22019
100% CONSTRUCTION DOCUMENTS
01/31/2025

LEGEND

———	S OR W	SOIL OR WASTE PIPING
- - - - -	V	VENT PIPING
—·—·—	CW	COLD WATER SUPPLY PIPING
—··—··—	HW	HOT WATER SUPPLY PIPING
—··—··—	HWR	HOT WATER RETURN PIPING
GAS GAS	G	GAS PIPING
	GV	GATE VALVE
	CV	CHECK VALVE
	BV	BALL VALVE
	HB	HOSE BIBB
	WH	WALL HYDRANT
	CO	CLEANOUT TO FLOOR
	FD	FLOOR DRAIN
	COTS	CLEANOUT TO GRADE
		UNION
	VTR	VENT THRU ROOF
1		SHEET NOTE
		POINT OF CONNECTION TO EXISTING
S		SOLENOID VALVE
	MR	MOP RECEPTOR
	WC	WATER CLOSET
	TP	TRAP PRIMER
	EWH	ELECTRIC WATER HEATER
	WHA	WATER HAMMER ARRESTOR TYPE A
	WHB	WATER HAMMER ARRESTOR TYPE B
	WHC	WATER HAMMER ARRESTOR TYPE C
	L	LAVATORY
	UR	URINAL
	KW	KILOWATT
	TVC	TEMPERATURE CONTROL VALVE
	MS	MASTER SHUT OFF VALVE
	S	SWITCH
	WV	WET VENT
	CP	CIRCULATOR PUMP
	HD	2" HUB DRAIN WITH FLEXIBLE TRAP SEAL BY MIFAB OR EQUAL ABOVE CEILING UNLESS NOTED
	MV	MIXING VALVE
	EWC	ELECTRIC WATER COOLER
	UB	UTILITY BOX
	SH	SHOWER
	SK	SINK

GENERAL NOTES

1. COORDINATE ALL PIPING WITH DUCTWORK SHOP DRAWINGS AND EXISTING CONDITIONS. ROUTE PIPING AS REQUIRED TO AVOID CONFLICTS.
2. PRIOR TO START OF ANY WORK, COORDINATE SANITARY SEWER AND POTABLE WATER PIPING WITH CIVIL DRAWINGS.
3. FIELD VERIFY PIPE INVERTS PRIOR TO LAYING OUT SANITARY SEWER PIPING.
4. ALL PIPING PASSING THROUGH ANY WALL SHALL HAVE A SLEEVE PER SPECIFICATIONS.
5. ALL PIPING PASSING THROUGH FIRE-RATED WALLS SHALL HAVE A FIRE-RATED SLEEVE PER SPECIFICATIONS. ALL PIPING PENETRATIONS THROUGH WALLS OR FLOORS SHALL BE SEALED TO EQUAL THE RATING OF THE WALLS OR FLOORS.
6. ALL PIPING INDICATED IS ABOVE THE CEILING EXCEPT THE OBVIOUS SANITARY SOIL, WASTE, VENT AND POTABLE WATER PIPING BELOW FLOOR OR GRADE.
7. SEE TOILET ROOM ELEVATIONS ON ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE MOUNTING HEIGHT.
8. COORDINATE EXACT LOCATION OF ALL EXTERIOR WALL HYDRANTS WITH ARCHITECTURAL DRAWINGS.
9. UNDER SLAB SOIL, WASTE AND VENT PIPING PASSING TO UNDERSIDE OR THROUGH FOUNDATION FOOTING, WALL OR GRADE BEAM SHALL BE PROVIDED WITH A RELIEVING ARCH OR PIPE SLEEVE 2 (TWO) PIPE SIZES GREATER THAN PIPE SIZE INDICATED ON PLANS. COORDINATE FINAL PIPE ROUTING AND LAYOUT WITH STRUCTURAL DRAWINGS.
10. PRIOR TO SUBSTANTIAL COMPLETION OF NEW AND ALTERED WORK AREAS, CONTRACTOR SHALL HAVE SANITARY PLUMBING SYSTEM CLEARED OF DEBRIS OR ANY MATTER THAT WOULD INTERFERE OR PREVENT ADEQUATE CONVEYANCE OF MATERIALS FROM MOVING THROUGH AND TERMINATING INTO BUILDING OR PUBLIC DISPOSAL FACILITIES.
11. ALL (VTR'S) VENT THRU ROOF PENETRATIONS INDICATED ON PLANS ARE PRELIMINARY. FINAL LOCATIONS SHALL BE COORDINATED WITH ALL TRADES. ALL VTR'S SHALL BE A MINIMUM OF 10'-0" FROM ALL FRESH AIR INTAKE OPENINGS.
12. ALL TRAP PRIMERS AND DOMESTIC WATER ISOLATION VALVES SHALL BE ACCESSIBLE. TRAP PRIMERS LOCATED IN THE VICINITY OF WATER CLOSETS SHALL BE ACTIVATED BY WATER CLOSET USAGE. ISOLATION VALVES SHALL BE OF THE QUARTER TURN BALL OR GATE TYPE.
13. CONTRACTOR SHALL DEVELOP AND SUBMIT COORDINATION SHOP DRAWINGS WHICH IDENTIFY ROUTING OF PLUMBING PIPE AND LOCATION OF EQUIPMENT. SHOP DRAWINGS SHALL INDICATE COORDINATION WITH THE WORK OF OTHER TRADES.
14. ALL WORK SHALL COMPLY WITH THE FLORIDA BUILDING CODE 8TH EDITION (2023) PLUMBING.

