SYMBOLS

SECTION TAG — 1 / A3.2 — DETAIL NUMBER, SHEET NUMBER

INTERIOR ELEVATION — 5 / 8 A8.8 6 / 7 — ELEVATION NUMBER, SHEET NUMBER

EXTERIOR ELEVATION — A2.8 6 — ELEVATION NUMBER, SHEET NUMBER

DETAIL TAG — 1 / A8.8

PARTITION/BULKHEAD TAG — P3 — (REFER TO A1.0 FOR TYPES)

ROOM TAG — OFFICE — ROOM NAME; B130 — ROOM NUMBER

CASEWORK TAG — 1235 / 3634 — BASIS OF DESIGN MODEL NUMBER (CUSTOM/MODIFIED CABINETS HAVE "M" SUFFIX); CABINET NOMINAL HEIGHT; CABINET WIDTH

WINDOW TAG — W13

CURTAIN WALL TAG — CW13

STOREFRONT TAG — AL13

INTERIOR WINDOW TAG — IW13

DOOR TAG — D336A-1

ROOF TAG — A

NEW DOOR

EXISTING DOOR

EXISTING COL. LINE — 1 — OCTAGON; ITALIC TEXT

NEW COL. LINE — 1 — CIRCLE; STANDARD TEXT

HATCH PATTERNS

METAL STUD · BATT INSUL. · CMU · FINISHED WOOD

RIGID INSULATION · CONCRETE · GRAVEL · STEEL

BRICK · ROUGH WOOD · EARTH · PLYWOOD

ABBREVIATIONS

(NOT ALL ABBREVIATIONS APPEAR IN PROJECT)

AC	AIR CONDITIONING
ACM	ALUMINUM COMPOSITE MATERIAL
ACOUST	ACOUSTICAL
ACT	ACOUSTIC CEILING TILE
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGGR	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ATTN	ATTENTION
AV	AUDIOVISUAL
BD	BOARD
BIT	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BO	BOTTOM OF
BOT	BOTTOM
BRG	BEARING
BSMNT	BASEMENT
CB	CEMENT BOARD
CBU	CEMENTITIOUS BACKER UNIT
CCTV	CLOSED CIRCUIT TELEVISION
CFS	COLD FORMED STEEL
CG	CORNER GUARD
CI	CAST IRON
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CORR	CORRIDOR
CPT	CARPET
CT	CERAMIC TILE
CTR	CENTER
CTSK	COUNTERSUNK
CW	COLD WATER
D	DEEP, DEPTH
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLISH OR DEMOLITION
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DIMS	DIMENSIONS
DIV	DIVISION
DMPF	DAMP PROOFING
DN	DOWN
DO	DOOR OPENING
DR	DOOR
DRN	DRAIN
DS	DOWNSPOUT
DTL	DETAIL
DW	DISHWASHER
DWG	DRAWING
E	EAST
EA	EACH
EC	ELECTRICAL CONTRACT(OR)
EJ	EXPANSION JOINT
EJC	EXPASNSION JOINT COVER
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOSURE
ENG	ENGINEER
EP	ELECTRICAL PANEL
EPDM	ETHYLENE PROPYLENE DIENE M-CLASS
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF&E	FURNITURE, FIXTURES AND EQUIPMENT
FIN	FINISH
FIXT	FIXTURE
FLR	FLOOR
FND	FOUNDATION
FO	FACE OF
FP	FIRE PROTECTION
FRC	FIBER REINFORCED CONCRETE
FRP	FIBER REINFORCED PLASTIC
FRT	FIRE RETARDANT TREATED
FRZ	FREEZER
FT	FEET/FOOT
FTG	FOOTING
FURN	FURNITURE
FURR	FURRING
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACT(OR)
GEN	GENERAL
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS
GLAZ	GLAZING
GRD	GROUND
GWB	GYPSUM WALL BOARD
GYP	GYPSUM
H	HIGH/HEIGHT
HC	HANDICAPPED
HDWD	HARDWOOD
HDWR	HARDWARE
HGT	HEIGHT
HM	HOLLOW METAL
HNDRL	HANDRAIL
HO	HOLD OPEN
HORIZ	HORIZONTAL
HR	HOUR
HSS	HOLLOW STRUCTURAL SECTION
HTG	HEATING
HVAC	HEATING VENTILATION AND AIR CONDITIONING
HW	HOT WATER
ID	INSIDE DIAMETER
IN	INCH/INCHES
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INTERM	INTERMEDIATE
INV	INVERT
JAN	JANITOR
JST	JOIST
JT	JOINT
KIT	KITCHEN
LAM	LAMINATE
LAV	LAVATORY
LB	POUNDS
LGM	LIGHT GUAGE METAL
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MAX	MAXIMUM
MECH	MECHANICAL
MED	MEDIUM
MEMBR	MEMBRANE
MFR	MANUFACTURER
MH	MAN HOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MR	MOISTURE RESISTANT
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MULL	MULLION
MW	MICROWAVE
N	NORTH
NA	NOT APPLICABLE
NC	NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OC	ON CENTER
OD	OUTSIDE DIAMETER
OD	OVERFLOW DRAIN
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFF	OFFICE
OFOI	OWNER FURNISHED, OWNER INSTALLED
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN
PBD	PARTICLE BOARD
PC	PRECAST OR PLUMBNG CONTRACT(OR)
PERF	PERFORATED
PERIM	PERIMETER
PERP	PERPENDICULAR
PL	PLATE
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PLYWD	PLYWOOD
PNL	PANEL
PNT	PAINT OR PAINTED
PREFAB	PREFABRICATED
PROJ	PROJECT
PSF	POUNDS PER SQUARE FOOT
PT	PRESSURE TREATED
PTD	PAINTED
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
QTY	QUANTITY
RA	RETURN AIR
RB	RESILIENT BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
RDL	ROOF DRAIN LEADER
REC	RECESSED
RECPT	RECEPTACLE
REF	REFERENCE
REF	REFRIFERATOR
REFR	REFRIGERATOR
REINF	REINFORCED REINFORCING
REQ	REQUIRE/REQUIRED
REV	REVISION/REVISED
RM	ROOM
RO	ROUGH OPENING
RTD	RATED
RTG	RATING
RWL	RAIN WATER LEADER
S	SOUTH
SA	SUPPLY AIR
SC	SOLID CORE
SD	STORM DRAIN
SECT	SECTION
SF	SQUARE FEET/FOOT
SHT	SHEET
SIM	SIMILAR
SM	SHEET METAL
SM	SURFACE MOUNTED
SPEC	SPECIFIED OR SPECIFICATION
SPK	SPRINKLER OR SPEAKER
SPKR	SPEAKER
SQ	SQUARE
SS	STAINLESS STEEL
STC	SOUND TRANSMISSION COEFFICIENT
STL	STEEL
STOR	STORAGE
STRG	STRINGER
STRUCT	STRUCTURE OR STRUCTURAL
SUSP	SUSPENDED
SYM	SYMMETRICAL
SYS	SYSTEM
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TELE	TELEPHONE
TEMP	TEMPORARY
THK	THICKNESS
TKBD	TACK BOARD
TLT	TOILET
TMPD	TEMPERED
TO	TOP OF
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TS	TUBE STEEL
TV	TELEVISION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
VAR	VARIES
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VR	VAPOR RETARDER
VT	VINYL TILE
VWC	VINYL WALL COVERING
W	WIDE/WEST
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WP	WATERPROOF/ WATERPROOFING
WPM	WATERPROOF MEMBRANE
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

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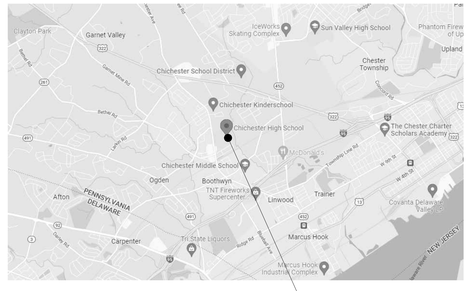
NEW STADIUM RESTROOMS

CHICHESTER HIGH SCHOOL

CHICHESTER SCHOOL DISTRICT

LIST OF DRAWING SHEETS



LOCATION MAP

MAROTTA/MAIN ARCHITECTS
WWW.MAROTTAMAIN.COM

SEAL:

CONSULTANT:

NEW STADIUM RESTROOMS
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES	DESCRIPTION:
DATE:	
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ # : 22-CSD-04 DRAWN BY : WEM

SHEET TITLE:

COVER SHEET

SHEET NUMBER:

A0.0

BID SET

BUILDING CODE ANALYSIS:

PENNSYLVANIA UNIFORM CONSTRUCTION CODE (UCC):
INTERNATIONAL BUILDING CODE - 2018
INTERNATIONAL PLUMBING CODE - 2018
INTERNATIONAL MECHANICAL CODE - 2018
INTERNATIONAL ENERGY CONSERVATION CODE - 2018
INTERNATIONAL FIRE CODE - 2018
ANSI ICC A117.1 - 2009

NO. CHAPTER HEADING

03. USE AND OCCUPANCY CLASSIFICATION
303.4 ASSEMBLY GROUP A-3

05. GENERAL BUILDING HEIGHTS AND AREA LIMITATIONS
TABLE 504.3 ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE
TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE
TABLE 506.2 ALLOWABLE AREA FACTOR IN SQUARE FEET
GROUP: A-3 (ASSEMBLY), ACCESSORY TO STADIUM
TYPE OF CONSTRUCTION: TYPE VB
HEIGHT LIMITATION: 1 STORY, 40 FEET
AREA LIMITATION: 6000 SF

ACTUAL BUILDING SIZE:
HEIGHT: 17' 9"
STORIES: 1
FIRST FLOOR SQUARE FOOTAGE: 2,424 SF

06. TYPES OF CONSTRUCTION
602 CONSTRUCTION CLASSIFICATION
602.3 TYPE V. TYPE V CONSTRUCTION IS THAT TYPE OF CONSTRUCTION IN WHICH THE EXTERIOR WALLS ARE OF NONCOMBUSTIBLE MATERIALS.
TABLE 601 FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)

BUILDING ELEMENT	TYPE V B
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS	
EXTERIOR	0
INTERIOR	0
NONBEARING WALLS AND PARTITIONS	
EXTERIOR	0
INTERIOR	0
FLOOR CONSTRUCTION AND SECONDARY MEMBERS	0
ROOF CONSTRUCTION AND SECONDARY MEMBERS	0

TABLE 602 FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE = 0

FIRE SEPARATION DISTANCE = X (FEET)	TYPE OF CONSTRUCTION	OCCUPANCY
X ≥ 30	V B	GROUP A, B, E, F-2, I, R, S-2, U

07. FIRE AND SMOKE PROTECTION FEATURES
705.3 BUILDINGS ON THE SAME LOT. FOR THE PURPOSES OF DETERMINING THE REQUIRED WALL AND OPENING PROTECTION, PROJECTIONS AND ROOF-COVERING REQUIREMENTS, BUILDINGS ON THE SAME LOT SHALL BE ASSUMED TO HAVE AN IMAGINARY LINE BETWEEN THEM.
WHERE A NEW BUILDING IS TO BE ERECTED ON THE SAME LOT AS AN EXISTING BUILDING, THE LOCATION OF THE ASSUMED IMAGINARY LINE WITH RELATION TO THE EXISTING BUILDING SHALL BE SUCH THAT THE *EXTERIOR WALL* AND OPENING PROTECTION OF THE EXISTING BUILD- ING MEET THE CRITERIA AS SET FORTH IN SECTIONS 705.5 AND 705.8.
EXCEPTIONS:
1. TWO OR MORE BUILDINGS ON THE SAME LOT SHALL BE EITHER REGULATED AS SEPARATE BUILDINGS OR SHALL BE CONSIDERED AS PORTIONS OF ONE BUILDING IF THE AGGREGATE AREA OF SUCH BUILDINGS IS WITHIN THE LIMITS SPECIFIED IN CHAPTER 5 FOR A SINGLE BUILDING. WHERE THE BUILDINGS CONTAIN DIFFERENT OCCUPANCY GROUPS OR ARE OF DIFFERENT TYPES OF CONSTRUCTION, THE AREA SHALL BE OWED FOR THE MOST RESTRICTIVE OCCUPANCY OR CONSTRUCTION.

08. INTERIOR FINISHES
803 WALL AND CEILING FINISHES
803.1.1 - INTERIOR WALL AND CEILING FINISH MATERIALS INTERIOR WALL AND CEILING FINISH MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM E 84 OR UL723. SUCH INTERIOR FINISH MATERIALS SHALL BE GROUPED IN THE FOLLOWING CLASSES IN ACCORDANCE WITH THEIR FLAME SPREAD AND SMOKE-DEVELOPED INDEXES.

CLASS B: FLAME SPREAD INDEX 26-75; SMOKE-DEVELOPED INDEX 0-450
CLASS C: FLAME SPREAD INDEX 76-200; SMOKE-DEVELOPED INDEX 0-450

803.1.2 - ROOM CORNER TEST FOR INTERIOR WALL OR CEILING FINISH MATERIALS. INTERIOR WALL OR CEILING FINISH MATERIALS SHALL BE PERMITTED TO BE TESTED IN ACCORDANCE WITH NFPA 286. INTERIOR WALL OR CEILING FINISH MATERIALS TESTED IN ACCORDANCE WITH NFPA 286 SHALL COMPLY WITH SECTION 803.1.2.1.

TABLE 803.9 - INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY - SPRINKLERED

	EXIT ENCLOSURES & ROOMS			
OCCUPANCY	EXIT PASSAGEWAYS	& ENCLOSED CORRIDORS	SPACES	
A-3	B	C		

803.13 - APPLICATION OF INTERIOR FINISH MATERIALS TO FIRE-RESISTANCE-RATED STRUCTURAL ELEMENTS. WHERE INTERIOR FINISH MATERIALS ARE APPLIED ON WALLS, CEILINGS, OR STRUCTURAL ELEMENTS REQUIRED TO HAVE A FIRE-RESISTANCE RATING OR TO BE OF NONCOMBUSTIBLE CONSTRUCTION, THEY SHALL COMPLY WITH THE PROVISIONS OF THIS SECTION.

09. FIRE PROTECTION SYSTEMS
903 AUTOMATIC SPRINKLER SYSTEM
903.2.3 GROUP A3: AUTOMATIC SPRINKLER SYSTEM IS NOT PROVIDED.

906 PORTABLE FIRE EXTINGUISHERS
906.1 WHERE REQUIRED. PORTABLE FIRE EXTINGUISHERS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:
1. IN NEW AND EXISTING GROUP A, B, E, F, I, M, R-1, R-2, R-4 AND S OCCUPANCIES.
2. WITHIN 30 FEET OF COMMERCIAL COOKING EQUIPMENT.
3. IN AREAS WHERE FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE STORED, USED OR DISPENSED.
4. ON EACH FLOOR OF STRUCTURES UNDER CONSTRUCTION.
5. WHERE REQUIRED BY THE INTERNATIONAL FIRE CODE SECTIONS INDICATED IN TABLE 906.1
6. SPECIAL-HAZARD AREAS, INCLUDING BUT NO LIMITED TO LABORATORIES, COMPUTER ROOMS AND GENERATOR ROOMS, WHERE REQUIRED BY THE FIRE CODE OFFICIAL.

906.2 GENERAL REQUIREMENTS. PORTABLE FIRE EXTINGUISHERS SHALL BE SELECTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THIS SECTION AND NFPA 10.

906.3 SIZE AND DISTRIBUTION.
TABLE 906.3(1) FIRE EXTINGUISHERS FOR CLASS A FIRE HAZARDS LIGHT (LOW) HAZARD OCCUPANCY

MINIMUM RATED SINGLE EXTINGUISHER	MAXIMUM FLOOR AREA PER UNIT OF TYPE A	MAXIMUM FLOOR AREA FOR EXTINGUISHER	MAXIMUM TRAVEL DISTANCE TO EXTINGUISHER
2-A	3,000 SQUARE FEET	11,250 SQUARE FEET	75 FEET

907 FIRE ALARM AND DETECTION SYSTEMS
907.2.1 GROUP A.
A MANUAL FIRE ALARM SYSTEM THAT ACTIVATES THE OCCUPANT NOTIFICATION SYSTEM IN ACCORDANCE WITH SECTION 907.5 SHALL BE INSTALLED IN GROUP A OCCUPANCIES WHERE THE OCCUPANT LOAD DUE TO THE ASSEMBLY OCCUPANCY IS 300 OR MORE.

OCCUPANCY LOAD IS UNDER 300

10. MEANS OF EGRESS
1003 GENERAL MEANS OF EGRESS
1003.1 APPLICABILITY. THE GENERAL REQUIREMENTS SPECIFIED IN SECTIONS 1003 THROUGH 1013 SHALL APPLY TO ALL THREE ELEMENTS OF THE MEANS OF EGRESS SYSTEM, IN ADDITION TO THOSE SPECIFIC REQUIREMENTS FOR THE EXIT ACCESS, THE EXIT AND THE EXIT DISCHARGE.

1003.2 CEILING HEIGHT. THE MEANS OF EGRESS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7 FEET 6 INCHES.
EXCEPTIONS:
1. SLOPED CEILINGS IN ACCORDANCE WITH SECTION 1208.2.
2. [NOT APPLICABLE]
3. ALLOWABLE PROJECTIONS IN ACCORDANCE WITH SECTION 1011.3.
4. STAIR HEADROOM IN ACCORDANCE WITH SECTION 1010.1.3
5. DOOR HEIGHT IN ACCORDANCE WITH SECTION 1011.1.1
6. RAMP HEADROOM IN ACCORDANCE WITH SECTION 1012.5.2.

1003.3 PROTRUDING OBJECTS.
1003.3.1 HEADROOM. PROTRUDING OBJECTS ARE PERMITTED TO EXTEND BELOW THE MINIMUM CEILING HEIGHT REQUIRED BY SECTION 1003.2 PROVIDED A MINIMUM HEADROOM OF 80 INCHES SHALL BE PROVIDED.
1003.3.2 POST-MOUNTED OBJECTS SHALL NOT OVERHANG MORE THAN 4 INCHES BETWEEN 27 INCHES AND 80 INCHES.
1003.3.3 HORIZONTAL PROJECTIONS SHALL NOT PROJECT MORE THAN 4 INCHES BETWEEN 27 INCHES AND 80 INCHES.
1003.3.4 PROTRUDING OBJECTS SHALL NOT REDUCE THE MINIMUM CLEAR WIDTH OF ACCESSIBLE ROUTES.

1003.4 SLIP-RESISTANT SURFACE. CIRCULATION PATHS OF THE MEANS OF EGRESS SHALL HAVE A SLIP-RESISTANT SURFACE AND BE SECURELY ATTACHED.

1003.5 ELEVATION CHANGE. WHERE CHANGES IN ELEVATION OF LESS THAN 12 INCHES EXIST IN THE MEANS OF EGRESS, SLOPE SURFACES SHALL BE USED. WHERE THE SLOPE IS GREATER THAN ONE UNIT VERTICAL IN 20 UNITS HORIZONTAL, RAMPS COMPLYING WITH SECTION 1010 SHALL BE USED.

1003.6 MEANS OF EGRESS CONTINUITY SHALL NOT BE INTERRUPTED BY ANY BUILDING ELEMENT OTHER THAN A MEANS OF EGRESS COMPONENT AS SPECIFIED IN THIS CHAPTER. OBSTRUCTIONS SHALL NOT BE PLACED IN THE REQUIRED WIDTH OF A MEANS OF EGRESS EXCEPT PROJECTIONS PERMITTED BY THIS CHAPTER. THE REQUIRED CAPACITY OF A MEANS OF EGRESS SYSTEM SHALL NOT BE DIMINISHED ALONG THE PATH OF EGRESS TRAVEL.

1005 MEANS OF EGRESS SIZING
1005.1 GENERAL.
ALL PORTIONS OF THE MEANS OF EGRESS SYSTEM SHALL BE SIZED IN ACCORDANCE WITH THIS SECTION.
EXCEPTION: AISLES AND AISLE ACCESSWAYS IN ROOMS OR SPACES USED FOR ASSEMBLY PURPOSES COMPLYING WITH SECTION 1029.
1005.2 MINIMUM WIDTH BASED ON COMPONENT.
THE MINIMUM WIDTH, IN INCHES (MM), OF ANY MEANS OF EGRESS COMPONENTS SHALL BE NOT LESS THAN THAT SPECIFIED FOR SUCH COMPONENT, ELSEWHERE IN THIS CODE.
1005.3 REQUIRED CAPACITY BASED ON OCCUPANT LOAD.
THE REQUIRED CAPACITY, IN INCHES (MM), OF THE MEANS OF EGRESS FOR ANY ROOM, AREA, SPACE OR STORY SHALL BE NOT LESS THAN THAT DETERMINED IN ACCORDANCE WITH SECTIONS 1005.3.1 AND 1005.3.2:
SECTION 1006 NUMBER OF EXITS AND EXIT ACCESS DOORWAYS
1006.1 GENERAL.
THE NUMBER OF EXITS OR EXIT ACCESS DOORWAYS REQUIRED WITHIN THE MEANS OF EGRESS SYSTEM SHALL COMPLY WITH THE PROVISIONS OF SECTION 1006.2 FOR SPACES, INCLUDING MEZZANINES, AND SECTION 1006.3 FOR STORIES.
1006.2 EGRESS FROM SPACES. ROOMS, AREAS OR SPACES, INCLUDING MEZZANINES, WITHIN A STORY OR BASEMENT SHALL BE PROVIDED WITH THE NUMBER OF EXITS OR ACCESS TO EXITS IN ACCORDANCE WITH THIS SECTION.
1006.2.1 EGRESS BASED ON OCCUPANT LOAD AND COMMON PATH OF EGRESS TRAVEL DISTANCE. TWO EXITS OR EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED WHERE THE COMMON PATH OF EGRESS TRAVEL DISTANCE EXCEEDS THE VALUES LISTED IM TABLE 1006.2.1:
- OCCUPANCY A, MAXIMUM OCCUPANT LOAD: 49
- MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE: 75 FEET.

1008 MEANS OF EGRESS ILLUMINATION
1008.1 MEANS OF EGRESS ILLUMINATION.
ILLUMINATION SHALL BE PROVIDED IN THE MEANS OF EGRESS IN ACCORDANCE WITH SECTION 1008.2. UNDER EMERGENCY POWER, MEANS OF EGRESS ILLUMINATION SHALL COMPLY WITH SECTION 1008.3.
1008.2 ILLUMINATION REQUIRED.
THE MEANS OF EGRESS SERVING A ROOM OR SPACE SHALL BE ILLUMINATED AT ALL TIMES THAT THE ROOM OR SPACE IS OCCUPIED.
1008.3 EMERGENCY POWER FOR ILLUMINATION.
THE POWER SUPPLY FOR MEANS OF EGRESS ILLUMINATION SHALL NORMALLY BE PROVIDED BY THE PREMISES ' ELECTRICAL SUPPLY.
1008.3.1 GENERAL.
IN THE EVENT OF POWER SUPPLY FAILURE IN ROOMS AND SPACES THAT REQUIRE TWO OR MORE MEANS OF EGRESS, AN EMERGENCY ELECTRICAL SYSTEM SHALL AUTOMATICALLY ILLUMINATE ALL OF THE FOLLOWING AREAS:
1. AISLES.
2. CORRIDORS.
3. EXIT ACCESS STAIRWAYS AND RAMPS

1009 ACCESSIBLE MEANS OF EGRESS
1009.1 ACCESSIBLE MEANS OF EGRESS REQUIRED.

1017 EXIT ACCESS TRAVEL DISTANCE

OCCUPANCY	WITHOUT SPRINKLER SYSTEM FT	
A,E,F-1,M,R,S-1	200 FT	—
F-2, S-2, U	300 FT	—

1010 DOORS, GATES AND TURNSTILES
1010.1.1 SIZE OF DOORS.
THE REQUIRED CAPACITY OF EACH DOOR OPENING SHALL BE SUFFICIENT FOR THE OCCUPANT LOAD THEREOF AND SHALL PROVIDE A MINIMUM CLEAR WIDTH OF 32 INCHES (813 MM). CLEAR OPENINGS OF DOORWAYS WITH SWINGINGDOORS SHALL BE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES (1.57 RAD), WHERE THIS SECTION REQUIRES A MINIMUM CLEAR WIDTH OF 32 INCHES (813 MM) AND A DOOR OPENING INCLUDES TWO DOOR LEAVES WITHOUT A MULLION, ONE LEAF SHALL PROVIDE A CLEAR OPENING WIDTH OF 32 INCHES (813 MM). THE MAXIMUM WIDTH OF A SWINGING DOOR LEAF SHALL BE 48 INCHES (1219 MM) NOMINAL MEANS OF EGRESS DOORS IN A GROUP I-2 OCCUPANCY USED FOR THE MOVEMENT OF BEDS SHALL PROVIDE A CLEAR WIDTH NOT LESS THAN 41 1/2 INCHES (1054 MM). THE HEIGHT OF DOOR OPENINGS SHALL BE NOT LESS THAN 80 INCHES (2032 MM)
1010.1.1.1 PROJECTIONS INTO CLEAR WIDTH.
THERE SHALL NOT BE PROJECTIONS INTO THE *REQUIRED CLEAR WIDTH* LOWER THAN 34 INCHES ABOVE THE FLOOR OR GROUND. PROJECTIONS INTO THE CLEAR OPENING WIDTH BETWEEN 34 INCHES AND 80 INCHES ABOVE THE FLOOR OR GROUND SHALL NOT EXCEED 4 INCHES.

1013 EXIT SIGNS
1013.1 WHERE REQUIRED.
EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXITSIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. THE PATH OF EGRESS TRAVEL TO EXITS AND WITHIN EXITS SHALL BE MARKED BY READILY VISIBLE EXIT SIGNS TO CLEARLY INDICATE THE DIRECTION OF EGRESS TRAVEL IN CASES WHERE THE EXIT OR THE PATH OF EGRESS TRAVEL IS NOT IMMEDIATELY VISIBLE TO THE OCCUPANTS. INTERVENING MEANS OF EGRESS DOORS WITHIN EXITS SHALL BE MARKED BY EXIT SIGNS. EXIT SIGN PLACEMENT SHALL BE SUCH THAT NO POINT IN AN EXIT ACCESS CORRIDOR OR EXITPASSAGEWAY IS MORE THAN 100 FEET OR THE LISTED VIEWING DISTANCE OF THE SIGN, WHICHEVER IS LESS, FROM THE NEAREST VISIBLE EXIT SIGN.

1013.3 ILLUMINATION. EXIT SIGNS SHALL BE INTERNALLY OR EXTERNALLY ILLUMINATED.
EXCEPTION: TACTILE SIGNS REQUIRED BY SECTION 1013.4 NEED NOT BE PROVIDED WITH ILLUMINATION.

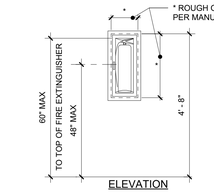
SECTION 1028 EXIT DISCHARGE
1028.1 GENERAL
EXITS SHALL DISCHARGE DIRECTLY TO THE EXTERIOR OF THE BUILDING. THE EXIT DISCHARGE SHALL BE AT GRADE OR SHALL PROVIDE A DIRECT PATH OF EGRESS TRAVEL TO GRADE. THE EXIT DISCHARGE SHALL NOT REENTER A BUILDING.

PLUMBING CODE ANALYSIS:

INTERNATIONAL PLUMBING CODE - 2018

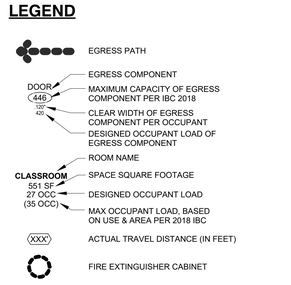
STADIUM SEATING FULL CAPACITY: 1,671 OCCUPANTS						
GROUP A-5 (ASSEMBLY) - 1,671 OCC / 2 = 836 MALE, 836 FEMALE						
	Male WC	Female WC	Male Lav	Female Lav	DF	Service Sink
	1 PER 75	1 PER 40	1 PER 200	1 PER 150	1 PER 1000	1
REQUIRED	12	21	5	6	2	1
ACCESSIBLE WCS REQUIRED	1	2				
ACCESSIBLE WCS PROVIDED	**2**	**2**				

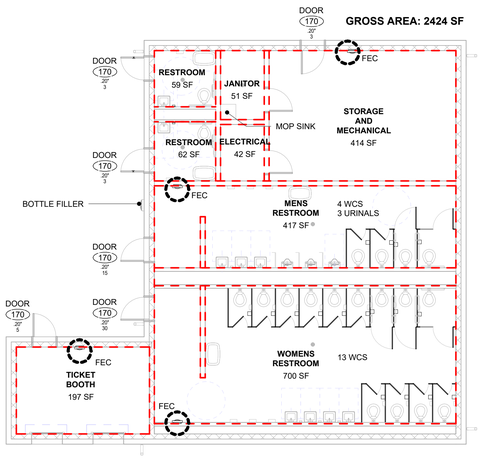
STADIUM SEATING 60% CAPACITY: 1,003 OCCUPANTS						
GROUP A-5 (ASSEMBLY) - 1,003 OCC / 2 = 502 MALE, 502 FEMALE						
	Male WC	Female WC	Male Lav	Female Lav	DF	Service Sink
	1 PER 75	1 PER 40	1 PER 200	1 PER 150	1 PER 1000	1
REQUIRED	7	13	3	4	2	1
TOTAL PROVIDED	**7**	**13**	**3**	**4**	**2**	**1**



2 F.E. CAB INSTALLATION DETAIL
A0.1 1/2" = 1'-0"

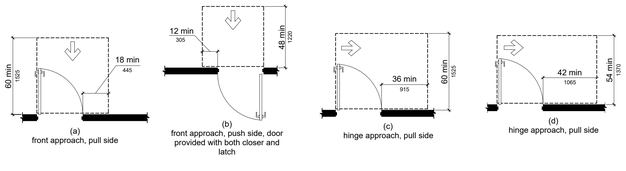
LEGEND





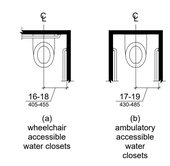
1 LIFE SAFETY & CODE COMPLIANCE PLAN
A0.1 1/8" = 1'-0"

TYPICAL ADA DETAILS

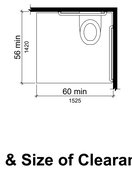


Drinking Fountain Spout Location

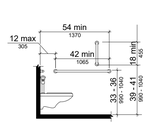
DOOR APPROACHES



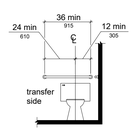
Water Closet Location



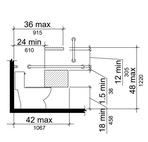
Size & Size of Clearance at Water Closets



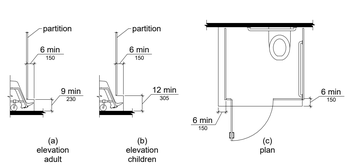
Side Wall Grab Bar at Water Closets



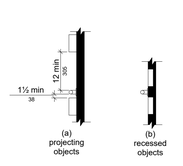
Rear Wall Grab Bar at Water Closets



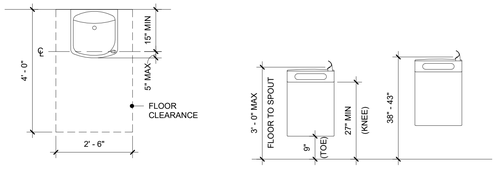
Protruding Dispenser Outlet Location



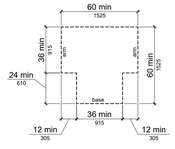
Wheelchair Accessible Toilet Compartment Toe Clearance



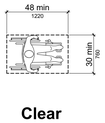
Spacing of Grab Bars



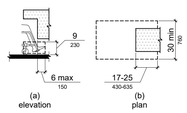
Drinking Fountain Clearances



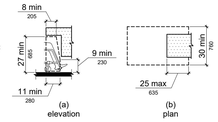
T-Shaped Turning Space



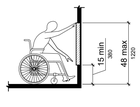
Clear Floor or Ground Space



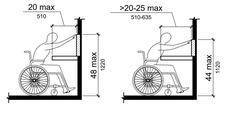
Toe Clearance



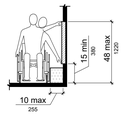
Knee Clearance



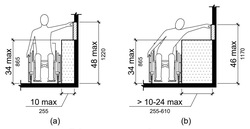
Unobstructed Forward Reach



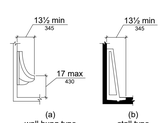
Obstructed High Forward Reach



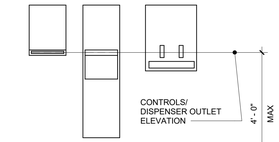
Unobstructed Side Reach



Obstructed High Side Reach



Height and Depth of Urinals



Dispenser Heights

MAROTTA/MAIN ARCHITECTS
WWW.MAROTTAMAIN.COM

CONSULTANT:

NEW STADIUM RESTROOMS
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES
DATE: DESCRIPTION:
03/17/2025 PERMIT SET
03/31/2025 BID SET

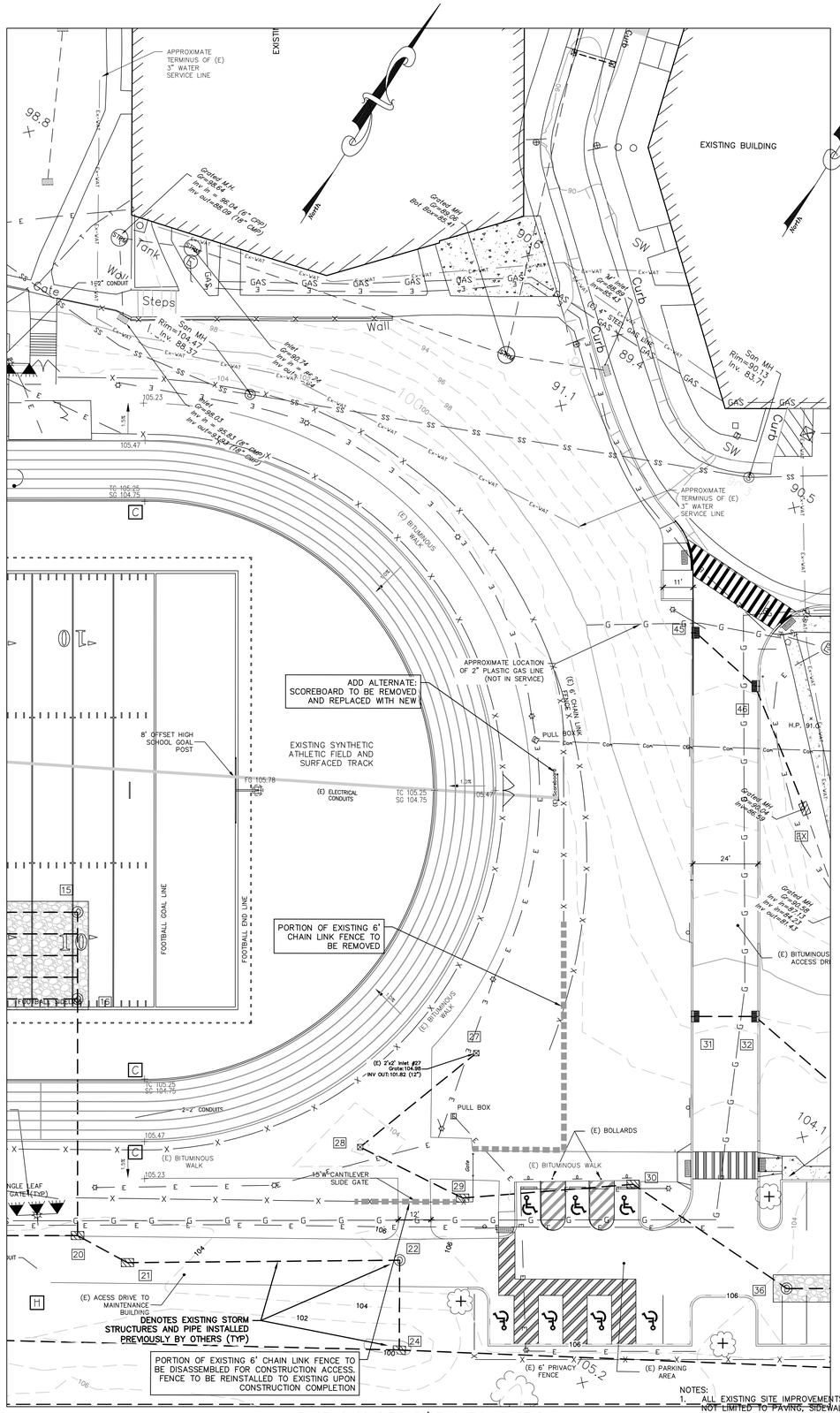
PROJ # : 22-CSD-04 DRAWN BY : CDK

SHEET TITLE:
CODE ANALYSIS, NOTES & DETAILS, LIFE SAFETY PLAN

SHEET NUMBER:
A0.1

BID SET

3/31/2025 5:48:36 PM



EXISTING CONDITIONS/DEMOLITION PART PLAN
1"=20'

GRADING PART PLAN
1"=20'

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

NOTES:
1. ALL EXISTING SITE IMPROVEMENTS INCLUDING BUT NOT LIMITED TO PAVING, SIDEWALKS, CURB & BITUMINOUS PATHS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE SCHOOL DISTRICT
2. SEE ELECTRICAL SITE PLANS BY ALBAN ENGINEERING INC FOR COMPLETE LAYOUT AND DESIGN INFORMATION FOR NEW ELECTRIC AND FIBER OPTIC SERVICES

LEGEND

- EXISTING FIRE HYDRANT
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING WATER MAIN
- EXISTING DECIDUOUS TREE
- EXISTING TREELINE/SHRUB LINE
- EXISTING CONTOUR 2' INTERVAL
- EXISTING CONTOUR 10' INTERVAL
- EXISTING TYPE "C" INLET
- EXISTING TYPE "M" INLET
- EXISTING DRAINAGE MANHOLE
- EXISTING 2'x2' INLET
- EXISTING STORM SEWER
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY SEWER
- EXISTING GAS MAIN
- EXISTING PETROLEUM PIPELINE
- EXISTING TELECOMMUNICATIONS/ CABLE
- EXISTING ELECTRIC SERVICE
- EXISTING LIGHT STANDARD
- EXISTING FENCES
- PROPOSED CONTOUR 2' INTERVAL
- PROPOSED CONTOUR 10' INTERVAL
- PROPOSED TYPE "C" INLET
- PROPOSED TYPE "M" INLET
- PROPOSED DRAINAGE MANHOLE
- PROPOSED STORM SEWER
- PROPOSED SANITARY LATERAL
- PROPOSED SANITARY MANHOLE
- PROPOSED WATER SERVICE LINE
- PROPOSED GAS SERVICE LINE
- PROPOSED ELECTRIC LINE
- PROPOSED 4' CHAIN LINK FENCE

PROPOSED GAS LINE TO BE 1.5" DIAM SCHEDULE 40 BLACK STEEL ASTM A 53/A 53M, TYPE E OR S, GRADE B

MAROTTA/MAIN ARCHITECTS
WWW.MAROTTAMAIN.COM

SEAL:
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
GUSTAVE N. HOUTMANN
ENGINEER 30026-E

CONSULTANT:
G.D. HOUTMAN & SON, INC.
CIVIL ENGINEERS–LAND SURVEYORS
LAND PLANNERS
139 EAST BALTIMORE PIKE MEDIA, PA 19063
(610)565-6383

STADIUM RENOVATIONS
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVENUE
BOOTHWYN, PA 19061

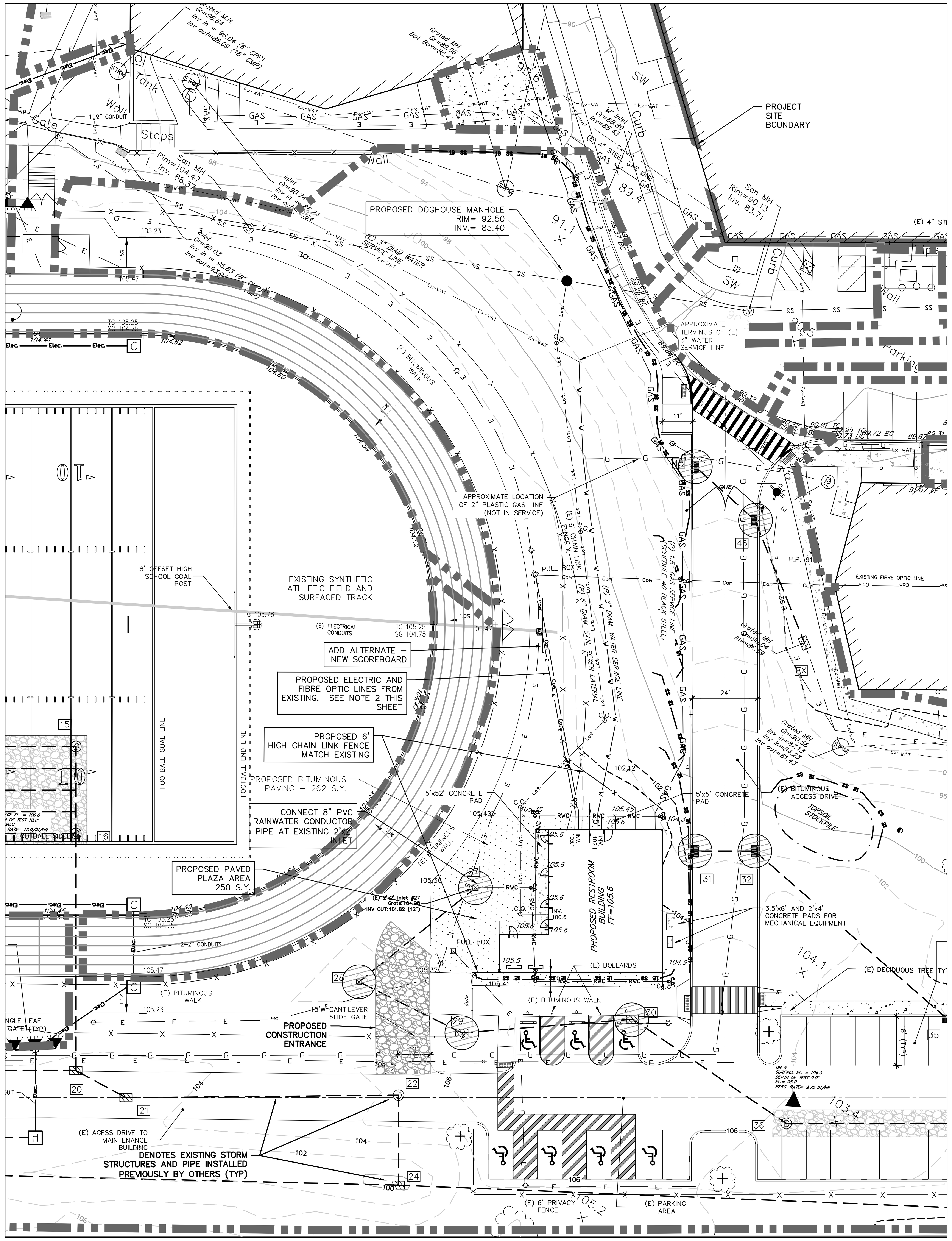
ISSUED: NO.	DATE:	DRAWN BY:	CHECKED BY:	DESCRIPTION:
1	05/26/25			Issued for Bid

PROJECT #: 23-CCSD-01

SHEET TITLE:
BUILDING AREA PART PLANS

SHEET NUMBER:
C–1

BID SET



EROSION AND SEDIMENT POLLUTION CONTROL PART PLAN

1"=20'

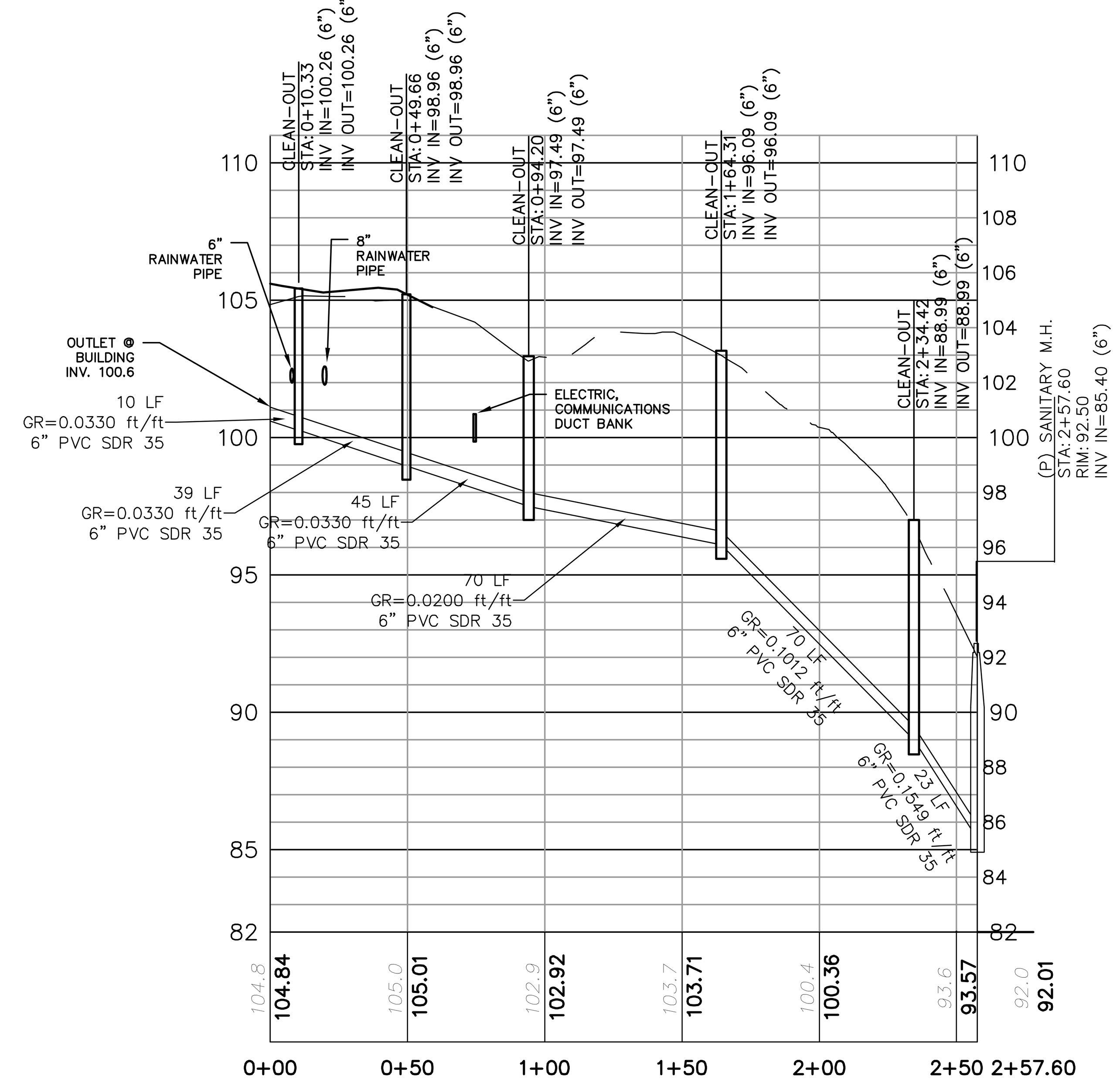
LEGEND

EXISTING FIRE HYDRANT	EXISTING STORM SEWER	PROPOSED CONTOUR 2' INTERVAL	PROPOSED 18" COMPOST FILTER SOCK
EXISTING UTILITY POLE	EXISTING SANITARY MANHOLE	PROPOSED CONTOUR 10' INTERVAL	PROPOSED 32" COMPOST FILTER SOCK
EXISTING WATER VALVE	EXISTING SANITARY SEWER	PROPOSED TYPE "C" INLET	PROPOSED LIMITS OF DISTURBANCE
EXISTING WATER MAIN	EXISTING GAS MAIN	PROPOSED TYPE 'M' INLET	PROJECT SITE BOUNDARY
EXISTING DECIDUOUS TREE	EXISTING PETROLEUM PIPELINE	PROPOSED DRAINAGE MANHOLE	INLET PROTECTION REQUIRED
EXISTING TREELINE/SHRUB LINE	EXISTING TELECOMMUNICATIONS/ CABLE	PROPOSED STORM SEWER	
EXISTING CONTOUR 2' INTERVAL	EXISTING ELECTRIC SERVICE	PROPOSED SANITARY LATERAL	
CONTOUR 10' INTERVAL	EXISTING LIGHT STANDARD	PROPOSED SANITARY MANHOLE	
EXISTING TYPE "C" INLET	EXISTING FENCES	PROPOSED WATER SERVICE LINE	
EXISTING TYPE "M" INLET		PROPOSED GAS SERVICE LINE	
EXISTING DRAINAGE MANHOLE		PROPOSED ELECTRIC LINE	
EXISTING 2'x2' INLET		PROPOSED 4' CHAIN LINK FENCE	

NOTE: LIMIT OF DISTURBANCE SHOWN PER APPROVED PLAN SET FOR THE TRACK RENOVATION PROJECT DATED JULY 27, 2023 AND LAST REVISED MARCH 14, 2024 BY G.D. HOUTMAN & SON, INC

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.



PROFILE SANITARY SEWER LATERAL

SCALE: 1"=40' HOR.
1"=4' VERT.

NOTES:
1. ALL EXISTING SITE IMPROVEMENTS INCLUDING BUT NOT LIMITED TO PAVING, SIDEWALKS, CURB & BITUMINOUS PATHS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE SCHOOL DISTRICT
2. SEE ELECTRICAL SITE PLANS BY ALBAN ENGINEERING INC FOR COMPLETE LAYOUT AND DESIGN INFORMATION FOR NEW ELECTRIC AND FIBER OPTIC SERVICES

MAROTTA/MAIN ARCHITECTS
WWW.MAROTTAMAIN.COM

SEAL:

GUSTAVE N. HOUTMANN
REGISTERED PROFESSIONAL ENGINEER 50026-E
COMMONWEALTH OF PENNSYLVANIA

CONSULTANT:
G.D. HOUTMAN & SON, INC.
CIVIL ENGINEERS–LAND SURVEYORS
LAND PLANNERS
139 EAST BALTIMORE PIKE MEDIA, PA 19063
(610)565–6363

STADIUM RENOVATIONS
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVENUE
BOOTHWYN, PA 19061

ISSUED:

NO.	DATE:	DRAWN BY:	CHECKED BY:	DESCRIPTION:
1	03/28/25			Issued for Bid

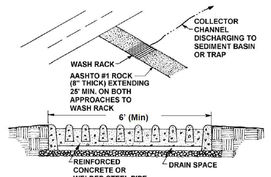
PROJECT #: 23-CCSD-01

SHEET TITLE:
BUILDING AREA PART PLANS

SHEET NUMBER:
C–2

BID SET

STANDARD CONSTRUCTION DETAIL # 3-2
Rock Construction Entrance with Wash Rack



Modified from Smith Cattleguard Company

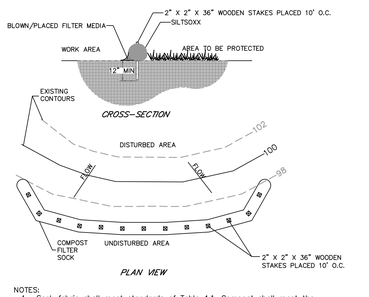
Wash rack shall be 20 feet (min.) wide or total width of access.

Wash rack be designed and constructed to accommodate anticipated construction vehicular traffic.

A water supply shall be made available to wash the wheels of all vehicles exiting the site.

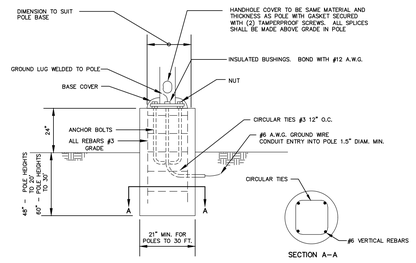
MAINTENANCE: Rock construction entrance thickness shall be constantly maintained to the specified dimensions by adding rock. A stockpile of rock material shall be maintained on site for this purpose. Drain space under wash rack shall be kept open at all times. Damage to the wash rack shall be repaired prior to further use of the rack. All sediment deposited on roadways shall be removed and returned to the construction site immediately. Washing the roadway or sweeping the deposits into roadway ditches, sewers, culverts, or other drainage courses is not acceptable.

NOTE: WASH RACK SHALL DISCHARGE TO A MINIMUM OF 24" SILT SOCK OR STORM STRUCTURE WITH APPROPRIATE INLET PROTECTION



NOTES:
1. Sock fabric shall meet standards of Table 4.1. Compost shall meet the standards of the latest version of the Pennsylvania Erosion and Pollution Control Manual.
2. Compost filter sock shall be placed at existing level grade. Both ends of the sock shall be extended at least 8 feet up slope at 45 degrees to the main sock alignment (Figure 4.1)
3. Maximum slope length above any sock shall not exceed that shown on Figure 4.2. Stakes may be installed immediately downslope of the sock if so specified by the manufacturer.
4. Tall grass shall be cut prior to installation to minimize potential for undercutting. Berm shall be netted or otherwise anchored after installation.
7. Accumulated sediment shall be removed when it reaches 1/3 of the aboveground height of the sock and disposed in the manner described elsewhere in the plan.
8. Any section compost filter berm which has been undermined or topped shall be immediately replaced. Concentrated flows shall not be directed toward any compost filter berm.
9. Traffic shall not be permitted to cross filter socks.
10. Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired according to manufacturer's specifications or replaced within 24 hours of inspection.
11. Biodegradable filter socks shall be replaced after 6 months; photodegradable socks after 1 year. Polypropylene socks shall be replaced according to manufacturer's recommendations.
12. Upon stabilization of the area tributary to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed. In the latter case, the mesh shall be cut open and the mulch spread as a soil supplement.

