QUANTITY AND LOCATIONS.



VRF MANUFACTURER TO PROVIDE CONTROL OF SPACE TEMPERATURE SET POINTS, OCCUPIED/UNOCCUPIED MODES, HEATING, COOLING MODES AND LOAD DEMAND.

A. FIN-TUBE:
   a. HEATING MODE: MODULATE CONTROL VALVE TO MAINTAIN SPACE TEMPERATURE SET POINT OF 69°F - ADJUSTABLE.
   b. COOLING MODE: MODULATE CONTROL VALVE TO FULL CLOSED POSITION.
   c. ALARMS:
      1) HIGH/LOW SPACE TEMPERATURE.

2 H501 OFFICE VRF SYSTEM CONTROLS SCHEMATIC

SCALE: NOT TO SCALE

ROOFTOP DEDICATED OUTSIDE AIR SYSTEMS (DOAS) - ENERGY RECOVERY UNITS:

1. OCCUPIED
   A. THE BMS WILL START THE UNIT SUPPLY AND RELIEF/EXHAUST FANS BASED ON A TIME-OF-DAY SCHEDULE. THE FANS WILL BE ENERGIZED CONTINUOUSLY WHENEVER THE ZONE IS SCHEDULED TO BE OCCUPIED. THE OUTSIDE AIR DAMPERS SHALL OPEN FULLY TO PROVIDE THE MINIMUM REQUIRED OUTSIDE AIR TO MEET THE VOLUMETRIC FLOW RATES INDICATED ON THE VENTILATION SCHEDULE. THE RELIEF AIR VENTILATOR DAMPER SHALL INDEX OPEN TO MATCH THE POSITION OF THE OUTSIDE AIR DAMPER TO EQUALIZE THE VOLUME OF RELIEF AIR WITH THE VOLUME OF OUTSIDE AIR. THE BMS WILL MONITOR THE DISCHARGE AIR TEMPERATURE.
   B. THE INTEGRAL AIR-COOLED HEAT PUMP WILL OPERATE HEATING AND COOLING OPERATION TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT.
   C. THE SUPPLEMENTAL HEATING COIL WILL REMAIN OFF DURING NORMAL UNIT OPERATION.
   D. WHEN THE OUTSIDE AIR TEMPERATURE IS BELOW 10 DEG. F, THE HEAT PUMP WILL BE DISABLED, AND THE ELECTRIC COIL SHALL MAINTAIN THE DOWNSTREAM SUPPLY AIR TEMPERATURE SETPOINT.
   E. IF THE CONNECTED SPACES ARE CALLING FOR COOLING, AND THE BMS INDICATES THAT ECONOMIZER OPERATION IS APPROPRIATE, THE BYPASS DAMPERS WILL MODULATE OPEN TO MAINTAIN THE DISCHARGE AIR TEMPERATUE SETPOINT. THE ELECTRIC COIL WILL BE OFF. THE OUTSIDE AIR DAMPER WILL BE RESTRICTED TO LIMIT THE MINIMUM DISCHARGE AIR TEMPERATURE TO A SETPOINT OF 55 DEGREES F (ADJUSTABLE) WHILE THE SPACE TEMPERATURE IS ABOVE THE COOLING SETPOINT.
   F. IF THE SPACE TEMPERATURE RISES ABOVE THE COOLING SETPOINT OF 74 DEGREES F (ADJUSTABLE), AND THE BMS INDICATES THAT ECONOMIZER OPERATION IS NOT APPROPRIATE, THE OUTSIDE AIR DAMPERS WILL MODULATE CLOSE TO MINIMUM POSITION AND COOLING WILL BE ENABLED.
   G. ECONOMIZER OPERATION SHALL USE AN ALGORITHM COMPARING INDOOR AIR AND OUTDOOR AIR ENTHALPY TO DETERMINE IF COOLING OR ASSISTED COOLING IS VIABLE. DX COOLING AND ECONOMIZER COOLING WILL BE ALLOWED TO OPERATE SIMULTANEOUSLY IF THE ALGORITHM CONFIRMS ASSISTED COOLING IS VIABLE.
   H. ENERGY RECOVERY WHEEL CONTROL
      1) THE ENERGY RECOVERY WHEEL MOTOR WILL BE ENABLED WHENEVER THE SUPPLY AND RETURN/EXHAUST FANS ARE ENABLED EXCEPT AS NOTED HERE:
   (A) THE ENERGY RECOVERY WHEEL MOTOR SHALL BE DISABLED WHEN THE BMS DETERMINES THAT IT IS BENEFICIAL TO USE ADDITIONAL OUTSIDE AIR FOR COOLING (ECONOMIZER MODE).
   (B) THE ENERGY RECOVERY WHEEL MOTOR SHALL BE DISABLED FOR TWO MINUTES OUT OF EACH 30 MINUTE PERIOD WHEN THE OUTDOOR AIR TEMPERATURE IS AT OR BELOW ZERO DEGREES F (DEFROST CYCLE).
   I. THE BMS WILL MONITOR FAN STATUS AND GENERATE AN ALARM WHENEVER THE FAN IS COMMANDED ON BUT THE STATUS INDICATES OFF. ALARMS WILL ALSO BE GENERATED IF A FREEZE CONDITION EXISTS OR IF A LOW DISCHARGE AIR TEMPERATURE IS DETECTED.
2. UNOCCUPIED
   A. WHEN THE ZONE IS SCHEDULED TO BE UNOCCUPIED, THE FANS WILL BE DISABLED, AND THE OUTSIDE AIR DAMPER WILL BE CLOSED.
3. ALARMS
   A. FAN FAILURE
      1) IF STATUS OF A FAN, WHICH HAS BEEN CALLED BY THE BMS SYSTEM TO START, HAS NOT BEEN VERIFIED AS RUNNING WITHIN A PERIOD OF 10 SECONDS (ADJ.), AN ALARM SHALL BE SENT TO THE OPERATOR'S WORKSTATION. THE FAN SHALL BE IDENTIFIED BY A DESCRIPTION OF WHAT IT SERVES, AND SHALL BE TAGGED AS A "FAN FAILURE".
   B. LOW LIMIT THERMOSTAT
      1) IF THE AIR LEAVING THE HOT WATER COIL DROPS BELOW 38 DEGREES F (ADJ.) THE SUPPLY FAN SHALL BE STOPPED VIA HARD WIRE INTERLOCK AND THE BMS SYSTEM SHALL BE ALERTED BY A SET OF DRY CONTACTS PROVIDED BY THE LOW LIMIT THERMOSTAT. AN ALARM SHALL BE SENT TO THE OPERATOR'S WORKSTATION. THE UNIT SHALL BE IDENTIFIED BY ITS CALL NUMBER AND SHALL BE TAGGED AS A "LOW LIMIT THERMOSTAT ALARM". THE UNIT MUST BE MANUALLY RESET BEFORE IT CAN BE RESTARTED.

ALTERNATE MC-01 - PROVIDE NEW FULL BUILDING CONTROLS AND ALL ASSOCIATED COMPONENTS TO HAVE A NEW HEAD END AND FULLY OPERATIONAL SYSTEM. PROVIDE CONTROLS TO ALL EXISTING TO REMAIN EQUIPMENT.
BASE BID - PROVIDE CONTROLS AND NEW HEAD END FOR THE NEW EQUIPEMENT.
SEE PLANS FOR QUANTITY AND LOCATION, FOR BOTH SCHOOLS.
VERIFY ALL EXISTING CONTROL SEQUENCES BEFORE THE COMMENCEMENT OF ANY DEMOLITION WORK.

GENERAL NOTES:

1. SEQUENCES OF OPERATION SPECIFIED HEREIN, WHICH INDICATE THE FUNCTIONAL INTENT OF HVAC SYSTEMS, SUBSYSTEMS, AND/OR COMPONENTS OPERATION, ARE GENERAL IN NATURE AND MAY NOT FULLY DEFINE EVERY ASPECT OF PROGRAMMING THAT MAY BE REQUIRED TO FULFILL THE DESIGN INTENT. CONTRACTOR SHALL PROVIDE ALL PROGRAMMING AND HARDWARE NECESSARY TO OBTAIN THE SEQUENCES/SYSTEM OPERATION INDICATED, RESULTING IN STABLE HVAC SYSTEM OPERATION IN ACCORDANCE WITH THE DESIGN INTENT. THE SYSTEM SHALL COMMUNICATE WITH THE EXISTING BMS.

1.1 HVAC CONTROL SEQUENCES :
A. GENERAL
   1. ALL SET POINTS, CHANGEOVER POINTS AND RESET SCHEDULES SHALL BE USER ADJUSTABLE.
   2. CONTROL ALGORITHMS SHALL UTILIZE TUNED PID LOOPS TO MAINTAIN SET POINTS AND MINIMUM/MAXIMUM LEAVING AIR TEMPERATURES OPTIMALLY.
   3. COORDINATE INDIVIDUAL ALARM NOTIFICATIONS WITH OWNER.
   4. ALARMS SHALL BE CONFIGURED AS STATUS ONLY OR CRITICAL. STATUS ONLY ALARMS SHALL DISPLAY ALARM ON THE OWNER COORDINATED WORKSTATION(S) AND DEVICE(S). CRITICAL ALARMS SHALL INCORPORATE COORDINATED UNIT SHUTDOWN ALONG WITH DISPLAYING ALARMS ON THE OWNER COORDINATED DEVICES AND REQUIRE THE ALARM TO BE CLEARED PRIOR TO RESTARTING THE EQUIPMENT.
   5. ALL HVAC EQUIPMENT SHALL OPERATE IN OCCUPIED/UNOCCUPIED MODES AS DETERMINED BY THE DDC BUILDING TIME CLOCK SYSTEM. OBTAIN THE BUILDING OCCUPANCY SCHEDULE FROM THE OWNER.
   6. ALL EQUIPMENT SHALL UTILIZE OPTIMUM START/STOP PROGRAMS.
   7. ASSIGN ALL EQUIPMENT A STAGGER START NUMBER TO KEEP TO MANY UNITS FROM STARTING AT THE SAME TIME. IN EFFECT, THIS FLATTENS LOAD PEAKS. THIS INCLUDES START-UP ON EMERGENCY POWER.
   8. UNOCCUPIED OVERRIDE BUTTONS SHALL PLACE THE SPACE EQUIPMENT IN OCCUPIED MODE FOR A PERIOD OF ONE-HOUR (ADJUSTABLE).
   9. COORDINATE CHILLED WATER VALVE AND CHILLED WATER PUMP RESPONSE TIME WITH THE CHILLER MANUFACTURER'S MAXIMUM RATE OF CHANGE IN CHILLED WATER FLOW.
B. UNIVERSAL SET POINTS. UNLESS OTHERWISE NOTED, USE THE FOLLOWING SPACE TEMPERATURE SET POINTS. SET POINTS SHALL BE INDEPENDENTLY ADJUSTABLE BY SPACE THROUGH THE BMS.

	OCCUPIED MODES		UNOCCUPIED MODES	
	COOLING	HEATING	COOLING	HEATING
OCCUPIED SPACES	74°F	69°F	85°F	55°F
UNOCCUPIED SPACES	80°F	60°F	85°F	55°F

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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
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PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
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SHEET INFORMATION

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Scale: 12" = 1'-0"
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Drawn By: KCM
Checked By: JJM
Drawing Title: MECHANICAL CONTROLS

Drawing Number
GEN
H501

EXISTING KITCHEN EF

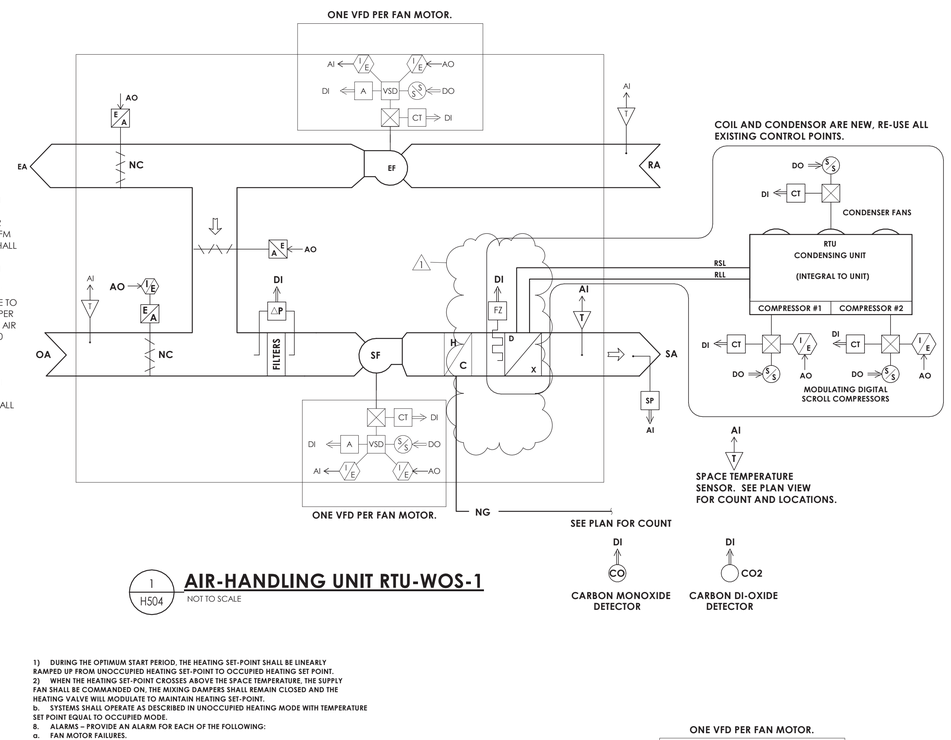
EXISTING MANUAL ON/OFF

KITCHEN FAN ENABLED:

1. WHEN THE KITCHEN EXHAUST FAN IS ON AND RTU-1 IS IN FULL OCCUPIED MODE THE RETURN AIR FAN SHALL MODULATE TO 3750 CFM AND THE EXHAUST AIR DAMPER SHALL MODULATE TO 650 CFM.
2. WHEN THE KITCHEN EXHAUST FAN IS ON AND RTU-1 IS AT ITS STANDARD OCCUPIED MODE THE RETURN AIR FAN SHALL MODULATE TO 3750 CFM, THE EXHAUST AIR DAMPER SHALL CLOSE AND THE OUTDOOR AIR DAMPER SHALL MODULATE TO 750 CFM.

KITCHEN FAN DISABLED:

1. WHEN THE EXISTING KITCHEN FAN IS OFF THE RETURN FAN AND EXHAUST AIR DAMPER IN RTU-1 SHALL MODULATE TO THE SCHEDULED VALUES ON SHEET WOS-H800



1 H504 **AIR-HANDLING UNIT RTU-WOS-1**

NOT TO SCALE

EXISTING CONTROL SEQUENCE: FOR BOTH UNITS

3.1 HVAC CONTROL SEQUENCES

A. ALL HVAC EQUIPMENT SHALL OPERATE IN OCCUPIED/UNOCCUPIED MODES AS DETERMINED BY THE DDC BUILDING TIME CLOCK SYSTEM. OBTAIN THE BUILDING OCCUPANCY SCHEDULE FROM THE OWNER.

B. AHU'S/RTU'S AND ASSOCIATED SPACE EQUIPMENT AND DUCTWORK SYSTEM:
1. ASSIGN EACH RTU A STAGGER START NUMBER TO KEEP TOO MANY UNITS FROM STARTING AT THE SAME TIME. IN EFFECT, THIS FLATTENS LOAD PEAKS. THIS INCLUDES START-UP ON EMERGENCY POWER.
2. OUTSIDE AIR AND RETURN AIR DAMPERS SHALL NEVER BE SIMULTANEOUSLY CLOSED. IN UNOCCUPIED MODES, THE RETURN AIR DAMPER SHALL BE FULL OPEN AND SHALL ONLY MODULATE CLOSED AS THE OUTDOOR AIR DAMPER MODULATES OPEN TO PROVIDE MAKEUP FOR SPACES THAT ARE EXHAUSTED.

3. ALL OCCUPIED MODES:
A. RTU SUPPLY FAN:
1) RUN CONTINUOUSLY.
B. RTU EXHAUST FAN:
1) RUN CONTINUOUSLY.
C. OUTSIDE AIR DAMPER:
1) OPEN TO MAINTAIN OUTSIDE AIR QUANTITY AS SCHEDULED, OUTSIDE AIR DAMPER SHALL NEVER BE POSITIONED BELOW THIS MINIMUM EXCEPT IN CASE OF EMERGENCY.
2) MODULATE OUTSIDE AIR DAMPER BEYOND SCHEDULED MINIMUM POSITION AS FOLLOWS:
A) AS REQUIRED FOR ECONOMIZER COOLING (SEE COOLING MODE BELOW).
D. EXHAUST AIR DAMPER:
1) MODULATE WITH OUTSIDE AIR DAMPER TO MAINTAIN FOLLOWING AIR BALANCE: EXH CFM = SA CFM – OA CFM.

4. OCCUPIED HEATING MODE –SPACE TEMPERATURE BELOW SET POINT.
A. UNIT MOUNTED HEATING COIL: MODULATE COIL CONTROL VALVE (CV) TO MAINTAIN SPACE TEMPERATURE SET POINT.
B. UNIT MOUNTED INDIRECT FIRED GAS HEATING: MODULATE GAS BURNER TO MAINTAIN SPACE TEMPERATURE SET POINT.
C. SPACE TEMPERATURE SET POINTS:
1) HEATING = 69 DEGREES (ADJUSTABLE).
D. LAT TEMPERATURE SET POINTS:
1) MINIMUM TEMPERATURE RESET SCHEDULE:
A. 65 DEGREE LAT AT 0 DEGREE OAT.
B. 55 DEGREE LAT AT 55 DEGREE OAT.

5. OCCUPIED ECONOMIZER COOLING MODE – WHEN THERE IS CALL FOR COOLING AND THE OUTDOOR AIR TEMPERATURE IS BELOW THE SPACE TEMPERATURE.
1) ECONOMIZER COOLING SET POINT: 74°F.
2) MODULATE EXHAUST AND OUTDOOR AIR DAMPERS INVERSELY TO MAINTAIN SPACE TEMPERATURE SET POINT.

6. ALL UNOCCUPIED MODES:
I. SPACE TEMPERATURE SET POINTS:
1) HEATING = 60 DEGREES.
2) COOLING = 85 DEGREES, FOR UNITS WITH DX.
b. RTU AND DUCT MOUNTED HEATING COIL:
1) ALL SAME AS OCCUPIED MODE WITH FOLLOWING EXCEPTIONS:
a) ENABLE AND DISABLE UNIT ONLY TO MEET TEMPERATURE SET POINT.
b) RETURN AIR DAMPER SHALL BE IN THE FULL OPEN POSITION.
c) EXHAUST AIR DAMPER SHALL BE IN THE FULL CLOSED POSITION.
d) THE EXHAUST FAN SHALL REMAIN DISABLED.

7. WARM-UP MODE.:
a. ALL UNITS SHALL START PER OPTIMUM START PROGRAM.
1) OPTIMUM START DURATION SHALL BE DETERMINED BASED ON OUTSIDE AIR TEMPERATURE.
1) DURING THE OPTIMUM START PERIOD, THE HEATING SET-POINT SHALL BE LINEARLY RAMPED UP FROM UNOCCUPIED HEATING SET-POINT TO OCCUPIED HEATING SET POINT.
2) WHEN THE HEATING SET-POINT CROSSES ABOVE THE SPACE TEMPERATURE, THE SUPPLY FAN SHALL BE COMMANDED ON, THE MIXING DAMPERS SHALL REMAIN CLOSED AND THE HEATING VALVE WILL MODULATE TO MAINTAIN HEATING SET-POINT.
b. SYSTEMS SHALL OPERATE AS DESCRIBED IN UNOCCUPIED HEATING MODE WITH TEMPERATURE SET POINT EQUAL TO OCCUPIED MODE.

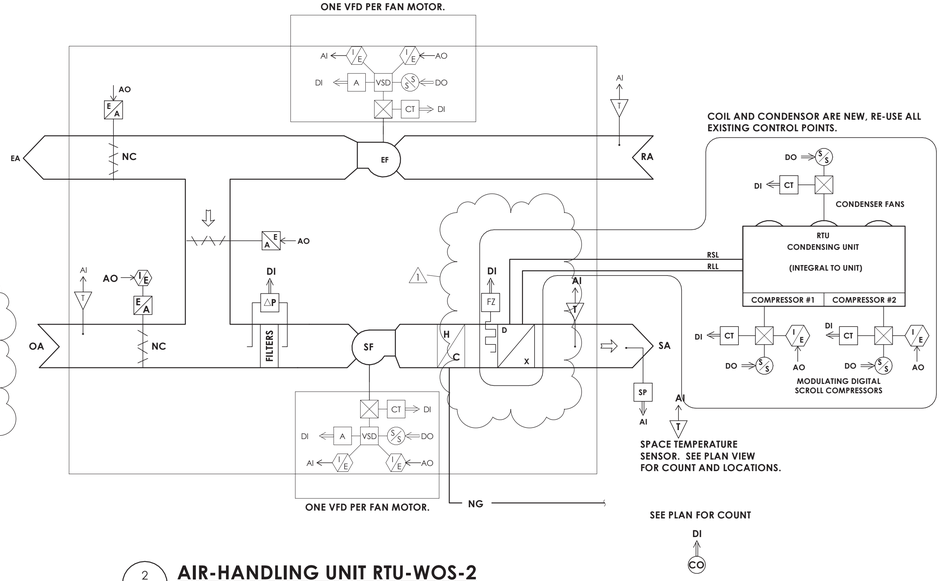
8. ALARMS – PROVIDE AN ALARM FOR EACH OF THE FOLLOWING:
a. FAN MOTOR FAILURES.
b. DISCHARGE AIR TEMPERATURE LOW/HIGH LIMITS.
c. SPACE TEMPERATURE LOW/HIGH LIMITS +/-5°F.
d. VFD FAULT.

9. UNOCCUPIED MODE BY OCCUPANCY SENSOR DURING DDC SCHEDULED OCCUPIED PERIOD
a. DURING THE SCHEDULED OCCUPIED MODE, WHEN THE SPACE IS UNOCCUPIED AS SENSED BY THE ROOM OCCUPANCY SENSOR, THE OUTSIDE AIR DAMPER WILL BE SET TO THE STANDARD OCCUPANCY MINIMUM OUTSIDE AIR AS INDICATED ON THE SCHEDULE.
b. IN HEATING MODE, THE SPACE TEMPERATURE SET-POINT SHALL BE RESET TO 2°F (ADJUSTABLE) LOWER THAN THE OCCUPIED SET-POINT. IN COOLING MODE, THE SPACE TEMPERATURE SET-POINT SHALL BE RESET TO 2°F (ADJUSTABLE) HIGHER THAN THE OCCUPIED SET-POINT.
c. THE SUPPLY FAN SHALL CYCLE REMAIN ON TO MAINTAIN THE STANDARD MINIMUM OUTSIDE air.
d. WHEN THE SPACE IS OCCUPIED AS SENSED BY THE ROOM OCCUPANCY SENSOR, THE SEQUENCE SHALL BE INDEXED TO THE OCCUPIED MODE.

C. CARBON MONOXIDE DETECTION:
1. UPON RISE IN CARBON MONOXIDE AT OR ABOVE 20PPM AS DETECTED BY A SPACE SENSOR, DISPLAY ALARM AT OPERATOR WORK STATION.
2. UPON RISE IN CARBON MONOXIDE LEVEL AT OR ABOVE 30PPM AS DETECTED BY A SPACE SENSOR, SOUND AUDIBLE ALARM AT SENSOR AND AT THE ASSOCIATED HALLWAY SENSOR IF APPLICABLE.

ADD COOLING CONTROL SEQUENCE: FOR BOTH UNITS

1. OCCUPIED COOLING MODE - SPACE TEMPERATURE BELOW SET POINT. - WHERE APPLICABLE
a. UNIT MOUNTED DX COOLING COIL: MODULATE DX COMPRESSOR TO MAINTAIN SPACE TEMPERATURE SET POINT.
b. SPACE TEMPERATURE SET POINTS:
1) COOLING = 75 DEGREES (ADJUSTABLE).
c. LAT TEMPERATURE SET POINTS:
2) COOLING = 55 DEGREE LAT AT 88 DEGREE OAT.



2 H504 **AIR-HANDLING UNIT RTU-WOS-2**

NOT TO SCALE

ALTERNATE MC-01 - PROVIDE NEW FULL BUILDING CONTROLS AND ALL ASSOCIATED COMPONENTS TO HAVE A NEW HEAD END AND FULLY OPERATIONAL SYSTEM. PROVIDE CONTROLS TO ALL EXISTING TO REMAIN EQUIPMENT.
BASE BID - PROVIDE CONTROLS AND NEW HEAD END FOR THE NEW EQUIPEMENT.
SEE PLANS FOR QUANTITY AND LOCATION, FOR BOTH SCHOOLS.
VERIFY ALL EXISTING CONTROL SEQUENCES BEFORE THE COMMENCEMENT OF ANY DEMOLITION WORK.

