RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

GENERAL CONDITIONS

1. IN CASE OF CONFLICT BETWEEN NOTES, DETAILS, AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
2. PERFORM ALL WORK INCLUDING CONSTRUCTION PRACTICES, USE AND DISPOSAL OF MATERIALS, AND QUALITIES OF WORKMANSHIP, IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE GOVERNING LOCAL, STATE, AND NATIONAL CODES AND SPECIFICATIONS FOR THIS CONSTRUCTION PROJECT. PROVIDE APPROPRIATE SAFETY MEASURES SATISFYING ALL OSHA REQUIREMENTS.
3. QUALITY OF MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE BEST STANDARDS AND PRACTICES OF THE TRADES INVOLVED.
4. THE CONTRACTOR SHALL FILE ALL REQUIRED INSURANCE CERTIFICATES AND OBTAIN ALL REQUIRED BUILDING PERMITS PRIOR TO COMMENCEMENT OF THE WORK. COSTS OF PERMITS TO BE PAID BY BUILDER, APPROVED PERMIT TO BE POSTED.
5. A COMPLETE SET OF PROJECT DOCUMENTS, INCLUDING AN ORIGINAL STAMPED SET OF DRAWINGS AND ALL SUBSEQUENT CHANGES AND CLARIFICATIONS SHALL BE KEPT ON SITE AT ALL TIMES. ALL PROPOSED CHANGES TO ORIGINAL PROJECT DOCUMENT BID SET ARE TO BE SUBMITTED BY CONTRACTOR IN THE FORM OF CHANGE ORDERS, INCLUDING ALL BACKUP INFORMATION, FOR APPROVAL BY OWNER/ARCHITECT.
6. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR, OWNER, AND ARCHITECT SHALL HOLD A PRE-CONSTRUCTION CONFERENCE TO CONFIRM SITE ACCESS ROUTE, SCHEDULE, AND SEQUENCE OF WORK.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY AND PROTECTION OF ALL CONDITIONS AND MATERIALS WITHIN THE PROPOSED CONSTRUCTION AREA. THE CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR ANY DAMAGE OR INJURY CAUSED BY OR DURING THE EXECUTION OF WORK.
8. SECTIONS AND DETAILS SHOWN, WHILE DRAWN FOR SPECIFIC LOCATIONS, ARE INTENDED TO ESTABLISH THE GENERAL TYPES OF DETAILS TO BE USED THROUGHOUT. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES, SHALL BE REPEATED. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT REQUIRED FOR PROPER CONSTRUCTION OF ANY PART OF THE WORK SHALL BE INCLUDED AS IF THEY WERE INDICATED IN THE DRAWINGS.
9. CONTRACTOR TO VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE AND TO NOTIFY THE OWNER/ARCHITECT OF ANY DISCREPANCIES AND/OR DEVIATIONS FROM DRAWINGS. PROPOSED REMEDIES, IF REQUIRING ADDITIONAL WORK, ARE TO BE SUBMITTED FOR APPROVAL IN THE FORM OF WRITTEN CHANGE ORDERS TO THE OWNER IN ACCORDANCE WITH THE TERMS OF THE CONTRACT BEFORE ORDERING MATERIAL OR COMMENCING WITH WORK.
10. CONTRACTOR TO VERIFY LOCATION OF ALL BELOW GRADE UTILITIES AND STORM WATER SYSTEMS PRIOR TO EXCAVATION. NOTIFY ARCHITECT OF ANY CONFLICTS WITH PROPOSED CONSTRUCTION.
11. ARCHITECT/ENGINEER IS NOT RESPONSIBLE FOR WORK THAT THE ARCHITECT/ENGINEER'S DOES NOT REVIEW AND/OR WORK NOT COMPLETED IN ACCORDANCE WITH ARCHITECT/ENGINEER'S PLAN AND/OR INSTRUCTIONS. NO DEVIATION FROM DESIGN DRAWINGS IS PERMITTED WITHOUT WRITTEN APPROVAL.
12. PROVIDE DAILY CLEAN-UP OF AREAS ADJACENT TO CONSTRUCTION AS WELL AS PERIODIC CLEAN-UP OF CONSTRUCTION AREAS.
13. AT JOB COMPLETION, BESIDES FINAL GENERAL CLEANING, REMOVE ALL STAINS AND PAINT FROM ALL NEW GLASS, TILE, AND OTHER FINISHES AND WASH AND POLISH STONE.

GENERAL DRAWING NOTES

1. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS.
2. ITEMS NOT NOTED AS EXISTING ARE NEW. DOORS AND WINDOWS NOT NUMBERED ON THE FLOOR PLAN OR ELEVATIONS ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS TO EXISTING SURFACES ARE TO FINISH, AND ALL DIMENSIONS TO NEW CONSTRUCTION ARE TO ROUGH FRAMING, UNLESS NOTED OTHERWISE.
4. MECHANICAL, ELECTRICAL, PLUMBING & FIRE PROTECTION SYSTEMS INDICATED ON ARCHITECTURAL DRAWINGS ARE FOR REFERENCE ONLY. COORDINATE WITH MEPF DRAWINGS
5. ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS AND SOFFITS PROTECTED BY 5/8" FIRE RATED GWB UNLESS NOTED OTHERWISE.

MATERIALS

- GYPSUM WALLBOARD
- FOAM INSULATION
- BATT INSULATION
- RIGID INSULATION
- LOOSE FILL INSULATION
- WOOD BLOCKING
- ROUGH WOOD
- FINISH WOOD
- PLYWOOD/SHEATHING
- MDO/MDF
- ORIENTED STRAND BOARD (OSB)
- CORK
- GLASS
- BRICK
- CONCRETE
- CONCRETE UNIT MASONRY
- STONE
- TILE
- TERRAZZO
- EARTH
- GRAVEL
- CLAY
- STEEL
- ALUMINUM

SYMBOLS

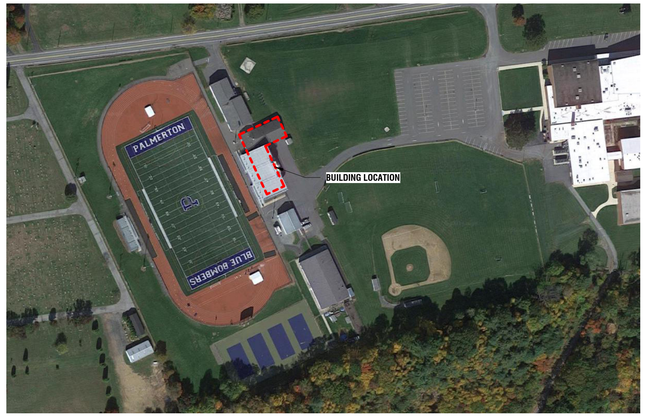
- XX — KEYED NOTE IDENTIFIER
- XX — KEYED NOTE (DEMOLITION)
- XX — CASEWORK/MILLWORK IDENTIFIER
- XX — REVISION IDENTIFIER
- NO. / NO. — COLUMN LINE OR GRID IDENTIFIER
- NO. / DWG / SIM — DETAIL INDICATOR
- NO. / DWG / SIM — SECTION INDICATOR
- NO. / DWG / SIM — EXTERIOR ELEVATION INDICATOR
- XX / DWG / XX — INTERIOR ELEVATION INDICATOR
- ROOM NAME / 150 SF / NO. — ROOM IDENTIFIER
- DOOR NO. / DR NO. / 1HR — DOOR & RATING IDENTIFIER
- NO. — WINDOW / GLAZING IDENTIFIER
- NO. — PARTITION TYPE IDENTIFIER
- NO. — ACCESSORIES IDENTIFIER
- NO. / MATL — CEILING HEIGHT & MATERIAL IDENTIFIER
- GL NO. — GLAZING PANEL IDENTIFIER
- NO. — FURNITURE IDENTIFIER
- FLOOR FINISH / WALL FINISH / BASE MATL — FLOOR FINISH PLAN - FLOOR/WALL/BASE FINISH IDENTIFIER
- EL. NO. — SPOT ELEVATION INDICATOR
- NORTH INDICATOR
- LEVEL NAME / ELEVATION — LEVEL INDICATOR
- NO. — SLOPE INDICATOR
- 0" - 0" — DIMENSION STRING
- EXISTING DOOR TO REMAIN (SWING @ 45 DEGREES)
- DOOR TO BE DEMOLISHED
- DOOR NO. — NEW DOOR AS SCHEDULED (SWING @ 90 DEGREES)

LINE TYPES

- EXISTING CONSTRUCTION
- ITEM / WALL TO BE DEMOLISHED
- NEW CONSTRUCTION
- HIDDEN ITEM
- ITEM ABOVE
- CENTERLINE
- GRID LINE
- BREAK LINE
- VIEW NO. / SHEET NO. — MATCH LINE
- VIEW NO. / SHEET NO. — MOISTURE / VAPOR BARRIER
- DAMPROOFING / WATER PROOFING
- 1 HR FIRE-RATED WALL
- 2 HR FIRE-RATED WALL
- 3 HR FIRE-RATED WALL
- PATH OF EGRESS

DRAWING INDEX

SITE LOCATION MAP



PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5 ARCHITECTURE

STRUCTURAL:
PANY & LENTZ ENGINEERING

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN & McCLURE COMPANY

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

ALLOY5 ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

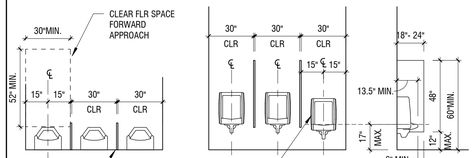
SHEET TITLE:

COVER SHEET

DATE:	02/16/2024
SCALE:	As indicated
DRAWN BY:	MC
CHECKED BY:	RG
PROJ NO:	22-0073

G0.00

ADA STANDARDS



PLAN VIEW OF URINAL STALLS — URINAL PARTITION — FRONT ELEVATION — ACCESSIBLE URINAL: WHERE MORE THAN ONE URINAL IS PROVIDED, AT LEAST ONE MUST BE ACCESSIBLE — SIDE ELEVATION

Figure 605.2(A)

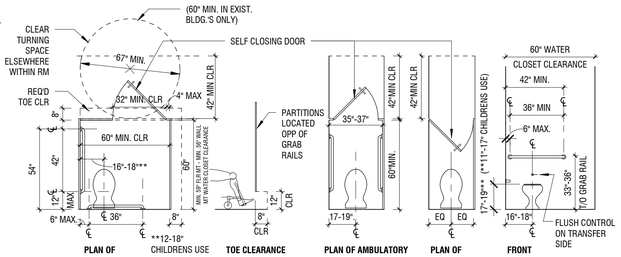
IPC 2017:
405.3.5 URINAL PARTITIONS.
EACH URINAL UTILIZED BY THE PUBLIC OR EMPLOYEES SHALL OCCUPY A SEPARATE AREA WITH WALLS OR PARTITIONS TO PROVIDE PRIVACY
EXCEPTIONS:

1. URINAL PARTITIONS SHALL NOT BE REQ.'D IN A SINGLE-OCCUPANCY OR FAMILY/ASSISTED-USE TOILET ROOM W/ A LOCKABLE DOOR.
2. TOILET ROOMS LOCATED IN CHILD DAY CARE FACILITIES AND CONTAINING TWO OR MORE URINALS SHALL BE PERMITTED TO HAVE ONE URINAL W/O PARTITIONS

NOTE: CONTRACTOR SHALL VERIFY THAT ALL FIXTURES, PIPES, AND ACCESSORIES DESIGNATED FOR HANDICAP USE CAN BE INSTALLED WITHIN THE ABOVE CLEARANCE REQUIREMENTS

URINAL CLEARANCES

SCALE : 1/4" = 1'-0" — ANSI A117.1-2017



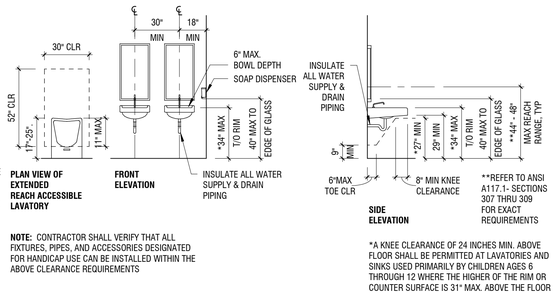
PLAN OF WHEEL CHAIR ACCESSIBLE STALL — TOE CLEARANCE WHEEL CHAIR ACCESSIBLE STALL Figure 604.9.5(A) — PLAN OF AMBULATORY ACCESSIBLE STALL Figure 604.10.1 — PLAN OF STANDARD STALL — FRONT ELEVATION Figure 604.5.2 — SIDE ELEVATION Figure 604.5.1 & 604.7.1(A)

NOTE: CONTRACTOR SHALL VERIFY THAT ALL FIXTURES, PIPES, AND ACCESSORIES DESIGNATED FOR HANDICAP USE CAN BE INSTALLED WITHIN THE ABOVE CLEARANCE REQUIREMENTS

NOTE: TOILET PAPER DISPENSERS THAT ACCOMMODATE A MAX. OF (2) TOILET PAPER ROLLS OF NOT MORE THAN 5 IN. DIA. EACH SHALL BE PERMITTED TO BE LOCATED 7" MIN. AND 9" MAX. IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTERLINE OF THE DISPENSER. THE OUTLET OF THE DISPENSER SHALL BE 15" MIN. AND 48" MAX. AFFL

TOILET COMPARTMENTS & TOILET FIXTURE CLEARANCES

SCALE : 1/4" = 1'-0" — ANSI A117.1-2017



PLAN VIEW OF EXTENDED REACH ACCESSIBLE LAVATORY — FRONT ELEVATION — SIDE ELEVATION

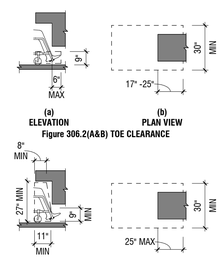
NOTE: CONTRACTOR SHALL VERIFY THAT ALL FIXTURES, PIPES, AND ACCESSORIES DESIGNATED FOR HANDICAP USE CAN BE INSTALLED WITHIN THE ABOVE CLEARANCE REQUIREMENTS

*A KNEE CLEARANCE OF 24 INCHES MIN. ABOVE FLOOR SHALL BE PERMITTED AT LAVATORIES AND SINKS USED PRIMARILY BY CHILDREN AGES 6 THROUGH 12 WHERE THE HIGHER OF THE RIM OR COUNTER SURFACE IS 31" MAX. ABOVE THE FLOOR

**REFER TO ANSI A117.1- SECTIONS 307 THRU 309 FOR EXACT REQUIREMENTS

LAVATORY CLEARANCES

SCALE : 1/4" = 1'-0" — ANSI A117.1-2017



(a) ELEVATION — (b) PLAN VIEW

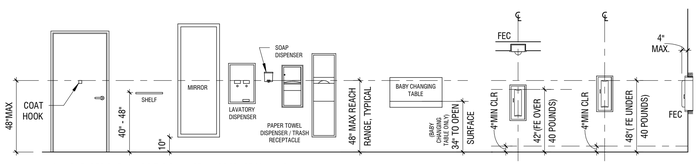
Figure 306.2(A&B) TOE CLEARANCE

(a) ELEVATION — (b) PLAN VIEW

Figure 306.3(A&B) KNEE CLEARANCE

KNEE & TOE CLEARANCES

SCALE : 1/4" = 1'-0" — ANSI A117.1-2017



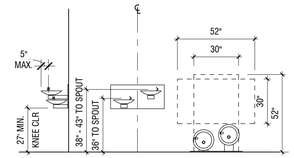
1. FIXTURES SHOWN ARE TYPICAL. ACTUAL PRODUCT MAY VARY. CLEAR FLOOR SPACE MUST ALSO BE MAINTAINED IN FRONT OF ACCESSORY AS DESCRIBED ELSEWHERE ON THIS SHEET.
2. MAXIMUM 4" PROJECTION IN PATH OF TRAVEL MUST BE OBSERVED.
3. CLEARANCES SHOWN ARE CODE MAX./MIN. ACTUAL MOUNTING HEIGHTS MAY VARY PROVIDED THEY FALL IN THE CODE RANGE

SEE CODE REFERENCES:
IFC: SECTION 906.9
ADA STANDARDS: SECTION 308

NOTE: CONTRACTOR SHALL VERIFY THAT ALL FIXTURES, PIPES, AND ACCESSORIES DESIGNATED FOR HANDICAP USE CAN BE INSTALLED WITHIN THE ABOVE CLEARANCE REQUIREMENTS

ACCESSORY CLEARANCES AND MOUNTING HEIGHTS

SCALE : 1/4" = 1'-0" — ANSI A117.1-2017



CLEARANCE UNDER WATER FOUNTAIN — CLEARANCE TO SPOUT OF WATER FOUNTAIN — FRONT & SIDE APPROACH CLEARANCE

DRINKING FOUNTAINS FOR PERSONS WHO ARE STANDING

NOTE: CONTRACTOR SHALL VERIFY THAT ALL FIXTURES, PIPES, AND ACCESSORIES DESIGNATED FOR HANDICAP USE CAN BE INSTALLED WITHIN THE ABOVE CLEARANCE REQUIREMENTS

DRINKING FOUNTAIN CLEARANCES

SCALE : 1/4" = 1'-0" — ANSI A117.1-2017

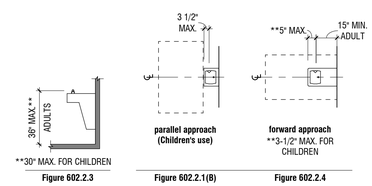
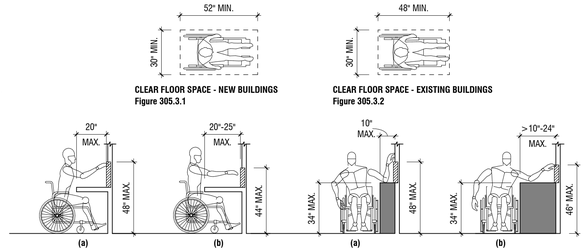


Figure 602.2.3 — Figure 602.2.1(B) — Figure 602.2.4

DRINKING FOUNTAINS FOR PERSONS USING WHEELCHAIRS



(a) (b) OBSTRUCTED HIGH FORWARD REACH Figure 308.2.2

(a) (b) OBSTRUCTED HIGH SIDE REACH Figure 308.3.2

SIDE & FRONT REACH CLEARANCES

SCALE : 1/4" = 1'-0" — ANSI A117.1-2017

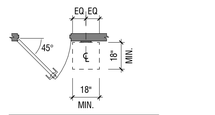


Figure 703.3.11

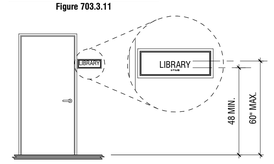


Figure 703.3.10

SIGNAGE MOUNTING

SCALE : 1/4" = 1'-0" — ANSI A117.1-2017

CLEAR FLOOR SPACE - NEW BUILDINGS Figure 305.3.1 — CLEAR FLOOR SPACE - EXISTING BUILDINGS Figure 305.3.2

FIGURE 608.2.1.2(A)TRANSFER - TYPE SHOWER COMPARTMENT CLEARANCES NEW BUILDINGS - OPTION 1

FIGURE 608.2.1.2(B)TRANSFER - TYPE SHOWER COMPARTMENT CLEARANCES NEW BUILDINGS - OPTION 2

FIGURE 608.2.1.2(C)TRANSFER - TYPE SHOWER COMPARTMENT CLEARANCES EXISTING BUILDINGS

SHOWER COMPARTMENT CLEARANCES

SCALE : N.T.S. — ANSI A117.1-2017

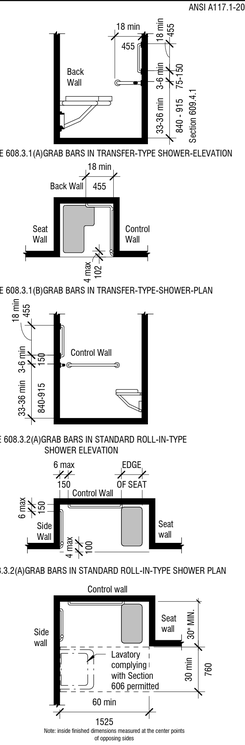


FIGURE 608.3.1(A)GRAB BARS IN TRANSFER-TYPE SHOWER-ELEVATION

FIGURE 608.3.1(B)GRAB BARS IN TRANSFER-TYPE-SHOWER-PLAN

FIGURE 608.3.2(A)GRAB BARS IN STANDARD ROLL-IN-TYPE SHOWER ELEVATION

FIGURE 608.3.2(A)GRAB BARS IN STANDARD ROLL-IN-TYPE SHOWER PLAN

FIGURE 608.2.2.2 STANDARD ROLL-IN-TYPE SHOWER COMPARTMENT CLEARANCE

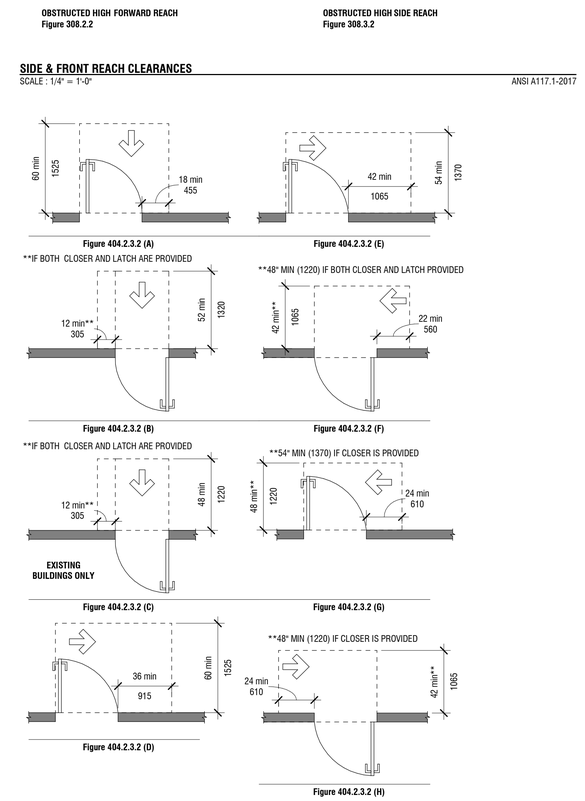


Figure 404.2.3.2 (A) — Figure 404.2.3.2 (E) — Figure 404.2.3.2 (B) — Figure 404.2.3.2 (F) — Figure 404.2.3.2 (C) — Figure 404.2.3.2 (G) — Figure 404.2.3.2 (D) — Figure 404.2.3.2 (H)

MANUAL SWINGING DOOR CLEARANCES

SCALE : 1/4" = 1'-0" — ANSI A117.1-2017

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT: ALLOY5 ARCHITECTURE
STRUCTURAL: PANY & LENTZ ENGINEERING
CIVIL: KEYSTONE CONSULTING ENGINEERS, INC.
MEPF: SNYDER HOFFMAN & McCLURE COMPANY

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

ALLOY5 ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

SHEET TITLE:

GENERAL INFORMATION

DATE:	02/16/2024
SCALE:	1/4" = 1'-0"
DRAWN BY:	Author
CHECKED BY:	Checker
PROJ NO:	22-0073

G1.00

BUILDING CODE DATA SUMMARY

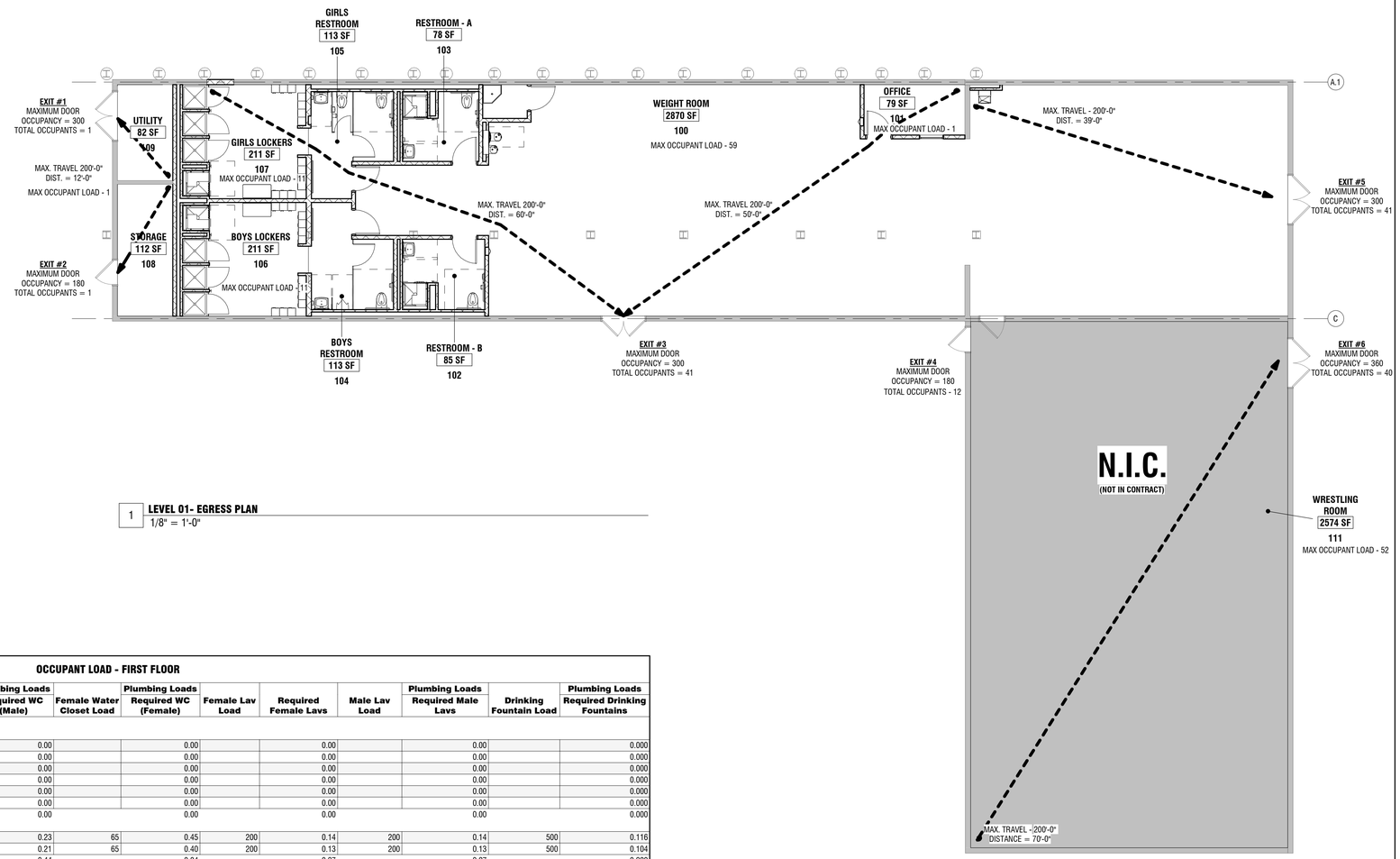
APPLICABLE BUILDING CODES & REGULATIONS:

TOWNSHIP OF LOWER TOWAMENSING ZONING CODE
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2017 ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2017 NATIONAL ELECTRICAL CODE
2018 INTERNATIONAL FIRE CODE

PROJECT DESCRIPTION:

SINGLE STORY
RENOVATION TO ATHLETIC FIELD HOUSE

IEBC ALTERATION LEVEL: 3	EXISTING BUILDING	RENOVATION
OCCUPANCY CLASSIFICATION:	GROUP A3	NO CHANGE
OCCUPANCY SEPARATION PROVIDED:	N/A	1 HR
AREA OF WORK:	N/A	4,175 GSF
CONSTRUCTION CLASSIFICATION:	TYPE IIIB	NO CHANGE
AUTOMATIC SPRINKLERS PROVIDED:	NONE	NO CHANGE
PORTABLE FIRE EXTINGUISHERS:	2 PROVIDED	NO CHANGE
# OF EXITS REQUIRED / # OF EXITS PROVIDED	2 / 5	2 / 4
TOTAL OCCUPANT LOAD:	-	135 OCCUPANTS
MAXIMUM EXIT ACCESS TRAVEL DISTANCE:	200 FT.	250 FT.



1 **LEVEL 01- EGRESS PLAN**
1/8" = 1'-0"

OCCUPANT LOAD - FIRST FLOOR

Level	NO.	Name	Use Group	Room Calcs: Area	Room Calcs: SF Per Person	Room Capacity	Male Water Closet Load	Plumbing Loads: Required WC (Male)	Female Water Closet Load	Plumbing Loads: Required WC (Female)	Female Lav Load	Required Female Lavs	Male Lav Load	Plumbing Loads: Required Male Lavs	Drinking Fountain Load	Plumbing Loads: Required Drinking Fountains
(none)																
Level 01	104	BOYS RESTROOM	(none)	113		0		0.00		0.00		0.00		0.00		0.000
Level 01	105	GIRLS RESTROOM	(none)	113		0		0.00		0.00		0.00		0.00		0.000
Level 01	110	JAN.	(none)	23		0		0.00		0.00		0.00		0.00		0.000
Level 01	103	RESTROOM - A	(none)	78		0		0.00		0.00		0.00		0.00		0.000
Level 01	102	RESTROOM - B	(none)	85		0		0.00		0.00		0.00		0.00		0.000
Not Placed	111	Room	(none)	0		0		0.00		0.00		0.00		0.00		0.000
(none): 6			A3	413		0		0.00		0.00		0.00		0.00		0.000
A1 (exercise room)			A3													
Level 01	100	WEIGHT ROOM	A1 (exercise room)	2870	50	58	125	0.23	65	0.45	200	0.14	200	0.14	500	0.116
Level 01	111	WRESTLING ROOM	A1 (exercise room)	2574	50	52	125	0.21	65	0.40	200	0.13	200	0.13	500	0.104
A1 (exercise room): 2				5443		110		0.44		0.84		0.27		0.27		0.220
B																
Level 01	101	OFFICE	B	79	150	1	25	0.02	25	0.02	40	0.01	40	0.01	100	0.010
B: 1				79		1		0.02		0.02		0.01		0.01		0.010
E																
Level 01	106	BOYS LOCKERS	E	211	20	11	50	0.11	50	0.11	50	0.11	50	0.11	100	0.110
Level 01	107	GIRLS LOCKERS	E	211	20	11	50	0.11	50	0.11	50	0.11	50	0.11	100	0.110
E: 2				422		22		0.22		0.22		0.22		0.22		0.221
S																
Level 01	108	STORAGE	S	112	300	1	100	0.00	100	0.00	100	0.00	100	0.00	1000	0.001
Level 01	109	UTILITY	S	82	300	1	100	0.00	100	0.00	100	0.00	100	0.00	1000	0.001
S: 2				194		2		0.01		0.01		0.01		0.01		0.002
Grand total: 13				6550		135		0.69		1.09		0.52		0.52		0.452

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

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NO.	ISSUE DESCRIPTION	DATE
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2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

ALLOY5 ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

SHEET TITLE:

LIFE SAFETY PLAN

DATE: 02/16/2024
SCALE: As indicated
DRAWN BY: Author
CHECKED BY: Checker
PROJ NO: 22-0073

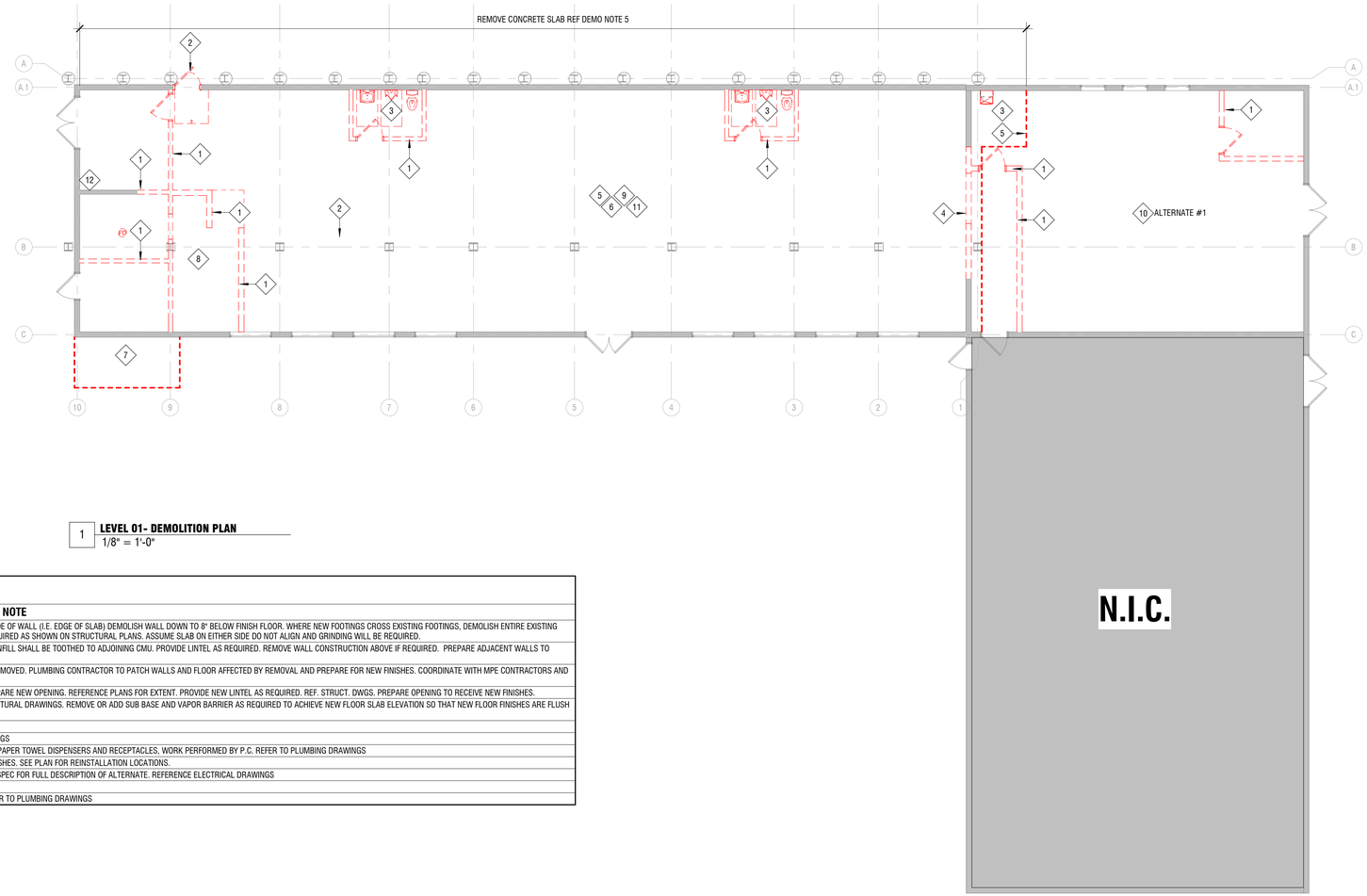
G1.01

GENERAL DEMOLITION NOTES

1. DEMOLITION DRAWINGS AND KEYED DEMOLITION NOTES ARE FOR CONTRACTOR'S CONVENIENCE ONLY. THE CONTRACTOR SHALL REMOVE ALL MATERIALS THAT ARE NOT REQUIRED IN THE FINISHED WORK UNLESS NOTED OTHERWISE. ALL PATCH MATERIAL SHALL MATCH EXISTING TYPE, PLANE, AND FINISH UNLESS NOTED OTHERWISE.
2. SEE MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR ADDITIONAL SCOPE OF DEMOLITION OF EQUIPMENT AND SERVICES. CONTRACTOR SHALL REMOVE ALL MATERIALS NOT INTENDED TO BE INCORPORATED INTO THE NEW WORK.
3. PROVIDE STRUCTURAL SUPPORT FOR ALL EXISTING LOAD BEARING WALLS TO REMAIN.
4. WHERE REMOVING WALLS OR PARTITIONS EXTENDS ONE FINISHED AREA INTO ANOTHER FINISHED AREA, FLOOR PATCH BETWEEN AREAS SHALL HAVE A LEVEL TOLERANCE NOT TO EXCEED 1/8" PER FOOT.
5. REMOVE ALL EXISTING CASEWORK, BULKHEADS, AND SOFFITS THAT ARE NOT INDICATED TO REMAIN UNLESS NOTED OTHERWISE.
6. CONTRACTOR TO PROVIDE OPENINGS IN EXISTING PARTITIONS AND FLOOR/CEILING ASSEMBLIES AS REQUIRED FOR NEW DUCT AND PIPING PENETRATIONS WHETHER OR NOT INDICATED ON THE ARCHITECTURAL DRAWINGS OR SPECIFICATIONS. REFER TO MEP DRAWINGS FOR MORE INFO. PROVIDE NEW FRAMING AS REQUIRED.
7. REMOVE ALL MISCELLANEOUS EQUIPMENT AND ACCESSORIES NOT INDICATED TO REMAIN UNLESS NOTED OTHERWISE.
8. REMOVE ALL EXISTING CEILINGS, SOFFITS, AND ASSOCIATED COMPONENTS UNLESS NOTED OTHERWISE.
9. COORDINATE ALL NEW OPENING DIMENSIONS WITH PLANS.
10. VERIFY ALL DIMENSIONS IN FIELD ASSOCIATED WITH ANY NEW WORK.
11. PATCH AND REPAIR ALL SURFACES AFFECTED BY DEMOLITION. CONTRACTOR TO PATCH AND REPAIR OPENINGS LEFT BY OTHER TRADES WHERE APPLICABLE.
12. CONTRACTOR TO PATCH, REPAIR, AND REFINISH ALL EXISTING BUILDING ELEMENTS TO REMAIN.