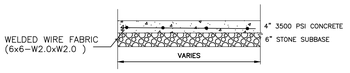
COMPOST FILTER SOCK – DETAIL



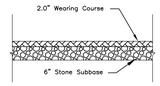
NOTES:
1. ALL ELECTRICAL EQUIPMENT SHALL BE GROUNDED IN COMPLETE ACCORDANCE WITH NATIONAL ELECTRIC CODE
2. SONOTUBE MAY BE USED FOR POLE BASE FORMATION
3. ALL CONCRETE COVER ON REBAR 3 INCHES MINIMUM

FOUNDATION TO EXTEND 30" MIN. ABOVE MACADAM PARKING AREAS. PROVIDE 6" MAXIMUM REVEAL WITHIN LANDSCAPE/GRASS AREAS. POLE HEIGHTS TO BE ADJUSTED TO PROVIDE 20' MOUNTING HEIGHT AS REQUIRED.

LIGHT POLE FOUNDATION DETAIL

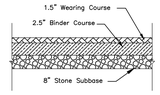


CONCRETE PAD X-SECTION



Wearing Course – Item 0409–0541 – Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64–22, 3.0 to 10 million design ESALS, 9.5 mm Mix, 2.0" Depth,
Subbase – Item 350–106 – 6.0" SubBase (No. 2a)

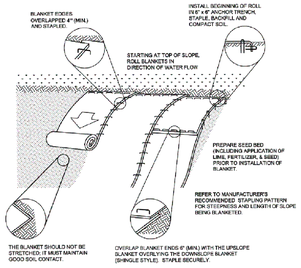
BITUMINOUS PAVING/WALK DETAIL



Wearing Course – Item 0409–0541 – Superpave Asphalt Mixture Design, HMA Wearing Course, PG 64–22, 3.0 to 10 million design ESALS, 9.5 mm Mix, 1.5" Depth,
Binder Course – Item 0409–6540 – Superpave Asphalt Mixture Design, HMA Binder Course, PG 64–22, 3 to 10 million design ESALS, 25 mm Mix, 2.5" Depth
Subbase – Item 350–106 – 8.0" SubBase (No. 2a)

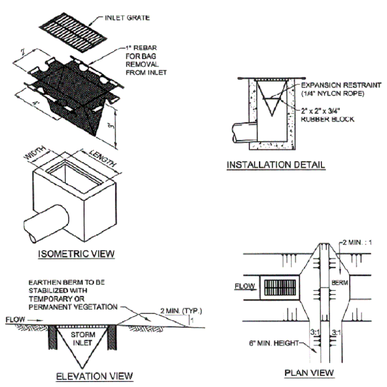
PAVING DETAIL

NOTE: THIS DETAIL PROVIDED TO REPAIR DAMAGED EXISTING PAVING IN ACCESS DRIVE/PARKING AREAS ONLY



INSTALLATION NOTES:
1. Seed and soil amendments shall be applied according to the rates in the plan drawings prior to installing the blanket.
2. Provide anchor trench at toe of slope in similar fashion as at top of slope. Slope surface shall be free of rocks, clods, sticks, and grass.
3. Blanket shall have good continuous contact with underlying soil throughout entire length. Lay blanket loosely and stake or staple to maintain direct contact with soil. Do not stretch blanket.
4. The blanket shall be stapled in accordance with the manufacturer's recommendations.
5. Blanketed areas shall be inspected weekly and after each runoff event until perennial vegetation is established to a minimum uniform 70% coverage throughout the blanketed area. Damaged or displaced blankets shall be restored or replaced within 4 calendar days.

EROSION CONTROL BLANKET INSTALLATION – DETAIL



Notes:
1. Maximum Drainage Area = 1/2 Acre
2. Inlet protection shall not be required for inlet tributary to sediment basin or trap. Berms shall be required for all installations.
3. Rolled earthen berm in roadway shall be maintained until roadway is stoned. Road subbase berm on roadway shall be maintained until roadway is paved. Earthen berm in channel shall be maintained until permanent stabilization is completed or remain permanently.
4. At a minimum, the fabric shall have a minimum grab tensile strength of 120 lbs., a minimum burst strength of 200 psi, and a minimum trapezoidal tear strength of 50 lbs. Filter bags shall be capable of trapping all particles not passing a No. 40 sieve.
5. Inlet filter bags shall be inspected on a weekly basis and after each runoff event. Bags shall be emptied and rinsed or replaced when half full or when flow capacity has been reduced so as to cause flooding or bypassing of the inlet. Damaged or clogged bags shall be replaced. A supply shall be maintained on site for replacement of bags. All needed repairs shall be initiated immediately after the inspection. Dispose accumulated sediment as well as all used bags according to the plan notes.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES
1. All Vehicles and equipment entering and existing the construction areas must pass through the proposed construction entrance. Internal access drives shall remain dirt/mud free at all times.
2. Stockpile heights must not exceed 35 feet. Stockpile slopes must be 2:1 or flatter.
3. The operator shall assure that the approved erosion and sediment control plan is properly and completed implemented.
4. Until the site achieves final stabilization, the operator shall assure that the best management practices are implemented, operated, and maintained properly and completely. Maintenance shall include inspections of all best management practice facilities. The operator shall maintain and make available to local Conservation District complete, written inspection logs of all those inspections. All maintenance work, including cleaning, repair, replacement, regarding, and restabilization shall be performed immediately.
5. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to eliminate potential for accelerated erosion and/or sediment pollution.
6. Before initiating any revisions to the approved erosion and sediment control plan or revisions to other plans which may affect the effectiveness of the approved E&S control plan, the operator must receive approval of the revisions from the local Conservation District.
7. The operator shall assure that an erosion and sediment control plan has been prepared, approved by the local Conservation District, and is being implemented and maintained for all soil and/or rock spoil and borrow areas, regardless of their locations.
8. The E&S control plan mapping must display a PA ONE CALL SYSTEM INCORPORATED symbol including the site identification number.
9. Erosion and sediment BMP's must be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMP's.
10. After final site stabilization has been achieved, temporary erosion and sediment BMP controls must be removed. Areas disturbed during removal of the BMP's must be stabilized immediately.
11. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.
12. Immediately after earth disturbance activities cease, the operator shall stabilize any areas disturbed by the activities. During non–germinating periods, mulch must be applied at the specified rates. Disturbed areas which are not at finished grade and which will be redisturbed within 1 year must be stabilized in accordance with the permanent vegetative stabilization specifications.
13. Hay or straw mulch must be applied at 3.0 tons per acre.
14. Mulch with mulch control netting or erosion control blankets must be installed on all slopes 3:1 and steeper.
15. Straw mulch shall be applied in long strands, not chopped or finely braken.
16. Until the site is stabilized, all erosion and sediment BMP's must be maintained properly. Maintenance must include inspections of all erosion and sediment control BMPs after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, remulching, and renetting, must be performed immediately, If erosion and sediment control BMPs fail to perform as expected, from replacement BMPs, or modifications of those installed will be required.
17. Sediment removed from BMPs shall be disposed of in landscaped areas outside of steep slopes, wetlands, floodplains or drainage swales and immediately stabilized, or placed in topsoil stockpiles.
18. The project's receiving watercourse is Unnamed tributary to the Green Creek. The Chapter 93 classification for the receiving water bodies CWF, MF. The Existing and Designated use is Cold Water fishery with Migratory fishes.
19. All Earth Disturbance activities shall proceed in accordance with the sequence. Each stage shall be completed before any following stage is initiated. Cleaning and grubbing shall be limited only to those areas described in each stage.
20. At Least 7 days before starting any earth disturbance activities., the operator shall invite all contractors involved in those activities including but not limited to: the landowner and all appropriate municipal officials ,a representative for the Delaware County Conservation District for an on site pre–construction meeting.
21. Before initiating any revision to the approved erosion and sediment control plan or revisions to other plans which may affect the effectiveness of the approved E&S control plan, the operator must receive approval of the revisions from the Delaware County Conservation District. The operator shall assure that the approved erosion and sediment control plan is properly and completely implemented. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the operator shall implement appropriate best management practices to eliminate potential for accelerated erosion and/or sediment pollution.
22. The contractor is advised to become thoroughly familiar with the provisions of the Appendix 64, Erosion Control rules and Regulations , Title 25, Part 1, Department of Environmental Protection, Subpart C, Protection of Natural Resources, Article 111. Water Resources, Chapter 102, Erosion Control.
23. The operator shall remove from the site, recycle. Or dispose all building materials and wastes in accordance with Department's Solid Waste Management at 25 Pa. Code 260.1 et seq., and 287.1 et seq. The contractor shall not illegally bury, dump. Or discharge any building materials or wastes at the site.
24. A copy of the approved erosion and sediment control plan must be available at the project site at all times. The operator shall assure that an erosion and sediment control plan has been prepared , approved by the Delaware County District, and is being implemented and maintained for all soil an/or rock spoil and borrow areas, regardless of their locations.
25. An area shall be considered to have achieved final stabilization when it has a minimum uniform 70% perennial vegetative cover or other permanent non– vegetative cover with a density sufficient to resist sliding and other movements. Immediately after earth disturbance activities cease , the operator shall stabilize any areas disturbed by the activities. During non–germinating periods, mulch must be applied at the specified rates. Disturbed areas which are not at finished grade and which will be redisturbed within 1 year must be stabilized in accordance with the temporary vegetative stabilization specifications. Disturbed areas which are at finished grade or which will not be redistributed within 1 year must be stabilized in accordance with the permanent vegetative stabilization specifications.
26. Upon completion or temporary cessation of the earth disturbance activity that will exceed 4 days, or any stage thereof, the project site shall be immediately stabilized with appropriate temporary or permanent stabilization.
27. The limit of disturbance will be staked with Construction fencing.
28. Additional erosion control device may be required during the building permit approval process.
29. Contractor shall use environmental due diligence to ensure that the fill material associated with this project qualifies as clean fill and Environmental Due Diligence are provided below. All fill material must be used in accordance with the PA DEP's policy "Management of Fill", document 258–2182–773. Clean fill is defined as uncontaminated, non–water soluble, non–decomposable, inert solid material. The term includes soil, rock, stone, dredged materials used asphalt and brick, block or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the waters of the Commonwealth unless otherwise authorized. The term used asphalt does not include milled asphalt or asphalt that has been processed for re–use. From FP–001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as clean fill due to analytical testing.
30. Areas which are to be top soiled shall be scarified to a minimum of 3 to 5 inches on loose soil and 6 to 12 inches on compacted soil prior to the placement of topsoil. Area to be vegetated shall have a minimum of 4 inches of topsoil in place prior to seeding and mulching.
31. Springs or seeps encountered during construction shall be handled in accordance with the standard and specification for subsurface drains or other approved method.
32. All construction wastes including but not limited to Asphalt, concrete, rubble, wood, plaster, metals, asphaltic substances, bricks, block and unsegregated concrete etc shall be removed from the site and placed in an appropriate location or receptacle where the material can be recycled to the maximum extent practical. The operator shall remove from the site, recycle, or dispose of all building materials and waste in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., and 287.1 et seq. The contractor shall not illegally bury, dump, or discharge any building material or wastes at the site.
33. All sediment or excess fill disposed of onsite shall be placed in an area not subject to accelerated erosion and immediately seeded and mulch. Any construction materials or other waste products from the proposed construction that will disposed of off–site shall be disposed of in an approved permitted site.
34. Soil has the potential to cause pollution if allowed to be transported off–site. When Properly implemented, the proposed Erosion and Sediment Control Facilities should be sufficient from allowing sediment to be transported off–site and causing downstream pollution. There are no known pollution problems associated with the underlying geology of the site.
35. The NPDES Boundary is equal to the limits of disturbance for the site, and any off–site areas within the limits of disturbance that are the responsibility of the developer to install. Off–site facilities such as: utilities and roadway improvements
36. Construction is not permitted outside the limits of disturbance shown on these plans without obtaining a modified NPDES permit from PaDEP.

SEEDING SPECIFICATIONS

NOTE: ALL GRASS SEED SHALL CONFORM TO THE SPECIFIED MINIMUM PURE LIVE SEED OR GREATER.

PURE LIVE SEED = $\frac{\text{(SEED PURITY \%)} \times \text{(SEED GERMINATION \%)}}{100}$

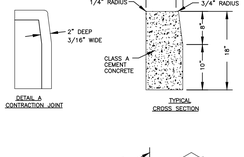
Disturbed areas on which activities have ceased must be stabilized immediately.

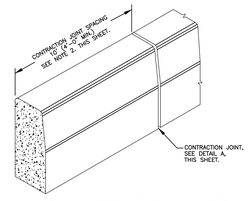
Prior to seeding, topsoil shall be placed in accordance with the topsoil application notes found on this sheet.

I. Growing Season (March Thru November 15)
- A. Temporary Cover – for disturbed areas which are not at finished grade and which will be redisturbed within 1 year.
  1. Site Preparation: Apply 1 ton/acre of Agricultural grade limestone, plus 500 lbs Fertilizer (10–10–10) per acre and work in where possible.
  2. Seeding: 50% Annual Ryegrass 50% Winter Rye. Apply at rate of 3lb/1000 S.F.(20% Pure Live Seed or greater)
  3. Mulch: 3 tons per acre of small grain straw.
- B. Permanent Cover – for disturbed areas at finish grade or will not be redisturbed within 1 year.
  1. Site Preparation: Apply 6 tons/acre of Agricultural grade Limestone plus 1000 lb per Ac. Fertilizer (10–20–20) and work in where possible.
  2. Seeding: 60% Kentucky Bluegrass (8% Pure Live Seed or Greater)
     10% Perennial Ryegrass (20% Pure Live Seed or Greater)
     30% Pennlawn Red Fescue (25% Pure Live Seed or Greater)
     Apply at rate of 4 lb/1000 S.F.
  3. Mulch: 3 tons per acre of small grain straw.

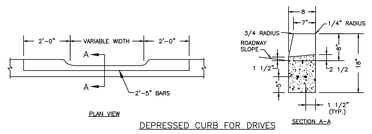
II. Non–germinating Period (Nov 15 Thru March 1)
1. Apply mulch (3 tons per acre of small grain straw) to disturbed areas.
2. Those areas that were stabilized by mulching only are to be limed, fertilized, seeded and mulched according to permanent or temporary seeding specifications at the end of the non–germinating period.

III. CRITICAL SLOPE PROTECTION – EROSION CONTROL BLANKET TO BE USED ON ALL SLOPES 3:1 AND GREATER
1. Seedbed Preparation: Loosen Top 1 to 3 Inches of Soil.
2. Site Preparation: Apply 2 Tons of Agricultural Grade Limestone Per Acre plus fertilizer 50–50–50 per acre (50 lbs of N. 50 lbs of P2O5 and 50 lbs of K2O per acre) and work in where possible.
3. Treatment:
   a. Broadcast Seed and Fertilizer With Hydroseeder.
   b. Apply Straw With Blower at 3 Tons/Acre.
   c. Anchor Straw With Mulch Binder.
4. Application: A Water–Slurry Mixture Composed of the Below Mentioned Materials shall be Sprayed Uniformly Over Prepared Area.
   a. Mowed Areas:
      80 Lb/Acre Winter Rye (20% Pure Live Seed or Greater)
      20 Lb/Acre Tall Fescue (25% Pure Live Seed or Greater)
      20 Lb/Acre Perennial Ryegrass (20% Pure Live Seed or Greater)
      Non–Mowed Areas:
      80 Lb/Acre Winter Rye (20% Pure Live Seed or Greater)
      10 Lb/Acre Crownvetch (20% Pure Live Seed or Greater)
      20 Lb/Acre Perennial Ryegrass (20% Pure Live Seed or Greater)
   b. Soil Supplements:
      i. 10–20–20 Analysis Commercial Fertilizer 930 Lb/Acre
      ii. 38– 0– 0 Urea–Form Fertilizer 250 Lb/Acre
      iii. Wood Cellulose Fiber 1500 Lb/Acre.
5. Mulch Anchor – Netting May be Used as Mulch Anchor–Refer to 6.c & 6.d.
   a. Emulsified Asphalt 200 Gallons/Acre or Terra Tack Used at Manufacturer's Recommended Rates.
   b. Wood Cellulose 800 Lb/Acre.
6. If persistent erosion occurs on steep slopes, Erosion Control Blanket shall be used.
   a. Repair any Gullied Areas.
   b. Reseed and Refertilize Affected Area.
   c. Apply Mulch at Rates Stated.
   d. Anchor with Erosion Control Blanket North American Green S75 or approved equivalent.



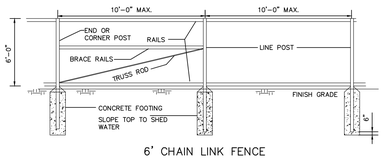


PLAIN CEMENT CONCRETE CURB – DETAIL



DEPRESSED CURB FOR DRIVES

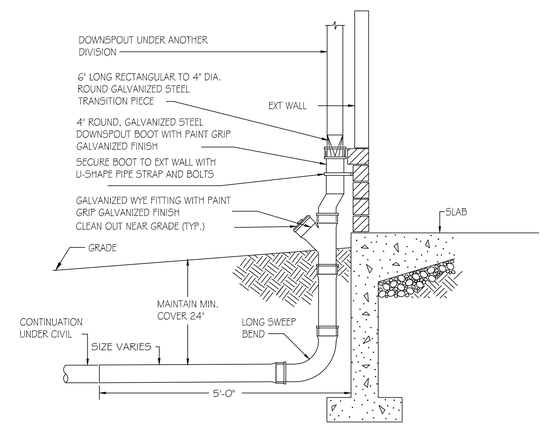
NOTE: CURB DETAILS PROVIDED FOR REPLACEMENT OF DAMAGED CURB ONLY



6' CHAIN LINK FENCE

Fence Height	Terminal Post	Line Post	Concrete Dim.
6–8 ft,	2–3/8 x 0.11	2–3/8x0.095	12" Diam. x 36" (6') 12" Diam. x 42" (8')

Notes:
1. Chain Link Fabric 11 gauge min.
2. Tension Bands Spacing 12" Max.
3. Wire Fabric Ties At Top Rail (Min 5 ties between posts)
4. Top And Bottom Rails Min 1 5/8"x0.047"
5. If Bottom Tension Wire Is Specified Use Min. 7 Gauge
6. Wire Fabric Ties Min. 12" O.C.
7. Maximum Clear Spacing Allowed At Bottom – 2"
8. Truss Rod As Required
9. Post Caps (Standard) Required.



RAIN LEADER DOWNSPOUT BOOT INSTALLATION DETAIL

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SEAL:
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
GUSTAVE N. HOUTMAN
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STADIUM RENOVATIONS
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVENUE
BOOTHWYN, PA 19061

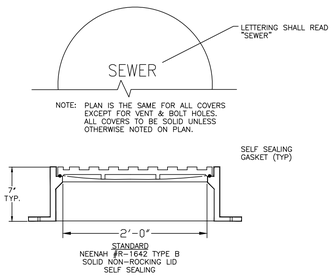
ISSUED: NO.	DATE:	DRAWN BY:	CHECKED BY:	DESCRIPTION:
1	05/09/25			Issued for Bid

PROJECT #: 23-CCSD-01

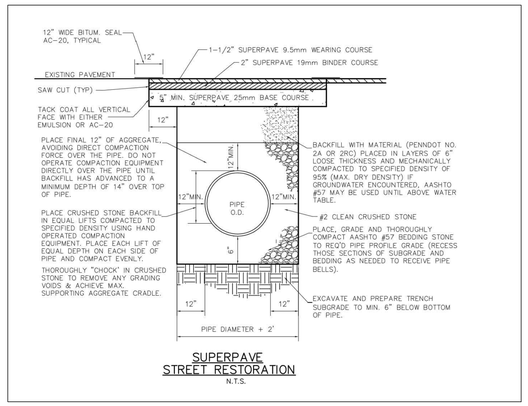
SHEET TITLE:
CONSTRUCTION DETAILS PLAN

SHEET NUMBER:
C–3

BID SET



CAST IRON FRAMES & COVERS

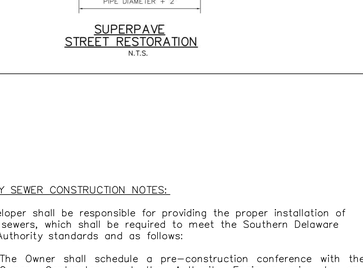


SUPERPAVE
STREET RESTORATION
N.T.S.

SANITARY SEWER CONSTRUCTION NOTES:

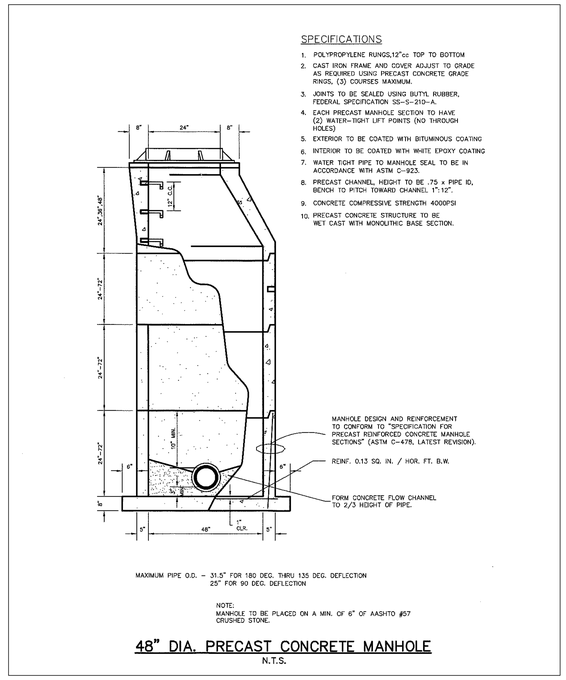
The developer shall be responsible for providing the proper installation of sanitary sewers, which shall be required to meet the Southern Delaware County Authority standards and as follows:

a. The Owner shall schedule a pre-construction conference with the Owner, Contractor, and the Authority Engineer prior to any construction on the site.
b. Design calculations, shop drawings, and/or catalog cuts for all material and equipment to be used on the project must be submitted and approved by the Authority's Engineer prior to commencement of work. This includes but is not limited to pump stations, manholes, piping material, grease traps, fittings and frames and covers as applicable to the project.
c. All work must be inspected by the Authority Engineer prior to backfilling. Any work covered prior to inspection shall be uncovered and inspected before any other work proceeds. The Authority Engineer must be notified at least 24 hours in advance of any required inspections.
d. All work in the existing public right-of way shall be backfilled in strict accordance with the bedding/trenching detail on the plans and temporarily paved using 2" asphalt binder material or, if applicable, as required by PA DOT.
e. The Contractor shall be required to compact all backfill materials within the road right-of-ways to a minimum of 95% of the materials maximum dry density as determined by A.S.T.M. D1557. Certified compaction tests must be performed by an independent agency with results submitted to the Authority for approval.
f. A separate street opening permit is required from Upper Chichester Township prior to any street opening.
g. If work is to be performed within a PA DOT right of way, a separate PA DOT Highway Occupancy Permit shall be required, prior to the start of any work.
h. No Trees shall be planted within 10 feet of a sanitary sewer.
i. Work shall be performed by a registered plumber.
j. All provisions of the Plumbing Code shall be adhered to.
k. Any found defects shall be repaired, or removed, at once by the Developer to the satisfaction of the Authority Engineer.
l. Before the start of any work, the Owner shall pay the SDCA current tapping fee and any other applicable SDCA fees at that time



SANITARY SEWER CLEAN-OUT(GRASS AREAS)
N.T.S.

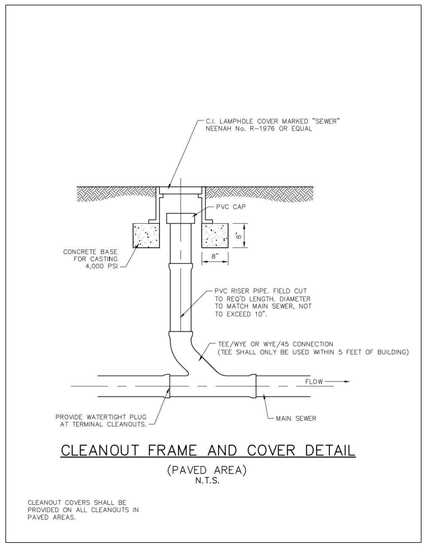
NOTE:
CLEANOUT LINE TO BE OF THE SAME DIAMETER AND MATERIAL AS SEWER LATERAL.



MAXIMUM PIPE O.D. - 31.5" FOR 180 DEG. THRU 135 DEG. DEFLECTION
25" FOR 90 DEG. DEFLECTION

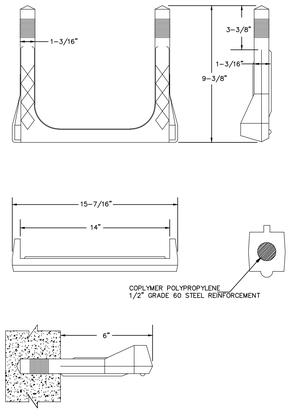
NOTE:
MANHOLE TO BE PLACED ON A MIN. OF 6" OF AASHTO #57 CRUSHED STONE.

48" DIA. PRECAST CONCRETE MANHOLE
N.T.S.



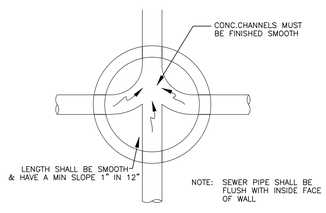
CLEANOUT FRAME AND COVER DETAIL
(PAVED AREA)
N.T.S.

CLEANOUT COVERS SHALL BE PROVIDED ON ALL CLEANOUTS IN PAVED AREAS.



STEPS TO BE DEFORMED REINFORCEMENT STEEL BARS #4, ASTM A815, GRADE 60 COATED WITH POLYPROPYLENE. STEPS BY MA INDUSTRIES OR APPROVED EQUAL. STEPS TO BE INSTALLED BY PRECASTER.

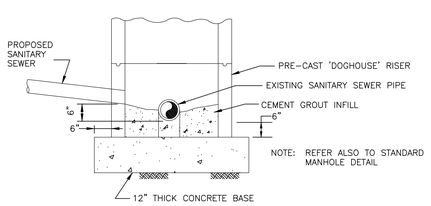
TYPICAL MANHOLE STEP - DETAIL
N.T.S.



PLAN

NOTE: CHANNELS SHALL BE PROVIDED FOR EXISTING SEWER LINE & PROPOSED SEWER LATERAL CONNECTION

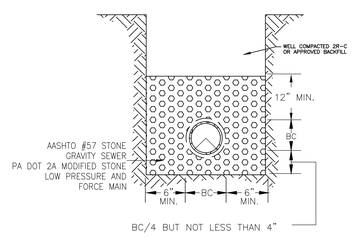
TYPICAL MANHOLE CHANNELS
N.T.S.



INSTALLATION PROCEDURE FOR NEW SANITARY MANHOLE OVER EXISTING LINE

1. EXCAVATE AREA FOR NEW MANHOLE CONCRETE PAD. DO NOT DISTURB EXISTING SANITARY SEWER LINE.
2. POUR PLAIN CONCRETE PAD UNDER EXISTING PIPE TO AN ELEVATION 6" BELOW EXISTING PIPE.
3. INSTALL "DOGHOUSE" RISER OVER EXISTING PIPE.
4. POUR CEMENT GROUT UP TO ON-HALF THE DIAMETER OF THE EXISTING PIPE AND SHAPE CHANNEL FOR NEW INCOMING PIPE.
5. COMPLETE MANHOLE CONSTRUCTION.
6. REMOVE THE TOP HALF OF THE EXISTING PIPE THUS CREATING NEW CHANNEL.

DETAIL OF PROPOSED MAN HOLE AT EXISTING SANITARY SEWER



(BC = PIPE O.D.)

SANITARY PIPE BEDDING DETAIL
NOT TO SCALE

For low pressure sewer system, a tracer wire shall be installed. Tracer wire shall be 6 gauge stranded copper with plastic insulation and suitable for direct bury. Tracer wire shall be attached to all sewer pipes at 5 foot intervals or as shown on details. Attachment to pipe shall be made with plastic cable ties or equivalent. Splices shall be soldered, copper to copper. Splice shall then be attached to pipe with ties and shrink-wrapped in place to re-establish insulation across spliced length. A minimum length of 6 feet of wire shall be left accessible at clean-outs and other structures. Contractor is responsible for testing continuity of wire from structure to structure.

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SEAL:
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
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STADIUM RENOVATIONS
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVENUE
BOOTHWYN, PA 19061

ISSUED: NO.	DATE:	DRAWN BY:	CHECKED BY:	DESCRIPTION:
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PROJECT #: 23-CCSD-01

SHEET TITLE:
CONSTRUCTION DETAILS PLAN

SHEET NUMBER:
C-4

BID SET

GENERAL NOTES

1. WORK SHALL INCLUDE ALL LABOR , ASSEMBLIES, AND FINISH WORK INCLUDING ALL PARTS AND MATERIALS NECESSARY TO MAKE A COMPLETE, IN-PLACE, PROPERLY WORKING FINISHED INSTALLATION.
2. CONTRACTOR SHALL FIELD MEASURE ALL DISTANCES AND CLEARANCES PRIOR TO COMMENCEMENT OF NEW WORK OR ORDERING OF MATERIALS. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS OR SIZES. VERIFY ALL DIMENSIONS IN THE FIELD.
3. PROVIDE BLOCKING IN PARTITIONS AS REQUIRED FOR ALL ITEMS ATTACHED TO WALL INCLUDING CABINETRY AND MILLWORK. ALL ROUGH CARPENTRY, BLOCKING, AND MISCELLANEOUS WOOD FRAMING SHALL BE FIRE RETARDANT TREATED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REQUIREMENTS.
4. HEIGHT OF ELECTRICAL, DATA AND COMMUNICATION OUTLETS WHEN SURROUNDED BY OR ABUTTING MILLWORK SHALL BE CONFIRMED PRIOR TO INSTILLATION.
5. FLOOR MOUNTED OUTLET LOCATIONS MUST BE CONFIRMED WITH THE OWNER AND ARCHITECT BEFORE CORE DRILLING.
6. PLACEMENT OF WALL OR CEILING ACCESS PANELS SHALL BE REVIEWED WITH THE OWNER/ARCHITECT PRIOR TO INSTALLATION.
7. PROVIDE FIRE EXTINGUISHERS AS REQUIRED BY CODE.
8. PROTECT NEWLY INSTALLED FINISHES, MILLWORK, BUILT-INS, AND MATERIALS, AND ANY ITEMS (FURNITURE, ETC.) REQUIRING STORAGE.
9. UPON COMPLETION OF WORK, ALL FACILITIES SHALL BE IN FULL USE WITHOUT DEFECTS.
10. CONTRACTOR SHALL USE AND PROTECT THE EXISTING BUILDING AND EXISTING FINISHES SCHEDULED TO REMAIN IN A MANNER WHICH WILL NOT SOIL, DEFACE, OR DAMAGE THE EXISTING FACILITIES, FINISHES OR FIXTURES. PROVIDE PROTECTIVE MATERIALS AS NECESSARY.
11. REMOVE ALL CONSTRUCTION DEBRIS AS REQUIRED TO MAINTAIN A CLEAN ENVIRONMENT AND TO PREVENT THE POSSIBILITY OF ACCIDENT OR FIRE.
12. HEIGHT OF ELECTRICAL, DATA AND COMMUNICATION OUTLETS WHEN ADJACENT TO OR ABUTTING CASEWORK SHALL BE COORDINATED AND REVIEW WITH THE ARCHITECT PRIOR TO INSTALLATION.
13. DOWNLIGHTS, SPRINKLER HEADS, SMOKE DETECTORS, AND EXIT SIGNS SHALL BE LOCATED IN THE CENTER OF THE CEILING TILE, U.N.O.
14. G.C. SHALL PROVIDE BLOCKING AS REQUIRED FOR ALL WALL MOUNTED EQUIP., CASEWORK, GRAB BARS, ETC.

GENERAL PARTITION NOTES

1. DIMENSIONS TAKEN TO FACE OF STUD OR FACE OF CMU, U.N.O.
2. REFER TO FINISH SCHEDULE FOR WALL FINISHES.
3. ALL INTERIOR PARTITIONS ARE TO EXTEND TIGHT TO THE FLOOR OR ROOF DECK ABOVE, U.N.O. SECOND FLOOR PARTITIONS UNDER GABLE ROOFS SHALL EXTEND TO 12' AFF AND DO NOT EXTEND TIGHT TO SLOPED DECK. PARTITIONS MUST BE SEALED TO ADJACENT CONSTRUCTION.
4. ALL DIMENSIONS MARKED "CLEAR" SHALL BE MAINTAINED.
5. NO PARTITIONS SHALL VARY MORE THAN 1/8" IN SURFACE PLANE IN 10 FEET IN ANY DIRECTION.
6. GALVANIZED STEEL MAY BE USED IN LIEU OF FIRE RETARDANT WOOD BLOCKING FOR WALL HUNG SHELVING, MILLWORK, AND HARDWARE. BACKING SHALL SPAN AT LEAST 3 STUDS.
7. PARTITION ASSEMBLIES AND BRACING SHALL BE INSTALLED AROUND ANY ABOVE-CEILING INTERFERENCES ENCOUNTERED SUCH AS DUCTS OR SPRINKLER LINES SO AS TO MAINTAIN THE INTEGRITY OF THE ASSEMBLY.
8. ALL INTERIOR WALLS IN OCCUPIED AREAS AND PUBLIC ARES TO A MINIMUM OF 8'-0" ABOVE FINISHED FLOOR MUST BE HIGH ABUSE-RESISTANT TYPE GYPSUM BOARD.
9. ALL EXPOSED CMU WALLS SHALL HAVE A BULLNOSE EDGE. RADIUSED CEILING EDGE TRACK SHALL BE PROVIDED ACCORDINGLY
10. SEAL FULL PERIMETER OF GWB/STUD WALLS WITH ACOUSTIC SEALANT.
11. PROVIDE CONTROL JOINTS PER THE SPECIFICATION AT INTERIOR CMU WALLS FOR WALL LENGTHS GREATER THAN 20'. PROVIDE CONTROL JOINTS BETWEEN WALLS ON FLOOR SLABS AND WALLS ON FOOTINGS. REFER TO TYPICAL CONTROL JOINT DETAILS FOR ADDITIONAL CONTROL JOINT INFORMATION.

PARTITION TYPE SCHEDULE & NOTES

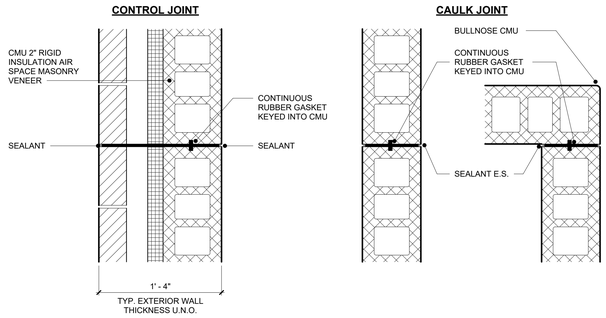
INTERIOR PARTITIONS

CMU WALLS

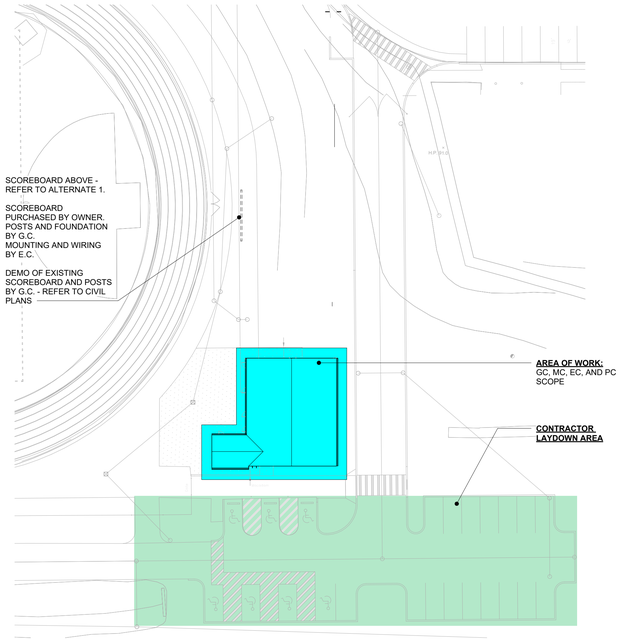
M4	UP TO TRUSS BEARING: 4" C.M.U.
M6	UP TO TRUSS BEARING: 6" C.M.U.
M8	UP TO TRUSS BEARING: 8" C.M.U.

CONVENTIONS

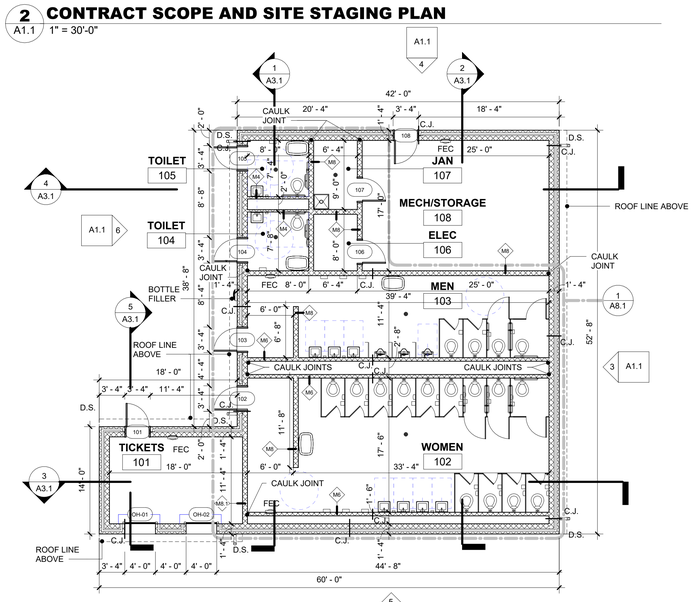
1. DETAILS ARE KEYED ONCE (ON THE PLANS OR ELEVATIONS WHEN THEY FIRST OCCUR) AND ARE TYPICAL FOR SIMILAR CONDITIONS THROUGH OUT U.N.O.
2. TYPICAL OR "TYP" MEANS FOR ALL SIMILAR CONSTRUCTION, U.N.O.
3. DO NOT SCALE DRAWINGS; DIMENSIONS GOVERN ALWAYS.
4. LARGE SCALE DETAILS GOVERN OVER SMALL SCALE DETAILS.
5. ALL VERTICAL DIMENSIONS SHOWN TO OR FROM FINISHED FLOOR LEVEL, U.N.O.
6. "ALIGN" MEANS THAT SIMILAR COMPONENTS OF CONSTRUCTION, AS INDICATED BY THE DRAWINGS, MUST BE STRAIGHT AND IN LINE, AND ANY JOINTS / SEAMS MUST BE CONCEALED AND INVISIBLE TO THE EYE OR TOUCH.
7. "PROVIDE" MEANS PROVIDE AND INSTALL, U.N.O.



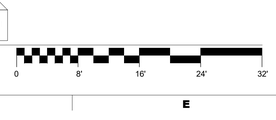
7 TYPICAL JOINT DETAILS
A1.1 1 1/2" = 1'-0"

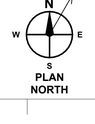


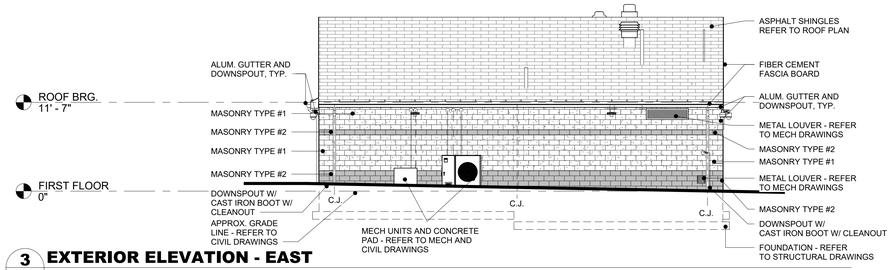
2 CONTRACT SCOPE AND SITE STAGING PLAN
A1.1 1" = 30'-0"



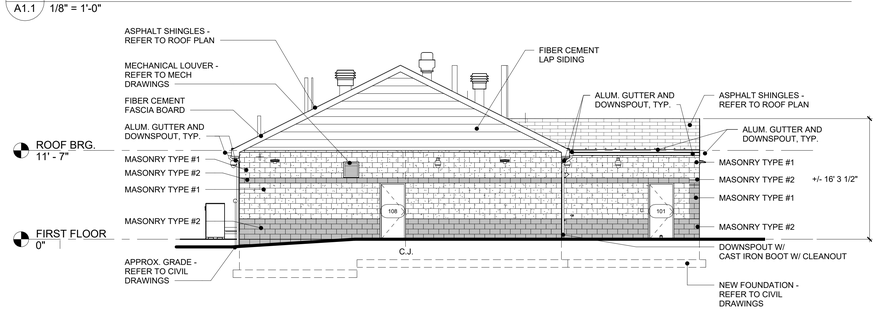
1 OVERALL FLOOR PLAN
A1.1 1/8" = 1'-0"



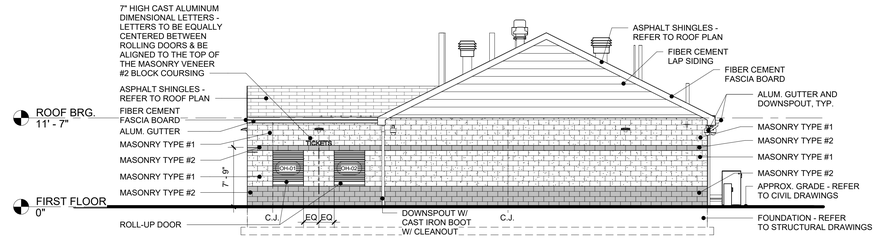




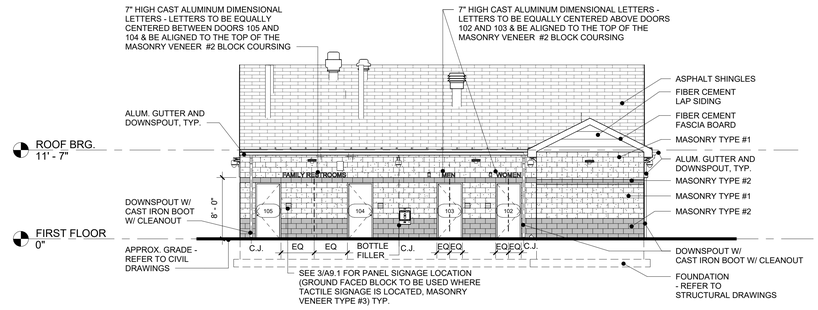
3 EXTERIOR ELEVATION - EAST
A1.1 1/8" = 1'-0"



4 EXTERIOR ELEVATION - NORTH
A1.1 1/8" = 1'-0"



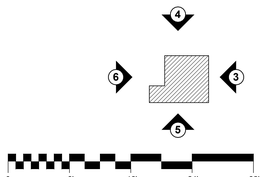
5 EXTERIOR ELEVATION - SOUTH
A1.1 1/8" = 1'-0"



6 EXTERIOR ELEVATION - WEST
A1.1 1/8" = 1'-0"

GENERAL EXTERIOR ELEVATION NOTES:

1. ALL COLOR SELECTIONS BY ARCHITECT / OWNER
2. PROVIDE ALL SAMPLE PANELS AS REQUIRED FOR ARCHITECT / OWNER REVIEW PRIOR TO WORK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CAULKING, SEALING AND FLASHING AS REQUIRED FOR WATERTIGHT JOB.
4. THE ELECTRICAL CONTRACTOR IS TO FIELD VERIFY ALL EXTERIOR LIGHTING AND SPEAKER LOCATIONS W/ THE ARCHITECT / OWNER PRIOR TO INSTALLATION.
5. REFER TO ELECTRICAL DRAWINGS & MECHANICAL DRAWINGS FOR ALL ITEMS, DEVICES AND CONDUIT RUNS BEING REMOVED. THE G.C. SHALL PATCH REPAIR ALL MASONRY AFFECTED BY THIS DEMOLITION SCOPE
6. CAULK JOINTS SHOWN ON EXISTING ELEVATIONS ARE DIAGRAMMATIC. FIELD CONFIRM ALL EXISTING LOCATIONS PRIOR TO BID.
7. ALL MASONRY VENEER IN-FILL LOCATIONS TO BE TOOTHED-IN TO MATCH EXISTING ADJACENT AND TO CREATE A SMOOTH/FLUSH TRANSITION. G.C. TO IN-FILL WALL CAVITY WITH C.M.U. TO MATCH EXISTING ADJACENT AND TO CREATE A SMOOTH/FLUSH INTERIOR WALL CONDITION.
8. ALL ARCHITECTURAL METAL LOUVERS MUST HAVE INSECT SCREENS. REFER TO SPECIFICATIONS.
9. ALL DOWNSPOUTS TO HAVE CAST IRON DOWNSPOUT BOOTS THAT TIE INTO UNDERGROUND STORM SYSTEM, U.N.O. REFER TO CIVIL DRAWINGS.



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ISSUE DATES

DATE:	DESCRIPTION:
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ # : 22-CSD-04 DRAWN BY : WEM

SHEET TITLE:

FLOOR PLAN & ELEVATIONS

SHEET NUMBER:

A1.1

BID SET

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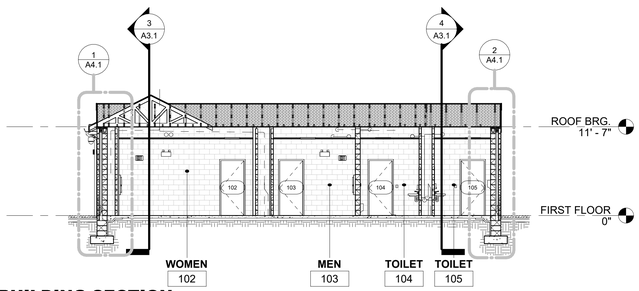
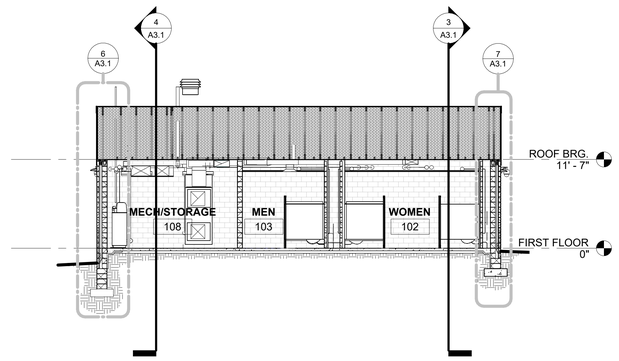


1 BUILDING SECTION
A3.1 1/8" = 1'-0"



2 BUILDING SECTION
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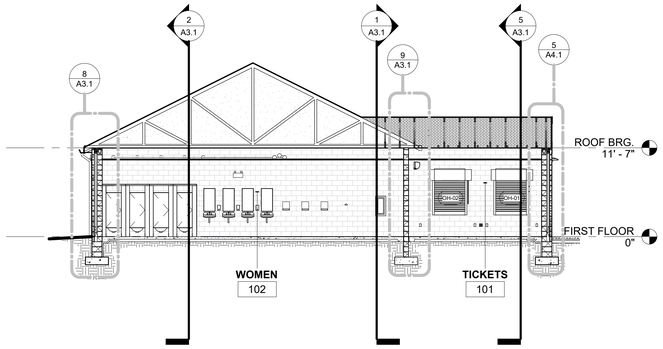
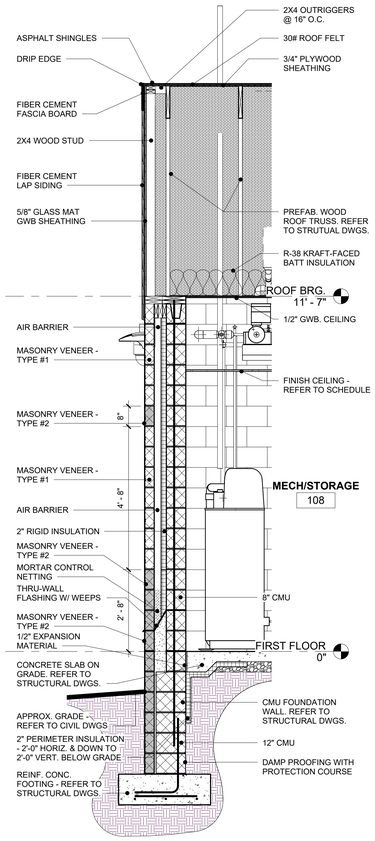
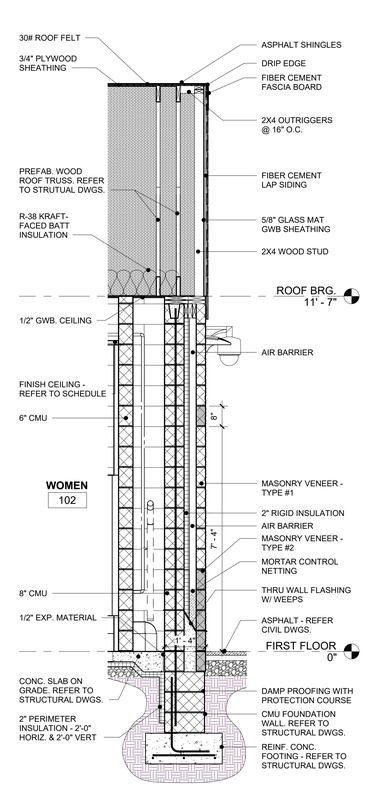


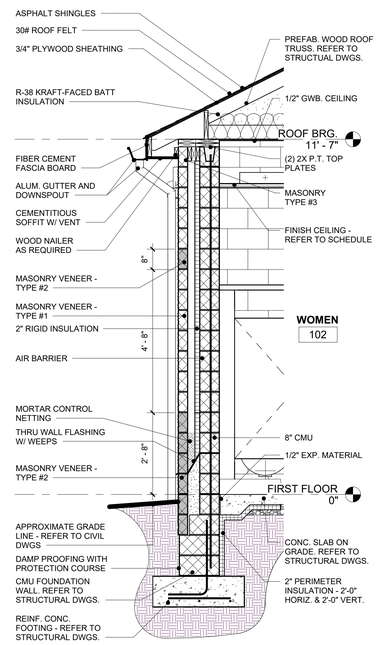
3 BUILDING SECTION
A3.1 1/8" = 1'-0"



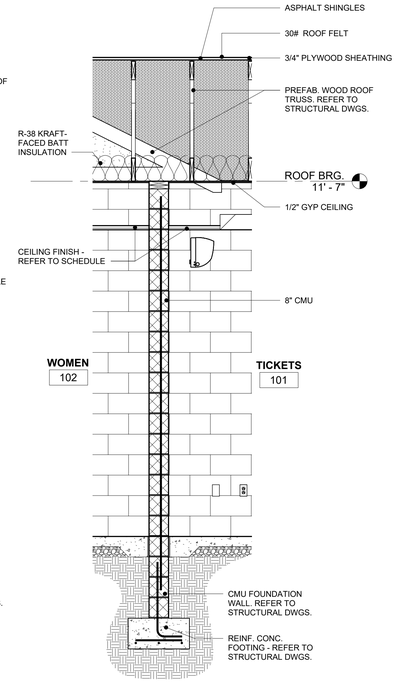
6 WALL SECTION
A3.1 1/2" = 1'-0"



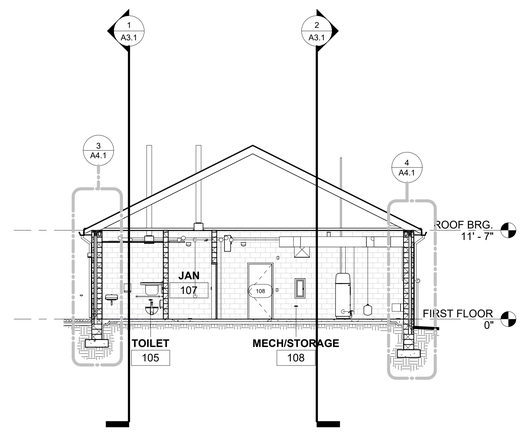
7 WALL SECTION
A3.1 1/2" = 1'-0"



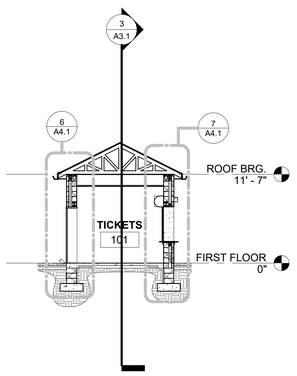
8 WALL SECTION
A3.1 1/2" = 1'-0"



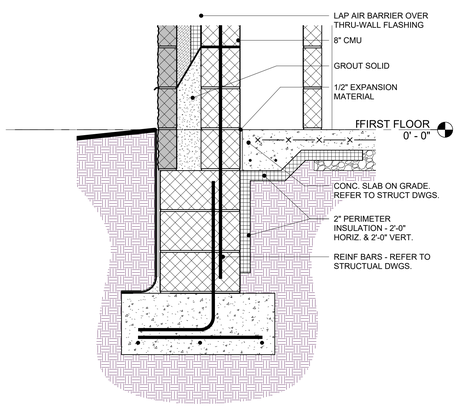
9 WALL SECTION
A3.1 1/2" = 1'-0"



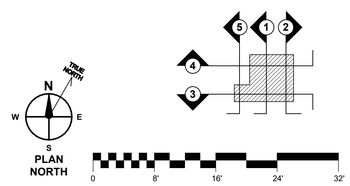
4 BUILDING SECTION
A3.1 1/8" = 1'-0"



5 BUILDING SECTION
A3.1 1/8" = 1'-0"



10 TYPICAL SECTION - FOOTING
A3.1 1" = 1'-0"



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ISSUE DATES
DATE: DESCRIPTION:
03/17/2025 PERMIT SET
03/31/2025 BID SET