GENERAL NOTES:

1. **SEQUENCES OF OPERATION SPECIFIED HEREIN, WHICH INDICATE THE FUNCTIONAL INTENT OF HVAC SYSTEMS, SUBSYSTEMS, AND/OR COMPONENTS OPERATION, ARE GENERAL IN NATURE AND MAY NOT FULLY DEFINE EVERY ASPECT OF PROGRAMMING THAT MAY BE REQUIRED TO FULFILL THE DESIGN INTENT. CONTRACTOR SHALL PROVIDE ALL PROGRAMMING AND HARDWARE NECESSARY TO OBTAIN THE SEQUENCES/SYSTEM OPERATION INDICATED, RESULTING IN STABLE HVAC SYSTEM OPERATION IN ACCORDANCE WITH THE DESIGN INTENT. THE SYSTEM SHALL COMMUNICATE WITH THE EXISTING BMS.**

1.1 **HVAC CONTROL SEQUENCES :**

A. **GENERAL**
1. **ALL SET POINTS, CHANGEOVER POINTS AND RESET SCHEDULES SHALL BE USER ADJUSTABLE.**
2. **CONTROL ALGORITHMS SHALL UTILIZE TUNED PID LOOPS TO MAINTAIN SET POINTS AND MINIMUM/MAXIMUM LEAVING AIR TEMPERATURES OPTIMALLY.**
3. **COORDINATE INDIVIDUAL ALARM NOTIFICATIONS WITH OWNER.**
4. **ALARMS SHALL BE CONFIGURED AS STATUS ONLY OR CRITICAL. STATUS ONLY ALARMS SHALL DISPLAY ALARM ON THE OWNER COORDINATED WORKSTATION(S) AND DEVICE(S). CRITICAL ALARMS SHALL INCORPORATE COORDINATED UNIT SHUTDOWN ALONG WITH DISPLAYING ALARMS ON THE OWNER COORDINATED DEVICES AND REQUIRE THE ALARM TO BE CLEARED PRIOR TO RESTARTING THE EQUIPMENT.**
5. **ALL HVAC EQUIPMENT SHALL OPERATE IN OCCUPIED/UNOCCUPIED MODES AS DETERMINED BY THE DDC BUILDING TIME CLOCK SYSTEM. OBTAIN THE BUILDING OCCUPANCY SCHEDULE FROM THE OWNER.**
6. **ALL EQUIPMENT SHALL UTILIZE OPTIMUM START/STOP PROGRAMS.**
7. **ASSIGN ALL EQUIPMENT A STAGGER START NUMBER TO KEEP TO MANY UNITS FROM STARTING AT THE SAME TIME. IN EFFECT, THIS FLATTENS LOAD PEAKS. THIS INCLUDES START-UP ON EMERGENCY POWER.**
8. **UNOCCUPIED OVERRIDE BUTTONS SHALL PLACE THE SPACE EQUIPMENT IN OCCUPIED MODE FOR A PERIOD OF ONE-HOUR (ADJUSTABLE).**
9. **COORDINATE CHILLED WATER VALVE AND CHILLED WATER PUMP RESPONSE TIME WITH THE CHILLER MANUFACTURER'S MAXIMUM RATE OF CHANGE IN CHILLED WATER FLOW.**

B. **UNIVERSAL SET POINTS. UNLESS OTHERWISE NOTED, USE THE FOLLOWING SPACE TEMPERATURE SET POINTS. SET POINTS SHALL BE INDEPENDENTLY ADJUSTABLE BY SPACE THROUGH THE BMS.**

	OCCUPIED MODES		UNOCCUPIED MODES	
	COOLING	HEATING	COOLING	HEATING
OCCUPIED SPACES	74°F	69°F	85°F	55°F
UNOCCUPIED SPACES	80°F	60°F	85°F	55°F

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SOUTH ORANGETOWN Central School District

Capital Improvements Bond

Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
1457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- ☐ WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- ☐ COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- ☐ TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- ☐ WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- ☐ COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- ☐ COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- ☐ WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- ☐ SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- ☐ CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- ☐ TZHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

SHEET INFORMATION

Issued
10/18/2023

Scale
1/2" = 1'-0"

Project Status
BID DOCUMENTS

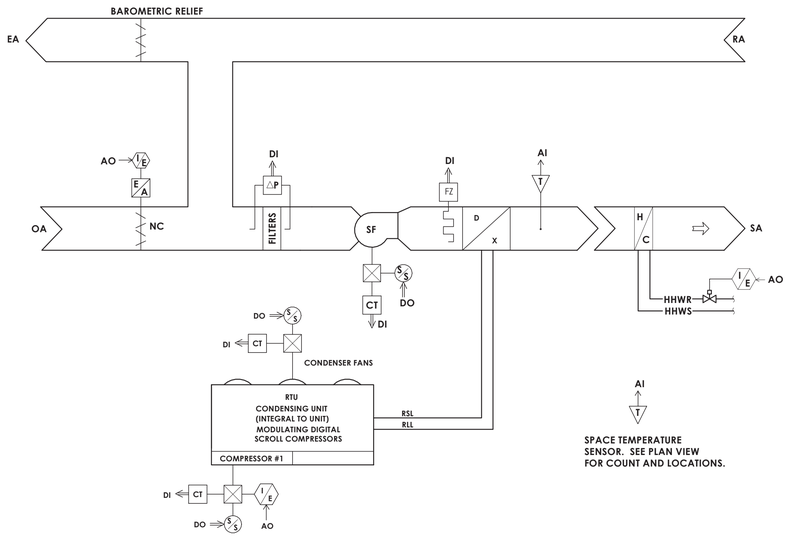
Drawn By
KCM

Checked By
JJM

Drawing Title
MECHANICAL CONTROLS

Drawing Number
GEN
H504

A. ROOF TOP UNITS:
1. ALL OCCUPIED MODES:
   a. UNIT SUPPLY FAN:
      1) RUN CONTINUOUSLY.
2. OCCUPIED HEATING MODE -SPACE TEMPERATURE BELOW SET POINT.
   a. HEATING COIL: MODULATE HEATING COIL CONTROL VALVE (CV) TO MAINTAIN SPACE TEMPERATURE SET POINT.
   b. SPACE TEMPERATURE SET POINTS:
      1) HEATING = 69 DEGREES (ADJUSTABLE).
   c. LAT TEMPERATURE SET POINTS:
      MINIMUM TEMPERATURE RESET SCHEDULE:
      65 DEGREE LAT AT 0 DEGREE OAT.
      55 DEGREE LAT AT 55 DEGREE OAT.
   d. HEAT EXCHANGER FACE AND BYPASS DAMPER: MODULATE DAMPER AS RECOMMENDED BY THE UNIT MANUFACTURER FOR THE HEAT EXCHANGER DEFROST CYCLE.
3. OCCUPIED COOLING MODE - SPACE TEMPERATURE BELOW SET POINT. - WHERE APPLICABLE
   a. UNIT MOUNTED DX COOLING COIL: MODULATE DX COMPRESSOR TO MAINTAIN SPACE TEMPERATURE SET POINT.
   b. SPACE TEMPERATURE SET POINTS:
      1) COOLING = 75 DEGREES (ADJUSTABLE).
   c. LAT TEMPERATURE SET POINTS:
      1) COOLING = 55 DEGREE LAT AT 88 DEGREE OAT
4. OCCUPIED ECONOMIZER COOLING MODE - WHEN THERE IS CALL FOR COOLING AND THE OUTDOOR AIR TEMPERATURE IS BELOW THE SPACE TEMPERATURE.
   a. ECONOMIZER COOLING SET POINT: 74°F.
   b. FULLY OPEN RECIRCULATION DAMPER.
   c. IF THE SPACE TEMPERATURE RISES ABOVE THE COOLING SETPOINT OF 75 DEGREES F (ADJUSTABLE), AND THE CONTROLS INDICATES THAT ECONOMIZER OPERATION IS NOT APPROPRIATE, THE OUTSIDE AIR DAMPERS WILL MODULATE CLOSE TO MINIMUM POSITION AND THE DX COOLING STAGES WILL BE ENERGIZED.
   d. ECONOMIZER OPERATION SHALL USE AN ALGORITHM COMPARING INDOOR AIR AND OUTDOOR AIR ENTHALPY TO DETERMINE IF COOLING OR ASSISTED COOLING IS VIABLE. DX COOLING AND ECONOMIZER COOLING WILL BE ALLOWED TO OPERATE SIMULTANEOUSLY IF THE ALGORITHM CONFIRMS ASSISTED COOLING IS VIABLE.
   e. THE CONTROLS WILL MONITOR FAN STATUS AND GENERATE AN ALARM WHENEVER THE FAN IS COMMANDED ON BUT THE STATUS INDICATES OFF. ALARMS WILL ALSO BE GENERATED IF A FREEZE CONDITION EXISTS OR IF A LOW SPACE TEMPERATURE IS DETECTED.
5. ALL UNOCCUPIED MODES:
   a. SPACE TEMPERATURE SET POINTS:
      1) HEATING = 60 DEGREES.
      2) COOLING = 85 DEGREES.
      3) THERE SHALL BE A 5 DEGREE DEADBAND FOR HEATING AND COOLING SET POINTS.
   b. HEATING COIL:
      1) ALL SAME AS OCCUPIED MODE WITH FOLLOWING EXCEPTIONS:
         a) ENABLE AND DISABLE UNIT ONLY TO MEET TEMPERATURE SET POINT.
         b) OPEN RECIRCULATION DAMPER.
6. WARM-UP MODE.:
   a. ALL UNITS SHALL START PER OPTIMUM START PROGRAM.
      1) OPTIMUM START DURATION SHALL BE DETERMINED BASED ON OUTSIDE AIR TEMPERATURE.
      2) DURING THE OPTIMUM START PERIOD, THE HEATING SET-POINT SHALL BE LINEARLY RAMPED UP FROM UNOCCUPIED HEATING SET-POINT TO OCCUPIED HEATING SET POINT.
   b. SYSTEMS SHALL OPERATE AS DESCRIBED IN UNOCCUPIED HEATING MODE WITH TEMPERATURE SET POINT EQUAL TO OCCUPIED MODE.
7. ALARMS - PROVIDE AN ALARM FOR EACH OF THE FOLLOWING:
   a. FAN MOTOR FAILURES.
   b. DISCHARGE AIR TEMPERATURE LOW/HIGH LIMITS.
   c. FREEZE CONDITION.
   d. DRAIN PAN.
   e. SPACE TEMPERATURE LOW/HIGH LIMITS +/-5°F.
   f. VFD FAULT.



1 H505 **ROOFTOP UNIT RTU-3 CLE CONTROL SCHEMATIC**
NOT TO SCALE

ALTERNATE MC-01 - PROVIDE NEW FULL BUILDING CONTROLS AND ALL ASSOCIATED COMPONENTS TO HAVE A NEW HEAD END AND FULLY OPERATIONAL SYSTEM. PROVIDE CONTROLS TO ALL EXISTING TO REMAIN EQUIPMENT.
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SEE PLANS FOR QUANTITY AND LOCATION, FOR BOTH SCHOOLS.
VERIFY ALL EXISTING CONTROL SEQUENCES BEFORE THE COMMENCEMENT OF ANY DEMOLITION WORK.

GENERAL NOTES:

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	OCCUPIED MODES		UNOCCUPIED MODES	
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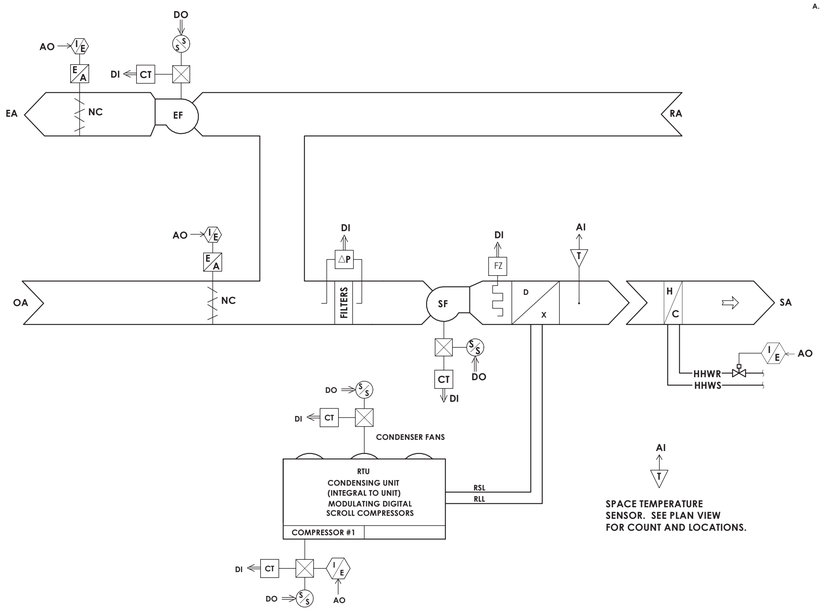

2 H505 **ROOFTOP UNIT RTU-3 CLE CONTROL SCHEMATIC**
NOT TO SCALE

A. ROOF TOP UNITS:
1. ALL OCCUPIED MODES:
   a. UNIT SUPPLY FAN:
      1) RUN CONTINUOUSLY.
   b. UNIT EXHAUST FAN:
      1) RUN CONTINUOUSLY.
2. OCCUPIED HEATING MODE -SPACE TEMPERATURE BELOW SET POINT.
   a. HEATING COIL: MODULATE HEATING COIL CONTROL VALVE (CV) TO MAINTAIN SPACE TEMPERATURE SET POINT.
   b. SPACE TEMPERATURE SET POINTS:
      1) HEATING = 69 DEGREES (ADJUSTABLE).
   c. LAT TEMPERATURE SET POINTS:
      MINIMUM TEMPERATURE RESET SCHEDULE:
      65 DEGREE LAT AT 0 DEGREE OAT.
      55 DEGREE LAT AT 55 DEGREE OAT.
   d. HEAT EXCHANGER FACE AND BYPASS DAMPER: MODULATE DAMPER AS RECOMMENDED BY THE UNIT MANUFACTURER FOR THE HEAT EXCHANGER DEFROST CYCLE.
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   a. UNIT MOUNTED DX COOLING COIL: MODULATE DX COMPRESSOR TO MAINTAIN SPACE TEMPERATURE SET POINT.
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   a. SPACE TEMPERATURE SET POINTS:
      1) HEATING = 60 DEGREES.
      2) COOLING = 85 DEGREES.
      3) THERE SHALL BE A 5 DEGREE DEADBAND FOR HEATING AND COOLING SET POINTS.
   b. HEATING COIL:
      1) ALL SAME AS OCCUPIED MODE WITH FOLLOWING EXCEPTIONS:
         a) ENABLE AND DISABLE UNIT ONLY TO MEET TEMPERATURE SET POINT.
         b) DISABLE EXHAUST FAN.
         c) OPEN RECIRCULATION DAMPER.
6. WARM-UP MODE.:
   a. ALL UNITS SHALL START PER OPTIMUM START PROGRAM.
      1) OPTIMUM START DURATION SHALL BE DETERMINED BASED ON OUTSIDE AIR TEMPERATURE.
      2) DURING THE OPTIMUM START PERIOD, THE HEATING SET-POINT SHALL BE LINEARLY RAMPED UP FROM UNOCCUPIED HEATING SET-POINT TO OCCUPIED HEATING SET POINT.
   b. SYSTEMS SHALL OPERATE AS DESCRIBED IN UNOCCUPIED HEATING MODE WITH TEMPERATURE SET POINT EQUAL TO OCCUPIED MODE.
7. ALARMS - PROVIDE AN ALARM FOR EACH OF THE FOLLOWING:
   a. FAN MOTOR FAILURES.
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   d. DRAIN PAN.
   e. SPACE TEMPERATURE LOW/HIGH LIMITS +/-5°F.
   f. VFD FAULT.

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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION
Project Number
14457.20
Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT
Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
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- CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

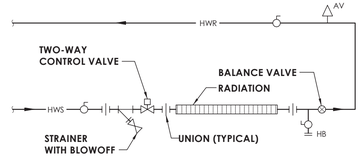
NEW YORK STATE EDUCATION STATEMENT
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS HE OR SHE IS A LICENSED ARCHITECT, PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

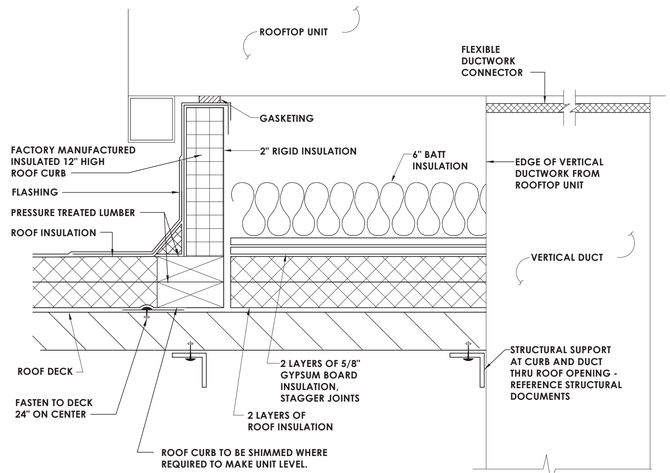
Issued	Scale
10/18/2023	12" = 1'-0"
Project Status	
BID DOCUMENTS	
Drawn By	Checked By
KCM	JJM

Drawing Title
MECHANICAL CONTROLS

Drawing Number
GEN
H505



1 H801 **FIN-TUBE RADIATION DETAIL**
NOT TO SCALE



NOTE:

ALL ROOF TOP HVAC UNITS REQUIRED TO HAVE CURB AND CURB INTERIOR AS SHOWN.

2 H801 **ROOFTOP UNIT - ROOF CURB DETAIL**
NOT TO SCALE

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SOUTH ORANGETOWN Central School District
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14457.20

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SHEET INFORMATION

Issued
10/18/23

Scale
1" = 1'-0"

Project Status
BID DOCUMENTS

Drawn By
-

Checked By
--

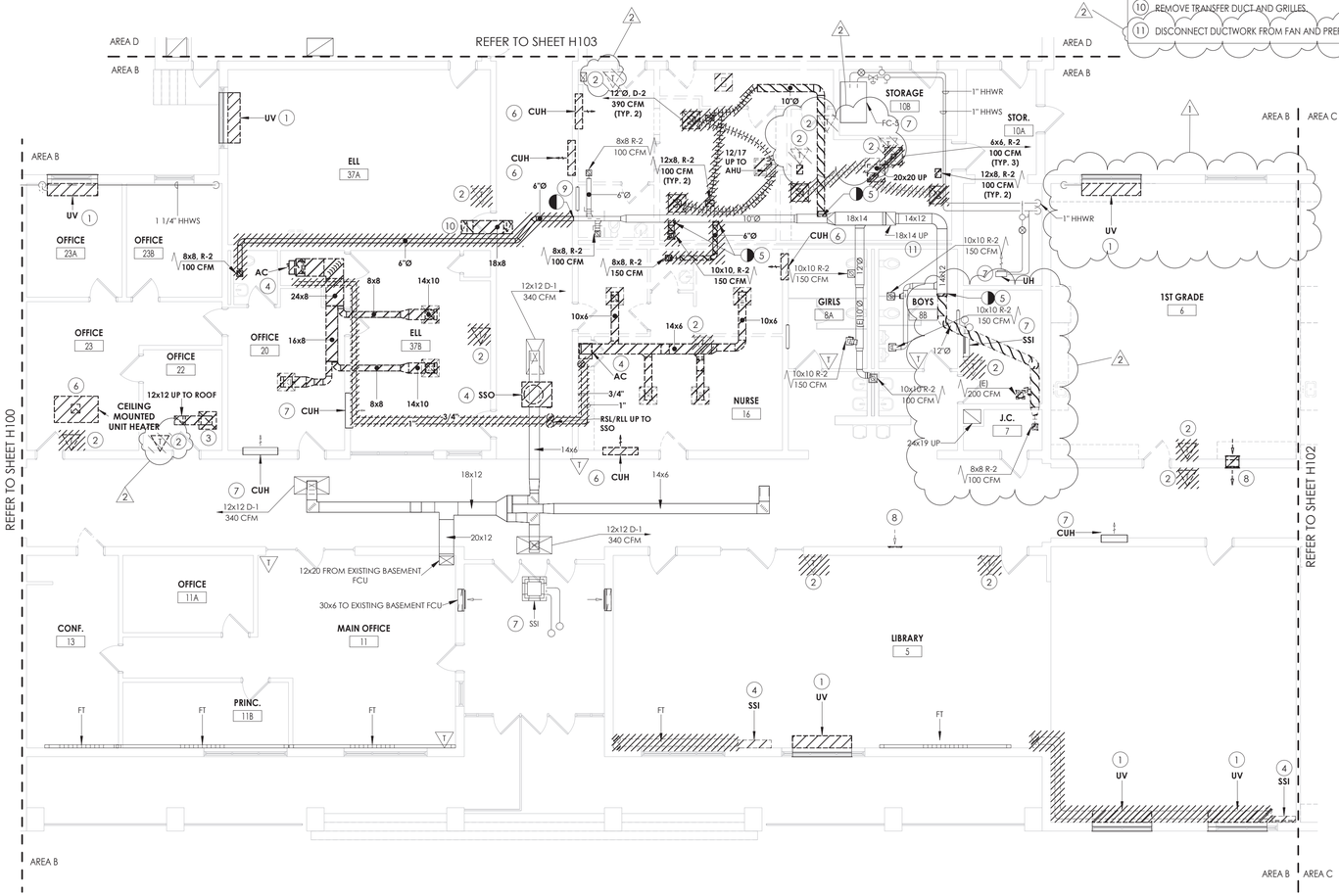
Drawing Title
HVAC DETAILS

Drawing Number
GEN
H801

11/16/2023 4:36:13 P.M. <project location> REVIT PROJECT FILES ON BIM360

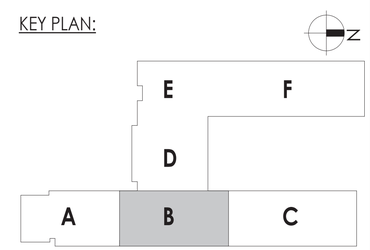
KEY NOTES:

1. REMOVE EXISTING UNIT VENTILATOR, LOUVER AND SLEEVE TO REMAIN. CUT AND CAP PIPING AT FINTUBE. REFER TO ARCHITECTURAL PLAN. MAINTAIN THE PIPING LOOP. PREPARE FOR NEW WORK.
2. REMOVE EXISTING ROOM TEMPERATURE SENSOR AND WIRING BACK TO CONTROL HEAD END.
3. REMOVE EXISTING GRILLE AND DUCTWORK UP TO ROOF.
4. REMOVE EXISTING HEATING/COOLING UNIT. REMOVE ALL ASSOCIATED PIPING, DUCTWORK, AND CONTROLS. REMOVE ALL RLL/RSL PIPING FROM UNIT TO CONDENSING UNIT ON ROOF. PRIOR REMOVAL, DRAIN ALL PIPING AND DISPOSE OF ALL REFRIGERANT PER THE LATEST ADAPTED RULES AND REGULATIONS BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA). CONTRACTOR OR TECHNICIAN PERFORMING THE WORK SHALL BE AN EPA APPROVED AGENT OR ORGANIZATION.
5. REMOVE EXISTING EXHAUST BRANCH DUCTWORK TO POINT INDICATED AND CAP.
6. REMOVE EXISTING CABINET UNIT HEATER, INCLUDING CONTROLS AND WIRING. CUT AND CAP ASSOCIATED PIPING.
7. PREPARE EXISTING EQUIPMENT FOR NEW CONTROLS. **BID ALTERNATE MC-01.**
8. REMOVE EXISTING LOW RELIEF AIR GRILLE IN ROOM AND HIGH RELIEF AIR GRILLE IN COORIDOR. ABANDON DUCTWORK WITHIN WALL. G.C TO PATCH WALL OPENINGS.
9. CAP DUCT AT THIS POINT.
10. REMOVE TRANSFER DUCT AND GRILLES.
11. DISCONNECT DUCTWORK FROM FAN AND PREPARE FOR NEW CONNECTION.



1 H101 **FIRST FLOOR DEMOLITION PLAN- AREA B**
1/8" = 1'-0"

KEY PLAN:



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- TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	10/27/2023	BID ADDENDUM #1
2	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

SHEET INFORMATION

Issued
10/18/2023

Scale
1/8" = 1'-0"

Project Status
BID DOCUMENTS

Drawn By
KCM

Checked By
JJM

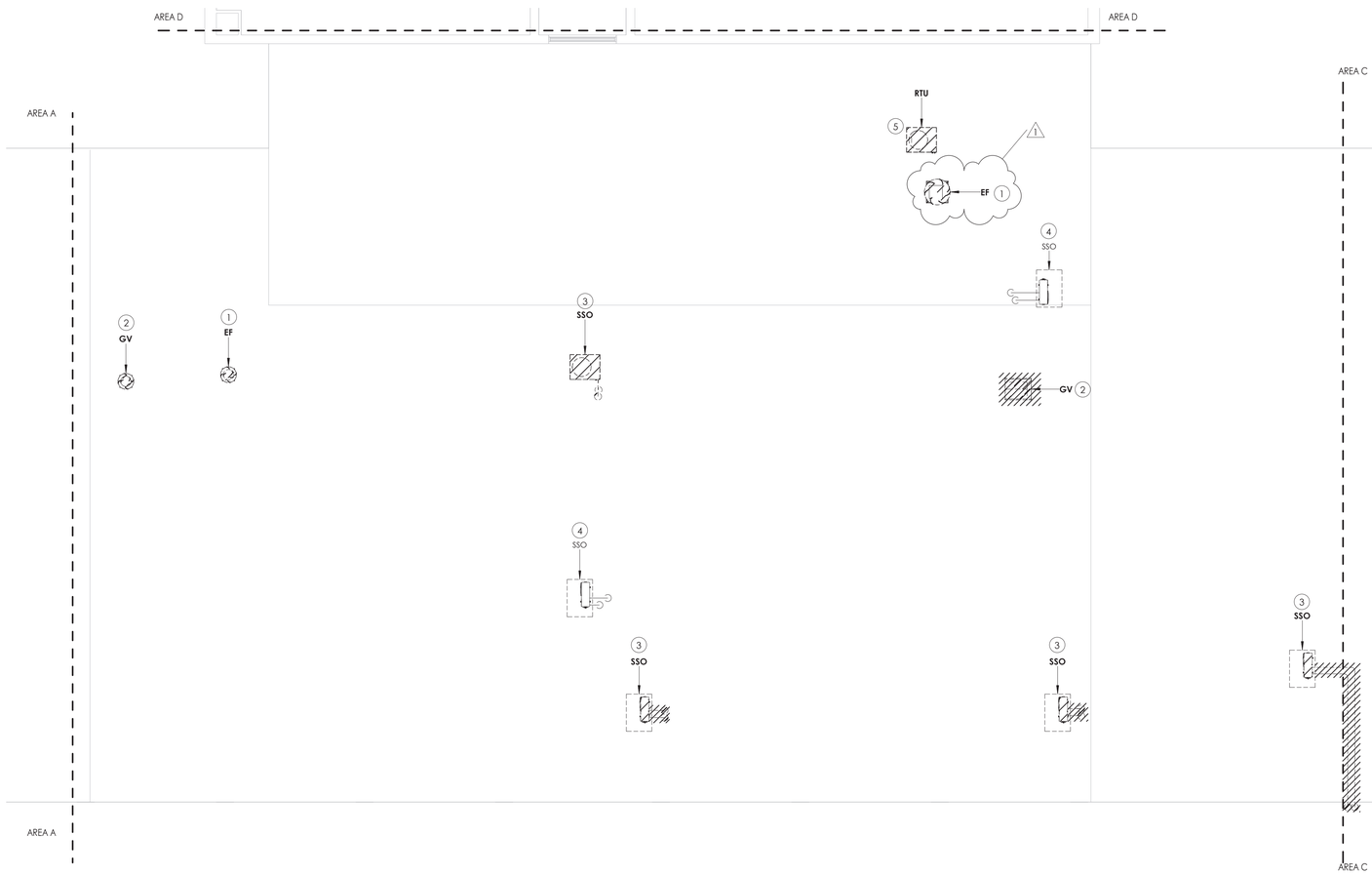
Drawing Title
FIRST FLOOR DEMOLITION PLANS- AREA B

Drawing Number
WOS
H101

11/16/2023 3:30:35 PM <project location> REVIT PROJECT FILES ON BIM360

KEY NOTES:

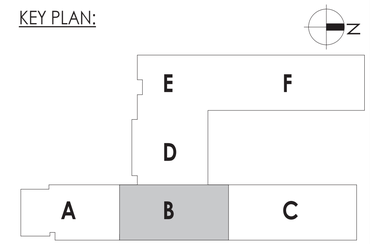
1. REMOVE EXISTING EXHAUST FAN.
2. REMOVE EXISTING RELIEF HOOD.
3. REMOVE EXISTING SSO UNIT.
4. PREPARE EXISTING EQUIPMENT FOR NEW CONTROLS. **BID ALTERNATE MC-01.**
5. REMOVE EXISTING ROOFTOP UNIT AND DISCONNECT DUCTWORK.



1 / H111 **ROOF HVAC DEMOLITION PLAN- AREA B**

1/8" = 1'-0"

KEY PLAN:



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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
1457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- ■ WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- ☐ COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- ☐ TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
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- ☐ CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- ☐ TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

SHEET INFORMATION

Issued
10/18/2023

Scale
1/8" = 1'-0"

Project Status
BID DOCUMENTS

Drawn By
KCM

Checked By
JJM

Drawing Title
ROOF HVAC DEMOLITION PLANS- AREA B

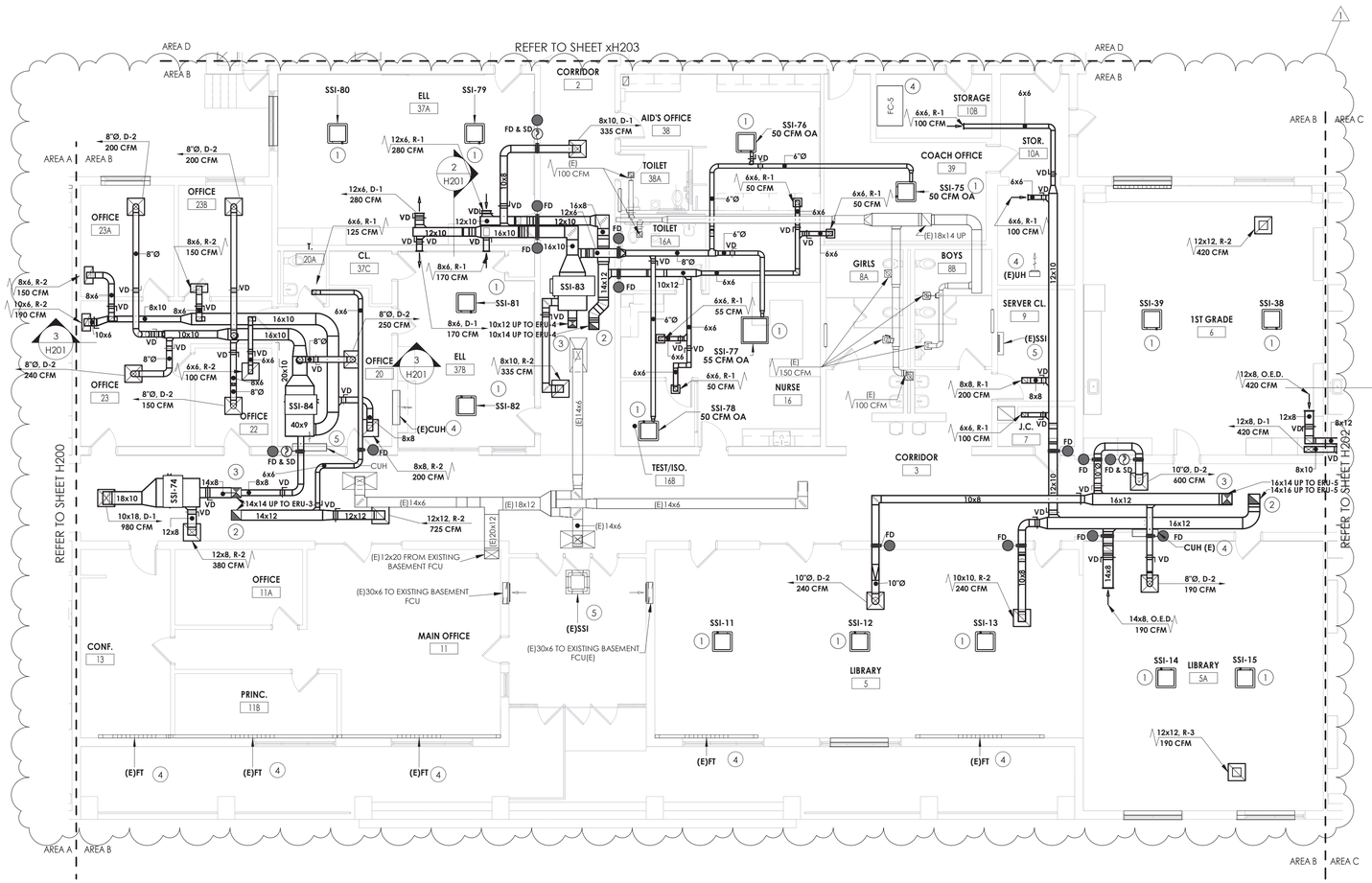
Drawing Number
WOS H111

GENERAL NOTES

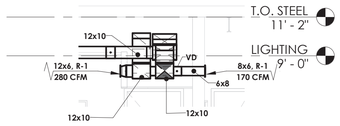
1. MAINTAIN ALL EXISTING ROOF WARRANTIES.