COORDINATION OF DEMOLITION:

1. GC WILL PROVIDE FLOOR CUTTING, EXCAVATION, BACKFILL, PATCHING, AND FINISHING OF CONCRETE FLOORS WHERE NEEDED FOR INSTALLATION OF UNDERGORUND SANITARY PIPING. REFER TO MEP COORDINATION DRAWINGS. REFER TO DEMOLITION NOTE #12 FOR PREPARATION OF SLAB FOR NEW FINISH.
2. WHERE FLOOR MOUNTED PLUMBING FIXTURES OR FLOOR DRAINS ARE TO BE REMOVED, GC SHALL OPEN FLOOR. ESCO CONTRACTOR WILL REMOVE PIPING TO BELOW FLOOR AND THE GC WILL PATCH CONCRETE FLOOR AND FINISH. REFER TO COORDINATION DRAWINGS.
3. GC WILL REMOVE EXISTING CEILINGS AND PROVIDE NEW WHERE REQUIRED FOR ABOVE CEILING PIPING INSTALLATION. ESCO CONTRACTOR WILL PROVIDE WALL OR ROOF PENETRATIONS FOR WATER HEATER FLUE AND COMBUSTION OF AIR DUCTS. ESCO CONTRACTOR WILL BE RESPONSIBLE FOR PATCHING AND / OR REPAIRING ANY WALL OR ROOF DAMAGE.



1 **LEVEL 01- DEMOLITION PLAN**
1/8" = 1'-0"

◇KEYED DEMOLITION NOTES

NO.	NOTE
1	REMOVE FULL HEIGHT OF WALL CONSTRUCTION, COMPONENTS AND BASE FOR EXTENT INDICATED DOWN TO FLOOR SLAB. IF FLOOR STRUCTURE STOPS EACH SIDE OF WALL (I.E. EDGE OF SLAB) DEMOLISH WALL DOWN TO 8" BELOW FINISH FLOOR. WHERE NEW FOOTINGS CROSS EXISTING FOOTINGS, DEMOLISH ENTIRE EXISTING FOOTING. REPLACE WITH STRUCTURAL FILL. PATCH FLOOR AND ADJACENT WALLS AS REQUIRED AND PREPARE FOR NEW FINISHES. PROVIDE NEW LINTEL IF REQUIRED AS SHOWN ON STRUCTURAL PLANS. ASSUME SLAB ON EITHER SIDE DO NOT ALIGN AND GRINDING WILL BE REQUIRED.
2	REMOVE DOOR, FRAME, AND HARDWARE IN THEIR ENTIRETY. SEE FLOOR PLANS FOR NEW DOOR/ WINDOW CONFIGURATION OR INFILL INFORMATION. MASONRY INFILL SHALL BE TOOTHED TO ADJOINING CMU. PROVIDE LINTEL AS REQUIRED. REMOVE WALL CONSTRUCTION ABOVE IF REQUIRED. PREPARE ADJACENT WALLS TO RECEIVE NEW FINISHES.
3	REMOVE TOILET PARTITIONS AND ACCESSORIES IN THEIR ENTIRETY. REFER TO PLUMBING DRAWINGS FOR REMOVAL OF FIXTURES. PLUMBING FIXTURES TO BE REMOVED. PLUMBING CONTRACTOR TO PATCH WALLS AND FLOOR AFFECTED BY REMOVAL AND PREPARE FOR NEW FINISHES. COORDINATE WITH MPE CONTRACTORS AND MPE DEMOLITION PLAN FOR CAPPING OF UTILITIES. WORK IS TO BE PERFORMED BY P.C. REFER TO PLUMBING DRAWINGS.
4	REMOVE PORTION OF EXTERIOR MASONRY WALL FOR NEW OPENING TO EXTENT SHOWN. TOOTH IN TO EXISTING MASONRY TO PROVIDE FINISHED ENDS AND PREPARE NEW OPENING. REFERENCE PLANS FOR EXTENT. PROVIDE NEW LINTEL AS REQUIRED. REF. STRUCT. DWGS. PREPARE OPENING TO RECEIVE NEW FINISHES.
5	REMOVE CONCRETE FLOOR SLAB TO EXTENTS INDICATED ON FLOOR AND FOUNDATION PLANS. PREPARE TO RECEIVE NEW CONCRETE SLAB. COORD. WITH STRUCTURAL DRAWINGS. REMOVE OR ADD SUB BASE AND VAPOR BARRIER AS REQUIRED TO ACHIEVE NEW FLOOR SLAB ELEVATION SO THAT NEW FLOOR FINISHES ARE FLUSH WITH EXISTING FLOOR FINISH. COORDINATE WITH MPE DRAWINGS TO PREP FOR NEW DRAINS
6	REMOVE EXISTING ELECTRICAL LIGHTING . COORD. WITH ELECTRICAL DRAWINGS. WORK IS TO BE PERFORMED BY E.C. REFER TO ELECTRICAL DRAWINGS.
7	TRENCH OUTSIDE OF BUILDING IN ORDER TO CONNCECT NEW WATER SERVICE TO BUILDING. WORK PERFORMED BY P.C. REFER TO CIVIL AND PLUMBING DRAWINGS
8	REMOVE EXISTING SHOWERS AND ACCESSORIES IN ITS ENTIRETY. ACCESSORIES ARE INCLUDING, BUT NOT LIMITED TO SHOWER CURTAINS, SOAP DISPENSERS, PAPER TOWEL DISPENSERS AND RECEPTACLES, WORK PERFORMED BY P.C. REFER TO PLUMBING DRAWINGS
9	REMOVE AND SALVAGE FIRE EXTINGUISHER AND CABINET AND OR AUTOMATED DEFIBRILLATOR. PATCH /INFILL WALL AS REQUIRED AND PREPARE FOR NEW FINISHES. SEE PLAN FOR REINSTALLATION LOCATIONS.
10	EXISTING LIGHTING AND CEILINGS SYSTEM TO REMAIN IN OLD LOCKER ROOM. ALTERNATE #1 REMOVE CEILING AND COMPONENTS IN ITS ENTIERTY SEE DIV 01 SPEC FOR FULL DESCRIPTION OF ALTERNATE. REFERENCE ELECTRICAL DRAWINGS
11	ALL EXISTING FITNESS EQUIPMENT TO BE REMOVED BY OWNER UNLESS NOTEED OTHERWISE
12	PLUMBING CONTRACTOR TO REMOVE EXISTING WATER HEATER AND ITS COMPONENTS IN ENTIERTY AND PREP FOR NEW INSTALLATION OF WATER HEATER. REFER TO PLUMBING DRAWINGS

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5 ARCHITECTURE

STRUCTURAL:
PANY & LENTZ ENGINEERING

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN & McCLURE COMPANY

SUBMISSIONS:

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REGISTRATION:

ALLOY5 ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

SHEET TITLE:

DEMOLITION PLAN - LEVEL 01

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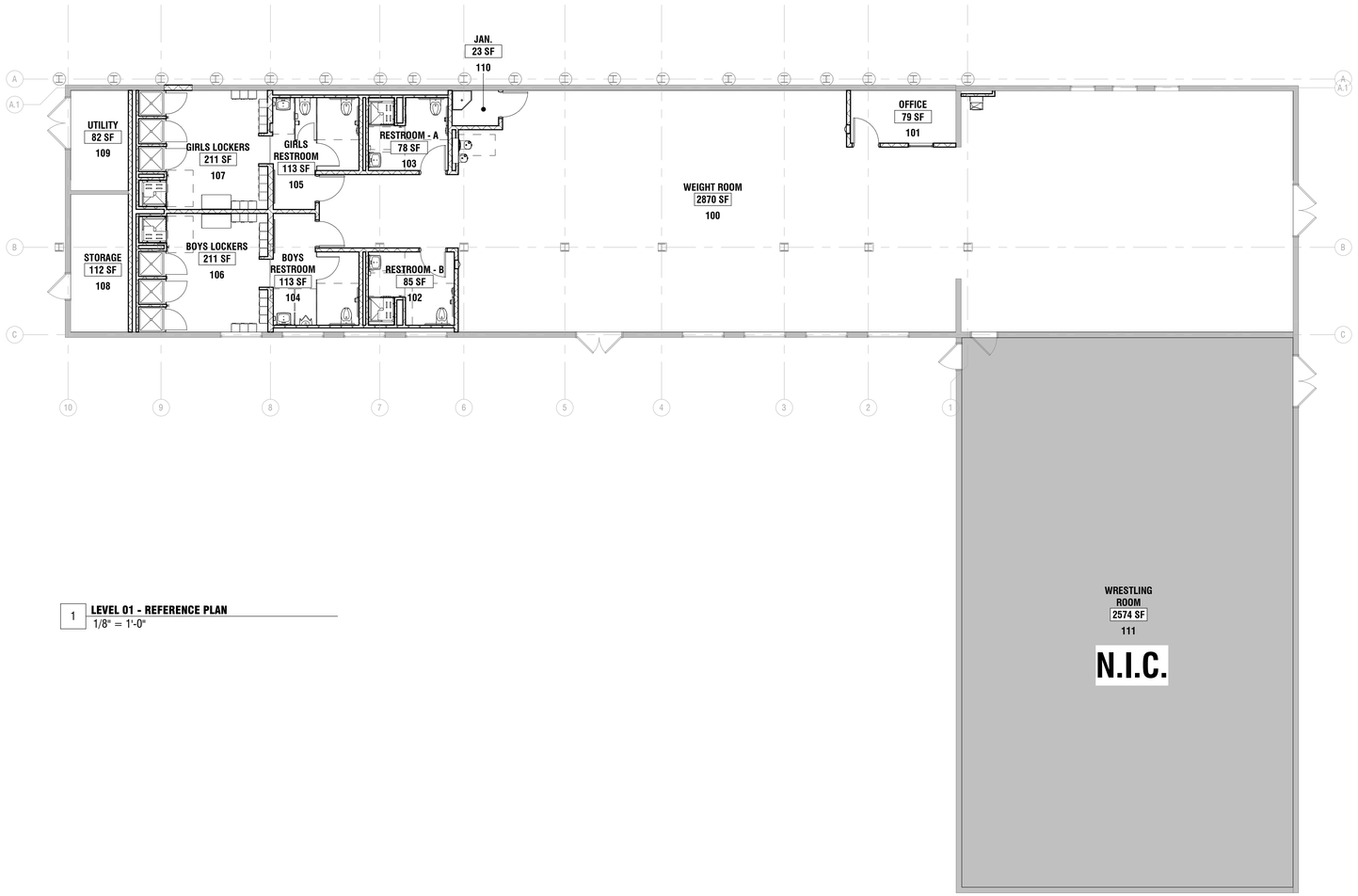

1 **LEVEL 01 - REFERENCE PLAN**
1/8" = 1'-0"

GENERAL PLAN NOTES

1. REFERENCE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, TELECOM, AND FOOD SERVICE DRAWINGS FOR ADDITIONAL INFORMATION. - **ESCO DRAWINGS**
2. ALL DIMENSIONS ARE NOMINAL UNLESS NOTED OTHERWISE.
3. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR IDENTIFYING ROOMS, SIGNS, DOORS, KEYS, EQUIPMENT, PANELS, ETC BY THE OWNER'S FINAL NUMBERING - **NOT** THE ARCHITECTURAL NUMBERS.
4. GC TO PROVIDE FIRE EXTINGUISHERS AS REQUIRED BY CODE.
5. ALL NEW WALLS TO
6. B - BULLNOSE BLOCK LOCATION, TYPICAL AT ALL OUTSIDE CORNERS
7. REFERENCE SHEET G1.00 FOR ANSI 117.1-2009 REQUIRED ADA CLEARANCES.
8. PC TO COORDINATE W/ GC FOR ALL PLUMBING FIXTURE LOCATIONS.
9. FE - FIRE EXTINGUISHER CABINET
10. O.F.O.I. - OWNER FURNISHED OWNER INSTALLED

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
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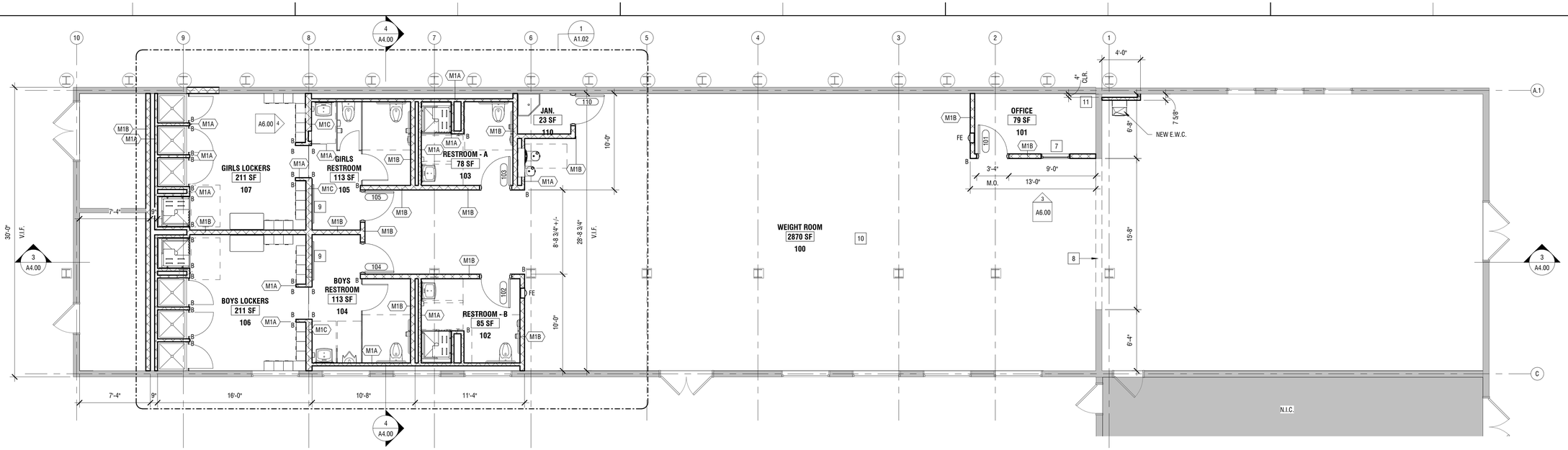
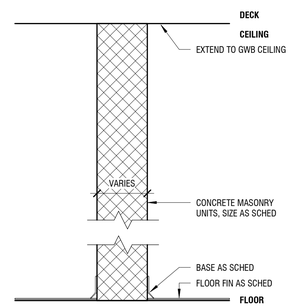
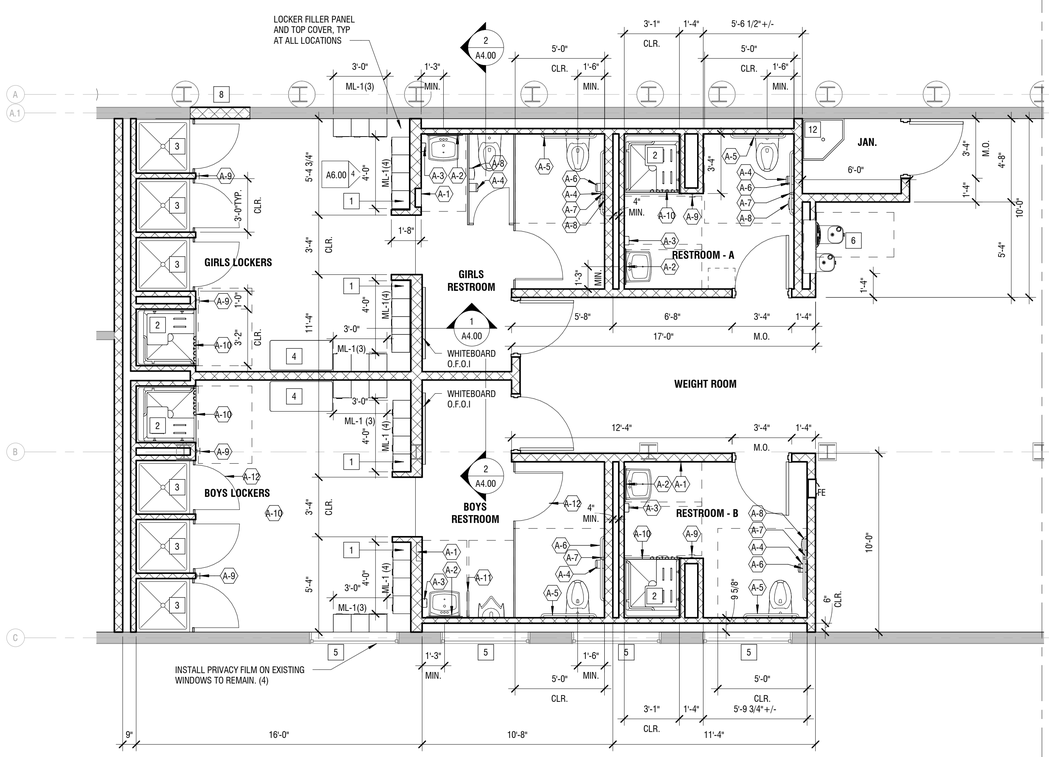


2 **LEVEL 01 - FLOOR PLAN**
3/16" = 1'-0"



MARK	CMU SIZE	TOTAL THK	STC	SOUND ATTEN	MARK	CMU SIZE	TOTAL THK	STC	SOUND ATTEN
A	4"	-	43-45	-	E	12"	-	47-51	-
B	6"	-	44-46	-	F	-			
C	8"	-	45-48	-	G	-			
D	10"	-	46-50	-	H	-			

M1 MASONRY PARTITION NOT TO SCALE



1 **LEVEL 01 - FLOOR PLAN - ENLARGED LOCKERROOMS**
1/4" = 1'-0"

LOCKER SCHEDULE			
LOCATION	TYPE	SIZE	QTY
GIRLS LOCKERS	ML-1	12" X 12" X 72"	14
BOYS LOCKERS	ML-1	12" X 12" X 72"	14

LOCKERS TO BE INSTALLED ON WOOD FRAMED BASE. SEE DETAIL

☐ KEYED PLAN NOTES

NO.	NOTE
1	DOUBLE STACKED METAL LOCKERS. SEE SPECIFICATIONS.
2	ADA SHOWER STALL WITH SHOWER CURTAIN AND ROD. SEE SPECIFICATIONS.
3	SHOWER STALL WITH PARTITION DOOR. SEE SPECIFICATIONS.
4	ADA LOCKER ROOM BENCH. SEE SPECIFICATIONS.
5	INSTALL PRIVACY FILM ON EXISTING WINDOW. SEE SPECIFICATIONS.
6	ADA AND STANDARD WATER FOUNTAIN TO BE PROVIDED AND INSTALLED BY PC
7	36" x 48" WINDOW WITH HM FRAME TO BE PAINTED. SEE DETAILS, AND SPECIFICATIONS.
8	TOOTHE IN CMU TO INFILL WHERE OPENINGS HAVE BEEN REMOVED. VERIFY EXISTING OPENINGS IN FIELD.REFERENCE DEMO PLAN. PAINT TO MATCH EXISTING COLOR. SEE STRUCTURAL DRAWINGS
9	WHITEBOARD. SEE SPECIFICATIONS
10	NEW SLAB TO BE LEVELED AND SMOOTH. PREPARE NEW CONCRETE SLAB TO RECEIVE NEW FINISH. SEE SPECIFICATIONS/STRUCTURAL DWGS FOR MORE INFORMATION.
11	EXISTING DATA RACK TO REMAIN. GC TO PROTECT DURING ALL PHASES OF DEMOLITION AND CONSTRUCTION.
12	JANITOR SINK. SEE PLUMBING DWGS.

WALL TYPE GENERAL NOTES:

1. DETAILS ARE NOT NUMBERED SEQUENTIALLY
2. WALL TYPES DO NOT INCLUDE WALL FINISHES. SEE ROOM FINISH SCHEDULE & INTERIOR ELEVATIONS FOR FINISH INFORMATION.
3. P = GENERAL PARTITION. F=FIRE RATED PARTITION. M=MASONRY PARTITION
4. ALL RATED WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH TESTING AGENCY REQUIREMENTS. REFER TO SPECIFIC TEST REPORTS FOR REQUIRED COMPONENTS AND ASSEMBLY. SEE WALL TYPE REFERENCES AND LIFE SAFETY PLANS FOR RATED WALL LOCATIONS. PROVIDE FIRESTOPPING PER FIRESTOPPING MANUFACTURER'S RECOMMENDATIONS FOR PENETRATIONS THROUGH RATED WALLS.
5. AT STEEL STUD WALLS WHICH DO NOT EXTEND TO STRUCTURE ABOVE, PROVIDE BRACE AT CENTERLINE OF DOOR OPENINGS AND BRACE @ 64" O.C. UNLESS NOTED OTHERWISE
6. PROVIDE BLOCKING AS REQUIRED AT ALL WALL MOUNTED ITEMS INCLUDING BUT NOT LIMITED TO: WALL CABINETS, TOILET ROOM ACCESSORIES AND PARTITIONS, DOOR HARDWARE, COUNTER TOPS, WALL MOUNTED EQUIPMENT, ETC.
7. ALL INTERIOR WALLS WHERE SOUND BATT INSULATION IS INDICATED ARE CONSIDERED ACOUSTIC WALLS, WHERE SPECIFIC STC RATINGS ARE REQUIRED, SEE INDIVIDUAL WALL TYPE PARTITIONS.
8. COORDINATE RATINGS REQUIREMENTS INDICATED ON SPECIFIC PARTITIONS WITH LIFE SAFETY PLANS.
9. WHERE TILE FINISH OCCURS, PROVIDE CEMENT BACKER BOARD IN LIEU OF GYPSUM BOARD AS SUBSTRATE, THICKNESS TO MATCH GYPSUM BOARD. REFER TO FINISH SCHEDULE AND INTERIOR ELEVATIONS FOR LOCATIONS OF TILE FINISH.
10. PROVIDE MOISTURE RESISTANT GYPSUM BOARD IN ALL RESTROOMS, LOCKER ROOMS, AND WET AREAS (WHERE TILE FINISH DOES NOT OCCUR).
11. WOOD FRAMING TO BE PRESSURE TREATED WHERE NOTED ON STRUC DWG'S, COORDINATE LOCATIONS W/ STRUC DWG'S & STRUC SPEC'S.

GENERAL PLAN NOTES

1. REFERENCE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, TELECOM, AND FOOD SERVICE DRAWINGS FOR ADDITIONAL INFORMATION. - **ESCO DRAWINGS**
2. ALL DIMENSIONS ARE NOMINAL UNLESS NOTED OTHERWISE.
3. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR IDENTIFYING ROOMS, SIGNS, DOORS, KEYS, EQUIPMENT, PANELS, ETC BY THE OWNER'S FINAL NUMBERING - **NOT** THE ARCHITECTURAL NUMBERS.
4. GC TO PROVIDE FIRE EXTINGUISHERS AS REQUIRED BY CODE.
5. ALL NEW WALLS TO
6. B - BULLNOSE BLOCK LOCATION, TYPICAL AT ALL OUTSIDE CORNERS
7. REFERENCE SHEET G1.00 FOR ANSI 117.1-2009 REQUIRED ADA CLEARANCES.
8. PC TO COORDINATE W/ GC FOR ALL PLUMBING FIXTURE LOCATIONS.
9. FE - FIRE EXTINGUISHER CABINET
10. O.F.O.I. - OWNER FURNISHED OWNER INSTALLED

ACCESSORIES SCHEDULE

NO.	Manufacturer	Description	INSTALLED BY	SUPPLIED BY	COMMENTS
A-1	Bobrick Washroom Equipment, Inc.	Bobrick B-396 Classic Series Recessed Combination Towel and Waste Unit	CONTRACTOR	CONTRACTOR	See Specs For Additional Information
A-2	Bobrick Washroom Equipment, Inc.	Bobrick B-165 Series 2436 Type 430 Stainless Steel	CONTRACTOR	CONTRACTOR	See Specs For Additional Information
A-3	Bobrick Washroom Equipment, Inc.	Bobrick B-2111 Surface-Mounted Soap Dispenser	CONTRACTOR	CONTRACTOR	See Specs For Additional Information
A-4	Bobrick Washroom Equipment, Inc.	Bobrick B-4288 Surface-Mounted Multi-Roll Toilet Tissue Dispenser	CONTRACTOR	CONTRACTOR	See Specs For Additional Information
A-5	Bobrick Washroom Equipment, Inc.	1 1/4" Diameter Stainless Steel Grab Bars with Snap Flange	CONTRACTOR	CONTRACTOR	See Specs For Additional Information
A-6	Bobrick Washroom Equipment, Inc.	1 1/4" Diameter Stainless Steel Grab Bars with Snap Flange	CONTRACTOR	CONTRACTOR	See Specs For Additional Information
A-7	Bobrick Washroom Equipment, Inc.	1 1/4" Diameter Stainless Steel Grab Bars with Snap Flange	CONTRACTOR	CONTRACTOR	See Specs For Additional Information
A-8	Bobrick Washroom Equipment, Inc.	Bobrick B-270 Contura Series Surface Mounted Sanitary Napkin Disposal	CONTRACTOR	CONTRACTOR	See Specs For Additional Information
A-9	Bobrick Washroom Equipment, Inc.	Stainless Steel Surface Mortted Double Robe Hook	CONTRACTOR	CONTRACTOR	See Specs For Additional Information
A-10		Shower Curtain Rod With White Vinyl Shower Curtain (72" H) And SS Shower Curtain Hooks.	CONTRACTOR	CONTRACTOR	See Specs For Additional Information
A-11	Bradley Corporation	Restroom Partitions, Urinal Screen	CONTRACTOR	CONTRACTOR	See Specs For Additional Information
A-12	Bradley Corporation	Restroom Partitions	CONTRACTOR	CONTRACTOR	See Specs For Additional Information

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

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680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT: ALLOY5 ARCHITECTURE
STRUCTURAL: PANY & LENTZ ENGINEERING
CIVIL: KEYSTONE CONSULTING ENGINEERS, INC.
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FLOOR PLAN - LEVEL 01

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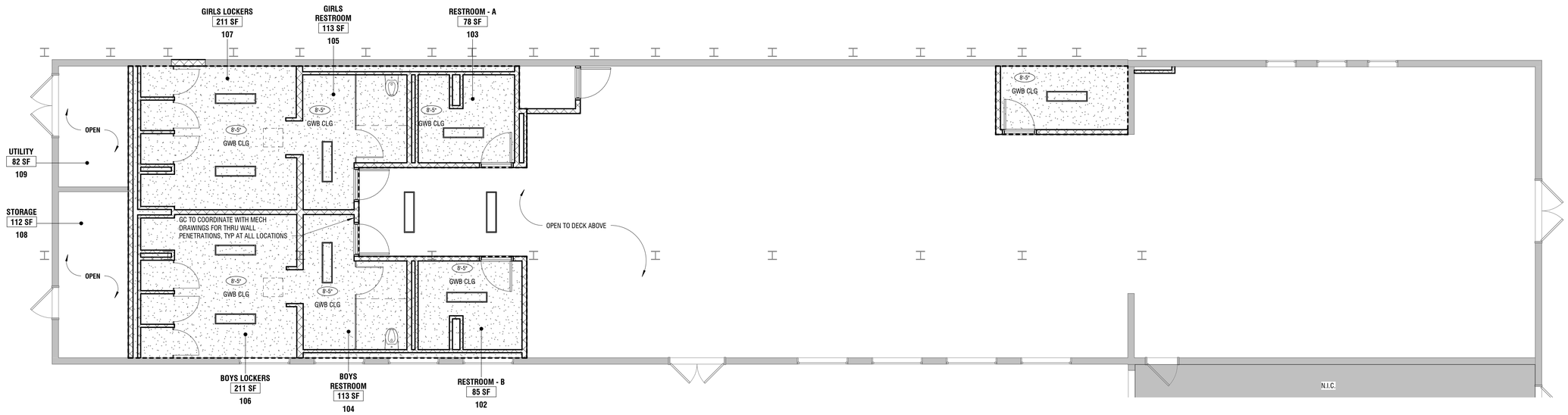

1 **LEVEL 01 - REFLECTED CEILING PLAN**
3/16" = 1'-0"

GC TO COORDINATE WITH MECHANICAL DRAWINGS. THRU ROOF VENTS TO BE PATCH AND REPAIRED

ALTERNATE #2

2A - REPLACE ALL NOTED 5/8" MOISTURE/ABUSE RESISTANT DRYWALL WITH 1/2" MARINE GRADE/FIRE TREATED PLYWOOD, PAINT AS REQUIRED PT-01

2B - REPLACE ALL NOTED 5/8" MOISTURE/ABUSE RESISTANT DRYWALL WITH 1/2" CEMENT BOARD, PAINT AS REQUIRED PT-01

CEILING LEGEND

- - - - - - -	EXTENT OF CEILING
▭	1'x4' LED LIGHT FIXTURE
⬚	2'-0" X 2'-0" ACCESS PANEL (COLOR TO MATCH PAINTED CEILING)

GENERAL CEILING NOTES

1. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR CEILING EQUIPMENT INCLUDING BUT NOT LIMITED TO GRILLES, REGISTERS, DIFFUSERS, SPRINKLER HEADS, LIGHTING, AND EMERGENCY FIXTURES.
2. REFER TO MEPF DRAWINGS FOR EXACT LOCATIONS, QUANTITIES, AND SIZES OF ALL EQUIPMENT.
3. EXPOSED PLYWOOD CEILING TO BE PAINTED. ARCHITECT SHALL SELECT COLOR FROM FULL MANUFACTURER'S RANGE.
4. EXPOSED METAL DECK & STEEL STRUCTURE TO BE PAINTED. WHERE APPLICABLE EXPOSED DUCTWORK TO BE PAINTED. ARCHITECT SHALL SELECT COLOR FROM FULL MANUFACTURER'S RANGE.
5. EXPOSED WOOD DECK STRUCTURE TO BE PAINTED. ARCHITECT SHALL SELECT COLOR FROM FULL MANUFACTURER'S RANGE.
6. PLYWOOD CEILING SYSTEM TO BE ATTACHED TO UNDERSIDE OF JOIST IN RUNNING BOND PATTERN. V.I.F. CEILING HEIGHT
7. VERIFY ACCESS PANEL LOCATION PRIOR TO INSTALL
8. **GC TO COORDINATE WITH MECHANICAL DRAWINGS. THRU ROOF VENTS TO BE PATCH AND REPAIRED**

PROJECT:

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3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

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680 FOURTH STREET PALMERTON, PA 18071

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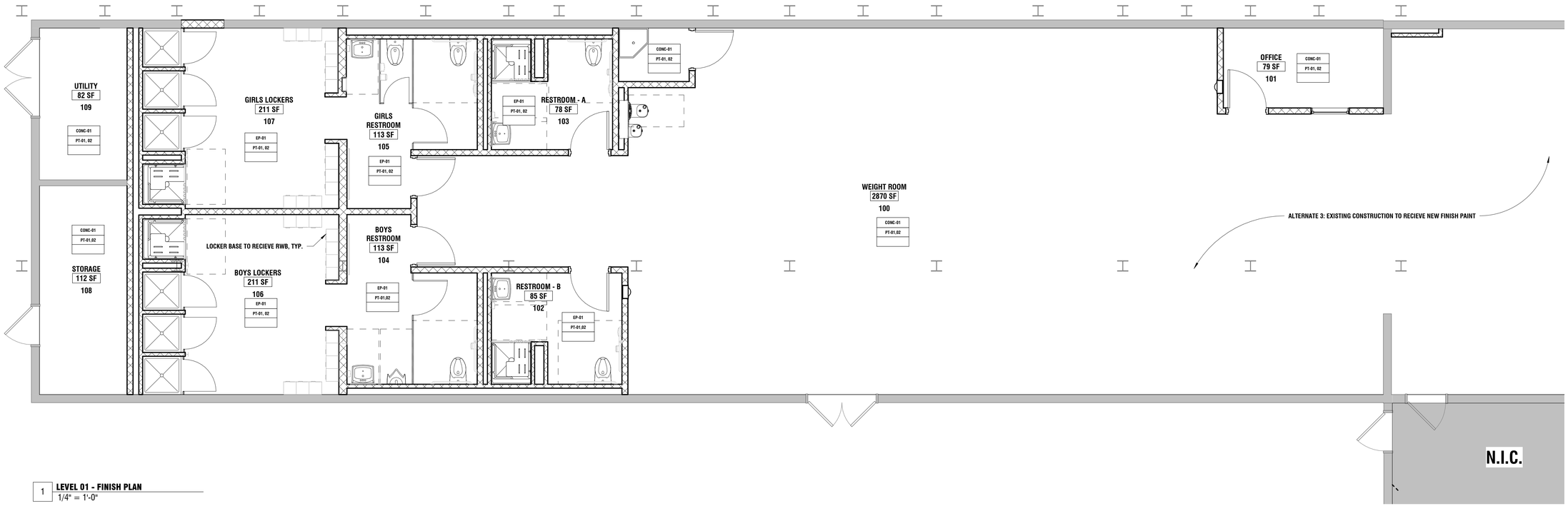


1 **LEVEL 01 - FINISH PLAN**
1/4" = 1'-0"

ROOM FINISH SCHEDULE - LEVEL 01

ROOM NO.	ROOM NAME	FLOOR FINISH	WALL BASE MATL	WALL BASE HGT	WALL FINISH	COMMENTS
100	WEIGHT ROOM	CONC-01		--	PT-01,02	
101	OFFICE	CONC-01		--	PT-01, 02	
102	RESTROOM - B	EP-01		--	PT-01,02	
103	RESTROOM - A	EP-01		--	PT-01, 02	
104	BOYS RESTROOM	EP-01		--	PT-01,02	
105	GIRLS RESTROOM	EP-01		--	PT-01, 02	
106	BOYS LOCKERS	EP-01		--	PT-01, 02	
107	GIRLS LOCKERS	EP-01		--	PT-01, 02	
108	STORAGE	CONC-01		--	PT-01,02	
109	UTILITY	CONC-01		--	PT-01, 02	
110	JAN.	CONC-01		--	PT-01, 02	
111	WRESTLING ROOM	ETR	ETR	--	ETR	N.I.C.