PLUMBING SPECIFICATIONS

WC-1 WATER CLOSET, FLOOR-MOUNT (ADULT HANDICAP, MANUAL VALVE):

VITREOUS CHINA, 1.28 GALLONS PER FLUSH, ELONGATED, HIGH EFFICIENCY SIPHON JET, WHITE, WATER SAVER BOWL WITH 1-1/2" TOP SPUD, 17" HIGH FOR HANDICAPPED. EXPOSED CHROME PLATE FLUSH VALVE, WITH SCREWDRIVER STOP, VACUUM BREAKER, QUIET FLUSH FEATURE, WITH SWEAT SOLDER KIT AND CAST WALL FLANGE. HEAVY MOLDED PLASTIC, WHITE, ELONGATED, OPEN FRONT SEAT LESS COVER, WITH STAINLESS STEEL, SELF-SUSTAINING CHECK HINGES. HOLD CENTERLINE FLUSH VALVE ASSEMBLY OFF FINISH WALL FOR GRAB BAR CLEARANCES, COORDINATE WITH ARCHITECTURAL DRAWINGS.

WATER CLOSET	ZURN Z5665BWL
VALVE	ZURN Z6000PL-HET
SEAT	ZURN Z5955SS-EL-STS
CLOSET BOLT/WAX RING KIT	ZURN Z5972-COMB

WC-2 WATER CLOSET, FLOOR-MOUNT (ADULT STANDARD/CHILD ADA, MANUAL VALVE):

VITREOUS CHINA, 1.28 GALLONS PER FLUSH, ELONGATED, HIGH EFFICIENCY SIPHON JET, WHITE, WATER SAVER BOWL WITH 1-1/2" TOP SPUD. 15" HIGH FOR HANDICAPPED CHILDREN AGES 5 THROUGH 8. EXPOSED CHROME PLATE FLUSH VALVE, WITH SCREWDRIVER STOP, VACUUM BREAKER, QUIET FLUSH FEATURE, WITH SWEAT SOLDER KIT AND CAST WALL FLANGE. HEAVY MOLDED PLASTIC, WHITE, ELONGATED, OPEN FRONT SEAT LESS COVER, WITH STAINLESS STEEL, SELF-SUSTAINING CHECK HINGES.