KEY NOTES:

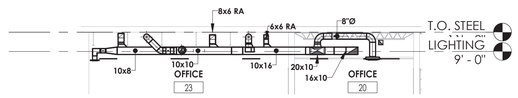
1. SSI TO BE INSTALLED IN JOIST SPACE. REMOVE BRACING AS NEEDED FOR INSTALLATION. PROVIDE NEW PROVIDE NEW BRACING IN NEW LOCATION IF EXISTING BRACING IS REMOVED.
2. RETURN DUCTWORK TO BE ROUTED IN HALLWAY CEILING. COORDINATE WITH EXISTING UTILITIES AND REFRIGERANT PIPING.
3. SUPPLY DUCTWORK TO BE ROUTED IN CEILING. COORDINATE WITH EXISTING UTILITIES AND REFRIGERANT PIPING.
4. CONNECT EXISTING EQUIPMENT TO NEW BMS SYSTEM. PROVIDE NEW CONTROL VALVE OR BRACNET CARD DEPENDING UPON THE TYPE OF EQUIPMENT. **BID ALTERNATE MC-01.**
5. EQUIPMENT NOT CONNECTED TO NEW BMS SYSTEM.



1 / H201 **FIRST FLOOR HVAC NEW WORK PLAN-AREA B**
1/8" = 1'-0"

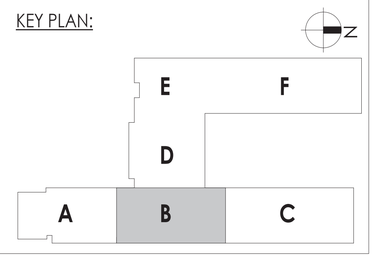


2 / H201 **SECTION**
1/4" = 1'-0"



3 / H201 **SECTION**
1/8" = 1'-0"

KEY PLAN:



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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
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- CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT
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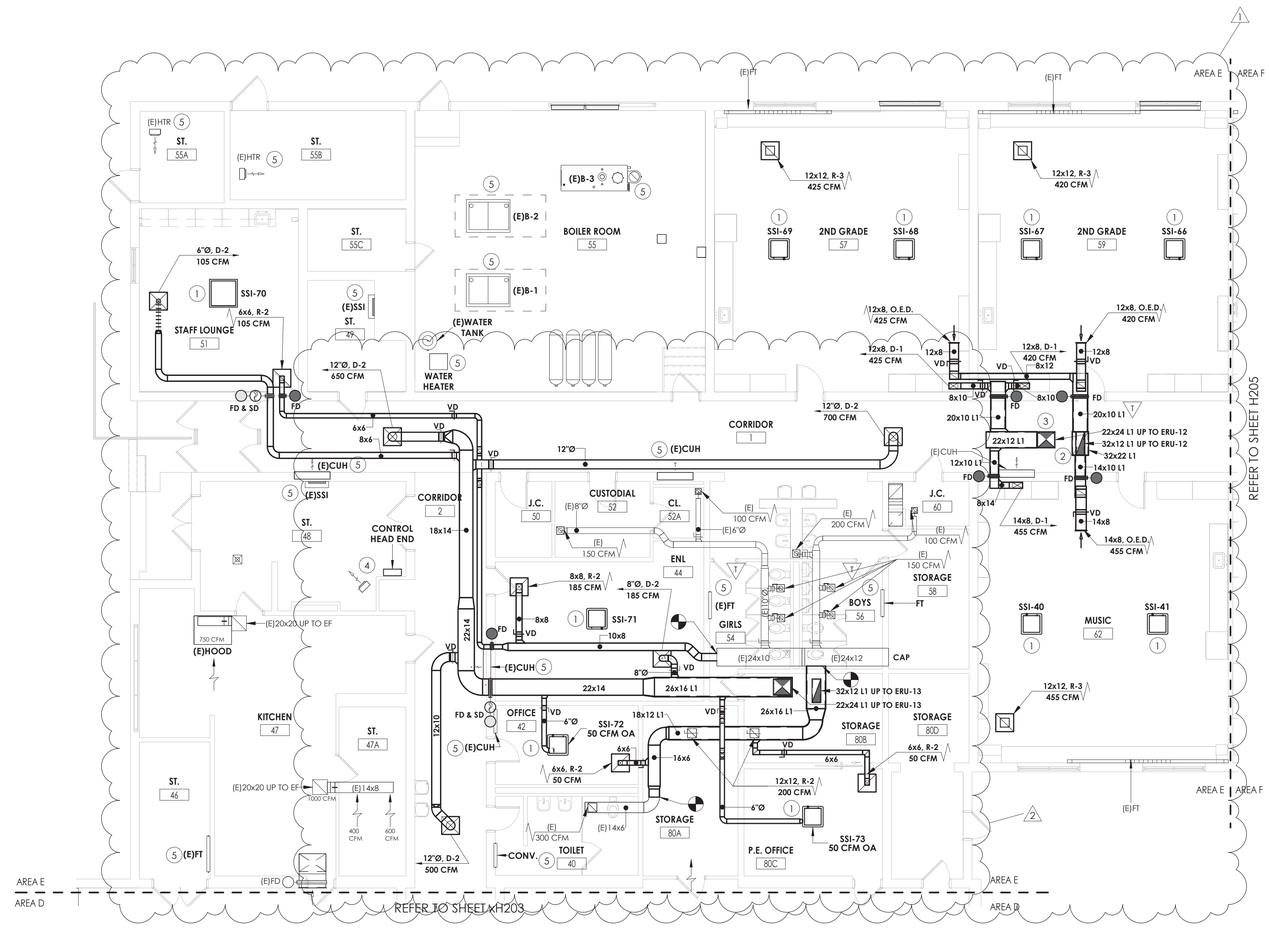
SHEET INFORMATION

Issued: 10/18/2023
Scale: As indicated
Project Status: BID DOCUMENTS
Drawn By: KCM
Checked By: JJM
Drawing Title: FIRST FLOOR HVAC NEW WORK PLAN- AREA B
Drawing Number: WOS H201

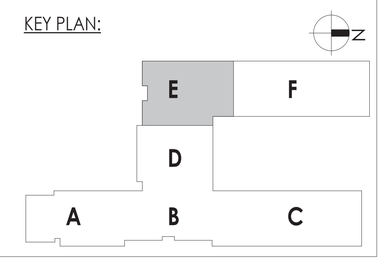
KEY NOTES:

1. SSI TO BE INSTALLED IN JOIST SPACE. REMOVE BRACING AS NEEDED FOR INSTALLATION. PROVIDE NEW BRACING IN NEW LOCATION IF EXISTING BRACING IS REMOVED.
2. RETURN DUCTWORK TO BE ROUTED IN HALLWAY CEILING. COORDINATE WITH EXISTING UTILITIES AND REFRIGERANT PIPING.
3. SUPPLY DUCTWORK TO BE ROUTED IN CEILING. COORDINATE WITH EXISTING UTILITIES AND REFRIGERANT PIPING.
4. PROVIDE NEW CONTROLS HEAD END. **BID ALTERNATE MC-01.**
5. CONNECT EXISTING EQUIPMENT TO NEW BMS SYSTEM. PROVIDE NEW CONTROL VALVE OR BACNET CARD DEPENDING UPON THE TYPE OF EQUIPMENT. **BID ALTERNATE MC-01.**



1 H204 **FIRST FLOOR HVAC NEW WORK PLAN-AREA E**
1/8" = 1'-0"

KEY PLAN:



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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
1457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD

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- ☐ TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	10/27/2023	BID ADDENDUM #1
2	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT

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SHEET INFORMATION

Issued	Scale
10/18/2023	1/8" = 1'-0"

Project Status
BID DOCUMENTS

Drawn By	Checked By
KCM	JJM

Drawing Title
FIRST FLOOR HVAC NEW WORK PLAN- AREA E

Drawing Number
WOS H204

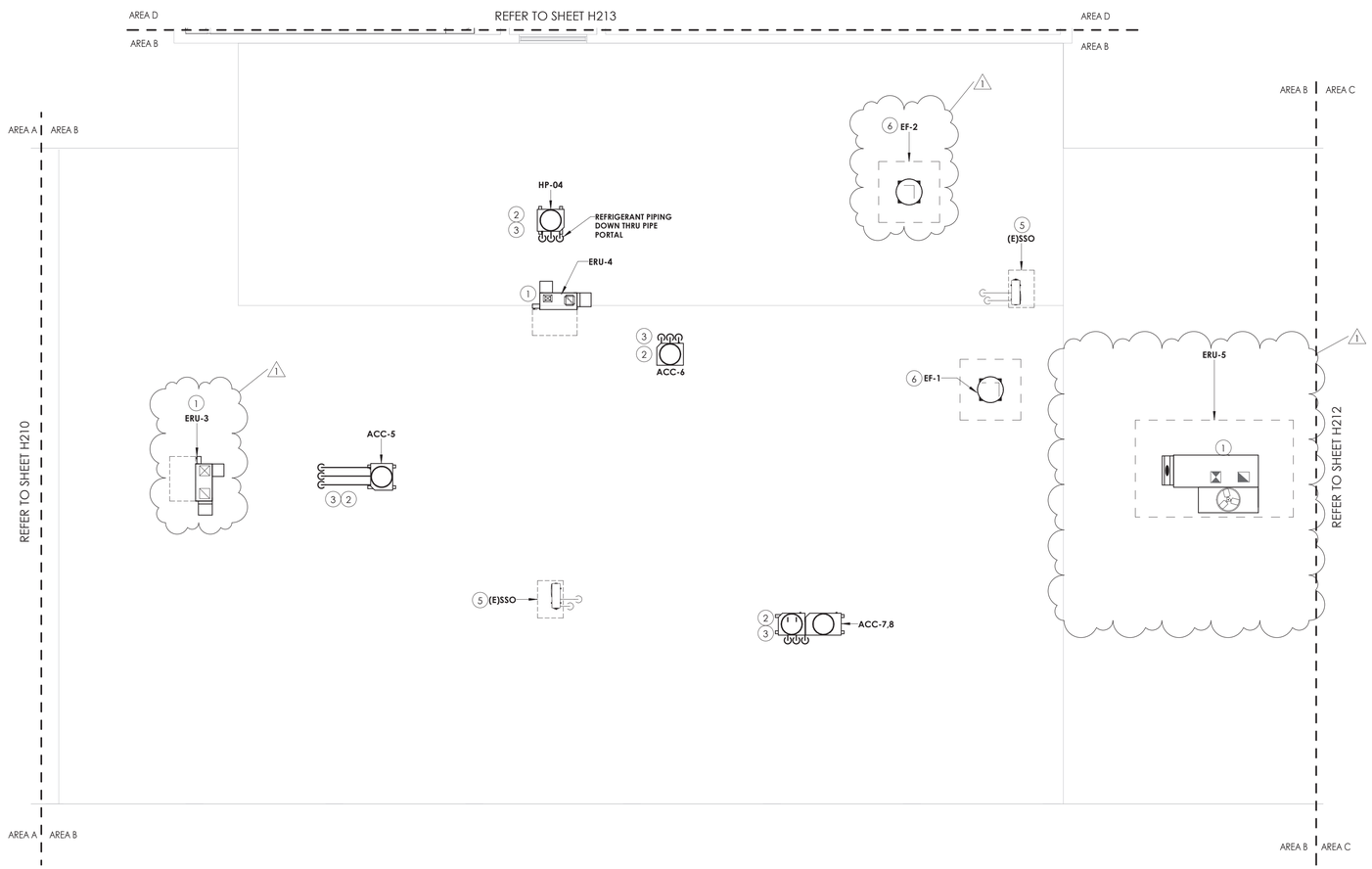
11/16/2023 2:06:32 P.M. <project location> REVIT PROJECT FILES ON BIM360

GENERAL NOTES

1. MAINTAIN ALL EXISTING ROOF WARRANTIES.

KEY NOTES

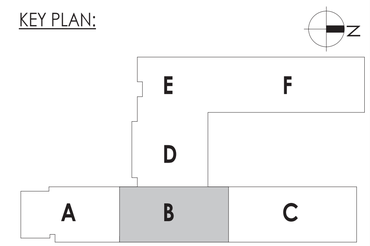
1. PROVIDE ERU ON INSULATED CURB WITH VIBRATION INSULATION.
2. PROVIDE WITH 12" EQUIPMENT RAILS, VIBRATION INSULATION AND PIPE PORTAL.
3. ROUTE NEW RS/RL LINES DOWN THROUGH ROOF. COORDINATE WITH EXISTING ROOFING AND STRUCTURE. INSTALL PER MANUFACTURERS INSTRUCTIONS.
4. CONNECT EXISTING EQUIPMENT TO NEW BMS SYSTEM. PROVIDE NEW CONTROL VALVE OR BACNET CARD DEPENDING UPON THE TYPE OF EQUIPMENT. **BID ALTERNATE MC-01.**
5. EXISTING EQUIPMENT NOT CONNECTED TO BMS.
6. PROVIDE NEW INSULATED ROOF CURB.



1 H211 **ROOF NEW WORK PLAN- AREA B**

1/8" = 1'-0"

KEY PLAN:



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Newburgh, NY 12550
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SOUTH ORANGETOWN Central School District
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PROJECT INFORMATION

Project Number
1457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
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- ☐ TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT

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SHEET INFORMATION

Issued
10/18/2023

Scale
1/8" = 1'-0"

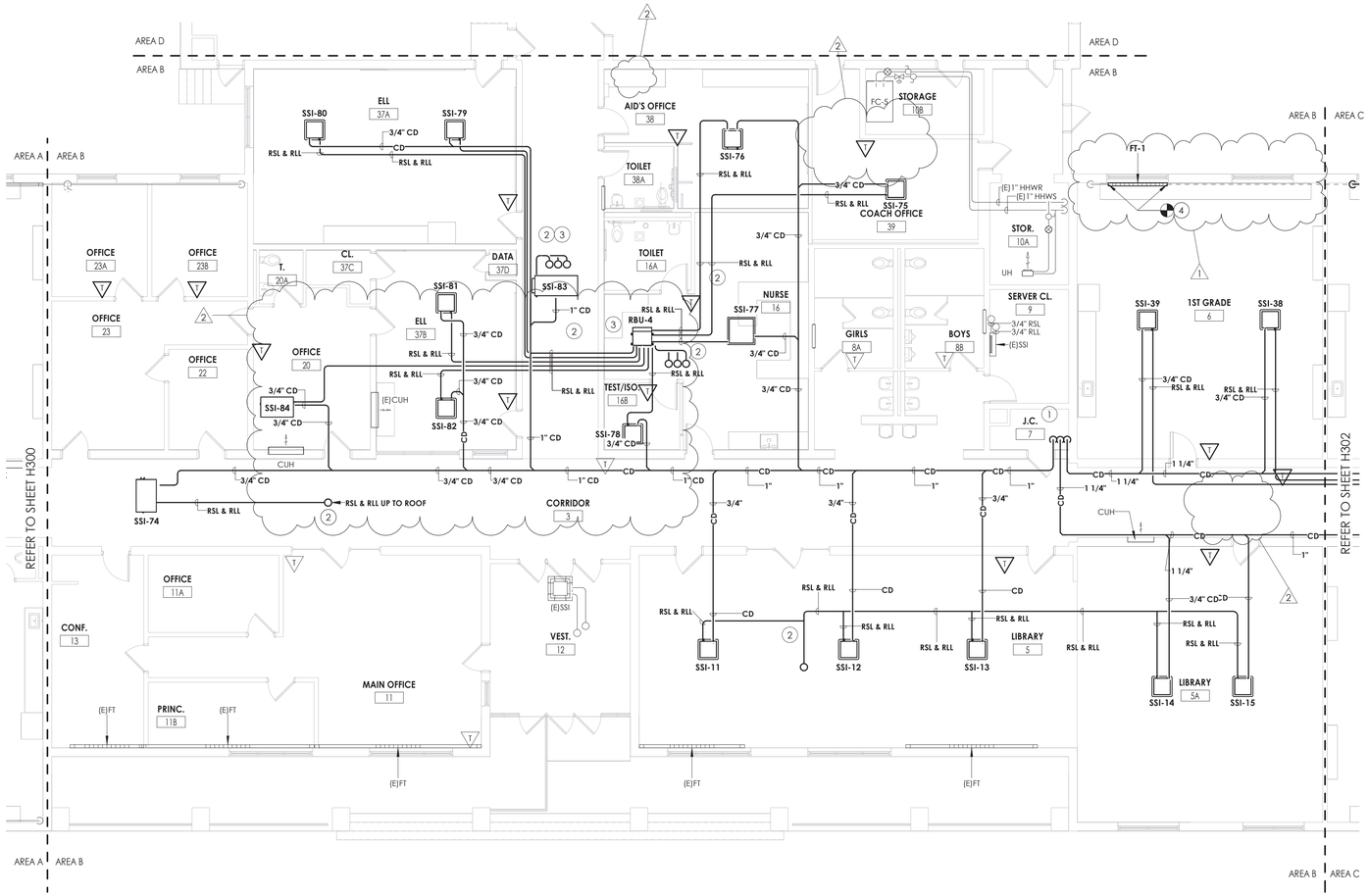
Project Status
BID DOCUMENTS

Drawn By
KCM

Checked By
JJM

Drawing Title
ROOF HVAC NEW WORK PLAN-AREA B

Drawing Number
WOS H211



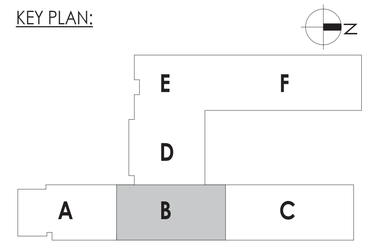
1 H301 **HVAC PIPING PLAN-AREA B**

1/8" = 1'-0"

KEY NOTES:

1. EXTEND CONDENSATE PIPING TO SANITARY. PROVIDE WITH AN INDIRECT CONNECTION.
2. PROVIDE PIPING SIZING AND ROUTING, REFER TO MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE BRANCH BOX. MOUNT UNIT AS HIGH AS POSSIBLE. COORDINATE PIPE ROUTING WITH DUCTWORK AND EXISTING STRUCTURE.
4. PROVIDE 4" FIN TUBE WITH DRAFT STOP WHERE INDICATED AND CONNECT TO EXISTING PIPING.

KEY PLAN:



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SOUTH ORANGETOWN Central School District
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PROJECT INFORMATION

Project Number
1457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
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District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD

- [x] WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- [ ] COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
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- [ ] WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- [ ] COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- [ ] COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- [ ] WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- [ ] SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- [ ] CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- [ ] TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	10/27/2023	BID ADDENDUM #1
2	11/17/2023	BID ADDENDUM #4

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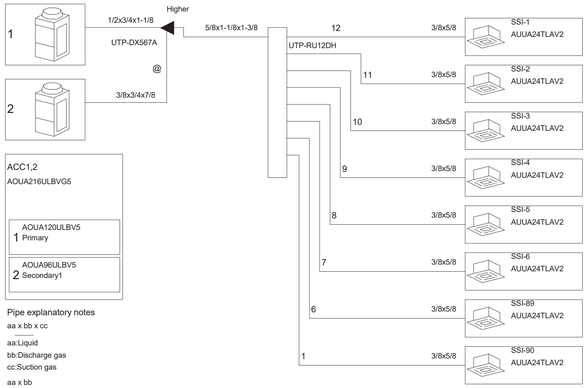
SHEET INFORMATION

Issued: 10/18/2023
Scale: 1/8" = 1'-0"
Project Status: BID DOCUMENTS
Drawn By: KCM
Checked By: JJM
Drawing Title: FIRST FLOOR HVAC PIPING PLAN-AREA B

Drawing Number
WOS H301

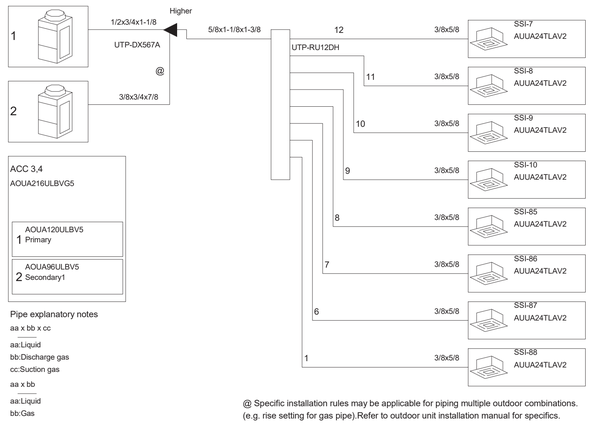
11/16/2023 2:06:37 PM <project location> REVIT PROJECT FILES ON BIM360



@ Specific installation rules may be applicable for piping multiple outdoor combinations. (e.g. rise setting for gas pipe).Refer to outdoor unit installation manual for specifics.

1 H600 **ACC-1,2 PIPING SCHEMATIC**

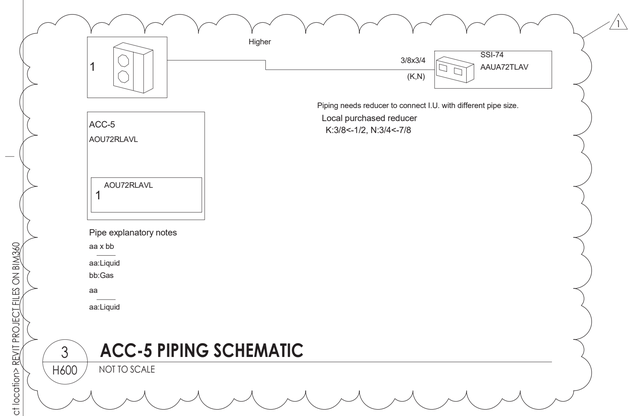
NOT TO SCALE



@ Specific installation rules may be applicable for piping multiple outdoor combinations. (e.g. rise setting for gas pipe).Refer to outdoor unit installation manual for specifics.

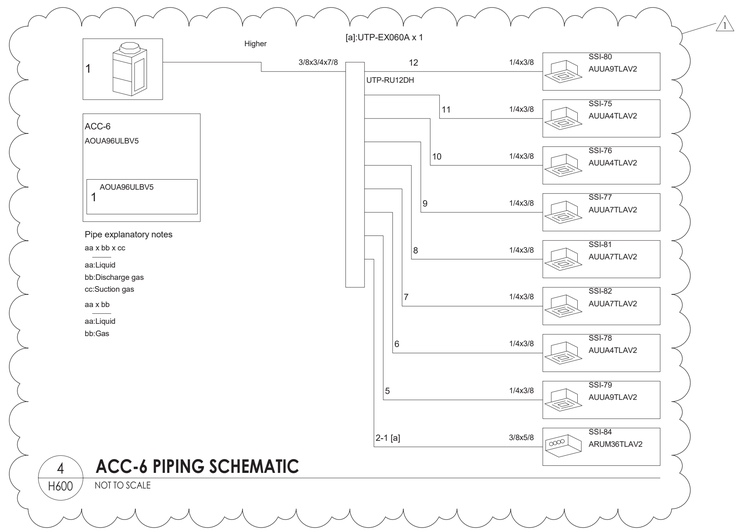
2 H600 **ACC-3,4 PIPING SCHEMATIC**

NOT TO SCALE



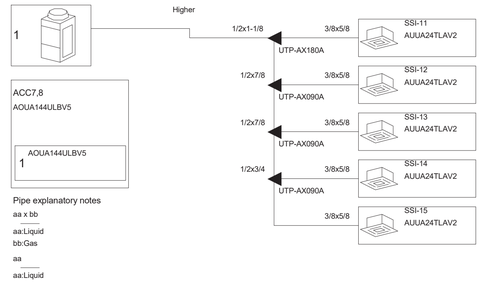
3 H600 **ACC-5 PIPING SCHEMATIC**

NOT TO SCALE



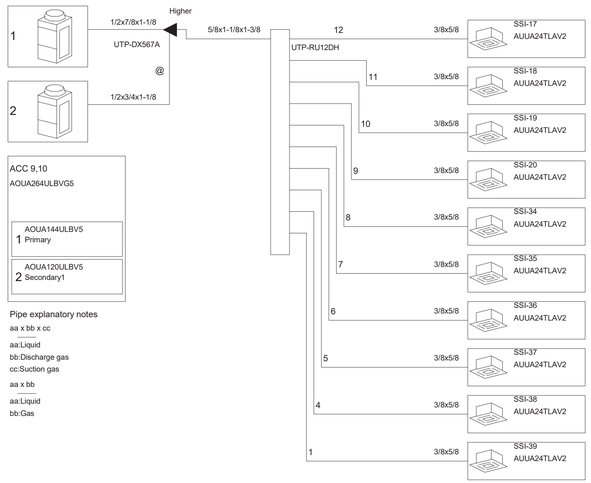
4 H600 **ACC-6 PIPING SCHEMATIC**

NOT TO SCALE



5 H600 **ACC-7,8 PIPING SCHEMATIC**

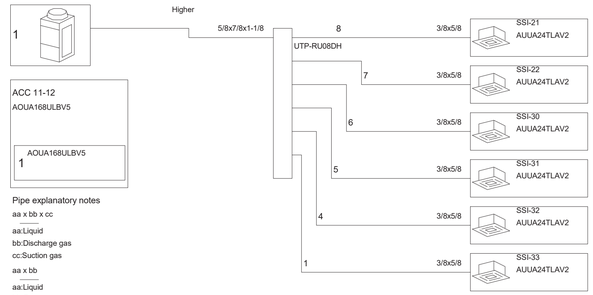
NOT TO SCALE



@ Specific installation rules may be applicable for piping multiple outdoor combinations. (e.g. rise setting for gas pipe).Refer to outdoor unit installation manual for specifics.

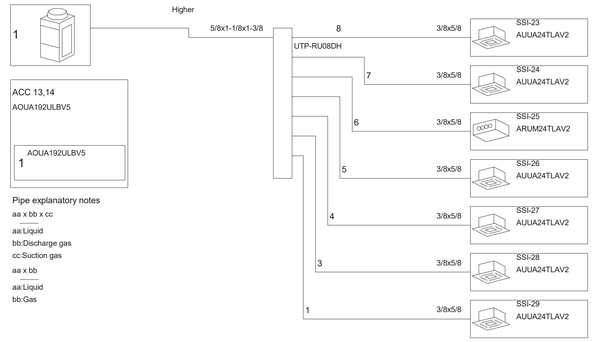
6 H600 **ACC-9,10 PIPING SCHEMATIC**

NOT TO SCALE



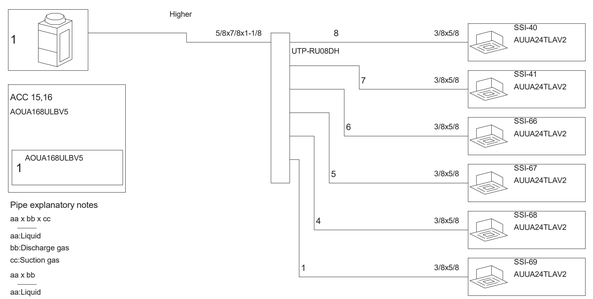
7 H600 **ACC-11,12 PIPING SCHEMATIC**

NOT TO SCALE



8 H600 **ACC-13,14 PIPING SCHEMATIC**

NOT TO SCALE



9 H600 **ACC-15,16 PIPING SCHEMATIC**

NOT TO SCALE

CPL | Architecture Engineering Planning
50 Front Street Suite 202,
Newburgh, NY 12550
CPLteam.com

SOUTH ORANGETOWN Central School District

Capital Improvements Bond

Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
1457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD

- [x] WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- [ ] COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- [ ] TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- [ ] WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- [ ] COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- [ ] COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- [ ] WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- [ ] SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- [ ] CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- [ ] TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

SHEET INFORMATION

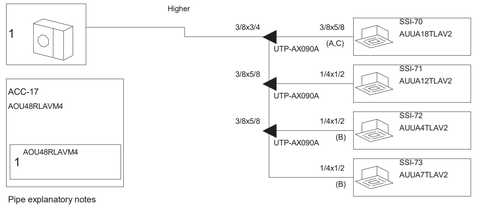
Issued	Scale
10/18/2023	NOT TO SCALE

Project Status
BID DOCUMENTS

Drawn By	Checked By
KCM	JJM

Drawing Title
VRF PIPING

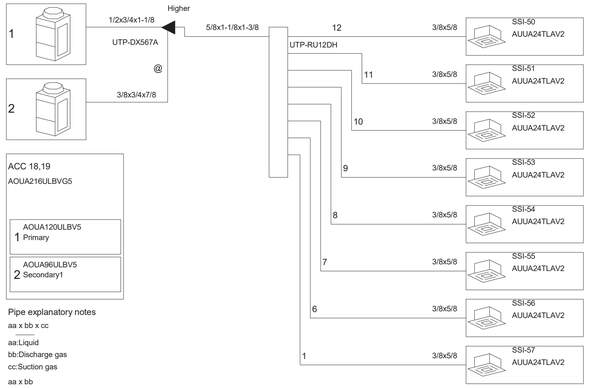
Drawing Number
WOS
H600



Piping needs reducer to connect I.U. with different pipe size.
Local purchased expander
A:3/8<-1/4, B:1/2<-3/8, C:5/8<-1/2

1 H601 ACC-17 PIPING SCHEMATIC

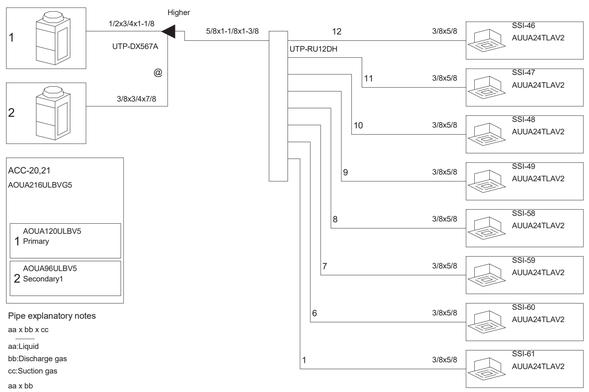
NOT TO SCALE



@ Specific installation rules may be applicable for piping multiple outdoor combinations. (e.g. rise setting for gas pipe).Refer to outdoor unit installation manual for specifics.