PROJ # : 22-CSD-04 DRAWN BY : WEM

SHEET TITLE:
BUILDING SECTIONS & WALL SECTIONS

SHEET NUMBER:
A3.1

BID SET

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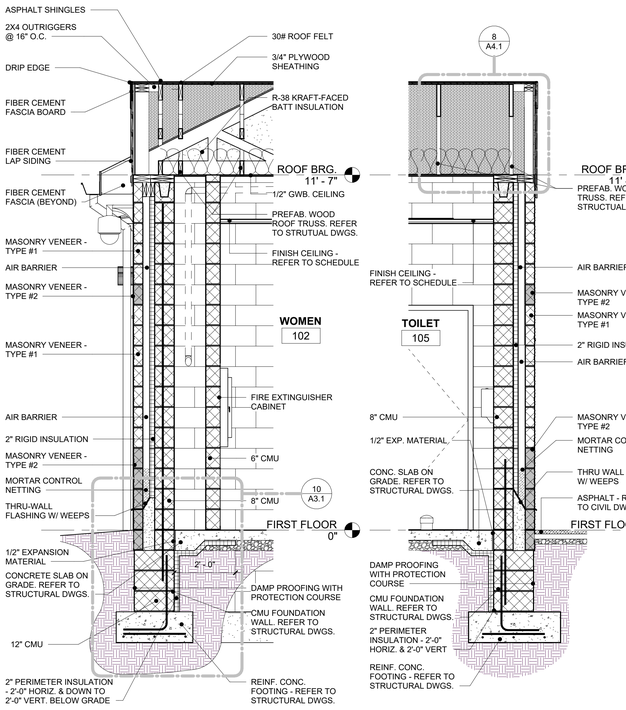
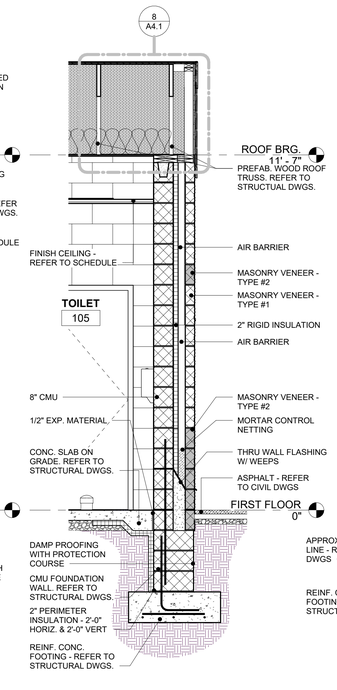
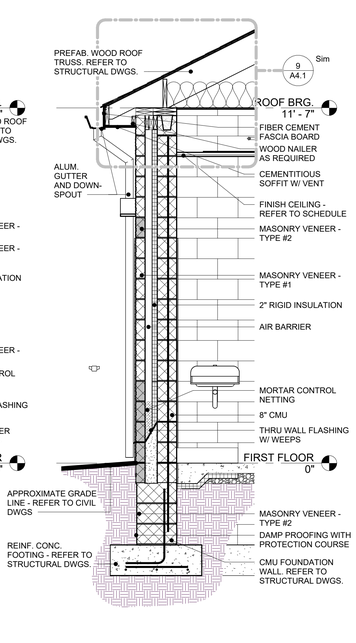


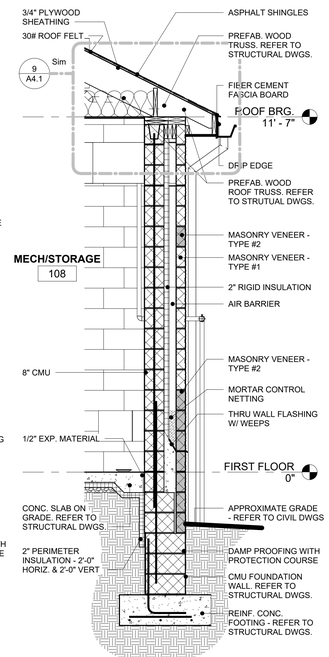
1 WALL SECTION A4.1 1/2" = 1'-0"



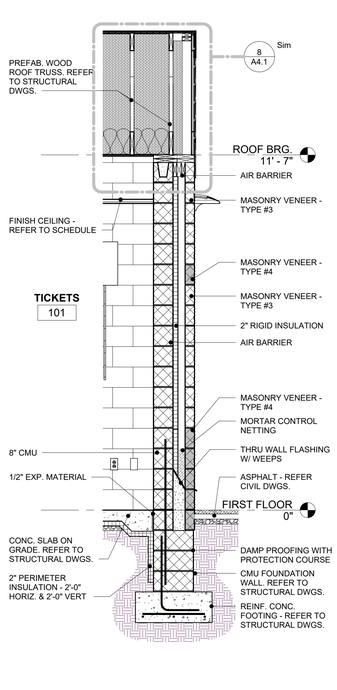
2 WALL SECTION A4.1 1/2" = 1'-0"



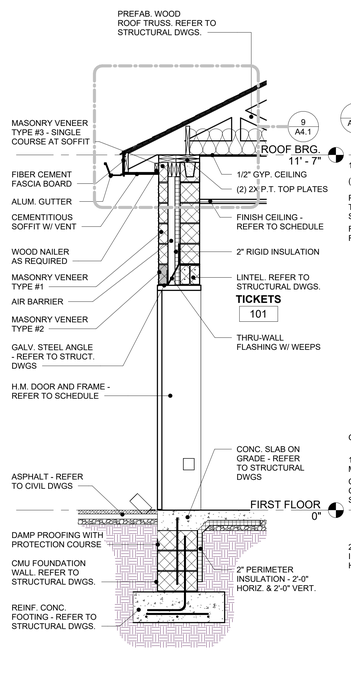
3 WALL SECTION A4.1 1/2" = 1'-0"



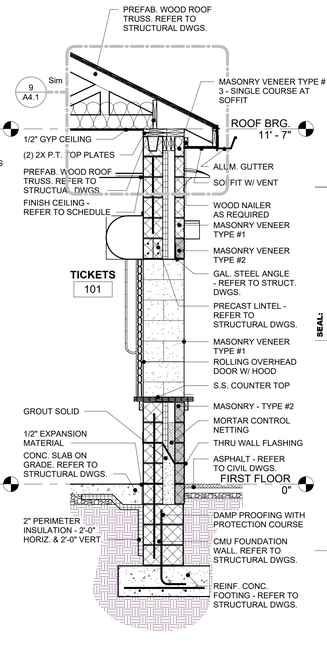
4 WALL SECTION A4.1 1/2" = 1'-0"



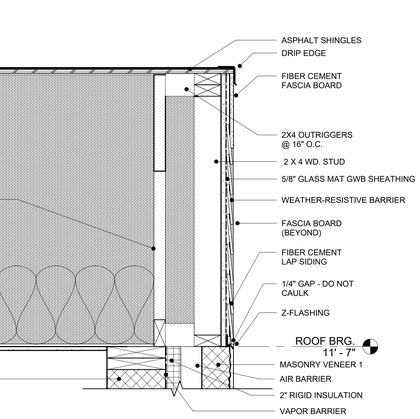
5 WALL SECTION A4.1 1/2" = 1'-0"



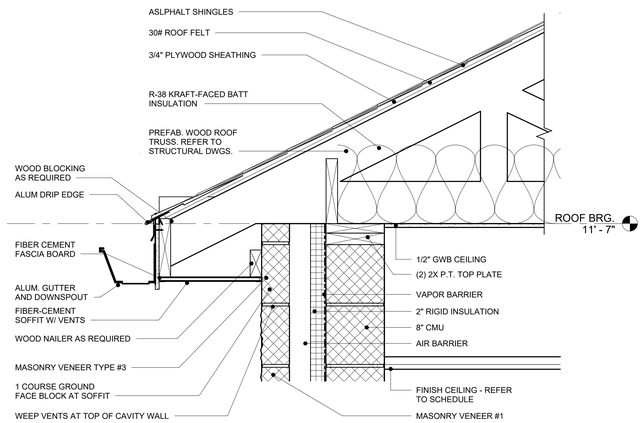
6 WALL SECTION A4.1 1/2" = 1'-0"



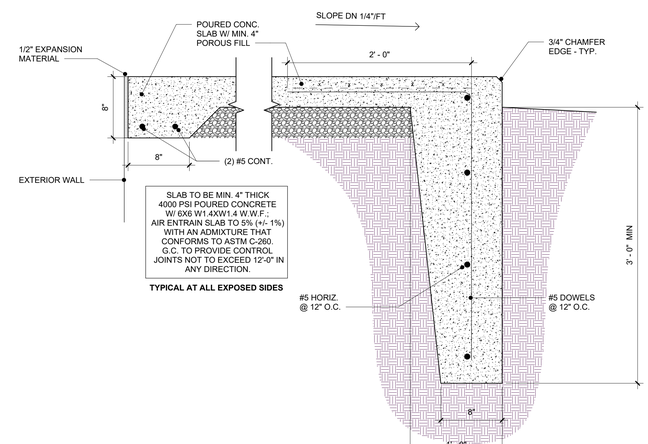
7 WALL SECTION A4.1 1/2" = 1'-0"



8 TYPICAL SECTION DETAIL - GABLE END A4.1 1 1/2" = 1'-0"



9 TYPICAL SECTION DETAIL - EAVE A4.1 1 1/2" = 1'-0"



10 TYPICAL TURN DOWN SLAB DETAIL A4.1 1 1/2" = 1'-0"

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ISSUE DATES
DATE: DESCRIPTION:
03/17/2025 PERMIT SET
03/31/2025 BID SET

PROJ # : 22-CSD-04 DRAWN BY : WEM

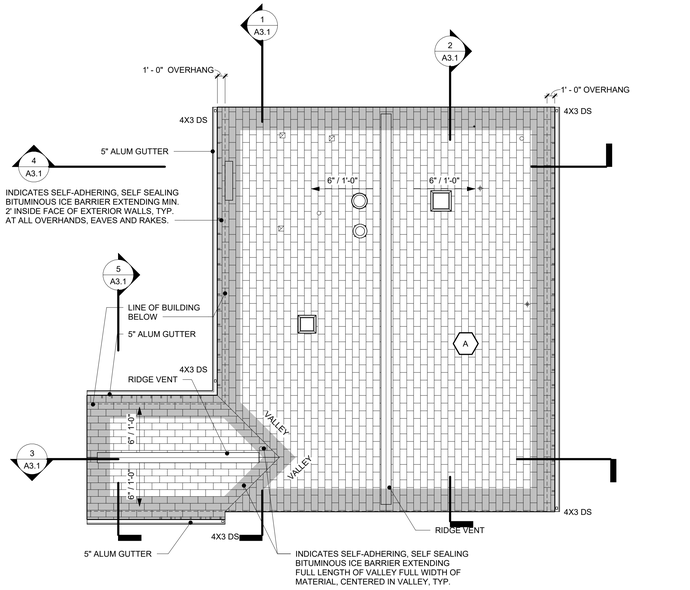
SHEET TITLE:

WALL SECTIONS & DETAILS

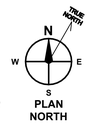
SHEET NUMBER:

A4.1

BID SET



1 ROOF PLAN
A5.1 1/8" = 1'-0"

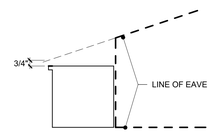


ROOF TYPE LEGEND

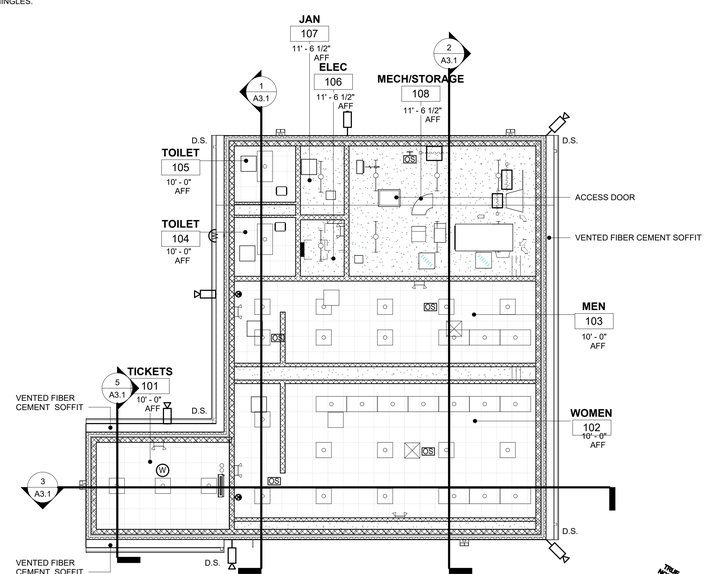
ROOF TYPE 'A'	HD ASPHALT SHINGLES OVER SELF-ADHERING, SELF-SEALING BITUMINOUS ICE BARRIER EXTEDING 2' MIN. INSIDE THE FACE OF THE EXTERIOR WALL, AND ASPHALT-SATURATED ORGANIC FELT UNDERLAYMENT, ON MIN. 3/4" PLYWOOD SHEATHING FASTENED TO ENGINEERED PRE-FABRICATED ROOF TRUSSES OR DIMENSIONAL LUMBER.

GENERAL ROOF NOTES:

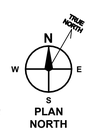
1. PROVIDE PRE-FINISHED ALUMINUM GUTTERS, LEAF GUARDS AND DOWNSPOUTS.
2. PROVIDE CONCRETE SPLASH BLOCKS AT ALL DOWNSPOUTS DISCHARGING TO GRADE.
3. ALL ROOF DETAILS ARE TO BE PER MANUFACTURER'S STANDARDS AND RECOMMENDATIONS.
4. PROVIDE RIDGE VENTS AS NOTED ON PLAN PER MANUFACTURER'S STANDARDS AND RECOMMENDATIONS.
5. PROVIDED SELF-ADHERING SELF-SEALING BITUMINOUS ICE BARRIER MIN. 2'-0" INSIDE FACE OF EXTERIOR WALLS.
6. PROVIDE SELF-ADHERING, SELF-SEALING BITUMINOUS ICE BARRIER, FULL WIDTH CENTERED IN VALLEYS, FULL LENGTH OF VALLEYS.
7. PROVIDE RIDGE VENT AS SHOWN ON ROOF PLAN, WITH ASPHALT RIDGE CAP SHINGLES.

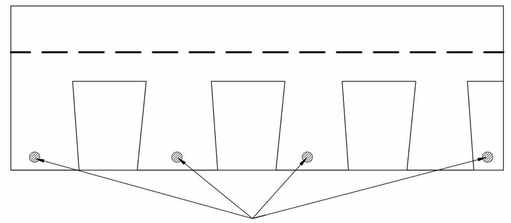


6 TYPICAL GUTTER PROFILE
A5.1 1 1/2" = 1'-0"



2 OVERALL REFLECTED CEILING PLAN
A5.1 1/8" = 1'-0"

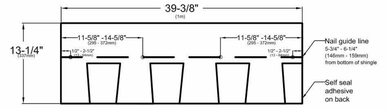




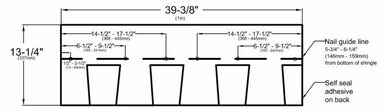
Cement locations
(4 quarter-sized dabs of cement on back of shingle)

SHINGLE SEALANT LOCATION

These shingles MUST be nailed a nominal 6" (152mm) from bottom of of shingle, above the cut outs, as shown. Nails must not be exposed.



STANDARD NAILING PATTERN - four nails per shingle



ENHANCED NAILING PATTERN - six nails per shingle*
* required by some local codes and required for enhanced wind coverage on certain products. See limited warranty for details.

NAIL PLACEMENT DETAIL
Metric Size Shingles

SHINGLE INSTALLATION
Start at either rake and lay in either direction

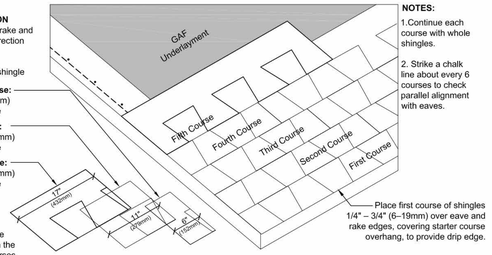
First Course:
Start with full shingle

Second Course:
Trim 6" (152mm) off first shingle

Third Course:
Trim 11" (279mm) off first shingle

Fourth Course:
Trim 17" (432mm) off first shingle

Remaining Courses:
Repeat the 1st - 4th course instructions on the remaining courses, starting the fifth course with a full shingle.



NOTES:
1. Continue each course with whole shingles.
2. Strike a chalk line about every 6 courses to check parallel alignment with eaves.

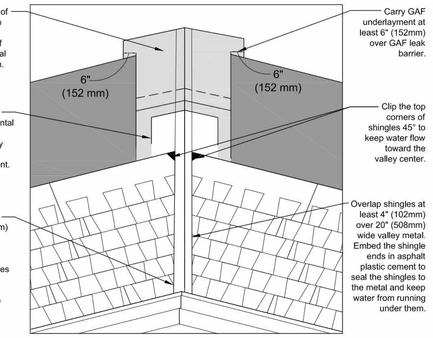
Place first course of shingles 1/4" – 3/4" (6–19mm) over eave and rake edges, covering starter course overhang, to provide drip edge.

SHINGLE INSTALLATION DETAIL

Center full width roll of GAF leak barrier. Do not place fasteners within 6" (152mm) of center line. Horizontal laps 6" (152mm) min.

Center valley metal, overlap metal horizontal laps a minimum 12" (305mm) and seal by embedding them in asphalt plastic cement.

Shingles should be separated 6" (152mm) at top of valley. Separation must increase 1/8" (3mm) per foot towards eaves to handle increasing water volume. Snap chalk lines to ensure shingles diverge properly in valley.



Carry GAF underlayment at least 6" (152mm) over GAF leak barrier.

Clip the top corners of shingles 45° to keep water flow toward the valley center.

Overlap shingles at least 4" (102mm) over 20" (508mm) wide valley metal. Embed the shingle ends in asphalt plastic cement to seal the shingles to the metal and keep water from running under them.

OPEN VALLEY DETAIL

GENERAL REFLECTED CEILING PLAN LEGEND AND NOTES:

- INDICATES A LIGHTING FIXTURE, REFER TO ELECTRICAL DWGS.
- INDICATES A HVAC DIFFUSER, REFER TO MECHANICAL DWGS.
- INDICATES 2X2 ACOUSTIC CEILING TILE. CEILING, REFER TO FINISH SCHEDULE.
- INDICATES GWB CEILING

NOTE:
1) 1/2" GYPSUM BOARD CEILING TO BE INSTALLED THROUGHOUT BUILDING TO UNDERSIDE OF TRUSSES.

ACOUSTICAL CEILING INSTALLATION

1. THE CONTRACTOR SHALL FIELD CHECK THE PREMISES AND VERIFY THAT THE CEILING LAYOUT SHOWN ON THE DRAWINGS CAN BE ACCOMMODATED AND VERIFY ALL CLEARANCES AS REQUIRED FOR ALL LIGHTING FIXTURES, AND DUCT WORK BEFORE PROCEEDING WITH ANY INSTALLATION. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING.
2. REVIEW CEILING LAYOUT WITH MEP COORDINATION DRAWINGS.
3. CEILING SHALL BE TRUE, FLAT, STRAIGHT AND REGULAR. PROVIDE STABILIZER BARS AS REQUIRE TO DISTRIBUTE LOAD EQUALLY OVER TWO OR MORE RUNNERS.
4. LEVEL CEILING TO BE WITHIN 1/8" IN 12 FEET IN ANY DIRECTION. LEVEL WITH HANGER WIRE TAUT AND PLUMB, WITHOUT KINKING OR BENDING HANGER WIRES. CEILING HEIGHT SHALL MATCH EXISTING UNLESS OTHERWISE NOTED.
5. INSTALL MAX. LENGTHS OF EDGE MOLDING AT INTERSECTION OF CEILING AND VERTICAL SURFACE. MITER ALL CORNERS.
6. COORDINATE INSTALLATION WITH ELECTRICAL AND MECHANICAL REQUIREMENTS.
7. INSTALL CEILING TILE HOLD DOWN CLIPS IN ALL VESTIBULES & AIR LOCKS.
8. LAY DIRECTIONAL PATTERN UNITS IN SINGLE DIRECTION.
9. INSTALL CEILING TILE HOLD DOWN CLIPS AT PARTITIONS WITH CUT CEILING TILES.
10. ALL FIXTURE TRIM (LIGHTING, SPEAKER,, HVAC GRILLES, ETC.) SHALL BE METAL AND PAINTED TO MATCH ADJACENT CEILING FINISH. PLASTIC TRIM IS NOT ACCEPTABLE UNLESS APPROVED BY THE ARCHITECT.
11. REGULAR CEILING TILE TO BE CUT AND FITTED SNUG AGAINST PARTITIONS. DO NOT SHIM THE GRID TO ALLOW CEILING TILE TO PASS OVER TOP OF PARTITION.
12. FINAL GRID HEIGHTS AND LAY-OUT TO BE DETERMINED IN THE FIELD FOLLOWING COORDINATION.

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SEAL:

CONSULTANT:

NEW STADIUM RESTROOMS
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES

DESCRIPTION:	DATE:
PERMIT SET	03/17/2025
BID SET	03/31/2025

PROJ # : 22-CSD-04 DRAWN BY : WEM

SHEET TITLE:

ROOF PLAN & CEILING PLAN

SHEET NUMBER:

A5.1

BID SET

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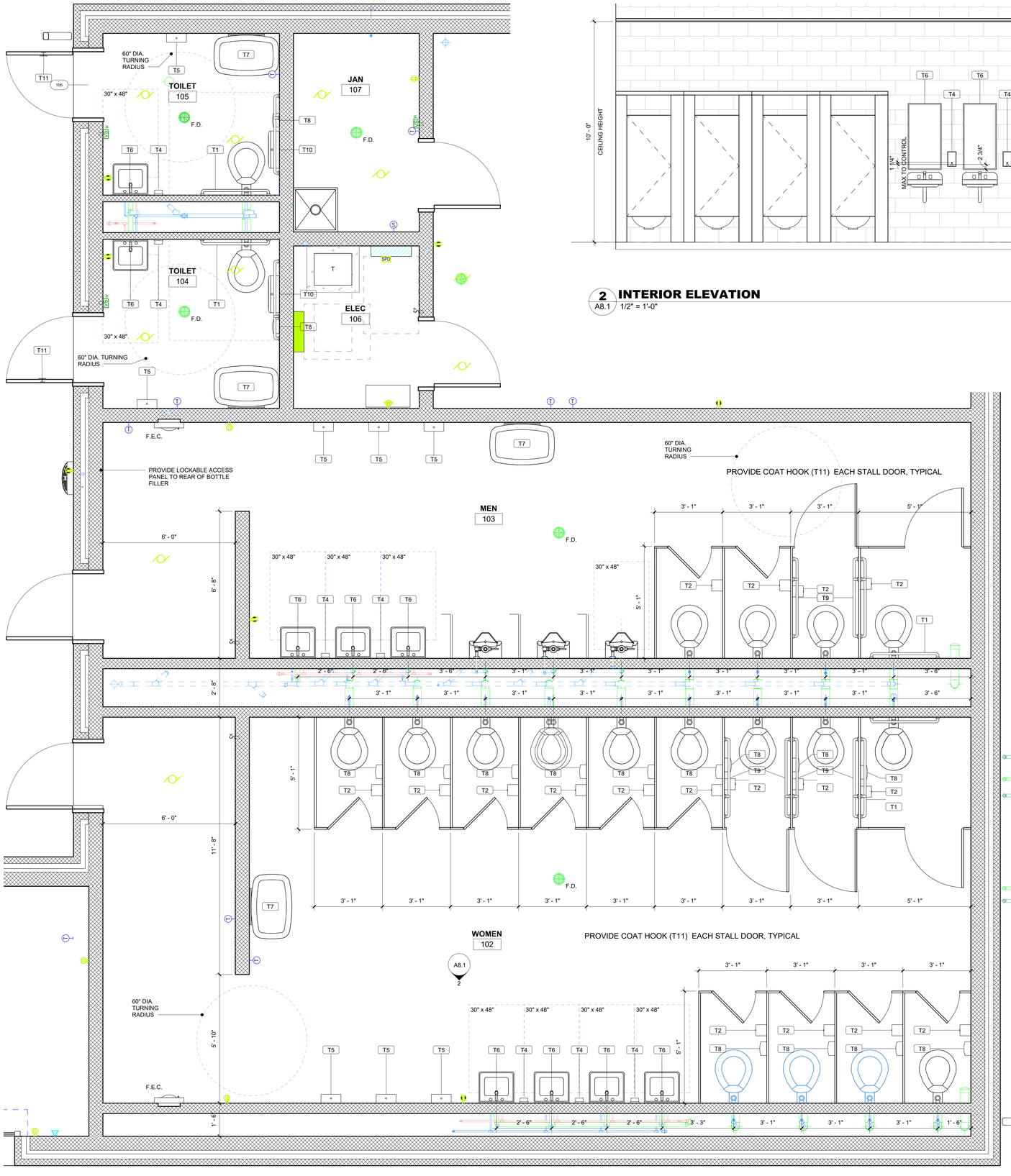
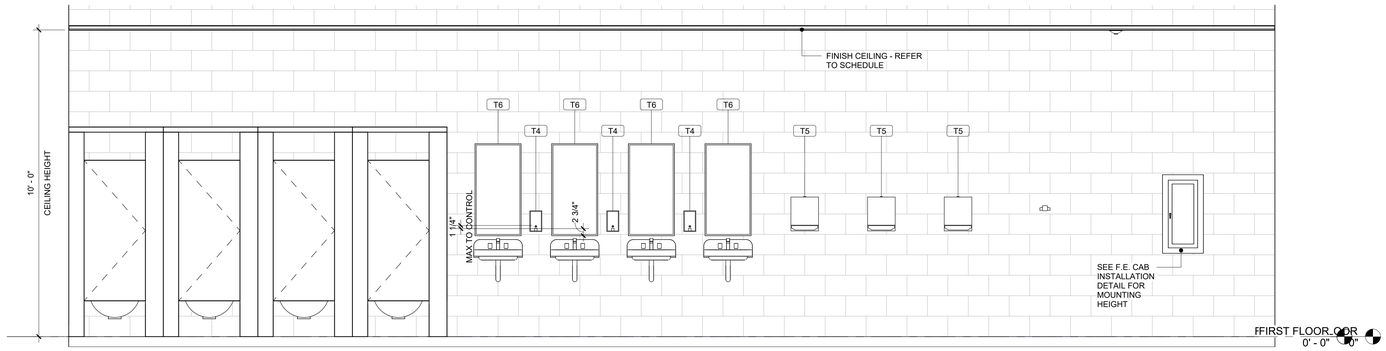


1 ENLARGED FLOOR PLAN
A8.1 1/2" = 1'-0"



2 INTERIOR ELEVATION
A8.1 1/2" = 1'-0"

TOILET ACCESSORY SCHEDULE

Type Mark	Description	Comments
T1	ADA COMPLIANT HORIZONTAL AND VERTICAL GRAB BARS	REFER TO ADA DETAILS ON A0.1 AND MFR'S INSTALLATION INSTRUCTIONS
T2	SURFACE-MOUNTED MULTI-ROLL TOILET TISSUE DISPENSER	REFER TO ADA DETAILS ON A0.1 AND MFR'S INSTALLATION INSTRUCTIONS - OWNER PROVIDED G.C. INSTALLED
T4	SURFACE MOUNTED SOAP DISPENSER	REFER TO ADA DETAILS ON A0.1 AND MFR'S INSTALLATION INSTRUCTIONS - OWNER PROVIDED G.C. INSTALLED
T5	SURFACE MOUNTED ADA PAPER TOWEL DISPENSER	REFER TO ADA DETAILS ON A0.1 AND MFR'S INSTALLATION INSTRUCTIONS - OWNER PROVIDED G.C. INSTALLED
T6	GLASS MIRROR WITH STAINLESS STEEL ANGLE FRAME	REFER TO ADA DETAILS ON A0.1 AND MFR'S INSTALLATION INSTRUCTIONS
T7	BOBRICK HORIZONTAL BABY CHANGING STATION - KOALA KARE KB200-01	REFER TO ADA DETAILS ON A0.1 AND MFR'S INSTALLATION INSTRUCTIONS
T8	SURFACE-MOUNTED SANITARY NAPKIN DISPOSAL	REFER TO ADA DETAILS ON A0.1 AND MFR'S INSTALLATION INSTRUCTIONS
T9	GRAB BAR SET - WATER CLOSET - (2) SIDES	REFER TO ADA DETAILS ON A0.1 AND MFR'S INSTALLATION INSTRUCTIONS
T10	BOBRICK B-2892 CLASSIC SERIES SURFACE MOUNTED TWIN JUMBO-ROLL TOILET TISSUE DISPENSER	REFER TO ADA DETAILS ON A0.1 AND MFR'S INSTALLATION INSTRUCTIONS - OWNER PROVIDED G.C. INSTALLED
T11	SURFACE MOUNTED ROBE HOOK	REFER TO ADA DETAILS ON A0.1 AND MFR'S INSTALLATION INSTRUCTIONS

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SEAL:

CONSULTANT:

NEW STADIUM RESTROOMS

CHICHESTER HIGH SCHOOL

CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES
DESCRIPTION:
DATE:
03/17/2025 PERMIT SET
03/31/2025 BID SET

PROJ # : 22-CSD-04 DRAWN BY : WEM

SHEET TITLE:

ENLARGED TOILET PLANS

SHEET NUMBER:

A8.1

BID SET

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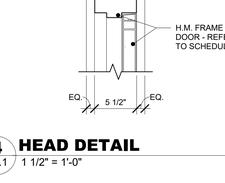
DOOR SCHEDULE

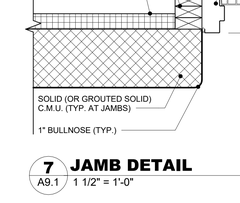
DOOR NUMBER	DOOR SIZE WIDTH LEAF 1	LEAF 2	HEIGHT	DOOR TYPE	DOOR MATERIAL	FIRE RATING	FRAME TYPE	FRAME MATERIAL	HEAD	JAMB	SILL	COMMENTS
FIRST FLOOR												
101	3' - 0"		7' - 2"	F	HM	N/A	HM1	HM	6	7	8	EXT - CARD SWIPE ACCESS
102	3' - 0"		7' - 2"	F	HM	N/A	HM1	HM	6	7	8	EXT
103	3' - 0"		7' - 2"	F	HM	N/A	HM1	HM	6	7	8	EXT
104	3' - 0"		7' - 2"	F	HM	N/A	HM1	HM	6	7	8	EXT
105	3' - 0"		7' - 2"	F	HM	N/A	HM1	HM	6	7	8	EXT
106	3' - 0"		7' - 2"	F	HM	N/A	HM1	HM	4	5		INT
107	3' - 0"		7' - 2"	F	HM	N/A	HM1	HM	4	5		INT
108	3' - 0"		7' - 2"	F	HM	N/A	HM1	HM	6	7	8	EXT

ROLLING DOOR SCHEDULE

DOOR NUMBER	DOOR SIZE Width	HEIGHT	Head Height	FIRE RATING	FRAME HEAD	JAMB	SILL	COMMENTS
FIRST FLOOR								
OH-01	4' - 0"	4' - 6"	7' - 4"	N/A	9	10	11	EXT.
OH-02	4' - 0"	4' - 6"	7' - 4"	N/A	9	10	11	EXT.



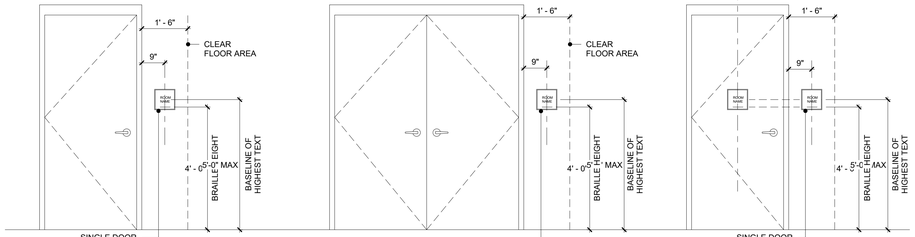
ENTRY DOORS



HM1

ROOM FINISH SCHEDULE

NUMBER	NAME	FLOOR FINISH	SUB-FLR	BASE	WALL FINISH N	E	S	W	Ceiling Finish	COMMENTS
101	TICKETS	SEAL	CONC	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	
102	WOMEN	SEAL	CONC	RB-1	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	ACT-1	
103	MEN	SEAL	CONC	RB-1	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	ACT-1	
104	TOILET	SEAL	CONC	RB-1	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	ACT-1	
105	TOILET	SEAL	CONC	RB-1	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	PNT-1, PNT-2, PNT-3	ACT-1	
106	ELEC	SEAL	CONC	-	PNT-1	PNT-1	PNT-1	PNT-1	PNT-4	
107	JAN	SEAL	CONC	-	PNT-1	PNT-1	PNT-1	PNT-1	PNT-4	
108	MECH/STORAGE	SEAL	CONC	-	PNT-1	PNT-1	PNT-1	PNT-1	PNT-4	



NOTE: REFER TO SPECIFICATIONS FOR SIGNAGE SIZE AND LOCATION REQUIREMENTS.

FINISH LEGEND

FLOOR FINISHES

SEAL: SEALED POLISHED CONCRETE - POLISH LEVEL 2: LOW SHEEN, 400 GRIT

BASE FINISHES

RB-1: ROPPE RUBBER COVE BASE, 4", PINNACLE TYPE TS, COLOR: DOLPHIN 128

CEILING FINISHES

ACT-1 ARMSTRONG KITCHEN ZONE #673 24" X 24" X 5/8" LAY IN TILE WITH PRELUDE XL 15/16" SUSPENSION SYSTEM

PAINT

PNT-1: SHERWIN WILLIAMS, FIELD PAINT, COLOR: SW7016 "MINDFUL GRAY"

PNT-2: SHERWIN WILLIAMS, HM DOORS AND FRAMES (INTERIOR AND EXTERIOR) & WALL ACCENT COLOR: SW7593 "RUSTIC RED"

PNT-3: SHERWIN WILLIAMS, ACCENT COLOR, COLOR: SW 7011 "NATURAL CHOICE"

PNT-4: SHERWIN WILLIAMS, GYPSUM CEILING WHERE EXPOSED: SW 7008 "ALABASTER"

SOLID SURFACE

SS-1: WILSONART MAPLE HARVEST 9106CS

1 DOOR TYPES
A9.1 1/4" = 1'-0"

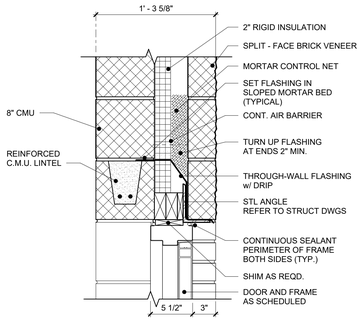
LEGEND

GL GLASS PANEL
MP METAL PANEL
OV OUTSWING VENT UNIT
TW TRANSLUCENT WALL PANEL
M.O. MASONRY OPENING

GENERAL DOOR AND FRAME NOTES

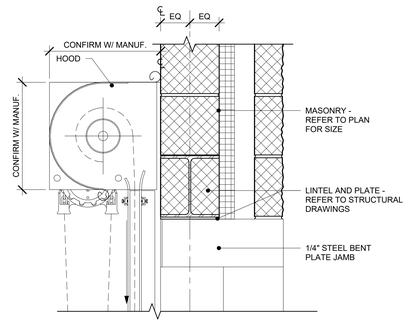
1. ALL DOORS LOCATED AT CORNERS IN MASONRY WALLS SHALL BE LOCATED 8" FROM ADJACENT PERPENDICULAR WALL TO OUTSIDE OF FRAME UNLESS DIMENSIONED OTHERWISE
2. ALL DOORS LOCATED AT CORNERS IN STUD WALLS SHALL BE LOCATED 4" FROM ADJACENT PERPENDICULAR WALL TO OUTSIDE OF FRAME UNLESS DIMENSIONED OTHERWISE
3. UNDERCUT DOORS AS REQUIRED TO OPERATE SMOOTHLY OVER FINISHED FLOOR. MAXIMUM UNDERCUT SHALL BE 1/4", UNLESS NOTED OTHERWISE FINISH BOTTOM OF DOORS AFTER UNDERCUTTING.
4. REFER TO PANEL SIGNAGE SPECIFICATIONS FOR PANEL SIGNAGE TYPE.

2 HOLLOW METAL DOOR FRAME TYPES
A9.1 1/4" = 1'-0"



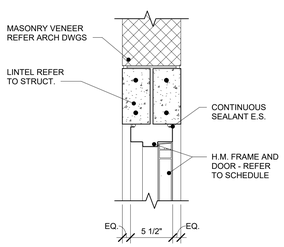
6 HEAD DETAIL (NEW)
A9.1 1 1/2" = 1'-0"

3 TACTILE SIGNAGE
A9.1 1/2" = 1'-0"

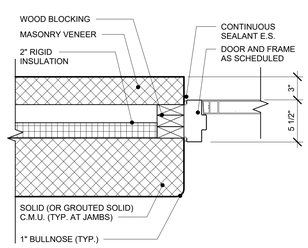


9 HEAD DETAIL
A9.1 1 1/2" = 1'-0"

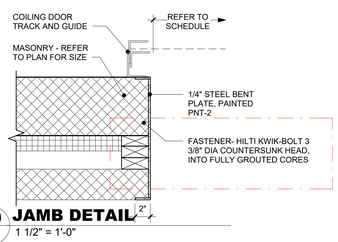
12 WALL PAINT PATTERN
A9.1 1/2" = 1'-0"



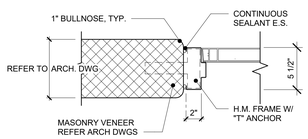
4 HEAD DETAIL
A9.1 1 1/2" = 1'-0"



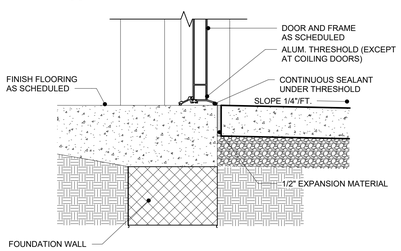
7 JAMB DETAIL
A9.1 1 1/2" = 1'-0"



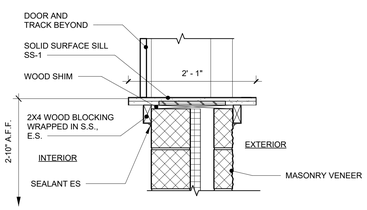
10 JAMB DETAIL
A9.1 1 1/2" = 1'-0"



5 JAMB DETAIL
A9.1 1 1/2" = 1'-0"



8 TYP. THRESHOLD DETAIL
A9.1 1 1/2" = 1'-0"



11 SILL DETAIL
A9.1 1" = 1'-0"

GENERAL FINISH NOTES

1. ALL EXPOSED STEEL TO BE PAINT FINISH. VERIFY COLOR IN FIELD WITH OWNER & ARCHITECT.
2. ALL EXPOSED DUCTWORK TO BE PAINTED BY G.C.
3. PAINT COLORS NOTED ON DRAWINGS ARE PLACE-HOLDERS. EXACT COLORS TO BE CONFIRMED DURING SUBMITTAL PROCESS.
4. ENSURE ALL SURFACES (NEW & EXISTING) TO RECEIVE FINISH ARE CLEAN. TRUE & FREE OF IRREGULARITIES. DO NOT PROCEED WITH WORK UNITL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
5. STARTING OF FINISH WORK SHALL INDICATE APPLICATOR'S ACCEPTANCE OF SUBSTRATE.
6. SUBMIT SAMPLES OF ALL SPECIFIED FINISHES AND COLORS FOR ARCHITECT'S APPROVAL PRIOR TO EXECUTION OF WORK.
7. WHERE TWO FLOOR FINISHES MEET AT A DOORWAY, THE TRANSITION MUST OCCUR ON THE CENTERLINE OF THE DOOR IN ITS CLOSED POSITION.
8. APPLY RUBBER BASE WHERE SCHEDULED TO WALLS, COLUMNS AND OTHER PERMANENT FIXTURES IN ROOMS OR AREAS WHERE SPECIFIED. INSTALL BASE IN AS LONG OF LENGTHS AS PRACTICABLE. TIGHTLY BOND TO BACKING THROUGHOUT THE LENGTH AND HEIGHT OF EACH PIECE, WITH CONTINUOUS CONTACT AT VERTICAL AND HORIZONTAL SURFACES. ALL RUBBER CORNERS TO BE PREMOLDED.
9. ARCHITECT SHALL INTERPRET THE AESTHETIC MATCH OF THE CONTROL SAMPLES THEY POSESS, AND THEIR ACCEPTANCE OF REJECTION OF THE SAMPLES OFFERED IS FINAL.
10. UPON RECEIPT FROM MANUFACTURER THE INSTALLER SHALL INSPECT ALL MATERAL FOR DEFECTS, SHIPPING DAMAGE, FLAWS, CORRECT COLOR AND PATTERN. DAMAGED OR INCORRECT MATERIALS SHALL BE SENT BACK TO THE MANUFACTURER FOR IMMEDIATE REPLACEMENT.
11. PRIOR TO OCCUPANCY, THE CONTRACTOR SHALL CLEAN ALL NEW AND EXISTING FINISHES OF DUST, DEBRIS, LOOSE CONSTRUCTION MATERIALS & EQUIPMENT.
12. MAINTENANCE MATERIALS: DELIVER USABLE SCRAPS OF CARPET, VINYL TILE AND OTHER FINISH MATERIALS TO OWNERS'S DESIGNATED STORAGE SPACE, PROPERLY PACKAGED (PAPER WRAPPED) AND IDENTIFIED.
13. TYPICAL THROUGHOUT WORK AREAS HOLLOW METAL FRAMES TO BE PAINTED PNT-2.

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CONSULTANT:

NEW STADIUM RESTROOMS
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES
DATE: DESCRIPTION:
03/17/2025 PERMIT SET
03/31/2025 BID SET

PROJ # : 22-CSD-04 DRAWN BY : WEM

SHEET TITLE:

DOOR SCHEDULE AND FINISH SCHEDULE

SHEET NUMBER:

A9.1

BID SET

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GENERAL STRUCTURAL NOTES

GENERAL STRUCTURAL NOTES:

1. The structural drawings shall be used in conjunction with the drawings of all other disciplines and the specifications. The contractor shall verify the requirements of other trades as to sleeves, chases, hangers, inserts, anchors, holes and other items to be placed or set in the structural work.

2. The contractor shall be responsible for complying with all safety precautions and regulations during the work. The engineer will not advise on nor issue direction as to safety precautions and programs.

3. The structural drawings herein represent the finished structure. The contractor shall provide all temporary shoring, guying and bracing required to erect and hold the structure in proper alignment until all structural work and connections have been completed. The investigation, design, safety, adequacy and inspection of erection bracing, shoring, temporary supports, etc. is the sole responsibility of the contractor.

4. The engineer shall not be responsible for the methods, techniques and sequences of procedures to perform the work. The supervision of the work is the sole responsibility of the contractor.

5. Drawings indicate general and typical details of construction. Where conditions are not specifically shown, similar details of construction shall be used, subject to approval by the engineer.

6. All structural systems which are to be composed of components to be field erected shall be supervised by the supplier during manufacturing, delivery, handling, storage and erection in accordance with the supplier's instructions and requirements.

7. Contractor shall provide all temporary supports required for stability and for resistance to wind and seismic forces until the structure is capable of providing this support. Contractor to refer to the National Concrete Masonry Association technical guide #03-04C, "Bracing concrete masonry walls under construction".

8. Loading applied to the structure during the process of construction shall not exceed the safe load-carrying capacity of the structural members. The live loadings used in the design of this structure are indicated in the "Design Criteria Notes". Do not apply any construction loads until structural framing is properly connected together and until all temporary bracing is in place.

9. All ASTM and other references are per the latest editions of these standards, unless otherwise noted.

10. In accordance with Section 1704 of IBC 2018, special inspections will be required for this project. Special inspections shall be performed in accordance with the "Schedule of Special Inspections". All fabricators shall satisfy the "Exception" noted in section 1704.2.5.1, which requires the fabricator to maintain an agreement with an approved independent inspection or quality control agency. The contractor shall notify the special inspector at least 48 hours in advance for work that will require inspection or testing

11. Unless otherwise indicated, all items noted to be demolished shall become the contractor's property and be removed from the site.

12. Contractors shall visit the site prior to bid to ascertain conditions which may adversely affect the work or cost thereof.

13. Dimensions shown on the architectural drawings shall govern over dimensions shown on the structural drawings. The contractor shall generate an RFI regarding discrepancies prior to construction.

SHOP DRAWING NOTES:

1. Shop drawings and other items shall be submitted to the engineer for review prior to fabrication. The engineer's review is to be for conformance with the design concept and general compliance with the relevant contract documents. The engineer's review does not relieve the contractor of the sole responsibility to review, check and coordinate the shop drawings prior to submission. The contractor remains solely responsible for errors and omissions associated with the preparation of shop drawings as they pertain to member sizes, details, dimensions, etc.

2. Submit shop drawings as per note #3 below. In no case shall reproduction of the contract drawings be used as shop drawings. As a minimum, submit the following items for review:
   A. Concrete mix design(s).
   B. Reinforcing steel shop drawings.
   C. Structural steel shop drawings.
   D. Pre-manufactured wood system/truss shop drawings (see notes).
Other submittals may be required per the "Schedule of Special Inspections" or the separate notes contained herein.

3. Contractor shall submit electronic shop drawings. Any additional shop drawings submitted will not be reviewed or returned.

4. Contractor shall submit a schedule indicating when each set of shop drawings will be submitted to the architect/engineer prior to any shop drawing submission.

5. All notes or questions from the detailer to the engineer or architect shall be clouded, numbered and with the text "Arch/Engr. review." Any notes or questions from the detailer to the contractor shall be clouded, numbered and with the text "G.C. Review."

6. All shop drawings shall be reviewed by the contractor before submittal to the engineer or architect. Shop drawings will be rejected if the contractor has not reviewed the shop drawings prior to submittal to engineer or architect.

7. The contractor shall produce all shop drawings. Copying, scanning and/or reusing any portion of the structural drawings as part of the shop drawings submittal is not permitted. Submittals that include reproduced portions of the structural drawings will be rejected without review.

DESIGN CRITERIA NOTES:

1. The intended design standards and/or criteria are as follows:
   General: Uniform statewide bldg. code (IBC 2018, Chapter 16 as amended)
   Concrete: ACI 318-14
   Masonry: TMS 402/602-16
   Structural Steel: ANSI/AISC 360-16 A.S.D. (15th Edition)
   Wood: NDS-2018
   Wood Trusses: TPI 1-2014
   Foundations: Geotechnical Investigation and Report completed by Earth Engineering Inc. dated September 6, 2023 (EEI Project No. 36201.00)

2. Design gravity dead loads used in the design of this structure are as follows (refer to IBC 2018 section 1606):

Roof	25 PSF Max. 15 PSF Min.
Floors	On Grade
All other	Actual weight

3. Design gravity live loads used in the design of this structure are as follows (refer to IBC 2018 section 1607):

Roof	20 PSF
Floor	100 PSF

4. The structure has been designed as Risk Category III in accordance with IBC 2018 table 1604.5.

5. Design lateral live loads used in the design of this structure, in accordance with Chapters 11 through 31 of ASCE 7-16, are as follows:
Wind - Ultimate, main system: 124 mph, Exposure B, Iw = 1.0
Wind - Ultimate, components: 124 mph, Exposure B, Iw = 1.0

Seismic: SDS = 0.193g, SD1 = 0.075g, Design Cat. B, Ie = 1.25, Site Class D
Cs = 0.121, R = 2, Base Shear = 61 Kips

6. Design snow loads used in the design of this structure, in accordance with Chapter 7 of ASCE 7-16, are as follows:
Pg (ground snow load) = 20 PSF, Ce = 1.0, Is = 1.1, Ct = 1.0
Pf (flat roof) = 20 PSF, Cs = 1.0
Ps (Balanced/sloped roof) = 20 PSF

7. The lateral load resisting system of this building consists of reinforced concrete masonry shear walls.

8. This structure has been designed with "safety factors" in accordance with generally accepted principles of structural engineering. The fundamental nature of the "safety factor" is to compensate for uncertainties in the design, fabrication and erection of structural building components. It is intended that "safety factors" be used so that the load carrying capacity of the structure does not fall below the design load and that the building will perform under design load without distress. While the use of "safety factors" implies some excess capacity beyond design load, such excess capacity cannot be adequately predicted and SHALL NOT BE RELIED UPON.

SUBGRADE PREPARATION NOTES:

1. All site preparation shall conform to the requirements of IBC 2018 Chapter 18 and the Geotechnical Report prepared by Earth Engineering, Inc. dated September 6, 2023 (EEI Project No. 36201.00)

2. Within an area a minimum of 5 feet beyond the building limits, excavate a minimum of 4" of existing soil. Remove all organics, pavement, roots, debris and otherwise unsuitable material.

3. The surface of the exposed subgrade shall be inspected by probing or testing to check for pockets of soft or unsuitable material. Excavate unsuitable soil as directed by the geotechnical engineer/testing agency.

4. Proofroll the surface of the exposed subgrade with a loaded tandem axle dump truck. Remove all soils which pump or do not compact properly as directed by the geotechnical engineer/testing agency.

5. Fill all excavated areas with approved controlled fill. Place in 8 inch loose lifts and compact to a minimum of 95% of the maximum dry density in accordance with ASTM D-698.

6. All controlled fill material shall be a select granular material free from all organics or otherwise deleterious material with not more than 20% by weight passing a No. 200 sieve (classified as SC, SM, SP or better in accordance with the unified soil classification system) and with a plasticity index not exceeding 6%.

7. Provide field density tests for each 3,000 s.f. of building area for each lift of controlled fill.

FOUNDATION NOTES:

1. All foundation construction shall conform to the requirements of IBC 2018 Chapter 18 and the Geotechnical Report prepared by Earth Engineering, Inc. dated September 6, 2023 (EEI Project No. 36201.00)

2. All footings have been designed based upon an assumed soil bearing pressure of 3,000 psf. All footings shall bear on undisturbed, firm natural soil or compacted fill. All foundation excavations shall be evaluated by the geotechnical engineer/testing agency prior to pouring foundation concrete.

3. Top of footing elevation shall be as shown on the foundation plan. These elevations are a maximum and shall be lowered as required to obtain the required design bearing pressure or lowered below new or existing utilities per typical details.

4. All foundation concrete shall obtain a 28 day compressive strength of 3,000 psi. All concrete to be permanently exposed to weather shall be air entrained to 5% (±1%) with an admixture that conforms to ASTM C-260.

5. All concrete work shall conform to the requirements of ACI 301, "Specification for Structural Concrete Buildings". Hot weather concreting shall be in accordance with ACI 305. Cold weather concreting shall be in accordance with ACI 306.

6. All reinforcing steel shall conform to ASTM A-615, Grade 60. Reinforcing shall be detailed and installed per ACI 315 and CRSI Manual of Standard Practice.

7. Unless otherwise noted, the following concrete cover shall be provided for reinforcement.
   A. Concrete cast against and permanently exposed to earth: 3"
   B. Concrete exposed to earth or weather:
      #6 through #18 bars: 2"
      #5 bar, W31 or D31 wire and smaller: 1-1/2"

8. All reinforcing marked continuous (cont.) on the plans and details shall be lapped 36xbar diameters at splices unless otherwise noted.

9. No unbalanced backfilling shall be placed against foundation walls unless walls are securely braced against overturning, either by temporary bracing or by permanent construction.

10. Prior to commencing any foundation work, coordinate work with any existing utilities. Foundations shall be lowered where required to avoid utilities.

11. Unless otherwise noted, the centerlines of column/pier foundations shall be located on column centerlines.

12. All retaining walls shall have at least 12" of free-draining granular backfill, full height of wall. Provide control joints in retaining walls at approximately equal intervals not to exceed 25 feet or 3 times the wall height. Provide expansion joints at every fourth control joint, unless otherwise indicated.

SLAB ON GRADE NOTES:

1. Slab-on-grade construction shall conform to the requirements of ACI 301, "Specification for Structural Concrete Buildings" and IBC 2018 Section 1907 and the Geotechnical Report prepared by Earth Engineering, Inc. dated September 6, 2023 (EEI Project No. 36201.00)

2. Provide concrete slabs as indicated on plans over a 15 mil polyethylene vapor barrier and 4" of porous fill as follows:
4" slab reinforced with 6x6- W1.4Xw1.4 welded wire fabric and with 4000 psi mix concrete
Maximum slump for all concrete slabs shall be 5 inches, using type I cement.

3. All welded wire fabric shall be in accordance with ASTM A-1064. Lap adjoining pieces at least one full mesh.

4. All porous fill material shall be a clean granular material with 100% passing a 1-1/2" sieve and no more than 5% passing a no. 4 sieve. Porous fill shall be compacted to 95% max. dry density per ASTM D-698.

5. Slab joints shall be filled with approved material. This should take place as late as possible, preferably 4 to 6 weeks after the slab has been cast. Prior to filling, remove all debris from the slab joints, then fill in accordance with the manufacturer's recommendations as follows fill with field molded or elastomeric sealant

6. Unless otherwise approved, all welded wire fabric shall be blocked into the position indicated with precast concrete blocks having a compressive strength equal to that of the slab.

7. In order to avoid concrete shrinkage cracking, the maximum length of slab cast in any one continuous pour is recommended to be less than 100 feet. The maximum spacing of joints shall be 12'.

8. The alternate wires of the welded wire fabric must be precut at the slab contraction joint locations to create a "weakened plane". Without cutting the alternate wires, the strength of the wire will prevent the slab from cracking (separating) at the joint and the slab may begin to crack elsewhere.

9. The use of polypropylene fibers (in lieu of welded wire fabric) is prohibited without the written authorization of the engineer.

10. See the architectural drawings for exact locations of depressed slab areas and drains. Slope slab to drains where shown.

11. Slabs have been designed based on the following criteria:
Subgrade modulus, K=120 pci
Uniform live loading = 100 psf

12. The finish tolerance of all slabs shall be in accordance with ACI 302, Section 8.4.

13. Slabs shall be constructed in accordance with the following flatness/levelness requirements:

Slab Category	Specified	Local Minimum
Flat	F_F = 35 , F_L = 30	F_F = 24 , F_L = 20

Floor flatness and levelness tests shall be conducted by the owner in accordance with ASTM E 1155. Results, including acceptance or rejection of the work will be provided to the contractor within 48 hours after data collection. Remedies for out of tolerance work shall be in accordance with the specifications.