CEILING TO BE PAINTED PT-01

FOR PT-01 AND PT-02 MATCH EXISTING HEIGHTS

INTERIOR FINISH PLAN FLOORS & WALL BASE

CONCRETE

Code: CONC-01
Sealed concrete floor with saw-cut joints, ground & waxed. Protect floor from stain-causing materials construction

EPOXY PAINT

Code: EP-01
Basis of Design: INSL-X Sure Step Acrylic Anti-Slip Coating
Color: Gray Pearl
Approved Equals: Sherwin Williams, Behr, Benjamin Moore

INTERIOR FINISH PLAN WALLS

PAINT

Code: PT-01
Basis of Design: Sherwin Williams
Color: Extra White SW7006
Finish: Semi-gloss
Approved Equals: Benjamin Moore, PPG, Glidden

Code: PT-02
Basis of Design: Sherwin Williams
Color: Blueblood SW6966
Finish: Semi-gloss
Approved Equals: Benjamin Moore, PPG, Glidden

INTERIOR FINISH PLAN OTHER

RESTROOM PARTITIONS

Code: RP-01
Basis of Design: Scranton Products - Hiny Hiders
Color: Black - Orange Peel
Approved Equals: ASI Partitions, General Partitions, Metpar

RUBBER WALL BASE AND ACCESSORIES

Code: RWB-01
Basis of Design: Roppe
Color: Blue Jay 664
Size: 4"
Approved Equals: Mannington, Tarkett, Armstrong

ROOM FINISH LEGEND

NOTE: DESIGN SELECTION SUMMARY: FOR REFERENCE ONLY, SEE SPECIFICATIONS FOR FULL MATERIAL DOCUMENTATION

FLOORS
WALLS
BASE

GENERAL FINISH NOTES

1. REFER TO SHEET A1.60 FOR ALL FINISH SELECTIONS, TYPICAL.
2. REFER TO REFLECTED CEILING PLANS ON SHEETS A1.20 FOR SPECIFIC LOCATIONS AND HEIGHTS.
3. GC TO PAINT ALL LOCATIONS WHICH INCLUDE, BUT ARE NOT LIMITED TO, ALL EXPOSED WOOD, EXPOSED DECK, EXPOSED SPRINKLER PIPING, EXPOSED CONDUIT, EXPOSED PIPING, EXPOSED DUCTWORK. COLOR SHALL BE SELECTED BY ARCHITECT.
4. EPOXY PAINT TO BE PAINTED FULL LENGTH OF CMU WALLS AT LOCATIONS INDICATED ON FINISH SCHEDULE.
5. ALL HOLLOW METAL DOOR FRAMES TO BE PRIMED AND PAINTED. FINAL COLOR SELECTION TO BE MADE BY ARCHITECT. REFER TO DOOR SCHEDULE FOR MORE INFORMATION.
6. REFER TO DOOR SCHEDULE ON SHEET A6.00 AND DETAILS ON SHEET A6.00 FOR FLOOR TRANSITION DETAILS. GC TO COORDINATE FLOOR TRANSITIONS WITH DOORS.
7. GWB CEILINGS TO RECIEVE 2 COATS OF PRIMER AND 1 COAT OF PAINT. COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5 ARCHITECTURE

STRUCTURAL:
PANY & LENTZ ENGINEERING

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN & McCLURE COMPANY

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

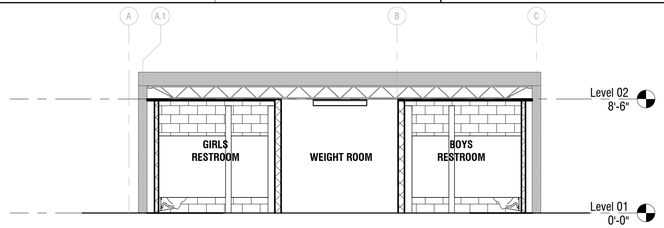
ALLOY5 ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

SHEET TITLE:

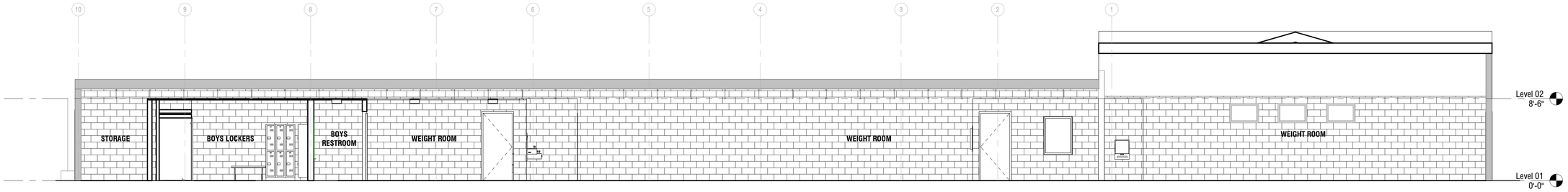
FINISH PLAN & SCHEDULE - LEVEL 01

DATE: 02/16/2024
SCALE: 1/4" = 1'-0"
DRAWN BY: Author
CHECKED BY: Checker
PROJ NO: 22-0073

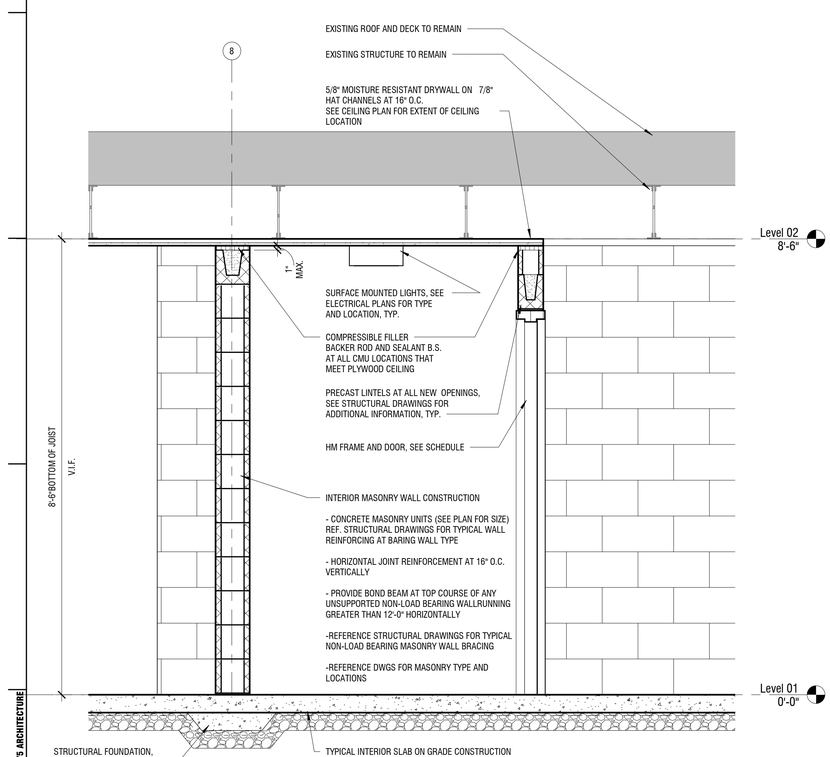
A1.60



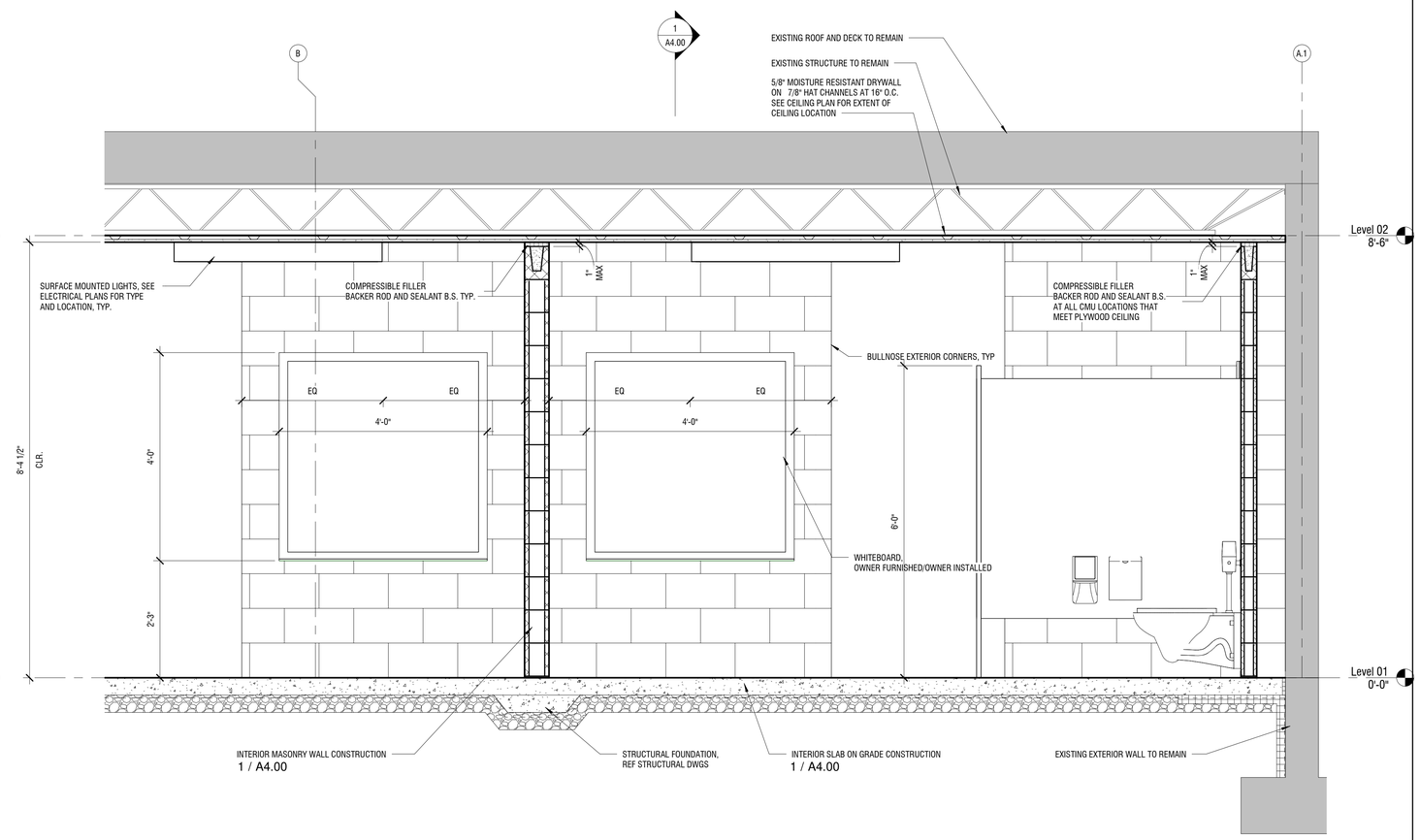
4 **BUILDING SECTION - TRANSVERSE**
3/16" = 1'-0"



3 **BUILDING SECTION - LONGITUDINAL**
3/16" = 1'-0"



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



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

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5 ARCHITECTURE

STRUCTURAL:
PANY & LENTZ ENGINEERING

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN & McCLURE COMPANY

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

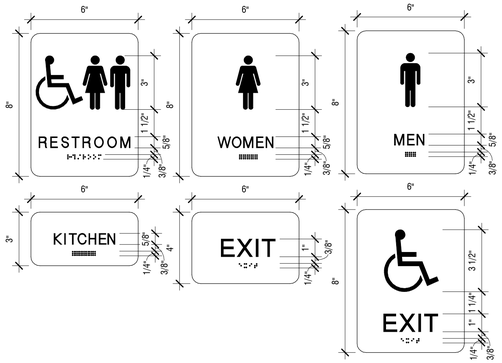
ALLOY5 ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

SHEET TITLE:

WALL SECTIONS

DATE:	02/16/2024
SCALE:	As indicated
DRAWN BY:	Author
CHECKED BY:	Checker
PROJ NO:	22-0073

A4.00



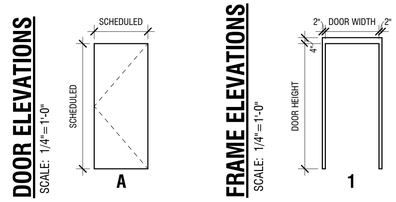
1 **A5_TYPICAL SIGNAGE DETAILS**
3" = 1'-0"

TACTILE SIGNAGE AT ALL ROOM LOCATIONS TYP.

DOOR & FRAME SCHEDULE - LEVEL 01

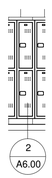
DOOR DATA						LABEL & RATING	FRAME DATA					HARDWARE SET
				SIZE						DETAILS		
NO.	TYPE	MATERIAL	FINISH	WIDTH	HEIGHT		FRAME TYPE	FRAME MATERIAL	FRAME FINISH	HEAD	JAMB	
101	A	HM	PTD	3'-0"	7'-0"		1	HM	PTD	H1	J1	SEE SPECS
102	A	HM	PTD	3'-0"	7'-0"		1	HM	PTD	H1	J1	SEE SPECS
103	A	HM	PTD	3'-0"	7'-0"		1	HM	PTD	H1	J1	SEE SPECS
104	A	HM	PTD	3'-0"	7'-0"		1	HM	PTD	H1	J1	SEE SPECS
105	A	HM	PTD	3'-0"	7'-0"		1	HM	PTD	H1	J1	SEE SPECS
110	A	HM	PTD	3'-0"	7'-0"		1	HM	PTD	H1	J1	SEE SPECS

NOTE: ALL DOORS TO HAVE 4" HEAD TO ALIGN WITH CMU COURSING

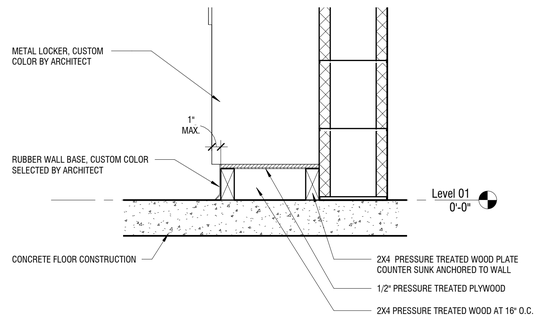


GENERAL DOOR NOTES

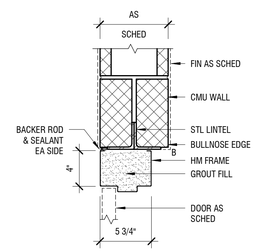
1. ALL HARDWARE TO BE ACCESSIBLE AND COMPLY WITH ANSI A117.1-2009
2. PROVIDE CLOSERS & SMOKE SEALS ON ALL RATED DOORS



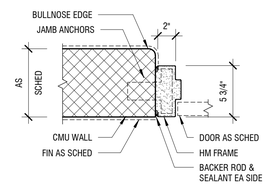
4 **INTERIOR ELEVATION - TYPICAL LOCKER**
1/4" = 1'-0"



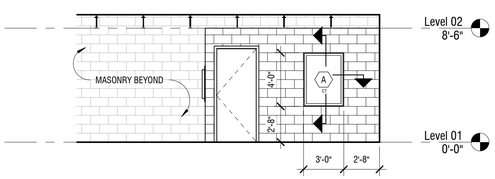
2 **TYPICAL LOCKER BASE DETAIL**
1 1/2" = 1'-0"



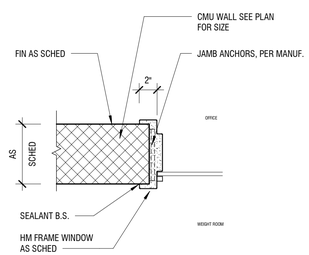
H1 **HEAD**
1 1/2" = 1'-0"



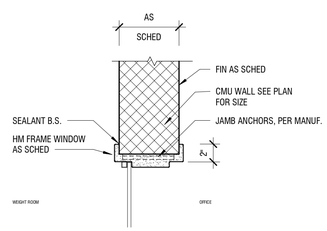
J1 **JAMB**
1 1/2" = 1'-0"



3 **OFFICE 101 - INTERIOR ELEVATION**
3/16" = 1'-0"



5 **WINDOW JAMB AND HEAD DETAIL , TYP.**
1 1/2" = 1'-0"



WINDOW SCHEDULE

LEVEL	TYPE MARK	UNIT TYPE	SIZE		HEAD HEIGHT	MANUF	COMMENTS
			WIDTH	HEIGHT			
Level 01	A	FIXED	3'-0"	4'-0"	6'-8"	SEE SPECS	SEE SPECS/CT GLASS IN WINDOW

GLAZING GENERAL NOTES

1. REFERENCE SHEET A6.00 FOR HM FRAME DETAILS.
2. REFERENCE DOOR SCHEDULE FOR DOOR INFORMATION.
3. ALL DIMENSIONS SHOULD BE VERIFIED IN FIELD PRIOR TO FABRICATION
4. ALL WINDOWS, STOREFRONT, CURTAIN WALL, AND DOORS ON THE GROUND FLOOR UP TO 10'-0" ABOVE GRADE TO BE LAMINATED GLAZING (LIG)

GLAZING TYPES

CT CLEAR TEMPERED GLASS

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5 ARCHITECTURE

STRUCTURAL:
PANY & LENTZ ENGINEERING

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN & McCLURE COMPANY

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

ALLOY5 ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

SHEET TITLE:

DOOR SCHEDULE & DETAILS

DATE: 02/16/2024
SCALE: As indicated
DRAWN BY: Author
CHECKED BY: Checker
PROJ NO: 22-0073

A6.00

PACKAGED ROOFTOP UNIT SCHEDULE - GAS_DX

ID	AREA SERVED	NOMINAL TONS	SUPPLY FAN DATA							DX COOLING PERFORMANCE DATA							GAS FURNACE HEATING PERFORMANCE DATA					ELECTRICAL DATA				UNIT WEIGHT (LBS)	BASIS OF DESIGN TRANE	REMARKS
			MAXIMUM TOTAL AIRFLOW (CFM)	MINIMUM TOTAL AIRFLOW (CFM)	MAXIMUM OUTSIDE AIR (CFM)	CO2 CONTROL AIR (CFM)	MINIMUM OUTSIDE AIR (CFM)	ESP (IN. WC)	MOTOR HP	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	ENTERING AIR TEMP. DB (°F)	ENTERING AIR TEMP. WB (°F)	LEAVING AIR TEMP. DB (°F)	LEAVING AIR TEMP. WB (°F)	EER	GAS TYPE	INPUT (MBH)	OUTPUT (MBH)	ENTERING AIR TEMP. DB (°F)	LEAVING AIR TEMP. DB (°F)	VOLTAGE / PHASE	FLA (AMPS)	MCA (AMPS)	MOCP (AMPS)			
RTU-1	WEIGHT/LOCKER ROOMS	10.0	3,600	2,175	3,600	1,450	375	1.83	3.0	120.4	85.5	79.0	65.9	55.5	54.7	11.0	NAT	200.0	162.0	56.0	97.8	460 / 3	25.0	29.0	40	1,258	YSJ120A450M	

NOTES:

1. DESIGN CONDITIONS: UNIT PERFORMANCE DATA BASED ON OUTSIDE AMBIENT TEMPERATURES OF 92.4°F DRY BULB, 76.5°F WET BULB SUMMER; 8.7°F DRY BULB, 6.5°F WET BULB WINTER AND INDOOR TEMPERATURES OF 75.0°F DRY BULB, 62.5°F WET BULB SUMMER; 72.0°F DRY BULB, 55.8°F WET BULB WINTER.
2. UNIT AIR CLEANING: UNIT SHALL BE PROVIDED WITH MERV-8 FILTER.
3. UNIT CONTROLS: FACTORY CONTROLS W/ BACNET INTERFACE FOR BAS INTEGRATION, BACNET MSTP_IP PROTOCOL, PHASE/BROWNOUT PROTECTION.
4. UNIT DUCTING CONFIGURATION: SUPPLY = DOWN, RETURN = DOWN
5. UNIT MOUNTING CONFIGURATION: NEW ROOF CURB
6. UNIT SUPPLY AIR CONTROL: CONSTANT VOLUME
7. UNIT O/A CONTROL: HUMIDITY

FAN SCHEDULE

ID	AREA SERVED	PERFORMANCE				MOTOR DATA		FAN STYLE	DRIVE TYPE	FAN CONTROL	WEIGHT (LBS)	BASIS OF DESIGN: GREENHECK	REMARKS
		CFM	EXT. S.P. (IN. WC.)	FAN RPM	SOUND POWER (SONES)	SIZE (HP OR WATTS)	VOLTAGE/ PHASE						
EF-1	RESTROOM A	100	0.35	1214	3.5	0.03	208/1	CEILING MOUNTED	DIRECT	TIME DELAY SWITCH	24	SP-A390-VG	SWITCH BY E.C.
EF-2	GIRLS RESTROOM	100	0.35	1214	3.5	0.03	208/1	CEILING MOUNTED	DIRECT	TIME DELAY SWITCH	24	SP-A390-VG	SWITCH BY E.C.
EF-3	RESTROOM B	100	0.35	1214	3.5	0.03	208/1	CEILING MOUNTED	DIRECT	TIME DELAY SWITCH	24	SP-A390-VG	SWITCH BY E.C.
EF-4	BOYS RESTROOM	100	0.35	1214	3.5	0.03	208/1	CEILING MOUNTED	DIRECT	TIME DELAY SWITCH	24	SP-A390-VG	SWITCH BY E.C.
EF-5	GIRLS LOCKERS	200	0.35	1249	4.0	0.03	208/1	CEILING MOUNTED	DIRECT	TIME DELAY SWITCH	24	SP-A390-VG	SWITCH BY E.C.
EF-6	BOYS LOCKERS	200	0.35	1249	4.0	0.03	208/1	CEILING MOUNTED	DIRECT	TIME DELAY SWITCH	24	SP-A390-VG	SWITCH BY E.C.

NOTES:

1. FAN ID KEY: EF = EXHAUST DUTY, SF = SUPPLY DUTY, RAF = RETURN DUTY, REF = RELIEF DUTY, TF = TRANSFER DUTY

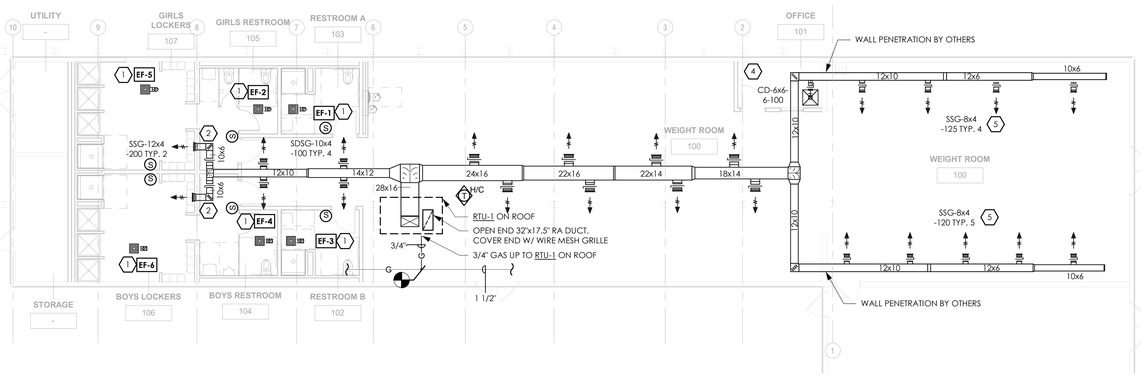
GENERAL NOTES - HVAC

1. ALL SYSTEMS ARE SHOWN SCHEMATICALLY. CHECK AND VERIFY ALL CONDITIONS AT THE SITE WITHIN THE CONTRACT LIMITS.
2. ALL INSTALLATION AND WORK SHALL BE PERFORMED IN A NEAT, WORKMANLIKE MANNER SO AS NOT TO DAMAGE ANY SURFACES, EQUIPMENT, OR MATERIALS.
3. INSTALL ALL EQUIPMENT AND MATERIALS IN STRICT ACCORDANCE WITH RESPECTIVE MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. COORDINATE HVAC WORK WITH THE WORK OF ALL OTHER TRADES.
5. ALL DIMENSIONS, DUCT SIZES AND PIPE SIZES ARE IN INCHES, UNLESS NOTED OTHERWISE.
6. FURNISH AND INSTALL ACCESS PANELS WHERE REQUIRED FOR ACCESS TO ALL CONCEALED VALVES, DAMPERS OR EQUIPMENT WHERE NO OTHER MEANS OF ACCESS IS PROVIDED.
7. ALL EQUIPMENT AND PIPING ABOVE THE CEILING SHALL BE SUPPORTED IN AN APPROVED MANNER FROM THE BUILDING STRUCTURE AND INCLUDES HANGERS AND RESTRAINTS IN ACCORDANCE WITH ALL APPLICABLE CODES AND SPECIFICATIONS.
8. WHERE EQUIPMENT, PIPING, DUCTWORK, CONDUIT, ETC. TO REMAIN IS SUPPORTED FROM EQUIPMENT AND/OR PIPING TO BE REMOVED, EXTEND EXISTING HANGERS OR PROVIDE NEW HANGERS AND SUPPORTS AS REQUIRED TO RE-SUPPORT ITEMS FROM THE BUILDING STRUCTURES.
9. EXISTING EQUIPMENT AND MATERIALS SHALL REMAIN, UNLESS NOTED OTHERWISE.
10. ALL SYSTEMS SHALL BE TESTED FOR PROPER OPERATION IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
11. INSTALL ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
12. REMOVE EXISTING CEILINGS AS NECESSARY TO PERFORM DEMOLITION WORK AND TO INSTALL NEW WORK. REFER TO CONTRACT DOCUMENTS FOR CEILING REUSE OR REPLACEMENT SCOPE OF WORK.

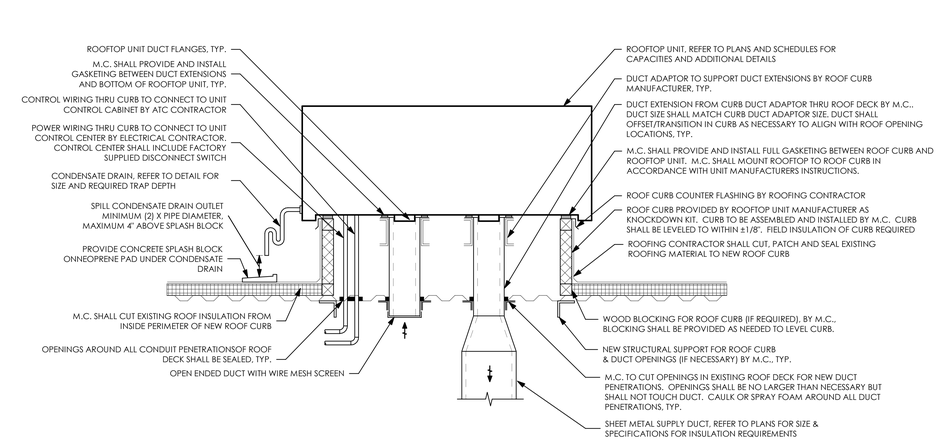
KEYED NEW WORK NOTES:

1. ROUTE 6Ø EXHAUST AIR DUCT UP THROUGH EXISTING ROOF AND PROVIDE GOOSENECK TERMINATION ABOVE. NEW ROOF PENETRATIONS ARE DONE BY OTHERS.
2. WALL PENETRATIONS FOR NEW SUPPLY GRILLES ARE DONE BY OTHERS.
3. ROOF PENETRATIONS OF EXHAUST FANS BY OTHERS.
4. RELOCATION OF CONTROLS AND I.T. IN SPACE BY OTHERS.
5. PAINTING OF EXPOSED DUCTWORK TO BE DONE BY OTHERS.

FOR COORDINATION PURPOSES ONLY



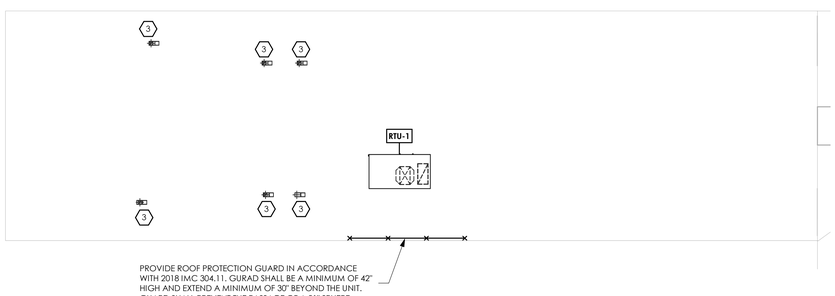
1 PARTIAL FIRST FLOOR NEW WORK PLAN - MECHANICAL
1/8" = 1'-0"



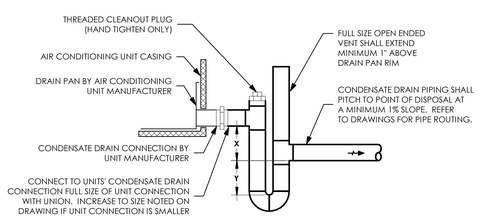
NOTES:

1. DETAIL DOES NOT NECESSARILY SHOW ALL WORK REQUIRED AND SHALL BE MODIFIED AS NEEDED FOR SPECIFIC ROOFTOP UNIT SUPPLIED.
2. ROOF CURB AND ROOFTOP UNIT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.
3. DUCT INSULATION REQUIREMENTS SHALL BE VERIFIED WITH SPECIFICATIONS.

3 PACKAGED DX ROOFTOP UNIT WITH NEW CURB DETAIL



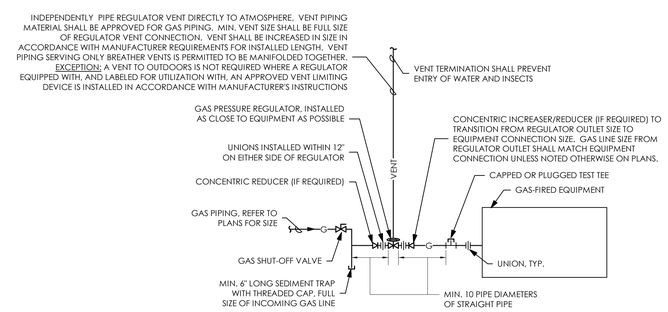
2 PARTIAL ROOF PLAN NEW WORK - MECHANICAL
1/8" = 1'-0"



NOTES:

1. REFER TO SPECIFICATIONS FOR ALLOWABLE CONDENSATE DRAIN PIPE MATERIAL AND INSULATION REQUIREMENTS.
2. MINIMUM CONDENSATE DRAIN PIPE SIZE BASED ON THE AIR CONDITIONING UNIT NOMINAL TONNAGE SHALL BE AS FOLLOWS, BUT IN NO CASE SMALLER THAN THE UNIT CONNECTION:
   - 2.1. 2 TONS & LESS = 3/4"
   - 2.2. 2-1/2 TONS TO 5 TONS = 1"
   - 2.3. 6 TONS TO 30 TONS = 1-1/4"
   - 2.4. 31 TONS TO 50 TONS = 1-1/2"
   - 2.5. 51 TONS TO 170 TONS = 2"
3. CONDENSATE DRAIN TRAP DIMENSIONS SHALL BE AS FOLLOWS:
   - 3.1. DRAW THRU STYLE UNIT:
     - 3.1.1. X = SUPPLY FAN TOTAL (NOT EXTERNAL) STATIC PRESSURE (IN INCHES) + 1". MINIMUM DIMENSION SHALL BE 2".
     - 3.1.2. Y = X/2 + 1". MINIMUM DIMENSION SHALL BE 2".
   - 3.2. BLOW THRU STYLE UNIT:
     - 3.2.1. X = MINIMUM DIMENSION SHALL BE 1/2".
     - 3.2.2. Y = SUPPLY FAN EXTERNAL (NOT TOTAL) STATIC PRESSURE (IN INCHES) + 1/2". MINIMUM DIMENSION SHALL BE 2".