2 H601 ACC-18,19 PIPING SCHEMATIC

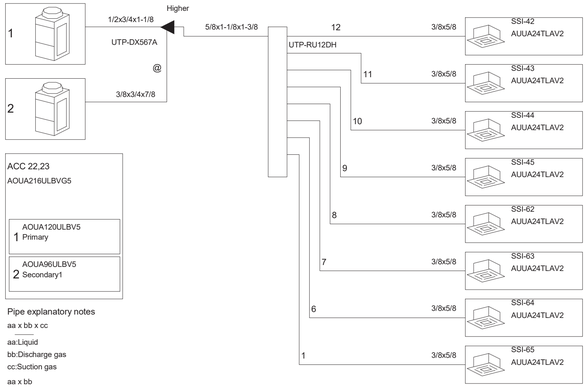
NOT TO SCALE



@ Specific installation rules may be applicable for piping multiple outdoor combinations. (e.g. rise setting for gas pipe).Refer to outdoor unit installation manual for specifics.

3 H601 ACC-20,21 PIPING SCHEMATIC

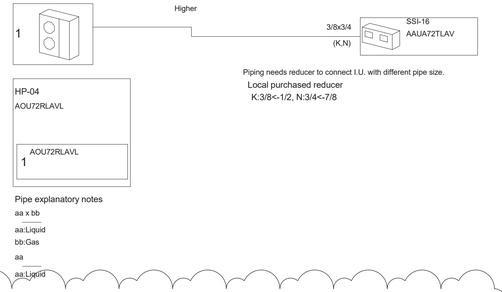
NOT TO SCALE



@ Specific installation rules may be applicable for piping multiple outdoor combinations. (e.g. rise setting for gas pipe).Refer to outdoor unit installation manual for specifics.

4 H601 ACC-22,23 PIPING SCHEMATIC

NOT TO SCALE



Piping needs reducer to connect I.U. with different pipe size.
Local purchased reducer
K:3/8<-1/2, N:3/4<-7/8

5 H601 HP-4 PIPING SCHEMATIC

NOT TO SCALE

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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
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Project Name
PHASE 1: 2022 BOND

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SOUTH ORANGETOWN CSD

- [x] WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
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- [ ] COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- [ ] WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- [ ] SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- [ ] CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
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PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

SHEET INFORMATION

Issued
10/18/2023

Scale
NOT TO SCALE

Project Status
BID DOCUMENTS

Drawn By
KCM

Checked By
JJM

Drawing Title
VRF PIPING

Drawing Number
WOS
H601

DX COIL SCHEDULE

TAG	LOCATION / SERVES	SUPPLY AIR (CFM)	DCV OA (CFM)	NOMINAL CAPACITY (TON)	COOLING CAPACITY								MFG SIZE	MFG SIZE HXL (IN.)	ROWS	TYPICAL UNIT MFG & MODEL NO.	NOTES:
					TOTAL MBH	SENS MBH	EAT°F		LAT°F		AMB °F	MAX APD (IN WC)					
							DB	WB	DB	WB							
DX-1	ROOF / AUDITERIA	5025	2700	20.3	243.2	170.2	84.0	69.2	55.0	54.5	93 / 75	0.83	9.93 SF	28.7 / 11.2	6	CARRIER 28ME	1,2
DX-2	ROOF / GYMNASIUM	5163	1800	18.2	217.9	152.5	81.2	67.2	55.0	54.5	93 / 75	0.37	14.34 SF	32.6 / 11.6	4	CARRIER 28ME	1,2

NOTES:
1. COORDINATE REFRIGERATION TYPE WITH CONDENSING UNIT
2. LOCATE IN EXISTING RTU, UPSTREAM OF SUPPLY FAN, DOWN STREAM FROM FILTERS.

REFRIGERANT BRANCH BOXES

MARK	UNIT SERVES	NUMBER OF BRANCHES AVAILABLE	NUMBER OF BRANCHES USED	MAX TOTAL CAPACITY (MBH)	MAX BRANCH CAPACITY (MBH)	CONNECTED TOTAL HEATING CAPACITY (MBH)	CONNECTED TOTAL COOLING CAPACITY (MBH)	DIMENSIONS (H × W × D)	POWER (V/Ø/HZ)	POWER (WATTS)	TYPICAL UNIT MFG & MODEL NO.
RBU-1	ACC-1,2	12	8	245	27	2592	2304	11" × 39" × 25"	208 / 230 / 1 / 60	339 W	UTP-RU12AH
RBU-2	ACC-3,4	12	8	245	27	2592	2304	11" × 39" × 25"	208 / 230 / 1 / 60	339 W	UTP-RU12AH
RBU-4	ACC-6	8	8	245	27	1010.4	852	11" × 26" × 25"	208 / 230 / 1 / 60	226 W	UTP-RU08AH
RBU-6	ACC-9,10	12	10	324	27	3240	2880	11" × 39" × 25"	208 / 230 / 1 / 60	339 W	UTP-RU12AH
RBU-7	ACC-11,12	8	6	245	27	1944	1728	11" × 26" × 25"	208 / 230 / 1 / 60	226 W	UTP-RU08AH
RBU-8	ACC-13,14	8	7	245	27	2268	2016	11" × 26" × 25"	208 / 230 / 1 / 60	226 W	UTP-RU08AH
RBU-9	ACC-18,19	12	8	245	27	2592	2304	11" × 39" × 25"	208 / 230 / 1 / 60	339 W	UTP-RU12AH
RBU-10	ACC-20,21	12	8	245	27	2592	2304	11" × 39" × 25"	208 / 230 / 1 / 60	339 W	UTP-RU12AH
RBU-11	ACC-22,23	12	8	245	27	2592	2304	11" × 39" × 25"	208 / 230 / 1 / 60	339 W	UTP-RU12AH
RBU-12	ACC-15,16	8	6	245	27	1944	1728	11" × 26" × 25"	208 / 230 / 1 / 60	226 W	UTP-RU08AH

FAN SCHEDULE

TAG	LOCATION	SERVICE	TYPE	CFM	SP IN W.G.	RPM	ELECTRICAL DATA				TYPICAL UNIT MFG & MODEL NO.	NOTES:
							HP	VOLTS	PHASE	AMPS		
EF-1	ROOF	CRAWLSPACE	DOWNBLAST	2320	1.3	1725	1-1/2	208	1	11	GREEHECK G-140-A	1-2
EF-2	ROOF	TOILETS	DIRECT	900	0.3	959	1/4	115	1	3.8	GREEHECK G-120-VG	1-2

NOTES:
1. FACTORY MOUNTED AND WIRED DISCONNECT.
2. HINGED BASE AND BIRD SCREEN.

REGISTERS, GRILLES, AND DIFFUSERS

TAG	APPLICATION	MATERIAL	TYPE	FINISH	DESIGN EQUIP.	NOTES:
D-1	SUPPLY	STEEL	CEILING GRILLE	WHITE	PRICE 500	3
D-2	SUPPLY	STEEL	LAY-IN	WHITE	PRICE SPD	2,4
D-3	SUPPLY	STEEL	ROUND	WHITE	PRICE HCD	1
R-1	RETURN/EA	STEEL	CEILING GRILLE	WHITE	PRICE 510	3
R-2	RETURN/EA	STEEL	LAY-IN	WHITE	PRICE PDN	-
R-3	RETURN/EA	STEEL	LAY-IN	WHITE	PRICE PDDR	-

NOTES:
1. OPPOSED BLADE DAMPER.
2. STANDARD AIR FLOW PATTERN.
3. SINGLE DEFLECTION, BLADES PARALLEL TO LENGTH.
4. INSULATED BACK PAN.

ENERGY RECOVERY UNIT

TAG	LOCATION	AREA SERVED	SA/OA (CFM)	EA (CFM)	RA (CFM)	SUPPLY FAN					EXHAUST FAN					HEATING TYPE	FROST CONTROL	OPERATING WEIGHT (LBS)	FILTERS	UNIT ELECTRICAL REQUIREMENTS	
						FAN TYPE	E.S.P. (IN. WC)	RPM	BHP	HP	FAN TYPE	E.S.P. (IN. WC)	RPM	BHP	HP					V/Ø/HZ	FLA
ERU-1	ROOF	CLASSROOMS	1885	1885	1885	PLENUM	1	1760	1.39	2	PLENUM	0.5	1562	0.77	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	208/3/60	99
ERU-2	ROOF	CLASSROOMS	1620	1620	1620	PLENUM	1	1760	1.14	2	PLENUM	0.5	1454	0.61	2	ELECTRIC	YES	1524	2" PRE-FILTER/4" MERV 13	208/3/60	78
ERU-5	ROOF	CLASSROOMS	1120	1120	1120	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1510	2" PRE-FILTER/4" MERV 13	208/3/60	54
ERU-6	ROOF	CLASSROOMS	2120	2120	2120	PLENUM	1	1760	1.62	2	PLENUM	0.5	1635	0.8	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	208/3/60	99
ERU-7	ROOF	CLASSROOMS	1230	1230	1230	PLENUM	1	1760	0.8	2	PLENUM	0.5	1633	0.4	1	ELECTRIC	YES	1510	2" PRE-FILTER/4" MERV 13	208/3/60	54
ERU-8	ROOF	CLASSROOMS	1260	1260	1260	PLENUM	1	1760	0.8	2	PLENUM	0.5	1626	0.4	2	ELECTRIC	YES	1510	2" PRE-FILTER/4" MERV 13	208/3/60	54
ERU-9	ROOF	CLASSROOMS	1990	1990	1990	PLENUM	1	1760	1.53	2	PLENUM	0.5	1608	0.84	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	208/3/60	99
ERU-10	ROOF	CLASSROOMS	1690	1690	1690	PLENUM	1	1760	1.2	2	PLENUM	0.5	1481	0.65	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	208/3/60	78
ERU-11	ROOF	CLASSROOMS	1680	1680	1680	PLENUM	1	1760	1.2	2	PLENUM	0.5	1481	0.65	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	208/3/60	78
ERU-12	ROOF	CLASSROOMS	1300	1300	1300	PLENUM	1	1760	0.8	2	PLENUM	0.5	1321	0.4	1	ELECTRIC	YES	1510	2" PRE-FILTER/4" MERV 13	208/3/60	54
ERU-13	ROOF	CLASSROOMS	2240	2240	2240	PLENUM	1	1760	1.7	2	PLENUM	0.5	1684	0.9	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	208/3/60	120

ENERGY RECOVERY UNIT (CONT.)

TAG	WINTER CONDITIONS									SUMMER CONDITIONS									TYPICAL UNIT MFG & MODEL NO.	NOTES
	WHEEL ENTERING CONDITIONS				WHEEL LEAVING CONDITIONS				EFFECTIVENESS @ WINTER DESIGN	WHEEL ENTERING CONDITIONS				WHEEL LEAVING CONDITIONS				EFFECTIVENESS @ SUMMER DESIGN		
	OUTSIDE AIR		RETURN AIR		SUPPLY AIR		EXHAUST AIR			OUTSIDE AIR		RETURN AIR		SUPPLY AIR		EXHAUST AIR				
	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	TOTAL %	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	TOTAL %		
ERU-1	-7	-8	65	62	39.2	39.2	18.7	18.7	65.4	90	71	75	62	79.8	65.1	85	68.1	65.4	AAON RN-007-80-E60E14A	1,2,3,4
ERU-2	-7	-8	65	62	41.6	41.6	16.3	16.3	68.2	90	71	75	62	79.3	64.9	85.4	68.4	68.2	AAON RN-006-80-E60E13A	1,2,3,4
ERU-5	-7	-8	65	62	46.2	46.2	11.7	11.7	74.3	90	71	75	62	78.4	64.3	86.4	68.9	74.3	AAON RN-006-80-E60E12A	1,2,3,4
ERU-6	-7	-8	65	62	42	42	18.7	18.7	65.1	90	71	75	62	79.3	64.8	84.9	68.1	65.1	AAON RN-007-80-E60E14A	1,2,3,4
ERU-7	-7	-8	65	62	45.2	45.2	12.7	12.7	72.9	90	71	75	62	78.6	64.4	86.2	68.8	72.9	AAON RN-006-80-E60E12A	1,2,3,4
ERU-8	-7	-8	65	62	45.3	45.3	12.7	12.7	73.1	90	71	75	62	78.6	64.4	86.2	68.8	73.1	AAON RN-006-80-E60E12A	1,2,3,4
ERU-9	-7	-8	65	62	38.2	38.2	19.7	19.7	63.8	90	71	75	62	80	65.3	84.8	68	63.8	AAON RN-007-80-E60E14A	1,2,3,4
ERU-10	-7	-8	65	62	41	41	16.9	16.9	67.4	90	71	75	62	79.4	64.9	85.3	68.3	67.4	AAON RN-007-80-E60E13A	1,2,3,4
ERU-11	-7	-8	65	62	41	41	16.9	16.9	67.4	90	71	75	62	79.4	64.9	85.3	68.3	67.4	AAON RN-007-80-E60E13A	1,2,3,4
ERU-12	-7	-8	65	62	46.5	46.5	12.7	12.7	73.1	90	71	75	62	78.3	64.3	86.2	68.8	73.1	AAON RN-006-80-E60E12A	1,2,3,4
ERU-13	-7	-8	65	62	33.6	33.6	19.8	19.8	63.7	90	71	75	62	81	65.9	84.7	68	63.7	AAON RN-007-80-E60E15A	1,2,3,4

NOTES:
1. FACTORY MOUNTED AND WIRED DISCONNECT.
2. FRESH AIR AND EXHAUST DAMPERS.
3. TERMINAL STRIP FOR BMS CONTROL OF FAN AND DAMPERS.
4. DIRTY FILTER SENSORS.

ENERGY RECOVERY UNIT (CONT.)

TAG	TYPE	FINS PER INCH	ROWS	FACE VEL	COIL PD	REF.	COMP QTY	COOLING				REHEAT		HEATING				
								TOTAL CAPACITY (MBH)	SENSIBLE (MBH)	EAT(F)	LAT(F)	CAPACITY (MBH)	LAT(F)	OAT(F)	RAT(F)	EAT(F)	TOTAL CAPACITY (MBH)	INPUT kW
ERU-1	AIR TO AIR	14	3	221	0.12	R410A	1	105	52.9	79.8	55.2	34	70/59	-7.0	65	39.2	102.4	30
ERU-2	AIR TO AIR	14	3	190	0.09	R410A	1	93.2	46.1	79.3	54.4	31	70/58.7	-7.0	65	41.6	76.8	22.5
ERU-5	AIR TO AIR	14	3	131		R410A	1	79.6	37.8	78.4/64.3	48.2/47	28	70/56.3	-7.0	65	46.2	51.2	15
ERU-6	AIR TO AIR	14	3	249	0.14	R410A	1	106	55.7	79.3	54.5	35	70/59.4	-7.0	65	42.1	102.4	30
ERU-7	AIR TO AIR	14	3	144	0.06	R410A	1	83	39.7	78.6	49.8	29	70/56.9	-7.0	65	45.2	68.3	20
ERU-8	AIR TO AIR	14	3	143	0.06	R410A	1	82.7	39.6	78.6	49.6	29	70/56.8	-7.0	65	45.3	51.2	15
ERU-9	AIR TO AIR	14	3	233	0.12	R410A	1	107	54.4	80	56.2	34	70/59.3	-7.0	65	38.2	102.4	30
ERU-10	AIR TO AIR	14	3	198	0.1	R410A	1	100	49.7	79.4	53.6	33	70/58.3	-7.0	65	41	76.8	22.5
ERU-11	AIR TO AIR	14	3	197	0.1	R410A	1	100	49.7	79.4	53.6	33	70/58.3	-7.0	65	41	76.8	22.5
ERU-12	AIR TO AIR	14	3	152	0.07	R410A	1	83.4	40.9	78.3	50.4	30	70/57.1	-7.0	65	46.5	51.2	15
ERU-13	AIR TO AIR	14	3	261	0.14	R410A	1	109	58.6	81	58.1	34	70/60.2	-7.0	65	33.7	128	37.6

ENERGY RECOVERY UNIT (CONT.)

TAG	SOUND SOURCE	OCTAVE BAND AND CENTER FREQUENCY (HZ)							
		1	2	3	4	5	6	7	8
		62.5	125	250	500	1000	2000	4000	8000
ERU-1	DISC.	84	83	86	81	73	71	68	63
	INLET	82	81	78	71	69	67	64	60
ERU-2	DISC.	83	814	84	79	72	69	67	61
	INLET	80	79	76	69	67	65	61	57
ERU-5	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-6	DISC.	85	83	87	83	75	72	70	64
	INLET	83	82	79	73	71	68	64	60
ERU-7	DISC.	80	79	81	77	70	67	64	59
	INLET	80	79	75	69	69	67	64	60
ERU-8	DISC.	80	79	81	77	70	67	64	59
	INLET	80	79	75	69	69	67	64	60
ERU-9	DISC.	85	83	87	82	75	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-10	DISC.	83	82	84	80	72	70	67	61
	INLET	81	79	76	69	67	65	62	58
ERU-11	DISC.	83	82	84	79	72	70	67	61
	INLET	81	79	76	69	67	65	62	58
ERU-12	DISC.	80	78	81	78	70	68	64	59
	INLET	78	76	72	65	64	63	59	55
ERU-13	DISC.	85	84	88	84	75	73	70	65
	INLET	83	83	80	74	71	69	66	62

ENERGY RECOVERY UNITS

TAG	LOCATION	AREA SERVED	SA (CFM)	EA (CFM)	RA (CFM)	SUPPLY FAN				EXHAUST FAN				TOTAL MBH SAVED SUMMER	TOTAL MBH SAVED WINTER	OPERATING WEIGHT (LBS)	FILTERS	ELECTRICAL REQUIREMENTS		TYPICAL UNIT MFG & MODEL NO.	NOTES:
						FAN TYPE	E.S.P. (IN. WC)	WATTS	HP	FAN TYPE	E.S.P. (IN. WC)	WATTS	HP					V/Ø/HZ	MCA		
ERU-3	ROOF	B	850	850	850	DIRECT	0.5	238	0.5	DIRECT	0.5	284	0.5	15.1	35.9	243-346	MERV 8	208/1/60	10.8	RENEWAIRE HE-1XJRTV-S15EE	1,2,3,4
ERU-4	ROOF	B	655	655	655	DIRECT	0.5	238	0.5	DIRECT	0.5	284	0.5	15.1	35.9	243-346	MERV 8	208/1/60	10.8	RENEWAIRE HE-1XJRTV-S15EE	1,2,3,4

NOTES:
1. FACTORY MOUNTED AND WIRED DISCONNECT.
2. FRESH AIR AND EXHAUST DAMPERS.
3. TERMINAL STRIP FOR BMS CONTROL OF FAN AND DAMPERS.
4. DIRTY FILTER SENSORS.

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160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- [x] WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- [ ] COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- [ ] TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- [ ] WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- [ ] COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- [ ] COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- [ ] WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- [ ] SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- [ ] CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- [ ] TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING ARCHITECT, ENGINEER OR SURVEYOR SHALL AFFIX TO ANY ALTERED DOCUMENT BOTH THE SEAL OF THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued
10/18/2023

Scale
12" = 1'-0"

Project Status
BID DOCUMENTS

Drawn By
KCM

Checked By
JJM

Drawing Title
MECHANICAL SCHEDULES

Drawing Number
WOS H900

11/16/2023 3:45:21 PM <project location> REVIT PROJECT FILES ON BIM360

VRF INDOOR UNITS

MARK	ROOM SERVED	TYPE	AIRFLOW (H/M/L) CFM	OUTDOOR AIRFLOW CFM	ESP (INWG)	NOM. HEATING CAPACITY MBH	NOM. COOLING CAPACITY MBH	DIMENSIONS (H" X W" X D")	WEIGHT (LBS)	POWER (V/Ø/Hz)	MOCP	FLA	TYPICAL UNIT MFG & MODEL NO.	REMARKS:
SSI-1	KINDERGARTEN RM 32	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-2	KINDERGARTEN RM 32	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-3	KINDERGARTEN RM 21	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-4	KINDERGARTEN RM 21	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-5	KINDERGARTEN RM 19	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-6	KINDERGARTEN RM 19	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-7	KINDERGARTEN RM 17	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-8	KINDERGARTEN RM 17	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-9	FIRST GRADE RM 15	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-10	FIRST GRADE RM 15	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-11	LIBRARY RM 5	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-12	LIBRARY RM 5	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-13	LIBRARY RM 5	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-14	LIBRARY RM 5	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-15	LIBRARY RM 5	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-16														
SSI-17	MAKERSPACE RM 3	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-18	MAKERSPACE RM 3	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-19	1ST GRADE RM 1	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-20	1ST GRADE RM 1	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-21	KINDERGARTEN RM 104	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-22	KINDERGARTEN RM 104	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-23	OT/PT RM 105	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-24	OT/PT RM 105	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-25	OFFICES M1/M2/M3	DUCTED	860/760/648	60	-	27	24	52 X 32 X 12	104	208/1/60	15	0.88	FUJITSU ARUM24TLAV2	1-5
SSI-26	KINDERGARTEN RM 103	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-27	KINDERGARTEN RM 103	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-28	KINDERGARTEN RM 102	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-29	KINDERGARTEN RM 102	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-30	KINDERGARTEN RM 101	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-31	KINDERGARTEN RM 101	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-32	SPECIAL ED RM 100	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-33	SPECIAL ED RM 100	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-34	1ST GRADE RM 2	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-35	1ST GRADE RM 2	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-36	1ST GRADE RM 4	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-37	1ST GRADE RM 4	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-38	1ST GRADE RM 6	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-39	1ST GRADE RM 6	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-40	MUSIC RM 62	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-41	MUSIC RM 62	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-42	2ND GRADE RM 64	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-43	2ND GRADE RM 64	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-44	2ND GRADE RM 66	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-45	2ND GRADE RM 66	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-46	2ND GRADE RM 68	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-47	2ND GRADE RM 68	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-48	1ST GRADE RM 70	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-49	1ST GRADE RM 70	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-50	2ND GRADE RM 72	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-51	2ND GRADE RM 72	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5

VRF INDOOR UNITS

MARK	ROOM SERVED	TYPE	AIRFLOW (H/M/L) CFM	OUTDOOR AIRFLOW CFM	ESP (INWG)	NOM. HEATING CAPACITY MBH	NOM. COOLING CAPACITY MBH	DIMENSIONS (H" X W" X D")	WEIGHT (LBS)	POWER (V/Ø/Hz)	MOCP	FLA	TYPICAL UNIT MFG & MODEL NO.	REMARKS:
SSI-52	ART RM 74	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-53	ART RM 74	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-54	1ST GRADE RM 71	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-55	1ST GRADE RM 71	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-56	1ST GRADE RM 69	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-57	1ST GRADE RM 69	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-58	2ND GRADE RM 67	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-59	2ND GRADE RM 67	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-60	2ND GRADE RM 65	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-61	2ND GRADE RM 65	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-62	2ND GRADE RM 63	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-63	2ND GRADE RM 63	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-64	1ST GRADE RM 61	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-65	1ST GRADE RM 61	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-66	2ND GRADE RM 59	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-67	2ND GRADE RM 59	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-68	2ND GRADE RM 57	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-69	2ND GRADE RM 57	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-70	STAFF LOUNGE RM 51	CEILING CASSETTE	418/348/271	-	-	20	18	23 X 23 X 10	44	208/1/60	15	0.41	FUJITSU AUUA18TLAV2	1-5
SSI-71	ENL RM44	CEILING CASSETTE	353/306/253	-	-	13.5	12	23 X 23 X 10	42	208/1/60	15	0.41	FUJITSU AUUA12TLAV2	1-5
SSI-72	OFFICE RM 42	CEILING CASSETTE	312/265/230	-	-	4.4	4	23 X 23 X 10	40	208/1/60	15	0.23	FUJITSU AUUA4TLAV2	1-5
SSI-73	P.E. OFFICE RM 80B	CEILING CASSETTE	318/271/230	-	-	9.5	7.5	23 X 23 X 10	40	208/1/60	15	0.41	FUJITSU AUUA7TLAV2	1-5
SSI-74	CORRIDOR 3	VENTILATION UNIT	989/742/495	600	-	47	72	60 X 27 X 20	139	208/1/60	15	-	FUJITSU AAUA72TLAV	1-5
SSI-75	COACH OFFICE RM 39	CEILING CASSETTE	318/271/230	-	-	9.5	7.5	23 X 23 X 10	40	208/1/60	15	0.41	FUJITSU AUUA7TLAV2	1-5
SSI-76	AID'S OFFICE RM 38	CEILING CASSETTE	318/271/230	-	-	9.5	7.5	23 X 23 X 10	40	208/1/60	15	0.41	FUJITSU AUUA7TLAV2	1-5
SSI-77	NURSE RM 16	CEILING CASSETTE	418/348/271	-	-	20	18	23 X 23 X 10	44	208/1/60	15	0.41	FUJITSU AUUA18TLAV2	1-5
SSI-78	TEST/ISO RM 168	CEILING CASSETTE	312/265/230	-	-	4.4	4	23 X 23 X 10	40	208/1/60	15	0.23	FUJITSU AUUA4TLAV2	1-5
SSI-79	ELL RM 37A	CEILING CASSETTE	324/283/236	-	-	10.9	9.5	23 X 23 X 10	40	208/1/60	15	0.41	FUJITSU AUUA9TLAV2	1-5
SSI-80	ELL RM 37A	CEILING CASSETTE	324/283/236	-	-	10.9	9.5	23 X 23 X 10	40	208/1/60	15	0.41	FUJITSU AUUA9TLAV2	1-5
SSI-81	ELL RM 37B	CEILING CASSETTE	318/271/230	-	-	9.5	7.5	23 X 23 X 10	40	208/1/60	15	0.41	FUJITSU AUUA7TLAV2	1-5
SSI-82	ELL RM 37B	CEILING CASSETTE	318/271/230	-	-	9.5	7.5	23 X 23 X 10	40	208/1/60	15	0.41	FUJITSU AUUA7TLAV2	1-5
SSI-83	RM 16, 168, 37A, & 37B, 38	VENTILATION UNIT	989/742/495	655	-	47	72	60 X 27 X 20	139	208/1/60	15	-	FUJITSU AAUA72TLAV	1-5
SSI-84	OFFICE 20/22/23/23A/23B	DUCTED	1113/954/766	250	0.6	40	36	52 X 32 X 12	104	208/1/60	15	1.39	FUJITSU ARUM36TLAV2	1-5
SSI-85	KINDERGARTEN RM 24	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-86	KINDERGARTEN RM 24	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-87	KINDERGARTEN RM 26	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-88	KINDERGARTEN RM 26	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-89	KINDERGARTEN RM 30	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5
SSI-90	KINDERGARTEN RM 30	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	208/1/60	15	0.62	FUJITSU AUUA24TLAV2	1-5

REMARKS:

1. UNIT MOUNTED AND WIRED DISCONNECT.
2. BAC NET INTERGRATION TO BMS.
3. COLOR WHITE.
4. DRAIN PAN LEVEL SESORS.
5. CONDENSATE PUMP.