MASONRY NOTES:

1. Masonry construction shall conform to the requirements of the "Building Code Requirements and Specification for Masonry Structures (TMS 402/602-16)", published by The Masonry Society, Longmont, Colorado, and IBC 2018 Chapter 21.

2. Hollow load-bearing masonry units shall conform to ASTM C-90, and be made with normal weight aggregate. The minimum prism compressive strength (f'm) shall be 2,500 psi at an age of 28 days, as determined by the unit strength method of ACI 530.1.

3. Fill all bond beams and reinforced cells solidly with grout. Grout shall conform to ASTM C-476 and shall obtain a min. 28 day compressive strength of 2,500 psi.

4. Reinforcing steel shall be in accordance with ASTM A-615, grade 60. Shop fabricate reinforcing bars which are shown to be hooked or bent. Provide a minimum lap of 48 x bar diameters at all splices, unless indicated otherwise.

5. The use of masonry-cement mortar is strictly prohibited. Mortar shall conform to ASTM C-270, type S. All mortar shall meet the "Proportion Specification" of ASTM C-270 and be made with Portland cement/lime (non air-entrained).

6. Unless otherwise indicated, all walls shall be laid in running bond. Bond corners and intersections of load-bearing walls.

7. Provide vertical reinforcing bars of the given size and spacing as indicated. Provide bars at all wall corners, intersections and opening edges. Masonry walls shall be constructed in accordance with the "low-lift" or "high-lift" methods. "High-lift" masonry construction is limited to specially qualified contractors meeting the following minimum requirements:
   A. Successful completion of at least 3 previous projects that utilized "high-lift" wall construction.
   B. Contractor shall submit a detailed "high-lift" wall construction procedure for approval, including the documentation of all personnel who have successfully been trained in "high-lift" masonry construction.

8. Provide rebar dowels from foundations to match vertical reinforcing size and spacing. Dowels shall have standard 90 degree hooks and lap with the first lift of reinforcing.

9. Provide horizontal bond beams with continuous reinforcing as indicated. Discontinue all horizontal reinforcing at control joints except for the bond beams at bearing elevations.

10. Provide standard, galvanized 9 gauge horizontal joint reinforcing at 16" on center in all walls. Provide ladder type joints reinforcing for all concrete masonry. Coordinate veneer tie back requirements with the architectural drawings. Unless otherwise noted, stop all horizontal joint reinforcing at control joints.

11. Provide lintels and above all wall openings per typical details and schedule. See the architectural drawings for locations of all door and window openings.

12. Provide CMU control joints as indicated on the architectural drawings, with additional joints such that the spacing between joints does not exceed a spacing of 3 x wall height (30 feet maximum). Where beams or lintels bear at CMU control joints, offset and lap the vertical reinforcing as indicated

13. The masonry contractor shall provide all required temporary wall bracing during construction (see "General Structural Notes").

14. Hot weather masonry work shall be in accordance with ACI 530.1. Cold weather masonry work shall be in accordance with ACI 530.1.

STRUCTURAL STEEL NOTES:

1. All structural steel shall conform to the AISC "Manual of Steel Construction" (15th Edition) and IBC 2018 Chapter 22.

2. Unless otherwise noted, all materials shall be in accordance with the following ASTM specifications:

Member	ASTM	Fy (Min. Strength)
W and WT	A992	50 KSI
C and MC	A36/A992	36 KSI/50 KSI
Angles	A36	36 KSI
HSS (Rectangle)	A500 (Gr. C)	50 KSI
Plates/shapes	A36/A572 (Gr. 50)	36 KSI/50 KSI
Connection bolts	F3125 (Gr. A325)	90 KSI (F_{nt})
Anchor bolts	F1554 (Gr. 55, Supplement S1)	55 KSI
Threaded rods	A36	36 KSI
Non-shrink grout	C1107	8000 PSI

3. Minimum bolt diameter shall be 3/4". Unless otherwise noted all bolts shall be shear/bearing type bolts and be "snug-tight".

4. All welding shall be in accordance with AWS D1.1 using E70XX electrodes. Unless otherwise noted, provide cont. min. sized fillet welds per AISC requirements. All filler material shall have a minimum yield strength of 70 KSI.

5. Holes in steel shall be drilled or punched. All slotted holes shall be provided with smooth edges. Burning of holes and torch cutting at the site is not permitted.

6. Unless otherwise noted, all structural steel permanently exposed to view shall be shop painted with one coat of SSPC 15-68, type 1 (red oxide) paint.

7. The structural steel erector shall provide all temporary guying and bracing (see General Structural Notes).

8. Columns, anchor bolts, base plates, etc. have been designed for the final completed condition and have not been investigated for potential loadings encountered during steel erection and construction. Any investigation of the columns, anchor bolts, base plates, etc. for adequacy during the steel erection and construction process is the sole responsibility of the contractor.

9. Unless otherwise noted, all structural steel permanently exposed to the weather, including all lintels in exterior walls, shall be hot-dipped galvanized in accordance with ASTM A153.

10. Protective coatings damaged during the transporting, erecting and field welding processes shall be repaired in the field to match the shop applied coating.

11. Finish welds shall be ground smooth and free of burrs.

12. Finished galvanized surfaces shall be smooth and free of galvanized paint bead build up from multiple layer applications.

13. The Owner will hire an independent testing agency to provide special inspections of bolting, welding and other items in accordance with IBC 2018, Section 1704.

PRE-ENGINEERED WOOD TRUSS NOTES:

1. Wood trusses shall be designed by the manufacturer to support the following loads:
   A. Gravity Loading Case
      Top Chord Loading
      Snow Load - 20 psf (on the horizontal projection)
      Dead Load - 20 psf (on the surface area)
      - Additional 5 psf at built-up framing areas
      Bottom Chord Loading
      Dead Load - 5 psf
   B. Wind Loading Case (per IBC 2018, Section 1609)
      See 'Design Criteria Notes' for wind component criteria

2. Wood trusses shall be designed by the manufacturer in accordance with the applicable provisions of the latest edition of the national design specification of the National Forest Products Association, the design specification for metal plate connected wood trusses of the Truss Plate Institute and IBC 2018 Section 2303.4.

3. Wood materials shall be Southern Pine, Douglas Fir or Larch and shall be kiln dried and used at 19% maximum moisture content. Provide Grade No. 2 or as required to satisfy stress requirements. See "Schedule of Required Stress Values" in the wood framing notes section.

4. Connector plates shall not be less than 0.036 inches (20 gauge) in coated thickness, shall meet or exceed ASTM Grade A or higher and shall be hot dipped galvanized according to ASTM A-2201 (coating G60). Minimum steel yield stress shall be 33,000 psi.

5. Trusses shall be fabricated in a properly equipped manufacturing facility of a permanent nature. Trusses shall be manufactured by experienced workmen, using precision cutting, jigging and pressing equipment under the requirements in Quality Control Standard QST-88 of the Truss Plate Institute.

6. Secondary bending stresses in truss top and bottom chords due to dead, live and wind loads shall be considered in the design. Load duration factors shall be per the "National Design Specification for Wood Construction".

7. Wood trusses shall be erected in accordance with the truss manufacturer's requirements. This work shall be done by a qualified and experienced contractor. Truss erection by an inexperienced or nonqualified contractor can result in construction collapse and/or serious injury and damage.

8. The contractor shall provide all temporary and permanent bracing as required for safe erection and performance of the trusses. The guidelines set forth by the truss plate institute publication "HIB-91, Commentary and Recommendations for Handling, Installing and Bracing Metal Plate Connected Wood Trusses" shall be a minimum requirement.

9. Truss members and components shall not be cut, notched, drilled nor otherwise altered in any way without the written approval of the engineer.

10. Submit complete shop drawings for all wood trusses showing member sizes, species, grade, moisture content, span, camber, dimensions, chord pitch, bracing requirements and loadings. Shop drawings shall be submitted to the engineer and shall bear the seal of a professional engineer registered in Pennsylvania. Refer to "Shop Drawing Notes" section for additional requirements.

PLYWOOD/GYPBOARD SHEATHING NOTES:

1. All plywood construction shall be in accordance with the American Plywood Association (APA) specifications and IBC 2018 Chapter 23.

2. All roof panel sheathing shall be 3/4" (nom.) type CDX, exp. 1 APA rated sheathing. Suitable edge support shall be provided by use of panel clips or blocking between framing. Unless otherwise noted connect roof sheathing with 8d common nails at 6" o/c at supported panel edges and 6" o/c at intermediate supports.

3. Install all plywood sheathing with the long dimension of the panel across supports and with panel continuous over two or more spans. Stagger panel end joints. Allow 1/8" spacing at panel ends and edges unless otherwise recommended by the sheathing manufacturer.

4. All nailing shall be carefully driven and not overdriven.

5. All exterior walls and interior walls noted as "shear walls" shall be sheathed on both faces with gyp-board sheathing (see Arch. dwgs. for thicknesses) and connected with 5d cooler nails spaced 6" o/c at supported panel edges and intermediate supports.

WOOD FRAMING NOTES:

1. All wood framing material shall be surfaced dry and used at 19% maximum moisture content. Allowable stress requirements of all material shall be in accordance with the "Schedule of Required Stress Values", as follows:

Wood Species	Bending Stress	Tensile Stress	Shear Stress	Compression Stress		Modulus of Elasticity
	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi) perpendicular to grain	Fc (psi) parallel to grain	E (psi)
SP	1200	650	90	565	1150	$1.6X10^6$
DF-L	875	575	95	625	1350	$1.6X10^6$
SPF	875	450	70	425	1150	$1.4X10^6$
HF	850	525	75	405	1300	$1.3X10^6$
SYP	1050	450	90	565	1450	$1.4X10^6$

2. All stud and wall framing shall be either of the following:
   A. No. 2 grade Southern Yellow Pine (syp)
   B. No. 2 grade Spruce-Pine-Fir (spf)
      "Stud" grade material is strictly prohibited from use.

3. All joist, rafter and misc. framing shall be no. 2 grade, Southern Pine. Provide full-depth (or metal) bridging at midspan and at a maximum spacing of 8'-0" o/c in between.

4. All framing exposed to the weather or in contact with masonry or concrete shall be pressure-treated in accordance with the American Wood Preservers Association specifications. Where possible, all cuts and holes should be completed before treatment. Cuts and holes due to on-site fabrication shall be brushed with 2 coats of copper naphthenate solution containing a minimum of 2% metallic copper in solution (per AWPA std. M4).

5. The contractor shall carefully select lumber to be used in loadbearing applications. The length of split on the wide face of 2" nominal loadbearing framing shall be limited to less than 1/2 of the wide face dimension. The length of split on the wide face of 3" (nominal) and thicker lumber shall be limited to 1/2 of the narrow face dimension.

6. Provide header beams of the same size as joists or rafters to frame around openings in the plywood deck unless otherwise indicated.

7. Structural steel plate connectors shall conform to ASTM A-36 specifications and be 1/4" thick unless otherwise indicated. Bolts connecting wood members shall be per ASTM A-307 and be 3/4" diameter unless otherwise indicated. Provide washers for all bolt heads and nuts in contact with wood surfaces.

8. Bolt holes shall be carefully centered and drilled not more than 1/16" larger than the bolt diameter. Bolted connections shall be snugged tight but not to the extent of crushing wood under washers.

10. Prefabricated metal joist hangers, hurricane clips, hold-down anchors and other accessories shall be as manufactured by "Simpson Strong-Tie Company", Tel. 800-999-5099, or approved equal. Install all accessories per the manufacturer's requirements. All steel shall have a minimum thickness or 0.04 inches (per ASTM A653, Grade A) and be galvanized (coating G60).

11. All nailing not otherwise indicated shall be in accordance with the "Nailing Schedule" on sheet S-0.1. Nailing shall not be overdriven.

12. Holes and notches drilled or cut into wood framing shall not exceed the requirements of IBC 2018 Sections 2308.4.2.4.

ABBREVIATIONS

@	AT
ø	DIAMETER
2X	TWO BY
(4)	QUANTITY OF 4
A.B.	ANCHOR BOLT
A.P.	ANCHOR POINT
ADD'L.	ADDITIONAL
ADJ.	ADJACENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AL.	ALUMINUM
ARCH.	ARCHITECT/ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
AWS	AMERICAN WELDING SOCIETY
BCX	BOTTOM CHORD EXTENSION
BEL.	BELOW
BLKG.	BLOCKING
BM.	BEAM
BOT.	BOTTOM
B.O.	BOTTOM OF
BTWN.	BETWEEN
C	CHANNEL
CFSF	COLD-FORMED STEEL FRAMING
CL	CENTER/COLUMN LINE
CLR.	CLEAR
C.J.	CONTROL/CONSTRUCTION JOINT
CMU	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
COORD.	COORDINATE
DBL.	DOUBLE
DET.	DETAIL
DN.	DOWN
DWL.	DOWEL
DWG.	DRAWING
EA.	EACH
E.F.	EACH FACE
ELEV.	ELEVATION
EQ.	EQUAL
E.S.	EACH SIDE
E.W.	EACH WAY
EX.	EXISTING
EXP.	EXPANSION
FLG.	FLANGE
FLR.	FLOOR
FDN.	FOUNDATION
F.O.	FACE OF
F.S.	FAR SIDE
FTG.	FOOTING
GALV.	GALVANIZED
G.C.	GENERAL CONTRACTOR
HK.	HOOK
HGR.	HANGER
HSS	HOLLOW STRUCTURAL SECTION
HORIZ.	HORIZONTAL
HT.	HEIGHT
INT.	INTERIOR
JST.	JOIST
JT.	JOINT
K	KIPS
L	ANGLE
(LLH)	LONG LEG HORIZONTAL
(LLV)	LONG LEG VERTICAL
LOC.	LOCATION
LG.	LONG
L.R.F.D.	LOAD & RESISTANCE FACTOR DESIGN
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
M.A.	MASONRY ANCHOR
MAX.	MAXIMUM
MIN.	MINIMUM/MINIMIZE
MANF.	MANUFACTURER
MECH.	MECHANICAL
M.O.	MASONRY OPENING
MTL.	METAL
(N)	NEW
N.S.	NEAR SIDE
N.S.G.	NON-SHRINK GROUT
O.C.	ON CENTER
OPN'G.	OPENING
OPP.	OPPOSITE
P.C.	PRE-CAST
PL	PLATE
PLYWD.	PLYWOOD
PMF	PRE-MOLDED FILLER
PSL	PARALLEL STRAND LUMBER
P.T.	PRESSURE TREATED
R/C	REINFORCED CONCRETE
REINF.	REINFORCING
REQ'D.	REQUIRED
RTU	ROOF TOP UNIT
SCH.	SCHEDULE
SECT.	SECTION
SF	STRIP FOOTING
SHT'G.	SHEATHING
SIM.	SIMILAR
SL	SLOPE
S.O.G.	SLAB-ON-GRADE
S.S.	STAINLESS STEEL
STL.	STEEL
SQ.	SQUARE
T&B	TOP AND BOTTOM
TCX	TOP CHORD EXTENSION
THK.	THICK
TJI	TRUSS JOIST I-SHAPED JOISTS
T.O.	TOP OF
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
V.L.D.	VERTICAL LEG DOWN
V.I.F.	VERIFY IN FIELD
WD.	WOOD
W/	WITH
W/O	WITHOUT
W.P.	WORK POINT
W.R.T.	WITH RESPECT TO
W.W.F.	WELDED WIRE FABRIC
WF	WIDE FLANGE BEAM
W	WIDE FLANGE BEAM
X	CROSS

STRUCTURAL DRAWING LIST

SYMBOL KEY

CMU, STEEL, BRICK, GRATING, CONCRETE, EARTH, WOOD ELEVATION, CRUSHED STONE/BUILDING STONE, WOOD SECTION, ENGINEERED WOOD PRODUCT

MAROTTA/MAIN ARCHITECTS
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ISSUE DATES
DATE: DESCRIPTION:
03/17/2025 PERMIT SET
03/31/2025 BID SET

PROJ #: MM2503 DRAWN BY: RK

SHEET TITLE:
GENERAL STRUCTURAL NOTES

SHEET NUMBER:
S-0.0

BID SET

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SCHEDULE OF SPECIAL INSPECTIONS:

SPECIAL INSPECTIONS SHALL BE PROVIDED IN ACCORDANCE WITH THE TABLE(S) BELOW.

REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION: IBC 2018 TABLE 1705.3				
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	IBC REFERENCE
1. INSPECTION OF REINFORCING STEEL AND PLACEMENT.	—	X	ACI 318 CH. 20, 25.2, 25.3, 26.1-26.6.3	1908.4
2. REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706; b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND c. INSPECT ALL OTHER WELDS.	— — X	X X —	AWS D1.4 ACI 318: 26.6.4	—
3. INSPECT ANCHORS CAST IN CONCRETE.	—	X	ACI 318: 17.8.2	—
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	X —	— X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	—
5. VERIFY USE OF REQUIRED DESIGN MIX.	—	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	—	ASTM C172 ASTM C31 ACI 318: 26.4, 26.12	1908.10
7. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	—	X	ACI 318: 26.5.3-26.5.5	1908.9
8. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	—	X	ACI 318: 26.11.1.2(b)	—

REQUIRED SPECIAL INSPECTIONS FOR MASONRY CONSTRUCTION: IBC 2018 1705.4 & TMS 402/ACI 520/ASCE5 & TMS 602/ACI 530.1/ASCE 6				
TABLE 3.1.2 – LEVEL B QUALITY ASSURANCE				
MINIMUM TESTS				
VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO THE PROJECT SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5 B.1.b.3 FOR SELF CONSOLIDATING GROUT				
VERIFICATION OF f'_m AND f'_{AAC} IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.4 B PRIOR TO CONSTRUCTION, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE				
MINIMUM SPECIAL INSPECTION				
INSPECTION TASKS	FREQUENCY (a)		REFERENCE FOR CRITERIA	
	CONTINUOUS	PERIODIC	TMS 402/ACI 530/ ASCE 5	TMS 602/ACI 530.1/ ASCE 6
1. VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS		X		Art. 1.5
2. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
a. PROPORTIOINS OF SITE-PREPARED MORTAR		X		Art. 2.1, 2.6 A
b. CONSTRUCTION OF MORTAR JOINTS		X		Art. 3.3 B
c. LOCATION OF REINFORCEMENT		X		Art. 3.4 B, 3.6 A
3. PRIOR TO GROUTING, VERIFY THE FOLLOWING ARE IN COMPLIANCE:				
a. GROUT SPACE		X		Art. 3.2 D, 3.2 F
b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS		X	SEC. 6.1	Art. 2.4, 3.4
c. PLACEMENT OF REINFORCEMENT AND ANCHORS		X	SEC. 6.1, 6.2.1, 6.2.6, 6.2.7	Art. 3.2 E, 3.4, 3.6 A
d. PROPORTIONS OF SITE-PREPARED GROUT		X		Art. 2.6 B, 2.4 G.1.b
e. CONSTRUCTION OF MORTAR JOINTS		X		Art. 3.3 B
4. VERIFY DURING CONSTRUCTION				
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS		X		Art. 3.3 F
b. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION		X	SEC. 1.2.1 (e), 6.1.4.3, 6.2.1	
c. WELDING OF REINFORCEMENT	X		SEC. 8.1.6.7.2, 9.3.3.4 (c), 11.3.3.4 (b)	
d. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C))		X		Art. 1.8 C, 1.8 D
e. PLACEMENT OF GROUT IS IN COMPLIANCE	X			Art. 3.5, 3.6 C
5. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS		X		Art. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4
(a) FREQUENCY REFERS TO THE FREQUENCY OF SPECIAL INSPECTION, WHICH MAY BE CONTINUOUS DURING THE TASK LISTED OR PERIODIC DURING THE LISTED TASK, AS DEFINED IN THE TABLE.				

REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS: IBC 2018 TABLE 1705.6 & GEOTECHNICAL REPORT		
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	—	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	—	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	—	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	—
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	—	X

GENERAL STRUCTURAL NOTES

WOOD FRAMING NOTES CONT.:

13. All plates, anchors, nails, bolts, nuts, washers, and other miscellaneous hardware shall be hot dip galvanized.

14. All plates, anchors, nails, bolts, nuts, washers, and other miscellaneous hardware to be in permanent contact with wood treated with Alkaline Copper Quat and/or Copper Azole shall be hot dipped galvanized (coating G185) or stainless steel type 304 or 316. Galvanized and stainless steel fasteners and connects shall not be used simultaneously in any one connection.

POST-INSTALLED ANCHOR NOTES

1. Except where indicated on the drawings, post-installed anchors shall consist of the following anchor types as provided by HILTI, Inc. Contact HILTI at (800) 879-8000 for product related questions.
   A. Anchorage to solid grouted masonry
      1. Adhesive anchors use:
         A. HILTI HIT-HY 270 safe set system with HILTI hollow drill bit and vacuum per ICC ESR-4143
         B. Steel anchor element shall be HILTI has continuously threaded rod or continuously deformed steel rebar
      2. Mechanical anchors use:
         A. HILTI KWIK BOLT-TZ2 expansion anchor per ICC ESR-4561

2. Anchor capacity used in design shall be based on the technical data published by HILTI or other such method as approved by the structural engineer of record. Substitution requests for alternate products must be approved in writing by the structural engineer of record prior to use. Contractor shall provide calculations that have been sealed by another licensed engineer demonstrating that the substituted product is capable of meeting the performance of the specified product. Substitutions will be evaluated by their having an ICC ESR showing compliance with the relevant building code for seismic uses, load resistance, installation category, and availability of comprehensive installation instructions. Adhesive anchor evaluation will also consider creep, in-service temperature, installation temperature, moisture condition of concrete, and drilling methods.

3. Use of diamond core bit with roughening tool for anchor holes requires approval from engineer of record prior to drilling. Unless otherwise shown in the drawings, all holes shall be drilled perpendicular to the concrete surface.

4. Install anchors per the manufacturer's printed installation instructions, as included in the anchor packaging.

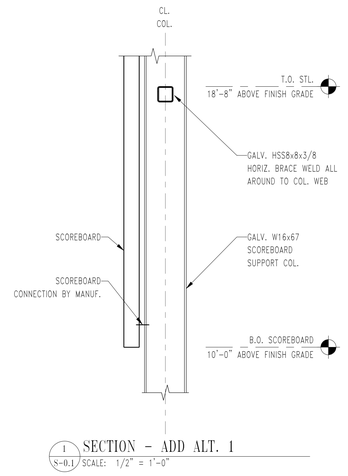
5. Overhead adhesive anchors must be installed using the HILTI Profi Piston Plug System.

6. ACI/CRSI adhesive anchor installer certification is required for all installers of adhesive anchors in horizontal or upwardly inclined orientation. The HILTI Adhesive Anchor Installer Certification Program (HAAICP) is an approved equivalent.

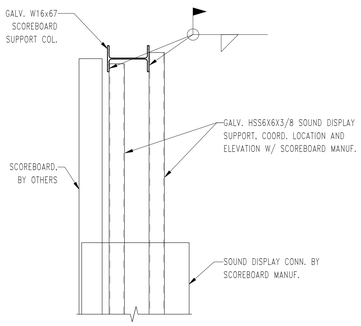
7. The contractor shall arrange an anchor manufacturer's representative to provide onsite installation training for all anchor products specified. The structural engineer of record must receive documented confirmation that all personnel who install anchors are trained prior to the commencement of anchor installation.

8. Anchor capacity is dependent upon spacing between adjacent anchors and proximity of anchors to edge of concrete. Install anchors in accordance with spacing and edge clearances indicated on the drawings.

FOOTING SCHEDULE			
MARK	SIZE	REINFORCEMENT	COMMENTS
SF-36	CONT. 3'-0" x 1'-0"	(4) #5 LONG. & #5 @ 24" O.C. TRANSV.	CONT. FTG.



1 S-0.1 SECTION – ADD ALT. 1
SCALE: 1/2" = 1'-0"



2 S-0.1 PLAN DETAIL – ADD ALT. 1
SCALE: 1/2" = 1'-0"

PROJECT LINTEL SCHEDULE (U.N.O. ON PLANS/DETAILS)	
NEW INTERIOR MASONRY WALLS	
MASONRY OPENING	LINTEL
0' < M.O. ≤ 6'-4" (4", 8", 12", 16", 20" CMU)	P.C. 4x8 PER 4" OF WALL THICKNESS (4", 8", 12", 16", 20" CMU)
0' < M.O. ≤ 6'-4" (6" CMU)	P.C. 6x8
NEW EXTERIOR MASONRY WALLS	
MASONRY OPENING W/ BRICK	LINTEL
0' < M.O. ≤ 6'-4" (8" CMU + VENEER)	P.C. 4x8 PER 4" OF WALL THICKNESS + L5x3 1/2x5/16 (LLV) FOR VENEER

NOTES:
1. ALL STEEL LINTELS IN EXTERIOR WALLS TO BE GALVANIZED.
2. P.C. LINTELS TO BE REINFORCED WITH #3 TOP & #4 BOTTOM U.N.O.
3. PROVIDE MIN. 8" BEARING EACH END OF LINTEL BEARING ON MASONRY, U.N.O.
4. LINTELS ARE REQUIRED AT OPENINGS OF MORE THAN 12" FOR BRICK-SIZE UNITS AND 24" FOR BLOCK-SIZE UNITS U.N.O. IF LESS THAN 8" OF MASONRY EXISTS BETWEEN ADJACENT OPENINGS THEY SHALL BE CONSIDERED AS ONE SINGLE OPENING.
5. REFER TO E/S-2.0 FOR TYPICAL LINTEL DETAIL.

NAILING SCHEDULE		
FRAMING CONDITION	TYPE	COMMON NAILS
BRIDGING TO JOIST	TOE NAIL	(2) 8d
DOUBLE TOP PLATES	FACE NAIL	16d @ 16"O.C.
TOP PLATES LAPS & INTERSECTIONS	TOE NAIL	(2) 16d
ROOF TRUSS TO PLATE	SEE SECTION	FRAMING ANCHOR
PLYWOOD SHEATHING TO STUDS & RIM BAND	@ EDGES	10d @ 6"O.C.
	INTERMEDIATE	10d @ 12"O.C.
PLYWOOD ROOF DECK TO RAFTERS OR TRUSSES	@ EDGES	8d @ 6"O.C.
	INTERMEDIATE	8d @ 6"O.C.

NOTE:
PROVIDE STEEL PLATE CONNECTORS W/ MANUFACTURER'S NAILS WHERE INDICATED IN SCHEDULE AND ON DRAWINGS.

MAROTTA/MAIN ARCHITECTS
WWW.MAROTTAMAIN.COM

SEAL:

CONSULTANT:
JBA Joseph Barbato Associates
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CHICHESTER HIGH SCHOOL
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3333 CHICHESTER AVE
BOOTHWYN, PA 19061

ISSUE DATES
DATE: DESCRIPTION:
03/17/2025 PERMIT SET
03/31/2025 BID SET

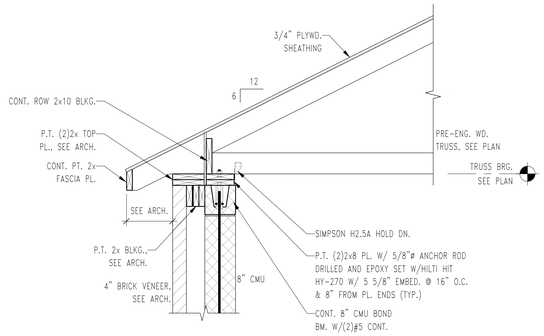
PROJ # : MM2503 DRAWN BY : RK

SHEET TITLE:
GENERAL STRUCTURAL NOTES, SCHEDULES & SECTIONS

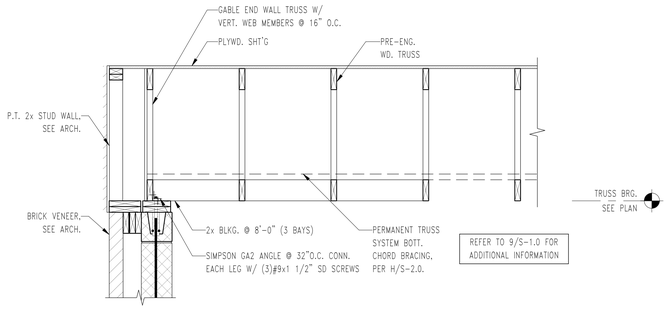
SHEET NUMBER:
S-0.1

BID SET

3/28/2025 5:28:56 PM



9 S-1.0 SECTION
SCALE: 3/4" = 1'-0"



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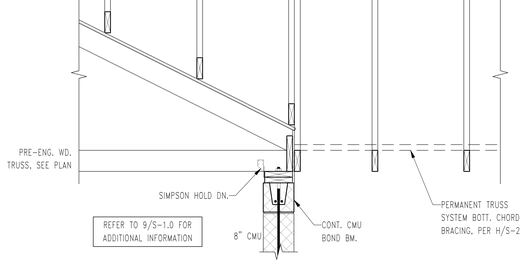

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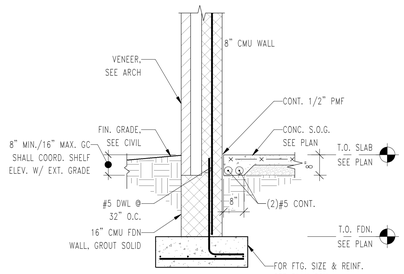
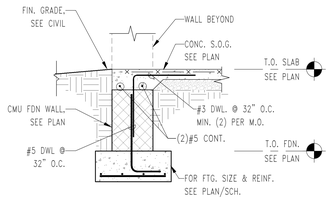
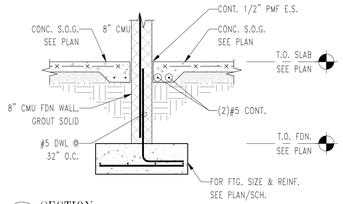


5 S-1.0 SECTION
SCALE: 1/2" = 1'-0"



6 S-1.0 SECTION (TYPICAL @ DOORS)
SCALE: 1/2" = 1'-0"



7 S-1.0 SECTION
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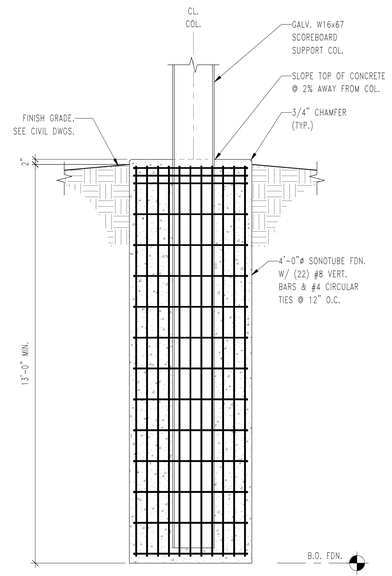

B S-1.0 SECTION - ADD ALT. 1
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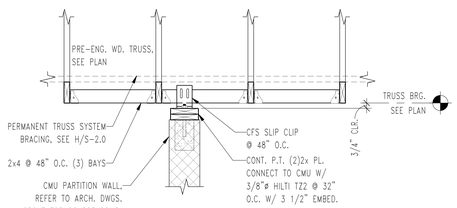
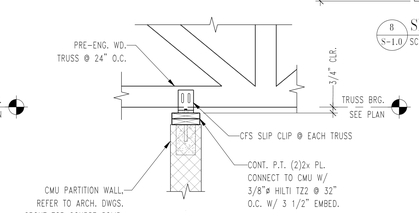


A S-1.0 TYPICAL CMU PARTITION WALL BRACING DETAIL
SCALE: N.T.S.



B S-1.0 TYPICAL CMU PARTITION WALL BRACING DETAIL
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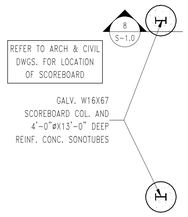
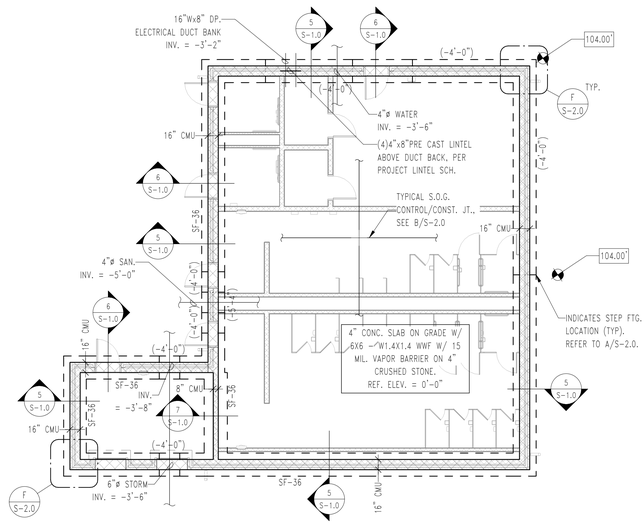


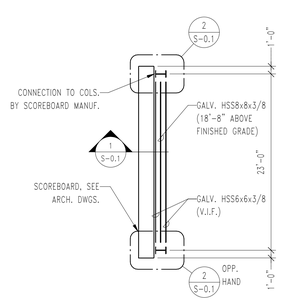


2 S-1.0 FOUNDATION PLAN - SCOREBOARD ADD ALT. 1
SCALE: 1/8" = 1'-0"

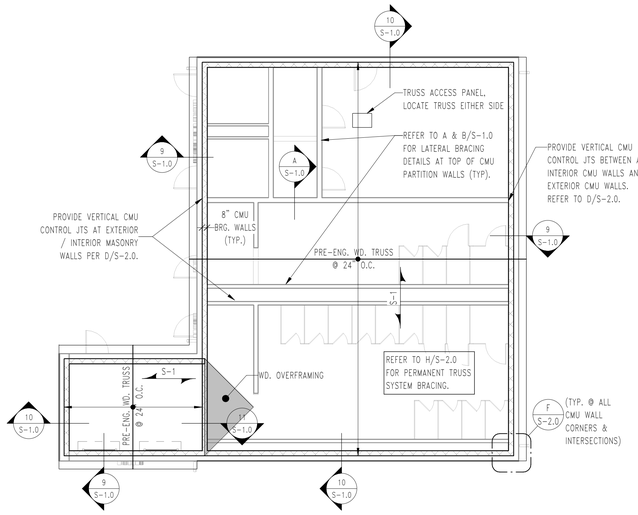
1 S-1.0 FOUNDATION PLAN - FIELD HOUSE
SCALE: 1/8" = 1'-0"

FOUNDATION PLAN NOTES

1. REFERENCE FINISH SLAB ELEVATION = 0'-0" (DATUM ELEV. 105.6') U.N.O. ON PLAN.
2. (#'-#") INDICATES TOP OF FOOTING ELEVATION. TOP OF FOOTING ELEVATION = -2'-8" W.R.T. REF. ELEVATION 0'-0" U.N.O. ON PLAN.
3. FOUNDATION MEMBERS ARE DESIGNATED AS FOLLOWS:
   SF#.# FOOTING MARK (SEE FOOTING SCHEDULE)
4. COORDINATE WITH ARCH, MECH, ELEC, AND PLUMBING DRAWINGS FOR FLOOR SLOPES, DRAINS, OPENINGS, DEPRESSIONS, ETC., NOT SHOWN ON THIS PLAN.
5. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT INDICATED.
6. FOR GENERAL STRUCTURAL NOTES, REFER TO S-0.0 & S-0.1.
7. REFER TO TYPICAL FOUNDATION DETAILS ON DRAWING S-2.0.
8. ALL WALL FOOTINGS SHALL BE INSTALLED CENTERED ON FOUNDATION WALL U.N.O.
9. TYPICAL MASONRY WALL REINFORCING = #5 @ 32" O.C., GROUT REINFORCED CORES AND ALL CMU BELOW GRADE SOLID. PROVIDE FOOTING DOWELS TO MATCH SIZE & SPACING OF WALL REINFORCING.
10. G.C. TO SUBMIT C.J. LAYOUT FOR APPROVAL FOR SLAB ON GRADE WORK. REFER TO TYPICAL DETAILS ON S-2.0 AND NOTES FOR PREPARATION OF LAYOUT.
11. REFER TO SITE/CIVIL DRAWINGS FOR EXTERIOR SITE GRADES. THIS FOUNDATION PLAN PREPARED ACCORDING TO GRADING PLAN PREPARED BY G.D. HOUTMAN & SON, INC., DATED MARCH 18, 2025. FOUNDATION DESIGN MAY CHANGE BASED ON FINAL SITE/CIVIL DRAWINGS.



4 S-1.0 SCOREBOARD FRAMING PLAN - ADD ALT. 1
SCALE: 1/8" = 1'-0"



3 S-1.0 ROOF FRAMING PLAN - FIELD HOUSE
SCALE: 1/8" = 1'-0"

FRAMING PLAN NOTES

1. REFERENCE TRUSS BEARING ELEVATION = 11'-7" U.N.O. WRT. ELEV. 0'-0".
2. ALL PRE-ENGINEERED TRUSSES SHALL BE SPACED AT 24" O.C. MAX. EXCEPT AS SHOWN OR NOTED.
3. ROOF TRUSSES SHOWN ARE SCHEMATIC ONLY. TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AND DELEGATED DESIGN CALCULATIONS STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF PROJECT. TRUSS MANUFACTURER SHALL SUPPLY ALL ENGINEERING AND CONNECTION DETAILS AT HIPS, GIRDER TRUSSES, CORNER FRAMING, ETC. REFER TO GENERAL NOTES ON S-0.1 FOR MORE INFO.
4. S-1 INDICATES 3/4" PLYWOOD SHEATHING. REFER TO "PLYWOOD / GYPBOARD SHEATHING NOTES" ON S-0.1 FOR ADDITIONAL INFORMATION.

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NEW TEAM ROOMS AND STADIUM RENOVATIONS FOR
CHICHESTER HIGH SCHOOL
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3333 CHICHESTER AVE
BOOTHWYN, PA 19061

ISSUE DATES
DESCRIPTION: PERMIT SET — DATE: 03/17/2025
DESCRIPTION: BID SET — DATE: 03/31/2025

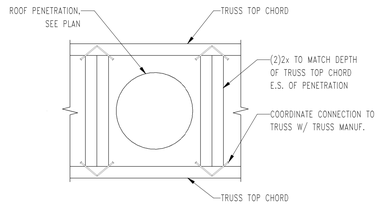
PROJ # : MM2503 DRAWN BY : RK

SHEET TITLE:
FOUNDATION AND ROOF FRAMING PLAN

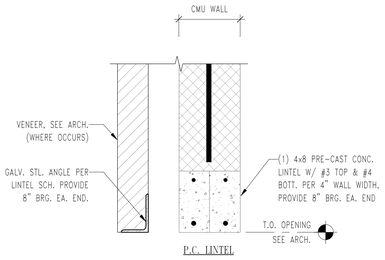
SHEET NUMBER:
S-1.0

BID SET

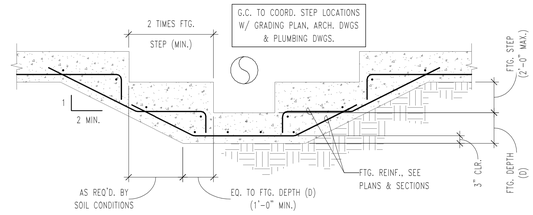
3/28/2025 5:28:58 PM



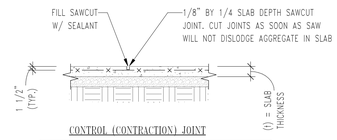
J / S-2.0 TYPICAL ROOF PENETRATION
SCALE: N.T.S.



E / S-2.0 TYPICAL LINTEL DETAIL
SCALE: N.T.S.

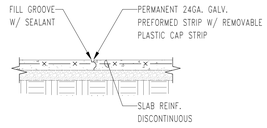


A / S-2.0 TYPICAL STEP FOOTING AT UTILITY
SCALE: N.T.S.



CONTROL (CONTRACTION) JOINT

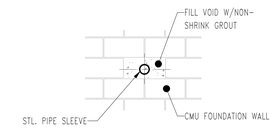
NOTE:
PROVIDE CONTROL JOINTS @ 36 TIMES (t) (12'-0"O.C. MAX.)



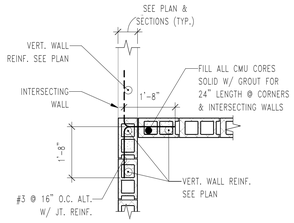
CONSTRUCTION JOINT

NOTE:
CONTRACTOR TO ADEQUATELY BRACE PREFORMED STRIP TO MAINTAIN STRAIGHT ALIGNMENT OF SCREED

B / S-2.0 TYPICAL S.O.G. CONTROL & CONST. JOINTS
SCALE: N.T.S.

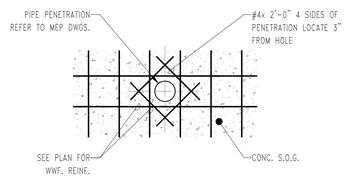


K / S-2.0 TYPICAL UTILITY THROUGH CMU WALL
SCALE: N.T.S.

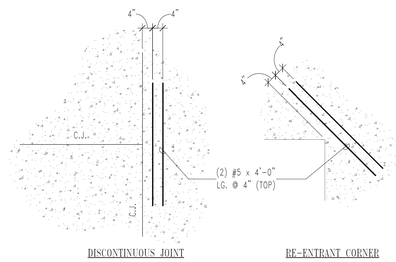


WALL SECTION @ CORNER/INTERSECTION

F / S-2.0 TYPICAL CMU WALL CORNER & INTERSECTION REINF.
SCALE: N.T.S.

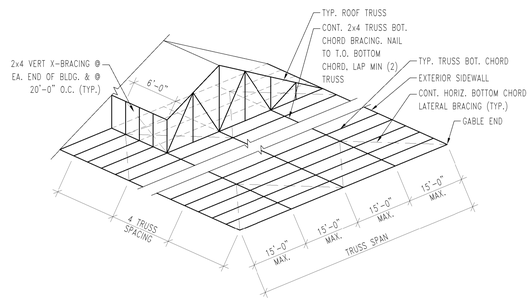


G / S-2.0 TYPICAL UTILITY THROUGH SLAB-ON-GRADE
SCALE: N.T.S.

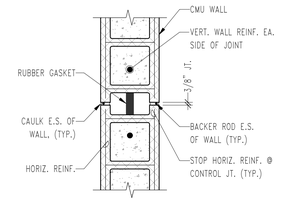


DISCONTINUOUS JOINT RE-ENTRANT CORNER

C / S-2.0 TYPICAL S.O.G. CRACK CONTROL
SCALE: N.T.S.



H / S-2.0 TYPICAL PERMANENT TRUSS BRACING DETAIL
SCALE: N.T.S.



NOTES:
1. REFER TO GENERAL NOTES & ARCH. DWGS. FOR SPACING REQUIREMENTS
2. A KEYED CMU MAY BE USED IN LIEU OF RUBBER GASKET SHOWN.

D / S-2.0 TYPICAL CMU WALL CONTROL JOINT
SCALE: N.T.S.

3/28/2025 5:29:00 PM

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NEW TEAM ROOMS AND STADIUM RENOVATIONS FOR
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL HIGH SCHOOL
3333 CHICHESTER AVE
BOOTHWYN, PA 19061

ISSUE DATES
DATE: DESCRIPTION:
03/17/2025 PERMIT SET
03/31/2025 BID SET

PROJ # : MM2503 DRAWN BY : RK

SHEET TITLE:

TYPICAL DETAILS

SHEET NUMBER:

S-2.0

BID SET

GENERAL NOTES: (MECHANICAL)

GENERAL NOTES AND CONDITIONS:

1. COORDINATE NEW WORK BETWEEN ALL DISCIPLINES.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, REGULATIONS, AND REQUIREMENTS OF ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT.
3. THE INTENT OF THESE DRAWINGS IS FOR THE CONTRACTOR TO PROVIDE ALL LABOR, MATERIAL, FINISHES, EQUIPMENT, INSTALLATION, AND SERVICES NECESSARY FOR AND INCIDENTAL WITH THE WORK, TO PROVIDE THE OWNER WITH A COMPLETE PROJECT INCLUSIVE OF ALL SYSTEMS.
4. PRIOR TO INITIATING ANY PORTION OF THE WORK, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATE ALL PORTIONS OF THE CONTRACT DOCUMENTS RELATING TO THAT PORTION OF THE WORK AND AFFECTING ADJOINING PORTIONS. IF DISCREPANCIES EXIST, THEY SHALL BE REPORTED TO THE CONSTRUCTION MANAGER FOR CLARIFICATION AND/OR RESOLUTION BEFORE COMMENCING SUCH WORK.
5. BY SUBMITTING A BID PROPOSAL THE CONTRACTOR CERTIFIES THAT THEY HAVE VISITED THE SITE AND UNDERSTAND THE COMPLETE SCOPE OF WORK, WHICH IS INCLUDED IN THE PROPOSAL.
6. DEFINITIONS: "PROVIDE" MEANS "FURNISH AND INSTALL". "VERIFY" MEANS "VERIFY IN THE FIELD AND COORDINATE DIMENSIONS AND DISCREPANCIES".
7. THESE NOTES AND OTHER NOTES ON THE DRAWINGS ARE DIRECTIONS FOR THE CONTRACTOR'S PERFORMANCE, UNLESS NOTED OTHERWISE (U.N.O.). FOR EXAMPLE, THE VERB "INSTALL" MEANS "CONTRACTOR SHALL INSTALL", "RELOCATE" MEANS "CONTRACTOR SHALL RELOCATE", ETC.
8. UNLESS NOTED OTHERWISE, NUMBERED DIMENSIONS SHOWN ON DRAWINGS TAKE PRECEDENCE OVER SCALED DRAWINGS. DETAIL DRAWINGS TAKE PRECEDENCE OVER GENERAL DRAWINGS. IF CONFLICTS EXIST ON THE DRAWINGS, THEN THE MORE STRINGENT REQUIREMENT SHALL APPLY. FINAL INTERPRETATION SHALL BE MADE BY THE ENGINEER.
9. SAMPLES AND SHOP DRAWINGS MUST BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR REVIEW AND PROCESSING BEFORE THE PURCHASE OR FABRICATION OF ANY MATERIALS.
10. DURING THE WORK, ANY CONDITION DISCOVERED THAT CAUSES CONFLICT WITH THE INTENDED DESIGN MUST BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
11. CONTRACTOR SHALL STAGE WORK IN SUCH A WAY AT TO ENSURE SAFE EMERGENCY EGRESS AT ALL TIMES.
12. EXCEPT FOR PREFINISHED SURFACES, ALL ITEMS DISTURBED OR DAMAGED BY WORK SHALL BE REFINISHED TO MATCH SURROUNDING AREA OR FINISHED AS INDICATED.
13. ALL HOLES AND PENETRATIONS IN WALLS AND CEILING SURFACES SHALL BE PATCHED AND FIRE STOPPED.
14. ANY ALTERATION TO THE STRUCTURE (I.E. CORE DRILLING CONCRETE, ETC.) SHALL BE COORDINATED WITH THE GENERAL TRADES CONTRACTOR.
15. UNLESS OTHERWISE INDICATED, ALL PIPING, CONDUIT, DUCTWORK, AND SIMILAR SERVICES SHALL BE CONCEALED.
16. GENERAL NOTES, THOSE FOUND ON THIS SHEET, APPLY TO ALL DRAWINGS RELATED TO THIS PROJECT.
17. DRAWING NOTES SPECIFICALLY REFER TO ITEMS NOTED WITH NUMBER OR LETTER DESIGNATIONS ON THE RESPECTIVE DRAWING WHERE THE DESIGNATIONS ARE SHOWN.
18. ALL INSULATED EXTERIOR PIPING SYSTEM SHALL BE PROVIDED WITH ALUMINUM JACKETING.
19. THE CONTRACTOR SHALL BE CERTIFIED BY THE VRV/VRF MANUFACTURER. THE VRV/VRF SYSTEM SHALL BE PROVIDED WITH A TEN (10) YEAR WARRANTY.
20. ALL KITCHEN HOOD/RANGE HOOD EXHAUST DUCTWORK SHALL BE 18GA WELDED STAINLESS STEEL WITH WELDED JOINTS AND 2 HOUR FIRE WRAP IN ACCORDANCE WITH NFPA 96 REQUIREMENTS.
21. ALL DISHWASHER EXHAUST DUCTWORK SHALL BE STAINLESS STEEL WITH WELDED JOINTS.
22. ALL DRYER VENT DUCTWORK SHALL BE STAINLESS STEEL WITH SMOOTH INTERIOR (I.E. NO SCREWS ETC).
23. PROVIDE MANUAL VOLUME DAMPERS FOR EACH AIR DEVICE (SUPPLY, RETURN, RELIEF, EXHAUST) WHICH IS INDICATED TO HAVE A SPECIFIC AIRFLOW (CFM).
24. PROVIDE INSULATED STAND-OFFS FOR ALL MANUAL VOLUME DAMPERS INSTALLED IN INSULATED DUCT SYSTEMS.
25. PROVIDE LIQUID LEVEL OVERFLOW SENSORS IN ALL UNIT CONDENSATE DRAIN PANS. INTERLOCK TO DEENERGIZE UNIT AND ALARM THROUGH THE EMS.
26. ALL TRANSFER AIR DUCTS SHALL BE SINGLE WALL SOUND LINED (NO INNER GALVANIZED LINER). ALL OTHER SOUND LINED DUCTS EXCEPT FOR DIFFUSER PLENUM BOXES SHALL BE DOUBLE WALL TYPE WITH PERFORATED GALVANIZED INNER LINER.
27. ALL EXPOSED DUCTWORK SHALL BE PAINT GRADE TYPE WITH SELF SEALING JOINTS UNLESS NOTED OTHERWISE.
28. USE RADIUS ELBOWS WHEREVER POSSIBLE. USE 90° MITERED ELBOWS WHERE RADIUS ELBOWS CAN'T BE USED.
29. ALL ROOF MOUNTED EXHAUST FANS AND INTAKE VENTS SHALL BE PROVIDED WITH MOTOR OPERATED DAMPERS (MOD'S-ATC) EXCEPT FOR KITCHEN HOOD / RANGE HOOD EXHAUST FANS.
30. PROVIDE DOUBLE WALL INSULATED BLANK OFF PANELS BEHIND UNUSED PORTION OF LOUVERS.
31. ALL EXPOSED CABINETS (CABINET UNIT HEATERS, CONVECTORS ETC), BRICK VENTS, LOUVERS ETC SHALL BE PROVIDED WITH A CUSTOM COLOR AS SELECTED BY THE ARCHITECT.
32. PROVIDE FRAME/ESCUTCHEON AROUND EXPOSED DUCTS PENETRATING WALLS.
33. WHERE DUCT RUNNOUTS ARE EXPOSED TO VIEW, UTILIZE RIGID DUCTWORK IN LEU OF FLEXIBLE TYPE.
34. ALL ROOF CURBS FOR FANS, VENTS AND UNITS SHALL BE A MINIMUM OF 18" ABOVE FINISHED ROOF AND TOP OF CURB SHALL BE LEVEL.
35. LOCATE ALL ROOF MOUNTED EQUIPMENT WHICH REQUIRES SERVICING A MINIMUM OF 10 FEET FROM THE EDGE OF THE ROOF UNLESS THERE IS MIN 42" HIGH PARAPET. PROVIDE OSHA APPROVED HANDRAILS WHERE EQUIPMENT IS LOCATED WITHIN 10'-0" OF ROOF EDGE.
36. COORDINATE LOCATION OF ALL ROOF MOUNTED INTAKE VENTS TO BE A MINIMUM OF 15 FEET FROM PLUMBING VENTS, EXHAUST VENTS, EXHAUST FANS ETC.
37. ALL WALL MOUNTED SENSORS SHALL BE PROVIDED WITH PROTECTIVE METAL GUARDS OR CAGES.
38. DUCT DETECTORS SHALL BE FURNISHED BY THE FIRE ALARM CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. THE ATC CONTRACTOR SHALL HARD WIRE INTERLOCK TO THE AHU AND THE FIRE ALARM CONTRACTOR SHALL INTERLOCK WITH THE FIRE ALARM. DUCT SMOKE DETECTORS SHALL BE PROVIDED IN ALL AIR HANDLING UNITS 2000 CFM AND GREATER (SUPPLY AND RETURN).
39. ALL OPEN END DUCTS SHALL BE PROVIDED WITH ½" X ½" MESH BIRD SCREEN.
40. THE CONTRACTOR IS RESPONSIBLE FOR ALL REFRIGERANT ROUTING, SIZING, ACCESSORIES AND INSTALLATION IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
41. THE CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIRING ALL PENETRATIONS TO MATCH EXISTING MATERIALS AND FINISHES.
42. LEAVE SPACE CLEAN ON COMPLETION, INCLUDING THE CLEANING OF GLASS, DOORS, FRAMES, FLOORS, GRILLES, LIGHT LENSES, ETC.
43. REFER TO STRUCTURAL DRAWINGS FOR TYPICAL PENETRATION/OPENING/INFILL DETAILS.
44. IT IS THE INTENT OF THESE DRAWINGS FOR ALL DISCIPLINES AND SPECIFICATIONS TO PRODUCE A COMPLETE PROJECT. IN ALL CASES THE DRAWINGS AND SPECIFICATIONS MUST BE REVIEWED, PRICED, ESTIMATED, AND CONSTRUCTED IN THEIR ENTIRETY. THE DRAWINGS ARE COMPLEMENTARY TO ONE ANOTHER AND THE SPECIFICATIONS. ANYTHING SHOWN OR IMPLIED ON ANY ONE DRAWING MUST BE PROVIDED, INSTALLED AND CONNECTED AS THOUGH IT WAS SHOWN ON ALL DRAWINGS AND INCLUDED IN THE ORIGINAL PRICING. NO REQUEST FOR ADDITIONAL COST OR CHANGE ORDER WILL BE ACCEPTED BY THE OWNER FROM ANY CONTRACTOR, SUPPLIER, OR INSTALLER THAT RESULTS FROM A FAILURE TO THOROUGHLY REVIEW ALL DRAWINGS AND SPECIFICATIONS, COORDINATE WITH OTHER TRADES, OR THOROUGHLY INSPECT THE SITE TO DETERMINE ALL EXISTING CONDITIONS.
45. IF AN ASSUMED OR ACTUAL CONFLICT IS DISCOVERED IN THE CONTRACT DOCUMENTS, THE MORE EXPENSIVE OR HIGHER QUALITY OPTION (AS DETERMINED BY THE ARCHITECT/ENGINEER) SHALL BE ASSUMED TO APPLY UNLESS DIRECTED OTHERWISE BY THE ARCHITECT/ENGINEER.
46. THE CONTRACTOR IS REQUIRED TO VISIT THE SITE, FAMILIARIZE THEMSELVES WITH THE LOCAL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND AS ARE NECESSARY FOR CONSTRUCTION, AND CORRELATE THEIR OBSERVATIONS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. IT IS ASSUMED THAT THE CONTRACTOR HAS OBTAINED, BEFORE AWARD OF THE CONTRACT, CLARIFICATION OF ALL QUESTIONS AS TO THE INTENT OF THE CONTRACT DOCUMENTS AND OF ASSUMED OR ACTUAL CONFLICT BETWEEN TWO OR MORE ITEMS IN CONTRACT DOCUMENTS. SHOULD THE CONTRACTOR FAIL TO OBTAIN SUCH CLARIFICATION, THE ARCHITECT/ENGINEER SHALL DIRECT WORK TO PROCEED BY THE METHOD INDICATED, SPECIFIED OR REQUIRED BY CONTRACT DOCUMENTS WHICH WILL PRODUCE THE BEST RESULTS, AS JUDGED BY THE ARCHITECT/ENGINEER. SUCH DIRECTION BY THE ARCHITECT/ENGINEER SHALL NOT ENTITLE THE CONTRACTOR TO ANY CLAIM FOR EXTRA COST.
47. IF ACTUAL FIELD CONDITIONS VARY FROM WHAT IS SHOWN OR ASSUMED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR IS REQUIRED TO PROMPTLY NOTIFY THE ARCHITECT/ENGINEER AND RECEIVE DIRECTION PRIOR TO PROCEEDING WITH THE WORK AFFECTED BY THE ACTUAL FIELD CONDITION.