WATER CLOSET	ZURN Z5454-BWL
VALVE	ZURN Z6000PL-HET
SEAT	ZURN Z5955SS-JUV-STS
CLOSET BOLT/WAX RING KIT	ZURNZ5972-COMB

UR-1 URINAL, WALL-MOUNT (HANDICAP, MANUAL VALVE):

VITREOUS CHINA, 0.5 GALLONS PER FLUSH, SIPHON JET FLUSH, 3/4" TOP SPUD, AND 2" OUTLET URINAL. EXPOSED CHROME PLATED FLUSH VALVE WITH SCREWDRIVER STOP, VACUUM BREAKER AND QUIET FLUSH FEATURE. MOUNT TO SATISFY ADA REQUIREMENTS, COORDINATE WITH ARCHITECTURAL DRAWINGS (TOILET ROOM ELEVATIONS) FOR FINAL MOUNTING HEIGHT. FURNISH FLOOR MOUNTED SINGLE CARRIER WITH HANGER PLATE, BEARING PLATE, ADJUSTABLE SUPPORTING RODS, STRUCTURAL UPRIGHTS AND BLOCK BASES, SECURE BASE TO FLOOR FOR RIGID CONNECTION WITH 1/2" X 3-3/4" THREADED ZINC PLATED STEEL HEAVY DUTY WEDGE ANCHORS, COMPLETE WITH STAINLESS STEEL CLIP, WASHER AND THREADED NUT, CONFORMING TO FEDERAL SPEC. FF-S-325.

URINAL	ZURN Z5738-U
VALVE	ZURN Z6003AV
URINAL FLANGE KIT	ZURN Z5976-URINAL
CARRIER	ZURN Z-1222
BASE ANCHORAGE	B-LINE ANCHORS AWA-50-375

UR-2 URINAL, WALL-MOUNT (STANDARD, MANUAL VALVE):

VITREOUS CHINA, 0.5 GALLONS PER FLUSH, SIPHON JET FLUSH, 3/4" TOP SPUD, AND 2" OUTLET URINAL. EXPOSED CHROME PLATED FLUSH VALVE WITH SCREWDRIVER STOP, VACUUM BREAKER AND QUIET FLUSH FEATURE. SEE ARCHITECTURAL DRAWINGS (TOILET ROOM ELEVATIONS) FOR MOUNTING HEIGHT. FURNISH FLOOR MOUNTED SINGLE CARRIER WITH HANGER PLATE, BEARING PLATE, ADJUSTABLE SUPPORTING RODS, STRUCTURAL UPRIGHTS AND BLOCK BASES, SECURE BASE TO FLOOR FOR RIGID CONNECTION WITH 1/2" X 3-3/4" THREADED ZINC PLATED STEEL HEAVY DUTY WEDGE ANCHORS, COMPLETE WITH STAINLESS STEEL CLIP, WASHER AND THREADED NUT, CONFORMING TO FEDERAL SPEC. FF-S-325.

URINAL	ZURN Z5738-U
VALVE	ZURN Z6003AV-EWS
URINAL FLANGE KIT	ZURN Z5976-URINAL
CARRIER	ZURN Z-1222
BASE ANCHORAGE	B-LINE ANCHORS AWA-50-375

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L-1 LAVATORY, WALL-MOUNT HANDICAP):

VITREOUS CHINA 20" X 18", COLOR "WHITE", 3 FAUCET HOLES ON 8" CENTER, FRONT OVERFLOW, FOR CONCEALED ARM SUPPORT. FURNISH FLOOR-MOUNTED SINGLE CARRIER WITH CONCEALED ARMS, LEVELING AND SECURING SCREWS, STRUCTURAL UPRIGHTS AND BLOCK BASES, SECURE BASE TO FLOOR FOR RIGID CONNECTION WITH 1/2" X 3-3/4" THREADED ZINC PLATED STEEL HEAVY DUTY WEDGE ANCHORS, COMPLETE WITH STAINLESS STEEL CLIP, WASHER AND THREADED NUT, CONFORMING TO FEDERAL SPEC. FF-S-325. PROVIDE CHROME PLATED ANGLE STOP TO WALL WITH CHROME PLATED 1/2" IPS X 3/8" OD FLEXIBLE COPPER SUPPLY RISERS AND LOOSE KEY OPERATOR, INTEGRAL PERFORATED CAST BRASS STRAINER WITH 1-1/4" OFFSET TAILPIECE AND P-TRAP WITH CLEANOUT AND TUBE WASTE TO WALL, WITH WATER SAVER TRAP PRIMER AND STAINLESS-STEEL PRIMER HOSE. POLISHED CHROME PLATED CAST BRASS SINGLE WATER METERING FAUCET WITH COVER PLATE, 0.5 GPM AERATOR OUTLET AND PUSH BUTTON. LAVATORY P-TRAP AND ANGLE VALVE ASSEMBLIES SHALL BE INSULATED WITH FULLY MOLDED INSULATION KIT, AND LIGHT GRAY COLOR WITH 3-PIECE INTERLOCKING TRAP ASSEMBLY AND 2-PIECE INTERLOCKING ANGLE VALVE ASSEMBLY. FASTENERS SHALL BE NYLON-TYPE SUPPLIED WITH KIT. LAVATORY SHALL BE MOUNTED WITH A CLEARANCE OF AT LEAST 28" FROM FLOOR TO BOTTOM OF THE APRON. KNEE AND TOE CLEARANCES SHALL BE AS FOLLOWS: 27" CLEAR HEIGHT SHALL BE PROVIDED FROM FINISHED FLOOR TO A POINT ON UNDERSIDE OF BOWL 8" IN FROM FRONT APRON. TOE CLEARANCE SHALL BE A MINIMUM HEIGHT OF 9" UNDER P-TRAP AND SUPPLIES OR STOPS. SEE ARCHITECTURAL DRAWINGS FOR FINAL MOUNTING HEIGHT.