5 AIR CONDITIONING CONDENSATE DRAIN DETAIL



NOTES:

1. REFER TO SCHEDULE FOR REGULATOR SIZING INFORMATION.

4 GAS PRESSURE REGULATOR - INDOOR

REVISION SCHEDULE

No.	Description	Date
1	ISSUE FOR CONSTRUCTION	01/17/2024
2	ISSUE FOR GC COORDINATION	02/16/2024

4101 NORTH SIXTH ST.
HARRISBURG, PA 17110
(717) - 232-9743
www.mcclurecco.com

MECHANICAL RENOVATIONS TO:
PALMERTON HIGH SCHOOL WEIGHT ROOM RENOVATIONS
PROJECT ADDRESS:
3525 FIRELINE RD.
PALMERTON, PA 18071

FIRST FLOOR PLAN - MECHANICAL

SHEET NO.	PROJECT NO.	DWG. SCALE	DESIGNED BY
M1.1	51049	As indicated	MB
	DRAWN BY	DATE	CHECKED BY
	MB	02/19/2024	JG

2/22/2024 11:23:39 AM

PLUMBING ABBREVIATION LEGEND

AAC		Above Accessible Ceiling		G		Gas
AFF		Above Finished Floor		G.C.		General Contractor
AFG		Above Finished Grade		G.I.		Grease Interceptor
AB		Above		GSAN		Grease Sanitary
AD		Area Drain		GV		Gas Valve
Arch		Architecturals		GW		Grease Waste
ASAN		Acid Sanitary		H / HW		Hot Water
AV		Acid Vent		H.C.		Heating Contractor
AW		Acid Waste		HB		Hose Bibb
AWC		Automatic Washer Connection		HR		Hose Reel
BF		Below Floor		HWH		Hot Water Heater
BFG		Below Finished Grade		HWR / R		Hot Water Return
BFP		Backflow Preventer		I.E. / Inv.		Invert Elevation
BV		Balancing Valve		IG		Interruptible Gas
C / CW		Cold Water		IWH		Instantaneous Water Heater
C.I.		Cast Iron		JAN		Janitor
C.O.		Clean Out		KD		Kitchen Drain
CA		Compressed Air		KS		Kitchen Sanitary
CD		Condensate Drain		KW		Kitchen Waste
CFH		Cubic Feet per Hour		LAV		Lavatory
CLG.		Ceiling		LPG		Liquid Petroleum Gas/Propane
Conn.		Connection		LT		Laundry Tub
Coord.		Coordinate		MAX		Maximum
CTE		Connect To Existing		MIN		Minimum
CTG		Clean Out To Grade		MR		Mop Receptor
CV		Circuit Vent		MTD		Mounted
CWV		Combination Waste & Vent		MU		Make-up Water
D		Drain		NFWH		Non-Freeze Wall Hydrant
DBF		Down Below Floor		NG		Natural Gas
DF		Drinking Fountain		NT		Neutralizing Tank
DFU		Drainage Fixture Units		OS		Oil Sanitary
DN		Down		P.C.		Plumbing Contractor
DWG		Drawing		PIV		Post Indicating Valve
DWH		Domestic Water Heater		PRV		Pressure Reducing Valve
E.C.		Electrical Contractor		PSI		Pounds per Square Inch
E.T.R.		Existing To Remain		PT		Plaster Trap
Ea.		Each		R		Return Piping (Hot Water)
EEW		Emerg. Eyewash		RCP		Re-circulating Pump
ER / ERC		Emerg. Rainwater Conductor		RD		Roof Drain
ERD		Emerg. Roof Drain		RW		Rain Water
ESEW		Emerg. Shower / Eyewash		RWC		Rainwater Conductor
ES		Emerg. Station		RWS		Rain Water Stack
ETV		Emerg. Tempering Valve		S.F./Sq. Ft.		Square Foot
EWC		Electric Water Cooler		SA		Shock Absorber
Ext.		Exterior		SAN		Sanitary
F.F.		Finished Floor		SAN I.E.		Sanitary Invert Elevation
F.P.C.		Fire Protection Contractor		ST		Storm
FAI		Fresh Air Inlet		T		Tempered Water
FCO		Floor Cleanout		T&P		Temperature and Pressure
FD		Floor Drain		T.B.R.		To Be Removed
FH		Fire Hydrant		TV		Tempering Valve
FHC		Fire Hose Cabinet		TYP.		Typical
Fin. Flr.		Finished Floor		UR		Urinal
Flr.		Floor		V		Vent
FM		Forced Main		V.I.F.		Verify In Field
FP		Fire Protection		V.T.R.		Vent Through Roof
FPZ		Fire Protection Zone		VS		Vent Stack
FS		Floor Sink		W		Waste
FSC		Food Service Contractor		WF		Wash Fountains
FVC		Fire Valve Cabinet		WB		Wash Box (Toilet Rooms)
				WC		Water Closet
				WCO		Wall Cleanout
				WSFU		Water Supply Fixture Units
				WSV		Waste Stack Vent

PLUMBING MISCELLANEOUS LEGEND

NOTE: NOT ALL ITEMS USED THIS PROJECT

	FLOW ARROWS
	PIPE CAP
	CLEANOUT ABOVE CEILING
	CLEANOUT TO GRADE
	EXPANSION LOOPS
	PIPE CROSS
	PIPE DROP
	PIPE RISE
	PIPE STACK
	PIPE TEE DROP/RISE
	VALVE IN PIPE DROP
	VENT THRU ROOF - TYPICAL
	VENT THRU ROOF - ACID
WCO	WALL CLEANOUT - TYPICAL

PLUMBING DRAIN LEGEND

NOTE: NOT ALL ITEMS USED THIS PROJECT

	AIR GAP FITTING
	EMERGENCY RAIN WATER OUTLET
	FLOOR CLEANOUT
	FLOOR DRAIN - FUNNEL
	FLOOR DRAIN - INDIRECT
	FLOOR DRAIN - ROUND
	FLOOR DRAIN - SQUARE
	FLOOR SINK - FULL GRATE
	FLOOR SINK - HALF GRATE
	FLOOR SINK - NO GRATE
	FLOOR SINK - ⅓ GRATE
	ROOF DRAIN - TYPICAL
	ROOF DRAIN - EMERGENCY

PLUMBING VALVE LEGEND

NOTE: NOT ALL ITEMS USED THIS PROJECT

	ANCHOR - PIPE
	BALL VALVE - TYPICAL
	BUTTERFLY VALVE
	CHECK VALVE
	CIRCUIT SETTER VALVE
	COMPRESSED AIR OUTLET
	GAS COCK
	GAS REGULATOR
	GATE VALVE
	GAUGE VALVE
	GLOBE VALVE
	GUIDE, PIPE
	HOSE BIBB
	MANUAL BALANCING VALVE
	NON FREEZE WALL HYDRANT
	OS&Y VALVE
	PRESSURE REDUCING VALVE
	RECIRCULATING PUMP
	REDUCE PRESSURE BACKFLOW PREVENTER
	SHOCK ABSORBER
	SOLENOID VALVE
	STRAINER
	TEMPERING VALVE
	THERMOMETER
	UNION, PIPE

PLUMBING TAG LEGEND

NOTE: NOT ALL ITEMS USED THIS PROJECT

	ADA SYMBOL
	CONNECT TO EXISTING
	DEMOLITION SYMBOL
NOTE / NOTE	DRAWING TAG
1111 / #### AFF	INVERT ELEVATION TAG
	LIMIT OF DEMOLITION
#	NOTE TAG - CIRCLE
#	NOTE TAG - DEMOLITION
#	NOTE TAG - HEXAGONAL
#	NOTE TAG - RENOVATION
	NOTE TAG - SQUARE
NOTE	NOTE TAG - TO BE REMOVED
TYP	PLUMBING FIXTURE TAG
	TITLE REVISION TAG

PLUMBING GENERAL NOTES

1.	Provide all labor, material, and equipment required for the completion and operation of all systems specified within the Division 22 specification sections and Plumbing drawings of work in accordance with all applicable codes including but not limited to PA Uniform Construction Code (PA-UCC), International Plumbing Code (IPC), ICC/ANSI A117.1 - Accessible and Usable Buildings and Facilities, International Building Code (IBC), International Fuel Gas Code (IFGC). Verify the latest adopted code editions and any additional adopted amendments with the Local Authority Having Jurisdiction(AHJ) Prior to beginning work.
2.	Coordinate connection of all Water, Sewer, and Gas utility services with the associated Utility provider. Coordination includes but is not limited to: pre-installation verification of all required connection/ valving details, arrangements and performing of all required tests and inspections, supports/base pads for meter installation, and final service activation.
3.	Provide a complete domestic water, gas and waste/vent systems to all fixtures and or equipment requiring such. verify all rough-in locations and coordinate piping locations with work under other divisions of the specifications to avoid conflicts.
4.	Provide all plumbing fixtures and appliances complete with all required supplies, stops, valves, faucets, drains, traps, tail pieces, escutcheons, etc. All fixture traps shall be semi-cast style, removable and/or provided with access for cleanout. All stops and shutoff valves shall be quarter turn style and installed in a readily accessible locations.
5.	All plumbing fixtures, equipment, and materials shall be new and shall fit the space available. Verify dimensions at site are adequate prior to order of any materials.
6.	All piping, apparatus, equipment, etc. shall be properly supported, braced vertically and horizontally in accordance with applicable codes and as required to prevent excessive movement during seismic conditions.
7.	Do not scale the plans. See architectural plans for exact location of doors, windows, fixtures, wall dimensions, equipment, devices, etc. Coordinate exact locations of fixtures, equipment, specialties, and piping in field prior to rough-in.
8.	All valves, cleanouts, plumbing specialties, etc., shall be so located and installed to permit access for service without damage to building or finished materials.
9.	In addition to cleanouts indicated on the plumbing drawings, provide cleanouts at base of all waste and rainwater stacks, at all changes in direction of piping in excess of 45 degrees and every 50 feet. Floor cleanouts shall be installed flush with finished floor. All cleanouts shall be so located and installed to permit access for service without damage to building or finished materials, wall cleanouts shall be minimum 18" A.F.F. Wall cleanouts covers shall be stainless steel or where directed by architect provide primer painted steel cover plates to receive final painted finish, same as wall finish. (final paint by G.C.)
10.	All exposed supply and waste piping in rest room areas shall be min. 17 ga. thick or semi-cast chrome plated brass, with matching stops and escutcheons.
11.	Drainage and vent piping systems, and water distribution piping systems shall be tested with air or water in accordance with IPC Section 312. Coordinate and schedule all required testing with local A.H.J. prior to testing.
12.	Sanitize domestic water piping in accordance with IPC requirements, Local Health Department, and American Water Works Association's (AWWA) specifications. Provide Final reports and test results to Owner.
13.	All domestic water piping shall be hung level without pitch unless noted otherwise on plans.
14.	Protect copper piping against contact with dissimilar metals. All hangers, supports, anchors, and clips shall be copper or copper plated. Where copper piping is carried on iron trapeze hangers with other piping, satisfactory and permanent electrolytic isolation material shall prevent contact with other metals.
15.	Protect copper piping against contact with all masonry. Where copper is sleeved through masonry, copper or red brass sleeves shall be used. Where copper must be concealed in or against masonry partitions, contact shall be prevented by coating the copper heavily with asphaltic enamel and #15 asphalt saturated felt between the pipe and the masonry partition.
16.	Install piping in areas not subject to freezing temperatures. Water piping in exterior walls shall be installed on conditioned side of the wall insulation.
17.	Provide shock absorbers, supplies and stops at each fixture as required by IPC and additionally as noted on the plans. Exposed stops shall be chrome plated.
18.	Provide drain valves at all low points of domestic water piping systems for complete drainage and indicate location of same on record drawings.
19.	Provide vacuum breakers as required by code.
20.	Vent all plumbing fixture drains in accordance with all applicable codes.
21.	Verify all fixture mounting heights with architectural interior elevations, schedules, etc. prior to fixture installation. Verify locations of Accessible fixtures and install in strict accordance with ICC/ANSI A117.1 requirements.
22.	Provide sleeves at all wall/floor penetrations. Coordinate sleeves with GC for installation in wall/floor construction. In exposed areas provide chrome plated escutcheons at pipe penetrations. Seal all fire rated floor and wall penetrations with fire stopping materials as specified in the Div. 7 specifications. Where firestopping materials are not specified in Div. 7, provide firestopping materials U.L. listed for use and as manufactured by 3m or equal.
23.	Install ball style shutoff valves on the entire domestic water system. Ball valves shall be furnished with blowout proof stem, insulated extension handles, and chrome plated ball.
24.	Insulate all domestic water piping as noted in Div. 22 specifications and in accordance with minimum thickness specified in IECC Section C404 and Table C403.11.3. Insulate all vertical and horizontal above slab rainwater and emergency rainwater piping as noted in Div. 22 specifications.
25.	Seal all fixtures to walls, floor, counters, etc. using a sanitary-type one-part, mildew resistant, silicone sealant. match sealant color to fixture color.
26.	Install all above ground vent piping at 1% slope (unless noted otherwise).
27.	Install all above ceiling cleanouts in locations above accessible ceiling construction. Coordinate exact locations in field. No cleanouts shall be installed within plenum ceilings.
28.	Coordinate all equipment floor drain and floor sink locations with the work of all other trades and with associated equipment in filed prior to rough in. Coordinate all general area floor drains with architectural plans and with G.C. in field prior to rough-in.
29.	Provide all floor drains with deep seal traps (unless noted otherwise) and trap seal protection.
30.	Install cleanouts to grade at all locations where storm and sanitary laterals exit building. Contractor shall coordinate required invert elevations with site contractor prior to installation, and make final connection to site Sanitary/Storm piping with all required fittings.
31.	Verify all "Accessible" toilet locations on Architectural plans. Installation of flushing lever actuator shall comply with ANSI A117.1 and shall be mounted on the accessible (wide) side of toilet areas no more than 44 inches above the finished floor. Coordinate rough-ins of all supplies, flush valves, sensors, etc., to avoid conflict with grab bars or other toilet accessories.
32.	All piping located in return air plenums shall conform to the flame spread and smoke developed limits of ASTM E84 or must be wrapped with U.L. approved plenum rated material.
33.	In finished spaces with exposed structure, provide and install 1" thick "fiberglass insulation with all-service jacket" in lieu of insulation specified. Prep and paint pipe insulation in color selected by Architect. In finish spaces with exposed vertical insulated piping, provide stainless steel protective jacket to minimum 10ft. above finish floor.
34	All fixture trim, including faucets, strainers, escutcheons, stops, waste traps, visible waste piping or visible hangers shall be made of brass and shall be polished chrome plated. Plastic, zinc or white metal will not be acceptable.
35.	Install all exposed horizontal and vertical piping in a neat arrangement in locations which are the most inconspicuous. Vertical piping drops shall be coordinated and installed within chases, walls, soffits and coordinated with other mechanical / electrical feeds. All such locations are to be coordinated between all trades prior to installation. Locations requiring piping to be installed exposed in finished spaces shall be reviewed with the Owner Representative and Architect in field prior to installation.
36.	Provide domestic water heater temperature / pressure relief valves with discharge piped full size to the nearest approved floor drain or waste receptor.
37.	Provide flexible expansion joints in piping systems at all locations where piping crosses horizontal / vertical building expansion joints. Refer to specifications for expansion joint information and refer to architectural dwgs. for horizontal / vertical expansion joint locations.
38.	Provide thermal expansion control equipment/specialties on all segments of hot water and hot water return piping exceeding 50ft. and at intervals not to exceed 100ft. Thermal expansion control equipment shall include pipe anchors, pipe guides, and expansion loops. Expansion loops shall be provided as specified and verified by manufacturer's calculation to be adequate to accommodate thermal expansion of the applicable piping system.
39.	All piping drops to fixtures, shall be concealed within wall or chase construction, unless noted otherwise.
40.	Include in this bid the cost for the removal of 5 feet of pipe insulation, fitting insulation, etc. on both sides of the point where a new domestic water (hot, cold, return), rainwater, emergency rainwater, etc. is made to the existing mains/branches throughout the building. Also include in this bid the cost associated with reinsulating the existing pipe/fittings/etc. once new connection is completed. Verify in field.

PLUMBING DEMOLITION - GENERAL NOTES

1.	Existing piping which is removed from service, shall be removed in its entirety, as indicated by plans or required by scope of work. Verify exact location of all branch piping in field. removals shall not be limited to only the piping on the demolition plans. Verify all conditions and notify Architect / Engineer of any piping not shown on removals prior to any demolition. No demolition shown on this plan shall be performed until all required new piping, equipment, and etc. or necessary temporary connections, are installed and operational.
2.	Equipment and piping locations, quantity and conditions are approximate. Field verify all conditions, locations and quantities prior to bid. The demolition drawings are intended to convey the basics of the existing system components. Not all conditions and components have been identified on these drawings. All abandoned plumbing piping discovered during the work of this project shall be removed unless directed otherwise, Contractor shall verify extent of removals in field.
3.	In general where existing fixtures, equipment, pipe risers and drops etc. occur at / in existing walls to be removed, the existing fixture and related piping shall be removed and related piping capped or plugged at mains. Piping within walls that are to remain, shall be capped or plugged within the existing construction and abandoned. Sanitary piping shall be capped below the floor slab and abandoned unless noted otherwise. Patch any affected construction to match existing adjacent finished surface.
4.	All existing systems shall remain functional for as long as required, until replacement with new or reworked as required (see new work plans and phasing plans). Provide temporary connections to keep systems functioning properly as required. Some additional work may be required to be performed after hours, weekends, or during vacation breaks. All demolition work shall in no way inconvenience or interrupt the normal workday schedule for this facility (coordinate with Architect/Owner). Any demolition work done which affects the operation of this facility shall be replaced with new, repaired to original conditions or replaced by temporary means for however long as required at no cost to the Owner.
5.	Coordinate all demolition and new work. Demolition work shall be coordinated so that no existing systems are demolished out-of-phase or ahead of the new piping system replacement schedule. Provide necessary temporary system connections as required to maintain all existing systems until which time the new systems area installed (during its proper phase) or until new mains can be extended and reconnected to existing. Verify in field. All temporary connections required to maintain existing systems or to replace existing connection terminated out-of-phase shall be installed immediately and at no additional cost to the owner.
6.	Remove/Rework existing work, materials, etc. in the way of any new work, even if not indicated to be removed on the demolition plans.
7.	Protect existing materials, equipment and finishes that are to remain. any damage caused by this contractor shall be repaired/replaced as necessary by this contractor.
8.	Remove all items that are to remain but conflict with the installation of any new work. Re-install the same items (or new if damaged during this task) once new work is completed.
9.	P.C. is responsible for all plumbing demo work. In all areas where patching is required, the plumbing contractor shall patch the sub-surface where the new surface is to be finished by the General Contractor. This sub-surface must be provided so that it does not inhibit the installation of or affect the appearance of the new finish. If a new finish will not be provided by the General Contractor, The Plumbing Contractor is responsible to patch the surrounding finished surface to match existing. Patch existing openings from demolished piping in fire rated floors and walls as required to maintain fire rating. Refer to the specifications for additional information and coordinate all work in field.
10.	Existing materials scheduled to remain may be required to be temporarily removed, to allow installation of new materials, finishes, etc. These materials must be re-installed in their previous locations in equal or better condition.
11.	At all locations where existing below slab drainage piping is indicated to be demolished, the piping shall be permanently capped and abandoned below floor slab. Any existing abandoned mains below floor which are encountered and conflict with new underground utilities shall be cut off with ample space on both sides of new main and both ends of existing sealed permanently as noted above. All pipe caps/plugs of removed floor penetration piping shall be at elevation that allows patching and restoration of existing floor with new finish materials.(Coordinate with General Contractor in field)
12.	Remove existing ceiling tiles and grids as required to obtain access to ceiling space for the installation of new piping above ceiling. Store the existing ceiling tiles and grids in a safe location and re-install the same once his work is completed and inspected. Provide additional temporary hangers/cables required to support remaining ceiling structure, light fixtures, ceiling devices, etc. during this contractor's work. remove all temporary facilities once work is completed.
13.	Upon reactivation of existing systems following temporary shutdowns, P.C. shall verify proper functioning of all connected fixtures and equipment. All system outlets, stops, and equipment shutoffs shall be returned to normal operating positions.

DESIGN CODE REFERENCES

PA - UCC	PENNSYLVANIA UNIFORM CONSTRUCTION CODE;
IBC	ICC - INTERNATIONAL BUILDING CODE; 2018
IFGC	ICC - INTERNATIONAL FUEL GAS CODE; 2018 (LPG REQUIREMENTS SUPERCEDED BY THE REQUIREMENTS OF PENNSYLVANIA'S PROPANE AND LIQUEFIED PETROLEUM GAS ACT)
IMC	ICC - INTERNATIONAL MECHANICAL CODE; 2018
IPC	ICC - INTERNATIONAL PLUMBING CODE; 2018
IFC	ICC - INTERNATIONAL FIRE CODE; 2018 (AS REFERENCED IN INTERNATIONAL BUILDING CODE)
IECC	ICC - INTERNATIONAL ENERGY CONSERVATION CODE; 2018
FGI	THE FACILITY GUIDELINES INSTITUTE - GUIDELINES FOR DESIGN AND CONSTRUCTION OF HOSPITALS; 2018

REFERENCED DESIGN STANDARDS

NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA 13	NATIONAL FIRE PROTECTION ASSOCIATION - STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS; 2013 EDITION OR MOST RECENT EDITION ADOPTED BY AUTHORITY HAVING JURISDICTION, INCLUDING ALL APPLICABLE AMENDMENTS AND SUPPLEMENTS.
NFPA 99	NATIONAL FIRE PROTECTION ASSOCIATION - HEALTH CARE FACILITIES CODE; 2015 EDITION OR MOST RECENT EDITION ADOPTED BY AUTHORITY HAVING JURISDICTION, INCLUDING ALL APPLICABLE AMENDMENTS AND SUPPLEMENTS.
NFPA 101	NATIONAL FIRE PROTECTION ASSOCIATION - CODE FOR SAFETY TO LIFE FROM FIRE IN BUILDINGS AND STRUCTURES; 2015 EDITION OR MOST RECENT EDITION ADOPTED BY AUTHORITY HAVING JURISDICTION, INCLUDING ALL APPLICABLE AMENDMENTS AND SUPPLEMENTS.

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5
ARCHITECTURE

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN ASSOCIATES, INC.

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

ALLOY5
ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

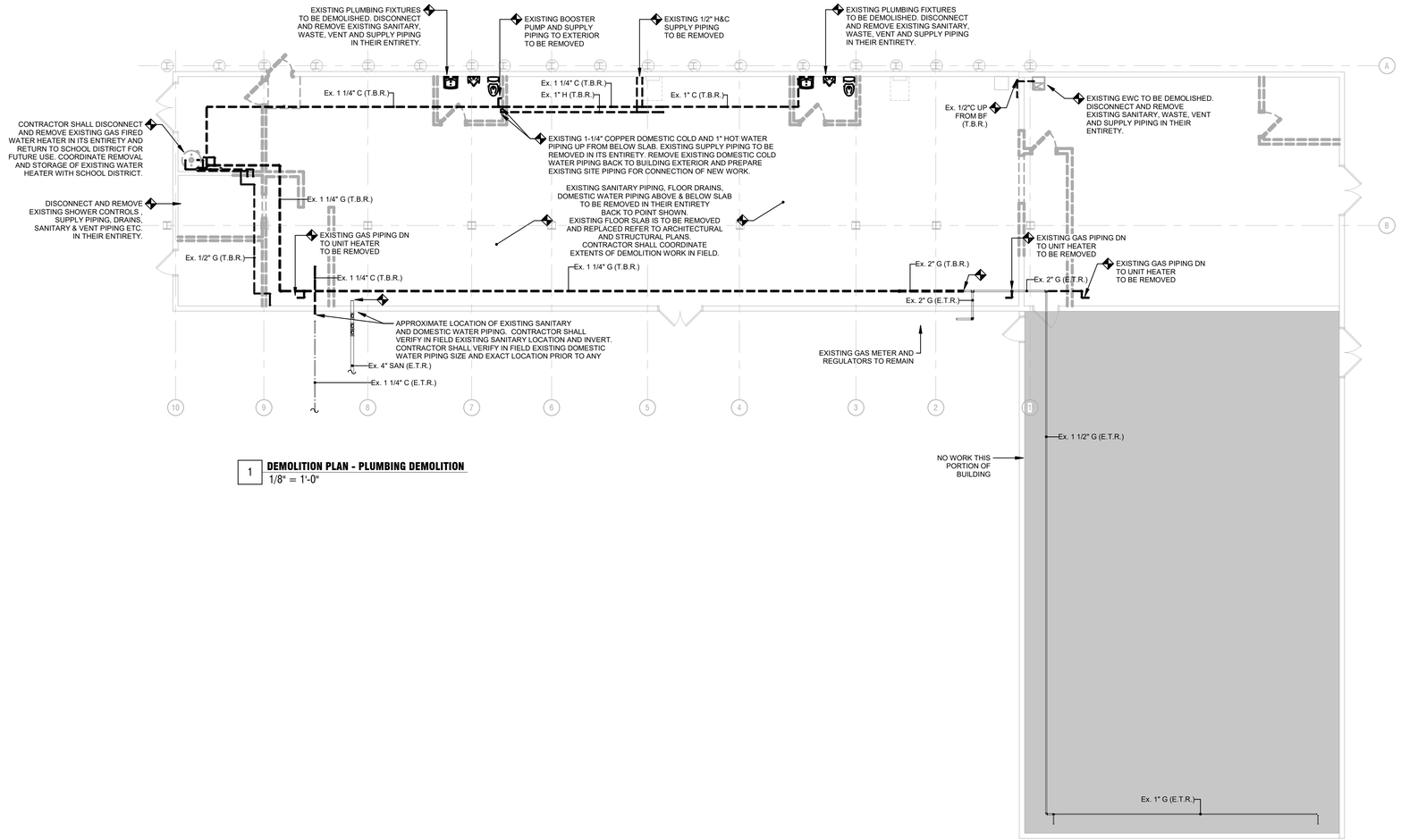
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEFFREY RYAN MACHIK
ENGINEER
PE083135

SHEET TITLE:

COVER SHEET - PLUMBING

DATE: 02/16/24
SCALE:
DRAWN BY: KP
CHECKED BY: KJF
PROJ NO: 22-0073

P0.00



1 **DEMOLITION PLAN - PLUMBING DEMOLITION**
1/8" = 1'-0"

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

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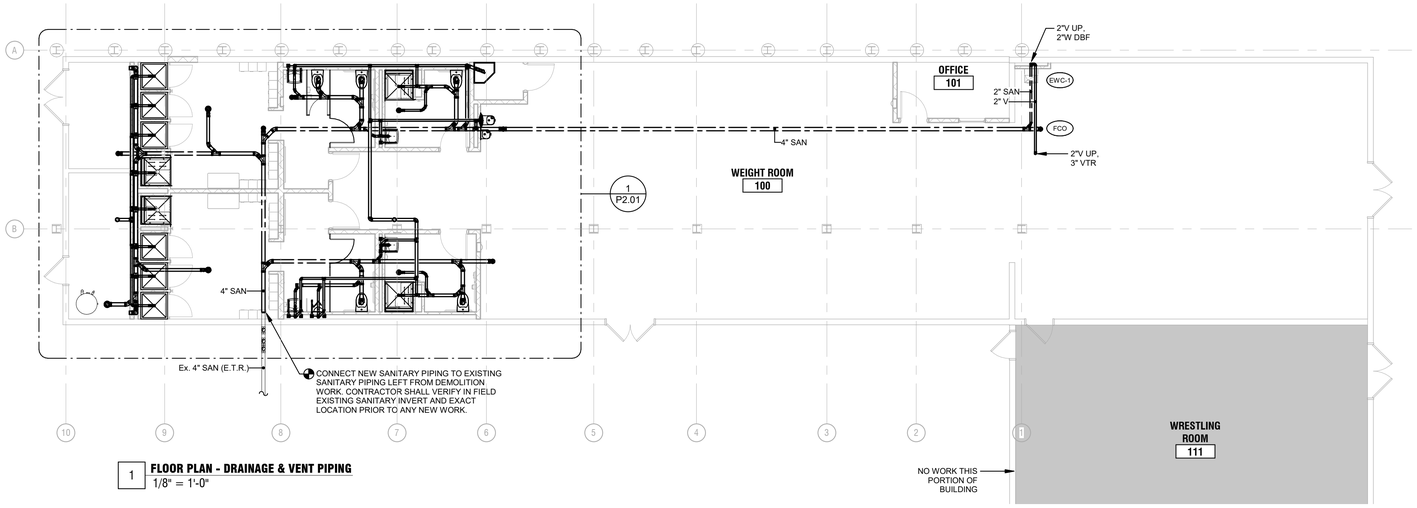
SHEET TITLE:

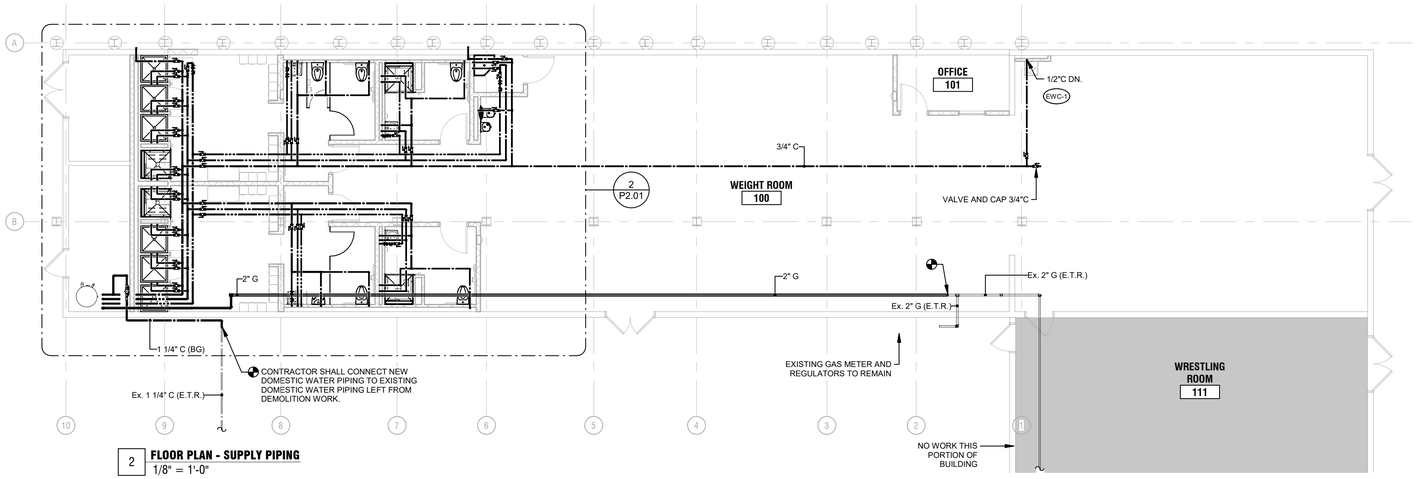
DEMOLITION PLAN - PLUMBING

DATE:	02/16/24
SCALE:	1/8" = 1'-0"
DRAWN BY:	KP
CHECKED BY:	KJF
PROJ NO:	22-0073

P0.01



1 **FLOOR PLAN - DRAINAGE & VENT PIPING**
1/8" = 1'-0"



2 **FLOOR PLAN - SUPPLY PIPING**
1/8" = 1'-0"

GENERAL NOTES - PLUMBING

1. P.C. SHALL COORDINATE GAS PIPE ROUTING AND SIZE WITH H.C.

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

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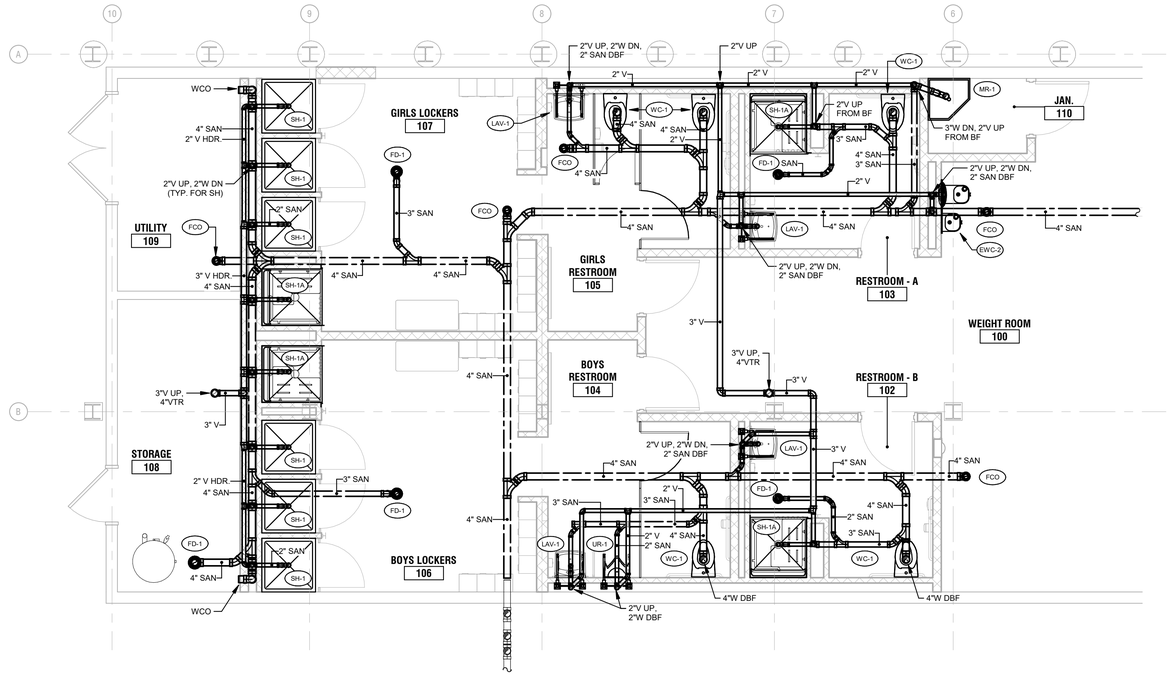
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEFFREY RYAN MACHIK
ENGINEER
PE083135

SHEET TITLE:

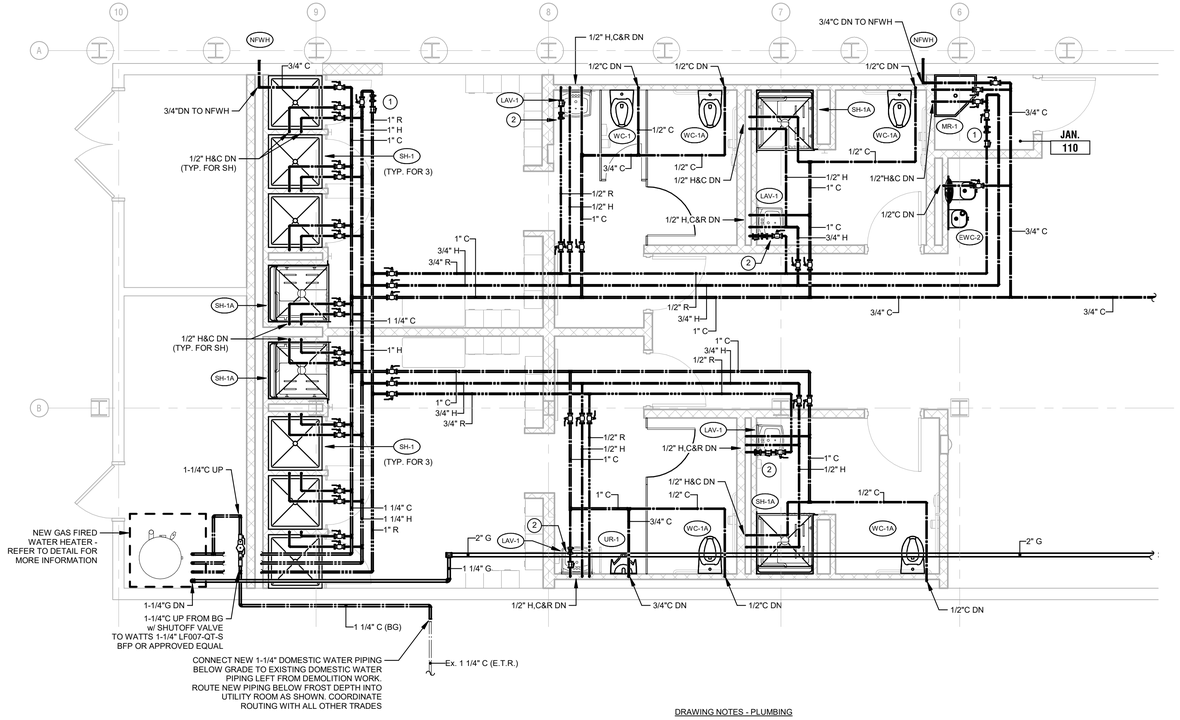
FLOOR PLANS - PLUMBING

DATE:	02/16/24
SCALE:	As indicated
DRAWN BY:	KP
CHECKED BY:	KJF
PROJ NO:	22-0073

P1.01



1 **ENLARGED FLOOR PLAN - DRAINAGE & VENT PIPING**
1/4" = 1'-0"



2 **ENLARGED FLOOR PLAN - SUPPLY PIPING**
1/4" = 1'-0"

DRAWING NOTES - PLUMBING

1. PROVIDE CIRCUIT SETTER VALVE, CHECK VALVE AND BALL SHUTOFF VALVE ABOVE CEILING IN ACCESSIBLE LOCATION.
2. PROVIDE MANUAL BALANCE VALVE, CHECK VALVE AND BALL SHUTOFF VALVE ABOVE CEILING IN ACCESSIBLE LOCATION.

PROJECT:

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3525 FIRELINE ROAD
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PROJECT TEAM:

ARCHITECT:
ALLOY5
ARCHITECTURE

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN ASSOCIATES, INC.