MECHANICAL LEGEND

SYMBOL	ABBREV	DEFINITION
	SA	SUPPLY AIR DUCT UP, DOWN
	RA	RETURN AIR DUCT UP, DOWN
	EA	EXHAUST AIR DUCT UP, DOWN
	OA	OUTSIDE AIR DUCT UP, DOWN
		RECT. TO ROUND TRANSITION
		FLEXIBLE CONNECTION (DUCTWORK)
		FLEXIBLE DUCT
	VD	MANUAL VOLUME DAMPER
	FD	FIRE DAMPER
	MOD	MOTOR OPERATED DAMPER
	SMD	SMOKE ISOLATION DAMPER
	CD	COMBINATION FIRE/SMOKE DAMPER
	SL	ACOUSTICAL DUCT LINING
		DUCT TRANSITION
		CHANGE IN ELEVATION RISE (R); DROP (D)
	AMS	AIR MONITORING STATION
	DD	DUCT SMOKE DETECTOR
		ELBOW W/TURNING VANES
		RADIUS ELBOW
		PHOENIX VALVE AND HW HEAT COIL
		POWER ROOF VENTILATOR
T	T'STAT	THERMOSTAT
S		FAN SWITCH
H		HUMIDISTAT
		GATE VALVE
		GLOBE VALVE
		BALL VALVE
		BALANCING VALVE
		MULTI-PURPOSE VALVE
		CHECK VALVE
		BUTTERFLY VALVE
		3-WAY MODULATING VALVE (ATC)
		2-WAY MODULATING VALVE (ATC)
	PRV	PRESSURE REDUCING VALVE
		NEEDLE VALVE
		PRESSURE RELIEF OR SAFETY VALVE
	HED	HOSE END DRAIN VALVE
		STRAINER W/HOSE END DRAIN VALVE & CAP
		COMBINATION BALANCING/SHUT-OFF VALVE
		AUTOMATIC AIR VENT
		MANUAL AIR VENT
		FLOW METER FITTING
		UNION
		FLANGE
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		FLEXIBLE CONNECTION (PIPING)
		THERMOMETER
		PRESSURE GAUGE W/NEEDLE VALVE
T		TEMPERATURE SENSOR
		STATIC PRESSURE GAUGE
DP	DP	DIFFERENTIAL PRESSURE CONTROLLER
DPT	DPT	DIFFERENTIAL PRESSURE TRANSMITTER
	AFC	AUTOMATIC FLOW CONTROL VALVE
FS	FS	FLOW SWITCH
SP	SPC	STATIC PRESSURE CONTROLLER
		EXPANSION LOOP
		SOLENOID VALVE
	UH	UNIT HEATER
		PIPE ALIGNMENT GUIDE
		PIPE ANCHOR
	F&T	FLOAT AND THERMOSTATIC TRAP
		PIPE-TURN DOWN
		PIPE-TURN UP
		PIPE-TURN DOWN (DOUBLE LINE PIPE)
		PIPE-TURN UP (DOUBLE LINE PIPE)
		PIPE TEE UP
		PIPE TEE DOWN
		END CAP
		DIRECTION OF FLOW
		BLIND FLANGE
	P/T	PRESSURE/TEMPERATURE PORT
		CONNECT TO EXISTING
		DEMOLITION ENDS HERE
#		DRAWING NOTE DESIGNATION
#		AIR DEVICE DESIGNATION

SYMBOL	ABBREV	DEFINITION
HPS	HPS	HIGH PRESSURE STEAM
MPS	MPS	MEDIUM PRESSURE STEAM
LPS	LPS	LOW PRESSURE STEAM
HPR	HPR	HIGH PRESSURE RETURN
PC	PC	PUMPED CONDENSATE
LPR	LPS	LOW PRESSURE STEAM
	AD	ACCESS DOOR
	AFF	ABOVE FINISHED FLOOR
	AFPF	AIRFOIL PLENUM FAN
	AHU	AIR HANDLING UNIT
	AMS	AIR MONITORING STATION
	AP	ACCESS PANEL
	APD	AIR PRESSURE DROP
	ATC	AUTOMATIC TEMPERATURE CONTROL
	BBR	BASEBOARD RADIATION
	BHP	BRAKE HORSEPOWER
	BTU	BRITISH THERMAL UNIT
	C	CLOSED
	CAP	CAPACITY
	CAV	CONSTANT AIR VOLUME
	CFM	CUBIC FEET PER MINUTE
	CONV	CONVECTOR
CW	CW	DOMESTIC COLD WATER
CHR	CHR	CHILLED WATER RETURN
CHS	CHS	CHILLED WATER SUPPLY
CHR(P)	CHR	CHILLED WATER RETURN (PRIMARY)
CHS(P)	CHS	CHILLED WATER SUPPLY (PRIMARY)
	DB	DRY BULB
	DB	DECIBEL
ø	DIA	DIAMETER
	DIFF	DIFFUSER
	DWG	DRAWING
	EAT	ENTERING AIR TEMPERATURE
	EF	EXHAUST FAN
	EFF	EFFICIENCY
	ELECT. CHAR.	ELECTRICAL CHARACTERISTICS
	EMS	ENERGY MANAGEMENT SYSTEM
	ESP	EXTERNAL STATIC PRESSURE
	EX	EXISTING
	ETR	EXISTING TO REMAIN
	EXH	EXHAUST
	EWT	ENTERING WATER TEMPERATURE
	F	FAN
	°F	DEGREES FAHRENHEIT
	FOB	FLAT ON BOTTOM
	FOT	FLAT ON TOP
	FPM	FEET PER MINUTE
	FT H_2O	FEET WATER GAUGE
	FTR	FINNED TUBE RADIATION
	FZ	FREEZESTAT
G	G	NATURAL GAS
	GPM	GALLONS PER MINUTE
	HP	HORSEPOWER
	HPU	HEAT PUMP UNIT
	HRU	HEAT RECOVERY UNIT
HR	HR	HEATING WATER RETURN
HS	HS	HEATING WATER SUPPLY
HR(P)	HR(P)	HEATING WATER RETURN (PRIMARY)
HS(P)	HS(P)	HEATING WATER SUPPLY (PRIMARY)
RL	RL	REFRIGERANT LIQUID
RS	RS	REFRIGERANT SUCTION
	HT	HEIGHT
	HWG	HOT WATER GENERATOR
	HZ	HERTZ
	IN H_2O	INCHES WATER GAUGE
	KW	KILOWATT
	LAT	LEAVING AIR TEMPERATURE
	LBS	POUNDS
	LF	LINEAR FOOT
	LWT	LEAVING WATER TEMPERATURE
	MAX	MAXIMUM
	MBH	BTU PER HOUR (THOUSAND)
	MIN	MINIMUM
	NC	NOISE CRITERIA
	N.C.	NORMALLY CLOSED
	No.	NUMBER
	N.O.	NORMALLY OPEN
	OAF	OUTSIDE AIR FAN
	OAT	OUTSIDE AIR TEMPERATURE
	O/C	ON CENTER
	OED	OPEN END DUCT
	P	PUMP
	PA	PRIMARY AIR
	PD	PRESSURE DROP
	PSI	POUNDS PER SQUARE INCH
	RAF	RETURN AIR FAN
	REG	REGISTER
	REQ'D	REQUIRED
	RPM	REVOLUTIONS PER MINUTE
	RX	REMOVE EXISTING
	SAF	SUPPLY AIR FAN
	SB	STAND-BY
	SENS	SENSIBLE
	SP	STATIC PRESSURE
	SPLY	SUPPLY
	SQ	SQUARE
	SS	STAINLESS STEEL
	STD	STANDARD
	SWT	SUPPLY WATER TEMPERATURE
	TCU	TERMINAL CONTROL UNIT
	TEMP	TEMPERATURE
	TONS	TONS OF REFRIGERATION
	V	VOLTS
	VAV	VARIABLE AIR VOLUME
	VEL	VELOCITY
	VSD	VARIABLE SPEED DRIVE
	W/	WITH
	WB	WET BULB
	WG	WATER GAUGE
	WPD	WATER PRESSURE DROP
	WSHP	WATER SOURCE HEAT PUMP
	ΔT	TEMPERATURE DIFFERENCE
	%	PERCENT
	φ	ELECTRICAL PHASE

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CONSULTANT:

ISSUE DATES	DESCRIPTION:
DATE:	
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ #: 22-CSD-04 DRAWN BY: ALBAN

NEW RESTROOMS AND TICKET BOOTH

CHICHESTER HIGH SCHOOL

CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

SHEET TITLE:

MECHANICAL LEGEND & ABBREVIATION

SHEET NUMBER:

M0.1

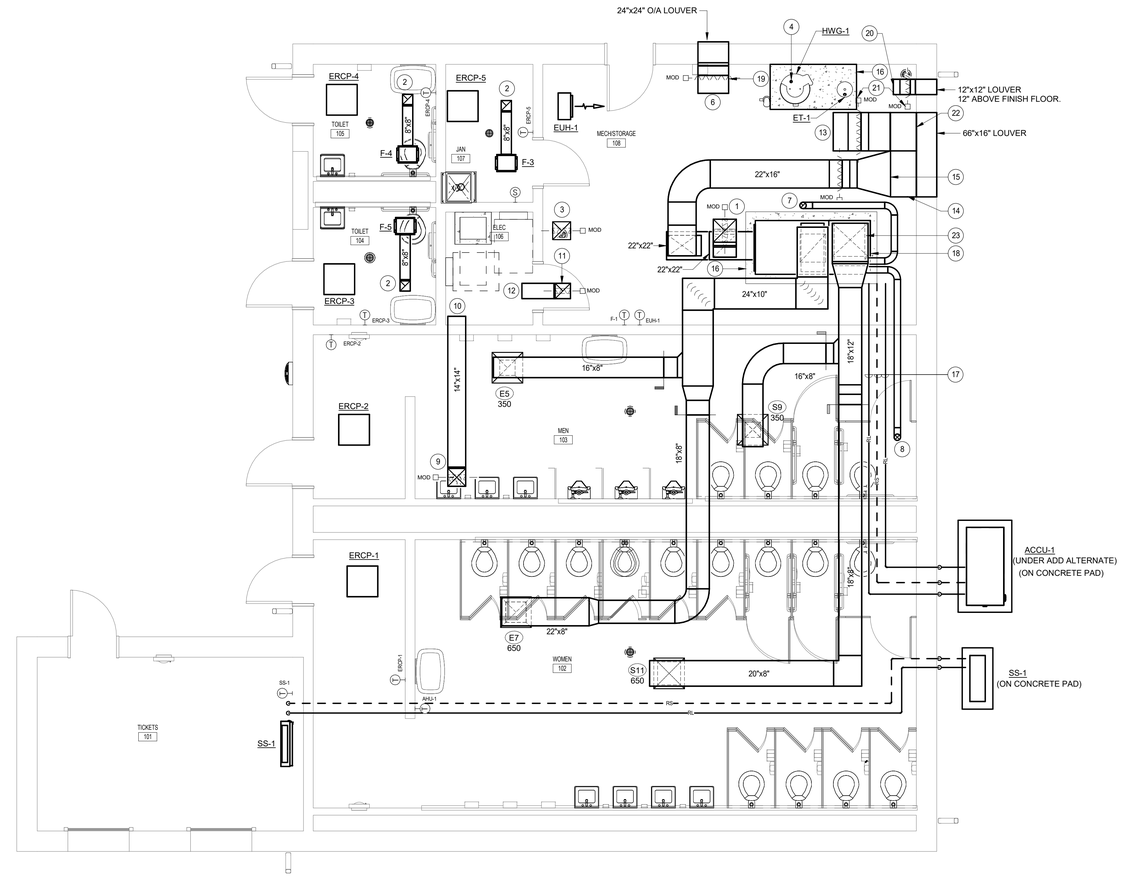
BID SET

GENERAL NOTES:

1. UNDER ADD ALTERNATE FOR MECHANICAL COOLING PROVIDE AIR COOLED CONDENSING UNIT, REFRIGERATION PIPING, SUPPORTS, INSULATION, CONDENSATE DRAIN AND CONTROLS IN A FULLY TURNKEY FASHION. UNDER BASE BID COOLING COIL AND HOT GAS REHEAT COIL SHALL BE CHARGED WITH NITROGEN AND CAPPED FOR FUTURE COOLING.
2. PROVIDE 2" THICK R-8 INSULATION FOR ALL DUCTWORK LOCATED IN ATTIC SPACE.

DRAWING NOTES:

1. 18"x18" E/A DUCT UP W/MOD TO GRAVITY RELIEF VENT-1 ON ROOF.
2. 8"x8" E/A DUCT UP THROUGH ROOF TO GOOSENECK.
3. 14"x14" OED W/ 1/2" BIRDSCREEN IN MECHANICAL ROOM AND UP W/MOD TO F-1 ON ROOF .
4. FLUE VENT DN TO HOT WATER GENERATOR. INSTALL ALL VENTING PER THE MANUFACTURER RECOMMENDATIONS.
5. 24" L x 20" H PLENUM BOX.
6. 24"x24" OED W/ 1/2" BIRDSCREEN IN ATTIC.
7. 5" FLUE EXHAUST VENT UP TO ROOF.
8. 5" COMBUSTION AIR INTAKE VENT UP TO ROOF.
9. 14"x14" O/A DUCT UP W/MOD TO GRAVITY INTAKE VENT-1 ON ROOF.
10. 14"x14" OED W/ 1/2" BIRDSCREEN.
11. 12"x12" E/A DUCT UP W/MOD TO F-2 ON ROOF.
12. 12"x12" OPEN END DUCT W/ 1/2" BIRDSCREEN.
13. 30"x16" OED W/ 1/2" BIRDSCREEN.
14. 36" W x 16" H PLENUM CONNECT TO LOUVER.
15. 22"x16" O/A DUCT TRANSITION TO 36"x16" PLENUM.
16. 6" CONCRETE HOUSEKEEPING PAD.
17. PROVIDE RL, RS, HG PIPING UNDER ADD ALTERNATE.
18. PROVIDE MERV 8 PRE-FILTER,MERV 13 FINAL FILTER AND VARIABLE FLOW SUPPLY AND RETURN/RELIEF FAN, HEAT RECOVERY WHEEL, DAMPERS, HOT GAS REHEAT AND DX COOLING COIL ETC. UNDER BASE BID FOR AHU-1.
19. 24"L x 24" H PLENUM BOX.
20. 12"x12" OED W/ 1/2" BIRDSCREEN.
21. MOD INTERLOCK WITH HOT WATER GENERATOR..
22. 30" W x 16" H PLENUM CONNECT TO LOUVER.
23. 28"x26" DN.



FLOOR PLAN
1/4" = 1'-0"

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NEW RESTROOMS AND TICKET BOOTH

CHICHESTER HIGH SCHOOL

CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES
DATE: DESCRIPTION:
03/17/2025 PERMIT SET
03/31/2025 BID SET

PROJ # : 22-CSD-04 DRAWN BY : Author

SHEET TITLE:

FLOOR PLAN

SHEET NUMBER:

M1.1

BID SET

Graphic Scale: 1 inch = 4 feet
0 4' 8' 12' 16'

N W E S

3/28/2025 2:17:53 PM

CONSULTANT:
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NEW RESTROOMS AND TICKET BOOTH

CHICHESTER HIGH SCHOOL

CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES	
DATE:	DESCRIPTION:
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ #: 23-030-04 DRAWN BY: Author

SHEET TITLE: **ROOF PLAN**

SHEET NUMBER: **M1.2**

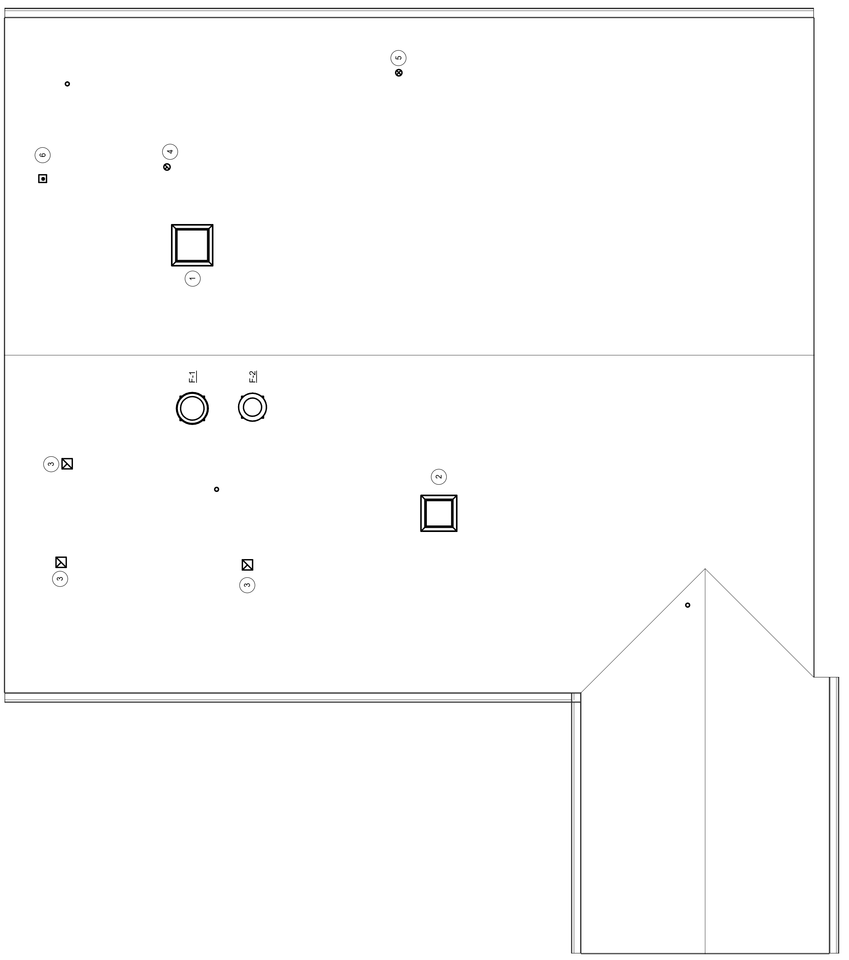
BID SET

N E S W

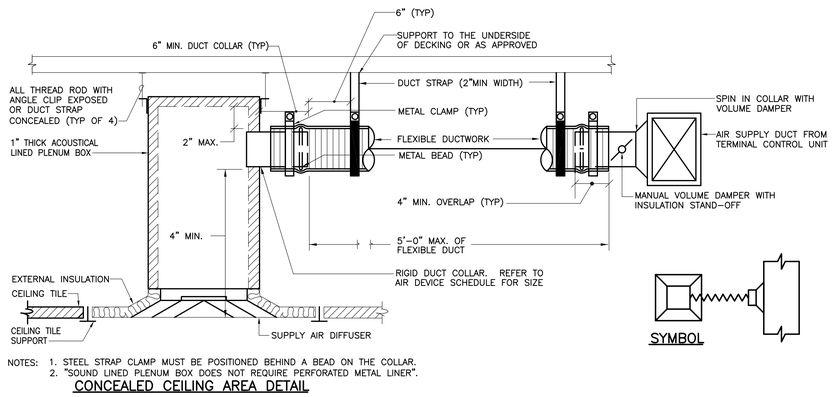
Graphic Scale: 1 inch = 4 feet
0 4' 8' 12' 16'

DRAWING NOTES:

1. GRAVITY RELIEF VENT-1
   LOUVERED TYPE
   18"x18" THROAT
   24"x24" CURB
   1000 CFM @ 444 FPM
   0.02" MAX APD
   GREENHECK MODEL WRH OR EQUAL
2. GRAVITY INTAKE VENT-1
   LOUVERED TYPE
   14"x14" THROAT
   20"x20" CURB
   500 CFM @ 367 FPM
   0.02" MAX APD
   GREENHECK MODEL WIH OR EQUAL
3. GOOSENECK.
4. 5" FLUE EXHAUST VENT DN. THROUGH ROOF CURB. REFER TO M1.1 FOR CONTINUATION.
5. 5" COMBUSTION AIR INTAKE VENT DN. THROUGH ROOF CURB. REFER TO M1.1 FOR CONTINUATION.
6. HOT WATER HEATER VENT THROUGH ROOF CURB. REFER TO DETAILS FOR ADDITIONAL INFORMATION.



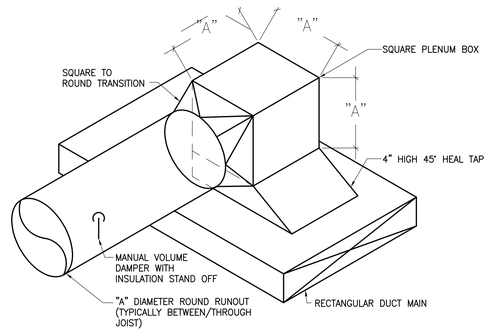
ROOF PLAN
1/4" = 1'-0"



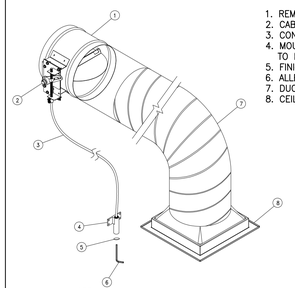
NOTES: 1. STEEL STRAP CLAMP MUST BE POSITIONED BEHIND A BEAD ON THE COLLAR.
2. "SOUND LINED PLENUM BOX DOES NOT REQUIRE PERFORATED METAL LINER".

CONCEALED CEILING AREA DETAIL

(1) TYPICAL SUPPLY AIR DEVICE INSTALLATION DETAIL — SCALE: NONE



(2) TYPICAL SUPPLY/RETURN AIR RUNOUT DETAIL — SCALE: NONE



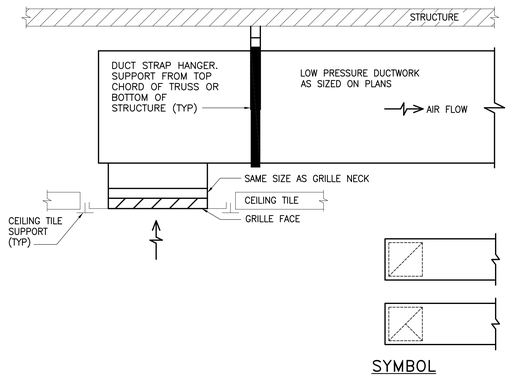
1. REMOTE CABLE OPERATED BALANCING DAMPER.
2. CABLE CONTROLLED LOCKING QUADRANT
3. CONTROL CABLE
4. MOUNTING BRACKET– INSTALL WITH OPEN END FLUSH TO FINISHED CEILING LINE
5. FINISH CAP
6. ALLEN HEX WRENCH
7. DUCT
8. CEILING DIFFUSER, LINEAR SLOT DIFFUSER, OR GRILLE

NOTE
A. COORDINATE EXACT LOCATION OF CEILING MOUNTED CONCEALED REGULATOR WITH ARCHITECT PRIOR TO INSTALLATION.

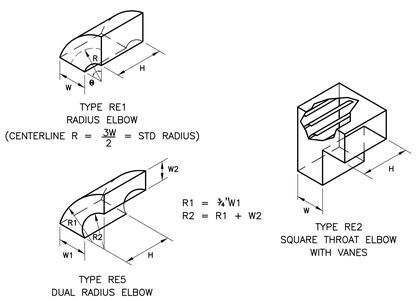
B. DETAIL IS TYPICAL FOR BOTH ROUND AND SQUARE REMOTE MANUAL VOLUME DAMPERS.

C. PROVIDE IN LIEU OF CEILING ACCESS DOOR WHERE MANUAL VOLUME DAMPERS ARE INSTALLED ABOVE HARD/INACCESSABLE CEILING SYSTEMS.

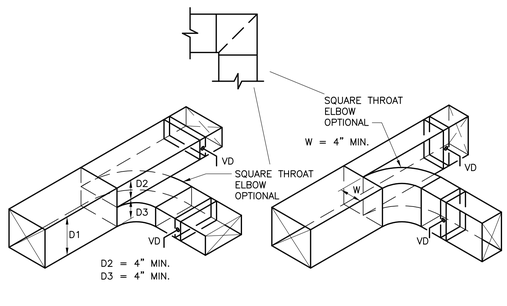
(3) TYPICAL REMOTE MANUAL VOLUME DAMPER DETAIL — SCALE: NONE



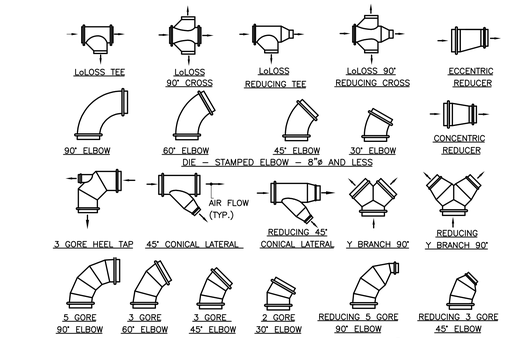
(4) TYPICAL CEILING RETURN AND EXHAUST AIR DEVICE DETAIL — SCALE: NONE



(5) TYPICAL RECTANGULAR DUCT CONSTRUCTION DETAIL — SCALE: NONE

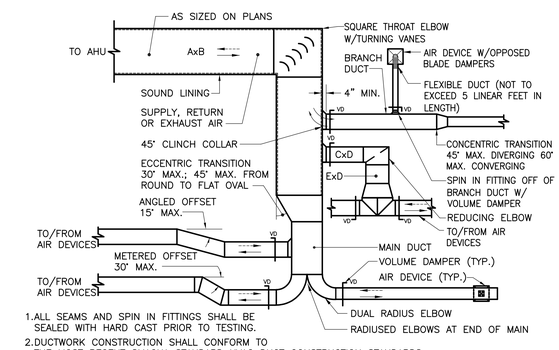


(6) PARALLEL FLOW BRANCHES DETAIL — SCALE: NONE



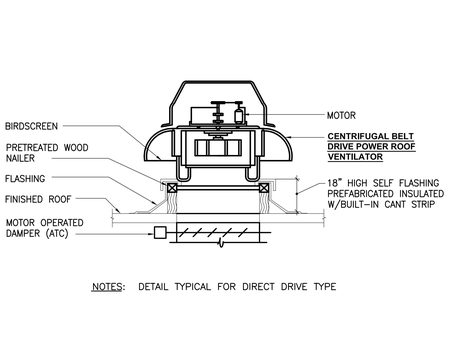
NOTE: ONLY FITTINGS SHOWN SHALL BE UTILIZED.

(7) TYPICAL DUCT FITTINGS DETAIL — SCALE: NONE



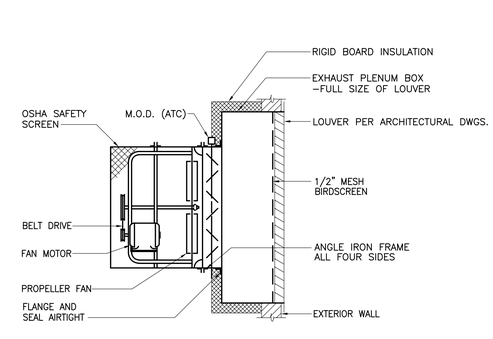
1. ALL SEAMS AND SPIN IN FITTINGS SHALL BE SEALED WITH HARD CAST PRIOR TO TESTING.
2. DUCTWORK CONSTRUCTION SHALL CONFORM TO THE MOST RECENT SMACNA STANDARD HVAC DUCT CONSTRUCTION STANDARDS
3. PROVIDE MANUAL VOLUME DAMPERS FOR EACH BRANCH AND RUNOUT IN LOW PRESSURE SYSTEMS
4. PROVIDE INSULATION STAND-OFFS FOR MANUAL VOLUME DAMPERS INSTALLED IN INSULATED DUCTS.

(8) TYPICAL SUPPLY,EXHUAST, OR RETURN DUCT OFFSET AND TRANSITION DETAIL — SCALE: NONE

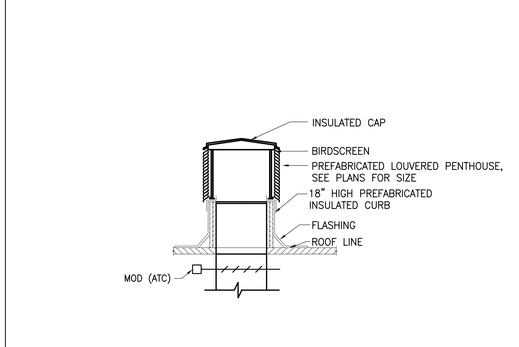


NOTES: DETAIL TYPICAL FOR DIRECT DRIVE TYPE

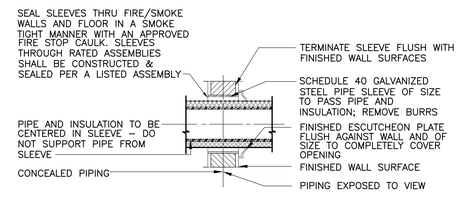
(9) TYPICAL CENTRIFUGAL POWER ROOF VENTILATOR — SCALE: NONE



(10) TYPICAL WALL MOUNTED PROPELLER EXHAUST FAN DETAIL — SCALE: NONE

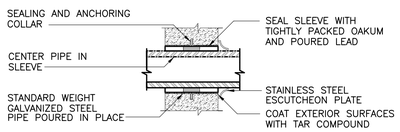


(11) TYPICAL RELIEF/INTAKE DETAIL — SCALE: NONE

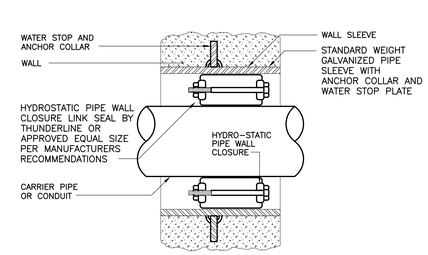


NOTE: FOR INTERIOR FRAME PARTITIONS–PIPE SLEEVES MAY BE FABRICATED FROM GALVANIZED SHEET METAL; ROUND TUBE CLOSED WITH SNAPLOCK JOINT, WELDED SPIRAL SEAMS, OR WELDED LONGITUDINAL JOINT. FABRICATE FROM THE FOLLOWING GAUGES: 3" AND SMALLER, 20 GAUGE; 4" TO 6", 16 GAUGE; OVER 6", 14 GAUGE.

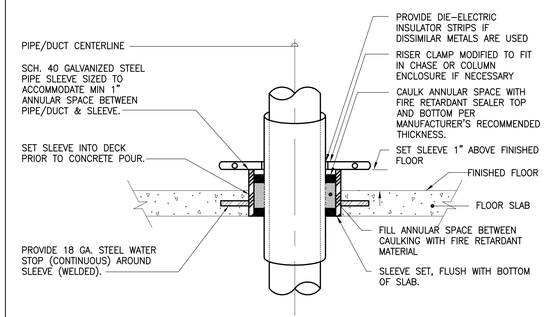
(12) TYPICAL PIPE SLEEVE THRU INTERIOR WALL DETAIL — SCALE: NONE



(13) TYPICAL PIPE SLEEVE THRU EXTERIOR WALL ABOVE GRADE DETAIL — SCALE: NONE



(14) TYPICAL PIPE SLEEVE THRU EXTERIOR WALL BELOW GRADE DETAIL — SCALE: NONE



(15) TYPICAL PIPE SLEEVE THRU FLOOR DETAIL — SCALE: NONE

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P.N. 190880

CONSULTANT:

NEW RESTROOMS AND TICKET BOOTH

CHICHESTER HIGH SCHOOL

CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES	DESCRIPTION:
DATE:	
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ # : 22-CSD-04 DRAWN BY : ALBAN

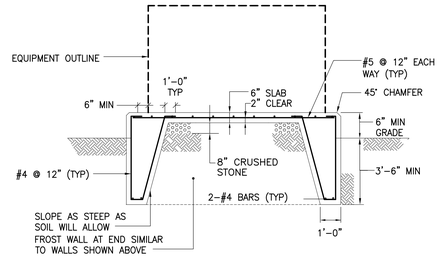
SHEET TITLE:

MISCELLANEOUS DETAILS

SHEET NUMBER:

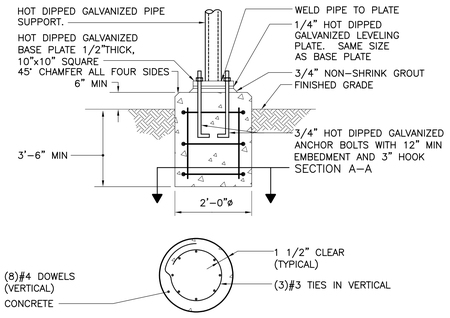
M7.1

BID SET



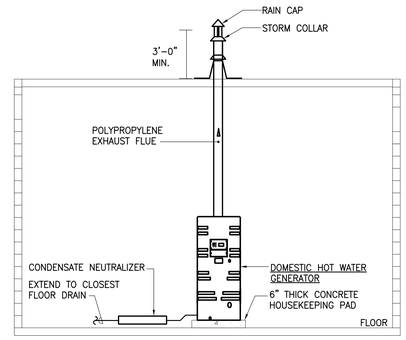
NOTE: PAD SHALL BE SLIGHTLY PITCHED TO ALLOW FOR WATER DRAINAGE. PROVIDE A 6" LEVELING PAD ON TOP OF EQUIPMENT PAD.

(16) CONCRETE EQUIPMENT PAD DETAIL — SCALE: NONE



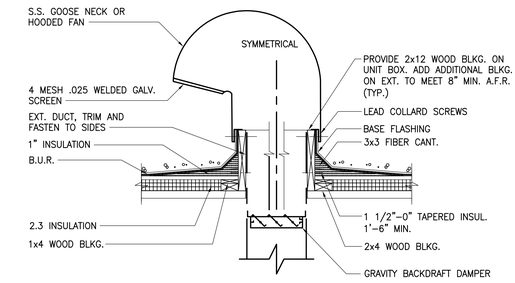
SECTION A–A

(17) TYPICAL EXTERIOR PIPE AND DUCT SUPPORT & FOUNDATION DETAIL — SCALE: NONE



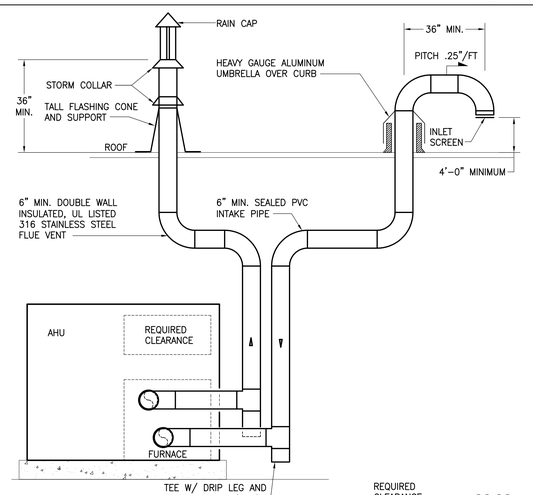
NOTE: INSTALL ALL VENTING PER THE MANUFACTURERS RECOMMENDATIONS

(18) TYPICAL DOMESTIC HOT WATER HEATER SEALED COMBUSTION AIR/VENT TERMINAL DETAIL — SCALE: NONE

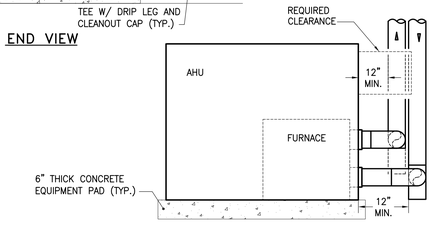


NOTE: DETAIL TYPICAL FOR DUCT PENETRATIONS THROUGH ROOF.

(19) TYPICAL GOOSENECK DETAIL — SCALE: NONE



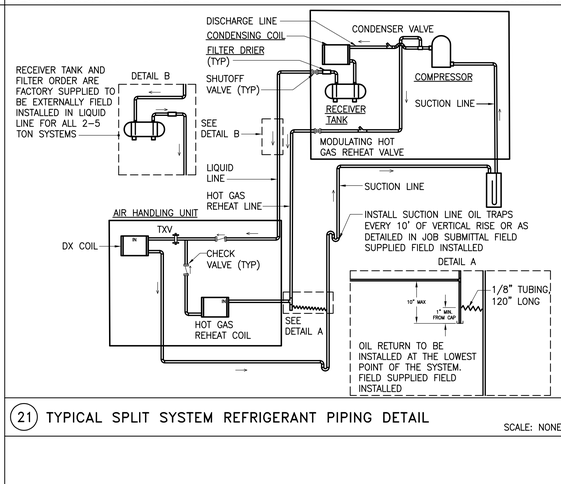
END VIEW



SIDE VIEW

NOTE:
1. INSTALL PER THE MANUFACTURERS RECOMMENDATIONS
2. AT THE CONTRACTORS OPTION AND AS ACCEPTANCE TO THE MANUFACTURER PROVIDE POLYPROPYLENE FLUE PIPE IN LIEU OF STAINLESS STEEL – CENTROTHERM OR EQUAL
3. ALL FLUE MATERIALS SHALL COMPLY WITH UL 1738 AND ULC 5636
4. ALL SOLVENTS, MAZTICS AND CEMENTS SHALL COMPLY WITH LEED REQUIREMENTS INDICATED IN DIVISION 01
5. SIZE ALL FLUE AND INTAKE PIPING PER THE MANUFACTURERS RECOMMENDATIONS.
6. MAINTAIN ALL CODE REQUIRED FLUE CLEARANCES.

(20) TYPICAL INDOOR AHU FURNACE VENTING DETAIL



(21) TYPICAL SPLIT SYSTEM REFRIGERANT PIPING DETAIL — SCALE: NONE

(22) NOT USED — SCALE: NONE

(23) NOT USED — SCALE: NONE

(24) NOT USED — SCALE: NONE

(25) NOT USED — SCALE: NONE

(26) NOT USED — SCALE: NONE

(27) NOT USED — SCALE: NONE

(28) NOT USED — SCALE: NONE

(29) NOT USED — SCALE: NONE

(30) NOT USED — SCALE: NONE

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CONSULTANT:

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ISSUE DATES

DESCRIPTION:	DATE:
PERMIT SET	03/17/2025
BID SET	03/31/2025

PROJ #: 22-CSD-04 DRAWN BY: ALBAN

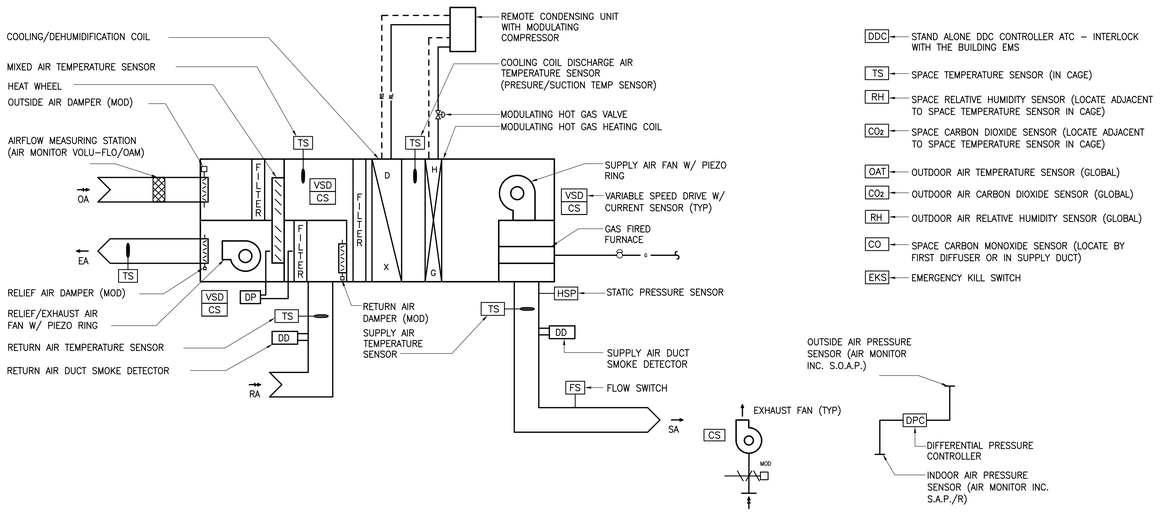
SHEET TITLE:

EQUIPMENT SUPPORT DETAIL

SHEET NUMBER:

M7.2

BID SET



DDC — STAND ALONE DDC CONTROLLER ATC – INTERLOCK WITH THE BUILDING EMS

TS — SPACE TEMPERATURE SENSOR (IN CAGE)

RH — SPACE RELATIVE HUMIDITY SENSOR (LOCATE ADJACENT TO SPACE TEMPERATURE SENSOR IN CAGE)

CO_2 — SPACE CARBON DIOXIDE SENSOR (LOCATE ADJACENT TO SPACE TEMPERATURE SENSOR IN CAGE)

OAT — OUTDOOR AIR TEMPERATURE SENSOR (GLOBAL)

CO_2 — OUTDOOR AIR CARBON DIOXIDE SENSOR (GLOBAL)

RH — OUTDOOR AIR RELATIVE HUMIDITY SENSOR (GLOBAL)

CO — SPACE CARBON MONOXIDE SENSOR (LOCATE BY FIRST DIFFUSER OR IN SUPPLY DUCT)

EKS — EMERGENCY KILL SWITCH

INPUT/OUTPUT SUMMARY FOR TYPICAL PACKAGED ROOFTOP UNIT

BUILDING SYSTEM: AIR HANDLING UNITS (AHU)

DESCRIPTION	INPUTS: ANALOG: ROOM TEMPERATURE	DUCT TEMPERATURE	DIFFERENTIAL PRESSURE	OA TEMPERATURE (GLOBAL)	CURRENT SENSOR/STATUS	STATIC PRESSURE	CO_2	RELATIVE HUMIDITY	AIRFLOW	INPUTS: BINARY: SWITCH CLOSURE	STATIC PRESSURE	LOW TEMPERATURE CUTOUT	END SWITCH	DIFFERENTIAL PRESSURE SWITCH	OUTPUTS: ANALOG: MODULATING ACTUATOR	E/P TRANSDUCER	VARIABLE SPEED	OUTPUTS: BINARY: CONTROL RELAY	SOLENOID	START/STOP	2-POSITION DAMPER MOD.	OUTPUTS: 3-POINT FLOATING: ACTUATOR	HEAT/COOL RELAY	FEED/BLEED SW	ALARMS: HIGH LIMIT	LOW LIMIT	RUN TIME	MAINTENANCE MESSAGE	SMOKE/FIRE/CO	LIQUID DETECTION	FEATURES: SCHEDULED START/STOP	TEMPERATURE SETBACK/SETUP	OCCUPIED/UNOCCUPIED	DEMAND LIMITING	DUTY CYCLE	VENTILATION DELAY	ECONOMIZER CYCLE	H.W. RESET W/ O.A. TEMP.	REMOTE CONTROL/ RESET	TENANT OVERRIDE	COLOR GRAPHICS	POINT LOCKOUT	TREND LOG	WARM UP/PULL DOWN
AHU																																									
RETURN AIR		●					●																					●				●	●	●		●					●
DUCT DETECTORS (TYP)																																										
SPACE	●						●								●																											
SUPPLY AIR		●							●																	●												●			●
SUPPLY AND RELIEF FANS				●				●	●							●											●	●			●									
OUTSIDE AIR (GLOBAL)			●				●	●																																
INDOOR STATIC PRESSURE				●																																		●			●
RELIEF AIR		●	●																																					
OUTDOOR AIR							●																																	
OUTSIDE AIR DAMPER															●																									
RELIEF AIR DAMPER															●																									
RETURN AIR DAMPER															●																									
HEAT WHEEL		●								●						●												●		●	●	●								
CARBON MONOXIDE																											●		●									●		
S/A STATIC PRESSURE																											●													
CARBON DIOXIDE	●					●																					●													
CONDENSATE DRAIN PAN																											●				●									
EXHAUST FANS (TYP)			●							●										●								●	●		●									

TYPICAL SZVF AIR HANDLING UNIT CONTROL DIAGRAM

SCALE: NONE

ATC SYSTEM I/O POINTS LIST

TYPICAL SZVF AIR HANDLING UNIT SEQUENCE OF OPERATION – DDC (ELECTRIC/ELECTRONIC ACTUATION)

1. GENERAL:

A. THE AIR HANDLING SYSTEM SHALL BE PROVIDED WITH FACTORY MOUNTED REFRIGERATION SYSTEM ONLY CONTROLLER AND TERMINAL STRIP FOR ATC INTERFACE. THE UNIT SHALL UTILIZE A FIELD INSTALLED DIRECT DIGITAL CONTROLLER BY THE ATC CONTRACTOR. THE ATC CONTRACTOR SHALL PROVIDE A DIRECT DIGITAL CONTROLLER AND ALL SENSORS, DEVICES AND CONTROLS NEEDED TO INTERFACE WITH THE AHU CONTROLLER AND PERFORM THE SEQUENCE OF OPERATION. THE AIR HANDLING SYSTEM SHALL BE STARTED AND STOPPED THROUGH A MANUAL SYSTEM ON-OFF-AUTOMATIC (H-O-A) SWITCH. WHEN INDEXED TO "ON", THE SYSTEM SHALL BE ENERGIZED AND OPERATE UNDER ITS CONTROL SEQUENCE. WHEN INDEXED TO "OFF" THE SYSTEM SHALL DE-ENERGIZE. WHEN INDEXED TO THE "AUTOMATIC" POSITION THE SYSTEM SHALL BE STARTED AND STOPPED BY A SIGNAL FROM THE EMS THROUGH ITS BUILT IN CONTROLLER.

B. SUPPLY FAN SHALL BE LOCALLY OR REMOTELY STARTED AND STOPPED THROUGH THE MANUAL SYSTEM SWITCH OR BY A SIGNAL FROM THE EMS.

C. RELIEF FAN AND HEAT WHEEL SHALL BE INTERLOCKED TO OPERATE WHEN THE SUPPLY FAN OPERATES AND TO BE OFF WHEN THE SUPPLY FAN IS OFF.

D. WHEN THE UNIT SUPPLY FAN IS OFF, THE OUTSIDE AIR DAMPER SHALL CLOSE AND RETURN AIR DAMPER SHALL OPEN; GAS FIRED FURNACE AND CONDENSING UNIT SHALL BE DE-ENERGIZED; THE HEAT WHEEL SHALL BE DE-ENERGIZED; AND THE RELIEF AIR FAN AND ASSOCIATED REMOTE EXHAUST FANS SHALL BE DE-ENERGIZED.

E. SUPPLY FAN, RELIEF FAN, CONDENSING UNIT AND HEAT WHEEL AND RELIEF FAN SHALL DE-ENERGIZE WHENEVER THE SUPPLY AIR TEMPERATURE DROPS BELOW THE LIMIT OF THE DISCHARGE AIR TEMPERATURE SET POINT OF 36°F (ADJUSTABLE THROUGH SOFTWARE) OR WHEN THE DUCT SMOKE DETECTORS SENSES PRODUCTS OF COMBUSTION OR WHEN THE HIGH DUCT STATIC PRESSURE SENSOR REACHES ITS SETPOINT (5" W.C. ADJUSTABLE) OR WHENEVER CARBON MONOXIDE IS SENSED OR WHENEVER THE CONDENSATE DRAIN PAN LEVEL IS REACHED.

F. WHEN THE AIR HANDLING UNIT IS OFF, THE HEAT WHEEL SHALL BE DE-ENERGIZED. WHENEVER THE AIR HANDLING SYSTEM IS ON AND IN THE OCCUPIED MODE, THE HEAT WHEEL AND THE ASSOCIATED RELIEF AIR FAN SHALL BE ENERGIZED AND OPERATE THROUGH ITS CONTROL SEQUENCE.

G. ALL SAFETIES AND ASSOCIATED CONTROLS SHALL REMAIN ACTIVE WHETHER THE SYSTEM IS LOCALLY OR REMOTELY CONTROLLED AND/OR MANUALLY OVERRIDDEN.

H. PROVIDE A REMOTE EMERGENCY SHUTDOWN SWITCH FOR SYSTEM SHUTDOWN. REMOTE SWITCH SHALL BE INSTALLED AT A LOCATION APPROVED BY THE FIRE INSPECTOR. SHUT-DOWN SHALL OCCUR FROM A SIGNAL THROUGH THE EMS.

I. THE UNIT SHALL OPERATE WITH ITS BUILT-IN CONTROL SEQUENCE WHEN COMMUNICATION IS LOST TO THE EMS. COORDINATE ALL CONTROLLER SETPOINTS WITH THE UNIT MANUFACTURER.

J. COORDINATE ALL CONTROLS WITH THE UNIT MANUFACTURER AND INTEGRATE ALL AVAILABLE POINTS FROM THE REFRIGERATION SYSTEM CONTROLLER INTO THE EMS.

K. COORDINATE OUTSIDE AIR AND RELIEF AIR DAMPERS WITH THE EQUIPMENT MANUFACTURER (DUCT MOUNTED BY ATC OR INTEGRAL BY MANUFACTURER).

L. GAS FURNACE SHALL ONLY BE ENERGIZED WHEN THERE IS PROOF OF AIRFLOW. COORDINATE FURNACE CONTROL REQUIREMENT WITH THE EQUIPMENT MANUFACTURER.

M. PROVIDE A CONDENSATE DRAIN PAN WATER LEVEL SENSOR. WHEN A HIGH WATER LEVEL IS SENSED IT SHALL SHUT DOWN THE UNIT AND ALARM THROUGH EMS.

2. OCCUPIED CYCLE

A. GENERAL:

1. WHEN THE UNIT SUPPLY FAN IS ENERGIZED TO RUN, IT SHALL GO THROUGH A WARM-UP/PULL DOWN CYCLE. WHEN THE SYSTEM COMPLETES ITS WARM-UP/PULL-DOWN MODE OF OPERATION AND THE SYSTEM SWITCHES TO THE OCCUPIED MODE OF OPERATION, THE OUTSIDE AIR DAMPER SHALL OPEN TO ITS MINIMUM POSITION AND THE RETURN AIR DAMPER SHALL MODULATE TO ITS CORRESPONDING POSITION. THE RELIEF AIR FAN AND HEAT WHEEL SHALL ENERGIZE.

2. THE SPACE TEMPERATURE IS CONTROLLED BY A SINGLE, SPACE MOUNTED TEMPERATURE SENSOR WITH SET POINT ADJUSTMENT.

3. WHEN THE SYSTEM IS PLACED IN OCCUPIED MODE, THE RELIEF FAN AND ASSOCIATED EXHAUST FANS SHALL BE COMMANDED ON WHEN SUPPLY FAN RUN STATUS IS CONFIRMED AND THE OUTSIDE AIR DAMPER IS OPEN TO ITS MINIMUM SETPOINT OR THE HEAT WHEEL HAS BEEN COMMANDED TO OPERATE.

B. WARM-UP/PULL DOWN:

THE UNIT CONTROL SHALL BE ARRANGED FOR A WINTER MORNING WARM-UP HEATING CYCLE AND SUMMER PULL DOWN COOLING CYCLE BASED ON AN OPTIMAL STARTING CONTROL STRATEGY. DURING WARM-UP CYCLE THE OUTSIDE AIR DAMPER AND RELIEF AIR DAMPER SHALL REMAIN CLOSED, THE RETURN AIR DAMPER OPEN, AND THE AIR HANDLING UNIT GAS FIRED FURNACE SHALL BE ENERGIZED UNTIL THE SPACE TEMPERATURE RISES TO 70°F (ADJUSTABLE). SIMILARLY FOR PULL DOWN CYCLE, THE CONDENSING UNIT SHALL BE STAGED UNTIL THE SPACE TEMPERATURE DROPS TO 75°F (ADJUSTABLE), AT THAT POINT, THE OUTSIDE AIR DAMPER SHALL MODULATE TO ITS MINIMUM POSITION, THE RETURN DAMPER SHALL MODULATE TO ITS CORRESPONDING POSITION AND RELIEF AIR DAMPER SHALL OPEN, THE RELIEF AIR FAN AND HEAT RECOVERY WHEEL SHALL ENERGIZE AS PREVIOUSLY DESCRIBED, AND THE HEATING AND COOLING CONTROL SHALL BE PLACED UNDER THE CONTROL OF THE SPACE AIR TEMPERATURE SENSOR.