SPLIT SYSTEM OUTDOOR CONDENSING UNIT SCHEDULE

NAME	LOCATION	SERVES	EER	COP	RATED COOLING CAPACITY (TON)	RATED HEATING CAPACITY (TON)	TOTAL COOLING CAPACITY (TON)	TOTAL HEATING CAPACITY (TON)	ELECTRICAL DATA: POWER (Ø/V/Hz)	RATED CURRENT IN COOLING (A)	RATED CURRENT IN HEATING (A)	MCA (A)	MFA (A)	DIMENSIONS (H X W X D) (INCH)	WEIGHT (LBS)	MANUF.	MODEL	NOTES
ACC-1,2,	ROOF	SSI-1, SSI-2, SSI-3, SSI-4, SSI-5, SSI-6, SSI-89, SSI-90	10.9	3.47	18	20.25	13	14.19	3/208/60	21.69	26.71	81.6	50	66-9/16 X 36-5/16 X 30-1/8	569	FUJITSU	AOUA120ULBV5	1,2,3
	ROOF								3/208/60	17.64	19.4		60	66-9/16 X 48-13/16 X 30-1/8	622		AOUA96ULBV5	
ACC-3,4	ROOF	SSI-7, SSI-8, SSI-9, SSI-10, SSI-85, SSI-86, SSI-87, SSI-88	10.9	3.47	18	20.25	13	14.19	3/208/60	21.69	26.71	81.6	50	66-9/16 X 36-5/16 X 30-1/8	569	FUJITSU	AOUA120ULBV5	1,2,3
	ROOF								3/208/60	17.64	19.4		60	66-9/16 X 48-13/16 X 30-1/8	622		AOUA96ULBV5	
ACC-5	ROOF	SSI-74	11	3.48	16	18	12.88	8.4	3/208/60	14.83	13.94	71	40	64-1/2 X 42-1/2 X 18-7/8	469.6	FUJITSU	AOU72RLAVL	1,2,3
ACC-6	ROOF	SSI-75, SSI-76, SSI-77, SSI-78, SSI-79, SSI-80, SSI-81, SSI-82, SSI-84	14.9	4.42	6	6.75	3.64	4.83	3/208/60	17.64	19.4	29.3	60	66-9/16 X 48-13/16 X 30-1/8	622	FUJITSU	AOUA96ULBV5	1,2,3
ACC-7,8	ROOF	SSI-11, SSI-12, SSI-13, SSI-14, SSI-15	14.4	4.07	12	13.5	8.17	9.67	3/208/60	24.36	28.25	49.8	60	66-9/16 x 63 x 30-1/8	937	FUJITSU	AOUA144ULBV5	1,2,3
ACC-9,10	ROOF	SSI-17, SSI-18, SSI-19, SSI-20, SSI-34, SSI-35, SSI-36, SSI-37, SSI-38, SSI-39	11.7	3.52	22	24.75	15.89	17.72	3/208/60	24.36	28.25	93.7	60	66-9/16 x 63 x 30-1/8	937	FUJITSU	AOUA144ULBV5	1,2,3
									3/208/60	21.69	26.71		50	66-9/16 X 36-5/16 X 30-1/8	569		AOUA120ULBV5	1,2
ACC-11,12	ROOF	SSI-21, SSI-22, SSI-30, SSI-31, SSI-32, SSI-33	12.2	3.78	14	15.67	9.62	10.78	3/208/60	33.49	35.83	59.8	70	66-9/16 X 63 X 30-1/8	937	FUJITSU	AOUA168ULBV5	1,2,3
ACC-13,14	ROOF	SSI-23, SSI-24, SSI-25, SSI-26, SSI-27, SSI-28, SSI-29	11	3.48	16	18	11	12.72	3/208/60	43.54	45.08	71	80	66-9/16 x 63 x 30-1/8	937	FUJITSU	AOUA192ULBV5	1,2,3
ACC-15,16	ROOF	SSI-40, SSI-41, SSI-66, SSI-67, SSI-68, SSI-69	12.2	3.78	14	15.67	9.62	10.78	3/208/60	33.49	35.83	59.8	70	66-9/16 X 63 X 30-1/8	937	FUJITSU	AOUA168ULBV5	1,2,3
ACC-17	ROOF	SSI-70, SSI-71, SSI-72, SSI-73	12.5	3.88	4	4.5	2.83	3.43	1/208/60	16.38	17.44	29.8	30	52-1/2 X 38-3/16 X 14-9/16	265	FUJITSU	AOU48RLAVM4	1,2,3
ACC-18,19	ROOF	SSI-50, SSI-51, SSI-52, SSI-53, SSI-54, SSI-55, SSI-56, SSI-57	10.9	3.47	18	20.25	12.37	14.01	3/208/60	21.69	26.71	81.6	50	66-9/16 X 36-5/16 X 30-1/8	569	FUJITSU	AOUA120ULBV5	1,2,3
	ROOF								3/208/60	17.64	19.4		60	66-9/16 X 48-13/16 X 30-1/8	622		AOUA96ULBV5	
ACC-20,21	ROOF	SSI-46, SSI-47, SSI-48, SSI-49, SSI-58, SSI-59, SSI-60, SSI-61	10.9	3.47	18	20.25	13	14.19	3/208/60	21.69	26.71	81.6	50	66-9/16 X 36-5/16 X 30-1/8	569	FUJITSU	AOUA120ULBV5	1,2,3
	ROOF								3/208/60	17.64	19.4		60	66-9/16 X 48-13/16 X 30-1/8	622		AOUA96ULBV5	
ACC 22,23	ROOF	SSI-42, SSI-43, SSI-44, SSI-45, SSI-62, SSI-63, SSI-64, SSI-65	10.9	3.47	18	20.25	13	14.19	3/208/60	21.69	26.71	81.6	50	66-9/16 X 36-5/16 X 30-1/8	569	FUJITSU	AOUA120ULBV5	1,2,3
	ROOF								3/208/60	17.64	19.4		60	66-9/16 X 48-13/16 X 30-1/8	622		AOUA96ULBV5	
SSO-1	HIGH ROOF	DX COIL	10.4	-	25	-	264.7	-	3/208/60	-	-	120.2	150	66.5 × 40.3 × 88.2	1095	CARRIER	38APD0255H	1,2
SSO-2	HIGH ROOF	DX COIL	10.6	-	20	-	224.3	-	3/208/60	-	-	74.8	100	50.4 × 67.1 × 86.1	976	CARRIER	38AUDT25	1,2
HP-05																		
HP-04	ROOF	SSI-16	12.1	4.19	8	6.75	6.88	6.07	3/208/60	14.83	13.94	38	40	64-1/2 X 42-1/2 X 18-7/8	469.6	FUJITSU	AOU72RLAVL	1,2,3

NOTES:

1. FACTORY MOUNTED DISCONNECT
2. 95°F OUTDOOR TEMPERATURE IN COOLING (DRY BULB), 10°F OUTDOOR TEMPERATURE IN HEATING(DRY BULB)
3. LOW AMBIENT TEMPERATURE KIT

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SOUTH ORANGETOWN Central School District

Capital Improvements Bond

Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD

- [x] WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- [ ] COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- [ ] TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- [ ] WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- [ ] COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- [ ] COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- [ ] WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- [ ] SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- [ ] CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- [ ] TZHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT

IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued: 10/18/2023
Scale: NOT TO SCALE
Project Status: BID DOCUMENTS
Drawn By: KCM
Checked By: JJM
Drawing Title: MECHANICAL SCHEDULES

Drawing Number
WOS
H901

VENTILATION CALCULATIONS

SPACE NAME		HVAC SYSTEM	SPACE MAXIMUM SUPPLY (CFM)	FLOOR AREA (SQ FT)	OCCUPANT DENSITY (PERSON/SQ FT)	TOTAL OCCUPANCY FOR VENTILATION (PEOPLE/1000 SQ FT)	PEOPLE OUTDOOR AIRFLOW RATE (CFM/PERSON)	AREA OUTDOOR AIRFLOW RATE (CFM/SQ FT)	EXHAUST AIRFLOW RATE (CFM/SQ FT)	AIR DISTRIBION EFFECTIVENESS	BREATHING ZONE OUTDOOR AIR (CFM)	ZONE OUTDOOR AIRFLOW (CFM)	ADJUSTED CFM
ROOM #	CLASSIFICATION		Vpz	Az	A		Rp	Ra		Ez	Vbz	Voz	
1	CLASSROOMS (5-8)	SSI-19,20	425	891 SF	25	23	10.0	0.12	-	0.8	337	422	425
2	CLASSROOMS (5-8)	SSI-34,35	425	891 SF	25	23	10.0	0.12	-	0.8	337	422	425
3	CLASSROOMS (5-8)	SSI-17,18	425	885 SF	25	23	10.0	0.12	-	0.8	336	421	425
4	CLASSROOMS (5-8)	SSI-36,37	425	888 SF	25	23	10.0	0.12	-	0.8	337	421	425
5	LIBRARY	ERU-5	240	1099 SF	10	11	5.0	0.12	-	0.8	187	234	240
5A	LIBRARY	ERU-5	190	882 SF	10	9	5.0	0.12	-	0.8	151	189	190
6	CLASSROOMS (5-8)	SSI-38,39	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
15	CLASSROOMS (5-8)	SSI-9,10	405	857 SF	25	22	10.0	0.12	-	0.8	323	404	405
16	OFFICE SPACES	SSI-77	55	464 SF	5	3	5.0	0.06	-	0.8	43	54	55
16B	SICKROOM	SSI-78	50	66 SF	25	2	10.0	0.18	-	0.8	32	40	50
17	CLASSROOMS (5-8)	SSI-7,8	405	857 SF	25	22	10.0	0.12	-	0.8	323	404	405
19	CLASSROOMS (5-8)	SSI-5,6	405	857 SF	25	22	10.0	0.12	-	0.8	323	404	405
20	OFFICE SPACES	SSI-84	250	228 SF	5	2	5.0	0.06	-	0.8	24	30	50
21	CLASSROOMS (5-8)	SSI-3,4	480	1025 SF	25	26	10.0	0.12	-	0.8	383	479	480
22	OFFICE SPACES	SSI-84	150	104 SF	5	1	5.0	0.06	-	0.8	11	15	50
23	OFFICE SPACES	SSI-84	240	266 SF	5	2	5.0	0.06	-	0.8	26	33	50
23A	OFFICE SPACES	SSI-84	200	142 SF	5	1	5.0	0.06	-	0.8	14	17	50
23B	OFFICE SPACES	SSI-84	200	142 SF	5	1	5.0	0.06	-	0.8	14	17	50
24	CLASSROOMS (5-8)	SSI-85,86	405	857 SF	25	22	10.0	0.12	-	0.8	323	404	405
26	CLASSROOMS (5-8)	SSI-87,88	405	857 SF	25	22	10.0	0.12	-	0.8	323	404	405
30	CLASSROOMS (5-8)	SSI-89,90	520	1105 SF	25	28	10.0	0.12	-	0.8	413	516	520
32	CLASSROOMS (5-8)	SSI-1,2	480	1025 SF	25	26	10.0	0.12	-	0.8	383	479	480
37A	CLASSROOMS (5-8)	SSI-79,80	280	600 SF	25	15	10.0	0.12	-	0.8	222	278	280
37B	CLASSROOMS (5-8)	SSI-81,82	170	356 SF	25	9	10.0	0.12	-	0.8	133	166	170
38	OFFICE SPACES	SSI-76	50	309 SF	5	2	5.0	0.06	-	0.8	29	36	50
39	OFFICE SPACES	SSI-75	50	261 SF	5	2	5.0	0.06	-	0.8	26	33	50
42	OFFICE SPACES	SSI-72	50	141 SF	5	1	5.0	0.06	-	0.8	13	17	50
44	CLASSROOMS (5-8)	SSI-71	185	377 SF	25	10	10.0	0.12	-	0.8	145	182	185
51	BREAK ROOMS	SSI-70	105	369 SF	30	12	5.0	0.06	-	0.8	82	103	105
57	CLASSROOMS (5-8)	SSI-68,69	425	898 SF	25	23	10.0	0.12	-	0.8	338	423	425
59	CLASSROOMS (5-8)	SSI-66,67	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
61	CLASSROOMS (5-8)	SSI-64,65	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
62	MUSIC/THEATER/DANCE	SSI-40,41	455	882 SF	35	31	10.0	0.06	-	0.8	363	454	455
63	CLASSROOMS (5-8)	SSI-62,63	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
64	CLASSROOMS (5-8)	SSI-42,43	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
65	CLASSROOMS (5-8)	SSI-60,61	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
66	CLASSROOMS (5-8)	SSI-44,45	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
67	CLASSROOMS (5-8)	SSI-58,59	425	889 SF	25	23	10.0	0.12	-	0.8	337	421	425
68	CLASSROOMS (5-8)	SSI-46,47	420	882 SF	25	23	10.0	0.12	-	0.8	336	420	420
69	CLASSROOMS (5-8)	SSI-56,57	425	891 SF	25	23	10.0	0.12	-	0.8	337	422	425
70	CLASSROOMS (5-8)	SSI-48,49	425	889 SF	25	23	10.0	0.12	-	0.8	337	421	425
71	CLASSROOMS (5-8)	SSI-54,55	425	891 SF	25	23	10.0	0.12	-	0.8	337	422	425
72	CLASSROOMS (5-8)	SSI-50,51	425	891 SF	25	23	10.0	0.12	-	0.8	337	422	425
74	ART CLASSROOM	SSI-52,53	715	891 SF	20	18	10.0	0.18	0.70	0.8	340	713	715
80C	OFFICE SPACES	SSI-73	50	186 SF	5	1	5.0	0.06	-	0.8	16	21	50
100	CLASSROOMS (5-8)	SSI-32,33	410	869 SF	25	22	10.0	0.12	-	0.8	324	406	410
101	CLASSROOMS (5-8)	SSI-30,31	410	870 SF	25	22	10.0	0.12	-	0.8	324	406	410
102	CLASSROOMS (5-8)	SSI-28,29	410	872 SF	25	22	10.0	0.12	-	0.8	325	406	410
103	CLASSROOMS (5-8)	SSI-26,27	410	872 SF	25	22	10.0	0.12	-	0.8	325	406	410
104	CLASSROOMS (5-8)	SSI-21,22	410	872 SF	25	22	10.0	0.12	-	0.8	325	406	410
105	HEALTH CLUB/WEIGHT ROOM	SSI-23,24	290	856 SF	10	9	20.0	0.06	-	0.8	231	290	290
106	CORRIDOR	RTU-3	100	172 SF	-	0	-	0.06	-	0.8	10	13	50
106A	OFFICE SPACES	RTU-3	380	181 SF	5	1	5.0	0.06	-	0.8	16	20	50
106B	OFFICE SPACES	RTU-3	360	132 SF	5	1	5.0	0.06	-	0.8	13	17	50
106C	OFFICE SPACES	RTU-3	180	124 SF	5	1	5.0	0.06	-	0.8	12	16	50
106D	OFFICE SPACES	RTU-3	250	245 SF	5	2	5.0	0.06	-	0.8	25	31	50
M1	OFFICE SPACES	SSI-25	175	113 SF	5	1	5.0	0.06	-	0.8	12	15	50
M2	OFFICE SPACES	SSI-25	225	150 SF	5	1	5.0	0.06	-	0.8	14	18	50
M3	OFFICE SPACES	SSI-25	365	241 SF	5	2	5.0	0.06	-	0.8	24	31	50
1	CORRIDOR	ERU-13	1,350	2472 SF	-	0	-	0.06	-	0.8	148	186	200
2	CORRIDOR	ERU-13	500	1500 SF	-	0	-	0.06	-	0.8	90	113	120
3	CORRIDOR	ERU-5	600	1915 SF	-	0	-	0.06	-	0.8	115	144	150
	CORRIDOR	SSI-74	980	1915 SF	-	0	-	0.06	-	0.8	115	144	150

ROOFTOP AIR CONDITIONING UNIT SCHEDULE

TAG	LOCATION	NOM. TONS	SEER	SUPPLY FAN				COOLING CAPACITY						ELECTRICAL			TYPICAL UNIT MFG & MODEL NO.	NOTES:
				CFM	OA CFM	ESP (IN. W.C.)	BHP / HP	TOTAL MBH	SENS MBH	EAT°F		LAT°F	AMB °F	VOLT/Ø	MCA	FLA		
										DB	WB							
RTU-3	ROOF	1-6	13.4	1250	250	1	0.73/1	37.81	25.61	75	64.66	55.78	95	208/1	32	28	AAON. RQ-003-1-0-DAAC-V0-21-000-A	1,2,3

NOTES:
1. 14" INSULATED CURB. UNIT SHALL HAVE PACKAGED CONTROLS AND CONNECT TO BMS.
2. FACTORY MOUNTED AND WIRED DISCONNECT. 2" PREFILTER, 4" MERV 13 FILTER.
3. DOUBLE WALL, R-13 FOAM INSULATION.

FIN TUBE SCHEDULE

TAG	LOCATION	BTU/FT.	GPM	TUBE SIZE (IN.)	FINS / FT.	EWT (°F)	EAT (°F)	ENCLOSURE			TYPICAL UNIT MFG & MODEL NO.	NOTES:
								H (IN.)	D (IN.)	STYLE		
FT-1	6	1200	0.7	0.75	50	180	65	28"	5-5/16"	BARE ELEMENT	STERLING JVB-T-C3/4-435	1,2,3

NOTES:
1. LOCATE ELEMENT BEHIND MILLWORK BY GC.
2. MC TO FIELD VERIFY ENCLOSURE LENTGH. ENCLOSURE TO BE FULL WIDTH WITHOUT GAPS.
3. COORDINATE HEIGHT WITH ELECTRICAL DEVICES.

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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
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- COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	10/27/2023	BID ADDENDUM #1
2	11/03/2023	BID ADDENDUM #2
3	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

SHEET INFORMATION

Issued
10/18/2023

Scale
12" = 1'-0"

Project Status
BID DOCUMENTS

Drawn By
KCM

Checked By
JJM

Drawing Title
MECHANICAL SCHEDULES

Drawing Number
WOS
H902

11/16/2023 4:03:22 PM <project location> REVIT PROJECT FILES ON BIM360

REGISTERS, GRILLES, AND DIFFUSERS

TAG	APPLICATION	MATERIAL	TYPE	FINISH	DESIGN EQUIP.	NOTES:
D-1	SUPPLY	STEEL	CEILING GRILLE	WHITE	PRICE 500	3
D-2	SUPPLY	STEEL	LAY-IN	WHITE	PRICE SPD	2,4
D-3	SUPPLY	STEEL	ROUND	WHITE	PRICE HCD	1
R-1	RETURN/EA	STEEL	CEILING GRILLE	WHITE	PRICE 510	3
R-2	RETURN/EA	STEEL	LAY-IN	WHITE	PRICE PDN	-
R-3	RETURN/EA	STEEL	GYM RA	WHITE	PRICE 90	1,3

NOTES:
1. OPPOSED BLADE DAMPER.
2. STANDARD AIR FLOW PATTERN.
3. SINGLE DEFLECTION, BLADES PARALLEL TO LENGTH.
4. INSULATED BACK PAN.

GRAVITY VENTILATOR SCHEDULE

TAG	LOCATION	SERVICE	MANUF.	MODEL	THROAT AREA (SQ.FT.)	HOOD AREA (SQ.FT.)	AIR FLOW (CFM)	S.P. (IN.WG.)	TYPICAL UNIT MFG & MODEL NO.	NOTES
GI-1	ROOF	I.T. & RESOURCES	GREENHECK	GRSI-8	0.4	2.0	160	0.032	GREENHECK: GRSI-8	1,2
GI-2	ROOF	NURSE	GREENHECK	GRSI-8	0.4	2.0	100	0.013	GREENHECK: GRSI-8	1,2
GR-1	ROOF	I.T. & RESOURCES	GREENHECK	GRSR-8	0.4	2.0	160	0.019	GREENHECK: GRSR-8	1,2
GR-2	ROOF	NURSE	GREENHECK	GRSR-8	0.4	2.0	100	0.008	GREENHECK: GRSR-8	1,2

NOTES:
1. BAROMETRIC RELIEF DAMPER IN CURB.
2. 14" CURB, HINGED BASE AND BIRD SCREEN.

VRF BRANCH SELECTOR UNITS

MARK	NUMBER OF BRANCHES AVAILABLE	NUMBER OF BRANCHES USED	MAX TOTAL CAPACITY (MBH)	MAX BRANCH CAPACITY (MBH)	CONNECTED TOTAL HEATING CAPACITY (MBH)	CONNECTED TOTAL COOLING CAPACITY (MBH)	DIMENSIONS (H × W × D)	POWER (V/Ø/HZ)	POWER (WATTS)	TYPICAL UNIT MFG & MODEL NO.
RBU-1	8	8	245	27	216	192	11" × 26" × 25"	208-230 / 1 / 60	226 W	FUJITSU UTP-RU08AH
RBU-2	8	6	245	27	162	144	11" × 26" × 25"	208-230 / 1 / 60	226 W	FUJITSU UTP-RU08AH
RBU-3	8	8	245	27	216	192	11" × 26" × 25"	208-230 / 1 / 60	226 W	FUJITSU UTP-RU08AH
RBU-4	8	5	245	27	128	132	11" × 26" × 25"	208-230 / 1 / 60	226 W	FUJITSU UTP-RU08AH
RBU-5	4	2	191	96	30	51	11" × 26" × 25"	208-230 / 1 / 60	110 W	FUJITSU UTP-RU08AH
RBU-6	8	3	245	27	60	108	11" × 26" × 25"	208-230 / 1 / 60	226 W	FUJITSU UTP-RU08AH
RBU-7	8	8	245	27	216	192	11" × 26" × 25"	208-230 / 1 / 60	226 W	FUJITSU UTP-RU08AH
RBU-8	8	8	245	27	216	192	11" × 26" × 25"	208-230 / 1 / 60	226 W	FUJITSU UTP-RU08AH
RBU-9	4	3	191	96	81	96	11" × 26" × 25"	208-230 / 1 / 60	110 W	FUJITSU UTP-RU08AH
RBU-10	4	4	191	96	49	81	11" × 26" × 25"	208-230 / 1 / 60	110 W	FUJITSU UTP-RU08AH
RBU-11	8	7	245	27	165	195	11" × 26" × 25"	208-230 / 1 / 60	226 W	FUJITSU UTP-RU08AH
RBU-12	4	4	191	96	108	96	11" × 26" × 25"	208-230 / 1 / 60	110 W	FUJITSU UTP-RU08AH
RBU-13	8	8	245	27	216	192	11" × 26" × 25"	208-230 / 1 / 60	226 W	FUJITSU UTP-RU08AH
RBU-14	8	6	245	27	162	144	11" × 26" × 25"	208-230 / 1 / 60	226 W	FUJITSU UTP-RU08AH
RBU-15	8	5	245	27	97	135	11" × 26" × 25"	208-230 / 1 / 60	226 W	FUJITSU UTP-RU08AH

HOT WATER REHEAT COIL SCHEDULE

TAG	LOCATION	AIR DATA				WATER DATA				MFG SIZE HxL (IN.)	ROWS	TYPICAL UNIT MFG & MODEL NO.	NOTES:
		CFM	TEMP °F		MAX APD (IN WC)	MIN. MBH	GPM	TEMP °F		MAX WPD (FT. HD)			
			ENT	LVG				ENT	LVG				
HC-1	GYM	3750	22.6	90.1	0.27	268.6	21.3	180	154.2	2.5	30X30	2	CAPITAL COIL W8-3030-10B-HCA-R	1
HC-2	GYM	3750	22.6	90.1	0.27	268.6	21.3	180	154.2	2.5	30X30	2	CAPITAL COIL W8-3030-10B-HCA-R	1
HC-3	GYM STAGE	2000	28.2	92.0	0.21	138.1	10.7	180	153.2	2.9	18X30	2	CAPITAL COIL W8-3018-09B-4CA-R	1

NOTES:
1. TUBE OD 0.625, TUBE SPACING 1.500 x 1.299

ELECTRIC REHEAT COIL SCHEDULE

TAG	LOCATION	AIR DATA					ELECTRICAL			MFG SIZE H (IN.)	MFG SIZE L (IN.)	TYPICAL UNIT MFG & MODEL NO.	NOTES:
		CFM	TEMP °F		MAX APD (IN WC)	KW	VOLTS	Ø	AMPS				
			ENT	LVG									
EC-1	MAIN OFFICE	390	40	72	0.08	13.48	208	3	65	8	10	INDEECO QUA	1,2,3
EC-2	RESOURCE	160	40	72	0.08	5.53	208	3	27	6	6	INDEECO QUA	1,2,3
EC-3	NURSE	100	40	72	0.08	3.46	208	3	17	8	8	INDEECO QUA	1,2,3
EC-4	ENL	265	40	72	0.08	9.16	208	3	45	6	8	INDEECO QUA	1,2,3
EC-5	MAC LAB	260	40	72	0.08	8.99	208	3	45	8	8	INDEECO QUA	1,2,3

NOTES:
1. PROVIDE PROPORTIONAL SCR CONTROLS AND DUCT TEMPERATURE SENSOR.
2. CONNECT TO BMS.
3. FACTORY MOUNTED AND WIRED DISCONNECT.

1

ENERGY RECOVERY UNITS

TAG	LOCATION	AREA SERVED	SA (CFM)	EA (CFM)	RA (CFM)	SUPPLY FAN				EXHAUST FAN				TOTAL MBH SAVED SUMMER	TOTAL MBH SAVED WINTER	OPERATING WEIGHT (LBS)	FILTERS	ELECTRICAL REQUIREMENTS		TYPICAL UNIT MFG & MODEL NO.	NOTES:
						FAN TYPE	E.S.P. (IN. WC)	WATTS	HP	FAN TYPE	E.S.P. (IN. WC)	WATTS	HP					V/Ø/HZ	MCA		
ERU-12	ROOF	MAIN OFFICE	390	390	390	DIRECT	0.75	395	0.5	DIRECT	0.75	395	0.5	9.0	21.1	184-243	MERV 8	208/1	15	RENEWAIRE EV450RT	1,2,3,4
ERU-13	CORRIDOR	RESOURCE	160	160	160	DIRECT	0.47	146	0.1	DIRECT	0.47	146	0.1	4.2	9.3	68	MERV 8	208/1	15	RENEWAIRE: EV200	1,2,3,4
ERU-14	212 NURSE	NURSE	100	100	100	DIRECT	0.77	111	0.1	DIRECT	0.77	111	0.1	2.8	6.1	68	MERV 8	208/1	15	RENEWAIRE: EV200	1,2,3,4
ERU-15	ROOF	MAT LABS	260	260	260	DIRECT	0.75	493	0.6	DIRECT	0.75	493	0.6	6.9	15.1	184-243	MERV 8	208/1	15	RENEWAIRE EV450RT	1,2,3,4
ERU-16	ROOF	ENL, BOOK, CUSTODIAN	265	265	265	DIRECT	0.75	493	0.6	DIRECT	0.75	493	0.6	7.0	15.4	184-243	MERV 8	208/1	15	RENEWAIRE EV450RT	1,2,3,4

NOTES:
1. FACTORY MOUNTED AND WIRED DISCONNECT.
2. FRESH AIR AND EXHAUST DAMPERS.
3. TERMINAL STRIP FOR BMS CONTROL OF FAN AND DAMPERS.
4. DIRTY FILTER SENSORS.