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

ALLOY5
ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
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JEFFREY RYAN MACHIK
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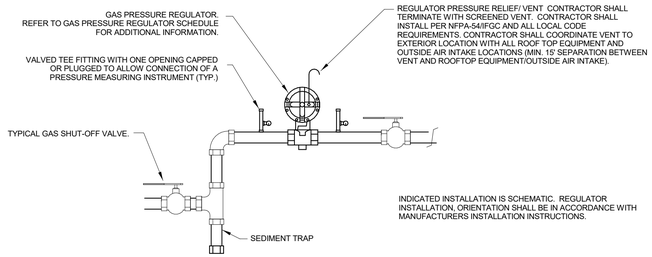
PE083135

SHEET TITLE:

ENLARGED FLOOR PLANS - PLUMBING

DATE:	02/16/24
SCALE:	As indicated
DRAWN BY:	KP
CHECKED BY:	KJF
PROJ NO:	22-0073

P2.01



GAS PRESSURE REGULATOR SCHEDULE

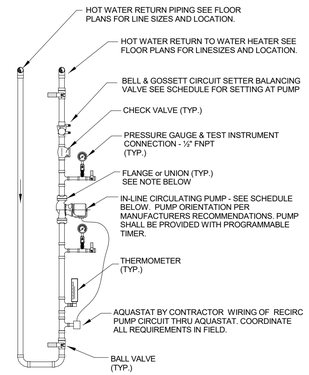
TAG	MANUF.	CHARACTERISTICS	EQUIPMENT SERVED (CONNECTED GAS LOAD)	INLET PRESSURE (PSI)	SET PRESSURE (NOTE 1)	OUTLET PRESSURE (NOTE 1 & NOTE 7)	TOTAL REQUIRED CAPACITY (NOTE 6 & NOTE 7)
GPRV-1	Fisher Controls, Pietro Fiorentini, or Approved Equal	Vented Internal Relief Weatherproof	DWH (200 CFH)	2 PSI	10 IN. W.C.	7 IN. W.C. - 11 IN. W.C.	200 CFH @ 1 PSI INLET (NOTE 6)

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY SET PRESSURE WITH FINAL EQUIPMENT SUBMITTALS PRIOR TO ORDER/INSTALLATION.
2. PIPE REGULATOR RELIEF VENT FULL SIZE OR LARGER TO BUILDING EXTERIOR AT SAFE LOCATION. COORDINATE EXACT LOCATION WITH ARCHITECT IN FIELD.
3. ALL MP REGULATORS SHALL BE INSTALLED IN ACCORDANCE WITH IFGC AND SHALL BE RATED TO MAINTAIN REDUCED PRESSURE DURING LOCKUP "NO FLOW" CONDITIONS.
4. ALL REGULATORS IN 2PSI SYSTEMS SHALL BE ANSI Z21.18/CSA6.3 APPROVED AND **TAGGED** FOR MINIMUM 5PSI **MAXIMUM ALLOWABLE OPERATING PRESSURE**. ALL REGULATORS WITH INLET PRESSURE GREATER THAN 2 PSI OR SHALL BE PROVIDED WITH OVERPRESSURE PROTECTION AND INTERNAL RELIEF VALVE.
5. ALL REGULATORS SHALL BE CLEARLY TAGGED WITH THE FOLLOWING INFORMATION: FULL MODEL NUMBER INDICATING ORIFICE SIZE, FIELD VERIFIED SET PRESSURE, SPRING NUMBER AND SPRING ADJUSTMENT RANGE, RATED INLET AND OUTLET PRESSURE.
6. ALL 2PSI SYSTEM PIPING IS SIZED FOR MAXIMUM 1PSI LOSS FROM SOURCE TO LINE PRESSURE REGULATOR. ALL REGULATORS NOTED ABOVE TO REDUCE FROM 2PSI TO IN. W.C. MUST BE SIZED TO THE NOTED CAPACITY WITH 1PSI INLET PRESSURE.
7. ALL REGULATORS SHALL BE SIZED TO MAINTAIN OUTLET PRESSURE WITHIN THE SPECIFIED OUTLET PRESSURE RANGE AT FULL REQUIRED FLOW CAPACITY NOTED ON SCHEDULE. (OR MAXIMUM 20%DROOP WHERE OUTLET PRESSURE RANGE IS NOT INDICATED)
8. ALL REGULATORS NOTED TO BE WEATHERPROOF SHALL BE CONSTRUCTED OF CORROSION RESISTANT MATERIALS AND VENTED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS FOR EXTERIOR INSTALLATION INCLUDING VENTING AND VENT TERMINATION FITTINGS AND SCREENING.

Gas Pressure Regulator Schedule

Scale: None

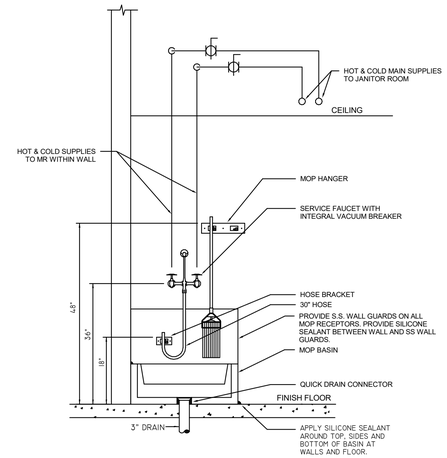


RECIRCULATING PUMP SCHEDULE						
TAG	MANUF.	MODEL	LOCATION	POWER	PERFORMANCE	CONST.
RCP-1	Armstrong	ASTRO 225BS-TA	STORAGE A106a	75 W	2.0 gpm @ 8.0 ft	Lead Free Bronze

NOTES:
1. PROVIDE ALL RECIRCULATION PUMPS WITH PROGRAMMABLE TIMER, AQUASTAT, AND FLANGE KITS.
2. ALL POWER WIRING BY E.C.

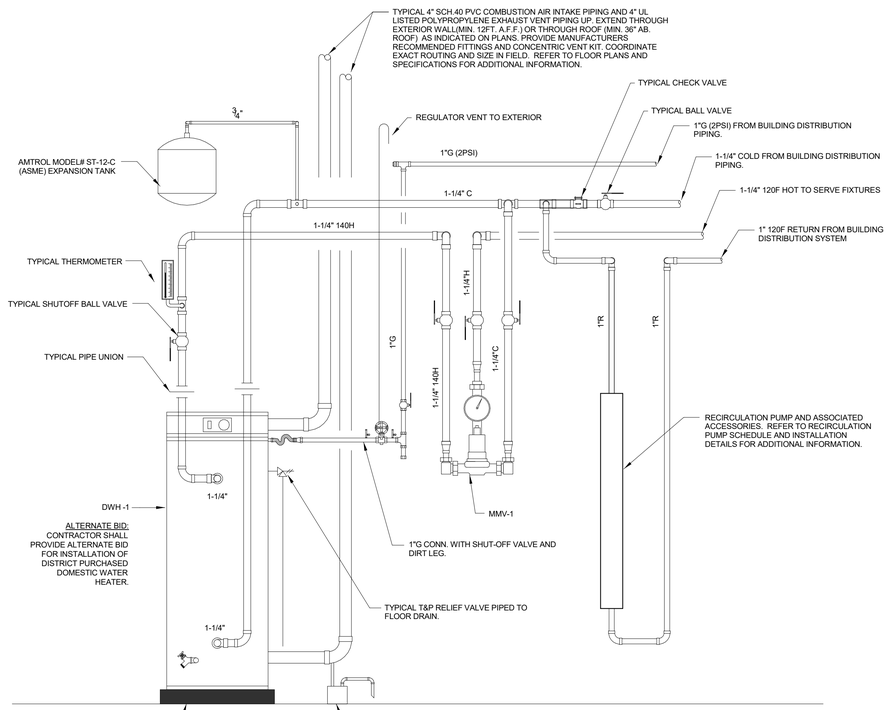
Domestic Hot Water Recirculating Pump Installation Detail

Scale: None



Mop Receptor and Accessories Detail

Scale: None

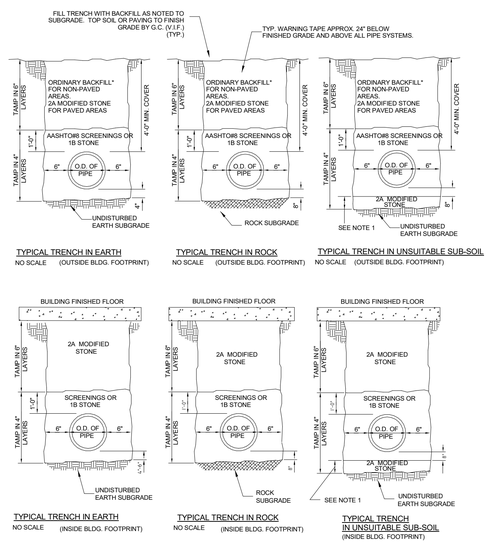


EQUIPMENT SPECIFICATIONS: (REFER TO DIV. 22 SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

DWH-1 BRADFORD-WHITE MODEL# EF-100T-199E-3NA (ASME)
100 GALLON STORAGE CAPACITY, 199,999 BTU/HR INPUT, 245 GPH RECOVERY AT 100° RISE. ASME CONSTRUCTION
MMV-1 POWERS SH-1432-1-1, SINGLE HI/LO MASTER MIXING VALVE TO SUPPLY 27 GPM@10PSI PRESSURE DROP. OUTLET TEMPERATURE SETPOINT TO 120°F.
ET-1 AMTROL ST-12-C THERMAL EXPANSION TANK, 4.7 GAL. CAP. ASME CONSTRUCTION

Domestic Water Heater Installation Detail (Commercial High Efficiency - Natural Gas Fired)

Scale: None



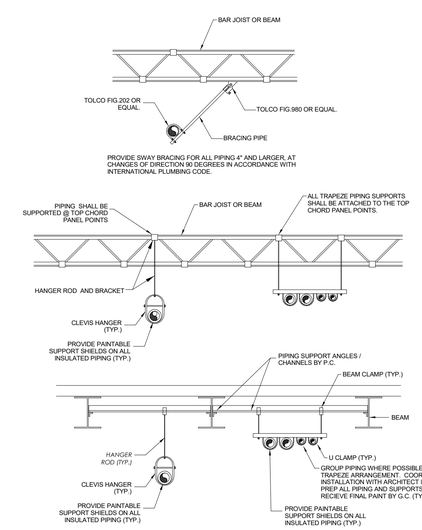
1. MINIMUM 12", EXACT DEPTH TO BE DETERMINED BY ARCHITECT / ENGINEER IN FIELD BASED ON EXISTING UNSUITABLE SUB-SOIL CONDITION.

2. IT IS THE INTENT THAT THE MATERIALS EXCAVATED FROM THE TRENCHES IS NOT TO BE USED FOR TRENCH BACKFILL. REFER TO DETAILS ABOVE FOR APPROVED BACKFILL MATERIALS. RAW EXCAVATED MATERIALS MUST BE DISPOSED OF PROPERLY OFF SITE BY THIS CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

*WITHIN ROAD RIGHT-OF-WAYS, SURFACE RESTORATION, BACKFILL MATERIALS, AND METHODS SHALL MEET THE APPROPRIATE MUNICIPAL OR PENN-DOT REQUIREMENTS.

Typical Pipe Trench Details

Scale: None



Typical Piping Support Details

Scale: None

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5 ARCHITECTURE

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN ASSOCIATES, INC.

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

ALLOY5 ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

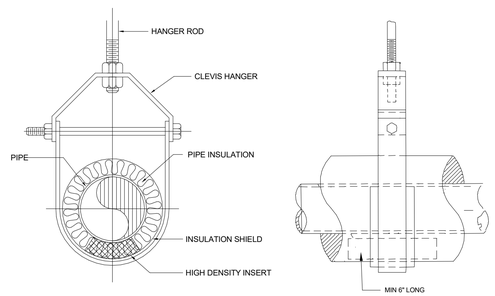
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEFFREY RYAN MACHIK
ENGINEER
PE083135

SHEET TITLE:

DETAILS - PLUMBING

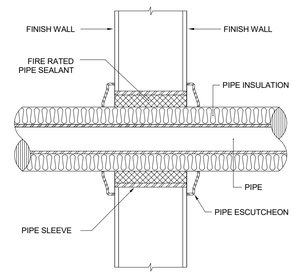
DATE:	02/16/24
SCALE:	
DRAWN BY:	KP
CHECKED BY:	KJF
PROJ NO:	22-0073

P3.01



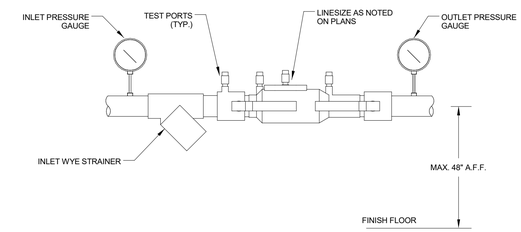
Typical Clevis Hanger Detail

Scale: None



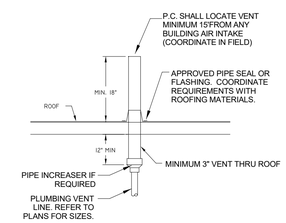
Pipe Sleeve Through Wall Detail

Scale: None



Typical Double Check Backflow Preventer Installation Detail

Scale: None

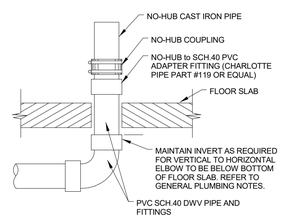


NOTES:

1. FLASHING AND SEALING OF NEW VTR PENETRATIONS WITHIN EXISTING ROOF CONSTRUCTION SHALL BE PROVIDED BY THE P.C. AND SHALL BE PERFORMED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE EXISTING ROOF MANUFACTURER TO MAINTAIN ANY EXISTING ROOF WARRANTY. COORDINATE ALL REQUIREMENTS WITH OWNER AND EXISTING ROOF MANUFACTURER IN FIELD.

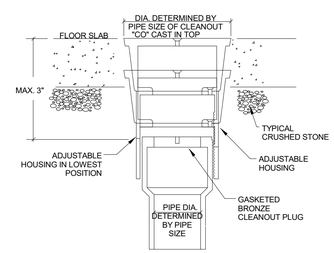
Vent Thru Roof Detail

Scale: None



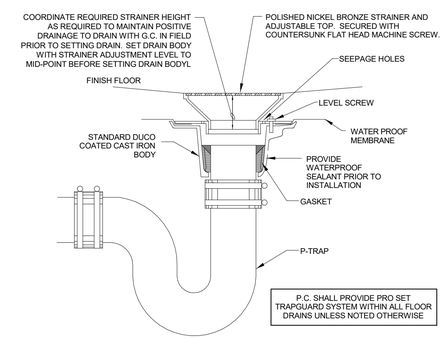
Typical No-Hub Cast Iron Above Slab to PVC Below Slab Transition

Scale: None



Typical Floor Cleanout Detail

Scale: None



Typical Floor Drain Detail

Scale: None

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

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ALLOY5
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SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
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KEY PLAN:

REGISTRATION:

ALLOY5
ARCHITECTURE
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610.419.4055

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEFFREY RYAN MACHIK
ENGINEER
PE083135

SHEET TITLE:

DETAILS - PLUMBING

DATE:	02/16/24
SCALE:	
DRAWN BY:	KP
CHECKED BY:	KJF
PROJ NO:	22-0073

P3.02

PART 1.00 GENERAL

1.01 WORK INCLUDED

A. Furnishing of all labor, materials, tools transportation, services, etc., necessary to complete the installation of the plumbing system and as described in these specifications, as illustrated on the accompanying drawings or as directed by the Architect, work is comprised of but not limited to the following principal items:
1. Select demolition of existing plumbing systems as detailed on drawings and as necessary for installation of all new work including work performed by other trades.
2. All hot and cold water systems with complete connections as detailed on contract documents to all plumbing fixtures and equipment requiring the water connections. These systems will be complete with controls, valves, equipment, devices and insulation.
3. All soil, waste, and vent inside the building as required to connect to new fixtures.
4. Furnishing and setting of plumbing fixtures, including all the required trim, supports and devices.
5. Furnishing of all final plumbing connections to space heating and air conditioning equipment including condensate drains.

1.02 SUBMITTALS:

A. SHOP DRAWINGS:
Within 35 days after award of contract and before any plumbing materials are delivered to the jobsite. Submit to the Architect complete shop drawings, including all plumbing fixtures, trim, drains, cleanouts, piping, valves, insulation, hangers, supports, equipment, and devices proposed to the furnished and installed.

B. RECORD DRAWINGS:
During the progress of the work, maintain an accurate record of all changes made in the plumbing system. The record shall show changes in manufacturer (with numbers and trade names), materials, size, locations, and hook-up points.

1.03 PRODUCT HANDLING

A. PROTECTION:
Use all means necessary to protect plumbing materials before, during and after installation and to protect the installed work and materials of all other trades.

B. REPLACEMENTS:
In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the owner.

1.04 EXAMINATION OF THE SITE:

All contractors submitting proposals for this work shall first examine the site and all conditions therein and/or therein all proposals shall have take into consideration all conditions that may affect the work under this contract lack of the information will not be considered as justification for extra cost or allowances to the contract price. Drawing notes may reference work not explicitly detailed on plans, review of site and site conditions will be required to determine the required scope of work involved. Non selective demolition will begin prior to bidding and may clarify omissions or unforeseen conditions not detailed on drawings.

1.05 COMPLIANCES WITH CODES AND PERMITS:

Comply with all applicable codes, ordinances, safety orders and requirements of the local authorities having jurisdiction. Contractor shall pay all fees miscellaneous costs and shall obtain all permits necessary to carry on the work, before final acceptance of the work. Furnish to the owner certificates of inspections stating that the building department has inspected the work.

1.06 GUARANTEE:

The contractor shall be responsible for all work under this section and shall adjust all valves, controls, vacuum breakers and incidental items and shall leave the system in perfect operating condition. He shall regulate, repair and replace at his own expense any defective workmanship, materials, and equipment, which may become apparent within one year after the date of final acceptance of the work. The decision of the owner shall be final in respect to imperfections. The contractor shall furnish the owner all manufactures written guarantees of materials and equipment, including water heater warranty requirements and water sterilization report.

PART 2.00 PRODUCTS:

2.01 PIPE:

A. SOIL, WASTE AND VENT PIPING:
1. Soil, waste, and vent piping above slab shall be service weight cast iron "no-hub" pipe (CISPI) and heavy duty fittings with neoprene sleeve gaskets with stainless steel bands. Galvanized steel piping may be used for vent piping 2 1/2" and smaller
2. Soil, waste, and vent piping Below slab shall be Schedule 40 PVC with solvent cement fittings. all trenching and bedding shall be performed in accordance with requirements of Local Authority Having Jurisdiction

B. INDIRECT AND CONDENSATE DRAIN LINES:
1. Shall be type DWV copper piping with wrought copper drainage pattern fittings and 95-5 silver solder joint.

C. WATER PIPING ABOVE SLAB:
1. Water piping shall be Type "L", hard drawn copper tubing with solder joint fittings. All materials use in the potable water piping system shall meet the "Lead Free" requirements of the Safe Drinking Water Act".

2.02 VALVES

A. WATER SERVICE
All shutoff valves in water service shall be full port ball valves unless otherwise indicated on the drawings.All materials use in the potable water piping system shall meet the "Lead Free" requirements of the Safe Drinking Water Act".
1. Ball Valves - 150 psi SWP, 600 psi CWP, 2-piece cast bronze body, TFE seats, chrome plated ball, full port, blowout proof stem, soldered end connections.-
-NIBCO #S585-70 or approved equal.
2. Check Valves - Class 125, Y-pattern bronze body, TFE disc seats, soldered end connections.-
-NIBCO #S413-Y or approved equal.

2.03 PIPE SLEEVE AND ESCUTCHEONS:

A. All pipe sleeves and escutcheons shall be "Adjusto-crete" or equal. Sleeves approved in advance by the Architect with ample clearance for pipe and covering and with chrome plated wall and floor escutcheons over pipe in all finished areas.

2.04 HANGERS AND SUPPORTS:

A. Soil, waste, and vent piping on horizontal lines, shall be Fee and Mason #215 adjustable ring hangers. Spaced not more than five feet apart. Water piping shall be Fee and Mason #212 split ring hangers with supporting rods, spaced not more than ten feet apart for 1 1/2" pipe and larger, and six feet apart for 1 1/4" pipe and smaller.

2.05 CLEANOUTS

A. Shall be manufactured by J.R. Smith, Zurn or Josam. See plumbing drawings for details.

2.06 PLUMBING FIXTURES

A. As indicated on drawings

2.07 INSULATION:

A. All Hot, Cold, Return water supply piping, all sizes up to and including 2" (unless otherwise noted on plans) shall be insulated with 1" thick, Mineral fiber insulation with All Service Jacket. Vapor retarding jacket required on all cold water piping. Certainteed Manson, Owens-Corning Fiberglas Corp., or approved equal.

B. All indirect and condensate drain lines shall be insulated with Closed-cell, sponge- or expanded-rubber materials. Comply with ASTM C 534, Type I for tubular materials and Type II for sheet materials, ¾" thick. Armstrong World Industries, Inc., Rubatex Corp., or approved equal.

PART 3.00 EXECUTION

3.01 INSTALLATION

A. All piping shall run concealed except where shown otherwise on drawings. Where piping is run exposed it shall be placed in unimportant and out-of-the way places, an approved by the Architect and painted with color approved by architect.

B. Valves, traps, cleanouts, and other apparatus shall be installed in an easily accessible location.

C. Soil, waste, vent offsets and house drains shall be installed with a minimum uniform grade of 1/4" to the foot unless indicated otherwise.

D. All water pipes shall have a minimum clearance of 1/2" and shall be electrically isolated from building structure and other piping.

E. Hot and cold water lines shall be at least 6" apart where piping is parallel.

F. Pipe isolators shall be installed on all water piping at ring hangers.

G. Isolation fitting shall be installed at all joints where copper or brass pipe or tubing joins ferrous pipe, fittings or equipment.

H. Access panels: Provide and install access panel over all equipment built into walls, floors or ceilings such as valves, cleanouts, etc. Verify location of panels in field with architect prior to rough-in. All shall be of a size suitable for the service intended. Verify before start of any work to insure that neither equipment nor fixtures will get in the way of the access panels after completion.

I. Cleanouts:
1. Cleanouts shall be installed at all changes in direction exceeding 45°, upper terminals not over 100 feet apart in any run, as shown on drawings, and where required by IPC2018 and local plumbing ordinances.
2. Each cleanout shall be fully accessible and so installed as to serve purpose for which it was intended.

J. All fixtures shall be securely attached to supporting surfaces as specified and shall be installed plumb, level. wall hung fixtures shall be securely attached to wood blocking securely framed in.

K. Protection: Provide adequate protection for all equipment and fixtures and leave work in a neat clean condition ready for use and operation acceptable to the Architect.

J. Cutting and patching: The contractor shall do all cutting and patching and shall provide all opening together with lintels and supports which may be required for the installation of the work under this section of specifications. Patching shall be of the same materials, workmanship and finish as and shall accurately match all surrounding construction.

K. Insulation: Piping insulation shall be installed or applied per the manufactures written instructions.

3.02 PLUMBING FIXTURES

A. See drawing for plumbing fixture specifications and manufacturers. Furnish and install all supports necessary for the required fixtures. Plumbing fixtures shall not under any circumstances be supported by plumbing connections. All like plumbing fixtures shall be of one manufacturer except where changes are approved in writing by the Architect.

B. All plumbing fixtures shall be provided with water, drain, and vent connections as shown on the drawings and as required by IPC2018 and any applicable plumbing ordinances. Fixture drains and floor drains shall have traps; factory-type shock absorbers shall be used on hot and cold water lines. All piping shall have chrome plated cast brass floor and wall escutcheons.

C. All faucets shall be equipped with renewable seats or cartridges. All exposed metal parts of fixtures shall be chrome plated.

D. The contractor will be held responsible for the proper protection of all fixtures after installation until the project is completed and accepted.

3.03 CONNECTIONS TO EQUIPMENT FURNISHED AND INSTALLED BY OTHERS:

A. Plumbing connections to space heating and air conditioning equipment
1. Make-up water connections.
2. Condensate drains

3.04 TESTING:

All work shall be tested under the supervision of the representative of the Architect and shall be inspected by all authorities having jurisdiction over this work.

A. Test shall be made on the various parts of the systems as required by governing authorities and shall be paid for by this contractor.

B. Minimum test required shall be: Pressure tests: turn over all test charts to owners representative
1. System Tested Gauge Pressure at start of test. The gauge pressure after 4hrs.
Water piping: start 125 pounds, 110 pounds minimum after time period.
2. Fuel Gas: starting 75 psi, 70 psi minimum after time period of 4 hrs.
3. Sewer, waste and vent piping: Test in accordance with IPC2018. Maintain record of each test.

C. Operating Test:
1. Test shall be performed before the final acceptance and under the supervision of the Architect and/or owner/operator of the tests shall be eight (8) hours. The contractor shall furnish all labor and instruments for the tests.
2. Test shall demonstrate that there is free and equal circulation from each part of the piping systems as well as satisfactory operation of all valves, pumps, equipment, automation controls, etc.

D. Should the contractor refuse or neglect to make any tests necessary to satisfy the owner or his representative that he has carried out the true intent and meaning of the specifications. The owner may make such tests and charge the expense there of to the contractor.

3.05 CLEANING PIPING SYSTEMS:

After the piping systems have been tested and proved tight, the contractor shall clean the various systems, including strainers of dirt, scale, oil, grease, waste and other foreign substances, which may have accumulated during the process of installation. The entire waste system from floor drains and floor sinks shall be cleaned with a mechanical snake rooter to insure clean free-flowing waste lines. All chrome-plated parts and pipe shall be polished in general system shall be left in a clean, neat and usable condition.

3.06 WATER SYSTEM STERILIZATION:

Before any use of system is made for domestic purposes, it shall be sterilized by slowly filling with water to which a sterilizing agent has been applies. At a rate giving 50 PPM of Chlorine, as determined by residual chlorine test at extremities of the line. After lines have been filled for a period of three (3) hours. Tests for residual chlorine shall show not less the 50 PPM. If less that 50 PPM is indicated. Drain or flush out the line and repeat striation treatment unit test indicate at least 50 PPM of residual chlorine after three (3) hours. The lines shall then be flushed out until all traces of chemical have been removed.

3.07 GROUTING:

Grout behind all wall hung plumbing fixtures with hard, white durable plaster materials, Eliminating all voids and cracks and providing sufficient plane-bearing surface for mounting.

3.09 ADJUSTING:

Upon completion of system and after cleaning of equipment. Automatic parts of plumbing systems shall be carefully adjusted for normal operation.

PLUMBING FIXTURE LIST

**********Note: Refer to Specification Sections 22 1006 and 22 4000 for complete fixture specifications.**********

FIXTURE TAG	FIXTURE DESCRIPTION	FIXTURE SPECIFICATIONS	DRAIN ROUGH IN CONNECTION	WATER ROUGH IN CONNECTION	
				HOT	COLD
EWC-1	Electric Water Cooler with Bottle Filler Surface Mounted	Electric Water Cooler with Bottle Filler, Single-Level, Filtered - 18ga 304 Stainless Steel body panels - Elevated anti-squirt bubbler with flexible mouth guard - Bottle filler mounted in ABS alcove above lower bowl w/sensor operation and Green Ticker - Cane Touch Skirt (where required for compliance with ANSI A117.1) Basis of Design: Elkay Model: LZS8WSSP	1-1/2"	----	1/2"
EWC-2	Electric Water Cooler with Bottle Filler Bi-Level Surface Mounted	Electric Water Cooler with Bottle Filler, Bi-Level, Filtered - 18ga 304 Stainless Steel body panels - Elevated anti-squirt bubbler with flexible mouth guard - Bottle filler mounted in ABS alcove above lower bowl w/sensor operation and Green Ticker - Cane Touch Skirt (where required for compliance with ANSI A117.1) Basis of Design: Elkay Model: LZSTL8WSSP	1-1/2"	----	1/2"
FCO-1	Floor Cleanout	Floor Cleanout - Cast iron body with flashing clamp - Twist to Floor adjustable Nickel Bronze top - Cover type coordinated with floor finish Basis of design: J.R. Smith Model 4020	Refer to Plans	----	----
FD-1	Floor Drain General Purpose	Floor Drain - Cast iron body with flashing clamp - 5" Nickel Bronze strainer - Deep Seal P-Trap w/ProSet Trap Guard seal protection. Basis of design: J.R. Smith Model 2005-NB	Refer to Plans	----	----
FD-2	Floor Drain Storage Rooms Mechanical Rooms	Floor Drain - Cast iron body with flashing clamp - 7" Nickel Bronze strainer - Deep Seal P-Trap w/ProSet Trap Guard seal protection. Basis of design: J.R. Smith Model 2350-MBG	Refer to Plans	----	----
NFWH	Hose Bibb	Hose bibb/wall hydrant - Chrome plated, Half turn operation w/Interchangeable Wheel handle/Loose Key operation - Anti-Siphon Vacuum Breaker (ASSE 1011 compliant) Basis of design: 55519-WC-CL-NB (verify wall thickness in field)	-----	-----	1/2"
LAV-1	Lavatory (Toilet Rooms)	Basin: - Wall hung, Vitreous China, ADA/ANSI A117.1 compliant - White Basis of Design: American Standard: Lucerne 0355.012 Faucet: - Chrome Plated Cast Brass, Lever handle, Manual faucet, 0.5 gpm Vandal Resistant aerator. Basis of Design: Moen Commercial: 8215F05 Accessories: - Floor mounted concealed arm carrier - Below deck ASSE-1070 compliant mixing valve - Truebro Lav Guard supply and drain insulating covers. - Chrome plated, Lead Free, Commercial grade, quarter turn Loose Key Angle Stops - Chrome plated copper supplies - In wall carrier	1-1/2"	1/2"	1/2"
MR-1	Mop Receptor with Utility Faucet	Base: - 32"x32"x12"H, Terazzo mop receptor basin **- Basis of Design: Acorn TNC-32** Faucet: - Chrome plated, wall mounted utility faucet w/Integral Vacuum Breaker, integral check stops, 3/4 GHT outlet, Wrist blade handles, Wall brace, and pail hook. **- Basis of Design: Moen Commercial, Model 8124** Accessories: - Quick connect drain fitting, (3) bracket Mop Hanger, 30" hose and hose bracket - Stainless Steel wall guards - Refer to detail for additional information.	3"	1/2"	1/2"
SH-1	Shower (Team Rooms)	Shower: - By G.C. Drain: Provide FD-1 w/ Sediment Bucket Option Controls: - Pressure Balancing Thermostatic Valve - ASSE 1016T/P, manual lever control - Low flow 1.5 gpm shower head Basis of design: Powers Controls: Hydropanel II Model 450-7101	2"	1/2"	1/2"
SH-1A	Shower (Team Rooms ADA)	Shower: - By G.C. Drain: Provide FD-1 w/ Sediment Bucket Option Controls: - Pressure Balancing Thermostatic Valve - ASSE 1016T/P, manual lever control - Low flow 1.5 gpm shower head Basis of design: Powers Controls: Hydropanel II Model 450-7108 w/following options: ES-P-141-150 Low Flow Handshower with non-positive shutoff device, 141804A quick disconnect coupling, and 141161D Wall hook	2"	1/2"	1/2"
UR-1	Urinal Wall Hung (Toilet Rooms)	Bowl: - Wall Hung, Vitreous China - Concealed floor mounted carrier Basis of Design: American Standard Inc; Model: Washbrook 6590.001EC Flush Valve: - 0.5 gpf - Exposed Chrome Plated Brass w/integral angle stop - Manual Operated, 0.5 gpf, Exposed chrome plated cast brass Basis of design: Sloan Valve Company; Model: Royal 186-0.5	2"	----	3/4"
WC-1	Water Closet Floor Mount (Toilet Rooms)	Bowl: - Elongated, Floor mounted, Floor outlet, Tank Type with Locking Lid - ASME A112.19 compliant - Vitreous China, white w/everclean antimicrobial finish Basis of Design: American Standard: Cadet 2462016.020 Seat: Plastic Open Front Seat, white, with self sustaining check hinge	4"	----	1/2"
WC-1A	Water Closet Floor Mount (Toilet Rooms)	Bowl: - Elongated, Floor mounted, Floor outlet, Tank Type with Locking Lid - ICC/ANSI A117.1 & ASME A112.19 compliant - Vitreous China, white w/everclean antimicrobial finish Basis of Design: American Standard: Cadet 2467016.020 Seat: Plastic Open Front Seat, white, with self sustaining check hinge	4"	----	1/2"

NOTES:
1. P.C. shall coordinate all "Accessible" fixture locations with Architectural plans prior to rough in.
2. Refer to Architectural drawings for all fixture mounting heights.
3. At all "Accessible" water closet compartments, installation of flush controls shall comply with ANSI 117.1.
4. Provide deep seal trap and Proset Trapguard trap seal protection in all floor drains. Refer to plans for outlet size/trap size.

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5
ARCHITECTURE

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN ASSOCIATES, INC.