LAVATORY	ZURN Z5348
FAUCET	ZURN Z-86500-3M
SUPPLY W/STOP	ZURN Z-8802LRUK-PC
P-TRAP	ZURN Z1021
STRAINER/TAILPIECE	ZURN Z-8746
INSULATION KIT	ZURN Z8946-3-NT
AERATOR	ZURN -3M
CARRIER	ZURN Z-1231
BASE ANCHORAGE	B-LINE ANCHORS AWA-50-375
MIXING VALVE	MV-1

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L-2 LAVATORY, COUNTERTOP-MOUNT (HANDICAP):

VITREOUS CHINA 20" X 17", OVAL, COLOR "WHITE", CENTER HOLE SETTING, FRONT OVERFLOW. . PROVIDE CHROME PLATED 1/2" IPS X 3/8"OD, LOOSE KEY OPERATED, ANGLE STOP TO WALL WITH CHROME PLATED 3/8" FLEXIBLE COPPER RISERS, INTEGRAL PERFORATED CAST BRASS STRAINER WITH ELBOW AND 1-1/4" OFFSET TAILPIECE, CHROME PLATED 17 GAUGE CAST BRASS P-TRAP WITH CLEANOUT AND TUBE WASTE TO WALL. POLISHED CHROME PLATED CAST BRASS SINGLE WATER METERING FAUCET WITH COVER PLATE, 0.5 GPM AERATOR OUTLET AND PUSH BUTTON.

LAVATORY	ZURN Z5111
FAUCET	ZURN Z-86500-3M
SUPPLY W/STOP	ZURN Z8802LRUK-PC
P-TRAP	ZURN Z8700-PC
STRAINER/TAILPIECE	ZURN Z8746
BASE ANCHORAGE	B-LINE ANCHORS AWA-50-375
MIXING VALVE	MV-1

SK-1 DOUBLE COMPARTMENT STAINLESS STEEL SINK (MATERIAL STORAGE):

29" X 22" X 8" DEEP (BOWL IS 11-1/2X16X6-3/8), TYPE 304, 18 GAUGE, 8" CENTERS, SELF RIMMING SINGLE COMPARTMENT, (18-8) NICKEL BEARING STAINLESS STEEL, BACK LEDGE SINK WITH SATIN FINISH AND SOUND DEADENING MATERIALS ON SIDE AND BOTTOM OF SINK. PROVIDE POLISHED CHROME PLATED TOP MOUNT SWING GOOSENECK SPOUT AND VACUUM BREAKER, STRAIGHT LEVER HANDLES, PRESSURE COMPENSATING AERATOR, STRAINER WITH REMOVABLE CRUMB CUP AND STOPPER, CHROME PLATED 17 GAUGE CAST BRASS P-TRAP WITH CLEANOUT AND TUBE WASTE TO WALL . CHROME PLATED LOOSE KEY ANGLE STOP TO WALL WITH 3/8" CHROME PLATED FLEXIBLE HOT AND COLD WATER SUPPLIES. COORDINATE WITH CABINET SHOP DRAWINGS, BASE CABINET MUST BE A TRUE MINIMUM 24" DEEP BACK TO FRONT IN ORDER FOR SINK TO DROP INTO COUNTERTOP OPENING. SINK DRILLINGS SHALL ACCOMMODATE FITTING INSTALLATION, ONLY, NO OTHER CAPPED OPENINGS WILL BE ALLOWED.