C. COOLING

1. COOLING IS ENABLED WHEN THE SPACE AIR TEMPERATURE IS ABOVE THE COOLING SET POINT OF 75°F (ADJUSTABLE AND RESETTABLE THROUGH SOFTWARE) AND OUTSIDE AIR TEMPERATURE IS ABOVE THE COOLING LOCKOUT SET POINT OF 55°F (ADJ). THE UNIT SHALL SEQUENCE THE COOLING STAGES AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SET POINT, MODULATING THE COMPRESSOR FROM 15% TO 100%. A STAGING DELAY ON AND DELAY OFF SHALL PREVENT EACH STAGE OF MECHANICAL COOLING FROM ENABLING AND DISABLING AT THE SAME TIME. IF THERE ARE MULTIPLE STAGES OF MECHANICAL COOLING AVAILABLE (I.E. MULTIPLE COMPRESSORS) EACH STAGE SHALL SEQUENTIALLY ENABLE BASED ON A TIME DELAY OF 180 SECONDS (ADJ) AND DISABLE BASED ON A MINIMUM DELAY OFF OF 180 SECONDS (ADJ). PROVIDE A 15 MINUTE (ADJ) ANTI-SHORT CYCLE TIME DELAY BETWEEN COMPRESSOR CYCLES.

D. REFRIGERATION LOW LIMIT CONTROL:

1. IF THE EVAPORATIVE LEAVING COIL FACE TEMPERATURE FALLS BELOW THE A LOW LIMIT SETPOINT OF 40°F (ADJUSTABLE), THE MECHANICAL COOLING WILL REVERT FROM TEMPERATURE CONTROL TO SEQUENTIALLY DISABLE STAGES OF MECHANICAL COOLING TO MAINTAIN THE LOW LIMIT TEMPERATURE SET POINT.

2. IF THE EVAPORATIVE LEAVING COIL FACE TEMPERATURE FALLS BELOW 34°F (ADJUSTABLE), MECHANICAL COOLING WILL BE DISABLED. MECHANICAL COOLING WILL BE COMMANDED TO RUN UNTIL THE EVAPORATIVE LEAVING COIL FACE TEMPERATURE RISES ABOVE 55°F (ADJUSTABLE) AND THE COMPRESSOR MINIMUM OFF TIME HAS BEEN ACHIEVED.

E. DEHUMIDIFICATION CONTROL:

1. DEHUMIDIFICATION IS ENABLED WHEN THE SUPPLY FAN IS OPERATING, SPACE TEMPERATURE IS SATISFIED (MECHANICAL COOLING IS OFF) OR ABOVE COOLING SET POINT (MECHANICAL COOLING IS ON), THE OUTSIDE AIR TEMPERATURE IS ABOVE THE COMPRESSOR LOCKOUT POINT AND SPACE RELATIVE HUMIDITY REACHES ITS SETPOINT 60% RH (ADJUSTABLE THROUGH SOFTWARE). DEHUMIDIFICATION MODE SHALL BE DISABLED IF EITHER THE SPACE RELATIVE HUMIDITY FALLS 5% (ADJUSTABLE) BELOW THE SPACE DEHUMIDIFICATION SETPOINT OR THE SPACE TEMPERATURE FALLS 5°F (ADJUSTABLE) BELOW THE OCCUPIED SPACE COOLING SETPOINT TEMPERATURE.

2. WHEN THE UNIT IS IN DEHUMIDIFICATION MODE, THE COOLING SHALL REVERT FROM MAINTAINING SPACE TEMPERATURE COOLING SET POINT TO MAINTAINING A CONSTANT LEAVING COIL FACE TEMPERATURE (55°F OR LESS) AS DETERMINED BY A REFRIGERATION SUCTION PRESSURE SENSOR LOCATED ON THE FIRST STAGE OF COOLING.

3. MODULATING HOT GAS REHEAT CONTROL–IF THE SPACE TEMPERATURE FALLS BELOW ITS SETPOINT TEMPERATURE OF 75°F (ADJUSTABLE THROUGH SOFTWARE) DURING DEHUMIDIFICATION MODE AND THE FIRST STAGE OF MECHANICAL COOLING IS COMMANDED TO RUN, THE REFRIGERATION MODULATING GAS HEAT WILL BEGIN TO MODULATE OPEN TO MAINTAIN THE COOLING MODE SPACE TEMPERATURE SETPOINT.

F. ECONOMIZER CONTROL:

1. THE UNIT SHALL BE PROVIDED WITH AN ENTHALPY ECONOMIZER CYCLE. THE ECONOMIZER CONTROL SHALL MODULATE THE OUTSIDE AIR AND RETURN AIR DAMPER TO MAINTAIN SPACE TEMPERATURE WHENEVER OUTSIDE AIR ENTHALPY IS LESS THAN RETURN AIR ENTHALPY OR LESS THAN 28 BTU/LBS. THE ECONOMIZER CYCLE SHALL BE LOCKED OUT WHEN THE UNIT IS OPERATING IN THE DEHUMIDIFICATION SEQUENCE OF OPERATION, OR IF MECHANICAL COOLING IS COMMANDED TO OPERATE AND WHEN THE OUTSIDE AIR TEMPERATURE IS 75°F OR ABOVE.

2. AN ECONOMIZER LOW LIMIT WILL PREVENT THE MIXED AIR TEMPERATURE FROM FALLING BELOW THE ECONOMIZER LOW LIMIT SET POINT OF 45°F (ADJUSTABLE THROUGH SOFTWARE). IF THE MIXED AIR TEMPERATURE FALLS BELOW THE ECONOMIZER LOW LIMIT SET POINT AND MECHANICAL COOLING IS DISABLED, THE ECONOMIZER WILL MODULATE THE OUTSIDE AIR DAMPERS TO MAINTAIN THE ECONOMIZER LOW LIMIT SET POINT. DURING THIS MODE OF OPERATION, THE ECONOMIZER HAS THE ABILITY TO MODULATE THE OUTSIDE AIR DAMPER BELOW THE ECONOMIZER MINIMUM POSITION TO MAINTAIN THE ECONOMIZER LOW LIMIT TEMPERATURE SET POINT.

3. HEATING:

SPACE TEMPERATURE SENSOR SHALL MODULATE GAS FURNACE CONTROL VALVE TO MAINTAIN 70°F (ADJUSTABLE AND RESETTABLE THROUGH SOFTWARE), SPACE TEMPERATURE SETPOINT.

G. HEAT RECOVERY:

1. THE ROTARY AIR-TO-AIR HEAT RECOVERY WHEEL SHALL OPERATE WHEN OUTSIDE AIR IS REQUIRED. THE HEAT WHEEL CONTROLS SHALL INCLUDE FROST CONTROL, CLEANING CYCLE, AND ROTATIONAL DETECTOR. THE HEAT WHEEL SHALL RUN AT FULL SPEED EXCEPT AT OUTSIDE AIR TEMPERATURES OF 55°F–75°F (ADJ–ECONOMIZER OPERATION) AND WHEN FROST OF THE WHEEL MAY OCCUR AS DETERMINED BY RELIEF AIR TEMPERATURE SENSOR AND HEAT WHEEL DIFFERENTIAL PRESSURE SENSOR. THE ENERGY WHEEL VARIABLE SPEED DRIVE SHALL JOG THE WHEEL OR MODULATE WHEEL SPEED TO PREVENT FROSTING.

2. THE HEAT WHEEL ACTS AS THE FIRST STAGE OF HEATING OR COOLING, WHEN THE UNIT IS PLACED IN OCCUPIED MODE, THE SUPPLY FAN RUN STATUS IS CONFIRMED AND THERE IS A CALL FOR MECHANICAL HEATING OR COOLING, THE HEAT WHEEL IS COMMANDED TO RUN. THE HEAT WHEEL SHALL RUN AT FULL SPEED WHENEVER THE OUTSIDE AIR TEMPERATURE IS HIGHER THAN THE RETURN AIR TEMPERATURE WHEN OPERATING IN THE COOLING MODE. THE HEAT WHEEL SHALL BE VARY IN SPEED DURING THE HEATING MODE TO MAINTAIN SPACE TEMPERATURE. WHEN ADDITIONAL HEAT IS REQUIRED, THE GAS FIRED FURNACE SHALL BE ENERGIZED. IF THE UNIT IS IN ECONOMIZER MODE OR THERE IS NOT A CALL FOR EITHER MECHANICAL HEATING OR COOLING (IE ECONOMIZER MODE) THE HEAT WHEEL SHALL CONTINUOUSLY ROTATE AT MINIMUM SPEED TO MINIMIZE RECOVERY EFFECTIVENESS. IF THE EXHAUST AIR TEMPERATURE FALLS BELOW ITS TEMPERATURE SETPOINT THE HEAT WHEEL DIFFERENTIAL PRESSURE INCREASES AND RELIEF FAN RUN STATUS IS CONFIRMED, THE HEAT WHEEL WILL OPERATE IN DEFROST MODE. DURING THIS MODE OF OPERATION, THE HEAT WHEEL WILL OPERATE IN THE DEFROST MODE TO PREVENT ANY ICE BUILDUP.

I. OUTSIDE AIR:

1. THE MINIMUM OUTSIDE AIR FLOW RATE SHALL BE 25% (ADJUSTABLE THROUGH SOFTWARE) OF THE SCHEDULED MINIMUM OUTSIDE AIR FLOW RATE. THE SPACE CARBON DIOXIDE SENSOR SHALL MODULATE OUTSIDE AIR DAMPER OPEN TO THE SCHEDULED MINIMUM OUTSIDE AIR FLOW RATE AS REQUIRED TO MAINTAIN A SPACE CO2 LEVEL THAT IS THE LESSER OF THE FOLLOWING:
   a. A 700 PPM (ADJUSTABLE) DIFFERENCE BETWEEN THE OUTSIDE AIR CO2 LEVEL AND THE SPACE CO2 LEVEL.
   b. A SPACE CO2 LEVEL OF 1200 PPM (ADJUSTABLE).
   c. PROVIDE AN ALARM WHEN CO_2 LEVELS EXCEED 10% OF SETPOINT.

2. OUTSIDE AIR FLOW MEASURING STATION SHALL MEASURE OUTSIDE AIR FLOW RATE TO MAINTAIN MINIMUM SETPOINTS.

J. FAN SPEED CONTROL:

1. SUPPLY AIR FAN SHALL BE CONTROLLED TO MAINTAIN SPACE TEMPERATURE THROUGH ITS BUILT CONTROLS. THE SUPPLY FAN SHALL MODULATE BETWEEN 50% (ADJUSTABLE THROUGH SOFTWARE) TO 100% OF THE SCHEDULED AIR FLOW RATE. SUPPLY AIR TEMPERATURE SHALL BE LIMITED TO 55°F – 90°F (ADJUSTABLE THROUGH SOFTWARE) AS RESET BY THE SPACE TEMPERATURE SENSOR. WHEN THE SUPPLY AIR LOW OR HIGH TEMPERATURE SETPOINT IS REACHED AND THE SPACE TEMPERATURE RISES ABOVE (COOLING) OR FALLS BELOW (HEATING) ITS SPACE TEMPERATURE, THE SUPPLY AIR FLOW TO THE SPACE SHALL INCREASE TO MAINTAIN THE SPACE TEMPERATURE SETPOINT.

2. THE RELIEF AIR FAN SHALL VARY ITS FAN SPEED TO MAINTAIN A SLIGHTLY POSITIVE BUILDING PRESSURE THROUGH DIFFERENTIAL PRESSURE CONTROLLER.

3. UNOCCUPIED CYCLE

A. GENERAL:

1. THE CONDENSING UNIT SHALL DE-ENERGIZE AND AFTER A FIVE MINUTE TIME DELAY THE SUPPLY FAN, ASSOCIATED RELIEF FAN, AND HEAT RECOVERY WHEEL SHALL BE DE-ENERGIZED. OUTSIDE AIR DAMPER AND RELIEF AIR DAMPER SHALL BE CLOSED, THE GAS FURNACE SHALL BE DEENERGIZED AND RETURN AIR DAMPER SHALL BE OPEN. SPACE TEMPERATURE SENSOR SHALL BE RESET TO 55°F (ADJUSTABLE) IN THE HEATING MODE.

B. HEATING:

1. HEATING SETBACK TEMPERATURE SHALL BE MAINTAINED BY CYCLING THE SUPPLY FAN AS RECIRCULATING UNIT HEATER. WHEN THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED SETPOINT OF 55°F (ADJUSTABLE), THE SUPPLY FAN SHALL START AND FULL HEATING SHALL BE ENABLED. HEATING IS DISABLED WHEN SPACE TEMPERATURE REACHES 2°F ABOVE SPACE TEMPERATURE SETPOINT. THE SUPPLY FAN SHALL DE-ENERGIZE AFTER THE TIME DELAY TIMES OUT. WHEN OUTSIDE AIR TEMPERATURE FALLS BELOW 20°F (ADJUSTABLE THROUGH SOFTWARE) THE UNOCCUPIED SPACE TEMPERATURE SHALL BE RESET TO ITS OCCUPIED TEMPERATURE SETPOINT. THIS CONTROL SEQUENCE SHALL BE ENABLED/DISABLED THROUGH THE EMS.

C. MECHANICAL COOLING:

1. MECHANICAL COOLING IS DISABLED. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED COOLING TEMPERATURE SETPOINT OF 85°F (ADJUSTABLE THROUGH SOFTWARE), THE UNIT COOLING NIGHT CYCLE MODE IS ENABLED. ONCE THE SUPPLY FAN RUN STATUS IS CONFIRMED, THE UNIT OPERATES WITH THE ECONOMIZER DISABLED AND SEQUENTIALLY ENABLES 100% MECHANICAL COOLING CAPACITY. ONCE THE SPACE TEMPERATURE FALLS 2°F (ADJUSTABLE THROUGH SOFTWARE) BELOW THE SPACE UNOCCUPIED COOLING TEMPERATURE SETPOINT, THE COOLING NIGHT CYCLE MODE IS DISABLE. THE SUPPLY FAN IS DISABLED AFTER 120 SECONDS TIME DELAY TO ALLOW FOR MECHANICAL UNLOADING. THE UNOCCUPIED COOLING SEQUENCE OF OPERATION SHALL BE ENABLED/DISABLED BY A MANUAL SOFTWARE SELECTOR SWITCH THROUGH THE EMS.

4. PRE/POST PURGE

A. PROVIDE A PRE AND POST PURGE BEFORE AND AFTER OCCUPANCY . WHEN ENABLED THROUGH THE EMS THE UNIT SHALL OPERATE IN THE OCCUPIED CYCLE FOR 2 HOURS (ADJUSTABLE THROUGH SOFTWARE) BEFORE AND AFTER OCCUPANCY.

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ISSUE DATES	DESCRIPTION:
DATE:	
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ # : 22-CSD-04 DRAWN BY : ALBAN

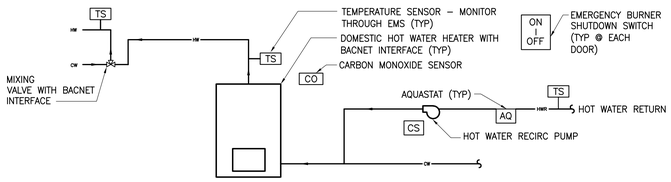
SHEET TITLE:

SZVF AIR HANDLING UNIT CONTROL DIAGRAM

SHEET NUMBER:

M8.1

BID SET



SEQUENCE OF OPERATION

1. WHENEVER RECIRCULATING WATER TEMPERATURE FALLS BELOW ITS SETPOINT (130F – ADJUSTABLE) AS SENSED BY AQUASTAT, THE RECIRCULATION PUMP SHALL BE ENERGIZED TO RUN. PUMP SHALL BE DE–ENERGIZED WHENEVER THE TEMPERATURE IS ABOVE ITS SETPOINT TEMPERATURE (140F – ADJUSTABLE).
2. INTERLOCK EMERGENCY SHUT–DOWN SWITCH WITH BURNER TO SHUT DOWN WHEN SWITCH IS INDEXED TO OFF.
3. PROVIDE ALL INTERLOCKS PER ASME–CSD–1 AND STATE OF MARYLAND BOILER AND PRESSURE VESSEL SAFETY ACT AND REGULATIONS.
4. PROVIDE START–STOP (OCCUPIED–UNOCCUPIED) SCHEDULE OF RECIRC. PUMPS, MONITOR THE DISCHARGE WATER TEMPERATURE AND ALARM ON HIGH TEMPERATURE. PROVIDE STATUS AND PUMP FAILURE ALARM THROUGH THE EMS.
5. THE EMS SHALL DETERMINE THE OCCUPIED/UNOCCUPIED (START/STOP) MODE OF THE HOT WATER HEATER SYSTEM.
6. INTEGRATE DOMESTIC WATER HEATER AND DIGITAL MIXING VALVE POINTS.
7. PROVIDE CARBON MONOXIDE SENSOR. INTERLOCK WITH FIRE ALARM SYSTEM AND EMS TO ALARM WHEN ITS SETPOINT IS REACHED. THE EMS SHALL DE–ENERGIZE THE WATER HEATERS(S) WHEN CARBON MONOXIDE IS SENSED.

DOMESTIC WATER HEATER CONTROL DIAGRAM

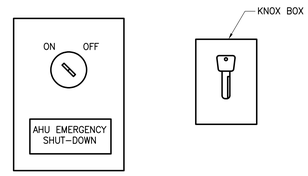
SCALE: NONE

SEQUENCE OF OPERATION

1. SPACE TEMPERATURE SENSOR SHALL ENERGIZE/DEENERGIZE THE FAN AND THE ELECTRIC HEATER TO MAINTAIN SPACE TEMPERATURE SETPOINT OF 65'F (ADJUSTABLE THROUGH SOFTWARE).
2. SPACE TEMPERATURE SHALL BE CONTROLLED AND MONITORED THROUGH THE EMS AND ALARMED WHEN LOW SPACE TEMPERATURE IS SENSED.

TYPICAL UNIT HEATER CONTROL DIAGRAM

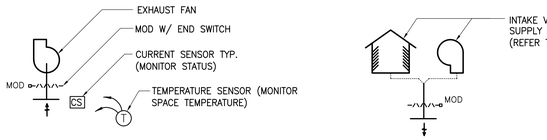
SCALE: NONE



NOTE:
1. PROVIDE A SINGLE SWITCH TO SHUT DOWN ALL EQUIPMENT INDICATED IN THE CONTROL SEQUENCE.
2. INSTALL NEXT TO FIRE ALARM PANEL IN ENTRY LEVEL VESTIBULE
3. REFER TO ENTRANCE LEVEL FLOOR PLAN DRAWING M8.11 FOR LOCATIONS. COORDINATE EXACT LOCATION IN THE FIELD WITH THE CONSTRUCTION MANAGER.

EMERGENCY FAN SHUT DOWN SWITCH

SCALE: NONE

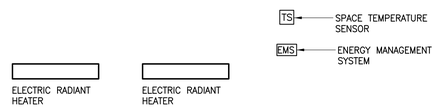


SEQUENCE OF OPERATION

1. VENTILATION: SPACE TEMPERATURE SENSOR SHALL ON A RISE IN TEMPERATURE TO 90°F (ADJ), ENERGIZE SUPPLY FAN AND ENERGIZE EXHAUST FAN. IN A FALL IN TEMPERATURE TO 85°F (ADJ), THE EXHAUST FAN SHALL DE–ENERGIZE AND THE SUPPLY FAN SHALL DE–ENERGIZE. PROVIDE A 5'F DEADBAND BETWEEN ENERGIZING/DE–ENERGIZING FANS TO PREVENT SHORT CYCLING.
2. EMS: HIGH (105'F) AND LOW (40'F) TEMPERATURE ALARMS SHALL BE ANNUNCIATED AT THE CENTRAL ENERGY MANAGEMENT SYSTEM COMPUTER. EMS SHALL MONITOR FAN STATUS.

TYPICAL ELECTRICAL EQUIPMENT ROOM AND STORAGE ROOM VENTILATION CONTROL DIAGRAM

SCALE: NONE



SEQUENCE OF OPERATION

1. SPACE TEMPERATURE SENSOR SHALL ENERGIZE/DEENERGIZE ELECTRIC RADIANT HEATERS TO MAINTAIN SPACE TEMPERATURE SETPOINT OF 70'F (ADJUSTABLE THROUGH SOFTWARE).
2. SPACE TEMPERATURE SHALL BE MONITORED THROUGH THE EMS AND ALARMED WHEN LOW SPACE TEMPERATURE IS SENSED.

TYPICAL ELECTRIC HEATING PANEL CONTROL DIAGRAM

SCALE: NONE

MISCELLANEOUS BUILDING INPUT/OUTPUT SUMMARY

BUILDING SYSTEM: MISCELLANEOUS BUILDING POINTS	INPUT: ANALOG: OUTDOOR AIR RH	DUCT TEMPERATURE	WATER TEMPERATURE	O.A. TEMPERATURE (GLOBAL)	DIFFERENTIAL PRESSURE	KW (TOTAL)	VOLTS (EACH PHASE)	AMPS (EACH PHASE)	SPACE TEMPERATURE	INPUT: BINARY: FLOW SWITCH	STATIC PRESSURE SWITCH	DIFFERENTIAL PRESSURE SWITCH	CURRENT SENSOR	SWITCH POSITION INDICATOR	STATUS	OUTPUTS: ANALOG: MODULATING ACTUATOR	E/P TRANSDUCER	VARIABLE SPEED	OUTPUTS: BINARY: CONTROL RELAY	SOLENOID	START/STOP	2–POSITION DAMPER MOD.	OUTPUTS: 3–POINT FLOATING: ACTUATOR	MOTOR STARTER RELAY	FEED/BLEED SAV	ALARMS: HIGH LIMIT	LOW LIMIT	RUN TIME	MAINTENANCE MESSAGE	TROUBLE MESSAGE	LIQUID SENSOR	FEATURES: SCHEDULED START/STOP	TEMPERATURE SETBACK/SETUP	OPTIMIZED START (ADAPT.)	DEMAND LIMITING	DUTY CYCLE	VENTILATION DELAY	ECONOMIZER CYCLE (O.B.)	H.W. RESET W/ O.A. TEMP.	VAV CONTROL	REMOTE READ/RESET	TENANT OVERRIDE	COLOR GRAPHICS	POINT LOCKOUT	TREND LOG	REMARKS
MECH & ELEC EQUIP. ROOMS (TYP)									•																	•	•					•										
MISC. EXHAUST FANS (TYP)														•						•							•	•			•										
SPLIT A/C UNIT ROOMS									•																		•														
COOLING COIL DRAIN SENSOR																											•			•		•										TYPICAL COOLING COIL

NOTE: REFER TO MISCELLANEOUS CONTROL DIAGRAMS FOR ADDITIONAL EMS MONITORING AND CONTROL POINTS.

MISCELLANEOUS INPUT/OUTPUT SUMMARY

SCALE: NONE

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ISSUE DATES

DATE:	DESCRIPTION:
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ #: 22-CSD-04 DRAWN BY: ALBAN

SHEET TITLE:

MISCELLANEOUS CONTROL DIAGRAM

SHEET NUMBER:

M8.2

BID SET

AIR HANDLING UNIT SCHEDULE

AHU NO.	SERVICE	LOCATION	SUPPLY FAN							RETURN/RELIEF FAN								COOLING COIL SYSTEM CONDITION								HG REHEAT COIL			NG FURNACE SYSTEM CONDITIONS					OUTSIDE AIR			ELECTRICAL CHARACTERISTICS			EER/IEER	WEIGHT (lbs)	SYSTEM TYPE	BASED ON (AAON)
			FAN HP	FAN RPM	STD. AIR CFM MIN.	STD. AIR CFM MAX.	FAN TYPE	FAN QTY	MAX ESP (IN H2O)	FAN HP	FAN RPM	STD. AIR CFM MIN.	STD. AIR CFM MAX.	FAN TYPE	FAN QTY	MAX ESP (IN H2O)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	MAX. FACE VEL. (FPM)	MAX. A.P.D. (IN H2O)	SENS. CAP. (MBH)	TOTAL CAP. (MBH)	EAT DB (°F)	LAT DB (°F)	TOTAL CAP. (MBH)	EAT DB (°F)	LAT DB (°F)	ELECTRICAL CHARACTERISTICS	MAX. A.P.D (IN H2O)	TOTAL CAP INPUT (MBH)	TOTAL CAP OUTPUT (MBH)	MIN. CFM	MAX. CFM	%	V/ø/Hz	MCA	MOP				
AHU–1	TEAM ROOMS	ABOVE CEILING	1.0	2441	1,000	1,000	AFPF	1	1.0	1.10	2586	1,000	1,000	AFPF	1	1.0	79	67	51	51	273	0.28	30.6	45.6	51	75	25.9	70	97	120V/1ø/60HZ	0.08	50	40	1,000	1,000	100	460/3/60	3	15	8.2/–	2,500	SZVF	V3–BRB–3–0

NOTES:
1. VAV=VARIABLE AIR VOLUME / CV=CONSTANT AIR VOLUME / MS=MULTIPLE SPEED
2. ESP = EXTERNAL STATIC PRESSURE BASED ON THE PRESSURE REQUIRED AT THE AHU DUCT CONNECTION.
3. FC = FORWARD CURVED, BIAF = BACKWARD INCLINED AIR FOIL, AFPF = AIRFOIL PLENUM FAN (SINGLE WIDTH, SINGLE INLET).
3. NATURAL GAS FURNACE CAN BE INTEGRAL TO UNIT OR BE DUCT MOUNTED.
4. PROVIDE MERV 8 PRE FILTERS AND MERV 13 FINAL FILTERS.

HEAT RECOVERY SCHEDULE

SERVICES AHU–X	HP	ENTHALPY HEAT RECOVERY DEVICE (PLATE TYPE) – SUMMER CONDITIONS									ENTHALPY HEAT RECOVERY DEVICE (PLATE TYPE) – WINTER CONDITIONS									
		SUPPLY					EXHAUST				SUPPLY					EXHAUST				
		DEVICE CFM (ENTERING)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	DEVICE CFM (ENTERING)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	DEVICE CFM (ENTERING)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	DEVICE CFM (ENTERING)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)
AHU–1	0.05	1000	95	78	79	67	1000	75	62	91	74	1000	10	9	60	52	1000	75	62	26	25

NOTES:
1. DEVICE ENTERING CFM INDICATED IS UPSTREAM OF HEAT RECOVERY DEVICE AND EXCLUDES PURGE VOLUME.
2. PROVIDE VARIABLE SPEED DRIVES AND FROST CONTROL FOR ALL ENTHALPY ROTARY TYPE HEAT RECOVERY DEVICES.
3. PLATE TYPE HEAT RECOVERY DEVICE IS IN A WRAP–AROUND POSITION.

FAN SCHEDULE

UNIT F–X	AREA SERVED	INTERLOCK	LOCATION	CHARACTERISTICS CFM	ESP (IN H2O)	FRPM	DRIVE TYPE	MOTOR HP	MOTOR TYPE	ELECTRICAL V/ø/Hz	EMERGENCY POWER	TYPE	BASED ON (GREENHECK)
1	MECH/STORAGE 127	TSTAT	ROOF	1000	0.30	1024	DIRECT	1/4	VG	115/1/60	NO	POWER ROOF VENTILATOR	G–120–VG
2	ELEC 124	TSTAT	ROOF	500	0.30	1390	DIRECT	1/10	VG	115/1/60	NO	POWER ROOF VENTILATOR	G–090–VG
3	JAN 128	SW	128	150	0.30	900	DIRECT	52 WATTS	ODP	115/1/60	NO	CEILING EXHAUST	SP–A200
4	TOILET 116	LIGHT SW	116	150	0.30	900	DIRECT	52 WATTS	ODP	115/1/60	NO	CEILING EXHAUST	SP–A200
5	TOILET 119	LIGHT SW	119	150	0.30	900	DIRECT	52 WATTS	ODP	115/1/60	NO	CEILING EXHAUST	SP–A200

NOTES:
1. TSTAT=THERMOSTAT; HSTAT=HUMIDISTAT; SW=SWITCH; SP=STATIC PRESSURE, TD=WITH 15 MINUTE TIME DELAY ZONE=ZONE OCC/UNOCC MODE
2. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH FOR ALL EXHAUST FANS, COORDINATING REQUIREMENTS AND INTERLOCKS WITH ELECTRICAL
3. REFER TO CONTROL DIAGRAMS FOR SPECIFIC SEQUENCES OF OPERATION AND INTERLOCK ARRANGEMENTS
4. PROVIDE SPEED CONTROLLER FOR ALL DIRECT DRIVE FANS

ELECTRIC UNIT HEATER SCHEDULE

UNIT EUH–X	AREA SERVED	SUPPLY FAN CFM	SUPPLY FAN RPM	ELECTRIC COIL CHARACTERISTICS V/ø/Hz	TOTAL CAP. (BTU)	TOTAL CAP. (KW)	AMPS	EMERGENCY POWER	TYPE	BASED ON MODEL (BERKOL)
1	EAGLES NEST 117	350	1600	460/3/60	10.2	3	3.6	NO	HORIZONTAL	HUHAA 348

NOTES:
1. PROVIDE CUSTOM COLOR AS SELECTED BY ARCHITECT
2. ALL UNITS SHALL BE PROVIDED WITH A DPST DISCONNECT SWITCH
3. ALL UNITS SHALL BE PROVIDED WITH WALL/CEILING BRACKET
4. ALL UNITS SHALL BE PROVIDED WITH FAN GUARD AND SUMMER FAN SWITCH

ELECTRIC RADINAT CEILING PANEL SCHEDULE

ERCP–X	AREA SERVED	SIZE (L"xW")	TOTAL CAP. (WATTS)	AMPS	ELEC. CHARC. (V/ø/Hz)	REMARKS (BASED ON)
ERCP–1	WOMEN 118	24x24	310	2.6	120/1/60	BERKO CP311F
ERCP–2	MEN 121	24x24	310	2.6	120/1/60	BERKO CP311F
ERCP–3	TOILET 119	24x24	310	2.6	120/1/60	BERKO CP311F
ERCP–4	TOILET 116	24x24	310	2.6	120/1/60	BERKO CP311F
ERCP–5	JAN 128	24x24	310	2.6	120/1/60	BERKO CP311F

AIR COOLED CONDENSING UNIT SCHEDULE (AIR HANDLING UNIT)

UNIT	AREA SERVED	UNIT LOCATION	COOLING CAPACITY (45°)(MBH)	OAT (°F)	ELECTRICAL EER/IEER	ELECTRICAL MCA	ELECTRICAL MOP	ELECTRICAL V/ø/Hz	WEIGHT (LBS)	EMER. POWER	BASED ON AAON
ACCU–1	TEAM ROOMS	GRADE	45.0	95	11.6/–	11	15	480/3/60	500	NO	CFA–004–A–A

NOTES:
1. PROVIDE HOT GAS REHEAT FOR ALL UNITS.
2. COORDINATE ALL CAPACITY REQUIREMENTS WITH INDOOR AIR HANDLING UNITS.
3. PROVIDE HAIL GUARD FOR ALL UNITS.
4. PROVIDE PHASE LOSS PROTECTION.
5. COMPRESSOR SHALL BE DIGITAL OR VARIABLE SPEED SCROLL TYPE.
6. INSTALL REFRIGERANT PIPING AND ACCESSORIES PER THE MANUFACTURERS RECOMMENDATIONS.
7. COOLING CAPACITIES ARE BASED ON A MAXIMUM OF 45°F SATURATED SUCTION TEMPERATURE.

DUCTLESS SPLIT SYSTEM SCHEDULE

UNIT SS–X	AREA SERVED	LOCATION EVAPORATOR	LOCATION CONDENSER	MAX CFM	REFRIGERANT TYPE	COOLING CAPACITY (BTUs)	SEER/EER	HEATING CAPACITY (BTUs)	INDOOR CONDITIONS EAT DB (°F)	INDOOR CONDITIONS EAT WB (°F)	OUTDOOR EAT DB (°F)	ELECTRICAL V/ø/Hz	ELECTRICAL MCA	ELECTRICAL EMERGENCY POWER	INDOOR UNIT TYPE	INDOOR UNIT SIZE (H x W x D)	OUTDOOR UNIT MAX OPERATING WT (LBS)	BASED ON DAIKIN EVAPORATOR	BASED ON DAIKIN CONDENSER	BASED ON DAIKIN SPLIT SYSTEM CONDENSING UNIT No.
SS–1	125 – THICKETS	125	GRADE	500	R454B	18,000	16.9/11.9	13,700	80	67	95	208/1/60	16.5	NO	WALL MOUNTED	11–3/8 x 41–3/8 x 9–1/4	172	FAQ18TAVJU	RZQ18TAVJU	SSCU–1

NOTES:
1. BASED ON DAIKIN WITH INVERTER DRIVEN COMPRESSOR R454B REFRIGERANT AND DEHUMIDIFICATION MODE. OR EQUAL OF MITSUBISHI ELECTRIC ADVANCED MICROPROCESSOR CONTROLLER
165'F REFRIGERANT LINE LENGTH. 100' LIFT.
2. FOR CONDENSING UNITS LOCATED ON ROOF. PROVIDE HAIL GUARD AND WIND BAFFLE.
3. FOR COOLING ONLY SPLIT SYSTEMS, PROVIDE LOW AMBIENT CONTROL (COOLING TO 0'F OUTDOOR AIR TEMPERATURE) AND WIND BAFFLE.
4. SPLIT SYSTEMS LOCATED IN IDF/MDF SPACES SHALL HAVE TEMPERATURE SENSOR WITH HI–TEMP ALARM FURNISHED BY THE ATC CONTRACTOR.
5. ALL WALL MOUNTED SPLIT SYSTEMS SHALL BE PROVIDE WITH INTEGRAL CONDENSATE PUMP

AIR DEVICE SCHEDULE

No. (S)	CFM MAX	NECK SIZE	COLLAR ø SIZE	MAX NC	TYPE (SEE SPEC.)
SUPPLY AIR DEVICE					
S1	125	6x6	6"ø	18	TITUS TDC
S2	230	9x9	8"ø	18	TITUS TDC
S3	400	12x12	10"ø	18	TITUS TDC
S4	600	15x15	12"ø	18	TITUS TDC
S5	800	18x18	14"ø	18	TITUS TDC
S6	1000	21x21	16"ø	18	TITUS TDC
S7	125	6x6	–	18	TITUS TDC
S8	230	9x9	–	18	TITUS TDC
S9	400	12x12	–	18	TITUS TDC
S10	600	15x15	–	18	TITUS TDC
S11	800	18x18	–	18	TITUS TDC
S12	1000	21x21	–	18	TITUS TDC
S13	200	12x12/8"ø	–	18	TITUS TDC
S14	270	12x12/10"ø		18	TITUS TDC
S15	500	15x15/12"ø	–	18	TITUS TDC
S16	150	8x6	–	18	TITUS 300RS
S17	200	12x6	–	18	TITUS 300RS
S18	315	18x6	–	18	TITUS 300RS
S19	350	12x10	–	18	TITUS 300RS
S20	450	24x6	–	18	TITUS 300RS
S21	550	18x10	–	18	TITUS 300RS
S22	650	18x12	–	18	TITUS 300RS
S23	725	24x10	–	18	TITUS 300RS
S24	850	24x12	–	18	TITUS 300RS
S25	950	24x14	–	18	TITUS 300RS
S26	950	36x10	–	18	TITUS 300RS
S27	1100	36x12	–	18	TITUS 300RS
S28	1300	42x12	–	18	TITUS 300RS
S29	1700	36x18	–	18	TITUS 300RS
S30	2000	42x18	–	18	TITUS 300RS
S31	150	12x4	–	18	TITUS S300FS
S32	200	12x6	–	18	TITUS S300FS
S33	475	36x6	–	18	TITUS S300FS
S34	450	18x8	–	18	TITUS S300FS
S35	670	18x12	–	18	TITUS S300FS
S36	850	24x12	–	18	TITUS S300FS
S37	950	30x12	–	18	TITUS S300FS
S38	1000	36x12	–	18	TITUS S300FS
S39	1500	36x16	–	18	TITUS S300FS
S40	390	12"ø	–	18	TITUS XC–310
S41	500	14"ø	–	18	TITUS XC–310
S42	650	16"ø	–	18	TITUS XC–310
S43	800	18"ø	–	18	TITUS XC–310
RETURN AIR DEVICE					
R1	100	6x6	–	18	TITUS 350RL
R2	300	10x10	–	18	TITUS 350RL
R3	450	12x12	–	18	TITUS 350RL
R4	800	16x16	–	18	TITUS 350RL
R5	1000	18x18	–	18	TITUS 350RL
R6	1300	20x20	–	18	TITUS 350RL
R7	1660	22x22	–	18	TITUS 350RL
R8	3300	46x22	–	18	TITUS 350RL
R9	650	18x12	–	18	TITUS 350RL
R10	1000	30x12	–	18	TITUS 350RL
R11	1250	36x12	–	18	TITUS 350RL
R12	900	22x10	–	18	TITUS 50F
R13	1900	22x22	–	18	TITUS 50F
R14	4000	46x22	–	18	TITUS 50F
R15	1600	20x20	–	18	TITUS 50FF
R16	3400	42x20	–	18	TITUS 50FF
R17	700	24x12	–	18	TITUS 33RS
R18	1200	24x24	–	18	TITUS 33RS
R19	1700	36x24	–	18	TITUS 33RS
R20	2600	36x36	–	18	TITUS 33RS
R21	3100	42x36	–	18	TITUS 33RS
R22	4600	48x36	–	18	TITUS 33RS
R23	3600	42x42	–	18	TITUS 33RS
R24	4650	48x48	–	18	TITUS 33RS
R25	350	18x6	–	18	TITUS 350RL
R26	685	22x10	–	18	TITUS 350RL
R27	2750	32x32	–	18	TITUS 350RL
R28	1610	36x14	–	18	TITUS 350RL
R29	5500	42x38	–	18	TITUS 350RL
R30	2110	36x18		18	TITUS 350RL
R31	300	10x10	–	18	TITUS 350RLF
R32	450	12x12	–	18	TITUS 350RLF
R33	800	16x16	–	18	TITUS 350RLF
R34	1660	22x22	–	18	TITUS 350RLF
EXHAUST AIR DEVICE					
E1	100	6x6	–	18	TITUS 350RL
E2	150	8x6	–	18	TITUS 350RL
E3	300	12x8	–	18	TITUS 350RL
E4	325	10x10	–	18	TITUS 350RL
E5	450	12x12	–	18	TITUS 350RL
E6	750	18x12	–	18	TITUS 350RL
E7	800	16x16	–	18	TITUS 350RL
E8	900	24x12	–	18	TITUS 350RL
E9	1050	18x18	–	18	TITUS 350RL
E10	1300	20x20	–	18	TITUS 350RL
E11	1550	22x22	–	18	TITUS 350RL
E12	1750	30x18	–	18	TITUS 350RL
E13	2450	42x18	–	18	TITUS 350RL
E14	2750	42x20	–	18	TITUS 350RL
E15	3300	46x22	–	18	TITUS 350RL

NOTES:
1. ALL SUPPLY AIR DIFFUSERS SHALL BE 4–WAY BLOW UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
2. ALL SUPPLY AIR REGISTERS SHALL BE DOUBLE DEFLECTION WITH FRONT BLADES PARALLEL TO THE SHORT DIMENSION (VERTICAL).
3. PROVIDE 24x24 OR 48x24 MODULE FOR ALL LAY–IN SUPPLY, RETURN AND EXHAUST AIR DEVICES. TRIM MODULE AS NECESSARY TO FIT INTO GRID IF LESS THAN 24x24 OR 48x24 IS AVAILABLE.
4. EGGCRATE REGISTERS SHALL HAVE ½"x½"x1" DEEP ALUMINUM CORES.
5. EXHAUST REGISTERS CONNECTED TO STAINLESS STEEL DUCTWORK SHALL BE CONSTRUCTED OF STAINLESS STEEL.
6. FOR SUPPLY AIR DEVICES CONNECTED TO THE BOTTOM OF BRANCH DUCTS (ie SERVING MORE THAN ONE AIR DEVICE) PROVIDE DAMPER WITH GRID, TITUS AG–65 OR EQUAL.
7. NOT ALL AIR DEVICES SCHEDULED MAY BE USED.
8. COLLAR SIZE REFERS TO RUNNOUT CONNECTION TO SOUND LINED PLENUM BOX FABRICATED BY THE SHEET METAL CONTRACTOR CONNECTING TO THE DIFFUSER NECK. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
9. PROVIDE AIR EXTRACTOR FOR ALL SIDEWALL SUPPLY REGISTERS.
10. PROVIDE ALUMINUM CONSTRUCTION FOR ALL AIR DEVICES LOCATED IN LOCKER ROOMS, KITCHEN, ROOMS WITH SHOWERS AND ALL SCIENCE LABS.
11. ALL TDCA TYPE DIFFUSERS SHALL BE PROVIDED WITH ADJUSTABLE VANES, ACCESSIBLE FROM THE DIFFUSER FACE, WITH THE DISCHARGE PATTERN SET TO THE VERTICAL POSITION.
12. PROVIDE FILTER FOR ALL FILTER RETURN AIR GRILLES.

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CONSULTANT:

NEW RESTROOMS AND TICKET Bbooth

CHICHESTER HIGH SCHOOL

CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES

DATE:	DESCRIPTION:
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ #: 22-CSD-04 DRAWN BY: ALBAN

SHEET TITLE:

MECHANICAL EQUIPMENT SCHEDULES

SHEET NUMBER:

M9.1

BID SET

PLUMBING NOTES

1. COORDINATE WORK BETWEEN DISCIPLINES
2. CONDENSATE FROM MECHANICAL EQUIPMENT COILS SHALL BE PIPED TO THE STORM DRAIN PIPING UNLESS OTHERWISE INDICATED ON DRAWINGS.
3. REFER TO SECTIONS OF ARCHITECTURAL AND MECHANICAL DRAWINGS FOR PIPE ROUTING THROUGH THE FACILITY.
4. COORDINATE PLUMBING PIPING ENCLOSURES WITH ARCHITECTURAL DRAWINGS PRIOR TO SETTING PIPING BELOW SLABS.
5. COORDINATE ALL FLOOR, SINK AND TRENCH DRAIN LOCATIONS WITH MECHANICAL EQUIPMENT PLACEMENT PRIOR TO SETTING SUCH DRAINS. DRAINS SHALL BE LOCATED AS CLOSE TO EQUIPMENT DRAIN POINTS AS POSSIBLE.
6. PROVIDE SHUTOFF VALVES IN DOMESTIC WATER SYSTEM BRANCH LINES SERVING TWO OR MORE FIXTURES.
7. INSTALL PIPING SO VALVES ARE ACCESSIBLE. ALL SHUT-OFF VALVES SHALL BE BALL TYPE ONLY.
8. WHERE HOT AND COLD WATER PIPING DROPS INTO PIPE CHASE THE SIZE SHOWN FOR THE PIPE DROPS SHALL BE USED TO THE LAST FIXTURE.
9. ITEMS SUCH AS ACCESS DOORS, RISE AND DROPS IN PIPING, ETC., ARE INDICATED ON THE DRAWINGS FOR CLARITY OR A SPECIFIC LOCATION REQUIREMENT AND SHALL NOT BE INTERPRETED AS THE EXTENT OF THE REQUIREMENTS FOR THESE ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR THESE ITEMS AS REQUIRED ELSEWHERE IN THE CONTRACT DOCUMENTS.
10. ALL PLUMBING FIXTURES SHALL HAVE A MINIMUM AIR GAP FROM THE LOWEST END OF A POTABLE WATER OUTLET TO THE FLOOD RIM OR LINE OF THE FIXTURE INTO WHICH IT DISCHARGES. THE AIR GAP SHALL BE A MINIMUM OF TWICE THE EFFECTIVE OPENING OF A POTABLE WATER OUTLET UNLESS THE OUTLET IS A DISTANCE LESS THAN 3 TIMES THE EFFECTIVE OPENING OF AWAY FROM A WALL OR SIMILAR VERTICAL SURFACE IN WHICH CASE THE MINIMUM REQUIRED AIR GAP SHALL BE 3 TIMES THE EFFECTIVE OPENING OF THE OUTLET.
11. FIXTURES SUBJECT TO INTERMITTENT OR CONTINUOUS PRESSURE BACK-SIPHONAGE SHALL BE PROVIDED WITH A BACKFLOW PREVENTION DEVICE, (ASSE PER AHJ).
12. FIXTURES WHICH DISCHARGE INDIRECTLY INTO A FLOOR DRAIN OR FLOOR SINK SHALL DISCHARGE WITH AN AIR GAP EQUAL TO TWICE THE DIAMETER OF THE FIXTURE DISCHARGE PIPE.
13. INSULATE ALL HORIZONTAL SECTIONS OF STORM WATER AND STORM WATER OVERFLOW PIPING.
14. COORDINATE SETTING AND ELEVATION OF KITCHEN FLOOR SINKS AND DRAINS WITH LOCAL PLUMBING INSPECTOR.
15. ALL PIPING NOT INDICATED IN CHASES SHALL BE LOCATED ABOVE CEILING AS HIGH AS POSSIBLE. COORDINATE ROUTING OF PIPING WITH OTHER DISCIPLINES.
16. PROVIDE SINK TAILPIECE WITH DISHWASHER DRAIN CONNECTION AND PROVIDE HOT WATER SUPPLY CONNECTION TO DISHWASHER AT REQUIRED LOCATIONS AS INDICATED PER ARCHITECTURAL DRAWINGS. INSTALL PLUMBING UTILITIES AS REQUIRED PER MANUFACTURERS RECOMMENDATIONS.
17. PROVIDE WATER HAMMER ARRESTORS WHERE QUICK CLOSING VALVES ARE INSTALLED. INSTALLATION AND QUANTITY SHALL BE PER CONTRACT DRAWINGS AND MANUFACTURERS RECOMMENDATIONS. WATER HAMMER ARRESTORS SHALL BE ACCESSIBLE FOR MAINTENANCE.
18. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR PROTECTING ALL DRAINS DURING THE CONSTRUCTION AND RETURNING THEM TO FREE FLOWING AND IN WORKING CONDITIONS. THE CONTRACTOR SHALL GUARANTEE ALL DRAINS FOR AT LEAST 90 DAYS AFTER FINAL COMPLETION OF THE BUILDING.
19. IF SITE WORK PIPING IS INSTALLED AT THE SAME TIME THE PLUMBING CONTRACTOR IS INSTALLING PIPING, THE CONTRACTOR SHALL MAKE THE CONNECTIONS TO THE SITE PLUMBING.
20. AFTER PRESSURE TESTS ARE COMPLETE ALL SANITARY AND STORM WATER PIPING 3" AND LARGER LOCATED UNDER SLAB SHALL BE VIDEOTAPED BY A THIRD PART TO THE FIRST MANHOLE OR CLEAN-OUT LOCATED OUTSIDE THE BUILDING.
21. ALL DOMESTIC WATER PIPING, VALVES, TANKS ETC IN ITS ENTIRETY SHALL BE NSF 61 CERTIFIED AND COMPLY WITH HB 372 LEAD FREE REQUIREMENTS.
22. ALL ADA ACCESSIBLE SINKS AND LAVS SHALL UTILIZE OFFSET DRAIN PIPING AND ALL EXPOSED PIPING SHALL BE PROVIDED WITH PRE MANUFACTURED INSULATION KITS.
23. PROVIDE TRAP TRAP SEALS FOR ALL FLOOR DRAINS.
24. PIPE ALL GAS VENTS (ie REGULATORS) TO THE EXTERIOR. VENT LIMITERS ARE PROHIBITED.

PLUMBING SYSTEM SUMMARY

PLUMBING FIXTURES

33 TOTAL PLUMBING FIXTURES - 221.25 TOTAL FIXTURE UNITS:

- 19 WATER CLOSETS - 190 FIXTURE UNITS
- 3 URINALS - 15 FIXTURE UNITS
- 9 LAVATORIES - 13.5 FIXTURE UNITS
- 1 SERVICE SINKS - 2.25 FIXTURE UNITS
- 1 WATER COOLERS - 0.5 FIXTURE UNITS

DOMESTIC WATER DEMAND

DOMESTIC HOT WATER DEMAND - 15 GPM

DOMESTIC COLD WATER DEMAND - 100 GPM

TOTAL DOMESTIC WATER DEMAND - 100 GPM

DOMESTIC HOT WATER LOAD

TOTAL HOT WATER LOAD = 76,900 BTU:

- (1) HOT WATER GENERATOR AT 76,900 BTU

GAS CONSUMPTION

50 CFH - AHU-1
76 CFH - DOMESTIC WATER
126 CFH - TOTAL

PLUMBING LEGEND

SYMBOLS

SYMBOL	DEFINITION
	COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
—F—	FIRE LINE
—SP—	SPRINKLER LINE
—SAN—	SANITARY
—V—	VENT
—SW—	STORM WATER
—OF—	OVERFLOW (STORM WATER)
—PD—	PUMPED DISCHARGE
—CD—	CONDENSATE DRAIN
—///	FOUNDATION DRAIN
—AW—	ACID RESISTANT WASTE
—AV—	ACID RESISTANT VENT
—G—	NATURAL GAS
	BALL VALVE
	PIPING BELOW GRADE OR SLAB
	BUTTERFLY VALVE
	UNION
	GATE VALVE
	GLOVE VALVE
	BALANCING VALVE
	PLUG VALVE
	REDUCED PRESS. BACKFLOW PREVENTER
	PRESSURE REDUCING VALVE
	CHECK VALVE
	DOUBLE DETECTOR CHECK VALVE
	BACKWATER VALVE
	FLOOR CLEANOUT
	WALL CLEANOUT
	PIPE UP
	PIPE UP & DN
	PIPE DOWN
	SIGHT GLASS
	FLOAT VALVE
	FLOOR DRAIN
	FLOOR DRAIN WITH TRAP PRIMER
	FLOOR SINK
(#)	ROOF DRAIN (W/ SQ.FT INDICATED)
	TRAP (ELEVATION)
	VENT THROUGH ROOF (ELEVATION)
	VENT THROUGH ROOF (PLAN)
	MIXING VALVE
	METER (FLUID OR GAS)
"	INCHES
'	FEET
	HOSE BIBB (PLAN)
	NON-FREEZE WALL HYDRANT
	HOSE BIBB (ELEVATION)
	HOSE END DRAIN
TS	OUTSIDE STEM & YOKE VALVE
TS	NON-RISING STEM & YOKE
FS	FLOW SWITCH
TS	TAMPER SWITCH
PS	PRESSURE SWITCH
	FIRE DEPT HOSE CONNECTION
FS	FLOOR CONTROL VALVE ASSEMBLY
	'Y' STRAINER
	WATER HAMMER ARRESTOR
	ACCESS PANEL
	POINT OF CONN. TO SITE UTILITIES
	SQUARE FOOTAGE
	DUPLEX GAS OUTLET
	ECCENTRIC REDUCER
	CONCENTRIC REDUCER
	FLEXIBLE CONNECTION
	CAPPED PIPE
	BLIND FLANGE
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	BLOW DOWN VALVE (W/ HOSE END)
T	PRESSURE/TEMP. RELIEF VALVE
△P	PRESSURE DIFFERENCE
△T	TEMPERATURE DIFFERENCE
	CENTERLINE
	THERMOMETER
	PRESSURE GAUGE W/ NEEDLE VALVE
⌀	DIAMETER (OR ELECTRICAL PHASE)
	BACKWATER VALVE W/ ACCESS COVER
	SOLENOID VALVE
	SLOPE OF PIPE (WITH % SLOPE SHOWN)
	DIRECTION OF FLOW
	FUNNEL CONNECTION @ FLOOR DRAIN
S-A-1	SANITARY/WATER RISER DESIGNATION
	CONNECT TO EXISTING
	DEMOLITION ENDS HERE
#	DRAWING NOTE DESIGNATION

NOTE:
NOT ALL SYMBOLS MAY BE USED.

ABBREVIATIONS

SYMBOL	DEFINITION
140°	140° DOMESTIC HOT WATER
140°R	140° DOMESTIC HOT WATER RETURN
AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
ANC	ANCHOR
AP	ACCESS PANEL
APPROX	APPROXIMATE
AQ	AQUASTAT
AV	ACID VENT
AW	ACID WASTE
BDV	BLOW DOWN VALVE
BF	BLIND FLANGE
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOP	BOTTOM OF PIPE
BOTT	BOTTOM
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BWV	BACKWATER VALVE W/ ACCESS COVER
CAP	CAPACITY
CD, COND	CONDENSATE DRAIN
CI	CAST IRON
CLG	CEILING
CO	CLEANOUT
CONN°	CONNECT
CONC	CONCRETE
CU FT	CUBIC FEET
CW	COLD WATER
CX	CONNECT TO EXISTING
DDC	DOUBLE DETECTOR CHECK VALVE
DFU	DRAINAGE FIXTURE UNITS
DIA	DIAMETER
DISH	DISCHARGE
DN	PIPE DOWN
DS	DOWN SPOUT W/ BOOT
DST	DEEP SEAL TRAP
DWG	DRAWING
ELEC	ELECTRIC
ELEV	ELEVATION
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
F	FIRE LINE
FC	FUNNEL CONNECTION @ FD
FCO	FLOOR CLEANOUT
FCVA	FLOOR CONTROL VALVE ASSEMBLY
FD	FLOOR DRAIN
FDV	FIRE DEPT. HOSE CONNECTION
FS	FLOW SWITCH
FT	FEET
FT. HD	FEET OF HEAD
G	GAS
GA	GAUGE
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HED	HOSE END DRAIN
HOR	HORIZONTAL
HP	HORSEPOWER
HT	HEAT TRAP
HW	HOT WATER (120°)
HWR	HOT WATER RETURN (120°)
HYD	HYDRAULIC
IN	INCHES
I.E.	INVERT ELEVATION
IW	INDIRECT WASTE
LOC	LIMIT OF CONTRACT
MAV	MANUAL AIR VENT
NFGH	NON-FREEZE GROUND HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
NRS	NON-RISING STEM & YOKE VALVE
OF	OVERFLOW
OHD	OPEN HUB DRAIN
O.S.&Y	OUTSIDE STEM & YOKE VALVE
P	PRESSURE
PCOND	PUMPED CONDENSATE
PD	PUMPED DISCHARGE
PH	PIPE HANGER
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSAN	PUMPED SANITARY
PSC	PUMPED STEAM CONDENSATE
RD	ROOF DRAIN
RL	RAIN LEADER
SAN, S	SANITARY
SC	STEAM CONDENSATE
SCH	SCHEDULE
SP	SPRINKLER LINE
STD	STANDARD
SW	STORM WATER
T	TEMPERATURE
TD	TRENCH DRAIN
TS	TAMPER SWITCH
TW	TEMPERED WATER
TWR	TEMPERED WATER RETURN
UP	PIPE UP
UP & DN	PIPE UP & DN
V	VENT
VB	VACUUM BREAKER
VTR	VENT THROUGH ROUGH
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTOR
WSFU	WATER SUPPLY FIXTURE UNITS
TD	TRENCH DRAIN

NOTE:
NOT ALL ABBREVIATIONS MAY BE USED.