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEFFREY RYAN MACHIK
ENGINEER
PE083135

SHEET TITLE:

SPECIFICATIONS - PLUMBING

DATE: 02/16/24
SCALE:
DRAWN BY: KP
CHECKED BY: KJF
PROJ NO: 22-0073

P4.01

ELECTRICAL LEGEND

NOTE: NOT ALL DEVICES SHOWN ON THE LEGEND ARE USED ON THIS PROJECT

?	LED LIGHT FIXTURE (UPPER CASE LETTER DENOTES TYPE, LOWER CASE LETTER DENOTES SWITCHING GROUP)
E ?	LIGHT FIXTURE WITH EMERGENCY LAMP SOCKET
?	INCANDESCENT, LED, FLUORESCENT OR H.I.D. LIGHT FIXTURE
?	NORMAL-EMERGENCY LIGHT FIXTURE
?	EMERGENCY ONLY LIGHT FIXTURE
	WALL SCONCE
	EXIT SIGN
	EMERGENCY BATTERY UNIT
	REMOTE HEAD
	DOUBLE REMOTE HEAD
S	SINGLE POLE SWITCH (LOWER CASE LETTER DENOTES GROUP TO BE SWITCHED)
S_D	DIMMER SWITCH
S_{LV}	LOW VOLTAGE SWITCH
S_T	CAPACITIVE TOUCH SCREEN LIGHTING CONTROL PANEL
S_3	3-WAY SWITCH
S_4	4-WAY SWITCH
S_F	FAN SWITCH
S_K	KEY SWITCH
S_M	MOMENTARY-CONTACT SWITCH
S_{OR}	OVERRIDE SWITCH
S_P	SWITCH WITH PILOT LIGHT
OS	OCCUPANCY SENSOR (CEILING-MOUNTED)
DS	DAYLIGHT SENSOR (CEILING-MOUNTED)
OS	OCCUPANCY SENSOR (WALL-MOUNTED)
OS	DUAL-TECH OCCUPANCY SENSOR (CORNER-MOUNTED)
OS	CORRIDOR OCCUPANCY SENSOR
US	ULTRASONIC 360° OCCUPANCY SENSOR (CEILING-MOUNTED)
BR / GTD	EMERGENCY LIGHTING RELAY
CP	OCCUPANCY SENSOR CONTROL/ POWER PACK
DM	DIGITAL LIGHTING ROOM CONTROLLER
CT	DUPLEX CONVENIENCE OUTLET (CT DENOTES COUNTERTOP HEIGHT)
DC	DUPLEX OUTLET SUSPENDED FROM DROP CORD
	DUPLEX ISOLATED GROUND OUTLET
	DOUBLE DUPLEX (QUADRUPLEX) OUTLET
	QUADRUPLEX ISOLATED GROUND OUTLET
	SPECIAL PURPOSE OUTLET
R	RANGE OUTLET, 50AMP 3 WIRE
	TELEPHONE OUTLET (POTS LINE)
	TELEPHONE OUTLET (PROVIDE (1) DATA DROP)
W	WALL-MOUNTED TELEPHONE OUTLET (PROVIDE (1) DATA DROP)
#	COMPUTER OUTLET (NUMBER DENOTES NUMBER OF JACKS. WHERE NO NUMBER IS SHOWN, PROVIDE TWO JACKS MINIMUM.)
	WIRELESS ACCESS POINT. PROVIDE TWO DATA DROPS IN CEILING OR ON WALL FOR EACH LOCATION INDICATED. FIELD COORDINATE TERMINATION/ PLATE TYPE WITH OWNER PROVIDED DEVICE REQUIREMENTS.
	BLANK PLATE
SB	SMARTBOARD
PP	PROJECTOR PLATE
	MOTOR
	DISCONNECT SWITCH (FUSED OR NON-FUSED AS INDICATED ON DRAWING)
	FRACTIONAL HORSEPOWER MANUAL MOTOR STARTER/DISCONNECT
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH
	MOTOR STARTER
	FRACTIONAL MOTOR STARTER
PP	POWER POLE
J	JUNCTION BOX
	WIRING CONCEALED ABOVE CEILING OR IN WALL. CROSS LINES INDICATE NUMBER OF #12 A.W.G. WIRES IN A 3/4" CONDUIT. GROUND WIRES ARE NOT SHOWN. NO CROSS LINES INDICATE (2)#12 A.W.G., (1)#12 A.W.G. GROUND IN A 3/4" CONDUIT.
	WIRING CONCEALED BELOW GRADE OR FLOOR
	CIRCUIT HOME RUN WITH CIRCUIT NUMBER INDICATED
	NORMAL-EMERGENCY OR EMERGENCY ONLY BRANCH CIRCUIT WIRING
	PLUGMOLD
T	TRANSFORMER

F	FIRE ALARM PULL STATION
F #	WALL-MOUNTED AUDIOVISUAL FIRE ALARM DEVICE. # INDICATES CANDELA RATING. WHERE NO NUMBER IS INDICATED, PROVIDE DEVICE WITH 15 CANDELA RATING.
VO F #	WALL-MOUNTED VISUAL-ONLY FIRE ALARM DEVICE. # INDICATES CANDELA RATING. WHERE NO NUMBER IS INDICATED, PROVIDE DEVICE WITH 15 CANDELA RATING.
F	FIRE ALARM BELL
F #	CEILING-MOUNTED AUDIOVISUAL FIRE ALARM DEVICE. # INDICATES CANDELA RATING. WHERE NO NUMBER IS INDICATED, PROVIDE DEVICE WITH 15 CANDELA RATING.
VO F #	CEILING-MOUNTED VISUAL-ONLY FIRE ALARM DEVICE. # INDICATES CANDELA RATING. WHERE NO NUMBER IS INDICATED, PROVIDE DEVICE WITH 15 CANDELA RATING.
A	CEILING-MOUNTED AUDIO ONLY FIRE ALARM DEVICE.
	SMOKE DETECTOR
H	HEAT DETECTOR
D	DUCT SMOKE DETECTOR
CO	CARBON MONOXIDE DETECTOR
FS	SPRINKLER SYSTEM FLOW SWITCH (BY OTHERS)
TS	SPRINKLER SYSTEM TAMPER SWITCH (BY OTHERS)
PS	SPRINKLER SYSTEM PRESSURE SWITCH (BY OTHERS)
RAC	RESCUE ASSISTANCE REMOTE CALL STATION
RAM	RESCUE ASSISTANCE MASTER STATION/ANNUNCIATOR PANEL
S	SPRINKLER SYSTEM ELECTRIC MOTOR GONG
D	DOORBELL
D	DOOR HOLDER - FIRE ALARM SYSTEM
IAM	INDIVIDUAL ADDRESSABLE MODULE - FIRE ALARM SYSTEM
ZAM	ZONE ADDRESSABLE MODULE - FIRE ALARM SYSTEM
CZAM	CONTROL RELAY ZONE ADDRESSABLE MODULE - F/A SYSTEM
REX	REQUEST-TO-EXIT DETECTOR
C S	CLOCK, SPEAKER UNIT
C	WALL MOUNTED CLOCK
2 C	DOUBLE FACE CLOCK
CR	CORD REEL WITH 20A 120V OUTLET
E E	EXISTING DEVICES TO REMAIN
M	MICROPHONE JACK - SOUND SYSTEM
S	PUBLIC ADDRESS/INTERCOM SPEAKER (FLUSH, CEILING-MOUNTED)
S	PUBLIC ADDRESS/INTERCOM SPEAKER (SURFACE, CEILING-MOUNTED)
	PUBLIC ADDRESS/INTERCOM SPEAKER (SURFACE, WALL-MOUNTED)
S	PUBLIC ADDRESS/INTERCOM SPEAKER (FLUSH, WALL-MOUNTED)
V	PUBLIC ADDRESS/ INTERCOM VOLUME CONTROL
I	INTERCOM DOOR STATION
IM	INTERCOM MASTER STATION
	MOTION DETECTOR - SECURITY SYSTEM
P	CEILING MOUNTED, 360° MOTION DETECTOR
	DOOR MAGNET CONTACT - SECURITY SYSTEM
	SECURITY CAMERA
S	ALARM HORN - SECURITY SYSTEM
ES	ELECTRIC DOOR STRIKE
CR	CARD READER
K	KEY PAD
R	RESET KEYSWITCH STATION
P	PUSH PLATE
	EMERGENCY OFF PUSH-BUTTON
K	EMERGENCY KILLSWITCH
	GAS SOLENOID VALVE

ELECTRICAL ABBREVIATIONS

A/a	AMPERE
A.F.F.	ABOVE FINISHED FLOOR
AFI	ARC FAULT INTERRUPTER RECEPTACLE
ARCH.	ARCHITECT
ATS	AUTOMATIC TRANSFER SWITCH
AUX.	AUXILIARY
A/V	AUDIOVISUAL
AWG.	AMERICAN WIRE GAUGE
BEPs	BUILDING ENTRANCE PROTECTORS
BKR.	BREAKER
CKT.	CIRCUIT
CLG.	CEILING
COND.	CONDUIT
CT	COUNTERTOP
DISC.	DISCONNECT
DN	DOWN
DWG.	DRAWING
E.C.	ELECTRICAL CONTRACTOR
EM.	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER (PROVIDE GROUND FAULT PROTECTION)
EXIST./EX./E	EXISTING
F.A.	FIRE ALARM
G.C.	GENERAL CONTRACTOR
GEN.	GENERATOR
GFI	GROUND FAULT INTERRUPTER RECEPTACLE
GND.	GROUND
H.C.	HEATING CONTRACTOR
HD	HAND DRYER
HWH	HOT WATER HEATER
IDF	INTERMEDIATE DISTRIBUTION FRAME
MAX.	MAXIMUM
M.C.	MECHANICAL CONTRACTOR
MDF	MAIN DISTRIBUTION FRAME
MIN.	MINIMUM
MTD.	MOUNTED
N/E	NORMAL EMERGENCY
P	POLE
P.C.	PLUMBING CONTRACTOR
PNL.	PANEL
POTS	PLAIN OLD TELEPHONE SERVICE
PTZ	PAN, TILT, ZOOM
S.F.	SQUARE FEET
SW.	SWITCH
TR	TAMPER RESISTANT
TYP.	TYPICAL
U/E	UNDERGROUND ELECTRIC
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
W/	WITH
W/O	WITHOUT
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER

EQUIPMENT TAG LEGEND

NOTE : NOT ALL TAGS SHOWN ON THE LEGEND ARE USED ON THIS PROJECT

ACC X	AIR-COOLED CHILLER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
ACU X	AIR-COOLED CONDENSOR - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
AHU X	AIR HANDLING UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
ATC X	AUTOMATIC TEMPERATURE CONTROL DAMPER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
B X	BOILER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
BF X	BOOSTER FAN - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
CH X	CABINET HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
CHP X	CONSOLE HEAT PUMP - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
CP X	CONDENSATE PUMP - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
CT X	COOLING TOWER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
CU X	CONDENSING UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
CV X	CONSTANT VOLUME BOX - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
DHU X	DEHUMIDIFICATION UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
DSS X	DUCTLESS SPLIT SYSTEM - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
ECH X	ELECTRIC CABINET HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
EDC X	ELECTRIC DUCT COIL - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
EF X	EXHAUST FAN - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
ER X	ELECTRIC RADIATION - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
FH X	FUME HOOD - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
FPV X	FAN-POWERED VAV BOX - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
FTP X	FUEL TRANSFER PUMP - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
GF X	GAS FURNACE - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
GUH X	GAS-FIRED UNIT HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
H X	HUMIDIFIER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
HP X	HEAT PUMP - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
HRU X	HEAT RECOVERY UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
IFR X	INFRARED HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
MAU X	MAKEUP AIR UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
P X	PUMP - SUPPLIED AND INSTALLED BY OTHERS, FINAL CONNECTION BY E.C.
PTAC X	PACKAGED THRU-WALL A/C UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
RF X	RETURN AIR FAN - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
RTU X	ROOFTOP UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
SF X	SUPPLY FAN - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
SS X	SPLIT SYSTEM - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
UH X	UNIT HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
UV X	UNIT VENTILATOR - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
VAV X	VARIABLE AIR VOLUME BOX - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
WH X	WALL HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
WHP X	WATER SOURCE HEAT PUMP - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.

ELECTRICAL GENERAL NOTES

1.	UNLESS OTHERWISE INDICATED, WIRE SIZES SHALL BE AS FOLLOWS: 20A #12, 30A #10, 40A #8, 50A #6, 70A #4, 100A #1.	
2.	LIGHTING LAYOUT IS DIAGRAMMATICAL. E.C. SHALL COORDINATE LIGHTS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND OTHER TRADES AND ADJUST AS REQUIRED.	
3.	ALL ROOF AND EXTERIOR-MOUNTED, GROUND-FAULT RECEPTACLES SHALL HAVE LOCKABLE "IN-USE" WEATHERPROOF COVERS. IN ADDITION TO THE WEATHERPROOF GFI RECEPTACLES SHOWN ON THE DRAWINGS, THE E.C. SHALL PROVIDE AND INSTALL (2) ADDITIONAL WEATHERPROOF GFI RECEPTACLES TO BE MOUNTED AS DIRECTED IN THE FIELD BY THE OWNER. EACH OF THE RECEPTACLES SHALL HAVE 50' OF BRANCH CIRCUIT WIRING TO CONNECT TO THE NEAREST AVAILABLE RECEPTACLE CIRCUIT. E.C. SHALL ASSUME COMPLETE CONSTRUCTION DURING THE INSTALLATION OF THESE RECEPTACLES.	
4.	E.C. SHALL REFER TO ARCHITECTURAL INTERIOR AND EXTERIOR ELEVATIONS TO COORDINATE THE ELECTRICAL DEVICE LOCATIONS. WHERE CONFLICTS OCCUR, CONTACT THE ARCHITECT FOR A MOUNTING HEIGHT AND LOCATION PRIOR TO ROUGHING IN.	
5.	THE E.C. SHALL NOT INSTALL ANY CONDUITS WITHIN ANY OF THE ELEVATED FLOOR SLABS. ANY CONDUITS INSTALLED BELOW THE SLAB ON GRADE SHALL BE INSTALLED IN THE STONE BASE AND NOT WITHIN THE CONCRETE.	
6.	GFI RECEPTACLES SHOWN ON DRAWINGS ARE NOT ALL-INCLUSIVE. E.C. SHALL PROVIDE GFI RECEPTACLES IN KITCHEN, SERVING AREAS, AND WHERE LOCATED WITHIN 6FT OF SINK BASINS AS REQUIRED PER THE NEC. E.C. SHALL ALSO PROVIDE ALL ARC-FAULT, TAMPER RESISTANT, WEATHER-RESISTANT, AND GFI RECEPTACLES WHERE REQUIRED BY THE NEC FOR EACH RECEPTACLE LOCATION SHOWN ON THE DRAWINGS AND AS REQUIRED FOR BUILDING TYPE AND OCCUPANCY GROUP.	
7.	THE E.C. SHALL VERIFY ROUGH-IN LOCATION FOR ELECTRIC WATER COOLER (EWC) RECEPTACLE WITH P.C. BEFORE DOING ANY WORK. PROVIDE OUTLET, CORD AND PLUG FOR REMOTE CHILLER MOUNTED ABOVE CEILING. PROVIDE GFI-TYPE RECEPTACLES FOR ALL EWCs.	
8.	THE E.C. SHALL INCLUDE IN THE ELECTRICAL BID FOR THE POST-CONSTRUCTION ADJUSTMENT OF THE OCCUPANCY SENSORS AS DIRECTED BY THE ARCHITECT OR OWNER. THIS SHALL INCLUDE ADJUSTMENT OF THE TIME AND SENSITIVITY OF THE DEVICES. ALSO INCLUDE THE COST TO RELOCATE (2) SENSORS UP TO 25' IN ORDER TO ELIMINATE FALSE TRIPPING OF THE SENSORS.	
9.	DEVICE MOUNTING HEIGHTS AS FOLLOWS:	
	RECEPTACLES	18" ABOVE FINISHED FLOOR TO CENTER OF BOX
	CT RECEPTACLES	3" ABOVE COUNTERTOP OR 1" ABOVE BACKSPLASH
	SWITCHES	48" ABOVE FINISHED FLOOR TO TOP OF BOX
	FIRE ALARM PULL STATIONS	THE OPERABLE PART (PULL HANDLE) OF EACH MANUAL FIRE ALARM BOX SHALL BE NOT LESS THAN 42" AND NOT MORE THAN 48" A.F.F.
	PANELS	54" TO CENTERLINE
	FIRE ALARM A/V UNITS	UNLESS OTHERWISE NOTED, ALL WALL-MOUNTED AUDIOVISUAL OR VISUAL-ONLY DEVICES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" A.F.F.
	WALL MOUNTED TELEPHONES	48" ABOVE FINISHED FLOOR TO TOP OF BOX

OCCUPANCY SENSOR SCHEDULE

SYMBOL	MANUFACTURER	MODEL #	COVERAGE AREA SQ. FT.	SENSOR TYPE	ADDITIONAL REMARKS
OS	WATTSTOPPER	WS-301	900	INFRARED	WALL MOUNTING
OS	WATTSTOPPER	DT-200	2000	DUAL TECHNOLOGY	WALL OR CEILING MOUNTING
OS	WATTSTOPPER	DT-300	1000	DUAL TECHNOLOGY	360° CEILING MOUNTING
OS	WATTSTOPPER	WT-2255	90 LINEAL FEET	ULTRASONIC	CEILING MOUNTED CORRIDOR SENSOR
US	WATTSTOPPER	UT-355-2	1000	ULTRASONIC	CEILING MOUNTED
OS_D	WATTSTOPPER	DW-311	900	INFRARED, DIMMING	WALL MOUNTING

NOTES: DISABLE SMART SET TECHNOLOGY IN ALL SPACES.

CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OCCUPANCY SENSORS WITH MANUFACTURER PRIOR TO ROUGH-IN

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PROJECT TEAM:

ARCHITECT:
ALLOY5
ARCHITECTURE

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN ASSOCIATES, INC.

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

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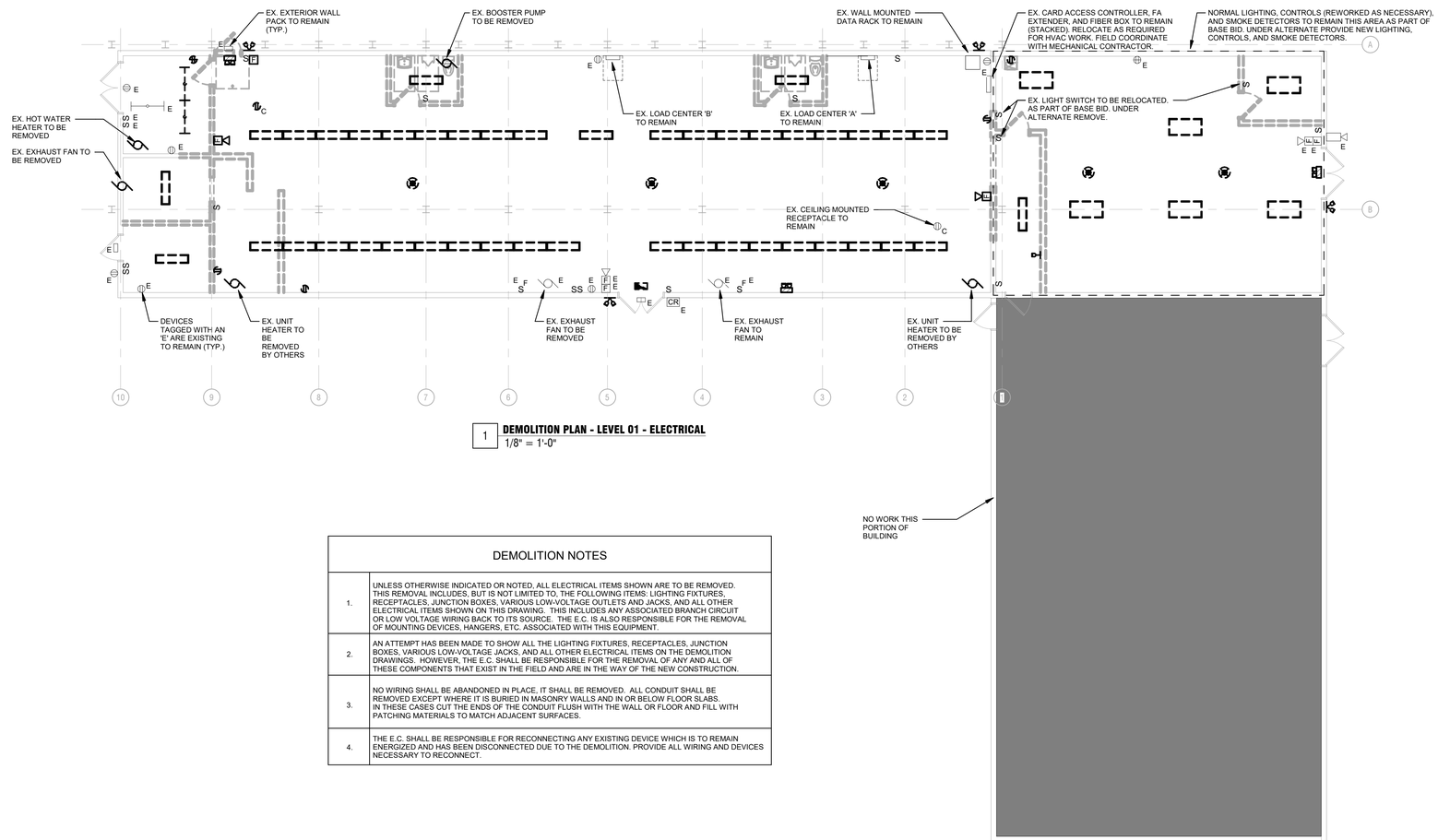
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEFFREY RYAN MACHIK
ENGINEER
PE083135

SHEET TITLE:

COVER SHEET - ELECTRICAL

DATE:	02/16/24
SCALE:	NO SCALE
DRAWN BY:	DAN
CHECKED BY:	DAN
PROJ NO:	22-0073

E0.00



1 **DEMOLITION PLAN - LEVEL 01 - ELECTRICAL**
1/8" = 1'-0"

DEMOLITION NOTES	
1.	UNLESS OTHERWISE INDICATED OR NOTED, ALL ELECTRICAL ITEMS SHOWN ARE TO BE REMOVED. THIS REMOVAL INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING ITEMS: LIGHTING FIXTURES, RECEPTACLES, JUNCTION BOXES, VARIOUS LOW-VOLTAGE OUTLETS AND JACKS, AND ALL OTHER ELECTRICAL ITEMS SHOWN ON THIS DRAWING. THIS INCLUDES ANY ASSOCIATED BRANCH CIRCUIT OR LOW VOLTAGE WIRING BACK TO ITS SOURCE. THE E.C. IS ALSO RESPONSIBLE FOR THE REMOVAL OF MOUNTING DEVICES, HANGERS, ETC. ASSOCIATED WITH THIS EQUIPMENT.
2.	AN ATTEMPT HAS BEEN MADE TO SHOW ALL THE LIGHTING FIXTURES, RECEPTACLES, JUNCTION BOXES, VARIOUS LOW-VOLTAGE JACKS, AND ALL OTHER ELECTRICAL ITEMS ON THE DEMOLITION DRAWINGS. HOWEVER, THE E.C. SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY AND ALL OF THESE COMPONENTS THAT EXIST IN THE FIELD AND ARE IN THE WAY OF THE NEW CONSTRUCTION.
3.	NO WIRING SHALL BE ABANDONED IN PLACE, IT SHALL BE REMOVED. ALL CONDUIT SHALL BE REMOVED EXCEPT WHERE IT IS BURIED IN MASONRY WALLS AND IN OR BELOW FLOOR SLABS. IN THESE CASES CUT THE ENDS OF THE CONDUIT FLUSH WITH THE WALL OR FLOOR AND FILL WITH PATCHING MATERIALS TO MATCH ADJACENT SURFACES.
4.	THE E.C. SHALL BE RESPONSIBLE FOR RECONNECTING ANY EXISTING DEVICE WHICH IS TO REMAIN ENERGIZED AND HAS BEEN DISCONNECTED DUE TO THE DEMOLITION. PROVIDE ALL WIRING AND DEVICES NECESSARY TO RECONNECT.

PROJECT:

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PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5
ARCHITECTURE

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN ASSOCIATES, INC.

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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ENGINEER
PE083135

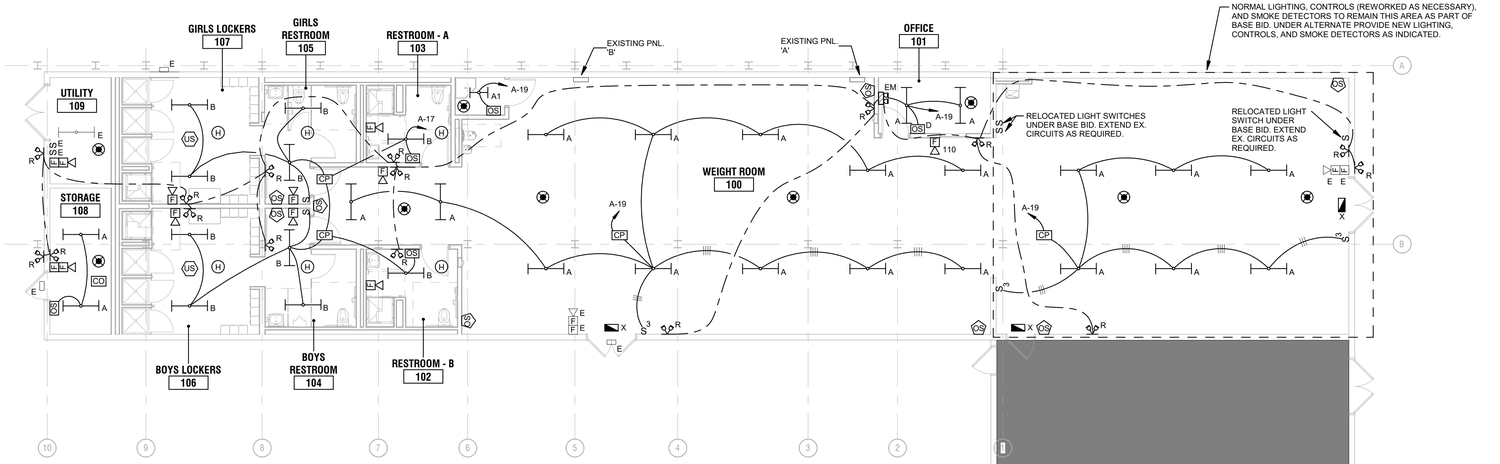
SHEET TITLE:

DEMOLITION PLAN - LEVEL 01 - ELECTRICAL

DATE:	02/16/24
SCALE:	As indicated
DRAWN BY:	DAN
CHECKED BY:	DAN
PROJ NO:	22-0073

E0.01

Lighting Fixture Schedule									
Type	Apparent Load	Manufacturer	Catalog Number	Mounting	Total Depth	No. of Lamps	Lamp Type	Voltage	Additional Remarks
A	44 VA	ILP	VS4-6L-U-40-FRL	SURFACE	N/A	LED	5660LU LED 4000K	UNV	STRIP LIGHT. MOUNT TIGHT TO STRUCTURE.
A1	19 VA	ILP	VS2-2L-U-50-FRL	SURFACE	N/A	LED	2501LU LED 5000K	UNV	STRIP LIGHT. MOUNT TIGHT TO STRUCTURE.
B	32 VA	ILP	VVT4-4L-U-40-FRL	SURFACE	N/A	LED	4524LU LED 4000K	UNV	VAPOR TIGHT. MOUNT TIGHT TO STRUCTURE.
EM	360 VA	EVENLITE	H-6E360-2-L247-SD	WALL	N/A	(2) PAR 18	7W	UNV	EMERGENCY BATTERY PACK W/ (2) HEADS.
R	14 VA	EVENLITE	ER4X-2-L247	WALL	N/A	LED	LED	24V DC	DOUBLE REMOTE HEAD. NEMA 4X RATED.
X	3 VA	EVENLITE	AUR-1-BA-CN	UNIVERSAL	N/A	LED	LED	UNV	SINGLE FACE HYBRID EXIT SIGN. PROVIDE CHEVRONS AS INDICATED.



1 **FLOOR PLAN - LEVEL 01 - LIGHTING**
1/8" = 1'-0"

GENERAL LIGHTING NOTES:

1. REFER TO E0.00 FOR LEGEND AND GENERAL NOTES.
2. CIRCUIT ALL EXIT SIGNS TO NEAREST AVAILABLE UN-SWTICHED LIGHTING CIRCUIT.
3. NOT ALL CIRCUITING SHOWN. PROVIDE ALL REQUIRED SWITCH LEGS AND LOW-VOLTAGE WIRING AS REQUIRED FOR A FULLY FUNCTIONING LIGHTING SYSTEM.

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5
ARCHITECTURE

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN ASSOCIATES, INC.

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

ALLOY5
ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEFFREY RYAN MACHIK
ENGINEER
PE083135

SHEET TITLE:

FLOOR PLAN - LEVEL 01 - LIGHTING

DATE:	02/16/24
SCALE:	As indicated
DRAWN BY:	DAN
CHECKED BY:	DAN
PROJ NO:	22-0073

E1.01

Branch Panel: A

Location: WEIGHT ROOM 100
Supply From:
Mounting: Surface
Enclosure: Type 1
Modifications:

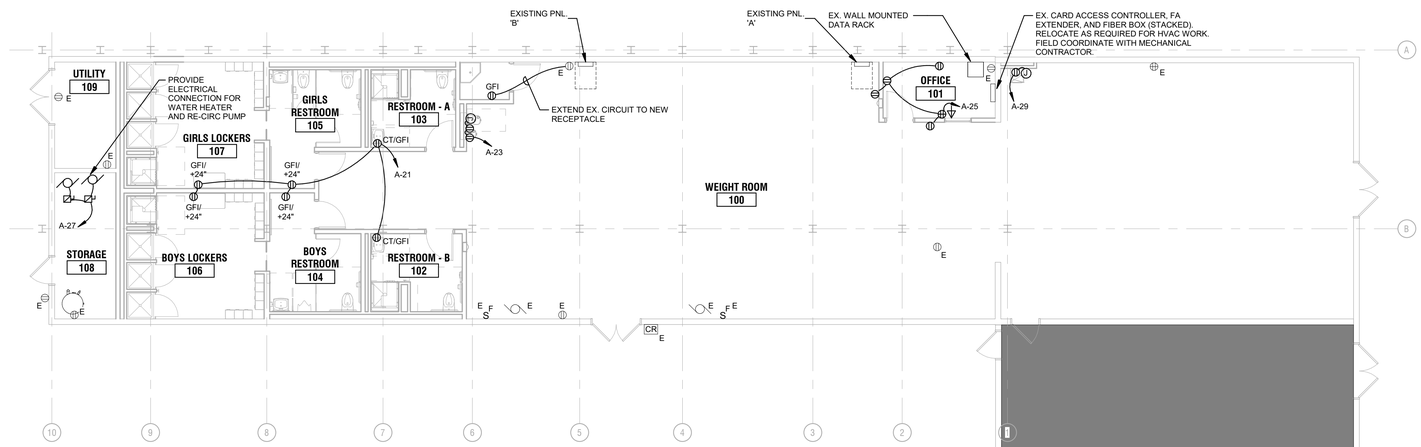
Volts: 120/240 Single
Phases: 1
Wires: 3

A.I.C. Rating: 10,000
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

CKT	Poles	Trip	Circuit Description	Phase A (VA)	Phase B (VA)	Circuit Description	Trip	Poles	CKT
1	*1*	*15 A*	*Ex. Load*	0 / 0		*Main Disconnect*	*100 A*	*2*	2
3	*1*	*20 A*	*Ex. Load*		0 / 0	--	--	--	4
5	*1*	*20 A*	*Ex. Load*	0 / 0		*Parking Lot Floods*	*20 A*	*1*	6
7	*1*	*20 A*	*Ex. Load*		0 / 0	*Ex. Load*	*20 A*	*1*	8
9	*1*	*20 A*	*Ex. Load*	0 / 0		*Ex. Load*	*20 A*	*1*	10
11	*1*	*20 A*	*Ex. Load*		0 / 0	*Ex. Load*	*20 A*	*1*	12
13	*2*	*60 A*	*Panel 'B'*	0 / 0		*Ltg - West*	*20 A*	*1*	14
15	--	--	--		0 / 0	*Fire Alarm*	*20 A*	*1*	16
17	**1**	**20 A**	**Ltg - Lockers**	408 / 0		*C-Cure Access Control*	*20 A*	*1*	18
19	**1**	**20 A**	**Ltg - Weight Rm, EM Batt.**		1279 / 0	*Spare*	*20 A*	*1*	20
21	**1**	**20 A**	**Rcpts - Lockers**	1080 / 0		*Space*	--	*1*	22
23	**1**	**20 A**	**EWC - Weight Room***		360 / 0	*Space*	--	*1*	24
25	**1**	**20 A**	**Rcpts - Office**	1080 / 0		*Space*	--	*1*	26
27	**1**	**20 A**	**Water Heater**		960 / 0	*Space*	--	*1*	28
29	**1**	**20 A**	**EWC - Weight Room***	180 / 0		*Space*	--	*1*	30
31	*1*	--	*Space*		0 / 0	*Space*	--	*1*	32
				2748 VA	2589 VA				
				23 A	22 A				

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
				Total Conn. Load:	5332 VA
				Total Est. Demand:	5332 VA
				Total Conn. Current:	22 A
				Total Est. Demand...	22 A

Notes:
Existing Loads and Breakers Designated By Italic font.
New Loads and Breakers Designated by Bold Font.
Field Verify Existing Panel AIC rating and provide equivalent AIC Rating for All New Breakers. Provide New Typed Circuit Directory
*Provide GFCI Class A Breaker
Existing Panelboard is a Schneider Electric CAT#QO32UF



1 **FLOOR PLAN - LEVEL 01 - POWER**
1/8" = 1'-0"

NO WORK THIS PORTION OF BUILDING

GENERAL POWER NOTES:

1. REFER TO E0.00 FOR LEGEND AND GENERAL NOTES.

PROJECT:
RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM
3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:
PALMERTON AREA SCHOOL DISTRICT
680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5
ARCHITECTURE

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
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SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
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KEY PLAN:

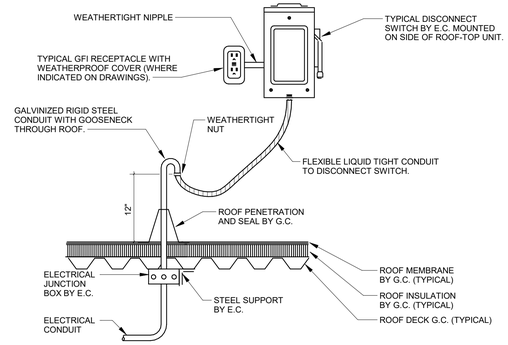
REGISTRATION:
ALLOY5 ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEFFREY RYAN MACHIK
ENGINEER
PE083135

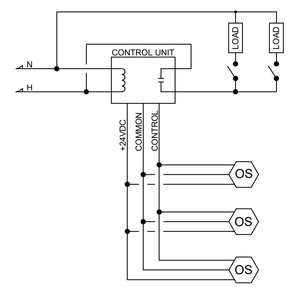
SHEET TITLE:
FLOOR PLAN - LEVEL 02 - POWER

DATE: 02/16/24
SCALE: As indicated
DRAWN BY: DAN
CHECKED BY: DAN
PROJ NO: 22-0073

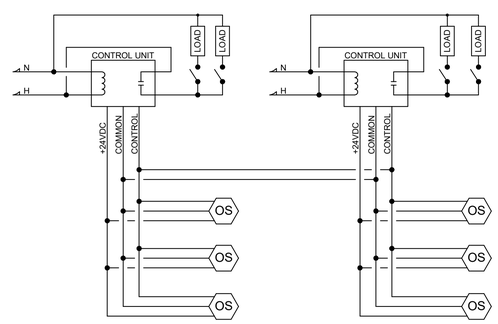
E2.01



4 **CONDUIT ROOF PENETRATION DETAIL**
NO SCALE

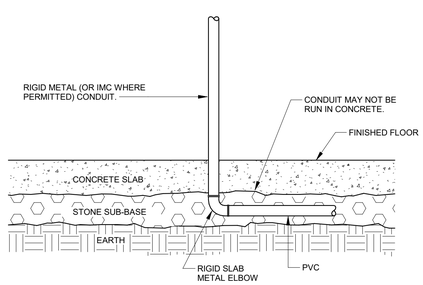


NOTE: UTILIZE THIS DIAGRAM FOR UP TO THREE OCCUPANCYSENSORS AND ONE CIRCUIT APPLICATIONS.

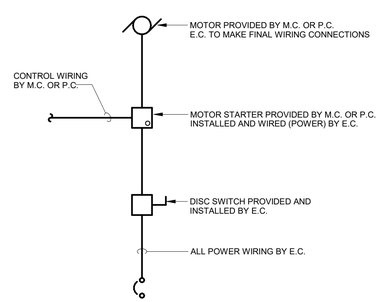


NOTE: UTILIZE THIS DIAGRAM FOR MORE THAN THREE OCCUPANCYSENSORS AND/OR MULTIPLE CIRCUITS.

1 **TYPICAL OCCUPANCY SENSOR WIRING DIAGRAM**
NO SCALE



3 **CONDUIT PENETRATION DETAIL**
NO SCALE



2 **TYPICAL MOTOR WIRING DIAGRAM**
NO SCALE

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5
ARCHITECTURE

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN ASSOCIATES, INC.

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

ALLOY5
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530 WEST BROAD ST BETHLEHEM, PA 18018
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COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEFFREY RYAN MACHIK
ENGINEER
PE083135

SHEET TITLE:

DETAILS & DIAGRAMS - ELECTRICAL

DATE:	02/16/24
SCALE:	NO SCALE
DRAWN BY:	DAN
CHECKED BY:	DAN
PROJ NO:	22-0073

E3.01

ELECTRICAL DRAWING SPECIFICATIONS

GENERAL

IT IS THE INTENT OF THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS TO GENERALLY DESCRIBE THE WORK NECESSARY FOR THE INSTALLATION OF A COMPLETE ELECTRICAL INSTALLATION.

THESE DRAWINGS AND SPECIFICATIONS ARE NOT INTENDED TO SHOW THE LOCATION OF EVERY WIRE, CONDUIT, FITTING, ETC., BUT IS UNDERSTOOD THAT THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND LABOR FOR COMPLETE WORKABLE SYSTEMS.

ALL WORK SHALL CONFORM TO THE LATEST ADOPTED IBC, NEC AND NFPA CODES AS WELL AS ALL REQUIRED LOCAL CODES AND REGULATIONS.