VRF INDOOR UNITS

MARK	ROOM SERVED	TYPE	AIRFLOW (H/M/L) CFM	OUTDOOR AIRFLOW CFM	ESP (INWG)	NOM.HEATING CAPACITY MBH	NOM.COOLING CAPACITY MBH	DIMENSIONS (W" X H" X D")	WEIGHT (LBS)	POWER (Ø/V/Hz)	MOCP	FLA	TYPICAL UNIT MFG & MODEL NO.	NOTES
SSI-1,2	411	CEILING CASSETTE	607/465/330		-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-3,4	409	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-5,6	407	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-7,8	405	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-9,10	410	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-11,12	408	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-13,14	406	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-15	404	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-16	400B	CEILING CASSETTE	318/271/230	50	-	9.5	7.5	23 X 23 X 10	40	1/208/60	15	0.41	FUJITSU AUUA7TLAV2	1,2,3,4,5,6
SSI-17	400C	CEILING CASSETTE	418/348/271	50	-	20	18	23 X 23 X 10	44	1/208/60	15	0.41	FUJITSU AUUA18TLAV2	1,2,3,4,5,6
SSI-18,19	400	CEILING CASSETTE	418/348/271	75	-	20	18	23 X 23 X 10	44	1/208/60	15	0.41	FUJITSU AUUA18TLAV2	1,2,3,4,5,6
SSI-20,21	106	CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-22,23	108	CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-24,25	110	CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-26,27	111	CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-28,29	109	CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-30,31	107	CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-32,33	105	CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-34	101A	CEILING CASSETTE	318/271/230	50	-	9.5	7.5	23 X 23 X 10	40	1/208/60	15	0.41	FUJITSU AUUA7TLAV2	1,2,3,4,5,6
SSI-35	101G	CEILING CASSETTE	418/348/271	-	-	20	18	23 X 23 X 10	44	1/208/60	15	0.41	FUJITSU AUUA18TLAV2	1,2,3,4,5,6
SSI-36	200B	CEILING CASSETTE	418/348/271	-	-	20	18	23 X 23 X 10	44	1/208/60	15	0.41	FUJITSU AUUA18TLAV2	1,2,3,4,5,6
SSI-37	200	CEILING CASSETTE	418/348/271	-	-	20	18	23 X 23 X 10	44	1/208/60	15	0.41	FUJITSU AUUA18TLAV2	1,2,3,4,5,6
SSI-38	202	CEILING CASSETTE	418/348/271	50	-	20	18	23 X 23 X 10	44	1/208/60	15	0.41	FUJITSU AUUA18TLAV2	1,2,3,4,5,6
SSI-39	204	CEILING CASSETTE	418/348/271	-	-	20	18	23 X 23 X 10	44	1/208/60	15	0.41	FUJITSU AUUA18TLAV2	1,2,3,4,5,6
SSI-40,41	206	CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-42,43	208	CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-44,45	210	CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-46,47	209	CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-48,49	207	CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-50,51	205	CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-52	201B	CEILING CASSETTE	318/271/230	110	-	9.5	7.5	23 X 23 X 10	40	1/208/60	15	0.41	FUJITSU AUUA7TLAV2	1,2,3,4,5,6
SSI-53	202A	CEILING CASSETTE	418/348/271	50	-	20	18	23 X 23 X 10	44	1/208/60	15	0.41	FUJITSU AUUA18TLAV2	1,2,3,4,5,6
SSI-54	212	CEILING CASSETTE	318/271/230	50	-	9.5	7.5	23 X 23 X 10	40	1/208/60	15	0.41	FUJITSU AUUA7TLAV2	1,2,3,4,5,6
SSI-55	212A	CEILING CASSETTE	318/271/230	50	-	9.5	7.5	23 X 23 X 10	40	1/208/60	15	0.41	FUJITSU AUUA7TLAV2	1,2,3,4,5,6
SSI-56,57	300C	CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-58	300B	CEILING CASSETTE	318/271/230	-	-	9.5	7.5	23 X 23 X 10	40	1/208/60	15	0.41	FUJITSU AUUA7TLAV2	1,2,3,4,5,6
SSI-59	300A	CEILING CASSETTE	418/348/271	-	-	20	18	23 X 23 X 10	44	1/208/60	15	0.41	FUJITSU AUUA18TLAV2	1,2,3,4,5,6
SSI-60	302	CEILING CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-61,62	301	CEILING CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-63,64	301A	CEILING CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-65,66	301B	CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-67	304	CEILING CASSETTE	589/512/436	-	-	27	24	46 X 32 X 13	84	1/208/60	15	0.74	FUJITSU ABUA24TLAV2	1,2,3,4,5,6
SSI-68,69	306	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-70,71	308	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-72,73	310	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-74,75	312	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-76,77	311	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-78,79	309	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-80,81	307	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-82,83	305	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6
SSI-84,85	303	CEILING CASSETTE	607/465/330	-	-	27	24	23 X 23 X 10	44	1/208/60	15	0.62	FUJITSU AUUA24TLAV2	1,2,3,4,5,6

NOTES:
1. UNIT MOUNTED AND WIRED DISCONNECT.
2. BAC NET INTEGRATION TO BMS.
3. COLOR WHITE.
4. DRAIN PAN LEVEL SENSORS.
5. CONDENSATE PUMP.
6. OUTDOOR UNITS POWERS INDOOR UNITS.

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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

vv	Date	Description
1	11/03/2023	BID ADDENDUM #2
2	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued: 10/18/23
Scale: NTS
Project Status: BID DOCUMENTS
Drawn By: KCM
Checked By: JJM
Drawing Title: HVAC SCHEDULES

Drawing Number
CLE
H900

FAN COIL UNIT SCHEDULE

TAG	LOCATION	SERVICE	MANUFACTURER	MODEL	TYPE	FAN					HOT WATER HEATING COIL													ELECTRICAL						WEIGHT (LBS)	NOTES
						AIR FLOW (CFM)	ESP (IN.WG.)	MOTOR BHP	MOTOR HP	DRIVE	EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)	CAPACITY (MBH)	FLUID TYPE	GPM	WPD (FT.WG)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	AMBIENT (°F)	FACE VELOCITY (FPM)	CIRCUITS	REFRIGERANT	FILTER	V	PH	HZ	MCA	FLA	MOCP		
FCU-1	VEST	102 VEST	AIR THERM	SRBB	DUCTED	500	100	-	2	DIRECT	50	90	180	150	21.6	WATER	1.44	-	19.3	13.5	85	400	1	R410A	MERV 8	120	1	60	-	-	15	-	1,2

NOTES: 1. PROVIDE DISCONNECT.
2. CEILING RECESSED

ENERGY RECOVERY EHEEL PERFORMANCE SCHEDULE

TAG	SUPPLY FAN				EXHAUST FAN				ELECTRICAL		WINTER CONDITIONS								SUMMER CONDITIONS										TYPICAL UNIT MFG & MODEL NO.	NOTES:
											WHEEL ENTERING CONDITIONS				WHEEL LEAVING CONDITIONS				TOTAL CAPACITY	WHEEL ENTERING CONDITIONS				WHEEL LEAVING CONDITIONS				TOTAL CAPACITY	EFFECTIVENESS @ SUMMER DESIGN		
	AIR FLOW (CFM)	E.S.P. (IN WC)	RPM	HP	AIR FLOW (CFM)	E.S.P. (IN WC)	RPM	HP	VOLT/Φ	FLA	OUTSIDE AIR		RETURN AIR		SUPPLY AIR		EXHAUST AIR			OUTSIDE AIR		RETURN AIR		SUPPLY AIR		EXHAUST AIR					
											DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	(MBH)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	(MBH)	TOTAL %		
RTU-1	3675	0.75	1760	5	2390	0.5	1760	2	208/3	64	-2	-3	65	62	42.71	42.71	20.29	20.29	185.74	95	71	72	62	79.25	65.08	87.47	68.27	46.05	66.4	AAON RN-011-3-0-DAAC-V0-21-000-A	1,2,3
RTU-2	3675	0.75	1760	5	2390	0.5	1760	2	208/3	64	-2	-3	65	62	42.71	42.71	20.29	20.29	185.74	95	71	72	62	79.25	65.08	87.47	68.27	46.05	66.4	AAON RN-011-3-0-DAAC-V0-21-000-A	1,2,3

NOTES: 1. 14" INSULATED CURB. EXTEND EXISTING CONTROLS TO NEW UNITS. MOTORIZED RELIEF DAMPERS.
2. FACTORY MOUNTED AND WIRED DISCONNECT. 2" PREFILTER, 4" MERV 13 FILTER.
3. DOUBLE WALL, R-13 FOAM INSULATION.

ENERGY RECOVERY UNIT

TAG	LOCATION	AREA SERVED	SA/OA (CFM)	EA (CFM)	RA (CFM)	SUPPLY FAN					EXHAUST FAN					HEATING TYPE	FROST CONTROL	OPERATING WEIGHT (LBS)	FILTERS	UNIT ELECTRICAL REQUIREMENTS	
						FAN TYPE	E.S.P. (IN. WC)	RPM	BHP	HP	FAN TYPE	E.S.P. (IN. WC)	RPM	BHP	HP					V/Ø/HZ	FLA
ERU-1	ROOF	CLASSROOMS	2000	2000	2000	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	208/3/60	99
ERU-2	ROOF	CLASSROOMS	1500	1500	1500	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	1	ELECTRIC	YES	1511	2" PRE-FILTER/4" MERV 13	208/3/60	75
ERU-3	ROOF	CLASSROOMS	2000	2000	2000	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	208/3/60	99
ERU-4	ROOF	CLASSROOMS	1950	1500	1500	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1541	2" PRE-FILTER/4" MERV 13	208/3/60	96
ERU-5	ROOF	CLASSROOMS	2000	2000	2000	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	208/3/60	99
ERU-6	ROOF	CLASSROOMS	1650	1060	1060	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1511	2" PRE-FILTER/4" MERV 13	208/3/60	96
ERU-7	ROOF	CLASSROOMS	2020	2020	2020	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	208/3/60	99
ERU-8	ROOF	CLASSROOMS	2000	2000	2000	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1554	2" PRE-FILTER/4" MERV 13	208/3/60	99
ERU-9	ROOF	CLASSROOMS	1605	700	700	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1511	2" PRE-FILTER/4" MERV 13	208/3/60	96
ERU-10	ROOF	CLASSROOMS	2110	1660	1660	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1541	2" PRE-FILTER/4" MERV 13	208/3/60	117
ERU-11	ROOF	CLASSROOMS	1120	1120	1120	PLENUM	1	1760	1.48	2	PLENUM	0.5	1760	0.85	2	ELECTRIC	YES	1510	2" PRE-FILTER/4" MERV 13	208/3/60	54

ENERGY RECOVERY UNIT (CONT.)

TAG	WINTER CONDITIONS									SUMMER CONDITIONS										TYPICAL UNIT MFG & MODEL NO.	NOTES
	WHEEL ENTERING CONDITIONS				WHEEL LEAVING CONDITIONS				EFFECTIVENESS @ WINTER DESIGN	WHEEL ENTERING CONDITIONS				WHEEL LEAVING CONDITIONS				EFFECTIVENESS @ SUMMER DESIGN			
	OUTSIDE AIR		RETURN AIR		SUPPLY AIR		EXHAUST AIR			OUTSIDE AIR		RETURN AIR		SUPPLY AIR		EXHAUST AIR					
	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	TOTAL %	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	DB (°F)	WB (°F)	TOTAL %		
ERU-1	-7	-8	65	62	38	38	19.8	19.8	63.7	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-80-E60E14A	1,2,3,4
ERU-2	-7	-8	65	62	42.7	42.7	15.2	15.2	69.7	90	71	75	62	79.1	64.7	85.7	68.5	69.7	AAON RN-006-80-E60E13A	1,2,3,4
ERU-3	-7	-8	65	62	38	38	19.8	19.8	63.7	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-80-E60E14A	1,2,3,4
ERU-4	-7	-8	65	62	28.1	28.1	19.3	19.3	72.4	90	71	75	62	81.1	65.9	86.2	68.9	72.4	AAON RN-007-80-E60E14A	1,2,3,4
ERU-5	-7	-8	65	62	38	38	19.8	19.8	63.7	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-80-E60E14A	1,2,3,4
ERU-6	-7	-8	65	62	24.1	24.1	16.6	16.6	78.6	90	71	75	62	81.9	66.4	87.2	69.4	78.6	AAON RN-006-80-E60E13A	1,2,3,4
ERU-7	-7	-8	65	62	38	38	19.8	19.8	63.7	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-80-E60E14A	1,2,3,4
ERU-8	-7	-8	65	62	38	38	19.8	19.8	63.7	90	71	75	62	80	65	84.7	68	63.7	AAON RN-007-80-E60E14A	1,2,3,4
ERU-9	-7	-8	65	62	24.1	24.1	16.6	16.6	78.6	90	71	75	62	81.9	66.4	87.2	69.4	78.6	AAON RN-006-80-E60E13A	1,2,3,4
ERU-10	-7	-8	65	62	28.5	28.5	19.8	19.8	69.7	90	71	75	62	81.3	71.7	85.8	68.6	69.7	AAON RN-007-80-E60E15A	1,2,3,4
ERU-11	-7	-8	65	62	46.2	46.2	11.7	11.7	74.3	90	71	75	62	78.4	64.3	86.4	68.9	74.3	AAON RN-006-80-E60E12A	1,2,3,4

NOTES: 1. FACTORY MOUNTED AND WIRED DISCONNECT.
2. FRESH AIR AND EXHAUST DAMPERS.
3. TERMINAL STRIP FOR BMS CONTROL OF FAN AND DAMPERS.
4. DIRTY FILTER SENSORS.

ENERGY RECOVERY UNIT (CONT.)

TAG	TYPE	FINS PER INCH	ROWS	FACE VEL	COIL PD	REF.	COMP QTY	COOLING				REHEAT		HEATING				
								TOTAL CAPACITY (MBH)	SENSIBLE (MBH)	EAT(F)	LAT(F)	CAPACITY (MBH)	LAT(F)	OAT(F)	RAT(F)	EAT(F)	TOTAL CAPACITY (MBH)	INPUT kW
ERU-1	AIR TO AIR	14	3	235		R410A	1	107	54.6	80/65.3	54.5/53.3	34	70/59.4	-7.0	65	38.1	102	30
ERU-2	AIR TO AIR	14	3	176		R410A	1	90.2	44.3	79.1/64.7	53/51.5	30	70/58.3	-7.0	65	42.8	76.8	22.5
ERU-3	AIR TO AIR	14	3	235		R410A	1	107	54.6	80/65.3	54.5/53.3	34	70/59.4	-7.0	65	38.1	102	30
ERU-4	AIR TO AIR	14	3	229		R410A	1	102	54.5	81.6/65.9	56.7/54.4	32	70/59.6	-7.0	65	28.1	102	30
ERU-5	AIR TO AIR	14	3	235		R410A	1	107	54.6	80/65.3	54.5/53.3	34	70/59.4	-7.0	65	38.1	102	30
ERU-6	AIR TO AIR	14	3	194		R410A	1	87.1	48.2	81.9/66.4	56.1/54.1	28	70/59.5	-7.0	65	24.1	102	30
ERU-7	AIR TO AIR	14	3	235		R410A	1	107	54.6	80/65.3	54.5/53.3	34	70/59.4	-7.0	65	38.1	102	30
ERU-8	AIR TO AIR	14	3	235		R410A	1	107	54.6	80/65.3	54.5/53.3	34	70/59.4	-7.0	65	38.1	102	30
ERU-9	AIR TO AIR	14	3	194		R410A	1	86.6	47.8	81.1/65.9	55.6/53.8	29	70/59.4	-7.0	65	24.1	102	30
ERU-10	AIR TO AIR	14	3	248		R410A	1	105.5	57.2	81.3/66	57.6/55.4	33	70/60.1	-7.0	65	28.5	128	37.6
ERU-11	AIR TO AIR	14	3	131		R410A	1	79.6	37.8	78.4/64.3	48.2/47	28	70/56.3	-7.0	65	46.2	51.2	15

ENERGY RECOVERY UNIT (CONT.)

TAG	SOUND SOURCE	OCTAVE BAND AND CENTER FREQUENCY (HZ)							
		1	2	3	4	5	6	7	8
		62.5	125	250	500	1000	2000	4000	8000
ERU-1	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-2	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-3	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-4	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-5	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-6	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-7	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-8	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-9	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-10	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60
ERU-11	DISC.	85	83	86	82	74	72	69	63
	INLET	83	81	78	72	70	68	64	60

PUMP SCHEDULE

TAG	LOCATION	SERVICE	MANUF.	MODEL	TYPE	FLUID	GPM	HEAD (FT.WG.)	RPM	HP	STARTER	ELECTRICAL						NOTES
												V	PH	HZ	MCA	FLA	MOCP	
P-1	BOILER ROOM	HHW	B&G	1510	BASE-MOUNTED SPLIT COUPLE	WATER	90	50	1750	10	VFD	460	3	60	-	-	-	1
P-2	BOILER ROOM	HHW	B&G	1510	BASE-MOUNTED SPLIT COUPLE	WATER	90	50	1750	10	VFD	460	3	60	-	-	-	1
P-3	GYM	HHW	B&G	ECOCIRC XL - 36-45	INLINE	WATER	22	12.5	2919	0.16	N	208	1	60	-	-	-	1,2
P-4	GYM	HHW	B&G	ECOCIRC XL - 36-45	INLINE	WATER	22	12.5	2919	0.16	N	208	1	60	-	-	-	1,2
P-5	STAGE	HHW	B&G	ECOCIRC XL - 36-45	INLINE	WATER	11	13	2727	0.16	N	208	1	60	-	-	-	1,2

NOTES: 1. PROVIDE DISCONNECT
2. ECM MOTOR.

ROOFTOP AIR CONDITIONING UNIT SCHEDULE

TAG	LOCATION	NOM. TONS	IEER	SUPPLY FAN				EXHAUST FAN			COOLING CAPACITY					ELECTRICAL		TYPICAL UNIT MFG & MODEL NO.	NOTES:
				CFM	OA CFM	ESP (IN. W.C.)	BHP / HP	CFM	ESP (IN. W.C.)	BHP / HP	TOTAL MBH	SENS MBH	EAT°F		LAT°F	AMB °F	VOLT/Ø	FLA	
													DB	WB					
RTU-3	STAGE	6	14.8	2000	1100	1.25	1.23/2	2000	0.5	.7/1	72.67	60.37	84.7	67.2	56.04	95	208/3	35	AAON: RN-007-3-0-BABC-V0-21-000-A	1,2,3

NOTES: 1. 14" INSULATED CURB. EXTEND EXISTING CONTROLS TO NEW UNITS. MOTORIZED RELIEF DAMPERS.
2. FACTORY MOUNTED AND WIRED DISCONNECT. 2" PREFILTER, 4" MERV 13 FILTER.
3. DOUBLE WALL, R-13 FOAM INSULATION.

UNIT VENTILATOR SCHEDULE

TAG	ROOM SERVES	SA	OA	UNIT TYPE	ELECTRICAL		WINTER		HW COIL CAPACITY							DX COIL CAPACITY				TYPICAL UNIT MFG & MODEL NO.	NOTES:
					MCA	VOLT/Ø	OA °F	RA °F	EWT °F	LWT °F	EAT °F	LAT °F	MBH	WPD	GPM	REF.	EAT °F	LAT °F	MBH		
UV-1	CAFÉ	1500	975	VERT	5.9	120/1	2	65	180	133	23.0	101	136.0	5.0	6.0	410A	85/70	62/59	54.0	MAGIC AIRE MAUV5	1,2,3,4,5
UV-2	CAFÉ	1500	975	VERT	5.9	120/1	2	65	180	133	23.0	101	136.0	5.0	6.0	410A	85/70	62/59	54.0	MAGIC AIRE MAUV5	1,2,3,4,5

NOTES: 1. FACTORY MOUNTED AND WIRED DISCONNECT.
2. CONDENSATE PUMP, DRAIN PAN ALARM.
3. FULL ADAPTER WITH ENCLOSED PIPE TUNNEL, FINISHED ENDS.
4. ECM MOTORS.
5. MERV 13 FILTERS.

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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- WILLIAM O. SCHAEFER SED#:30-03-01-06-0-012-019
- COTTAGE LANE ELEMENTARY SED#:30-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED#:30-03-01-06-0-006-032
- WILLIAM O. SCHAEFER S&L SED#: 30-03-01-06-0-012-020
- COTTAGE LANE S&L SED#: 30-03-01-06-0-010-023
- COTTAGE LANE LIBRARY S&L SED#: 30-03-01-06-8-023-002
- WOS OUTDOOR CLASSROOM SED#: 30-03-01-06-7-053-001
- SOMS OUTDOOR CLASSROOM SED#: 30-03-01-06-7-056-001
- CLE OUTDOOR CLASSROOM SED#: 30-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#: 30-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

vv	Date	Description
1	10/27/2023	BID ADDENDUM: #1
2	11/03/2023	BID ADDENDUM: #2
3	11/17/2023	BID ADDENDUM: #4

PROFESSIONAL STAMPS

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SHEET INFORMATION

Issued
10/18/23
Scale
NTS
Project Status
BID DOCUMENTS
Drawn By
KCM
Checked By
JJM
Drawing Title
HVAC SCHEDULES

Drawing Number
CLE
H901

EQUIPMENT	LOCATION	HP/FLA	VOLTS	PHASE	AMPS	BREAKER SIZE	WIRE/CONDUIT SIZE	PANEL/CIRCUIT	REMARKS:
ERU-1	ROOF	99A	208	3	99A	125A/3P	3 #1, 1#6GND IN 2" C	1LNL14/1,3,5	1
ERU-2	ROOF	75A	208	3	75A	100A/3P	3 #2, 1#8GND IN 1-1/2" C	1LNL14/2,4,6	1
ERU-3	ROOF	99A	208	3	99A	125A/3P	3 #1, 1#6GND IN 2" C	1LNL14/26,28,30	1
ERU-4	ROOF	96A	208	3	96A	125A/3P	3 #1, 1#6GND IN 2" C	1LNL11/37,39,41	1
ERU-5	ROOF	99A	208	3	99A	125A/3P	3 #1, 1#6GND IN 2" C	1LNL15/1,3,5	1
ERU-6	ROOF	96A	208	3	96A	125A/3P	3 #1, 1#6GND IN 2" C	1LNL15/2,4,6	1
ERU-7	ROOF	99A	208	3	99A	125A/3P	3 #1, 1#6GND IN 2" C	1LNL16/26,28,30	1
ERU-8	ROOF	99A	208	3	99A	125A/3P	3 #1, 1#6GND IN 2" C	1LNL16/25,27,29	1
ERU-9	ROOF	96A	120	1	96A	125A/3P	3 #1, 1#6GND IN 2" C	1LNL13/38,40,42	1
ERU-10	ROOF	117A	208	3	117A	150A/3P	3# 2/0, 1#6GND IN 2-1/2" C	1LNL16/1,3,5	1
ERU-11	ROOF	54A	208	3	54A	70A/3P	3 #4, 1#8GND IN 1-1/2" C	1LNL16/2,4,6	1
ERU-12	ROOF	6A	208	1	6A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL14/19,21	1
ERU-13	CORRIDOR	10A	208	1	10A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL15/45,47	1
ERU-14	NURSE 212	10A	208	1	10A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL15/40,42	1
ERU-15	ROOF	15A	208	1	15A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL15/19,21	1
ERU-16	ROOF	15A	208	1	15A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL15/29,31	1
RTU-1	ROOF	64A	208	3	64A	80A/3P	3 #4, 1 #10 GND IN 1-1/2" C	1LNL15/39,41,43	1
RTU-2	ROOF	64A	208	3	64A	80A/3P	3 #4, 1 #10 GND IN 1-1/2" C	1LNL16/20,22,24	1
RTU-3	ROOF	35A	208	3	35A	50A/3P	3 #6, 1 #10 GND IN 1" C	1LNL16/19,21,23	1
ACC-1	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL14/7,9,11	1
ACC-2	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL14/8,10,12	1
ACC-3	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL14/13,15,17	1
ACC-4	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL14/14,16,18	1
ACC-5	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL14/32,34,36	1
ACC-6	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL14/41,43,45	1
ACC-7	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL14/38,40,42	1
ACC-8	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL14/20,22,24	1
ACC-9	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL15/7,9,11	1
ACC-10	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL15/8,10,12	1
ACC-11	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL15/14,16,18	1
ACC-12	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL15/13,15,17	1
ACC-13	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL16/32,34,36	1
ACC-14	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL16/31,33,35	1
ACC-15	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL16/38,40,42	1
ACC-16	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL16/37,39,41	1
ACC-17	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL16/44,46,48	1
ACC-18	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL15/20,22,24	1
ACC-19	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL16/7,9,11	1
ACC-20	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL16/8,10,12	1
ACC-21	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL16/13,15,17	1
ACC-22	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL16/14,16,18	1
ACC-23	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL14/23,25,27	1
ACC-24	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL15/33,35,37	1
ACC-25	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL15/23,25,27	1
ACC-26	EXTERIOR OUTSIDE CAFÉ	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL15/34,36,38	1
ACC-27	EXTERIOR OUTSIDE CAFÉ	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL15/28,30,32	1
FC-1	SECURE VESTIBULE 102	50A	120	1	15A	20A/1P	2 #12, 1 #12 GND IN 3/4" C	1LNL11/9	1,2
RBU-1	CORRIDOR	226W	208	1	1A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL12/10,12	1,2
RBU-2	CORRIDOR	226W	208	1	1A		2 #12, 1 #12 GND IN 3/4" C		
RBU-3	CORRIDOR	226W	208	1	1A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL12/13,15	1,2
RBU-4	CORRIDOR	226W	208	1	1A		2 #12, 1 #12 GND IN 3/4" C		
RBU-5	ENL 101G	110W	208	1	1A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL12/14,16	1,2
RBU-6	MAC LAB 200	226W	208	1	1A		2 #12, 1 #12 GND IN 3/4" C		
RBU-7	CORRIDOR	226W	208	1	1A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL13/13,15	1,2
RBU-8	CORRIDOR	226W	208	1	1A		2 #12, 1 #12 GND IN 3/4" C		
RBU-9	CORRIDOR	110W	208	1	1A		2 #12, 1 #12 GND IN 3/4" C		
RBU-10	CORRIDOR	110W	208	1	1A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL12/24,26	1
RBU-11	CORRIDOR	226W	208	1	1A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL13/12,14	1,2
RBU-12	CORRIDOR	110W	208	1	1A		2 #12, 1 #12 GND IN 3/4" C		
RBU-13	CORRIDOR	226W	208	1	1A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL11/12,14	1,2
RBU-14	CORRIDOR	226W	208	1	1A		2 #12, 1 #12 GND IN 3/4" C		
RBU-15	MAIN OFFICE 400	226W	208	1	1A		2 #12, 1 #12 GND IN 3/4" C		
EC-1	MAIN OFFICE 400	13.5KW	208	3	65A	70A/3P	3 #4, 1 #10 GND IN 1-1/2" C	1LNL11/6,8,10	1,2
EC-2	RESOURCE	5.5KW	208	3	27A	30A/3P	3 #10, 1 #12 GND IN 3/4" C	1LNL12/17,19,21	1,2
EC-3	NURSE 212	3.5KW	208	3	17A	20A/3P	3 #12, 1 #12 GND IN 3/4" C	1LNL12/18,20,22	1,2
SSO-1	ROOF	50A	208	3	60A	60A/3P	3 #6, 1 #10 GND IN 1" C	1LNL14/29,31,33	1

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE MOUNTING, AND LINE/LOAD SIDE CONNECTIONS OF DISCONNECT AND/OR STARTER DEVICE ASSOCIATED WITH UNIT. MEANS OF DISCONNECT AND/OR STARTER ASSOCIATED WITH UNIT PROVIDE BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL FINAL CONNECTIONS TO EQUIPMENT.