SINK	ELKAY LRAD292265PD-3
FAUCET	ZURN Z-871 B1
STRAINER	ELKAY LK-35
SUPPLIES	ZURN Z-8800-LR-LK
P-TRAP	ZURN Z8700-PC
MIXING VALVE	MV-1

MV-1 WATER MIXING VALVE (THERMOSTATIC MIXING):

UNDER SINK 3/8" COMPRESSION FITTING MIXING VALVE, BRASS BODY, LEAD FREE, LIMITS HOT WATER BETWEEN 80°F & 120°F, DUAL CHECK VALVES, 0.25GPM MIN. FLOW, 40 MESH STAINLESS STEEL STRAINER, TAMPER RESISTANT LOCKING CAP. MEETS ASSE 1070 STANDARDS.

EXPOSED MIXING VALVE	WATTS LFUSG-B

UB-1 ICE MAKER HOOK-UP (REFRIGERATOR SPACE):

RECESSED METAL WALL BOX CONSTRUCTED AND SUITABLE FOR FIRE RATED PARTITIONS, COMPLETE WITH FACTORY INSTALLED SHANK VALVE WITH 1/4" O.D. COPPER OUTLET TESTED @ 100 P.S.I. PROVIDE APPROXIMATELY 5'-0" OF 1/4" O.D. SOFT COPPER TUBING WITH COMPRESSION FITTING IN TIGHT COIL. ANCHOR BOX TO WALL STRUCTURE. VERIFY LOCATION AND MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS OR MOUNT TO MANUFACTURERS RECOMMENDATIONS.

WALL BOX	GUY GRAY BIM 875

CP-1 CIRCULATOR PUMP (INLINE TYPE):

INFINITELY VARIABLE CIRCULATOR MADE OF COMPOSITE CASING, HOUSING, IMPELLER, CERAMIC SHAFT, AND CARBON BEARINGS. A 44 WATT ECM PERMANENT MAGNET MOTOR AND ELECTRICAL CHARACTERISTICS ARE 120V/1 PHASE, 60 HZ., WITH 1" CONNECTIONS, MAXIMUM OPERATING PRESSURE OF 150 PSI, UL STANDARD 778 AND NSF CERTIFIED. DIGITAL TIMER WITH CIRCULATOR PROGRAMMING. TEMPERATURE AQUASTAT MAINTAINS WATER TEMPERATURE BETWEEN 95°F AND 115°F. CIRCUIT SETTER CALIBRATED BALANCE VALVE. LEAD-FREE BRASS, WITH 1/4" NPT TAPPED DRAIN PORT, MEMORY STOP FEATURE, SET AT 1 GPM. PROVIDE CIRCUIT SOLVER A SELF-ACTING THERMOSTATIC RECIRCULATION VALVE SET AT 110°F.

CIRCULATOR	TACO 006E3
TIMER	TACO 265-3
AQUASTAT	TACO 563-2
CIRCUIT SETTER	XYLEM CB-1/25 LF
RECIRCULATION VALVE (TVC)	CIRCUIT SOLVER CS-1/2-110,

EWH-1 ELECTRIC WATER HEATER:

ASHRAE STANDARD 90, GLASS LINED TANK SUITABLE FOR 150 PSI WORKING PRESSURE, 300-PSI TEST. FINISH OF DURABLE HIGH GLOSS BAKED ENAMEL. BLANKET GLASS FIBER INSULATION OVER ENTIRE TANK. CONTROL CIRCUIT TRANSFORMER AND MANUAL RESET HIGH TEMPERATURE LIMIT CONTROL. ASME PRESSURE AND TEMPERATURE RELIEF VALVE. WATER HEATER SHALL BE ACCEPTABLE FOR COMMERCIAL APPLICATION BY MANUFACTURER. PROVIDE 3 FULL YEAR WARRANTY, SNAP ACTION AUTOMATIC IMMERSION MOUNTED THERMOSTATS, IMMERSION TYPE HEATING ELEMENTS AND MAGNESIUM ANODE ROD. PROVIDE UNIT MOUNTED DISCONNECT SWITCH. PROVIDE INLET AND OUTLET SHUT-OFF VALVES, VACUUM RELIEF VALVE ON INLET WATER SUPPLY. PROVIDE GALVANIZED STEEL DRIP PAN. PROVIDE PRE-CHARGED EXPANSION TANK, OUTER STEEL SHELL (FLEXIBLE DIAPHRAGM TYPE), ON COLD WATER INLET SIDE OF WATER HEATER FOR THERMAL EXPANSION CONTROL, TANK VOLUME IN GALLONS SHALL BE OF SUFFICIENT SIZE TO ACCOMMODATE WATER HEATER SIZE IN GALLONS. 80 GAL 9KW 208V/3 PHASE. WIRED FOR SIMULTANEOUS OPERATION.

WATER HEATER	A. O. SMITH DEN 80
VACUUM RELIEF	WATTS 36A
EXPANSION TANK	AMTROL "THERM-X-TROL"

EWH-2 ELECTRIC WATER HEATER:

ASHRAE STANDARD 90, GLASS LINED TANK SUITABLE FOR 150 PSI WORKING PRESSURE, 300-PSI TEST. FINISH OF DURABLE HIGH GLOSS BAKED ENAMEL. BLANKET GLASS FIBER INSULATION OVER ENTIRE TANK. CONTROL CIRCUIT TRANSFORMER AND MANUAL RESET HIGH TEMPERATURE LIMIT CONTROL. ASME PRESSURE AND TEMPERATURE RELIEF VALVE. WATER HEATER SHALL BE ACCEPTABLE FOR COMMERCIAL APPLICATION BY MANUFACTURER. PROVIDE 3 FULL YEAR WARRANTY, SNAP ACTION AUTOMATIC IMMERSION MOUNTED THERMOSTATS, IMMERSION TYPE HEATING ELEMENTS AND MAGNESIUM ANODE ROD. PROVIDE UNIT MOUNTED DISCONNECT SWITCH. PROVIDE INLET AND OUTLET SHUT-OFF VALVES, VACUUM RELIEF VALVE ON INLET WATER SUPPLY. PROVIDE GALVANIZED STEEL DRIP PAN. PROVIDE PRE-CHARGED EXPANSION TANK, OUTER STEEL SHELL (FLEXIBLE DIAPHRAGM TYPE), ON COLD WATER INLET SIDE OF WATER HEATER FOR THERMAL EXPANSION CONTROL, TANK VOLUME IN GALLONS SHALL BE OF SUFFICIENT SIZE TO ACCOMMODATE WATER HEATER SIZE IN GALLONS. 36 GAL 3KW 208V/3 PHASE. WIRED FOR SIMULTANEOUS OPERATION.

WATER HEATER	A. O. SMITH DEL 30
VACUUM RELIEF	WATTS 36A
EXPANSION TANK	AMTROL "THERM-X-TROL"

FD FLOOR DRAIN:

DURA-COATED CAST IRON BODY, BOTTOM OUTLET AND TRAP PRIMER CONNECTION. TYPE B POLISHED NICKEL BRONZE STRAINER, MEMBRANE CLAMP & ADJUSTABLE COLLAR WITH SLOTS.

FLOOR DRAIN	ZURN Z-415B-P

WH RECESSED HOSE BIB & WALL HYDRANT:

ANTI-SIPHON VACUUM BREAKER, FLUSH MOUNTING STAINLESS STEEL WALL BOX WITH HINGED COVER, 3/4 INCH HOSE THREAD, BRONZE BODY AND INTER PARTS, WHEEL HANDLE, LOOSE KEY FAUCET OPERATED CONTROL VALVE, DUAL CHECK VALVE, SCREWDRIVER OPERATED STOP VALVE IN SUPPLY, NARROW INSTALLATION.