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NEW RESTROOMS AND TICKET BOOTH
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES

DESCRIPTION:	DATE:
PERMIT SET	03/17/25
BID SET	03/31/25

PROJ # : 22-CSD-04
DRAWN BY : Author

SHEET TITLE:

PLUMBING GENERAL NOTES AND LEGEND

SHEET NUMBER:

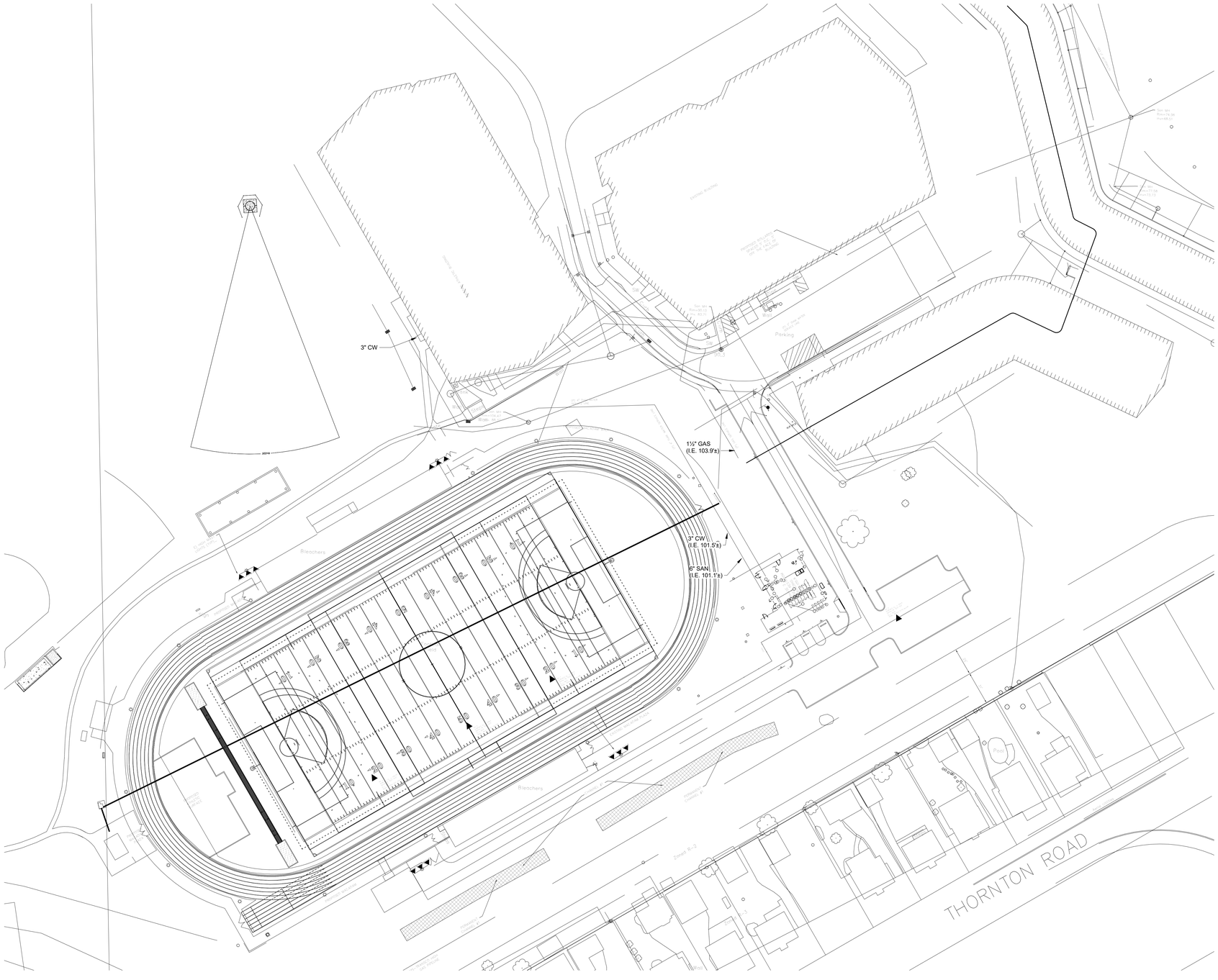
P0.0

BID SET

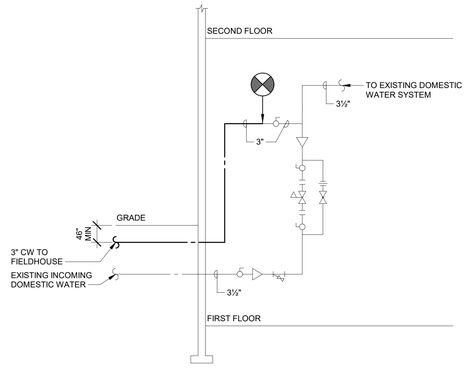
3/28/2025 3:36:07 PM

GENERAL NOTES:

1. COORDINATE ALL NEW WORK WITH SITE UTILITIES.
2. CUT AND PATCH EXISTING PAVED AREAS INCLUDING PARKING, CURBS SIDEWALKS AND LOTS REQUIRED FOR INSTALLATION OF PLUMBING WORK.
3. COORDINATE INSTALLATION OF PLUMBING WORK WITH EXISTING AND FINAL GRADING. REFER TO CIVIL PLANS.
4. REFER TO CIVIL DRAWINGS FOR EXTENSION OF ALL UTILITIES.



SITE PLAN - PLUMBING
1" = 40'-0"



FIELD HOUSE CW EXTENSION DETAIL
3/8" = 1'-0"

N
W E
S

Graphic Scale: 1 inch = 40 feet
0 40' 80' 120' 160'

3/26/2025 3:36:08 PM

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ISSUE DATES

DATE:	DESCRIPTION:
03/17/25	PERMIT SET
03/31/25	BID SET

PROJ # : 22-CSD-04 DRAWN BY : Author

NEW RESTROOMS AND TICKET BOOTH
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

SHEET TITLE:

SITE PLAN - PLUMBING

SHEET NUMBER:

P0.1

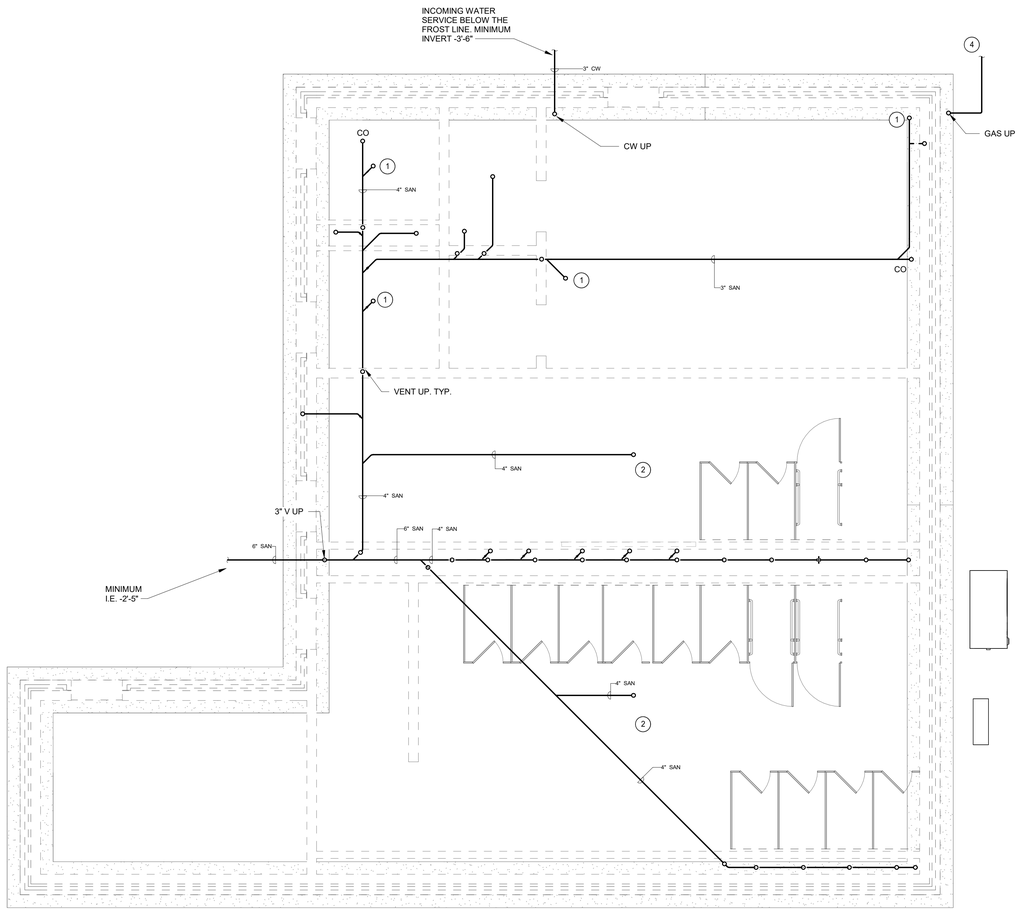
BID SET

GENERAL NOTES:

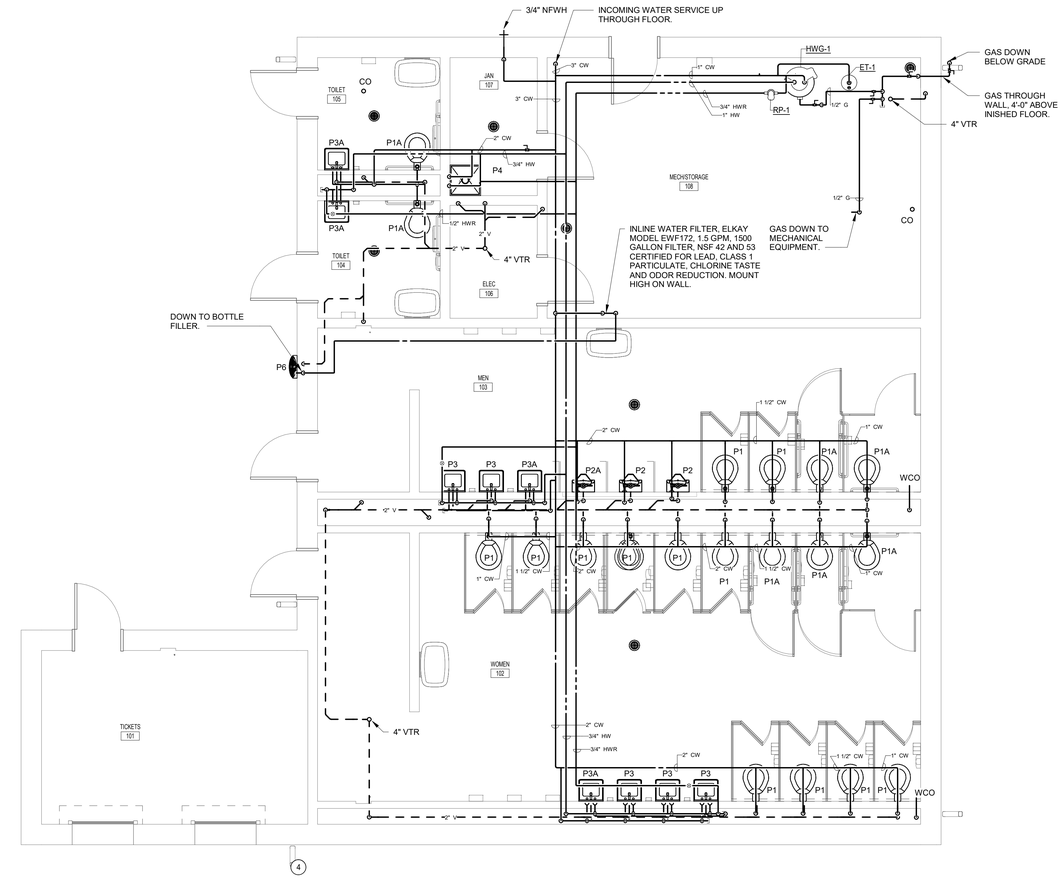
1. REFER TO CIVIL DRAWINGS FOR CONTINUATION OF ALL UTILITIES.
2. REFER TO MECHANICAL DRAWINGS FOR ALL MECHANICAL EQUIPMENT.
3. MOUNT RP-1 AND DIGITAL MIXING VALVE MOUNTED ON UNISTRUT.
4. PC TO PROVIDE AND INSTALL 6" HOUSEKEEPING PAD.

DRAWING NOTES:

1. 3" SAN UP TO FLOOR DRAIN
2. 4" SAN UP TO FLOOR DRAIN
3. 4" VTR
4. MATCH CIVIL GAS LINE INVERT ELEVATION. STEP ABOVE FOOTING.



FOUNDATION PLAN - PLUMBING
1/4" = 1'-0"



FLOOR PLAN - PLUMBING
1/4" = 1'-0"

Graphic Scale: 1 inch = 4 feet
0 4' 8' 12' 16'

Graphic Scale: 1 inch = 8 feet
0 8' 16' 24' 32'

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NEW RESTROOMS AND TICKET BOOTH
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES

DATE:	DESCRIPTION:
03/17/25	PERMIT SET
03/31/25	BID SET

PROJ # : 22-CSD-04 DRAWN BY : Author

SHEET TITLE:

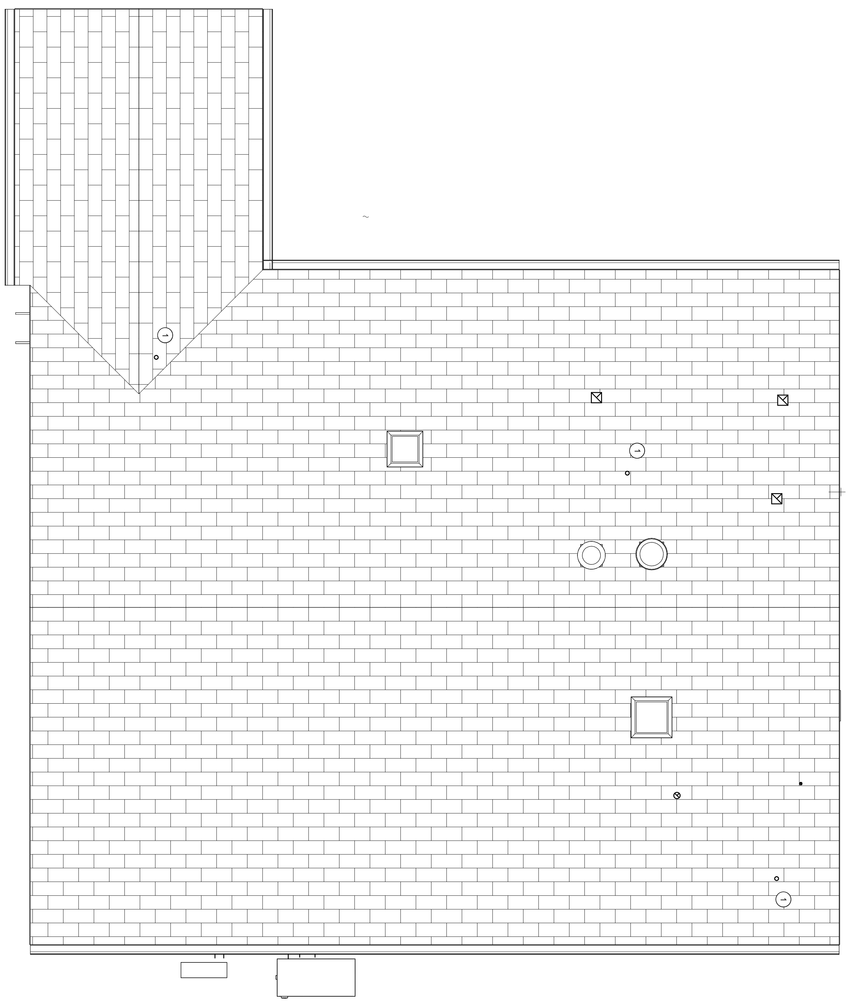
PLUMBING FLOOR PLANS

SHEET NUMBER:

P1.1

BID SET

3/28/2025 3:36:10 PM



ROOF PLAN
1/4" = 1'-0"

DRAWING NOTES:

1 4" VTR

Graphic Scale: 1 inch = 4 feet
0 4' 8' 12' 16'

W N S E

ISSUE DATES

DATE:	DESCRIPTION:
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SHEET NUMBER: P1.2

SHEET TITLE: ROOF PLAN - PLUMBING

PROJ #: 22-CSD-04

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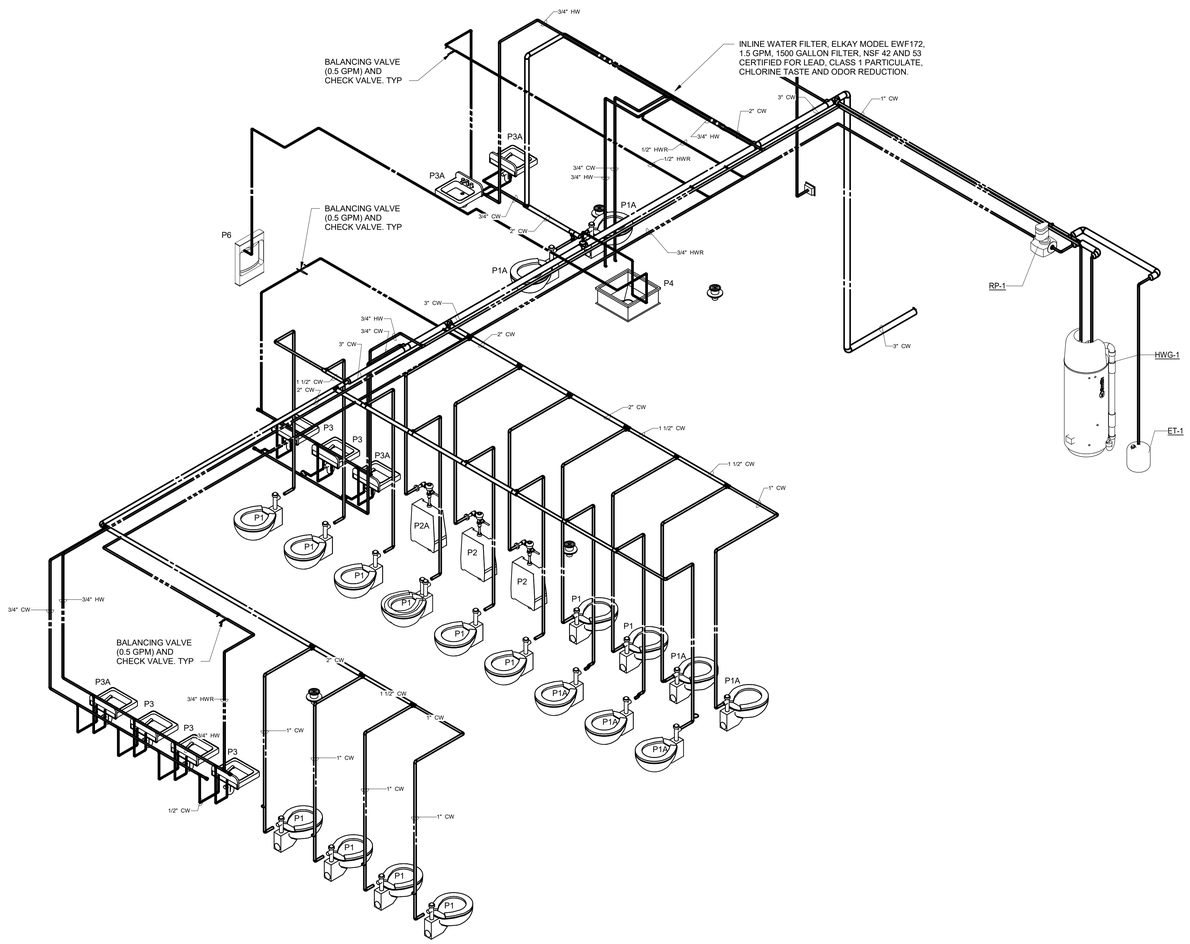
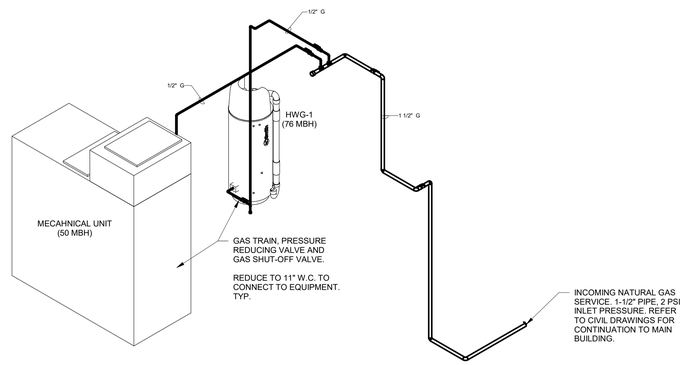
GENERAL NOTES:

1. REFER TO CIVIL DRAWINGS FOR CONTINUATION OF ALL UTILITIES.
2. REFER TO MECHANICAL DRAWINGS FOR ALL MECHANICAL EQUIPMENT.
3. PROVIDE AND INSTALL BALANCING VALVE SET TO 0.5 GPM AND CHECK VALVE ON ALL HOT WATER RECIRCULATION PIPING CONNECTIONS ABOVE CEILING.



DOMESTIC WATER RISER DIAGRAM



NATURAL GAS RISER DIAGRAM

NOTE:
GAS PIPE SIZE BASED ON 2 PSI DELIVERY PRESSURE, 1 PSI PRESSURE DROP, 900 FT OF EQUIVALENT LENGTH, AND SCHEDULE 40 METALLIC PIPE.

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ISSUE DATES

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PROJ # : 22-CSD-04 DRAWN BY : Author

SHEET TITLE:
DOMESTIC WATER AND NATURAL GAS RISER DIAGRAM

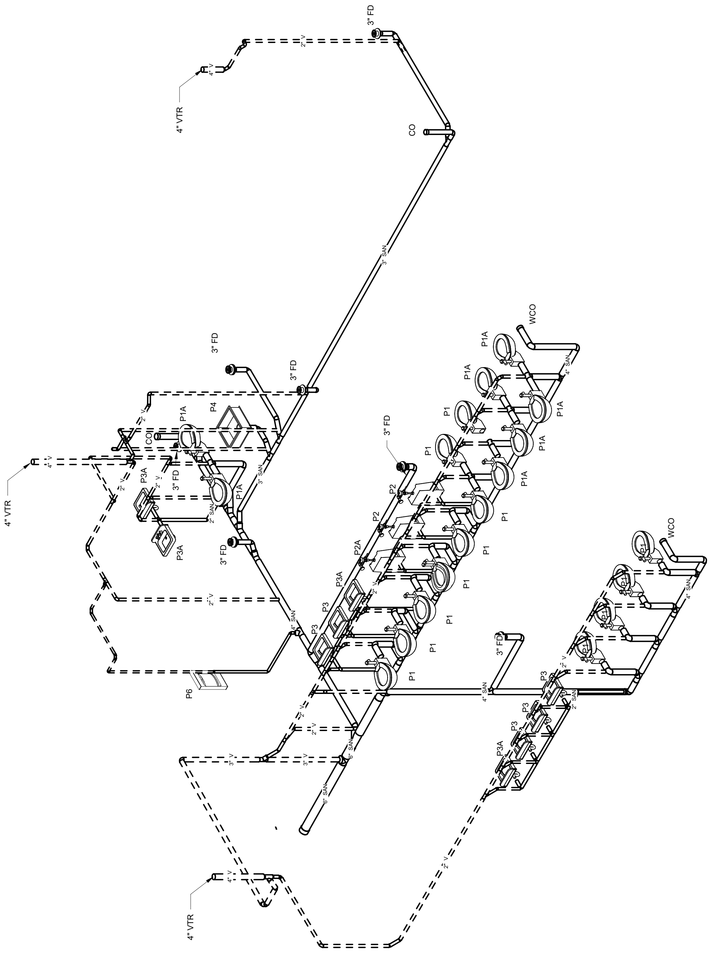
SHEET NUMBER:
P6.1

BID SET

3/28/2025 3:36:12 PM

GENERAL NOTES:

1. REFER TO CIVIL DRAWINGS FOR CONTINUATION OF ALL UTILITIES.



SANITARY AND VENT RISER DIAGRAM

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ISSUE DATES	
DATE:	DESCRIPTION:
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03/31/25	BID SET

PROJ #: 23-03-04 DRAWN BY: Author

SHEET TITLE:
SANITARY AND VENT RISER DIAGRAM

SHEET NUMBER:
P6.2

BID SET

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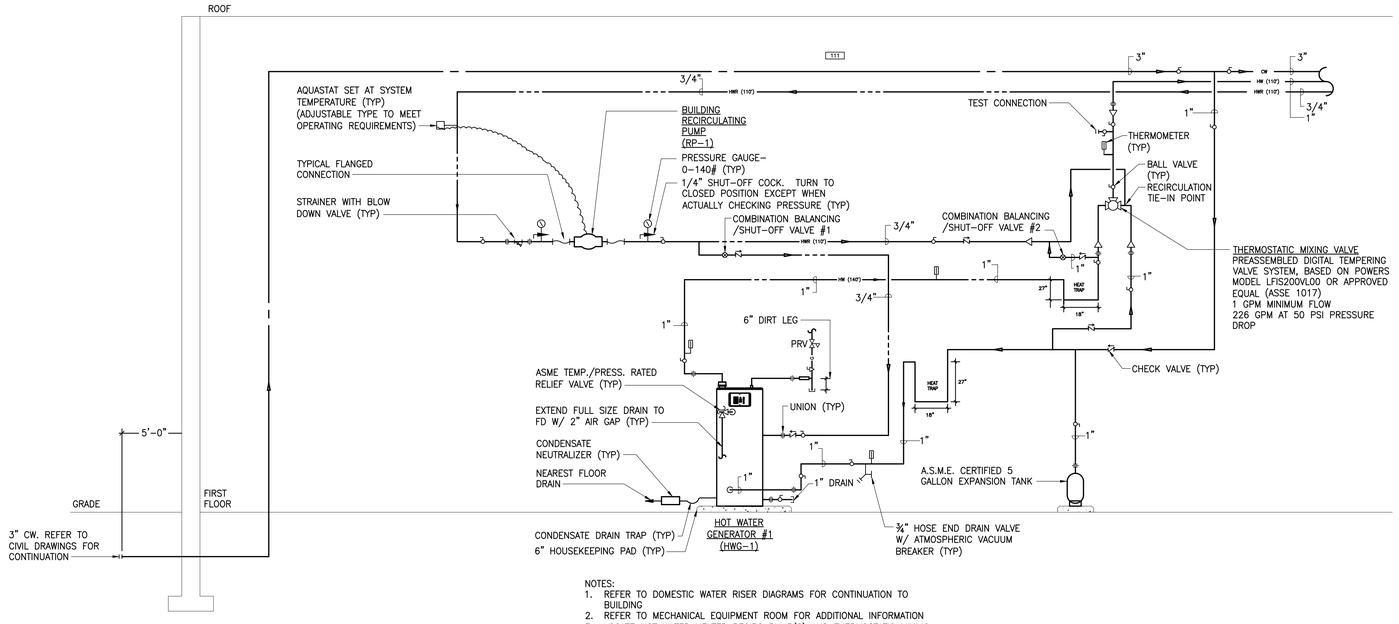

NOTES:
1. REFER TO DOMESTIC WATER RISER DIAGRAMS FOR CONTINUATION TO BUILDING
2. REFER TO MECHANICAL EQUIPMENT ROOM FOR ADDITIONAL INFORMATION
3. LOCATE HOT WATER HEATER RECIRC PUMP(S) AND THERMOSTATIC MIXING VALVE ON WALL OR UNISTRUT SUPPORT BETWEEN 36" AND 60" A.F.F. AND 36" CLEAR IN FRONT FOR SERVICING AND MAINTENANCE.

DOMESTIC HOT WATER GENERATOR RISER DIAGRAM
MECH 127

SCALE: NOT TO SCALE

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ISSUE DATES

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PERMIT SET	03/17/2025
BID SET	03/31/2025

PROJ # :

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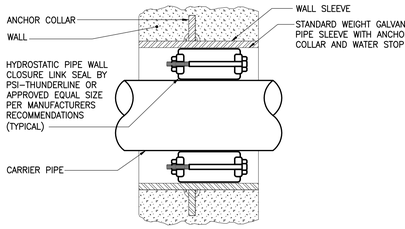
SHEET TITLE:

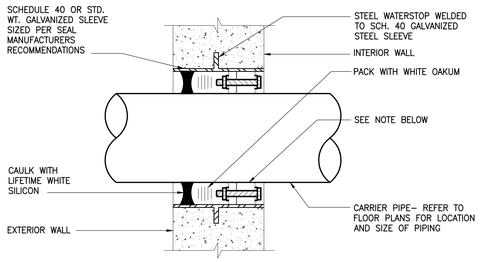
MECHANICAL ROOM RISER

SHEET NUMBER:

P6.3

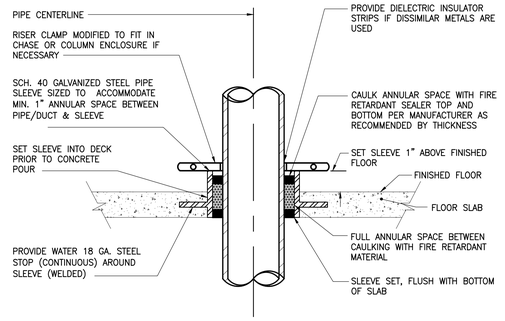


1 TYPICAL PIPE THRU EXTERIOR WALL PENETRATION SEAL BELOW GRADE DETAIL — SCALE: NONE

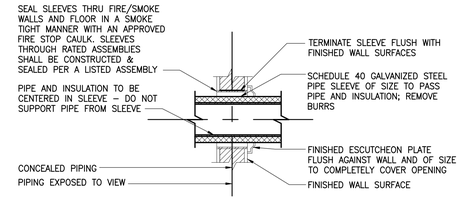


NOTE:
SEAL ASSEMBLY SHALL BE MODULAR MECHANICAL TYPE CONSISTING OF INTERLOCKING RUBBER LINKS SHAPED TO CONTINUOUSLY FILL THE ANNULAR SPACE BETWEEN THE CARRIER PIPING AND THE SLEEVE. BOLTS SHALL BE STAINLESS STEEL WITH DELRIN PLASTIC PRESSURE PLATES.

2 TYPICAL WATERTIGHT SLEEVE THRU EXTERIOR WALL ABOVE GRADE DETAIL — SCALE: NONE

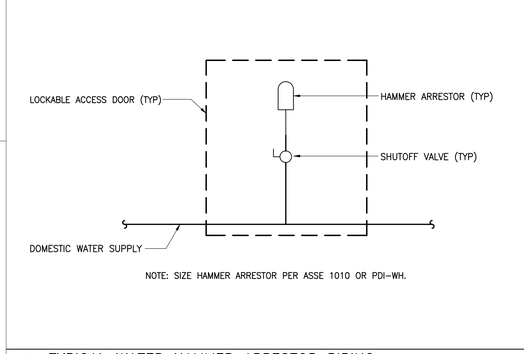


3 TYPICAL SLEEVE THROUGH FLOOR DETAIL — SCALE: NONE

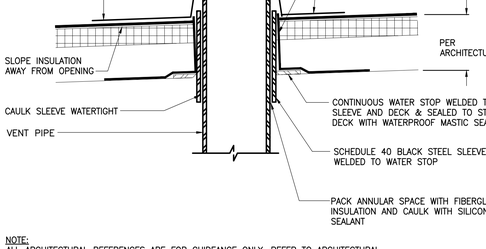


NOTE:
FOR INTERIOR FRAME PARTITIONS–PIPE SLEEVES MAY BE FABRICATED FROM GALVANIZED SHEET METAL; ROUND TUBE CLOSED WITH SNAPLOCK JOINT, WELDED SPIRAL SEAMS, OR WELDED LONGITUDINAL JOINT. FABRICATE FROM THE FOLLOWING GAUGES: 3" AND SMALLER, 20 GAUGE; 4" TO 6", 16 GAUGE; OVER 6", 14 GAUGE.

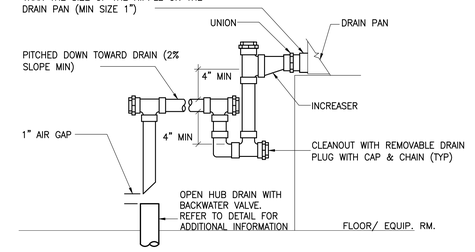
4 TYPICAL PIPE SLEEVE THRU INTERNAL WALL DETAIL — SCALE: NONE



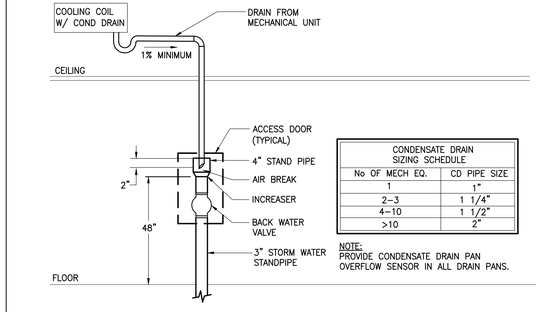
5 TYPICAL PIPE SUPPORT DETAIL — SCALE: NONE



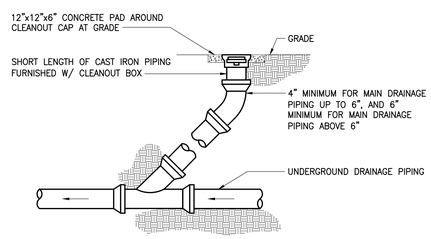
6 TYPICAL TRAPEZE PIPE SUPPORT DETAIL — SCALE: NONE



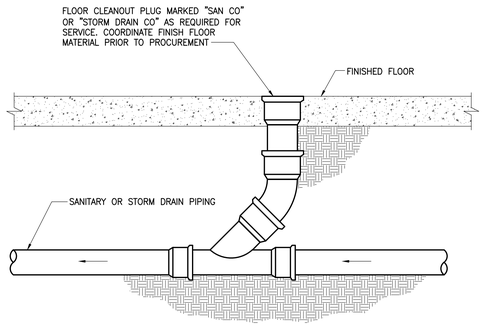
7 TYPICAL PIPE SUPPORT DETAIL — SCALE: NONE



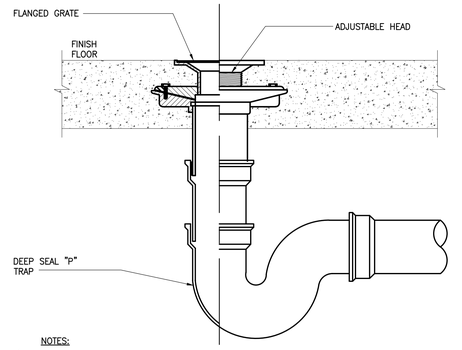
8 IN–LINE HOT WATER RECIRCULATION PUMP DETAIL — SCALE: NONE



9 TYPICAL EXTERIOR CLEANOUT DETAIL — SCALE: NONE

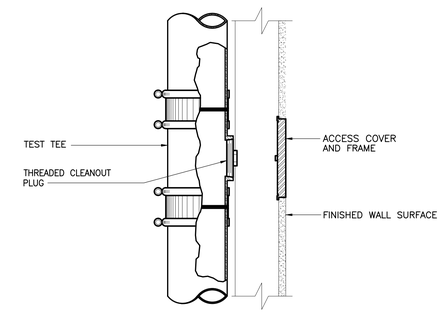


10 TYPICAL FLOOR CLEANOUT — SCALE: NONE



NOTES:
1. REFER TO MECHANICAL SPECIFICATION FOR PIPING MATERIALS.
2. REFER TO STRUCTURAL DRAWINGS FOR SLAB PENETRATION RECOMMENDATIONS
3. PROVIDE ASSE 1072 TRAP SEAL (SURE SEAL, ZURN) FOR ALL FLOOR DRAINS

11 TYPICAL FLOOR DRAIN DETAIL — SCALE: NONE



12 TYPICAL INTERIOR WALL CLEANOUT WITH ACCESS COVER DETAIL — SCALE: NONE

NOTE: SIZE HAMMER ARRESTOR PER ASSE 1010 OR PDI–WH.

13 TYPICAL WATER HAMMER ARRESTOR PIPING AND ACCESS DETAIL — SCALE: NONE

NOTE:
ALL ARCHITECTURAL REFERENCES ARE FOR GUIDEANCE ONLY. REFER TO ARCHITECTURAL DRAWING FOR EXACT ARCHITECTURAL AND ROOFING REQUIREMENTS.

14 TYPICAL VENT PIPE THRU ROOF DETAIL — SCALE: NONE

NOTES:
1. COORDINATE DISTANCE OFFSETS WITH EQUIPMENT PRESSURE DIFFERENTIALS.
2. COORDINATE ARRANGEMENT TO ALLOW ACCESS TO ALL CLEANOUTS.

15 TYPICAL AHU CONDENSATE DRAIN TRAP DETAIL — SCALE: NONE

CONDENSATE DRAIN SIZING SCHEDULE	
No OF MECH EQ.	CD PIPE SIZE
1	1"
2–3	1 1/4"
4–10	1 1/2"
>10	2"

NOTE:
PROVIDE CONDENSATE DRAIN PAN OVERFLOW SENSOR IN ALL DRAIN PANS.

16 TYPICAL CONDENSATE DRAIN STANDPIPE DETAIL — SCALE: NONE

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CONSULTANT:

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CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES	DESCRIPTION:
DATE:	
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03/31/2025	BID SET

PROJ # :

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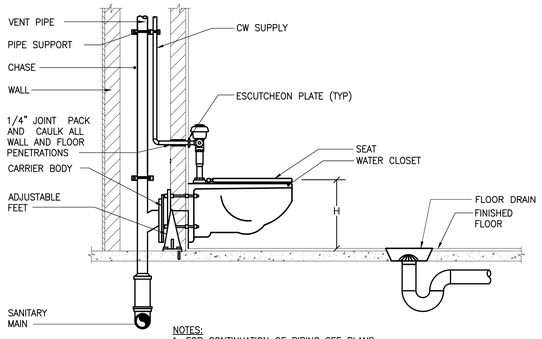
SHEET TITLE:

PIPING, SUPPORT AND EQUIPMENT DETAILS

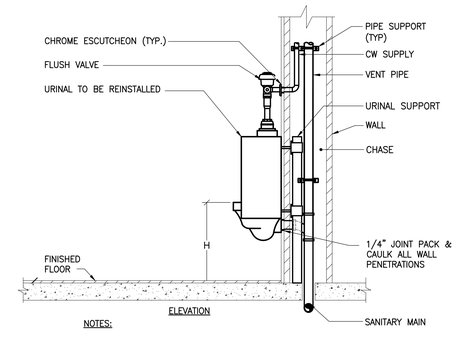
SHEET NUMBER:

P7.1



NOTES:
1. FOR CONTINUATION OF PIPING SEE PLANS.
2. H = AS REQUIRED PER PLUMBING CODE.
3. PROVIDE FLOOR DRAINS AS INDICATED ON FLOOR PLANS.

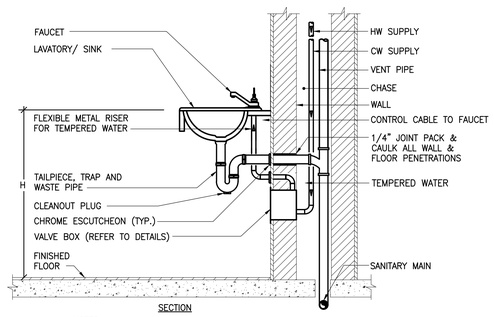
(17) TYPICAL WALL MOUNTED, BACK OUTLET WATER CLOSET DETAIL — SCALE: NONE



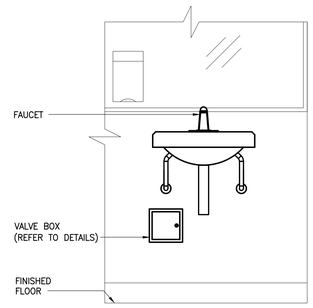
ELEVATION

NOTES:
1. FOR CONTINUATION OF PIPING SEE PLANS.
2. H = AS REQUIRED PER PLUMBING CODE.

(18) TYPICAL URINAL DETAIL — SCALE: NONE



SECTION



ELEVATION

NOTES:
1. FOR CONTINUATION OF PIPING SEE PLANS.
2. H = REFER TO ARCHITECTURAL DRAWING AS REQUIRED PER PLUMBING CODE.
3. PROVIDE OFFSET TRAP FOR ACCESSIBLE FIXTURES

(19) TYPICAL WALL MOUNTED LAVATORY DETAIL — SCALE: NONE

ELEVATION VIEW PLAN VIEW

NOTES:
1. REFER TO RISER DIAGRAMS FOR PIPE SIZING
2. INSTALL VALVE BOX PER MANUFACTURERS RECOMMENDATIONS
3. RECESSED VALVE BOX NOT REQUIRED IF CONCEALED BY LAV GUARD.

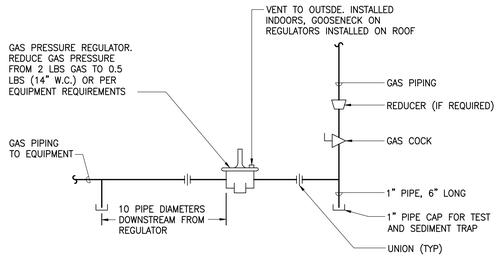
(20) TYPICAL ASSE 1070 TEMPERING VALVE BOX DETAIL — SCALE: NONE

(21) SINK ASSE 1070 MIXING VALVE INSTALLATION DETAIL — SCALE: NONE

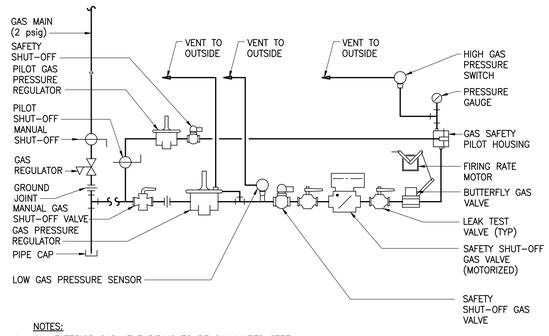
(22) TYPICAL FLOOR MOUNTED MOP SINK DETAIL — SCALE: NONE

NOTE:
TO BE INSTALLED AT ALL MOP SINKS UNLESS OTHERWISE NOTED

(23) CHEMICAL DISPENSING SUPPLY DETAIL — SCALE: NONE



(24) TYPICAL GAS PRESSURE REGULATOR DETAIL — SCALE: NONE



NOTES:
1. ALL EXTERIOR GAS VENT PIPING TO BE GALVANIZED STEEL.

(25) I.R.I GAS TRAIN DETAIL — SCALE: NONE

(26) — SCALE: NONE

(27) — SCALE: NONE

(28) — SCALE: NONE

(29) — SCALE: NONE

(30) — SCALE: NONE

(31) — SCALE: NONE

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ISSUE DATES

DESCRIPTION:	DATE:
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BID SET	03/31/2025

PROJ # :
DRAWN BY :

SHEET TITLE:
PLUMBING FIXTURE PIPING DETAILS

SHEET NUMBER:
P7.2

PLUMBING EQUIPMENT NOTES

1. HOT WATER GENERATOR #1 (HWG-1)

HOT WATER GENERATOR SHALL BE ULTRA HIGH EFFICIENCY, GAS FIRED TYPE.
ASME TANK RATED FOR 150 PSI WORKING PRESSURE
WITH A.G.A. RATED T & P VALVE.
TANK CAPACITY: 50 GALLONS
BURNER CAPACITY: 76,900 BTUH
RECOVERY RATE: 86 GPH @ 100°F RISE
5 AMPS AT 120V/1 /60HZ
UNIT SHALL BE UL LISTED AND SHALL MEET OR EXCEED
ASHRAE/IES-90.1-2016
UNIT SHALL BE NSF 61 AND HB 372 COMPLIANT
BASIS OF DESIGN AO SMITH CYCLONE HE MODEL BTX-80
PROVIDE UNIT WITH EXPANSION TANK WITH MINIMUM 2.3 TANK VOLUME, 150 PSI
WORKING PRESSURETHERM-X-TROL MODEL ST-12-C-DD OR EQUAL

2. WATER TEMPERING DEVICE

WTD-1:
PROVIDE FOR ALL FIXTURES FOR WHICH HOT WATER IS PROVIDED
TEMPER WATER TO 110°F
ASSE 1070 RATED, NSF-61 CERTIFIED
WATTS MODEL LFMMV OR AS APPROVED EQUAL

PLUMBING FIXTURE SCHEDULE

DESIG.	FIXTURE	ROUGH-IN CONNECTION				FIXTURE UNIT VALUES			GPM FLOW RATE	WATER TEMPERING DEVICE (WTD)	REMARKS
		C.W.	H.W.	SAN.	VENT	C.W.	H.W.	SAN.			
P1	WATER CLOSET (W/H)	1"	---	4"	2"	10	---	6	1.28 GPF	---	STANDARD, W/H, BACK OUTLET
P1A	WATER CLOSET (W/H)	1"	---	4"	2"	10	---	6	1.28 GPF	---	ADA ACCESSIBLE, W/H, BACK OUTLET
P2	URINAL (W/H)	3/4"	---	2"	1½"	5	---	4	.125 GPF	---	STANDARD
P2A	URINAL (W/H)	3/4"		2"	1½"	5		4	.125 GPF		ADA ACCESSIBLE
P3	LAVATORY (W/H)	1/2"	1/2"	1½"	1½"	1.5	1.5	1	0.35	WTD-1	STANDARD, W/H, SINGLE USE
P3A	LAVATORY (W/H)	1/2"	1/2"	1½"	1½"	1.5	1.5	1	0.35	WTD-1	ADA ACCESSIBLE, W/H, SINGLE USE
P4	MOP SINK	3/4"	3/4"	3"	1½"	2.25	2.25	2	4.0	WTD-1	
P6	BOTTLE FILLER	1/2"	---	1½"	1½"	0.25	---	0.5	---	---	ADA ACCESSIBLE

NOTES:

1) W/H = WALL HUNG
2) LOCATE ROUGH IN FOR HANDICAPPED TOILETS SO THAT FLUSH VALVE HANDLE IS IN THE WIDE SIDE OF THE STALL
3) SLAB ON GRADE FIXTURE DRAINS SHALL BE 2" MINIMUM.
4) PROVIDE DISHWASHER DRAIN CONNECTION AND WATER CONNECTION WHERE DISHWASHERS ARE LOCATED ADJACENT TO SINKS.
5) ALL ACCESSIBLE LAVS AND SINKS SHALL BE PROVIDED WITH PREFORMED PIPE INSULATION KIT (TRUBRO OR EQUAL).

PUMP SCHEDULE

NO.	SERVICE	LOCATION	GPM	FT. OF HEAD	HP	RPM	ELECT. CHAR. V/ϕ/Hz	TYPE	REMARKS (BASED ON)
RP-1	HOT WATER RECIRCULATION	MECH 111	9	15	70 WATTS	4820	120/1/60	IN-LINE CIRCULATOR	BELL & GOSSETT ECOCIRC 20-18

NOTES:

1) ALL CIRCULATOR PUMPS SHALL BE ALL BRONZE OR STAINLESS STEEL CONSTRUCTION; LEAD FREE AS CERTIFIED BY NSF 61 & HB 372

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PA FIRM # 190880

CONSULTANT:

NEW RESTROOMS AND TICKET BOOTH

CHICHESTER HIGH SCHOOL

CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES

DATE:	DESCRIPTION:
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ # :

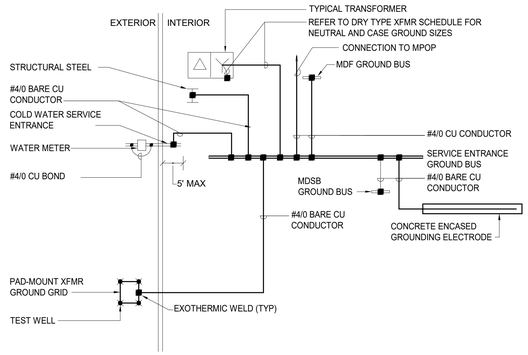
DRAWN BY :

SHEET TITLE:

PLUMBING EQUIPMENT NOTES AND SCHEDULE

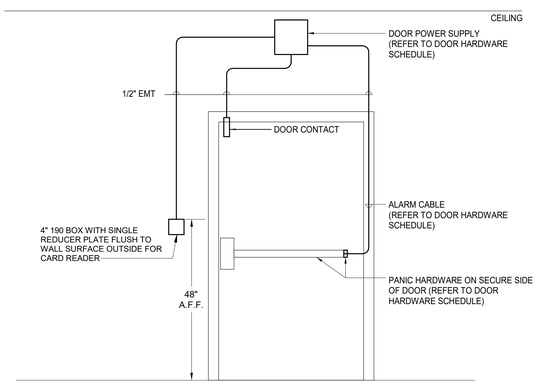
SHEET NUMBER:

P9.1



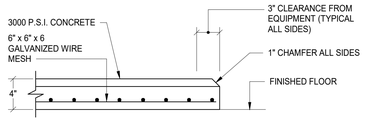
ALL GROUNDING SHALL COMPLY WITH NEC.

PARTIAL GROUNDING SINGLE LINE SCHEMATIC DIAGRAM



NOTE:
EC TO PROVIDE JUNCTION BOX, CONDUIT W/ PULLSTRINGS AND POWER TO DOOR POWER SUPPLY. ALL OTHER MATERIALS AND INTERCONNECTIONS SHALL BE PROVIDED BY OTHERS AND INSTALLED BY EC.

TYPICAL ELECTRIC DOOR LOCK & ROUGH-IN



CONCRETE HOUSEKEEPING PAD

ELECTRICAL LEGEND:

(MOUNTING HEIGHTS ARE TO TOP OF DEVICE U.O.N.)

CONDUIT

HOMERUN TO PANELBOARD; REFER TO PANEL SCHEDULES FOR MINIMUM WIRE AND CONDUIT SIZES.

BRANCH CIRCUIT CONDUIT AND WIRING CONCEALED IN CEILING OR WALL SPACE, OR SURFACE MOUNTED WHERE NO CEILING OR WALL SPACE EXISTS. REFER TO PANEL SCHEDULES FOR MINIMUM WIRE AND CONDUIT SIZES.

BRANCH CIRCUIT CONDUIT AND WIRING IN SLAB, UNDER FLOOR OR UNDERGROUND. REFER TO PANEL SCHEDULES FOR MINIMUM WIRE AND CONDUIT SIZES.

LIGHTING

LIGHT FIXTURE. TYPE AS SPECIFIED. REFER TO LIGHT FIXTURE SCHEDULE.

WALL MOUNTED LIGHT FIXTURE - TYPE AS SPECIFIED. REFER TO LIGHT FIXTURE SCHEDULE.

EXIT SIGNAGE - CEILING MOUNTED, WALL MOUNTED 6" ABOVE DOOR. SHADING INDICATES ILLUMINATED FACE. DIRECTIONAL ARROWS AS INDICATED. CONNECT TO BRANCH LIGHTING CIRCUIT SERVING AREA LOCATED IN AHEAD OF ALL CONTROLS FOR POWER MONITORING AND BATTERY CHARGING WITH 2#12 + 1#12GW IN 3/4"C. MINIMUM.

EMERGENCY BATTERY PACK. TYPE AS SPECIFIED. REFER TO LIGHT FIXTURE SCHEDULE. MOUNT AT 7'-6" A.F.F. U.O.N. CONNECT TO BRANCH LIGHTING CIRCUIT SERVING AREA LOCATED IN AHEAD OF ALL CONTROLS FOR POWER MONITORING AND BATTERY CHARGING WITH 2#12 + 1#12GW IN 3/4"C. MINIMUM.

REMOTE EMERGENCY HEAD. TYPE AS SPECIFIED, REFER TO LIGHT FIXTURE SCHEDULE. POWERED VIA EMERGENCY BATTERY BACK. VERIFY EXACT MOUNTING LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN [B.O.D. SHALL BE AT 8'-0" A.F.G.].

SWITCHES

(MOUNTING HEIGHTS TO TOP OF DEVICE)

S — LINE VOLTAGE TOGGLE SWITCH. MOUNT AT 48" A.F.F. U.O.N.

S^K — KEY OPERATED SWITCH. MOUNT AT 48" A.F.F. U.O.N.

OS — OCCUPANCY SENSOR, LOW VOLTAGE WITH POWER PACK, DUAL TECHNOLOGY, CEILING MOUNTED, 1000sq ft COVERAGE MINIMUM U.O.N. WATTSTOPPER DT-300 SERIES OR APPROVED EQUALS. FAIL TO ON TYPE. TIME DELAY PER OWNERSHIP.

VS W — DUAL TECHNOLOGY, SINGLE LEVEL WALL SWITCH SENSOR COMBINATION WITH MANUAL ON, AUTO OFF SETTING AND PUSHBUTTON FOR MANUAL ON/OFF. CAPABLE OF THREE WAY SWITCHING CONFIGURATION. NEUTRAL REQUIRED. TIME DELAY PER OWNERSHIP. WATTSTOPPER DSW-301 SERIES OR APPROVED EQUALS. FAIL TO ON TYPE. MOUNT AT 48" A.F.F. U.O.N.