2. REMOVE 1-POLE CIRCUIT BREAKERS IN SPACE INDICATED. PLACE 1-POLE CIRCUIT BREAKERS IN OPEN SPACES WITHIN PANEL.

PANEL: 1LNL14

LOCATION: JC 113 — **A.I.C. RATING:**
VOLTAGE: — **MCB RATING:** Type 1
FED FROM: MDP — **MAIN BUS RATING:** 800 A
MOUNTING: Surface

...	BRKR		LOAD DESCRIPTION	A (VA)		B (VA)		C (VA)		LOAD DESCRIPTION	BRKR		...
1				11889	9006								2
3	125	3	ERU-1			11889	9006			ERU-2	3	100	4
5								11889	9006				6
7				7205	7205								8
9	60	3	ACC-1			7205	7205			ACC-2	3	60	10
11								7205	7205				12
13				7205	7205								14
15	60	3	ACC-3			7205	7205			ACC-4	3	60	16
17								7205	7205				18
19													20
21	20	2	ERU-12	624	7205					ACC-8	3	60	22
23						624	7205						24
25	60	3	ACC-23	7205	11889			7205	7205				26
27						7205	11889			ERU-3	3	125	28
29								7205	11889				30
31	60	3	SSO-1	7205	7205								32
33						7205	7205			ACC-5	3	60	34
35	20	1	SPARE					0	7205				36
37	20	1	SPARE	0	7205								38
39	20	1	SPARE			0	7205			ACC-7	3	60	40
41								7205	7205				42
43	60	3	ACC-6	7205	--					SPACE	1	--	44
45						7205	--			SPACE	1	--	46
47	--	1	SPACE					--	--	SPACE	1	--	48
49	--	1	SPACE	--	--					SPACE	1	--	50
51	--	1	SPACE			--	--			SPACE	1	--	52
53	--	1	SPACE					--	--	SPACE	1	--	54
			TOTAL LOAD	105458 VA		105458 VA		104834 VA					

Load Classification

Load	Connected VA	Demand Factor	Demand VA
Recept.			
Lighting			
HVAC			
Motors			
Refrig.			
Kitchen			
Misc.	315749 VA	75.00%	236812 VA

Panel Totals

Connected Load	315749 VA
Estimated Load	236812 VA
Connected Amps	876 A
Demand Amps	657 A

PANEL: 1LNL15

LOCATION: CL. 200A — **A.I.C. RATING:**
VOLTAGE: — **MCB RATING:** Type 1
FED FROM: MDP — **MAIN BUS RATING:** 800 A
MOUNTING: Surface

...	BRKR		LOAD DESCRIPTION	A (VA)		B (VA)		C (VA)		LOAD DESCRIPTION	BRKR		...
1				11889	11528								2
3	125	3	ERU-5			11889	11528			ERU-6	3	125	4
5								11889	11528				6
7				7205	7205								8
9	60	3	ACC-9			7205	7205			ACC-10	3	60	10
11								7205	7205				12
13				7205	7205								14
15	60	3	ACC-12			7205	7205			ACC-11	3	60	16
17								7205	7205				18
19	20	2	ERU-15	1560	7205								20
21						1560	7205			ACC-18	3	60	22
23								7205	7205				24
25	60	3	ACC-25	7205	--					SPACE	1	--	26
27						7205	7205						28
29	20	2	ERU-16					1560	7205	ACC-27	3	60	30
31				1560	7205								32
33						7205	7205						34
35	60	3	ACC-24					7205	7205	ACC-26	3	60	36
37				7205	7205								38
39						7686	1040			ERU-14	2	20	40
41	80	3	RTU-1					7686	1040				42
43				7686	--					SPACE	1	--	44
45	20	2	ERU-13			1040	--			SPACE	1	--	46
47								1040	--	SPACE	1	--	48
49	--	1	SPACE	--	--					SPACE	1	--	50
51	--	1	SPACE			--	--			SPACE	1	--	52
53	--	1	SPACE					--	--	SPACE	1	--	54
			TOTAL LOAD	99068 VA		99588 VA		99588 VA					

Load Classification

Load	Connected VA	Demand Factor	Demand VA
Recept.			
Lighting			
HVAC			
Motors			
Refrig.			
Kitchen			
Misc.	298245 VA	75.00%	223684 VA

Panel Totals

Connected Load	298245 VA
Estimated Load	223684 VA
Connected Amps	828 A
Demand Amps	621 A

CPL | Architecture Engineering Planning
50 Front Street Suite 202,
Newburgh, NY 12550
CPLteam.com

SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- ☐ WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- ■ COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- ☐ TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- ☐ WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- ☐ COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- ☐ COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- ☐ WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- ☐ SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- ☐ CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- ☐ TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

vv	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

SHEET INFORMATION

Issued: 12/21/22 — Scale: 1/2" = 1'-0"
Project Status: BID DOCUMENTS
Drawn By: MAY — Checked By: JBT
Drawing Title: ELECTRICAL SCHEDULES

Drawing Number
CLE
E900

EQUIPMENT	LOCATION	HP/FLA	VOLTS	PHASE	AMPS	BREAKER SIZE	WIRE/CONDUIT SIZE	PANEL/CIRCUIT	REMARKS:
SSI-67	MATH RTI 304	0.84	208	1	0.34A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL13/6,8	1,2
SSI-68	4TH GRADE 306	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-69	4TH GRADE 306	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-70	4TH GRADE 308	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-71	4TH GRADE 308	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-72	3RD GRADE 310	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-73	3RD GRADE 310	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-74	3RD GRADE 312	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-75	3RD GRADE 312	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-76	3RD GRADE 311	0.34	208	1	0.34A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL13/9,11	1,2
SSI-77	3RD GRADE 311	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-78	5TH GRADE 309	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-79	5TH GRADE 309	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-80	5TH GRADE 307	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-81	5TH GRADE 307	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-82	4TH GRADE 305	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-83	4TH GRADE 305	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-84	3RD GRADE 303	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-85	3RD GRADE 303	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
EC-4	ENL 101G	9.16KW	208	3	45A	60A/3P	3 #6, 1 #10 GND IN 1-1/4" C	1LNL12/25,27,29	1
EC-5	MAC LAB 200B	8.99KW	208	3	45A	60A/3P	3 #6, 1 #10 GND IN 1-1/4" C	1LNL12/28,30,32	1

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE MOUNTING, AND LINE/LOAD SIDE CONNECTIONS OF DISCONNECT AND/OR STARTER DEVICE ASSOCIATED WITH UNIT. MEANS OF DISCONNECT AND/OR STARTER ASSOCIATED WITH UNIT PROVIDE BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL FINAL CONNECTIONS TO EQUIPMENT.

2. REMOVE 1-POLE CIRCUIT BREAKERS IN SPACE INDICATED. PLACE 1-POLE CIRCUIT BREAKERS IN OPEN SPACES WITHIN PANEL.

LUMINAIRE SCHEDULE

MARK	DESCRIPTION	DESIGN MAKE	MODEL NUMBER	VOLTS	LAMP		REMARKS:
					WATTS	TEMPERATURE	
A	2X2 RECESSED LED TROFFER	CURRENT LIGHTING	LCAT22-9-35-HL-G-ED1-U	UNV	32	3500K	
A/EM	2X2 RECESSED LED TROFFER WITH EMERGENCY BATTERY BACKUP	CURRENT LIGHTING	LCAT22-9-35-HL-G-ED1-U-ELL14	UNV	32	3500K	3,4
B	2X2 RECESSED LED FLAT PANEL	CURRENT LIGHTING	CFP22-40/33/2835	UNV	40	3500K	1
B/EM	2X2 RECESSED LED FLAT PANEL EMERGENCY BATTERY BACKUP	CURRENT LIGHTING	CFP22-40/33/2835-ELL14	UNV	4	3500K	1,3,4
C	2X2 RECESSED LED TROFFER	CURRENT LIGHTING	LHFL-G-D-22-SOF-C1-35K-D42-D01-UNV	UNV	33	3500K	
C/EM	2X2 RECESSED LED TROFFER EMERGENCY BATTERY BACKUP	CURRENT LIGHTING	LHFL-G-D-22-SOF-C1-35K-D42-D01-UNV-EF	UNV	33	3500K	3,4
D	1X4 SURFACE MOUNTED LED EXTERIOR	CURRENT LIGHTING	91L-P-D-2-STD-4-04-SOF-C5-40K-D100-D01-1C-UNV-H72	UNV	48	4000K	2
E	6" LED RECESSED CANOPY DOWNLIGHT	CURRENT LIGHTING	LTR-6RD-H-35L-DM1-LTR-6RD-T-SH-HL-40K-8-WT-ACL-B6	UNV	42	4000K	
EM	6" LED RECESSED CANOPY DOWNLIGHT WITH EMERGENCY BATTERY BACKUP	CURRENT LIGHTING	LTR-6RD-H-35L-DM1-EMR-LTR-6RD-T-SH-HL-40K-8-WT-ACL-B6	UNV	42	4000K	3,4
X	LED EXIT SIGN	CURRENT LIGHTING	CEWSRE	UNV	3		3,4
EM	LED EMERGENCY FIXTURE	CURRENT LIGHTING	CU2SO	UNV	4		3,4

REMARKS: 1. FIXTURE TO BE SET AT 40 (4000 LUMENS) IN FIELD BEFORE INSTALLATION.
2. FIXTURES TO BE MOUNTED TO UNDERSIDE OF ROOF. PROVIDE ALL MOUNTING HARDWARE NECESSARY.
3. ALL FIXTURES SHOWN WITH AN "EM" DESIGNATION INDICATES AND EMERGENCY FIXTURE. PROVIDE EMERGENGY BATTERY BACKUP FOR EACH FIXTURE INDICATED.
4. ALL "EM" BATTERY BACKUPS WITHIN FIXTURE SHALL BE WIRED TO THE UNSWITCHED HOT LEG OF THE CIRCUIT FEEDING IT.

PANEL: 1LNL16

LOCATION: ST. 302B
VOLTAGE:
FED FROM: MDP
MOUNTING: Surface

A.I.C. RATING:
MCB RATING: Type 1
MAIN BUS RATING: 800 A

...	BRKR		LOAD DESCRIPTION	A (VA)		B (VA)		C (VA)		LOAD DESCRIPTION	BRKR		...
1				14050	6485								2
3	150	3	ERU-10			14050	6485			ERU-11	3	70	4
5								14050	6485				6
7				7205	7205								8
9	60	3	ACC-19			7205	7205			ACC-20	3	60	10
11								7205	7205				12
13				7205	7205								14
15	60	3	ACC-21			7205	7205			ACC-22	3	60	16
17								7205	7205				18
19				5164	7686								20
21	50	3	RTU-3			5164	7686			RTU-2	3	80	22
23								5164	7686				24
25				11889	11889								26
27	125	3	ERU-8			11889	11889			ERU-7	3	125	28
29								11889	11889				30
31				7205	7205								32
33	60	3	ACC-14			7205	7205			ACC-13	3	60	34
35								7205	7205				36
37				7205	7205								38
39	60	3	ACC-16			7205	7205			ACC-15	3	60	40
41								7205	7205				42
43	20	1	SPARE	0	7205								44
45	20	1	SPARE			0	7205			ACC-17	3	60	46
47	20	1	SPARE					0	7205				48
49	--	1	SPACE	--	--					SPACE	1	--	50
51	--	1	SPACE			--	--			SPACE	1	--	52
53	--	1	SPACE					--	--	SPACE	1	--	54
			TOTAL LOAD	122008 VA		122008 VA		122008 VA					

Load Classification

Load	Connected VA	Demand Factor	Demand VA
Recept.			
Lighting			
HVAC			
Motors			
Refrig.			
Kitchen			
Misc.	366025 VA	75.00%	274518 VA

Panel Totals

Connected Load	366025 VA
Estimated Load	274518 VA
Connected Amps	1016 A
Demand Amps	762 A

EQUIPMENT	LOCATION	HP/FLA	VOLTS	PHASE	AMPS	BREAKER SIZE	WIRE/CONDUIT SIZE	PANEL/CIRCUIT	REMARKS:
SSI-1	5TH GRADE 411	0.62A	208	1	0.62A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL11/1,3	1,2
SSI-2	5TH GRADE 411	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-3	4TH GRADE 409	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-4	4TH GRADE 409	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-5	5TH GRADE 407	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-6	5TH GRADE 407	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-7	5TH GRADE 405	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-8	5TH GRADE 405	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-9	5TH GRADE 410	0.62A	208	1	0.62A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL11/2,4	1,2
SSI-10	5TH GRADE 410	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-11	5TH GRADE 408	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-12	5TH GRADE 408	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-13	5TH GRADE 406	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-14	5TH GRADE 406	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-15	CONFERENCE ROOM 404	0.62A	208	1	0.62A		2 #12, 1 #12 GND IN 3/4" C		
SSI-16	ASSISTANT PRINCIPAL 400B	0.41	208	1	0.34A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL11/5,7	1,2
SSI-17	PRINCIPAL 400C	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-18	MAIN OFFICE 400	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-19	MAIN OFFICE 400	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-20	4TH GRADE 106	0.84	208	1	0.34A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL12/1,3	1,2
SSI-21	4TH GRADE 106	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-22	5TH GRADE 108	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-23	5TH GRADE 108	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-24	4TH GRADE 110	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-25	4TH GRADE 110	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-26	4TH GRADE 111	0.84	208	1	0.34A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL12/2,4	1,2
SSI-27	4TH GRADE 111	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-28	4TH GRADE 109	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-29	4TH GRADE 109	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-30	MAKERSPACE 107	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-31	MAKERSPACE 107	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-32	4TH GRADE 105	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-33	4TH GRADE 105	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-34	BOOK ROOOM 101A	0.41	208	1	0.34A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL12/5,7	1,2
SSI-35	ENL 101G	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-36	MAC LAB 200B	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-37	MAC LAB 200	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-38	PSYCH. 202	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-39	PSYCH. 204	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-40	4TH GRADE 206	0.84	208	1	0.34A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL12/6,8	1,2
SSI-41	4TH GRADE 206	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-42	3RD GRADE 208	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-43	3RD GRADE 208	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-44	TECH. 210	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-45	TECH. 210	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-46	3RD GRADE 209	0.84	208	1	0.34A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL12/9,11	1,2
SSI-47	3RD GRADE 209	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-48	4TH GRADE 207	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-49	4TH GRADE 207	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-50	3RD GRADE 205	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-51	3RD GRADE 205	0.34	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-52	I.T. 201B	0.41	208	1	0.34A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL13/1,3	1,2
SSI-53	RESOURCE ROOM 202A	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-54	NURSE 212	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-55	NURSE 212A	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-56	MUSIC 300C	0.84	208	1	0.34A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL13/2,4	1,2
SSI-57	MUSIC 300C	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-58	O.T. 300B	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-59	READING 300A	0.41	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-60	COPY/ST. 302	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-61	3RD GRADE 301	0.84	208	1	0.34A	20A/2P	2 #12, 1 #12 GND IN 3/4" C	1LNL13/5,7	1,2
SSI-62	3RD GRADE 301	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-63	3RD GRADE 301A	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-64	3RD GRADE 301A	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-65	ART 301B	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		
SSI-66	ART 301B	0.84	208	1	0.34A		2 #12, 1 #12 GND IN 3/4" C		

1. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE MOUNTING, AND LINE/LOAD SIDE CONNECTIONS OF DISCONNECT AND/OR STARTER DEVICE ASSOCIATED WITH UNIT. MEANS OF DISCONNECT AND/OR STARTER ASSOCIATED WITH UNIT PROVIDE BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL FINAL CONNECTIONS TO EQUIPMENT.

2. REMOVE EXISTING 1-POLE CIRCUIT BREAKERS IN SPACES INDICATED. PLACE 1-POLE CIRCUIT BREAKERS IN OPEN SPACES WITHIN PANEL.

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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD.
BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- ☐ WILLIAM O. SCHAEFER SED#:30-03-01-06-0-012-019
- ■ COTTAGE LANE ELEMENTARY SED#:30-03-01-06-0-010-022
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- ☐ TZHS OUTDOOR CLASSROOM SED#: 30-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

vv	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND THE COMMISSIONER'S REGULATIONS FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE SEAL OF AN ARCHITECT, ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING PARTY SHALL AFFIX TO THE ITEM THEIR SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

SHEET INFORMATION

Issued: 12/21/22
Scale: 1Z" = 1'-0"
Project Status: BID DOCUMENTS
Drawn By: MAY
Checked By: JBT
Drawing Title: ELECTRICAL SCHEDULES

Drawing Number
CLE
E901

11/16/2023 10:09:21 AM <project location> REVIT PROJECT FILES ON BIM360

KEY NOTES

1. DISCONNECT AND REMOVE CONDUIT AND WIRING BACK TO SOURCE PANEL.
2. DISCONNECT EXISTING CONDUIT AND WIRING FROM EXHAUST FAN AND TAG FOR RE-USE.

1 / E107 **ROOF DEMOLITION PLAN - AREA B**
1/8" = 1'-0"

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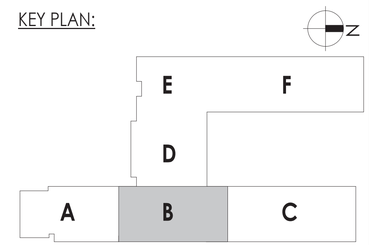
PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

KEY PLAN:



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SHEET INFORMATION

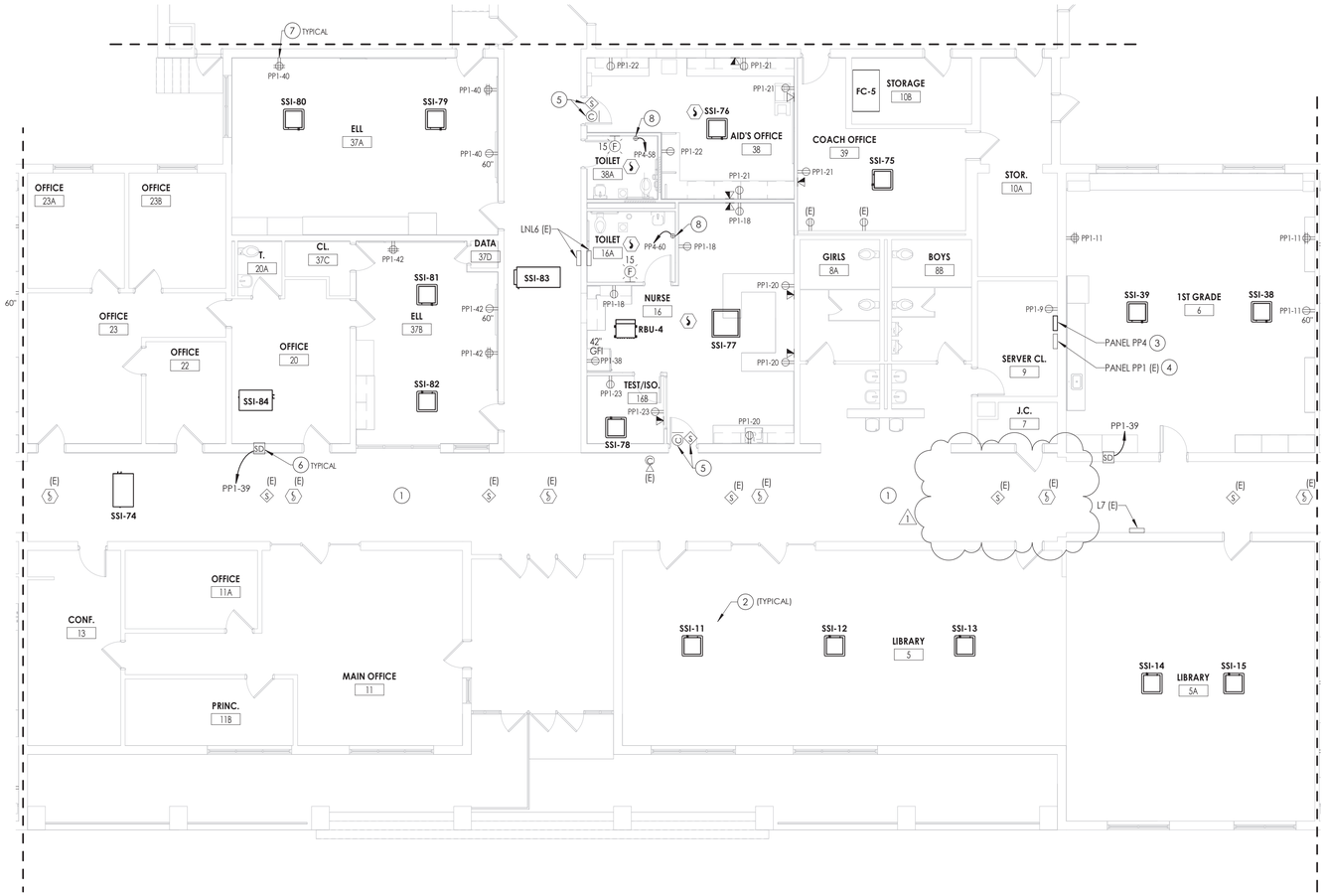
Issued	Scale
10/18/2023	AS NOTED

Project Status
BID DOCUMENTS

Drawn By	Checked By
MAY	JBT

Drawing Title
ROOF DEMOLITION PLAN-AREA B

Drawing Number
WOS
E107



1 E201 **FIRST FLOOR NEW WORK PLAN - AREA B**

1/8" = 1'-0"

GENERAL NOTES

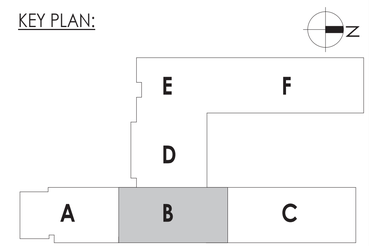
A. FOR ALL 120V DEVICES SHOWN, WIRE WITH (2)#12, #12G IN 3/4"C AND CONNECT TO 20A/1P CIRCUIT BREAKER IN PANEL INDICATED TO CIRCUIT INDICATED ADJACENT TO DEVICE.

B ALL CIRCUITS OVER 100' SHALL BE WIRED WITH #10 THHN.

KEY NOTES

1. EXISTING CEILING MOUNTED DEVICES TO BE RE-INSTALLED BACK IN CEILING AS NECESSARY TO ACCOMMODATE ANY CEILING REMOVAL/REPLCAEMENTS. CONNECT TO EXISTING TAGGED WIRING.
2. ALL MECHANICAL EQUIPMENT POWER REQUIREMENTS ARE NOTED ON DRAWINGS E901, E902, AND E903. LABEL INDICATES EQUIPMENT TAG. REFER TO RESPECTIVE TAG ON DRAWINGS NOTED.
3. PROVIDE A 120/208V, 3-PHASE, 4-WIRE, 800-AMP, 66 CIRCUIT PANELBOARD AT LOCATION INDICATED. PROVIDE (2) SETS OF (4) #500 MCM, (1) #3 GND IN (2) 4" C FROM NEW PANEL TO MDP. REFER TO DRAWING WOS-E204.
4. UTILIZE EXISTING 20A, 1-POLE CIRCUIT BREAKERS IN EXISTING PANELBOARD.
5. NEW LOCATION OF EXISTING CLOCK/SPEAKER UNITS. CONNECT TO EXISTING TAGGED WIRING.
6. PROVIDE FIRE/SMOKE DAMPER FIRE ALARM RELAY AT LOCATIONS INDICATED. PROVIDE WIRING TO CONNECT TO EXISTING FIRE ALARM SYSTEM. PROVIDE (2) #12, (1) #12GND IN 3/4" CONDUIT TO FIRE/SMOKE DAMPER ACTUATOR FROM PANEL AND CIRCUIT INDICATED.
7. NEW RECEPTACLES TO BE PLACED IN WIREMOLD AT THESE LOCATIONS. WIREMOLD BY OTHERS. COORDINATE FINAL LOCATIONS WITH OWNER AND T-SERIES DRAWINGS.
8. PROVIDE (2) #12, (1) #12 GND IN 3/4" CONDUIT FROM PANEL PP4 TO EACH HAND DRYER LOCATION INDICATED.

KEY PLAN:



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PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
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SHEET INFORMATION

Issued
10/18/2023

Scale
1/8" = 1'-0"

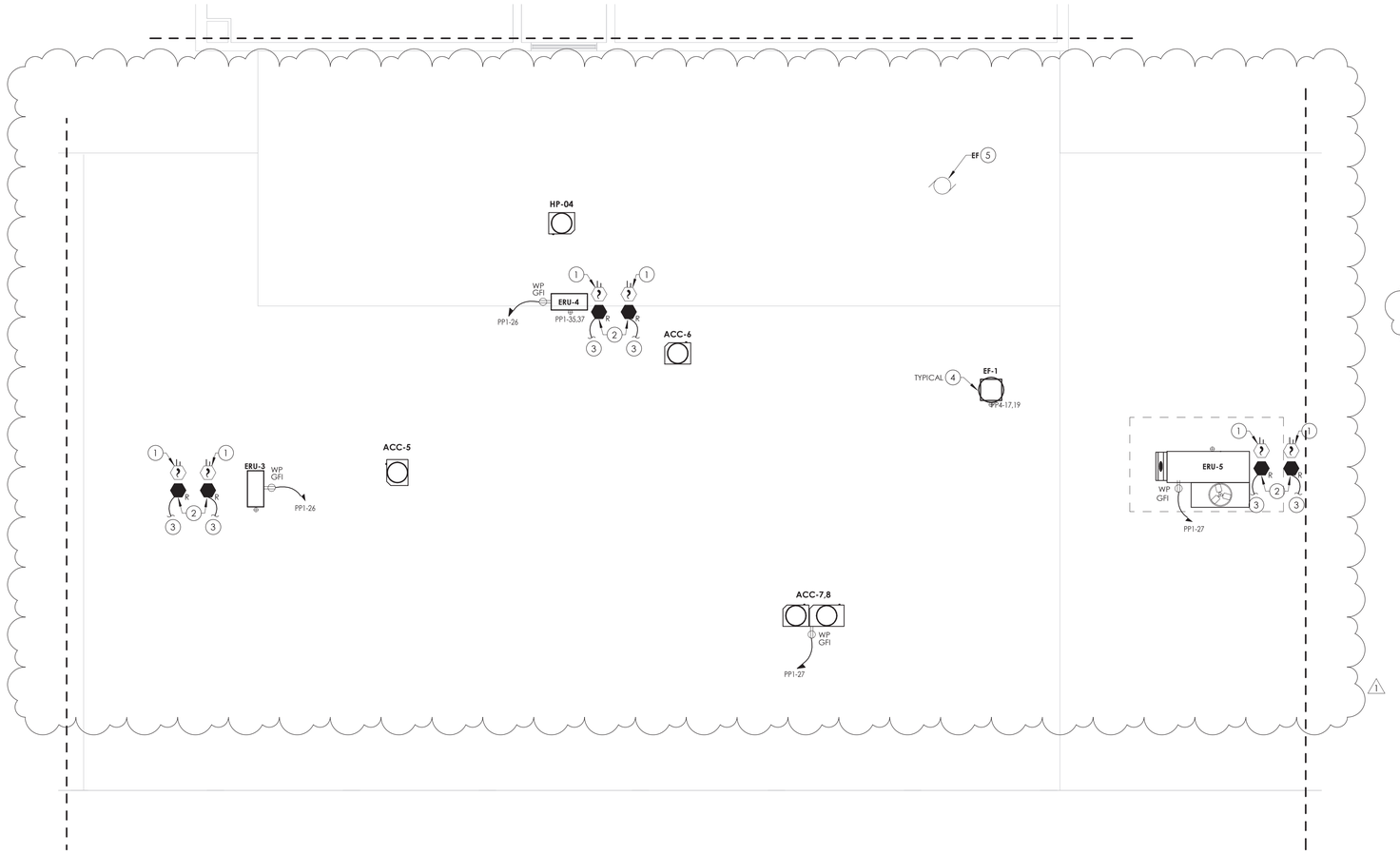
Project Status
BID DOCUMENTS

Drawn By
MAY

Checked By
JBT

Drawing Title
FIRST FLOOR NEW WORK PLAN - AREA B

Drawing Number
WOS E201



GENERAL NOTES

A. FOR ALL 120V DEVICES SHOWN, WIRE WITH (2)#12, #12G IN 3/4"C AND CONNECT TO 20A/1P CIRCUIT BREAKER IN PANEL INDICATED TO CIRCUIT INDICATED ADJACENT TO DEVICE.

B. ALL CIRCUITS OVER 100' SHALL BE WIRED WITH #10 THHN.

KEY NOTES

1. PROVIDE DUCT SMOKE DETECTOR FOR RETURN AND SUPPLY LINES OF RTU'S. SHOWN HERE FOR CLARITY BUT ARE IN FIRST FLOOR CEILING PLAN. PROVIDE FAN SHUT DOWN RELAYS SO THAT UNIT WILL SHUT DOWN ALL FANS ASSOCIATED WITH UNIT ON ACTIVATION OF THE BUILDING FIRE ALARM PANEL.
2. PROVIDE FAN SHUT DOWN RELAYS AT HVAC EQUIPMENT CONTROLS. INTERCONNECT RELAYS TO BUILDING FIRE ALARM SYSTEM TO SHUT DOWN FAN MOTORS WHEN THE FIRE ALARM IS ACTIVATED.
3. PROVIDE ASSOCIATED REMOTE TEST SWITCHES IN CEILING SPACE BELOW.
4. ALL MECHANICAL EQUIPMENT POWER REQUIREMENTS ARE NOTED ON DRAWINGS E901, E902, AND E903. LABEL INDICATES EQUIPMENT TAG. REFER TO RESPECTIVE TAG ON DRAWINGS NOTED.
5. CONNECT NEW EXHAUST FAN TO EXISTING TAGGED CIRCUITRY. REWORK/EXTEND CIRCUITRY AS NECESSARY TO ACCOMMODATE NEW EQUIPMENT AND ROOF CURB.