ALL EQUIPMENT AND MATERIALS SHALL BEAR THE LABEL OF THE UNDERWRITER'S LABORATORIES, INC. WHERE SO REQUIRED BY THE NFPA REGULATIONS.

FURNISH ALL LABOR, EQUIPMENT HAULING, RIGGING SCAFFOLDING, SYSTEM PROGRAMMING, ETC. NECESSARY FOR COMPLETION OF WORK FOR THE PROJECT.

PERIODS OF SHUTDOWN SHALL BE MINIMAL AND ALL NEW WORK SHALL BE PLANNED AND SCHEDULED TO ACCOMPLISH AS FEW SHUTDOWNS AS POSSIBLE.

COORDINATE PHASING OF WORK INDICATED ON THE DRAWINGS WITH THE OWNER AND OTHER TRADES. PROVIDE ALL PREMIUM LABOR FOR WORK REQUIRED TO BE PERFORMED ON WEEKENDS AND 2ND AND 3RD SHIFTS AS REQUIRED FOR PHASING OF WORK, SHUTDOWNS AND SCHEDULED COMPLETION.

THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO ACQUAINT HIMSELF/HERSELF WITH THE SITE CONDITIONS. ADDITIONAL COSTS WILL NOT BE PAID FOR FAILURE OF THE E.C. TO FAMILIARIZE HIMSELF/HERSELF WITH EXISTING SITE CONDITIONS AND/OR INFORMING THE ENGINEER OF UNKNOWN CONDITIONS CRUCIAL TO THE COMPLETION OF WORK PRIOR TO SUBMITTING HIS/HER BID.

ALL WORK SHALL BE PERFORMED TO MEET THE MOST RECENT VERSION OF THE NATIONAL ELECTRICAL CODE (NFPA 70). THIS SHALL INCLUDE BUT IS NOT LIMITED TO PROVIDING: GROUND FAULT PROTECTION, ARC-FAULT PROTECTION, WEATHER RESISTANT RECEPTACLES, TAMPER RESISTANT RECEPTACLES, AVAILABLE FAULT-CURRENT LABELING, ARC-FLASH LABELING, ETC.

THE SCOPE OF WORK

THE ELECTRICAL CONTRACT SHALL CONSIST OF THE FOLLOWING, BUT NOT LIMITED TO, THIS WORK:

- EXTEND EXISTING POWER DISTRIBUTION AS INDICATED
- PROVIDE NEW LIGHTING AND LIGHTING CONTROLS
- EXTEND EXISTING FIRE ALARM SYSTEM
- EXTEND EXISTING STRUCTURED CABLING SYSTEM

SUBMITTALS

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SUFFICIENTLY DETAILED TO SHOW THAT THE PROPOSED EQUIPMENT MEETS THE PROJECT SPECIFICATIONS. THE SHOP DRAWING PACKAGE SHALL CONTAIN THE FOLLOWING: CONTRACTORS REVIEW/APPROVAL STAMP, MANUFACTURER, SELECTED CATALOG NUMBER, CATALOG CUTS OF COMPONENTS INCLUDING SYSTEM CABINETS WITH PHYSICAL DIMENSIONS, BLOCK DIAGRAM SHOWING THE TYPES AND ARRANGEMENT OF CONNECTIONS AMONG THE COMPONENTS INCLUDING CABLE TYPES. SUBMIT ON ALL DEVICES, LIGHTING FIXTURES, PANELBOARDS, WIRING ETC. TO THE ARCHITECT FOR APPROVAL PRIOR TO ORDERING ANY EQUIPMENT. THE ARCHITECT SHALL MAKE THE ULTIMATE DECISION ON COLOR AND FINISH FOR ALL DEVICES SUCH AS RECEPTACLES, COMMUNICATION OUTLETS, SWITCHES, SWITCH PLATES, SURFACE RACEWAYS, AS WELL AS ANY OTHER CONTROL DEVICES. THIS APPROVAL SHALL BE MADE BEFORE ANY ITEMS ARE ORDERED.

OWNER INSTRUCTION AND OPERATION MANUALS SHALL BE PROVIDED TO INSTRUCT IN THE PROPER OPERATION AND MAINTENANCE OF ALL WORK. PROVIDE A MINIMUM OF (3) THREE OPERATING MANUALS FOR ALL WORK.
WITHOUT THESE, THE PACKAGE WILL BE REJECTED WITHOUT REVIEW.

APPROVALS, CODES, ORDINANCES AND REGULATIONS

ALL WORK AND MATERIALS SHALL CONFORM TO ALL CODES, ORDINANCES, REGULATIONS, STANDARDS AND RULES. ALL PERMITS, UTILITY SERVICE CHARGES, FEES AND COSTS, INSPECTION CERTIFICATES AND APPROVALS SHALL BE SECURED AND PAID BY THE CONTRACTOR.

WORK SHALL NOT BE COVERED UP NOR ENCLOSED UNTIL IT HAS BEEN INSPECTED, TESTED AND APPROVED. ANY WORK THAT IS ENCLOSED OR COVERED UP BEFORE SUCH INSPECTION AND TEST, SHALL BE UNCOVERED. AFTER IT HAS BEEN INSPECTED AND APPROVED, ALL UNCOVERED ITEMS SHALL BE RESTORED TO ITS ORIGINAL COVERED CONDITION AT NO ADDITIONAL COST TO THE OWNER.

SECURE ELECTRICAL INSPECTION CERTIFICATE FROM AUTHORIZED AGENT.

CONTINUITY OF WORK AND COORDINATION

THE CONTRACTOR SHALL PLAN CONSTRUCTION SCHEDULE TO COORDINATE WITH ALL OTHER TRADES, UNLESS A SCHEDULED CHANGE HAS BEEN ARRANGED WITH THE ARCHITECT.

COORDINATION SHALL INCLUDE ADEQUATE CLEARANCES FOR THE INSTALLATION AND MAINTENANCE OF EQUIPMENT AND PHYSICAL AND ELECTRICAL REQUIREMENTS OF ITEMS OR EQUIPMENT REQUIRING CONNECTIONS.

STORAGE AND PRESERVATION OF MATERIALS

EQUIPMENT AND MATERIALS STORED AT THE SITE, PRIOR TO FINAL INSTALLATION, SHALL BE FULLY PROTECTED FROM DAMAGE, DIRT, DEBRIS, AND WEATHER. DENTS, MARRED FINISHES AND OTHERWISE DAMAGED EQUIPMENT SHALL BE REPAIRED TO ITS ORIGINAL CONDITION OR REPLACED. COORDINATE WITH THE OWNER TO DETERMINE ANY STORAGE REQUIREMENTS OR CONSTRAINTS.

CUTTING AND PATCHING

PERFORM ALL CUTTING AND PATCHING OF EVERY NATURE REQUIRED IN CONNECTION WITH THIS CONTRACT.

PERFORM CUTTING CAREFULLY SO AS NOT TO DAMAGE THE STRUCTURE OR LEAVE UNSIGHTLY SURFACES THAT CANNOT BE COVERED WITH PLATES, ESCUTCHEONS, OR OTHER NORMAL CONCEALING CONSTRUCTION.

PATCH UNSIGHTLY CONDITIONS RESULTING FROM CUTTING OR REMOVAL OF EXISTING DEVICES AS DIRECTED BY ARCHITECT. ENGAGE COMPETENT MECHANICS FOR PATCHING. ALL PATCHING SHALL MATCH ADJACENT FINISHES.

ALL GRADES, SEEDING, AND RESTORATION OF MACADAM AND CONCRETE SURFACES DISTURBED BY THIS CONTRACT SHALL BE RESTORED AS DIRECTED BY ARCHITECT AND TO THE SATISFACTION OF THE OWNER.

DEMOLITION

THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING LIGHTING FIXTURES, DEVICES, CONDUIT, WIRING AND APPURTENANCES IN THE EXISTING BUILDING WHICH IS SHOWN ON THE DRAWINGS OR WHICH IS IN CONFLICT WITH NEW CONSTRUCTION OR RENOVATIONS. DISCONNECT EXISTING CONDUIT AND WIRING TO ITEMS BEING REMOVED. WIRING AND CONDUIT SHALL BE REMOVED COMPLETELY BACK TO THE PANEL. NO WIRING SHALL BE ABANDONED IN PLACE.

ALL CONSTRUCTION AND REMOVAL WORK SHALL BE PERFORMED IN A MANNER AS TO KEEP THE EXISTING SYSTEMS IN OPERATION AS THE WORK PROGRESSES. PROVIDE ALL REQUIRED TEMPORARY CONNECTIONS AND PARTITIONS AS REQUIRED TO KEEP ADJACENT OCCUPIED AREAS IN OPERATION THROUGHOUT THE PROJECT.

PERIODS OF SHUTDOWN SHALL BE MINIMAL AND ALL NEW WORK SHALL BE PLANNED AND SCHEDULED TO ACCOMPLISH AS FEW SHUTDOWNS AS POSSIBLE. ANY REQUIRED SHUTDOWNS SHALL BE COORDINATED WITH THE OWNER. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE OWNER A MINIMUM OF 72 HOURS IN ADVANCE OF ANY SHUTDOWNS.

THE OWNER SHALL HAVE THE OPTION OF KEEPING ANY OR ALL SALVAGEABLE ITEMS REMOVED FROM THE BUILDING SUCH AS LIGHT FIXTURES, PANELS, BREAKERS, ETC. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE WHAT REMOVED ITEMS, IF ANY, THEY WISH TO KEEP IN ADVANCE OF THE DEMOLITION. ANY ITEMS REMOVED FROM THE BUILDING THAT THE OWNER DOES NOT WISH TO KEEP SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND HE SHALL DISPOSE OF THESE ITEMS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL NATIONAL AND LOCAL CODES. FURNISH ALL LABOR, EQUIPMENT HAULING, RIGGING SCAFFOLDING, ETC. NECESSARY FOR THE REMOVAL PHASE OF THE PROJECT.

IDENTIFICATION

ALL PANELBOARDS, ELECTRICAL POWER AND BRANCH CIRCUIT CONDUCTORS, FEEDER CONDUITS, OUTLET BOXES (INSIDE OF COVER PLATES OR OUTSIDE AS PREFERRED BY OWNER), BREAKERS, TRANSFORMERS, SWITCHGEAR, MOTOR CONTROLLERS, MOTOR CONTROL CENTERS, DISCONNECTS, FIRE ALARM CONTROL PANELS, ETC., SHALL BE LABELED DESIGNATING AREA BEING FED, TYPE OF SERVICE, CIRCUIT NUMBER, ETC.

NAMEPLATES SHALL GENERALLY BE BLACK TYPED LETTERS WITH WHITE BACKGROUND OR WHITE TYPED LETTERS WITH BLACK BACKGROUND ON LAMINATED PLASTIC WITH BEVELED EDGES. LETTERS SHALL BE A MINIMUM OF 1/8" HIGH. CONDUIT MARKERS SHALL BE STANDARD PRE-PRINTED FLEXIBLE PLASTIC SHEET MATERIAL OR SELF-ADHERING VINYL LABELS. WIRE MARKERS SHALL BE LAMINATED PLASTIC NAMEPLATES, SELF-ADHERING VINYL LABELS OR TAPE.

PROVIDE A TYPED DIRECTORY FOR EACH PANELBOARD INDICATING THE ITEM/ITEMS CONTROLLED BY EACH CIRCUIT. THE DIRECTORY SHALL BE LOCATED ON THE INSIDE OF THE HINGED DOOR TO THE PANEL.

WIRING

ALL BRANCH CIRCUIT WIRING SHALL BE COPPER “THW” OR “THHN” UNLESS OTHERWISE NOTED ON THE DRAWINGS AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE CODES LISTED ABOVE.

UNLESS OTHERWISE INDICATED, WIRE SIZES SHALL BE AS FOLLOWS: 20A #12, 30A #10, 40A #8, 50A #6, 70A #4, AND 100A #2. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID ROUND COPPER WIRE. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED CONCENTRIC COPPER WIRE.

ALL FEEDER AND BRANCH CIRCUIT CONDUCTORS SHALL BE COLOR CODED. A GREEN GROUND WIRE SHALL BE RUN WITH ALL CIRCUITS. SHARED NEUTRALS ARE NOT PERMITTED AND FULL RATED NEUTRALS SHALL BE PROVIDED FOR ALL CIRCUITS.

MULTICONDUCTOR METAL CLAD CABLE (MC) WITH GROUND WIRE SHALL BE ACCEPTABLE FOR USE THROUGHOUT THE BUILDING EXCEPT WHERE CIRCUITS ARE MORE THAN 30A AND WHERE CONDUIT IS SPECIFICALLY NOTED OR REQUIRED BY APPLICABLE CODES. MULTICONDUCTOR CABLE MAY ONLY BE USED WHERE CONCEALED IN WALLS OR FULLY CONCEALED FROM VIEW ABOVE ACCESSIBLE CEILINGS, AND IN ACCORDANCE WITH THE NEC. MULTICONDUCTOR CABLE SHALL BE SUPPORTED INDEPENDENT OF CEILING STRUCTURE. MULTICONDUCTOR CABLE IN PLENUM SPACES SHALL BE COMPLIANT WITH NEC 300.22 - MC CABLE EMPLOYING A SMOOTH OR CORRUGATED METAL SHEATH WITHOUT AN OVERALL NONMETALLIC COVERING. PROVIDE BUSHINGS ON ALL MC CABLE ENDS.

NON-METALLIC SHEATHED CABLE (ROMEX, ETC.) SHALL NOT BE ACCEPTABLE FOR USE ANYWHERE IN THE BUILDING.

THE CONTRACTOR SHALL ACCOUNT FOR VOLTAGE DROP WHEN PROVIDING LONG LEAD LENGTHS OF CONDUCTORS.

CONDUCTORS OF SPECIAL SERVICE SYSTEMS AND POWER SYSTEMS SHALL NOT OCCUPY THE SAME ENCLOSURE WITH LIGHT AND POWER CONDUCTORS OR THE SAME ENCLOSURE WITH EACH OTHER. CONDUCTORS SHALL BE CONTINUOUS WITH SPLICES AND CONNECTIONS MADE IN OUTLET, JUNCTION OR PULL BOXES ONLY.

WHERE SEVERAL FEEDERS PASS THROUGH A COMMON PULLBOX, THE FEEDERS SHALL BE TAGGED TO CLEARLY INDICATE THE ELECTRICAL CHARACTERISTICS, CIRCUIT NUMBER AND PANEL DESIGNATION.

CIRCUIT CONDUCTORS SHALL BE SAME AWG SIZE FROM SOURCE TO LOAD. NEUTRAL WIRES SHALL BE THE SAME SIZE AS PHASE WIRES EXCEPT AS NOTED ON DRAWINGS.

ALL WIRING SHALL BE INSTALLED CONCEALED IN WALLS AND NOT EXPOSED ON OPEN WALLS. IF WIRING MUST BE EXPOSED, SURFACE RACEWAY WILL BE USED BUT ONLY AS SPECIFICALLY DIRECTED BY THE ARCHITECT.

ALL WIRING AND CONDUITS SHALL BE SUPPORTED IN AN APPROVED NEAT AND ORDERLY FASHION, AND AS REQUIRED BY APPLICABLE CODES. FASTEN CABLE SECURELY IN PLACE AT INTERVALS NOT EXCEEDING NEC REQUIREMENTS. WIRING AND CONDUITS SHALL BE SUPPORTED DIRECTLY FROM THE BUILDING STRUCTURE UTILIZING MECHANICALLY SECURE CLIPS, TRAPEZE, CLEVIS HANGERS, OR CABLE TRAY. TIE-WRAPS SHALL NOT BE AN ACCEPTABLE MEANS OF SUPPORT EXCEPT WHERE VELCRO TIE-WRAPS ARE APPLICABLE FOR LOW VOLTAGE DATA CABLING. SUPPORT FROM MECHANICAL DUCTWORK OR PIPING SHALL NOT BE ACCEPTABLE. ANY WIRING OR CONDUITS DEEMED AS NOT BEING CONCEALED FROM VIEW OR SUPPORTED PROPERLY BY THE ARCHITECT SHALL BE REMOVED AND RE-INSTALLED TO THE SATISFACTION OF THE ARCHITECT/ENGINEER AT THE SOLE EXPENSE OF THE CONTRACTOR.

GROUNDING

PROVIDE ALL ELECTRICAL SYSTEM GROUNDS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE, AND THE NATIONAL ELECTRICAL SAFETY CODE.

THE FOLLOWING SHALL BE SOLIDLY GROUNDED: 1) CONDUIT SYSTEM (NEC ARTICLE 250), 2) ALL EQUIPMENT WITH ELECTRICAL CONNECTIONS, 3) NEUTRAL LEAD OF SECONDARY SERVICE.

A SEPARATE GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED FOR ALL ELECTRICAL CIRCUITS. ALL ELECTRICAL EQUIPMENT ENCLOSURES AND CONDUCTOR ENCLOSURES SHALL BE GROUNDED.

ALL FEEDER DISCONNECTS AND BREAKERS RATED 1000 AMPERES AND ABOVE IN A SOLIDLY GROUNDED WYE SYSTEM WITH GREATER THAN 150 VOLTS TO GROUND, BUT NOT EXCEEDING 600 VOLTS PHASE TO PHASE SHALL BE PROVIDED WITH GROUND FAULT PROTECTION.

ALL WIRING SHALL BE TESTED WITH A MEGGER FOR GROUNDS AND SHORTS BEFORE ENERGIZING.

CONDUIT

CONDUIT SHALL BE NO SMALLER THAN 3/4 INCH, UNLESS OTHERWISE NOTED FOR INTERIOR APPLICATIONS AND NO SMALLER THAN 1” FOR EXTERIOR APPLICATIONS. CONDUIT JOINTS SHALL BE MADE UP WITH FITTINGS OF THE PROPER TYPE. CONDUIT SHALL BE SIZED AS PER NEC RULES FOR NUMBER AND SIZE OF WIRES THEREIN.

ELECTRICAL METALLIC TUBING (EMT) SHALL BE METALLIC CONDUIT OF THE THIN WALL TYPE IN STRAIGHT LENGTHS, ELBOWS, OR BENDS AND SHALL CONFORM TO ANSI C80.3 AND THE REQUIREMENTS OF UL 797. EMT SHALL BE INSTALLED INDOORS IN DRY LOCATIONS NOT SUBJECT TO MECHANICAL INJURY. ALSO, CONCEALED CIRCUITS AND CIRCUITS LOCATED IN PLENUM SHALL BE EMT UNLESS OTHERWISE NOTED. COUPLINGS AND CONNECTORS FOR EMT SHALL BE HEX-NUT EXPANSION-GLAND, COMPRESSION TYPE, ZINC OR CADMIUM-PLATED. CRIMP, SPRING OR SET-SCREW TYPE FITTINGS ARE NOT ACCEPTABLE. WHERE EMT ENTERS OUTLET BOXES, CABINETS OR OTHER ENCLOSURES, CONNECTORS SHALL BE THE INSULATED-THROAT TYPE, WITH LOCKNUTS. FITTINGS SHALL MEET THE REQUIREMENTS OF ANSI/NEMA FBI.

FLEXIBLE METALLIC CONDUIT (FMC) SHALL MEET THE REQUIREMENTS OF UL 1. FMC WITH SEPARATE GROUND WIRE SHALL BE INSTALLED IN AREAS SUBJECT TO VIBRATION IN MAXIMUM SIX-FOOT LENGTHS PROPERLY SUPPORTED.

RIGID GALVANIZED STEEL CONDUIT (RMC) SHALL CONFORM TO UL 6 AND ANSI C80.1. RMC WITH THREADED FITTINGS SHALL BE INSTALLED OUTDOORS, WHERE UNDERGROUND, OR IN AREAS SUBJECT TO WEATHER AND/OR MECHANICAL INJURY. RMC CONDUIT SHALL BE USED IN ALL OPEN SHOP AREAS TO A MINIMUM ELEVATION OF 15'-0" AFF. CONDUIT FITTINGS SHALL CONFORM TO ANSI/NEMA FBI.

LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT (LTFMC) SHALL CONSIST OF STEEL, CONSTRUCTED OF SINGLE STRAP, FLEXIBLE CONTINUOUS, INTERLOCKED, AND DOUBLE-WRAPPED METAL WITH A LIQUID-TIGHT JACKET OF FLEXIBLE POLYVINYL CHLORIDE (PVC) CONFORMING TO NEMA RN1. LTFMC WITH SEPARATE GROUND WIRE SHALL BE INSTALLED IN AREAS SUBJECT TO VIBRATION IN MAXIMUM SIX FOOT LENGTHS PROPERLY SUPPORTED.

RIGID NONMETALLIC CONDUIT (RNC) SHALL COMPLY WITH NEMA TC2, SCHEDULE 40 AND SCHEDULE 80 PVC. RNC SHALL BE INSTALLED BELOW GRADE. FOR RNC, USE SOLVENT-CEMENTED JOINTS IN DUCTS AND FITTINGS AND MAKE WATERTIGHT ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. STAGGER COUPLINGS SO THOSE OF ADJACENT DUCTS DO NOT LIE IN THE SAME PLANE. RNC FITTINGS SHALL COMPLY WITH NEMA TC3, MATCH TO CONDUIT TYPE AND MATERIAL.

INSTALL RACEWAYS SQUARE WITH BUILDING WALLS AND FASTENED TO BUILDING STRUCTURE. EXPOSED CONDUIT SHALL BE NEATLY AND EVENLY SPACED AND SHALL RUN PARALLEL TO CEILING, FLOORS, WALLS OR OTHER PERMANENT STRUCTURES. THE CONTRACTOR SHALL FURNISH AND INSTALL ABOVE GRADE CONDUIT SYSTEMS AS SPECIFIED, INCLUDING ALL NECESSARY SUPPORTS, HANGERS, AND OTHER HARDWARE.

ALL CONDUIT IN FINISHED AREAS SHALL BE INSTALLED CONCEALED. IF CONDUIT MUST BE EXPOSED, SURFACE RACEWAY WILL BE USED BUT ONLY AS SPECIFICALLY DIRECTED BY THE ARCHITECT. ALL EXPOSED CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACE COLORS.

CONDUIT SHALL BE SECURELY CLAMPED AND SUPPORTED AT LEAST EVERY 10 FEET VERTICALLY AND 8 FEET HORIZONTALLY. GALVANIZED PIPE STRAPS SHALL BE FASTENED TO STRUCTURE WITH BOLTS, SCREWS AND ANCHORS. CONDUIT AND BOXES SHALL NOT BE SUPPORTED FROM T-BAR CEILING WIRES.

EXPANSION FITTINGS WITH FLEXIBLE GROUND STRAP SHALL BE PROVIDED IN CONDUIT RUNS CROSSING BUILDING EXPANSION JOINTS.

CONTRACTOR SHALL AVOID MORE THAN THREE 90 DEGREE BENDS, OR EQUIVALENT, IN A RUN BETWEEN PULL FITTINGS.

WHERE APPLICABLE, CONDUITS SHALL BE FASTENED TO ALL SHEET METAL BOXES, GUTTERS AND CABINETS WITH TWO LOCKNUTS AND A BUSHING.

EMERGENCY LIGHTING SYSTEM WIRING SHALL BE IN RIGID CONDUIT, EMT.

INSULATED BUSHINGS

FURNISH AND INSTALL ALL INSULATED BUSHINGS, AS MANUFACTURED BY O.Z. OR T&B COMPANIES FOR ALL POWER SYSTEM CONDUITS AND ALL LIGHTING SYSTEM CONDUITS 1-1/4” AND LARGER. PROVIDE INSULATED BUSHINGS ON ALL CONDUITS USED FOR LOW-VOLTAGE SYSTEMS AND ALL FLEXIBLE METALLIC CONDUITS REGARDLESS OF SIZE.

EMERGENCY LIGHTING AND WIRING SYSTEM

THE CONTRACTOR SHALL FURNISH AND INSTALL AN EMERGENCY LIGHTING SYSTEM AND EMERGENCY WIRING SYSTEM AS INDICATED ON THE DRAWINGS.

ALL EMERGENCY WIRING SHALL BE OF #10 THW OR LARGER DIAMETER. WIRING SHALL BE INSTALLED IN A SEPARATE CONDUIT SYSTEM FROM NORMAL LIGHTING AND POWER CIRCUITS.

JUNCTION, PULL AND OUTLET BOXES

JUNCTION AND PULL BOXES SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS, OR AT SUCH LOCATIONS AS MAY BE REQUIRED TO FACILITATE THE PULLING OF CABLES. PULL BOXES SHALL BE FURNISHED AND INSTALLED ON CONDUIT RUNS LONGER THAN 100 FEET OR WITH MORE THAN THREE RIGHT-ANGLE BENDS. JUNCTION BOXES AND PULL BOXES SHALL HAVE SUFFICIENT VOLUME TO ACCOMMODATE THE NUMBER OF CONDUCTORS ENTERING THE BOX IN ACCORDANCE WITH THE REQUIREMENTS OF NEC ARTICLE 314. BOXES SHALL BE CADMIUM-PLATED OR ZINC-COATED SHEET METAL. JUNCTION BOXES AND PULL BOXES FOR USE WITH THE CONDUIT SYSTEMS SHALL NOT BE LESS THAN 2-1/8" DEEP AND 4" BY 4". PULL AND JUNCTION BOXES SHALL BE FURNISHED WITH HINGED OR SCREW-FASTENED COVERS. PROVIDE EXTRA-DEEP BOXES WHERE REQUIRED FOR LOW-VOLTAGE SYSTEM CONNECTIONS.

OUTLET BOXES SHALL CONSIST OF STEEL BOXES OF PROPER TYPE AND NOT LESS THAN 4” SQUARE. COMPLY WITH UL 514B, FITTINGS FOR CONDUIT AND OUTLET BOXES. THE REQUIRED SIZE BY THE N.E.C. SHALL BE PLACED AT ALL LIGHT, RECEPTACLE AND SWITCH OUTLETS. OUTLET BOXES SHALL BE FIRMLY SECURED IN PLACE AND SHALL BE SET TRUE, SQUARE AND FLUSH WITH THE FINISHED SURFACES. OUTLET BOXES SHALL BE EQUIPPED WITH PLASTER RINGS, EXTENSION RINGS AND FIXTURE STUDS WHERE REQUIRED. ALL UNUSED OPENINGS IN BOXES SHALL BE CLOSED WITH FACTORY MADE KNOCKOUT SEALS.

BOXES AND ENCLOSURES SHALL BE SECURELY MOUNTED TO THE BUILDING STRUCTURE WITH SUPPORTING FACILITIES INDEPENDENT OF THE CONDUIT ENTERING OR LEAVING THE BOXES.

SUPPORTING DEVICES AND HANGERS

SECURE ALL EQUIPMENT, DEVICES AND RACEWAYS. ALL CONDUITS SHALL BE SECURELY FASTENED AND SUPPORTED AS APPROVED IN THE NEC. DO NOT FASTEN SUPPORTS TO PIPES, DUCTS, MECHANICAL EQUIPMENT OR CONDUIT. SUPPORTS SHALL NOT BE ATTACHED TO ANY ROOF OR FLOOR DECK.

PROVIDE ALL STEEL SUPPORTS, MOUNTING BRACKETS, ANGLES, THREADED RODS, SLOTTED CHANNELS, ETC. AS REQUIRED FOR SUPPORT OF THE EQUIPMENT FURNISHED AND/OR INSTALLED.

WIRING DEVICES

SWITCHES SHALL BE OF THE A.C. HEAVY DUTY, 277VOLT, FLUSH TOGGLE TYPE RATED AT 20 AMPERES AND U.L. APPROVED. SWITCHES SHALL BE LOCATED ON THE KNOB SIDE OF THE DOOR AND MOUNTED 48” ABOVE THE FINISHED FLOOR. FOR SWITCHES TO BE MOUNTED IN THE SAME GANGED PLATE AS DIMMERS, THE SWITCH STYLE SHALL MATCH THAT OF THE DIMMERS.

GENERAL PURPOSE RECEPTACLES AND GFCI RECEPTACLES SHALL BE HEAVY DUTY INDUSTRIAL GRADE MINIMUM, POLARIZED, GROUNDED, DUPLEX, RATED 20 AMPERES, 120V AND U.L. APPROVED. ALL RECEPTACLES SHALL BE MOUNTED 18 INCHES ABOVE THE FINISHED FLOOR UNLESS OTHERWISE NOTED OR SO DIRECTED BY THE ARCHITECT. RECEPTACLES SHALL BE TAMPER RESISTANT WHERE REQUIRED PER THE NEC.

RECEPTACLES SHALL BE HOSPITAL GRADE WHERE APPLICABLE PER THE NEC.

OUTDOOR RECEPTACLES SHALL BE WEATHER-RESISTANT OUTDOOR GRADE GFCI WITH IN AN IN-USE, METAL, WEATHERPROOF ENCLOSURE.

FOR HOSPITALITY APPLICATIONS AND IN HOSPITAL PATIENT BATHROOMS, BATHROOM GFCI RECEPTACLES SHALL HAVE GUIDE LIGHTS.

PROVIDE TAMPER RESISTANT AND WEATHER RESISTANT RECEPTACLES AS REQUIRED BY CODE.

GFI RECEPTACLES SHOWN ON THE DRAWINGS SHALL BE UNDERSTOOD TO BE THE MINIMUM NUMBER OF GFI RECEPTACLES TO BE PROVIDED. PROVIDE GFI TYPE RECEPTACLES FOR ANY RECEPTACLE LOCATION SHOWN ON THE DRAWINGS AND REQUIRED TO BE GFI TYPE BY THE NEC CODE.

DEVICE PLATES OF ONE PIECE SHALL BE PROVIDED FOR ALL OUTLETS TO SUIT THE DEVICES INSTALLED. PLATES SHALL BE SMOOTH BRUSHED STAINLESS STEEL, UNLESS OTHERWISE DIRECTED. PLATES SHALL BE INSTALLED WITH ALL FOUR EDGES IN CONTINUOUS CONTACT WITH THE FINISHED WALL SURFACES OR JUNCTION BOX WITHOUT THE USE OF MATS OR SIMILAR DEVICES. PLATE SHALL BE INSTALLED VERTICALLY AND WITH AN ALIGNMENT TOLERANCE OF 1/16 INCH.

DEVICE PLATES SHALL BE SIMILAR TO LEVITON COMMERCIAL SPECIFICATION GRADE 84001, 84009, 84003, 84016 OR EQUAL BY HUBBELL ETC.

SWITCHES SHALL BE SIMILAR TO LEVITON COMMERCIAL SPECIFICATION GRADE 54521-2I, 54523-2I, 54524-2I, 1451-I, 1453-I, OR EQUAL BY HUBBELL ETC.

250 VOLT RECEPTACLES SHALL BE SIMILAR TO LEVITON COMMERCIAL SPECIFICATION GRADE 5823-I, 5029-I OR EQUAL BY HUBBELL ETC.

DIMMERS SHALL BE BY LUTRON OR AN APPROVED EQUIVALENT. DIMMERS SHALL MATCH THE HOLE OPENING OF NEARBY NEIGHBORING SWITCHES. THEY SHALL BE SPECIFICATION GRADE, SLIDE TYPE OR BUTTON TYPE FOR RAISE AND LOWER FUNCTIONS. THEY SHALL BE RATED FOR 120 VOLTS OR 277 VOLTS AS APPLICABLE. THE RATED WATTAGE SHALL BE DEPENDENT UPON THE LIGHTING LOAD. DIMMER TYPE SHALL MATCH THE LOAD TYPE THAT THEY ARE CONTROLLING – I.E. FLUORESCENT FOR FLUORESCENT DIMMING, ELECTRONIC LOW VOLTAGE FOR DIMMING ELECTRONIC TRANSFORMERS, LED FOR LED LOADS, AND 0-10V FOR 0-10V APPLICATIONS. VERIFY APPLICATION REQUIREMENTS WITH DIMMER MANUFACTURER. PROVIDE ACCESSORIES AND APPURTENANCES AS NECESSARY TO SUPPORT LARGER LOADS OR THOSE DIMMING APPLICATIONS WHICH REQUIRE INTERFACES. DIMMER LOCATIONS TO BE CONFIRMED WITH OWNER PRIOR TO ROUGHING-IN. FOR THE CASE OF DIMMERS GANGED TOGETHER, THE CONTRACTOR SHALL APPLY THE APPROPRIATE DERATING FACTORS AS THE MULTIPLE DIMMERS ARE GANGED TOGETHER. PROVIDE 3-WAY AND 4-WAY DIMMING OPERATION FROM MULTIPLE LOCATIONS WHERE SHOWN.

WIRING DEVICES SHALL BE INSTALLED AND TESTED TO VERIFY THE UNITS ARE WORKING AS INTENDED. CONTRACTOR SHALL TROUBLESHOOT ANY DEVICES NOT FUNCTIONING PROPERLY OR AS INTENDED. CONTRACTOR SHALL EITHER RESTORE THE PROBLEMATIC DEVICE OR REPLACE IT IN LIKE KIND. RETEST UNTIL DEVICES ARE VERIFIED TO BE IN WORKING CONDITION.

BARRIERS BETWEEN ADJACENT DEVICES SHALL BE INSTALLED WHERE REQUIRED PER NEC 406.4(G).

ALL DEVICES SHALL BE GROUNDED UTILIZING A INSULATED SYSTEM GROUNDING WIRE BACK TO THE POWER SOURCE.

PROVIDE NEUTRAL WIRE AT EACH SWITCH LOCATION.

COMPUTER WIRING SYSTEM

THE CONTRACTOR SHALL WIRE EACH WORKSTATION OUTLET SHOWN ON THE DRAWINGS TO THE PATCH PANEL AT THE LOCATION SHOWN ON THE DRAWINGS. ALL WIRING SHALL BE INSTALLED IN AT LEAST 3/4” EMT TO THE ACCESSIBLE CEILING. DATA WIRING SHALL BE INSTALLED IN SEPARATE RACEWAYS FROM POWER WIRING. PROVIDE OUTLETS, HORIZONTAL WIRING, CROSS-CONNECT PATCH PANELS, EQUIPMENT BACKBOARDS, AND OTHER MATERIALS AND LABOR FOR A 10GHZ LOCAL AREA NETWORK (LAN) WIRING SYSTEM.

PROVIDE LISTED SURGE PROTECTION DEVICES (SPD’S) RATED FOR THE APPLICATION ON EVERY LOW-VOLTAGE CABLE FEEDING ANY EXTERIOR DEVICE (CAMERA, WI-FI, ETC.). LOCATE SPD AT A READILY ACCESSIBLE LOCATION NEAR THE INTERIOR BUILDING PENETRATION.

CABLE IDENTIFICATION SHALL BE PROVIDED ON BOTH ENDS OF EACH CABLE AND TERMINATION WITH THE OWNERS ROOM NUMBER AND WIRING BLOCK OR DEVICE TO WHICH IT IS CONNECTED. TAGS SHALL BE PERMANENT AND NEAT.

ALL WIRING SHALL BE INSTALLED IN AT LEAST 3/4” EMT TO THE ACCESSIBLE CEILING. DATA WIRING SHALL BE INSTALLED IN SEPARATE RACEWAYS FROM POWER WIRING.

INSTALL SYSTEMS IN ACCORDANCE WITH NFPA 70 AND OTHER APPLICABLE CODES. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURES AND SUPPLIERS INSTRUCTIONS.