WALL FAUCET	ZURN Z1335

HB RECESSED HOSE BIB & WALL HYDRANT:

ANTI-SIPHON VACUUM BREAKER, FLUSH MOUNTING WALL BOX, 3/4 INCH, MALE HOSE THREAD, BRASS CASTING WITH CHROME FINISH POLYCARBONATE WHEEL HANDLE, LOOSE KEY FAUCET OPERATOR.

WALL FAUCET	WOODFORD MODEL B24

TP TRAP PRIMERS:

PROVIDE BRASS TRAP PRIMERS AND DISTRIBUTION UNITS TO SEAL FLOOR DRAINS INDICATED ON DRAWINGS. TRAP PRIMER VALVES SHALL BE AUTOMATIC, SELF CONTAINED TYPE WITH NO SPRINGS OR DIAPHRAGMS AND SHALL NOT REQUIRE ADJUSTMENT. INLET AND OUTLET SIZE IS 1/2". TRAP PRIMER VALVES SHALL BE THE TYPE THAT CAN BE INSTALLED ANYWHERE ON COLD WATER PIPING SIZE 1-1/2" OR LESS. DISTRIBUTION UNITS SHALL SUPPLY 1-4 FLOOR DRAINS. TRAP PRIMER VALVES SHALL COMPLY WITH ASSE 1018. PRECISION PLUMBING PRODUCTS (PPP)

TRAP PRIMER	PPP PR-500
DISTRIBUTION UNIT	PPP DU-U

MR-1 SERVICE SINK (FLOOR TYPE):

24" X 24" X 12" DEEP, NEO-CORNER FLOOR MOUNT, TERRAZZO WITH 20 GAUGE STAINLESS STEEL INTEGRAL CAST CAP, 3" CAST BRASS OUTLET DRAIN WITH STAINLESS STEEL STRAINER. ROUGH CHROME PLATED 8" FAUCET WITH TOP BRACE, STRAIGHT LEVER HANDLES, SWIVEL INLETS, BUCKET HOOK, VACUUM BREAKER, STOPS AND HOSE END.

SINK	ACORN TSH-24-KF24
FAUCET	ZURN Z843 M1 RC

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PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	FIXTURE CONNECTIONS			PIPE SIZES-INCHES			
		CW	HW	W	CW	HW	W	V
WC-1	WATER CLOSET (ADULT HANDICAP, MANUAL)	1	"	4	1	"	4	"
WC-2	WATER CLOSET (CHILD HANDICAP/ADULT STANDARD, MANUAL)	1	"	4	1	"	4	"
UR-1	URINAL (HANDICAP, MANUAL)	3/4	"	2	3/4	"	2	1-1/2
UR-2	URINAL (STANDARD, MANUAL)	3/4	"	2	3/4	"	2	1-1/2
L-1	LAVATORY (HANDICAP, 20X18)	1/2	1/2	2	3/8	3/8	1-1/4	1-1/2
L-2	LAVATORY (HANDICAP, 20X18)	1/2	1/2	2	3/8	3/8	1-1/4	1-1/2
SK-1	SINK (29"x22"x7-8")	1/2	1/2	2	3/8	3/8	1-1/2	1-1/2
UB-1	RECESSED UTILITY WALL BOX (ICE-MAKER HOOK-UP)	"	"	-	1/4	"	-	-
EWC-1	ELECTRIC WATER COOLER (DUAL LEVEL, BOTTLE FILL STATION)	1/2	"	2	3/8	"	1-1/2	-
MV-1	WATER MIXING VALVE	"	"	-	3/8	3/8	-	-
EWH-1	ELECTRIC WATER HEATER	1	1	-	3/4 INLET	3/4 OUTLET	-	-
EWH-2	ELECTRIC WATER HEATER	1	1	-	3/4 INLET	3/4 OUTLET	-	-
CP-1	CIRCULATOR PUMP(INLINE)	"	1/2	"	"	3/4 FLANGE	"	"
TCV-1	TEMPERATURE CONTROL VALVE	-	1/2	-	-	1/2	-	-
FD	FLOOR DRAIN	"	"	3	1/2	"	3	"
HB	HOSE BIBB	3/4	"	"	3/4	"	"	"
WH	RECESSED WALL HYDRANT	3/4	"	"	3/4	"	"	"
TP-1	TRAP PRIMER	"	"	"	1/2	"	"	"
MR-1	MOP (24"x24"x12")	3/8	3/8	3	1/2	1/2	3	1-1/2