VS WD — DUAL TECHNOLOGY, SINGLE LEVEL, 0-10v, WALL SWITCH SENSOR DIMMER COMBINATION WITH MANUAL ON, AUTO OFF SETTING, RAISE/OWER BUTTONS AND CAPABLE OF THREE WAY SWITCHING WITH DIMMING FROM EITHER LOCATION. NEUTRAL REQUIRED. TIME DELAY PER OWNERSHIP. WATTSTOPPER DW-311 SERIES OR APPROVED EQUALS. FAIL TO ON TYPE. MOUNT AT 48" A.F.F. U.O.N.

VS W2 — DUAL TECHNOLOGY, DUAL RELAY, WALL SWITCH SENSOR COMBINATION WITH MANUAL ON, AUTO OFF SETTING AND PUSHBUTTON FOR MANUAL ON/OFF. RATED FOR 1/4 HP MOTOR LOAD WITH SEPERATE TIME DELAY FUNCTION. WATTSTOPPER DSW-302 SERIES. NEUTRAL REQUIRED. TIME DELAY PER OWNERSHIP. FAIL TO ON TYPE. MOUNT AT 48" A.F.F. U.O.N.

POWER

PANELBOARD; RECESSED, SURFACE MOUNTED. MOUNT AT 5'-6" A.F.F. TO TOP OF PANEL.

SW — SINGLE POLE MANUAL MOTOR STARTING SWITCH WITH HOA SWITCH; MOUNT AT 48" A.F.F. IN NEMA 1 ENCLOSURE U.O.N.

MOTOR; TYPE AS NOTED.

SAFETY DISCONNECT SWITCH - FUSED, NON-FUSED. MOUNT AT 48" A.F.F. U.O.N. FUSED AS NOTED. REFER TO SPECIFICATION FOR NEMA RATING.

ENCLOSED CIRCUIT BREAKER. MOUNT AT 5'-6" A.F.F. TO TOP U.O.N. FUSE SIZE AS NOTED. REFER TO SPECIFICATIONS FOR NEMA RATING.

JUNCTION BOX - CEILING MOUNTED, WALL MOUNTED. TYPE AS NOTED.

T — TRANSFORMER.

COMBINATION TYPE MOTOR STARTER - FVNR WITH CONTROL TRANSFORMER, RED AND GREEN INDICATING LIGHTS, H.O.A. SELECTOR SWITCH AND CIRCUIT BREAKER DISCONNECT SWITCH. MOUNT AT 5'-6" A.F.F. TO TOP U.O.N. FUSED AS NOTED, REFER TO SPECIFICATION FOR NEMA RATING.

ELECTRICAL METER.

UNIT HEATER.

M — LIGHTING CONTACTOR, NUMBER AS INDICATED - FOR EACH, PROVIDE 4 POLE ELECTRICALLY HELD CONTACTOR FOR HIGH MAST LIGHTING CIRCUITS.

MISCELLANEOUS

(1) — REFERENCE TO DRAWING NOTE.

#E## — DETAIL REFERENCE: DETAIL NUMBER/DRAWING NUMBER

ITEMS SHOWN SOLID/LIGHT ARE EXISTING TO REMAIN.

OUTLETS

Y^1-3 — DUPLEX RECEPTACLE; TAMPER RESISTANT 2P, 3W, 20A, 125V, NEMA 5-20R; MOUNT AT 18"A.F.F. U.O.N. SUBSCRIPT DENOTES INDICATES BRANCH CIRCUIT CONNECTION. REFER TO SPECIFICATIONS AND THIS DRAWING FOR WIRE AND CONDUIT REQUIREMENTS.

DOUBLE DUPLEX RECEPTACLE; TAMPER RESISTANT 2P, 3W, 20A, 125V, NEMA 5-20R; MOUNT AT 18" A.F.F. U.O.N. SUBSCRIPTS: USB - PROVIDE USB IN FACEPLATE

DUPLEX RECEPTACLE; TAMPER RESISTANT 2P, 3W, 20A, 125V, NEMA 5-20R; MOUNT IN LINE WITH THE TOP OF MASONRY UNIT 16" A.F.F. U.O.N.

DUPLEX RECEPTACLE; TAMPER RESISTANT 2P, 3W, 20A, 125V, NEMA 5-20R; GROUND FAULT INTERRUPTER MOUNT AT 18" A.F.F. U.O.N.

SPECIAL RECEPTACLE; TYPE AS NOTED; MOUNT AT 18" A.F.F. U.O.N.

SLASH INDICATES DEVICE TO BE MOUNTED AT 42" A.F.F. OR 6" ABOVE COUNTER U.O.N.

DUPLEX RECEPTACLE; 2P, 3W, 20A, 125V, NEMA 5-20R; WEATHER RESISTANT, GROUND FAULT INTERRUPTER WITH WHILE IN-USE WEATHERPROOF COVER; MOUNT AT 18" A.F.F. U.O.N.

TELECOMMUNICATIONS

C — DATA OUTLET - (1) RJ45 MODULAR JACK. MOUNT AT 18" A.F.F. U.O.N. SUBSCRIPT 'C' INDICATES DEVICE TO BE MOUNTED AT 42" A.F.F. OR 6" ABOVE COUNTER U.O.N.

W — CEILING MOUNTED WIRELESS ACCESS POINT OUTLET. (1) CAT6 CABLE TERMINATED IN MALE RJ4 CONNECTOR ABOVE CEILING.

SECURITY

OWNER PROVIDED VIDEO SURVEILLANCE CAMERA. CEILING MOUNTED, WALL MOUNTED. PROVIDE CAT 6 DATA DROP IN 3/4" CONDUIT FROM ACCESSIBLE CEILING SPACE TO NEAREST MDF OR IDF CLOSET. EXTERIOR CAMERAS SHALL BE MOUNTED AT 10'-0" A.F.G. U.O.N.

POE CARD READER PROVIDED AND INSTALLED BY OWNER. EC SHALL PROVIDE ROUGH-INS, CONDUIT AND 1- 4 PAIR CAT 6 CABLE FROM POE CARD READER BACK TO NEAREST MDF/IDF.

ABBREVIATIONS:

A	AMPERE, AMPERES
A.F.F.	ABOVE FINISHED FLOOR
A.F.G.	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
B.O.D.	BASIS OF DESIGN
CATV	CABLE TELEVISION
CCTV	CLOSED CIRCUIT TELEVISION
C	CONDUIT
CB	CIRCUIT BREAKER
DWG	DRAWING
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
EPO	EMERGENCY POWER OFF
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EX	EXISTING
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPERES
FSS	FUSED SAFETY SWITCH
G	GROUND
GFEP	GROUND FAULT EQUIPMENT PROTECTION
GFI	GROUND FAULT INTERRUPTING
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HWG	HOT WATER HEATER GENERATOR
IDF	INTERMEDIATE DISTRIBUTION FRAME
IMC	INTERMEDIATE METAL CONDUIT
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LFS	LIGHT FIXTURE SCHEDULE
LRA	LOCKED ROTOR AMPERES
LMS	LUMENS
MCA	MINIMUM CIRCUIT AMPERES
MCB	MAIN CIRCUIT BREAKER
MDF	MAIN DISTRIBUTION FRAME
MLO	MAIN LUGS ONLY
MPOP	MAIN POINT OF PRESENCE
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MH	MOUNTING HEIGHT/MANHOLE
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER's ASSOCIATION
NFSS	NON-FUSED SAFETY SWITCH
NO	NUMBER
OS	OCCUPANCY SENSOR
OC	ON CENTERS
P	POLE, POLES
Ø	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
RAF	RETURN AIR FAN
RGS	RIGID GALVANIZED STEEL
RX	REMOVE EXISTING
SSBJ	SUPPLY SIDE BONDING JUMPER
TYP	TYPICAL
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UH	UNIT HEATER
VS	VACANCY SENSOR
V	VOLT, VOLTS
VR	VANDAL RESISTANT
WP	WEATHERPROOF
W	WATTS, WIRE, WIRES
XFMR	TRANSFORMER
TTB	TELEPHONE TERMINAL BOARD
UTP	UNSHIELDED TWISTED PAIR
U.O.N.	UNLESS OTHERWISE NOTED

GENERAL NOTES:

1. THE ELECTRICAL CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE DRAWINGS OF ALL OTHER TRADES ON THE PROJECT. ELECTRICAL OR SYSTEMS CONNECTIONS INDICATED ON ARCHITECTURAL, MECHANICAL, CIVIL, STRUCTURAL, KITCHEN AND ALL OTHER DRAWINGS WHICH ARE PART OF THIS PROJECT, SHALL BE CONSIDERED A PART OF THIS CONTRACT AND SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AT NO EXTRA COST TO THE OWNER.
2. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE AND AS SUCH SHALL NOT BE SCALED. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF DEVICES AND EQUIPMENT AND DIMENSIONAL INFORMATION PRIOR TO ROUGH-IN. COORDINATE LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN OF SERVICE EQUIPMENT AND WIRING.
3. COORDINATE MOUNTING HEIGHTS OF ALL DEVICES WITH ARCHITECTURAL PLANS, SECTIONS, ELEVATIONS AND CASEWORK DRAWINGS.
4. COORDINATE WALLS THAT ARE TO REMAIN AND NEW WALLS WITH ARCHITECTURAL PLANS.
5. WIRING AND CONDUIT SIZES INDICATED IN PANEL SCHEDULES ARE MINIMUM ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT WIRING AND CONDUIT SIZES. CONTRACTOR SHALL PROVIDE SPLICE BLOCKS AND REDUCING PINS AS REQUIRED TO TERMINATE WIRING AND MAKE FINAL CONNECTIONS.
6. ELECTRICAL BOXES IN FIRE RATED PARTITIONS SHALL NOT EXCEED 16 SQUARE INCHES IN AREA (IF 4"x4"), SHALL BE MADE OF STEEL, AND SHALL BE SUCH THAT THE CUMULATIVE AREA OF BOX "CUTOUTS" IN THE FIREWALL DOES NOT EXCEED 100 SQUARE INCHES PER 100 SQUARE FEET OF WALL AREA. ELECTRICAL BOXES ON OPPOSITE SIDES OF THE SAME FIREWALL SHALL BE SEPARATED BY A HORIZONTAL AND VERTICAL DISTANCE OF NOT LESS THAN 24 INCHES. THE ELECTRICAL CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS, AS NECESSARY, TO ELECTRICAL BOX LOCATIONS TO ENSURE COMPLIANCE WITH THIS REQUIREMENT SINCE BOX LOCATIONS ARE TYPICALLY NOT DIMENSIONED ON THE DRAWINGS. CONSULT ARCHITECT IF CLARIFICATION IS REQUIRED.
7. ALL CONDUIT SHALL BE CONCEALED IN WALLS, FLOORS, ABOVE CEILING OR THROUGH MILLWORK. AT TIMES CONDUIT ROUTING IS SHOWN FOR CLARITY AND IN NO WAY PROVIDES THE CONTRACTOR ABILITY TO NOT PROVIDE CONCEALED CONDUIT AT ANY POINT OTHER POINT NOT SHOWN IN THE BUILDING. REFER TO SPECIFICATIONS FOR CONDUIT AND WIRING REQUIREMENTS BASED ON APPLICATION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT ROUTING OF WIRING AND CONDUITS AND SHALL BE RESPONSIBLE FOR SIZING ALL BRANCH CIRCUIT WIRING TO LIMIT VOLTAGE DROP TO 3%. CONTRACTOR SHALL SIZE CONDUIT TO ACCOMMODATE WIRING PER NEC. 20 AMPERE CIRCUITS SHALL BE SIZED AS FOLLOWS:

20 AMPERE CIRCUITS				
120 VOLT		277 VOLT		MINIMUM CONDUIT SIZE
WIRING LENGTH	WIRING SIZE	WIRING LENGTH	WIRING SIZE	
0' - 60'	#12	0 '- 130'	#12	3/4"
60' - 100'	#10	130' - 210'	#10	3/4"
100' - 150'	#8	210' - 340'	#8	3/4"
150' - 240'	#6	340' - 540'	#6	3/4"
OVER 240'	#4	OVER 540'	#4	1"

NOTE:
BRANCH CIRCUITS IN PANELBOARDS WITH 200% RATED NEUTRAL BUS AND ALL DIMMED LIGHTING CIRCUITS & ECM MOTORS SHALL HAVE DEDICATED NEUTRAL CONDUCTORS.

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NEW STADIUM RESTROOMS
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CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES

DESCRIPTION:	DATE:
PERMIT SET	03/17/2025
BID SET	03/31/2025

PROJ # : 22-CSD-04 DRAWN BY : MW

SHEET TITLE:

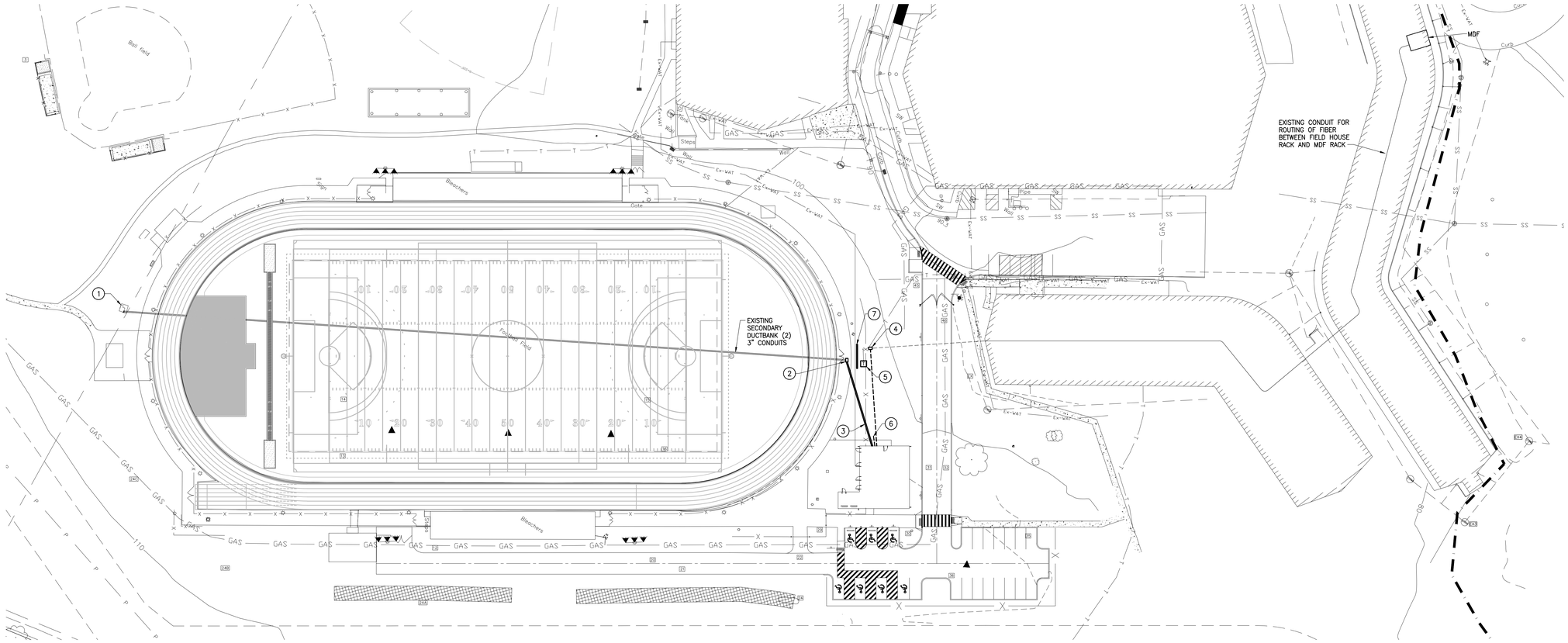
ELECTRICAL LEGEND, SCHEDULES AND DETAILS

SHEET NUMBER:

E0.1

BID SET

3/28/2025 3:22:05 PM



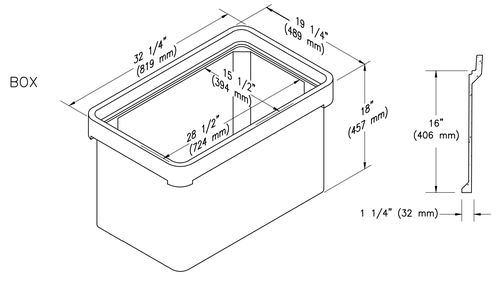
ELECTRICAL SITE PLAN
1"=40'-0"

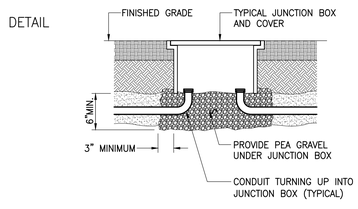
GENERAL NOTES:

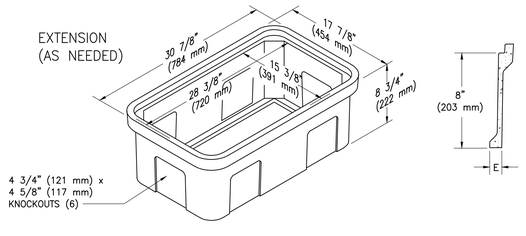
1. COORDINATE ALL NEW WORK WITH EXISTING SITE UTILITIES.
2. CUT AND PATCH EXISTING PAVED AREAS INCLUDING PARKING, CURBS, SIDEWALKS AND LOTS REQUIRED FOR INSTALLATION OF ELECTRICAL WORK.
3. ALL EXTERIOR LIGHTING CONDUITS/RACEWAYS SHALL HAVE DETECTABLE MARKING TAPE.
4. CONCRETE ENCASE CONDUIT BELOW PAVED AREAS.
5. COORDINATE ALL COMMUNICATIONS BOX LOCATIONS WITH TURF FIELD CONTRACTOR PRIOR TO ROUGH-IN.

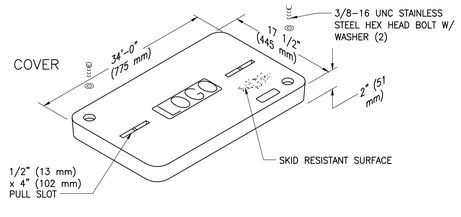
DRAWING NOTES:

1. EXISTING UTILITY TRANSFORMER AND VAULT BASE, COORDINATE WITH PECO FOR TEMPORARY SHUT DOWN SO THAT NEW SECONDARY CABLES CAN BE CONNECTED. COORDINATE SHUTDOWN WITH OWNER 2 WEEKS PRIOR TO ANTICIPATED OUTAGE.
2. INTERCEPT EXISTING SPARE SECONDARY CONDUITS AND INSTALL A 24" X 36" X24" DEEP HANDHOLE.
3. PROVIDE NEW SECONDARY CONDUIT FROM HANDHOLE TO NEW ELECTRICAL ROOM.
4. INTERCEPT EXISTING SPARE FIBER CONDUIT AND INSTALL A 24" X 36" X24" DEEP HANDHOLE. EXTEND 2" CONDUIT FROM HANDHOLE TO DATA RACK IN NEW ELECTRICAL ROOM.
5. IF NEW SCOREBOARD ALTERNATE IS ACCEPTED, RELOCATE EXISTING MINI-POWER ZONE (TRANSFORMER AND PANELBOARD UNIT) TO NEW SCOREBOARD LOCATION. REMOVE ALL CIRCUITS SERVING EXISTING SCOREBOARD AND PROVIDE (4) 1P-20A CIRCUITS TO THE NEW SCOREBOARD WITH 2#12+#12GW IN 3/4" CONDUIT. MAKE ALL CONNECTIONS TO NEW SCOREBOARD PER MANUFACTURERS RECOMMENDATIONS.
6. PROVIDE (1) 2" CONDUIT FROM NEW DATA RACK LOCATION STUBBED OUT 24" PAST PAVED AREA FOR SPARE TO SCOREBOARD. IF NEW SCOREBOARD ALTERNATE IS ACCEPTED, EXTEND THIS CONDUIT TO SCOREBOARD LOCATION.
7. SCOREBOARD LOCATION UNDER ALTERNATE.

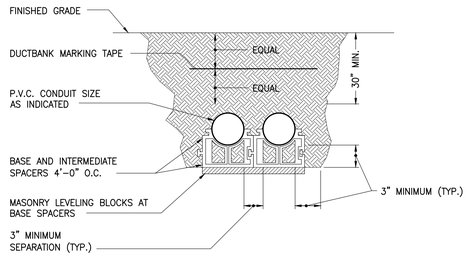




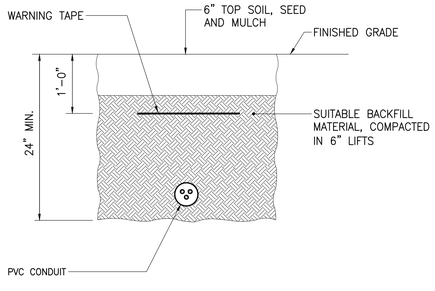




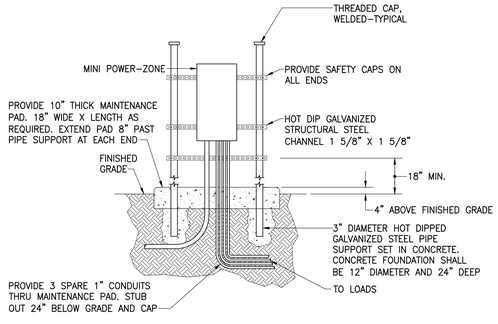
EXTERIOR JUNCTION BOX
NOT TO SCALE



SECONDARY DUCTBANK
NOT TO SCALE



DIRECT BURIED PVC CONDUIT
NOT TO SCALE



EQUIPMENT MOUNTING PEDESTAL
NOT TO SCALE

SCALE: 1" = 40'-0"
40 0 40 80

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CONSULTANT:

NEW RESTROOMS AND TICKET BOOTH
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES	DESCRIPTION:
DATE:	
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ # : DRAWN BY :

SHEET TITLE:
ELECTRICAL SITE PLAN

SHEET NUMBER:
E0.2

Branch Panel: FH

LOCATION: ELEC 124 | **VOLTAGE:** 480/277 Wye | **A.I.C. RATING:** 22K
SUPPLY FROM: | **PHASE:** 3 | **MAINS RATING:** 225 A
MOUNTING: Surface | **WIRES:** 4 | **MCB RATING:** 225 A
NEUTRAL RATING: 100%

Notes: *PROVIDE TIME CLOCK AND PHOTOCELL CONTROL
EXISTING SIEMENS TYPE P1 PANEL AND CIRCUIT BREAKERS PROVIDED BY OWNER. CIRCUIT BREAKERS SHOWN IN BOLD SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

CKT	CIRCUIT	WIRE SIZE	P	CB	A		B		C		CB	P	WIRE SIZE	CIRCUIT	CKT
FH-1	* Ltg. - Bldg. Facade	(2)#12 + #12GW - 3/4"C	1	20 A	0.2 kVA	1.4 kVA					20 A	1	(2)#12 + #12GW - 3/4"C	Ltg. - Interior	FH-2
FH-3							0.8 kVA	1.0 kVA			20 A	1			FH-4
FH-5	AHU-1	(3)#12 + #12GW - 3/4"C	3	15 A					0.8 kVA	1.0 kVA	20 A	3	(3)#12 + #12GW - 3/4"C	EUH-1	FH-6
FH-7					0.8 kVA	1.0 kVA									FH-8
FH-9							3.0 kVA								FH-10
FH-11	ACCU-1	(3)#12 + #12GW - 3/4"C	**3**	**15 A**					3.0 kVA						FH-12
FH-13					3.0 kVA										FH-14
FH-15															FH-16
FH-17															FH-18
FH-19															FH-20
FH-21															FH-22
FH-23															FH-24
FH-25															FH-26
FH-27															FH-28
FH-29															FH-30
FH-31															FH-32
FH-33															FH-34
FH-35															FH-36
FH-37					0.1 kVA	5.3 kVA									FH-38
FH-39	SPD	(4)#10 + #10GW - 3/4"C	3	**30 A**			0.1 kVA	3.0 kVA			30 A	3	REFER TO XFMR SCHEDULE	PANEL FL (VIA TFL)	FH-40
FH-41									0.1 kVA	3.7 kVA					FH-42
		Total Connected Load:	28.4...		11.7 kVA		8.0 kVA		8.7 kVA						

Legend:

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANELBOARD TOTALS	
MOTOR -	0.0 kVA	0.00%	0.0 kVA	**Total Conn. Load:**	28.4 kVA
REC -	4.6 kVA	100.00%	4.6 kVA	**Total Est. Demand:**	28.4 kVA
MECHANICAL -	21.8 kVA	100.00%	21.8 kVA	**Total Conn.:**	34 A
LTG. -	1.4 kVA	100.00%	1.4 kVA	**Total Est. Demand.:**	34 A

Branch Panel: FL

LOCATION: ELEC 124 | **VOLTAGE:** 120/208 Wye | **A.I.C. RATING:** 10K
SUPPLY FROM: TFL | **PHASE:** 3 | **MAINS RATING:** 100 A
MOUNTING: Surface | **WIRES:** 4 | **MCB RATING:** 60 A
NEUTRAL RATING: 100%

Notes:...
EXISTING SIEMENS TYPE P1 PANEL AND CIRCUIT BREAKERS PROVIDED BY OWNER. CIRCUIT BREAKERS SHOWN IN BOLD SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

CKT	CIRCUIT	WIRE SIZE	P	CB	A		B		C		CB	P	WIRE SIZE	CIRCUIT	CKT
FL-1	REC - TICKETS 125	(2)#12 + #12GW - 3/4"C	1	20 A	0.8 kVA	1.2 kVA					20 A	1	(2)#12 + #12GW - 3/4"C	REC - RESTROOMS	FL-2
FL-3	REC - TICKETS 125	(2)#12 + #12GW - 3/4"C	1	20 A			0.8 kVA	0.4 kVA			20 A	1	(2)#12 + #12GW - 3/4"C	REC - ELEC 124	FL-4
FL-5	REC - MECH/STORAGE 127	(2)#12 + #12GW - 3/4"C	1	20 A					1.2 kVA	0.6 kVA	20 A	1	(2)#12 + #12GW - 3/4"C	ERCP-1,2	FL-6
FL-7	ERCP-3,4,5	(2)#12 + #12GW - 3/4"C	1	20 A	0.9 kVA	0.4 kVA					**15 A**	**1**	(2)#12 + #12GW - 3/4"C	F-3,4,5	FL-8
FL-9	F-1,2	(2)#12 + #12GW - 3/4"C	**1**	**15 A**			1.0 kVA	0.6 kVA			20 A	1	(2)#12 + #12GW - 3/4"C	HWG-1	FL-10
FL-11	REC - BOTTLE FILLER	(2)#12 + #12GW - 3/4"C	1	20 A					0.2 kVA	1.7 kVA	**25 A**	**2**	(2)#10 + #10GW - 3/4"C	SS-1	FL-12
FL-13	RP-1	(2)#12 + #12GW - 3/4"C	1	20 A	0.2 kVA	1.7 kVA									FL-14
FL-15	DOOR ACCESS POWER SUPPLY	(2)#12 + #12GW - 3/4"C	1	20 A			0.2 kVA								FL-16
FL-17															FL-18
		Total Connected Load:	12.0...		5.3 kVA		3.0 kVA		3.7 kVA						

Legend:

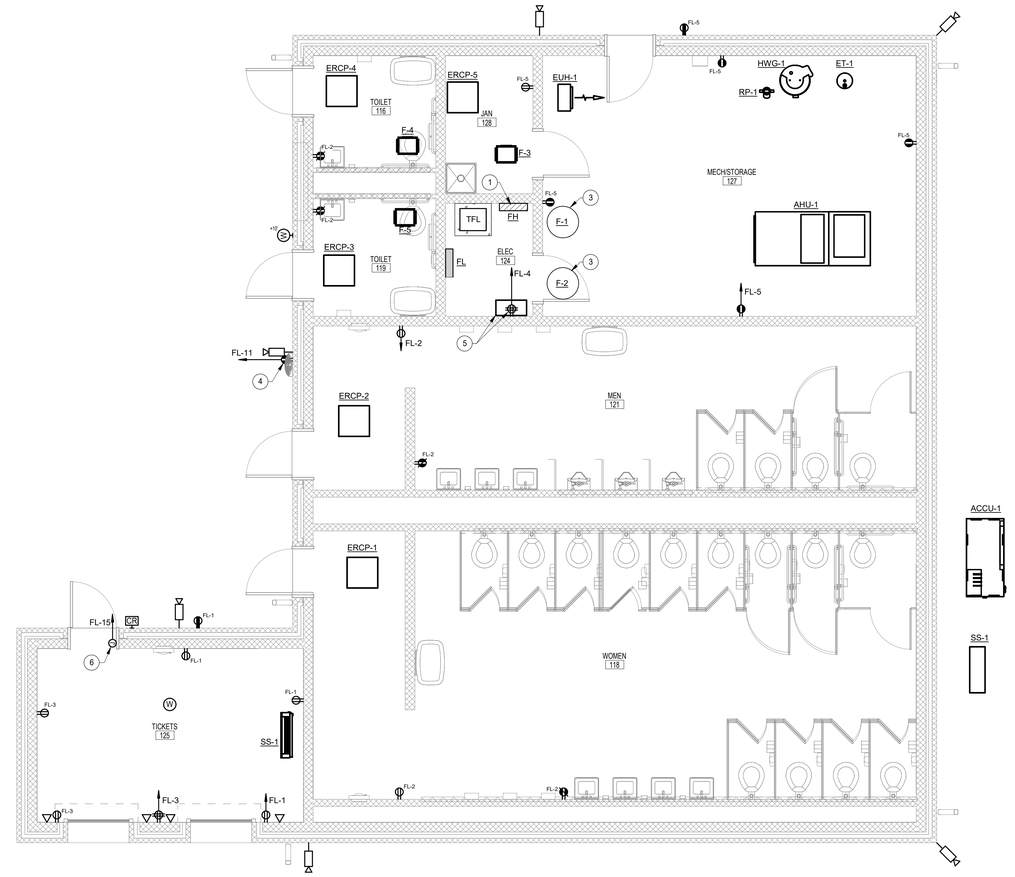
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANELBOARD TOTALS	
MOTOR -	0.0 kVA	0.00%	0.0 kVA	**Total Conn. Load:**	12.0 kVA
REC -	4.6 kVA	100.00%	4.6 kVA	**Total Est. Demand:**	12.0 kVA
MECHANICAL -	7.2 kVA	100.00%	7.2 kVA	**Total Conn.:**	33 A
LTG. -	0.0 kVA	0.00%	0.0 kVA	**Total Est. Demand.:**	33 A

GENERAL NOTES:

1. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULES ON THIS SHEET FOR ADDITIONAL INFORMATION.

DRAWING NOTES:

1. MOUNT TO SUIT WALL MOUNTED DATA RACK. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO ROUGH-IN.
2. MAKE CONNECTION TO INTEGRAL DISCONNECT AT UNIT.
3. FANS LOCATED IN ATTIC ABOVE.
4. MOUNT RECEPTACLE WITHIN SHROUD CANOPY OF BOTTLE FILLER.
5. WALL MOUNTED DATA RACK, MOUNT RECEPTACLE AT 80" ABOVE FINISHED FLOOR.
6. MOUNT TO SUIT DOOR ACCESS POWER SUPPLY.



FLOOR PLAN - POWER
1/4" = 1'-0"

MECH NOTES:

1. PROVIDE 2P-30A-F/SS (FUSED PER MANUFACTURERS NAMEPLATE DATA) AT BOTH OUTDOOR AND ASSOCIATED INDOOR UNITS AND MAKE ALL CONNECTIONS AS REQUIRED.
2. PROVIDE 3P-30A-F/SS (FUSED PER MANUFACTURERS NAMEPLATE DATA) AT UNIT AND MAKE ALL CONNECTIONS AS REQUIRED.
3. MAKE ALL CONNECTIONS TO DISCONNECT PROVIDED WITH UNIT AS REQUIRED.
4. PROVIDE 2P MOTOR RATED SWITCH WITH GREEN PILOT LIGHT. MOUNT ADJACENT TO UNIT IN CEILING SPACE AND MAKE ALL CONNECTIONS.
5. PROVIDE 2P MOTOR RATED SWITCH WITH GREEN PILOT LIGHT. MOUNT ADJACENT TO UNIT AND MAKE ALL CONNECTIONS.
6. PROVIDE 2P-15A NF/SS. MOUNT ON WALL ADJACENT TO HOT WATER GENERATOR AND MAKE ALL CONNECTIONS.
7. PROVIDE 3P-30A-NF/SS AT UNIT AND MAKE ALL CONNECTIONS AS REQUIRED.

MECHANICAL EQUIPMENT CONNECTION SCHEDULE (AHUs)

EQUIPMENT DESIG.	ELECTRICAL CHARACTERISTICS				CIRCUIT DESIG.	MECS NOTES
	VOLTAGE	*ϕ*	*AMPS*	*kVA*		
AHU-1	480 V	3	3.0 A	2.5 kVA	FH-3,5,7	7

MECHANICAL EQUIPMENT CONNECTION SCHEDULE (ACCUs)

EQUIPMENT DESIG.	ELECTRICAL CHARACTERISTICS				CIRCUIT DESIG.	MECS NOTES
	VOLTAGE	*ϕ*	*AMPS*	*kVA*		
ACCU-1	480 V	3	11.0 A	9.1 kVA	FH-9,11,13	2

MECHANICAL EQUIPMENT CONNECTION SCHEDULE (HWGs)

EQUIPMENT DESIG.	ELECTRICAL CHARACTERISTICS				CIRCUIT DESIG.	MECS NOTES
	VOLTAGE	*ϕ*	*AMPS*	*kVA*		
HWG-1	120 V	1	5.0 A	0.6 kVA	FL-10	6

MECHANICAL EQUIPMENT CONNECTION SCHEDULE (EUHs)

EQUIPMENT DESIG.	ELECTRICAL CHARACTERISTICS				CIRCUIT DESIG.	MECS NOTES
	VOLTAGE	*ϕ*	*AMPS*	*kVA*		
EUH-1	480 V	3	3.6 A	3.0 kVA	FH-4,6,8	3

MECHANICAL EQUIPMENT CONNECTION SCHEDULE (FANs)

EQUIPMENT DESIG.	ELECTRICAL CHARACTERISTICS				CIRCUIT DESIG.	MECS NOTES
	VOLTAGE	*ϕ*	*AMPS*	*kVA*		
F-1	120 V	1	5.8 A	0.7 kVA	FL-9	3
F-2	120 V	1	2.5 A	0.3 kVA	FL-9	3
F-3	120 V	1	1.0 A	0.1 kVA	FL-8	3
F-4	120 V	1	1.0 A	0.1 kVA	FL-8	3
F-5	120 V	1	1.0 A	0.1 kVA	FL-8	3

MECHANICAL EQUIPMENT CONNECTION SCHEDULE (ERCPs)

EQUIPMENT DESIG.	ELECTRICAL CHARACTERISTICS				CIRCUIT DESIG.	MECS NOTES
	VOLTAGE	*ϕ*	*AMPS*	*kVA*		
ERCP-1	120 V	1	3 A	0.3 kVA	FL-6	4
ERCP-2	120 V	1	3 A	0.3 kVA	FL-6	4
ERCP-3	120 V	1	3 A	0.3 kVA	FL-7	4
ERCP-4	120 V	1	3 A	0.3 kVA	FL-7	4
ERCP-5	120 V	1	3 A	0.3 kVA	FL-7	4

MECHANICAL EQUIPMENT CONNECTION SCHEDULE (SPLIT SYSTEMs)

EQUIPMENT DESIG.	ELECTRICAL CHARACTERISTICS				CIRCUIT DESIG.	MECS NOTES
	VOLTAGE	*ϕ*	*AMPS*	*kVA*		
SS-1	208 V	1	16.5 A	3.4 kVA	FL-12,14	1

MECHANICAL EQUIPMENT CONNECTION SCHEDULE (RPs)

EQUIPMENT DESIG.	ELECTRICAL CHARACTERISTICS				CIRCUIT DESIG.	MECS NOTES
	VOLTAGE	*ϕ*	*AMPS*	*kVA*		
RP-1	120 V	1	2.00 A	0.24 kVA	FL-13	5

Graphic Scale: 1 inch = 8 feet
0 8' 16' 24' 32'

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NEW STADIUM RESTROOMS
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES

DATE:	DESCRIPTION:
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ # : 22-CSD-04 DRAWN BY : MW

SHEET TITLE:

FLOOR PLAN - POWER

SHEET NUMBER:

E1.1

BID SET

3/28/2025 3:27:23 PM

LIGHTING FIXTURE SCHEDULE

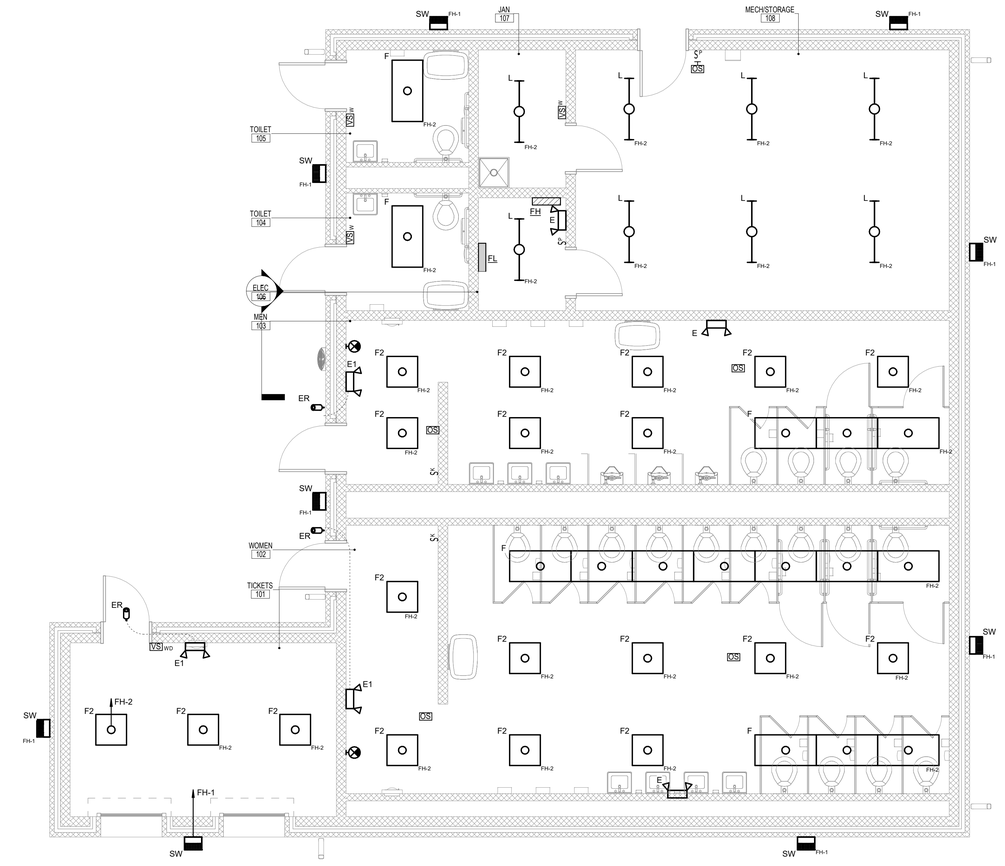
TYPE	DESCRIPTION	MANUFACTURER	MODEL	LAMPS	MAX. ALLOCATED WATTAGE	VOLTS	MOUNTING	REMARKS
E	THERMOPLASTIC STYLE LED EMERGENCY BATTERY UNIT WITH UNIVERSAL MOUNTING, TWO HIGH PERFORMANCE 6 WATT LED LAMPHEADS, POLYCARBONATE OPTICS, FIELD SELECTABLE VOLTAGE, HIGH CAPACITY MAINTENANCE FREE LITHIUM IRON PHOSPHATE BATTERY, TEST SWITCH, STATUS INDICATOR, LVCO, BROWN OUT SENSING, LINE LATCH FUNCTION, UL924 LISTED, DAMP LOCATION LISTED AND WHITE FINISH.	EVENLITE	TEBL6W SERIES	LED, 600lms EACH	12.0 W	277 V	WALL, SURFACE AT 8'-0" A.F.F.	
E1	SIMILAR TO TYPE 'E' EXCEPT WITH REDUCED LUMEN OUTPUT TO ALLOW FOR ADDITIONAL BATTERY CAPACITY (5 WATTS MINIMUM) TO POWER REMOTE HEAD(s) [TYPE 'ER'].	EVENLITE	TEBL5W SERIES	LED, 300lms EACH	15.0 W	277 V	WALL, SURFACE AT 8'-0" A.F.F.	
ER	REMOTE EMERGENCY HEAD WITH DIE CAST ALUM. CONSTRUCTION, GASKETED MOUNTING PLATE, FULLY ADJUSTABLE WITH LOCKING SET SCREW AND BLACK FINISH.	EVENLITE	PRW.LED.1.MV.B SERIES	LED	1.0 W	10 V	WALL, SURFACE AT 8'-0" A.F.G. REFER TO LFS NOTE No. 1.	POWERED VIA TYPE 'E1' LUMINAIRE.
F	NOMINAL 2'w x 4'l x 2"d (INCLUDING DRIVER) EDGE-LIT FLAT PANEL STYLE LED LUMINAIRE WITH INTEGRAL FACTORY PROGRAMMED/CUSTOMIZED LUMEN OUTPUT DRIVER, 80+ CRI MIN., LIGHT GUIDE PLATE, 2 TO 1 MAX. UNIFORMITY RATIO, HEAVY DUTY 20 GAUGE CRS BACK PANEL, ALUM. FRAME, INTERLOCKING CORNERS UNIFORMLY TURNED IN AND HEMMED, POST PAINTED AND WHITE FINISH.	ORACLE LIGHTING	24.FPL1.LED.3000L.DIM10.MVOLT.40K.85 SERIES	LED, 4000k, 3,000lms	28.5 W	277 V	CEILING, RECESSED	REFER TO LFS NOTE No. 1.
F2	SAME AS TYPE 'F' EXCEPT 2'x2' AND STANDARD LUMEN OUTPUT.	ORACLE LIGHTING	22.FPL1.LED.3000L.DIM10.MVOLT.40K.85 SERIES	LED, 4000k, ~3,300lms	30.0 W	277 V	CEILING, RECESSED	
L	NOMINAL 6"w x 3-1/2"d x 4'l ENCLOSED AND GASKETED STYLE LED LUMINAIRE WITH COMPRESSION MOLDED NON-CONDUCTIVE NON-CORROSIVE SELF EXTINGUISHING FIBERGLASS HOUSING, PEARL WHITE FINISH, POURED CONTINUOUS GASKETING, FROSTED WIDE OPTIC POLYCARBONATE LENSING, VANDAL RESISTANT HARDWARE, UL LISTED FOR WET LOCATIONS, IP65/66/67 RATED, 80+ CRI MIN., TOP HUB CEILING MOUNTING STYLE AND INTEGRAL 0-10v DIMMING DRIVER.	NLS LIGHTING	AVSL.4F.4F.40K8.WPC.UNV.TH.SSL.VR SERIES	LED, 4000k, 4200lms	49.0 W	277 V	SURFACE OR SUSPENDED AT 9'-0" A.F.F.	
SW	NOMINAL 12"l x 9"w x 6"h WALL PACK STYLE LED LUMINAIRE WITH DIE CAST ALUM. CONSTRUCTION, INTERNAL COOLING FINS, CORROSION RESISTANT EXTERNAL HARDWARE, ONE-PIECE SILICONE GASKET (IP65 RATED ELECTRONICS COMPARTMENT), TWO PIECE SILICONE MICRO OPTICS (IP67 RATED, FULL CUTOFF AND VANDAL RESISTANT), TYPE 2 DISTRIBUTION, IK10 RATED, 20Kv SURGE PROTECTOR, 70+ CRI MIN., INTEGRAL DRIVER, B1-U0-G1 MAX. BUG RATING AND FINISH PER ARCHITECT (B.O.D. SHALL BE BLACK).	NLS LIGHTING	NV-W.T2.16L.35.40K7.UNV.WM.BLK.x.20KA.BH SERIES	LED, 4000k, ~2600lms	19.0 W	277 V	WALL, SURFACE AT ~9'-0" A.F.G. REFER TO LFS NOTE No. 1.	
X	THERMOPLASTIC STYLE LED EXIT SIGNAGE WITH UNIVERSAL MOUNTING, WHITE FINISH, INTEGRAL BATTERY, TEST SWITCH AND COLOR OF LETTERS PER AHJ.	EVENLITE	TLX SERIES	LED	5.0 W	277 V	WALL, SURFACE AT 7'-6" A.F.F. OR ABOVE DOOR	

GENERAL NOTES:

1. PROVIDE ALL 0-10V DIMMING DRIVERS PREWIRED WITH ISOLATE LEADS. WHEN A DIMMING DRIVER IS PROVIDED BUT ONLY CALLED FOR STATIC OPERATION, CAP 0-10V LEADS AND LEAVE IN PLACE, ENSURE LUMINAIRE STILL OPERATES AT 100% OUTPUT.
2. COORDINATE LIGHTING FIXTURES INDICATED ON DRAWINGS WITH ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS. VERIFY CEILING CONSTRUCTION IN ALL AREAS WITH ARCHITECTURAL DRAWINGS AND PROVIDE ALL MOUNTING FRAMES/HARDWARE AS REQUIRED FOR A COMPLETE INSTALLATION SUITABLE FOR THE CEILING TYPE.
3. IN SPRINKLERED AREAS, MAINTAIN ADEQUATE SPACING BETWEEN FIXTURES AND SPRINKLER HEADS PER COUNTY FIRE MARSHAL REQUIREMENTS.
4. ALL LOW VOLTAGE, CLASS 2 WIRING FROM A REMOTE POWER SUPPLY TO LUMINAIRE SHALL BE IN CONDUIT.
5. PROVIDE ALL DRIVERS AS UNIVERSAL VOLTAGE.
6. MODEL NUMBERS ARE FOR REFERENCE ONLY. SUBMIT SHOP DRAWINGS BASED ON ENTIRE SCHEDULE AND DRAWING INFORMATION.

LIGHT FIXTURE SCHEDULE NOTES:

1. FACTORY PROGRAM DRIVER TO 28.5w AT 3,000lms+ REQUIRED. FIELD SELECTABLE OPTIONS NOT ACCEPTABLE. WATTAGE INDICATED IS MAXIMUM ALLOWED, LUMENS INDICATED ARE MINIMUM ALLOWED.
2. SCHOOL STANDARD, NO SUBSTITUTIONS. VERIFY ALL MOUNTING LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN.



FIRST FLOOR - LIGHTING
1/4" = 1'-0"

Graphic Scale: 1 inch = 8 feet
0 8' 16' 24' 32'

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PA FIRM NO. 25018

NEW STADIUM RESTROOMS
CHICHESTER HIGH SCHOOL
CHICHESTER SCHOOL DISTRICT
3333 CHICHESTER AVE, BOOTHWYN, PA 19061

ISSUE DATES	DESCRIPTION:
DATE:	
03/17/2025	PERMIT SET
03/31/2025	BID SET

PROJ # : 22-CSD-04 DRAWN BY : MW

SHEET TITLE:
FLOOR PLAN - LIGHTING

SHEET NUMBER:
E2.1

BID SET

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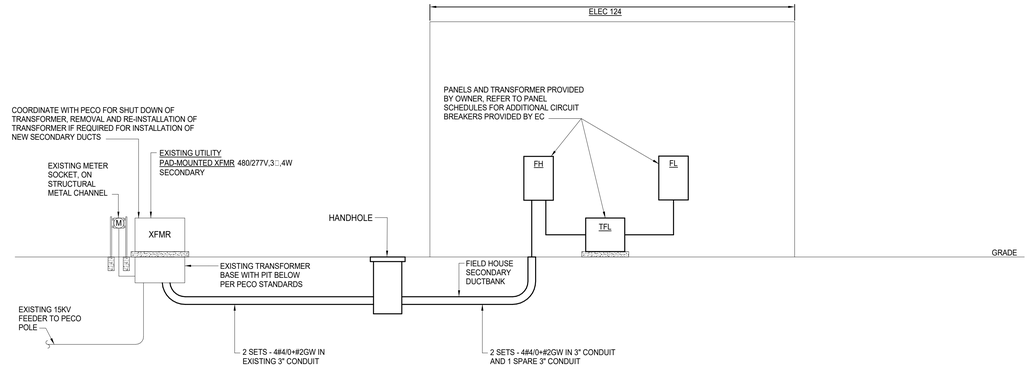
DRY TYPE TRANSFORMER SCHEDULE												
XFMR	kVA	PRIMARY			PRIMARY WIRING	SECONDARY WIRING	SECONDARY			NEUTRAL/ CASE GND	REMARKS	MOUNTING DESCRIPTION
		VOLTAGE	*ϕ*	*CB*			*VOLTAGE*	*ϕ*	*CB*			
TFL	15	480 V	3	30 A	(3) #10 + #10GW - 3/4"C	(4) #4 + #8 SSBJ - 1 1/4"C	208/120 V	3	60 A	#8		FLOOR

TRANSFORMER IS PROVIDED BY OWNER.

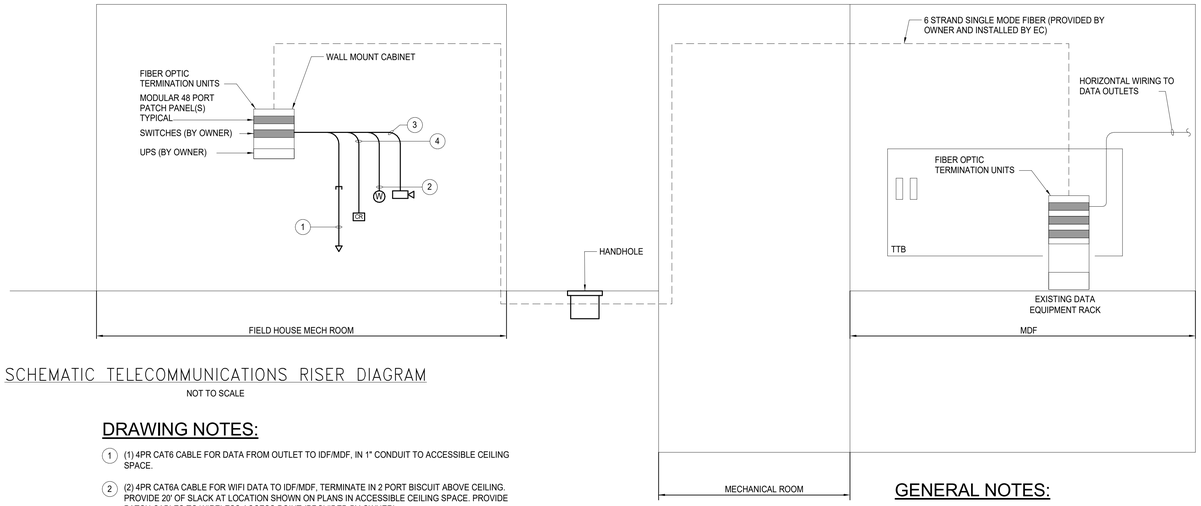
POWER RISER GENERAL NOTES:

1. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL REDUCE FEEDER SIZE (IF REQUIRED) WITHIN 5'-0 OF EQUIPMENT TO ACCOMMODATE LUG SIZES.



SCHEMATIC POWER RISER DIAGRAM –WEST END TICKET BOOTH – BASE BID

NOT TO SCALE



SCHEMATIC TELECOMMUNICATIONS RISER DIAGRAM

NOT TO SCALE

DRAWING NOTES:

1. (1) 4PR CAT6 CABLE FOR DATA FROM OUTLET TO IDF/MDF, IN 1" CONDUIT TO ACCESSIBLE CEILING SPACE.
2. (2) 4PR CAT6A CABLE FOR WIFI DATA TO IDF/MDF, TERMINATE IN 2 PORT BISCUIT ABOVE CEILING. PROVIDE 20' OF SLACK AT LOCATION SHOWN ON PLANS IN ACCESSIBLE CEILING SPACE. PROVIDE PATCH CABLES TO WIRELESS ACCESS POINT (PROVIDED BY OWNER).
3. (1) 4PR CAT6 CABLE FOR SECURITY CAMERA TO IDF/MDF, TERMINATE IN 2 PORT BISCUIT ABOVE CEILING. PROVIDE 20' OF SLACK AT LOCATION SHOWN ON PLANS IN ACCESSIBLE CEILING SPACE. PROVIDE PATCH CABLES TO CAMERA (PROVIDED BY OWNER).
4. (1) 4PR CAT6 CABLE FOR POE DOOR POWER. COORDINATE TERMINATION WITH DOOR ACCESS CONTROL CONTRACTOR.

DATA CABLE COLOR CODING:

WHITE - DATA/IP PHONE CABLE

YELLOW - WIRELESS ACCESS POINTS

PURPLE - SECURITY CAMERAS

GREEN - ATC PANELS

GENERAL NOTES:

1. REFER TO FLOOR PLANS FOR RACK QUANTITIES AND EXACT DEVICE COUNT AND LOCATIONS. FLOOR BOXES SHALL HAVE SAME CONDUITS/WIRING/BACKBOX SIZES AS CORRESPONDING WALL OUTLETS
2. WIRELESS ACCESS POINTS SHALL BE TERMINATED ON DEDICATED PATCH PANEL.
3. CCTV CAMERAS SHALL BE TERMINATED ON DEDICATED PATCH PANEL.
4. DATA CABLES SHALL BE TERMINATED ON DEDICATED PATCH PANEL.
5. IP PHONE CABLES SHALL BE TERMINATED ON DEDICATED PATCH PANEL.
6. REFER TO DETAILS FOR ADDITIONAL INFORMATION ON OUTLET CONFIGURATIONS.
7. PROVIDE SURGE PROTECTION FOR CABLING TO ALL EXTERIOR DEVICES AT PENETRATION THROUGH EXTERIOR WALL.
8. COORDINATE PATCH PANEL LAYOUT WITHIN RACK (ALTERNATING PATCH PANEL, SWITCH) WITH OWNER PRIOR TO SHOP DRAWING PHASE.

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PROJ # : 22-CSD-04 DRAWN BY : MW

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SCHEMATIC POWER RISER DIAGRAM

SHEET NUMBER:

E5.1

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