ALL WIRING SHALL BE SUPPORTED IN AN APPROVED NEAT AND ORDERLY FASHION UTILIZING ONE OF THE FOLLOWING SUPPORT METHODS: J-HOOKS, TRAPEZE, OR CABLE TRAY. WIRING SUPPORTS AND SUPPORT METHOD SHALL COMPLY WITH ALL APPLICABLE CODES. ANY WIRING DEEMED AS NOT BEING SUPPORTED IN A NEAT AND ORDERLY FASHION BY THE ENGINEER SHALL BE REMOVED AND RE-INSTALLED PROPERLY AT THE EXPENSE OF THE E.C. PROVIDE A PROPERLY GROUNDED, GROUNDING BUS BAR IN EACH DATA/NETWORK CLOSET AND GROUND ALL CABLE TRAYS, RACKS ETC. TO THIS POINT.

IF CROSS TALK, APPRECIABLE LOSS OF VOLUME OR DISTORTION OCCURS AFTER INSTALLATION HAS BEEN COMPLETED, IT SHALL BE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO CORRECT ANY SUCH CONDITION WITHOUT COST TO THE OWNER.

THE SYSTEM IN ITS ENTIRETY SHALL BE WARRANTED FOR 15 YEARS FROM FINAL ACCEPTANCE BY THE OWNER. THIS WARRANTY SHALL INCLUDE COMPONENT AND PERFORMANCE WARRANTIES. COMPLETE TESTING BETWEEN PATCH PANELS AND OUTLET LOCATIONS TO VERIFY COMPLIANCE WITH SPECIFICATIONS.

THE COMPLETE INSTALLATION SHALL CONFORM TO EIA/TIA 568-COMMERCIAL BUILDING TELECOMMUNICATIONS WIRING STANDARDS AND PROPOSED REVISIONS OF EIA/TIA 568-COMMERCIAL BUILDING TELECOMMUNICATIONS WIRING STANDARD.

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO INSTALLATION AND INCLUDE MANUFACTURER'S INFORMATION ON ALL SYSTEM COMPONENTS SPECIFIED. THE INFORMATION SHALL BE SUFFICIENT TO VERIFY COMPLIANCE WITH THE SPECIFICATIONS. THE COMPUTER WIRING SYSTEM COMPONENTS SPECIFIED CONSIST OF THE FOLLOWING:

> CATEGORY 6A WIRING SHALL BE 100 OHM, 24AWG COPPER, 8 CONDUCTOR, UNSHIELDED TWISTED PAIR CABLE, PVC JACKET, PLENUM RATED AS MANUFACTURED BY AMP, BELDEN BERK-TEK OR MOHAWK.
>
> TWO PORT COMPUTER OUTLET KEYED, 4 PAIR, CATEGORY 6A, RJ45, 110 CONNECTION, T568A MODULAR JACK, WITH MATCHING FACE PLATE OR EQUAL, APPROVED IN ADVANCE.
>
> PATCH PANELS SHALL BE 48-PORT AND/OR 24-PORT, AS REQUIRED, 19" BRACKET MOUNT, CATEGORY 6A, NON-KEYED EIGHT-CONDUCTOR EIA/TIA568A MODULAR PATCH PANEL, T568A WIRING OR EQUAL, APPROVED IN ADVANCE.
>
> PATCH CORDS SHALL BE 5 FOOT, CATEGORY 6A, UTP PATCH CORD, BLUE BOOT, TIA 568A OR EQUAL, APPROVED IN ADVANCE. PROVIDE PATCH CORDS EQUAL TO NUMBER OF MODULAR PATCH PANEL PORTS.
>
> EQUIPMENT RACK(S) SHALL BE 19" OPEN RACKS, 7'-0" HEIGHT, OPEN DESIGN, FLOOR MOUNT, WITH RACK ORGANIZER KIT CONTAINING VERTICAL CABLE MANAGEMENT, TOP AND BOTTOM TROUGHS. PROVIDE VERTICAL MANAGEMENT FULL HEIGHT, AND HORIZONTAL CABLE MANAGEMENT HANGERS, OR EQUAL, APPROVED IN ADVANCE.

TELEPHONE AND COMPUTER CABLE TESTING

THE INSTALLATION CONTRACTOR SHALL BOTH PERFORM TESTS AND RECORD THE RESULTS OF TESTS ON ALL HORIZONTAL DISTRIBUTION CABLES FROM THE WIRING RACK(S) TO THE WORKSTATION OUTLET. AT A MINIMUM THE CONTRACTOR SHALL TEST ATTENUATION, DC LOOP RESISTANCE, WIRE MAP, AND NEAR END CROSSTALK (NEXT) IN BOTH DIRECTIONS FOR THE INSTALLED CABLING SYSTEM.

TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH THE GUIDANCE PROVIDED IN ANSI/TIA/EIA-568-A. ALL TEST EQUIPMENT USED SHALL MEET ANSI/TIA/EIA/568-A (CURRENT EDITION) AND TIA/EIA TSB67. THE CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION FROM THE MANUFACTURER THAT THE TEST EQUIPMENT MEETS THESE STANDARDS. TESTING PROCEDURES SHALL CONFORM TO THE MOST RECENT VERSION OF BICSI TELECOMMUNICATIONS DISTRIBUTION METHODS MANUAL, AND MANUFACTURES TEST EQUIPMENT MANUALS.

THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL TEST EQUIPMENT, TEST FIXTURES, TEST SUPPLIES AND PERSONNEL IN SUFFICIENT QUANTITY TO PERFORM TESTING IN A TIMELY MANNER TO MEET PROJECT SCHEDULES. ALL TEST EQUIPMENT SHALL BE IN CURRENT CALIBRATION.

THE CONTRACTOR IS NOT LIMITED TO THE TEST IDENTIFIED WITHIN THIS SPECIFICATION OR OTHER PROJECT SPECIFICATION SECTIONS. THE CONTRACTOR MAY CONDUCT ADDITIONAL TESTS THAT ARE DEEMED APPROPRIATE TO SUBSTANTIATE THE COMMUNICATIONS CAPABILITY OF THE CABLE SYSTEM.

TEN WORKING DAYS TO THE START OF TESTING, THE CONTRACTOR SHALL SUBMIT A DETAILED TEST PLAN FOR REVIEW AND APPROVAL BY THE ENGINEER. THE TEST PLAN SHALL DEFINE THE TEST EQUIPMENT, DETAILED STEP-BY-STEP TEST PROCEDURES, TEST SETUPS, TEST FIXTURES, ACCEPTANCE CRITERIA, AND ACTIONS TO BE TAKEN IN THE EVENT OF A FAILURE. THROUGHOUT THE LIFE OF THE PROJECT THE CONTRACTOR SHALL SUBMIT A REVISED PROCEDURE WHENEVER ANY CHANGES OCCUR THAT RESULT IN DEVIATIONS FROM THE CURRENTLY APPROVED TEST PLAN. THE REVISION MUST BE REVIEWED AND APPROVED PRIOR TO BEING IMPLEMENTED AND USED FOR THE FIRST TIME.

IN THE EVENT OF FAILURE OF HORIZONTAL CABLE TESTING THE CONTRACTOR SHALL INSPECT THE INSTALLED CABLE, TERMINATION, AND FAILED TEST RESULTS TO DETERMINE THE PROBABLE FAILURE CAUSE. THE CONTRACTOR SHALL TAKE APPROPRIATE ACTION TO REMEDY AND CORRECT THE SITUATION. ALL FAILED CABLES SHALL BE RE-TESTED AFTER CORRECTIVE ACTIONS.

TELEPHONE AND COMPUTER RACEWAY SYSTEM

THE E.C. SHALL PROVIDE ONE 4” RECESSED OUTLET BOX WITH AND ¾” EMT CONDUIT SLEEVE TO THE ACCESSIBLE CEILING SPACE FOR EACH DATA/PHONE LOCATION INDICATED ON THE DRAWINGS. TERMINATE EACH CONDUIT SLEEVE WITH INSULATED BUSHING IN ACCESSIBLE LOCATION ABOVE SUSPENDED CEILING. THE OWNERS REPRESENTATIVE SHALL PROVIDE ALL DATA WIRING AND CONNECTIONS.

FOR EACH OUTLET SHOWN IN THE FLOOR, PROVIDE FLOOR BOX AND FLOOR FITTING. PROVIDE EMPTY CONDUIT FOR LOW VOLTAGE WIRING AS REQUIRED FROM FLOOR BOX TO ACCESSIBLE CEILING BELOW OR TO ACCESSIBLE CEILING ABOVE.

WHEN A SUSPENDED LIFT-OUT PANEL STATIC AIR PLENUM CEILING OCCURS, THE OWNERS REPRESENTATIVE SHALL INSTALL THEIR WIRING ABOVE THE CEILING WITHOUT CONDUIT.

WHERE WALL OR PARTITIONS OBSTRUCT HORIZONTAL PASSAGE OF WIRING, PROVIDE AT LEAST 2” CONDUIT SLEEVES FOR DATA WIRING.

PROVIDE CONDUIT SLEEVES AND PULL BOXES WITH ACCESS PANELS ABOVE CEILINGS THAT ARE NOT LIFT-OUT TYPE.

THE CONTRACTOR COMPLETING THIS WORK SHALL HAVE A MINIMUM OF 5 YEARS EXPERIENCE IN THE DATA/TELECOMMUNICATIONS WIRING FIELD. THE CONTRACTOR SHALL BE CERTIFIED BY THE MANUFACTURER FOR INSTALLATION OF THE COMPONENTS AND WIRING SPECIFIED. THE CONTRACTOR SHALL SUBMIT PROOF OF CERTIFICATION ALONG WITH THE CONTRACTOR’S QUALIFICATION STATEMENT.

OCCUPANCY SENSORS

WALL MOUNT OCCUPANCY/SWITCH TYPE SENSORS SHALL BE INFRARED TYPE. THE SENSOR SHALL MATCH OTHER WALL MOUNTED SWITCHES. THE SENSOR SHALL HAVE MANUAL “ON” OPERATION. IT SHALL CONTAIN A NEUTRAL WIRE CONNECTION WHERE REQUIRED BY THE NEC. SENSOR SHALL HAVE AREA COVERAGE APPROPRIATE FOR THE APPLICATION.

CEILING AND WALL MOUNT OCCUPANCY SENSORS SHALL BE ULTRASONIC, INFRARED OR DUAL-TECHNOLOGY TYPE AS INDICATED. THE OCCUPANCY SENSOR SHALL BE WHITE. PROVIDE A WALL MOUNTED SWITCH APPROPRIATELY COORDINATED WITH THE CEILING MOUNT OCCUPANCY SENSOR. PROVIDE RELAYS AND APPURTENANCES AS NECESSARY TO CREATE A COMPLETE, OPERABLE SYSTEM. THE SENSOR SHALL HAVE AREA COVERAGE APPROPRIATE FOR THE APPLICATION.

CONNECTION TO EQUIPMENT

THE ELECTRICAL CONTRACTOR SHALL WIRE AND MAKE FINAL CONNECTIONS TO EQUIPMENT FURNISHED AND INSTALLED BY OTHER CONTRACTORS OR OWNER. VERIFY MOTOR ROTATION PRIOR TO ENERGIZING.

THE ELECTRICAL CONTRACTOR SHALL COORDINATE EQUIPMENT LUGS/TERMINATIONS AND WIRE SIZES FOR ALL TERMINATIONS PROVIDED BY HIM EVEN WHERE THE EQUIPMENT AND/OR WIRING IS NOT FURNISHED BY HIM. WHERE WIRE SIZES SPECIFIED ARE LARGER THAN EQUIPMENT CAN ACCOMMODATE, AND EQUIPMENT IS FURNISHED BY THE ELECTRICAL CONTRACTOR PROVIDE LARGER LUGS/CONNECTIONS TO ACCOMMODATE THE SPECIFIED WIRING. WHERE WIRE SIZES SPECIFIED ARE LARGER THAN EQUIPMENT CAN ACCOMMODATE DUE TO VOLTAGE DROP, AND THE EQUIPMENT IS EXISTING OR FURNISHED BY OTHERS, THE ELECTRICAL CONTRACTOR SHALL PROVIDE LARGER LUGS/CONNECTIONS OR THE ELECTRICAL CONTRACTOR SHALL REDUCE THE WIRING TO A SIZE SUITABLE FOR THE LUGS/CONNECTIONS IN A SPLICE BOX WITHIN 10’ OF ENTERING THE EQUIPMENT. IN NO CASE SHALL CONDUCTOR SIZE BE REDUCED FROM THE SPECIFIED SIZE TO A SMALLER RATED AMPERAGE THAN THE UPSTREAM OVERCURRENT PROTECTIVE DEVICE RATING OR A SIZE SMALLER THAN PERMITTED BY THE LATEST EDITION OF THE NEC.

AT ALL MOTOR CONNECTIONS THE ELECTRICAL CONTRACTOR SHALL INSTALL FLEXIBLE METALLIC CONDUIT APPROXIMATELY 18 INCHES LONG FOR THE FINAL CONNECTIONS TO THE MOTOR TERMINALS.

ALL WIRING SHALL BE COPPER TYPE “THW” OR “THHN” AND INSTALLED IN CONDUIT OF PROPER SIZE AND CAPACITY FOR THE PROTECTIVE DEVICE SPECIFIED.

ENCLOSED CIRCUIT BREAKERS AND SAFETY SWITCHES

ALL SAFETY SWITCHES AND DISCONNECT SWITCHES SHALL BE OF THE HEAVY-DUTY TYPE AND PROVIDED WITH 75-DEGREE RATED LUGS. PROVIDE THE VOLTAGE CLASS, AMPERAGE SIZE, AND NUMBER OF POLES REQUIRED FOR THE APPLICATION.

CONTRACTOR SHALL PROVIDE AND INSTALL ENCLOSED BREAKERS WITH TRIP RATINGS, REQUIRED POLES AND VOLTAGES AS INDICATED ON THE DRAWINGS. PROVIDE 75-DEGREE RATED LUGS. UNITS SHALL BE MANUFACTURED BY SQUARE D, SIEMENS, EATON/CUTLER HAMMER, GENERAL ELECTRIC OR APPROVED EQUIVALENT.

ENCLOSURES SHALL COMPLY WITH NEMA AB 1 AND NEMA KS TO MEET ENVIRONMENTAL CONDITIONS OF THE INSTALLED LOCATION.

MOTOR CONTROLLERS

COMBINATION MOTOR CONTROLLERS WITH DISCONNECTING MEANS IN COMMON ENCLOSURE, USING THERMAL MAGNETIC CIRCUIT BREAKER CONFORMING TO NEMA AB 1, WITH INTEGRAL THERMAL AND INSTANTANEOUS MAGNETIC TRIP IN EACH POLE. NEMA RATING SHALL MATCH THE ENVIRONMENTAL CONDITIONS OF THE SPACE. UNITS SHALL BE MANUFACTURED BY SIEMENS, SQUARE D, CUTLER HAMMER, GENERAL ELECTRIC OR APPROVED EQUIVALENT.

SHOULD ANY MOTORS BE LOCATED OUT OF SIGHT OR GREATER THAN 50 FEET FROM THEIR CONTROLLERS, THE CONTRACTOR SHALL FURNISH AND INSTALL A NON-FUSED SAFETY SWITCH IN CLOSE VICINITY TO THE MOTOR.

INTERIOR LIGHTING FIXTURES

THE LIGHTING DESIGN HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPLICABLE ENERGY CODES FOR THIS PROJECT. ANY DEVIATION IN FIXTURES, OR FIXTURE COMPONENTS. WILL AFFECT THE OVERALL ENERGY CONSUMED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL UPDATED CALCULATIONS RESULTING FROM CHANGES TO DEMONSTRATE THAT THE PROJECT MAINTAINS COMPLIANCE WITH THE ENERGY CODE.

FIXTURES SHALL BE SECURELY HUNG IN PLACE, BE PROPERLY WIRED AND CONNECTED INTO THE BRANCH CIRCUITS, TESTED, CLEANED AND LEFT READY FOR OPERATION.

NO FIXTURE SHALL BE SOLELY SUPPORTED BY CEILING TILE OR CEILING GRID. PROVIDE AT MINIMUM, TWO STRUCTURAL CABLE SUPPORTS RATED FOR THE PURPOSE, FROM DIAGONAL CORNERS OF ALL 1X4, 2X2, AND 2X4 FIXTURES INSTALLED IN LAY-IN CEILINGS TO THE STRUCTURE ABOVE.

ALL FIXTURES SHALL BE INSTALLED IN PERFECT ALIGNMENT. THEY SHALL BE HUNG PLUMB, WITH CANOPIES SET SQUARE AGAINST CEILING OR WALL.

PROVIDE FLEXIBLE METALLIC CONDUIT OR MC CABLE WHIPS NOT EXCEEDING SIX-FEET IN LENGTH TO FIXTURES INSTALLED IN ACCESSIBLE CEILINGS.

ALL FIXTURES SHALL HAVE ALL NECESSARY MOUNTING HARDWARE AND ACCESSORIES REQUIRED FOR INSTALLATION AS INDICATED ON THE PLANS OR AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.

ALL FIXTURE WITH REMOTE DRIVERS SHALL BE INSTALLED WITH THE DRIVER LOCATED IN A READILY ACCESSIBLE LOCATION. WHERE THIS IS NOT POSSIBLE DUE TO BUILDING CONSTRAINTS OR MANUFACTURER LIMITATIONS, CONSULT THE ARCHITECT FOR FURTHER DIRECTION.

EXIT SIGNS SHALL BE CIRCUITED TO AN UN-SWITCHED LEG OF THE AREA CIRCUIT LIGHTING. INSTALLATION OF EXIT SIGNS PROVIDED IN ACCORDANCE WITH NFPA 70, NFPA 101, IBC, AND LOCAL ORDINANCES. AND NFPA 72

EMERGENCY BATTERY PACKS AND BALLAST BATTERY BACK-UP FIXTURES SHALL BE CIRCUITED TO AN UN-SWITCHED LEG OF THE LOCAL LIGHTING CIRCUIT FOR THE AREA SERVED. INSTALLATION SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 70 AND NFPA 101, AND IBC REQUIREMENTS.

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5
ARCHITECTURE

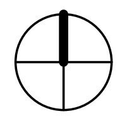
CIVIL:
KEYSTONE CONSULTING
ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN
ASSOCIATES, INC.

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:



REGISTRATION:

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JEFFREY RYAN MACHIK
PE083135

SHEET TITLE:

SPECIFICATIONS - ELECTRICAL

DATE: 02/16/24
SCALE:
DRAWN BY: DAN
CHECKED BY: DAN
PROJ NO: 22-0073

E4.01

FIRE ALARM SYSTEM

THE FIRE ALARM INSTALLATION SHALL BE IN ACCORDANCE WITH NEC, NFPA 72, LOCAL CODE REQUIREMENTS AS WELL AS THE AMERICAN WITH DISABILITIES ACT. THE MANUFACTURER SHALL BE AND EXTENSION OF THE EXISTING SIMPLEX GRINNEL SYSTEM. THE SYSTEM SHALL BE 24V DC OBTAINED FROM 120V AC SERVICE AND A POWER-SUPPLY MODULE. SECONDARY POWER SHALL BE SUPPLIED VIA 24V DC SUPPLY SYSTEM INCLUDING BATTERIES, AUTOMATIC BATTERY CHARGER AND AN AUTOMATIC TRANSFER SWITCH. BATTERY BACK-UP SHALL COMPLY WITH NFPA 72. PROVIDE ALL THE NECESSARY MODULES AND RELAYS REQUIRED. THE SYSTEM SHALL BE UL LISTED FOR THIS SERVICE.

FIRE ALARM SIGNAL INITIATION SHALL BE BY ONE OR MORE OF THE APPLICABLE FOLLOWING DEVICES: MANUAL STATIONS; HEAT DETECTORS; SMOKE DETECTORS; DUCT TYPE SMOKE DETECTORS; SPRINKLER SYSTEM WATER FLOW; FIRE EXTINGUISHING SYSTEM OPERATION; FIRE STANDPIPE SYSTEM. S

FIRE ALARM SIGNAL SHALL INITIATE THE ALL OF THE APPLICABLE FOLLOWING ACTIONS: ALARM NOTIFICATION APPLIANCES SHALL OPERATE CONTINUOUSLY; IDENTIFY ALARM AT THE FACP AND REMOTE ANNUNCIATOR; DE-ENERGIZE ELECTROMAGNETIC DOOR HOLDERS; TRANSMIT AN ALARM SIGNAL TO THE REMOTE ALARM RECEIVING STATION; UNLOCK ELECTRIC DOOR LOCKS IN DESIGNATED EGRESS PATHS; RELEASE FIRE AND SMOKE DOORS HELD OPEN BY MAGNETIC DOOR HOLDERS; SWITCH HEATING, VENTILATING, AND AIR-CONDITIONING EQUIPMENT CONTROLS TO FIRE ALARM MODE; CLOSE SMOKE DAMPERS IN AIR DUCTS OF SYSTEM SERVING ZONE WHERE ALARM WAS INITIATED; ELEVATOR RECALL WHERE APPLICABLE.

SYSTEM TROUBLE SIGNAL INITIATION SHALL BE BY ONE OR MORE OF THE FOLLOWING DEVICES OR ACTIONS: OPEN CIRCUITS, SHORTS AND GROUNDS OF WIRING FOR INITIATING DEVICE, SIGNALING LINE, AND NOTIFICATION-APPLIANCE CIRCUITS; OPENING, TAMPERING, OR REMOVAL OF ALARM-INITIATING AND SUPERVISORY SIGNAL-INITIATING DEVICES; LOSS OF PRIMARY POWER AT THE FACP; GROUND OR A SINGLE BREAK IN FACP INTERNAL CIRCUITS; ABNORMAL AC VOLTAGE AT THE FACP; A BREAK IN STANDBY BATTERY CIRCUITRY; FAILURE OF BATTERY CHARGING; ABNORMAL POSITION OF ANY SWITCH AT THE FACP OR ANNUNCIATOR; FIRE-PUMP POWER FAILURE, INCLUDING A DEAD-PHASE OR PHASE-REVERSAL CONDITION.

SYSTEM TROUBLE AND SUPERVISORY SIGNAL ACTIONS: RING TROUBLE BELL AND ANNUNCIATE AT THE FACP AND REMOTE ANNUNCIATORS.

MANUAL PULL STATIONS SHALL BE ADDRESSABLE, DOUBLE ACTION, SURFACE MOUNTED WITH MANUFACTURER'S STANDARD BACKBOX.

HORN/STROBE UNITS SHALL BE WALL MOUNTED WHERE SHOWN AND WHERE REQUIRED IN ACCORDANCE WITH NFPA 72.

SMOKE DETECTORS SHALL BE PHOTOELECTRIC TYPE, CEILING MOUNT SMOKE DETECTORS WITH ADJUSTABLE SENSITIVITY, AUXILIARY RELAY CONTACT, INTEGRAL THERMAL ELEMENT RATED 135 DEGREES F AND VISUAL INDICATION OF DETECTOR ACTIVATION.

PROVIDE SOUNDER BASES AND INTEGRAL CARBON MONOXIDE DETECTION AS REQUIRED.

THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT QUANTITY AND LOCATION OF DUCT DETECTORS REQUIRED WITH THE H.C. FURNISH ALL REQUIRED DUCT DETECTORS AND TURN OVER TO THE H.C. FOR MECHANICAL INSTALLATION OF THE DUCT DETECTOR INTO THE DUCTWORK. THE E.C. SHALL PROVIDE ALL WIRING AND FINAL CONNECTION TO THE FIRE ALARM SYSTEM. PROVIDE DUCT TYPE SMOKE DETECTORS. THEY SHALL BE PHOTOELECTRIC TYPE, WITH (2) AUXILIARY SPDT RELAY CONTACTS, KEY-OPERATED NORMAL-RESET-TEST SWITCH, DUCT SAMPLING TUBES EXTENDING WIDTH OF DUCT, VISUAL INDICATION OF DETECTOR ACTIVATION AT DUCT MOUNTED HOUSING AND SHUT-OFF CONTROL CONNECTED TO THE BUILDING CONTROL SYSTEM. INSTALLATION OF DEVICE AND APPURTENANCES SHALL BE BY HVAC CONTRACTOR. FOR EACH MECHANICAL UNIT WITH DUCT DETECTOR, PROVIDE FIRE ALARM CONTROL RELAY WITHIN 3' OF MECHANICAL UNIT CONTROLLER FOR SHUTDOWN.

STROBES, HORNS, AND HORN/STROBE UNITS SHALL BE PROVIDED AS SHOWN ON DRAWINGS AND IN ACCORDANCE WITH NFPA 72 WITH RATINGS OF 15, 30, 75 OR 110 CANDELA (AS INDICATED ON DRAWINGS). THE STROBES SHALL MEET THE PROVISIONS ALLOWED UNDER THE AMERICANS WITH DISABILITIES ACT.

ADDRESSABLE RELAYS SHALL BE PROVIDED FOR EACH FLOW AND TAMPER SWITCH.

HEAT DETECTOR FIXED TEMPERATURE SENSING SHALL BE INDEPENDENT OF RATE-OF-RISE SENSING AND PROGRAMMABLE TO OPERATE AT 135-DEG F OR 155-DEG F. SENSOR RATE-OF-RISE TEMPERATURE DETECTION SHALL BE SELECTABLE AT THE FACP FOR EITHER 15-DEG FOR 20-DEG F PER MINUTE.

THE ELEVATOR SHAFT HEAT DETECTOR SHALL BE PROGRAMMABLE TO OPERATE AT 15 DEGREES FAHRENHEIT LESS THAN THE SPRINKLER HEAD RATING. PROVIDE ALL RELAYS AND MONITORING MODULES AS REQUIRED FOR THE ELEVATOR RECALL AND SHUNT TRIP OPERATION WHERE APPLICABLE.

THE KITCHEN HEAT DETECTORS SHALL BE PROGRAMMABLE TO OPERATE AT 200 DEGREES FAHRENHEIT FIXED.

THE CONTRACTOR WILL BE REQUIRED TO COORDINATE WITH A MANUFACTURER'S REPRESENTATIVE FOR THE CORRECT EQUIPMENT MODEL NUMBERS PRIOR TO ORDERING:

MANUAL PULL STATIONS,
AUDIBLE/VISUAL DEVICES,
VISUAL ONLY DEVICES,
DOOR HOLD OPEN DEVICES,
DOOR RELEASE DEVICES,
SMOKE DETECTORS,
HEAT DETECTORS,
DUCT DETECTORS (TWO ENCAPSULATED RELAYS PER DUCT SMOKE DETECTOR),
ADDRESSABLE RELAYS,
PLENUM RATED WIRING.

ALL WIRING SHALL BE AS RECOMMENDED BY THE FIRE ALARM SYSTEM MANUFACTURER, PER NFPA AND UL LISTED. ALL WIRING SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE WITH THE MANUFACTURER'S REPRESENTATIVE FOR THE REQUIRED WIRING BETWEEN THE DEVICES, THE NOTIFICATION APPLIANCE EXTENDER PANELS AS WELL AS THE MAIN FIRE ALARM CONTROL PANEL.

CABLE SHALL BE PLENUM RATED. SPECIFIC TYPE RECOMMENDED BY THE EQUIPMENT MANUFACTURER AND APPROVED FOR USE AS A FIRE ALARM CABLE BY THE NATIONAL FIRE CODE AND THE LOCAL AUTHORITY.

INSTALL ALL CABLING EXPOSED TO VIEW AND ABOVE NON-ACCESSIBLE CEILINGS IN CONDUIT. WIRING MAY BE INSTALLED WITHOUT CONDUIT ABOVE ACCESSIBLE CEILINGS. PROVIDE DEDICATED SUPPORTS FOR ALL WIRING AND CONDUITS, DO NOT SHARE WITH OTHER SYSTEMS.

CABLING SHALL BE FIRE ALARM TYPES AS APPLICABLE IN COMPLIANCE WITH NEC ARTICLE 760 AND APPROVED FOR USE AS A FIRE ALARM CABLE BY THE NATIONAL FIRE CODE AND THE LOCAL AUTHORITY. PROVIDE DEDICATED WALL SLEEVES, MINIMUM 3/4" EMT CONDUIT, WITH UL APPROVED PLIABLE FIRE STOPPING.

THE SYSTEM SHALL INCLUDE ALL DEVICES AS SHOWN ON THE DRAWINGS, AND ANY OTHER APPURTENANCES NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM AS DESCRIBED IN THE DRAWING SET AND THIS SPECIFICATION.

CONTRACTOR SHALL SUBCONTRACT TO THE FIRE ALARM SYSTEM MANUFACTURER FOR PROGRAMMING AND FINAL SYSTEM CHECKOUT AND TEST.

EACH AND ALL ITEMS OF THE FIRE ALARM SYSTEM SHALL BE LISTED AS A PRODUCT OF A SINGLE FIRE ALARM SYSTEM MANUFACTURER UNDER THE APPROPRIATE CATEGORY BY UNDERWRITERS LABORATORIES, INC. (UL) AND SHALL BEAR THE "UL" LABEL. ALL CONTROL EQUIPMENT IS TO BE LISTED UNDER UL CATEGORY UOJZ AS A SINGLE CONTROL UNIT. PARTIAL LISTING SHALL NOT BE ACCEPTABLE.

IN ADDITION TO SHOP DRAWING REQUIREMENTS NOTED ELSEWHERE FOR THIS PROJECT, THE CONTRACTOR SHALL BLOCK DIAGRAMS SHOWING THE TYPES AND ARRANGEMENT OF CONNECTIONS AMONG THE COMPONENTS INCLUDING CABLE TYPES, TABULATIONS VERIFYING THE EXTRA POWER CAPACITY REQUIRED (BATTERY CALCULATIONS) FOR FIRE ALARM CONTROL PANELS AND EXTENDER PANELS. SHOW TABULATIONS FOR POINTS AND POWER SUPPLIES.

WHEN THE INSTALLATION IS COMPLETE, IT SHALL BE TESTED BY A REPRESENTATIVE OF THE MANUFACTURER. THE LOCAL FIRE MARSHAL AND OWNER'S REPRESENTATIVE SHALL BE INVITED TO ATTEND THE TESTING. WHEN THE MANUFACTURER'S REPRESENTATIVE HAS VERIFIED THAT THE SYSTEM IS COMPLETE AND OPERATING PROPERLY, HE SHALL PROVIDE THE OWNER WRITTEN CERTIFICATION STATING THE SYSTEM HAS BEEN TESTED AND VERIFIED FOR PROPER OPERATIONS.

EXECUTION

MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS INDICATED, THE APPROVED RECOMMENDATIONS OF THE MANUFACTURERS AND NFPA 70. THE INSTALLATION SHALL BE ACCOMPLISHED BY WORKERS SKILLED IN THIS TYPE OF WORK AND SHALL BE DONE IN ACCORDANCE WITH THE BEST PRACTICE OF THE TRADES.

INSTALLATION SHALL CONFORM TO ALL LOCAL CODES AND INDUSTRY STANDARDS. THE CODE OR STANDARD THAT IS MORE STRINGENT SHALL APPLY.

THE CONTRACTOR SHALL DELIVER A COMPLETE AND OPERATIONAL SYSTEM. THE CONTRACTOR SHALL EXAMINE THE DESIGN DOCUMENTS AND PROJECT SITE THOROUGHLY. ANY WORK NOT INCLUDED ON THE DRAWINGS, BUT NECESSARY TO DELIVER A COMPLETE SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR WITHOUT ADDITIONAL COST TO OWNER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ARCHITECTURAL AND MECHANICAL DRAWINGS FOR IMPACT ON ELECTRICAL INSTALLATIONS.

THE CONTRACTOR SHALL COMPLY WITH OSHA 191.150 "LOCKOUT AND TAGOUT PROCEDURE".

INSTALLATIONS ARE NOT COMPLETE UNTIL TESTED AND OPERATIONAL. GREEN CARDS, WHEN REQUIRED, MUST BE SIGNED AND APPROVED.

PROVIDE NEW TYPED PANEL DIRECTORIES FOR EACH PANEL FURNISH/MODIFIED UNDER THIS PROJECT INCORPORATING DESCRIPTIVE INFORMATION FOR EACH NEW/EXISTING LOAD.

FIELD TESTING

PHASE ROTATION TESTS SHALL BE CONDUCTED ON ALL THREE-PHASE CIRCUITS USING ROTATION INDICATING INSTRUMENT. THE PHASE ROTATION OF ELECTRICAL CONNECTIONS TO ALL CONNECTED EQUIPMENT SHALL BE CLOCKWISE.

ELECTRICAL PROTECTIVE DEVICES SHALL BE TESTED TO DEMONSTRATE PROPER CHARACTERISTICS.

UPON COMPLETION OF THE ELECTRICAL WORK, AND AT SUCH TIME AS THE OWNER'S REPRESENTATIVE MAY DIRECT, AN OPERATING TEST OF THE ELECTRICAL SYSTEMS SHALL BE CONDUCTED. ALL ELECTRICAL EQUIPMENT SHALL BE DEMONSTRATED TO OPERATE IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED AND INDICATED

AS-BUILT DRAWINGS

THE CONTRACTOR SHALL COORDINATE ALL FIELD CHANGES AND MAINTAIN A SET OF RECORD PRINTS DURING CONSTRUCTION. HE SHALL RECORD ON THESE PRINTS ALL DEVIATIONS FROM THE CONTRACT DRAWINGS IN CONDUIT SIZING, FEEDER SIZES, BREAKERS SIZES, LIGHTING, EQUIPMENT AND CONDUIT LOCATIONS, ETC. AT THE COMPLETION OF WORK, THE CONTRACTOR SHALL INCORPORATE THE CHANGES INTO AN ELECTRONIC CAD/REVIT SET OF DOCUMENTS AND PROVIDE THE OWNER WITH BOTH A HARD COPY AND DIGITAL COPY OF THE REVISED DRAWINGS NOTED ON EACH SHEET WITH "AS-BUILT DRAWINGS".

CERTIFICATE OF APPROVAL

OBTAIN AND DELIVER A FINAL CERTIFICATE OF APPROVAL FROM THE APPLICABLE NEC INSPECTION AUTHORITY HAVING JURISDICTION. THE ELECTRICAL CONTRACTOR SHALL PAY ALL CHARGES MADE BY THE INSPECTION AUTHORITY AND TURN OVER CERTIFICATE TO THE ARCHITECT AT THE TIME OF SUBSTANTIAL COMPLETION.

GUARANTEE

THE CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE HIS MATERIAL AND LABOR FOR A PERIOD OF ONE YEAR AFTER BUILDING ACCEPTANCE BY OWNER.

PROJECT:

RENOVATIONS TO PALMERTON HIGH SCHOOL WEIGHT ROOM

3525 FIRELINE ROAD
PALMERTON, PA 18071

OWNER:

PALMERTON AREA SCHOOL DISTRICT

680 FOURTH STREET PALMERTON, PA 18071

PROJECT TEAM:

ARCHITECT:
ALLOY5
ARCHITECTURE

CIVIL:
KEYSTONE CONSULTING ENGINEERS, INC.

MEPF:
SNYDER HOFFMAN ASSOCIATES, INC.

SUBMISSIONS:

NO.	ISSUE DESCRIPTION	DATE
1	100% DD REVIEW	01/12/24
2	100% CD REVIEW	02/09/24
3	BID SET	02/16/24

KEY PLAN:

REGISTRATION:

ALLOY5
ARCHITECTURE
530 WEST BROAD ST BETHLEHEM, PA 18018
610.419.4055

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
JEFFREY RYAN MACHIK
ENGINEER
PE083135

SHEET TITLE:

SPECIFICATIONS - ELECTRICAL

DATE: 02/16/24
SCALE:
DRAWN BY: DAN
CHECKED BY: DAN
PROJ NO: 22-0073

E4.02