1

1 E211 **ROOF NEW WORK PLAN - AREA B**
1/8" = 1'-0"

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SOUTH ORANGETOWN Central School District
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SHEET INFORMATION

Issued
10/18/2023

Scale
AS NOTED

Project Status
BID DOCUMENTS

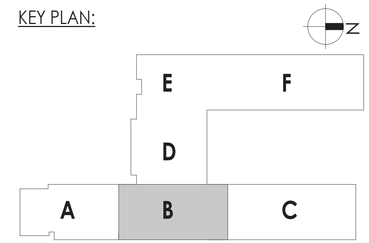
Drawn By
MAY

Checked By
JBT

Drawing Title
ROOF NEW WORK PLAN - AREA B

Drawing Number
WOS
E211

KEY PLAN:



EQUIPMENT	LOCATION	HP/FLA	VOLTS	PHASE	AMPS	BREAKER SIZE	WIRE/CONDUIT SIZE	PANEL/CIRCUIT	REMARKS:
ERU-01	ROOF	99A	208	3	99A	125A/3P	(3) #1, (1) #6GND IN 1-1/2" C	PP4/49,51,53	1
ERU-02	ROOF	78A	208	3	78A	100A/3P	(3) #2, (1) #8GND IN 1-1/2" C	PP4/52,54,56	1
ERU-03	ROOF	10.8A	208	1	10.8A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP1/34,36	1
ERU-04	ROOF	10.8A	208	1	10.8A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP1/35,37	1
ERU-05	ROOF	54A	208	3	54A	70A/3P	(3) #4, (1) #8GND IN 1-1/4" C	PP4/28,30,32	1
ERU-06	ROOF	99A	208	3	99A	125A/3P	(3) #1, (1) #6GND IN 1-1/2" C	PP5/30,32,34	1
ERU-07	ROOF	54A	208	3	54A	70A/3P	(3) #4, (1) #8GND IN 1-1/4" C	PP5/31,33,35	1
ERU-08	ROOF	54A	208	3	54A	70A/3P	(3) #4, (1) #8GND IN 1-1/4" C	PP5/36,38,40	1
ERU-09	ROOF	99A	208	3	99A	125A/3P	(3) #1, (1) #6GND IN 1-1/2" C	PP3/1,3,5	1
ERU-10	ROOF	78A	208	3	78A	100A/3P	(3) #2, (1) #8GND IN 1-1/2" C	PP3/2,4,6	1
ERU-11	ROOF	78A	208	3	78A	100A/3P	(3) #2, (1) #8GND IN 1-1/2" C	PP3/7,9,11	1
ERU-12	ROOF	54A	208	3	54A	70A/3P	(3) #4, (1) #8GND IN 1-1/4" C	PP3/26,28,30	1
ERU-13	ROOF	120A	208	3	120A	150A/3P	(3) #2/0, (1) #6GND IN 2-1/2" C	PP3/31,33,35	1
ACC-01	ROOF	-	208	3	50A	50A/3P	(3) #6, (1) #10GND IN 1" C	PP4/31,33,35	1
ACC-02	ROOF	-	208	3	60A	60A/3P	(3) #6, (1) #10GND IN 1" C	PP4/37,39,41	1
ACC-03	ROOF	-	208	3	50A	50A/3P	(3) #6, (1) #10GND IN 1" C	PP4/34,36,38	1
ACC-04	ROOF	-	208	3	60A	60A/3P	(3) #6, (1) #10GND IN 1" C	PP4/40,42,44	1
ACC-05	ROOF	-	208	3	71A	90A/3P	(3) #3, (1) #8GND IN 1-1/4" C	PP4/43,45,47	1
ACC-06	ROOF	-	208	3	29.3A	40A/3P	(3) #8, (1) #10GND IN 1" C	PP4/22,24,26	1
ACC-07	ROOF	-	208	3	49.8A	60A/3P	(3) #6, (1) #10GND IN 1" C	PP1/28,30,32	1
ACC-08	ROOF	-	208	3	49.8A	60A/3P	(3) #6, (1) #10GND IN 1" C	PP1/29,31,33	1
ACC-09	ROOF	-	208	3	60A	60A/3P	(3) #6, (1) #10GND IN 1" C	PP5/19,21,23	1
ACC-10	ROOF	-	208	3	50A	50A/3P	(3) #6, (1) #10GND IN 1" C	PP5/12,14,16	1
ACC-11	ROOF	-	208	3	59.8A	70A/3P	(3) #4, (1) #8GND IN 1-1/4" C	PP5/13,15,17	1
ACC-12	ROOF	-	208	3	59.8A	70A/3P	(3) #4, (1) #8GND IN 1-1/4" C	PP5/18,20,22	1
ACC-13	ROOF	-	208	3	71A	90A/3P	(3) #3, (1) #8GND IN 1-1/4" C	PP5/24,26,28	1
ACC-14	ROOF	-	208	3	71A	90A/3P	(3) #3, (1) #8GND IN 1-1/4" C	PP5/25,27,29	1
ACC-15	ROOF	-	208	3	59.8A	70A/3P	(3) #4, (1) #8GND IN 1-1/4" C	PP3/32,34,36	1
ACC-16	ROOF	-	208	3	59.8A	70A/3P	(3) #4, (1) #8GND IN 1-1/4" C	PP3/37,39,41	1
ACC-17	ROOF	-	208	3	29.8A	40A/3P	(3) #8, (1) #10GND IN 1" C	PP3/38,40,42	1
ACC-18	ROOF	-	208	3	50A	50A/3P	(3) #6, (1) #10GND IN 1" C	PP3/8,10,12	1
ACC-19	ROOF	-	208	3	60A	60A/3P	(3) #6, (1) #10GND IN 1" C	PP3/13,15,17	1
ACC-20	ROOF	-	208	3	50A	50A/3P	(3) #6, (1) #10GND IN 1" C	PP3/14,16,18	1
ACC-21	ROOF	-	208	3	60A	60A/3P	(3) #6, (1) #10GND IN 1" C	PP3/19,21,23	1
ACC-22	ROOF	-	208	3	50A	50A/3P	(3) #6, (1) #10GND IN 1" C	PP3/20,22,24	1
ACC-23	ROOF	-	208	3	60A	60A/3P	(3) #6, (1) #10GND IN 1" C	PP3/25,27,29	1
SSI-1	KINDERGARTEN 32	3.15A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP4/13,15	1
SSI-2	KINDERGARTEN 32	3.15A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-3	KINDERGARTEN 21	3.15A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-4	KINDERGARTEN 21	3.15A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-5	KINDERGARTEN 19	3.15A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP4/10,12	1
SSI-6	KINDERGARTEN 19	3.15A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-7	1ST GRADE 17	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-8	1ST GRADE 17	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-9	FIRST GRADE 15	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-10	FIRST GRADE 15	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-11	LIBRARY 5	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP4/14,16	1
SSI-12	LIBRARY 5	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-13	LIBRARY 5	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-14	LIBRARY 5A	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-15	LIBRARY 5A	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-17	MAKERSPACE 3	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP5/1,3	1
SSI-18	MAKERSPACE 3	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-19	1ST GRADE 1	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-20	1ST GRADE 1	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-21	KINDERGARTEN 104	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP5/4,6	1
SSI-22	KINDERGARTEN 104	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-23	OT/PT 105	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-24	OT/PT 105	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-25	SUPPORT M3	0.88A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-26	KINDERGARTEN 103	0.34A	208	1	15A	20A2P	(2) #12, (1) #12 GND IN 3/4" C	PP5/9,11	1
SSI-27	KINDERGARTEN 103	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-28	KINDERGARTEN 102	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-29	KINDERGARTEN 102	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-30	KINDERGARTEN 101	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-31	KINDERGARTEN 101	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		

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2. REMOVE 1-POLE CIRCUIT BREAKERS IN SPACES INDICATED. TURN BREAKERS OVER TO OWNER.

LUMINAIRE SCHEDULE

MARK	DESCRIPTION	DESIGN MAKE	MODEL NUMBER	VOLTS	LAMP		REMARKS:
					WATTS	TEMPERATURE	
A	2X2 RECESSED LED TROFFER	CURRENT LIGHTING	LCAT22-9-35-HL-G-ED1-U	UNV	32	3500K	
A/EM	2X2 RECESSED LED TROFFER WITH EMERGENCY BATTERY BACKUP	CURRENT LIGHTING	LCAT22-9-35-HL-G-ED1-U-ELL14	UNV	32	3500K	3,4
B	6" RECESSED LED DOWNLIGHT	CURRENT LIGHTING	LTR-6RD-H-ML-20L-DM01-LTR-6RD-T-ML-35K-9-MD-SS-WT-FMR6-R	UNV	22	3500K	
C	2X2 RECESSED LED FLAT PANEL	CURRENT LIGHTING	CFP22-40/33/2835	UNV	40/28	3500K	1
C/EM	2X2 RECESSED LED FLAT PANEL EMERGENCY BATTERY BACKUP	CURRENT LIGHTING	CFP22-40/33/2835-ELL14	UNV	40/28	3500K	1,3,4
D	2X4 RECESSED LED TROFFER	CURRENT LIGHTING	LCAT24-35-LW-G-ED1-U	UNV	36	3500K	
D/EM	2X4 RECESSED LED TROFFER EMERGENCY BATTERY BACKUP	CURRENT LIGHTING	LCAT24-35-LW-G-ED1-U-ELL14	UNV	36	3500K	3,4
E	1X4 RECESSED LED TROFFER	CURRENT LIGHTING	LCAT14-9-35-LW-G-ED1-U	UNV	36	3500K	5
E/EM	1X4 RECESSED LED TROFFER WITH EMERGENCY BATTERY BACKUP	CURRENT LIGHTING	LCAT14-9-35-LW-G-ED1-U-ELL14	UNV	36	3500K	3,4,5
F	1X4 SURFACE MOUNTED LED EXTERIOR	CURRENT LIGHTING	91L-P-D-2-STD-4-04-SOF-C5-40K-D100-D01-1C-UNV-H72	UNV	48	4000K	2
X	LED EXIT SIGN	CURRENT LIGHTING	CEWSRE	UNV	3		3,4
EM	LED EMERGENCY FIXTURE	CURRENT LIGHTING	CU2SO	UNV	4		3,4

REMARKS:
1. FIXTURE TO BE SET AT 40 (4000 LUMENS) IN FIELD BEFORE INSTALLATION. IN THE SINGLE GANG TOILET ROOMS WITHIN THE CLASSROOMS, FIXTURES TO BE SET AT 28 (2800 LUMENS).
2. FIXTURES TO BE MOUNTED TO UNDERSIDE OF ROOF. PROVIDE ALL MOUNTING HARDWARE NECESSARY.
3. ALL FIXTURES SHOWN WITH AN "EM" DESIGNATION INDICATES AND EMERGENCY FIXTURE. PROVIDE EMERGENGY BATTERY BACKUP FOR EACH FIXTURE INDICATED.
4. ALL "EM" BATTERY BACKUPS WITHIN FIXTURE SHALL BE WIRED TO THE UNSWITCHED HOT LEG OF THE CIRCUIT FEEDING IT.
5. PROVIDE FIXTURES WITH GYP CEILING KIT FK14.

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Newburgh, NY 12550
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SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
14457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- TDHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

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SHEET INFORMATION

Issued: 10/18/2023
Scale: 12" = 1'-0"
Project Status: BID DOCUMENTS
Drawn By: MAY
Checked By: JBT
Drawing Title: ELECTRICAL SCHEDULES

Drawing Number
WOS
E900

11/16/2023 12:33:50 PM <project location> REVIT PROJECT FILES ON BIM360

EQUIPMENT	LOCATION	HP/FLA	VOLTS	PHASE	AMPS	BREAKER SIZE	WIRE/CONDUIT SIZE	PANEL/CIRCUIT	REMARKS:
EF-1	ROOF	1-1/2HP	208	1	11A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP4/17,19	1,2
SSO-1	ROOF	120A	208	3	150A	150A/3P	(3) #2/0, (1) #6GND IN 2" C	PP4/46,48,50	1
SSO-2	ROOF	75A	208	3	100A	100A/3P	(3) #2, (1) #8 IN 1-1/4"C	PP2/29,31,33	1
HP-04	ROOF	38A	208	3	40A	50A/3P	(3) #6, (1) #10 GND IN 1" C	PP4/25,27,29	1
RBU-1	CORRIDOR	339W	208	1	1A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP4/9,11	1
RBU-2	CORRIDOR	339W	208	1	1A		(2) #12, (1) #12 GND IN 3/4" C		
RBU-4	NURSE 16	226W	208	1	1A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP4/5,7	1
RBU-6	CORRIDOR	339W	208	1	1A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP5/5,7	1
RBU-7	CORRIDOR	226W	208	1	1A		(2) #12, (1) #12 GND IN 3/4" C		
RBU-8	CORRIDOR	226W	208	1	1A		(2) #12, (1) #12 GND IN 3/4" C		
RBU-9	CORRIDOR	339W	208	1	1A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP2/28,30	1
RBU-10	CORRIDOR	339W	208	1	1A		(2) #12, (1) #12 GND IN 3/4" C		
RBU-11	CORRIDOR	339W	208	1	1A		(2) #12, (1) #12 GND IN 3/4" C		
RBU-12	ROOF	339W	208	1	1A		(2) #12, (1) #12 GND IN 3/4" C		

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2. PROVIDE FIRE ALARM RELAY AT EXHAUST FAN AND TIE INTO EXISTING FIRE ALARM SYSTEM

EQUIPMENT	LOCATION	HP/FLA	VOLTS	PHASE	AMPS	BREAKER SIZE	WIRE/CONDUIT SIZE	PANEL/CIRCUIT	REMARKS:
SSI-32	SPEC. ED. 100	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP5/8,10	1
SSI-33	SPEC. ED. 100	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-34	1ST GRADE 2	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-35	1ST GRADE 2	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-36	1ST GRADE 4	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-37	1ST GRADE 4	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-38	1ST GRADE 6	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-39	1ST GRADE 6	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-40	MUSIC 62	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP2/21,23	1,2
SSI-41	MUSIC 62	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-42	2ND GRADE 64	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-43	2ND GRADE 64	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-44	2ND GRADE 66	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-45	2ND GRADE 66	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-46	2ND GRADE 68	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-47	2ND GRADE 68	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-48	1ST GRADE 70	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-49	1ST GRADE 70	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-50	2ND GRADE 72	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP2/25,27	1
SSI-51	2ND GRADE 72	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-52	ART 74	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-53	ART 74	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-54	1ST GRADE 71	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-55	1ST GRADE 71	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-56	1ST GRADE 69	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-57	1ST GRADE 69	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-58	2ND GRADE 67	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP2/32,34	1
SSI-59	2ND GRADE 67	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-60	2ND GRADE 69	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-61	2ND GRADE 65	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-62	2ND GRADE 63	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-63	2ND GRADE 63	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-64	1ST GRADE 61	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-65	1ST GRADE 61	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-66	2ND GRADE 59	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP2/20,22	1,2
SSI-67	2ND GRADE 59	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-68	2ND GRADE 57	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-69	2ND GRADE 57	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-70	STAFF LOUNGE 51	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-71	ENL 44	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP2/24,26	1
SSI-72	OFFICE 42	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-73	P.E. OFFICE 80C	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-74	CORRIDOR	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP4/1,3	1
SSI-75	COACH OFFICE 39	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP4/4,6	1
SSI-76	AID'S OFFICE 38	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-77	NURSE 16	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-78	TEST/ISO 16B	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-79	ENL 37A	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP4/21,23	1
SSI-80	ENL 37A	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-81	ENL 37B	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-82	ENL 37B	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-83	CORRIDOR	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-84	OFFICE 20	1.39A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-85	KINDERGARTEN 24	0.34A	208	1	15A	20A/2P	(2) #12, (1) #12 GND IN 3/4" C	PP4/18,20	1
SSI-86	KINDERGARTEN 24	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-87	KINDERGARTEN 26	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-88	KINDERGARTEN 26	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-89	KINDERGARTEN 30	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		
SSI-90	KINDERGARTEN 30	0.34A	208	1	15A		(2) #12, (1) #12 GND IN 3/4" C		

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2. REMOVE EXISTING 1-POLE CIRCUIT BREAKERS IN SPACES INDICATED. PLACE 1-POLE CIRCUIT BREAKERS IN OPEN SPACES WITHIN PANEL.

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SOUTH ORANGETOWN Central School District

Capital Improvements Bond

Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
1457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
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PROJECT ISSUE & REVISION SCHEDULE

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SHEET INFORMATION

Issued: 10/18/2023
Scale: 12" = 1'-0"
Project Status: BID DOCUMENTS
Drawn By: MAY
Checked By: JBT
Drawing Title: ELECTRICAL SCHEDULES

Drawing Number
WOS
E901

PANEL: PP5

LOCATION: SUPPORT M2 **A.I.C. RATING:**
VOLTAGE: **MCB RATING:** Type 1
FED FROM: **MAIN BUS RATING:** 800 A
MOUNTING: Surface

...	BRKR		LOAD DESCRIPTION	A (VA)		B (VA)		C (VA)		LOAD DESCRIPTION	BRKR		...
1	20	2	SSI-17,18,19,20	140	--					SPACE	1	--	2
3						140	175			SSI-21,22,23,24,25	2	20	4
5	20	2	RBU-6,7,8					600	175				6
7				600	280					SSI-32,33,34,35,36,37,38,39	2	20	8
9	20	2	SSI-26,27,28,29,30,31			210	280						10
11								210	6004				12
13				7181	6004					ACC-10	3	50	14
15	70	3	ACC-11			7181	6004						16
17								7181	7181				18
19				7205	7181					ACC-12	3	70	20
21	60	3	ACC-9			7205	7181						22
23								7205	8526				24
25				8526	8526					ACC-13	3	90	26
27	90	3	ACC-14			8526	8526						28
29								8526	11889				30
31				6485	11889					ERU-6	3	125	32
33	70	3	ERU-7			6485	11889						34
35								6485	6485				36
37	--	1	SPACE	--	6485					ERU-8	3	70	38
39	--	1	SPACE			--	6485						40
41	--	1	SPACE					--	--	SPACE	1	--	42
43	--	1	SPACE	--	--					SPACE	1	--	44
45	--	1	SPACE			--	--			SPACE	1	--	46
47	--	1	SPACE					--	--	SPACE	1	--	48
49	--	1	SPACE	--	--					SPACE	1	--	50
51	--	1	SPACE			--	--			SPACE	1	--	52
53	--	1	SPACE					--	--	SPACE	1	--	54
			TOTAL LOAD	70502 VA		70287 VA		70467 VA					

Load Classification

Load	Connected VA	Demand Factor	Demand VA
Recept.			
Lighting			
HVAC			
Motors			
Refrig.			
Kitchen			
Misc.	211256 VA	75.00%	158442 VA

Panel Totals

Connected Load	211256 VA
Estimated Load	158442 VA
Connected Amps	586 A
Demand Amps	440 A

PANEL: PP3

LOCATION: STORAGE 58 **A.I.C. RATING:**
VOLTAGE: **MCB RATING:** Type 1
FED FROM: **MAIN BUS RATING:** 800 A
MOUNTING: Surface

...	BRKR		LOAD DESCRIPTION	A		B		C		LOAD DESCRIPTION	BRKR		...
1				11649	9367								2
3	125	3	ERU-9			11649	9367			ERU-10	3	100	4
5								11649	9367				6
7				9367	6004								8
9	100	3	ERU-11			9367	6004			ACC-18	3	50	10
11								9367	6004				12
13				7205	6004								14
15	60	3	ACC-19			7205	6004			ACC-20	3	50	16
17								7205	6004				18
19				7205	6004								20
21	60	3	ACC-21			7205	6004			ACC-22	3	50	22
23								7205	6004				24
25				7205	6485								26
27	60	3	ACC-23			7205	6485			ERU-12	3	70	28
29								7205	6485				30
31				14411	7181								32
33	150	3	ERU-13			14411	7181			ACC-15	3	70	34
35								14411	7181				36
37				7181	3578								38
39	70	3	ACC-16			7181	3578			ACC-17	3	40	40
41								7181	3578				42
43	--	1	SPACE	--	--					SPACE	1	--	44
45	--	1	SPACE			--	--			SPACE	1	--	46
47	--	1	SPACE					--	--	SPACE	1	--	48
49	--	1	SPACE	--	--					SPACE	1	--	50
51	--	1	SPACE			--	--			SPACE	1	--	52
53	--	1	SPACE					--	--	SPACE	1	--	54
			TOTAL LOAD	108846 VA		108846 VA		108846 VA					

Load Classification

Load	Connected VA	Demand Factor	Demand VA
Recept.			
Lighting			
HVAC			
Motors			
Refrig.			
Kitchen			
Misc.	326539 VA	75.00%	244904 VA

Panel Totals

Connected Load	326539 VA
Estimated Load	244904 VA
Connected Amps	906 A
Demand Amps	680 A

PANEL: PP4

LOCATION: SERVER CL. 9 **A.I.C. RATING:**
VOLTAGE: **MCB RATING:** Type 1
FED FROM: **MAIN BUS RATING:** 800 A
MOUNTING: Surface

...	BRKR		LOAD DESCRIPTION	A		B		C		LOAD DESCRIPTION	BRKR		...
1				35	--					SPACE	1	--	2
3	20	2	SSI-74			35	140			SSI-75,76,77,78	2	20	4
5	20	2	RBU-4					200	140				6
7				200	--					SPACE	1	--	8
9	20	2	RBU-1,2			400	795			SSI-5,6,7,8,9,10	2	20	10
11								400	795				12
13	20	2	SSI-1,2,3,4	1310	210					SSI-11,12,13,14,15,16	2	20	14
15						1310	210						16
17	20	2	EF-1					1144	210	SSI-85,86,87,88,89,90	2	20	18
19				1144	210								20
21	20	2	SSI-79,80,81,82,83,84			210	3579						22
23								210	3579	ACC-6	3	40	24
25				4803	3579								26
27	50	3	HP-04			4803	6485						28
29								4803	6485	ERU-5	3	70	30
31				6004	6485								32
33	50	3	ACC-1			6004	6004						34
35								6004	6004	ACC-3	3	50	36
37				7205	6004								38
39	60	3	ACC-2			7205	7205						40
41								7205	7205	ACC-4	3	60	42
43				8526	7205								44
45	90	3	ACC-5			8526	9006						46
47								8526	9006	SSO-1	3	150	48
49				11889	9006								50
51	125	3	ERU-1			11889	9367						52
53								11889	9367	ERU-2	3	100	54
55	20	1	SPARE	0	9367								56
57	20	1	SPARE			0	500			POWER	1	20	58
59	20	1	SPARE					0	500	POWER	1	20	60
61	--	1	SPACE	--	--					SPACE	1	--	62
63	--	1	SPACE			--	--			SPACE	1	--	64
65	--	1	SPACE					--	--	SPACE	1	--	66
			TOTAL LOAD	83183 VA		83674 VA		83673 VA					

Load Classification

Load	Connected VA	Demand Factor	Demand VA
Recept.			
Lighting			
HVAC			
Motors			
Refrig.			
Kitchen			
Misc.	249529 VA	75.00%	187146 VA

Panel Totals

Connected Load	250529 VA
Estimated Load	187896 VA
Connected Amps	695 A
Demand Amps	522 A

PANEL: PP1

LOCATION: SERVER CL. 9 **A.I.C. RATING:**
VOLTAGE: **MCB RATING:** Type 1
FED FROM: **MAIN BUS RATING:** 225 A
MOUNTING: Surface

...	BRKR		LOAD DESCRIPTION	A (VA)		B (VA)		C (VA)		LOAD DESCRIPTION	BRKR		...
1	20	1	RECEPTS: 32	1080	1080					RECEPTS: 21	1	20	2
3	20	1	RECEPTS: 30			1080	1080			RECEPTS: 19	1	20	4
5	20	1	RECEPTS: 26					1080	1080	RECEPTS: 17	1	20	6
7	20	1	RECEPTS: 24	1080	1080					RECEPTS: 15	1	20	8
9	20	1	RECEPTS: 9			180	1080			RECEPTS: 3	1	20	10
11	20	1	RECEPTS: 6					1080	1080	RECEPTS: 1	1	20	12
13	20	1	RECEPTS: 4	1080	1080					RECEPTS: 104	1	20	14
15	20	1	RECEPTS: 2			1080	1080			RECEPTS: 105	1	20	16
17	20	1	RECEPTS: 100					1080	540	RECEPTS: 16	1	20	18
19	20	1	RECEPTS: 101	1080	540					RECEPTS: 16	1	20	20
21	20	1	RECEPTS: 38, 39			720	360			RECEPTS: 38	1	20	22
23	20	1	RECEPTS: 16B					360	1080	RECEPTS: 102	1	20	24
25	20	1	RECEPTS: 103	1080	360					RECEPTS: ROOF	1	20	26
27	20	1	RECEPTS: ROOF			360	5980						28
29								5980	5980	ACC-7	3	60	30
31	60	3	ACC-8	5980	5980								32
33						5980	1040						34
35	20	2	ERU-4					1040	1040	ERU-3	2	20	36
37	20	1	FIRE/SMOKE DAMPER ACTUATORS	1040	180					RECEPTS: 16	1	20	38
39	20	1	FIRE/SMOKE DAMPER ACTUATORS			1000	900			RECEPTS: 37A	1	20	40
41	20	1	SPARE					0	900	RECEPTS: 37B	1	20	42
			TOTAL LOAD	22721 VA		21921 VA		22321 VA					

Load Classification

Load	Connected VA	Demand Factor	Demand VA
Recept.	25920 VA	69.29%	17960 VA
Lighting			
HVAC			
Motors			
Refrig.			
Kitchen			
Misc.	40042 VA	75.00%	30032 VA

Panel Totals

Connected Load	66962 VA
Estimated Load	48742 VA
Connected Amps	186 A
Demand Amps	135 A

PANEL: PP2

LOCATION: STORAGE 58 **A.I.C. RATING:**
VOLTAGE: **MCB RATING:** Type 1
FED FROM: **MAIN BUS RATING:** 225 A
MOUNTING: Surface

...	BRKR		LOAD DESCRIPTION	A (VA)		B (VA)		C (VA)		LOAD DESCRIPTION	BRKR		...
1	20	1	RECEPTS: 57	1080	1080					RECEPTS: 62	1	20	2
3	20	1	RECEPTS: 59			1080	1080			RECEPTS: 64	1	20	4
5	20	1	RECEPTS: 61					1080	1080	RECEPTS: 66	1	20	6
7	20	1	RECEPTS: 63	1080	1080					RECEPTS: 68	1	20	8
9	20	1	RECEPTS: 65			1080	1080			RECEPTS: 70	1	20	10
11	20	1	RECEPTS: 67					1080	1080	RECEPTS: 72	1	20	12
13	20	1	RECEPTS: 69	1080	1080					RECEPTS: 74	1	20	14
15	20	1	RECEPTS: 71			1080	360			RECEPTS: EXTERIOR CLASSROOM	1	20	16
17	20	1	RECEPTS: EXTERIOR CLASSROOM					720	3000	LIGHTING: EXTERIOR CLASSROOM	1	20	18
19	20	1	RECEPTS: ROOF	360	175					SSI-66,67,68,69,70	2	20	20
21						350	175						22
23	20	2	SSI-40,41,42,43,44,45,46,47,48,49					350	105	SSI-71,72,73	2	20	24
25				280	105								26
27	20	2	SSI-50,51,52,53,54,55,56,57			280	800			RBU-9,10,11,12	2	20	28
29								14410	800				30
31	100	3	SSO-2	14410	280					SSI-58,59,60,61,62,63,64,65	2	20	32
33						14410	280						34
35	20	1	FIRE/SMOKE DAMPER ACTUATORS					1000	0	SPARE	1	20	36
37	20	1	SPARE	0	0					SPARE	1	20	38
39	20	1	SPARE			0	0			SPARE	1	20	40
41	20	1	SPARE					0	0	SPARE	1	20	42
			TOTAL LOAD	22090 VA		22055 VA		24573 VA					

Load Classification

Load	Connected VA	Demand Factor	Demand VA
Recept.	17640 VA	78.34%	13820 VA
Lighting	3000 VA	125.00%	3750 VA
HVAC			
Motors			
Refrig.			
Kitchen			
Misc.	47211 VA	75.00%	35408 VA

Panel Totals

Connected Load	68707 VA
Estimated Load	53554 VA
Connected Amps	191 A
Demand Amps	149 A

CPL | Architecture Engineering Planning
50 Front Street Suite 202,
Newburgh, NY 12550
CPLteam.com

SOUTH ORANGETOWN Central School District
Capital Improvements Bond
Essential Infrastructure for Student Health, Safety and Success

PROJECT INFORMATION

Project Number
1457.20

Client Name
SOUTH ORANGETOWN CENTRAL SCHOOL DISTRICT

Project Name
PHASE 1: 2022 BOND

District Office Address
160 VAN WYCK RD, BLAUVELT, NY 10913

SOUTH ORANGETOWN CSD
- WILLIAM O. SCHAEFER SED#:50-03-01-06-0-012-019
- COTTAGE LANE ELEMENTARY SED#:50-03-01-06-0-010-022
- TAPPAN ZEE HIGH SCHOOL SED#:50-03-01-06-0-006-032
- WILLIAM O. SCHAEFER S&L SED#: 50-03-01-06-0-012-020
- COTTAGE LANE S&L SED#: 50-03-01-06-0-010-023
- COTTAGE LANE LIBRARY S&L SED#: 50-03-01-06-8-023-002
- WOS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-053-001
- SOMS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-056-001
- CLE OUTDOOR CLASSROOM SED#: 50-03-01-06-7-054-001
- TZHS OUTDOOR CLASSROOM SED#: 50-03-01-06-7-055-001

PROJECT ISSUE & REVISION SCHEDULE

No.	Date	Description
1	11/17/2023	BID ADDENDUM #4

PROFESSIONAL STAMPS

NEW YORK STATE EDUCATION STATEMENT
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SHEET INFORMATION

Issued
10/18/2023

Scale

Project Status
BID DOCUMENTS

Drawn By
MAY

Checked By
JBT

Drawing Title
ELECTRICAL SCHEDULES

Drawing Number
WOS
E902