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1. WATER SUPPLY TAPPING TO EACH PLUMBING FIXTURE SHALL BE FULL SIZE (MINIMUM).
2. SEE ELECTRICAL DWGS FOR FINAL POWER REQUIREMENTS.
3. PROVIDE WATER HAMMER ARRESTERS ON HOT & COLD WATER SUPPLY BRANCHES SERVING SINGULAR, MULTIPLE OR GROUPS OF PLUMBING FIXTURES. ADHERENCE TO THE PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I.-WH201 (PER SPECIFICATIONS) SHALL BE EMPLOYED IN DETERMINING PROPER SIZE, SELECTION, PLACEMENT, LOCATION AND INSTALLATION OF ARRESTERS.

1 A FOUNDATION MAY BE REQUIRED IN VERY POOR SOIL CONDITIONS.

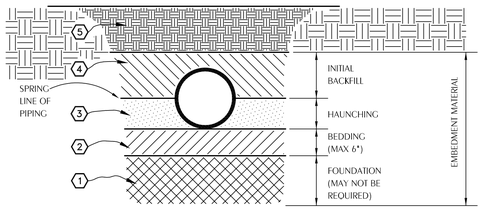
2 BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIALS SHALL PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE. IN DRY SOIL CONDITIONS, CLASS II OR III MATERIAL SHALL BE HAND PLACED IN 4-6", LIGHTLY COMPACTED UNIFORM AND NOT FINER THAN THE FOUNDATION MATERIAL. IN WET CONDITIONS, CLASS I, II OR III MATERIAL SHALL BE HAND PLACED IN 4-6", UNIFORM AND NOT FINER THAN THE FOUNDATION MATERIAL. WHEN UTILIZING CLASS I MATERIAL, SUFFICIENT AMOUNTS OF CLASS II OR III MATERIAL SHALL BE ADDED TO FILL ALL VOIDS CREATED BY THE USE OF CLASS I MATERIAL.

3 HAUNCHING MATERIAL SHALL BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. CLASS II OR III MATERIAL SHALL BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPED TO PROVIDE ADEQUATE SIDE SUPPORT.

4 INITIAL BACKFILL MATERIAL SHALL BE CLASS II OR III. IT SHALL BE PLACED WITHIN 24-30" ABOVE THE TOP OF THE PIPE AND TAMPED BY A PORTABLE VIBRATOR. FINAL BACKFILL MATERIAL MAY BE MACHINE PLACED. THE MATERIAL SHALL BE CLASS II OR III MATERIAL. CLASS IV MATERIAL MAY BE INSTALLED OUTSIDE OF ROADWAY.

5 FINAL BACKFILL UNDER ROADWAYS MAY REQUIRE SPECIAL COMPACTION AND DENSITY TESTS. A MINIMUM OF 30" OF COVER OVER THE TOP OF THE PIPE SHALL BE PROVIDED BEFORE THE TRENCH IS WHEEL- LOADED.

NOTE:
ALL EMBEDMENT MATERIALS SHALL BE NO LESS THAN 95% OF MAXIMUM DENSITY. LABORATORY TESTING OF THE SOIL WILL BE REQUIRED. THIS PROCEDURE SHALL BE REQUIRED ON ALL INSTALLATIONS. ALL TRENCHING, EXCAVATION, AND BACKFILLING SHALL BE IN ACCORDANCE WITH 2023 FLORIDA BUILDING CODE, PLUMBING SECTION 306.



EMBEDMENT MATERIALS

CLASS I: ANGULAR, 1/4"-1-1/2", GRADED STONE, INCLUDING A NUMBER OF FILL MATERIALS THAT HAVE RECIONAL SIGNIFICANCE SUCH AS CORAL, SLAG, CINDERS, CRUSHED STONE AND CRUSHED SHELLS.

CLASS II: COARSE SANDS AND GRAVELS WITH MAXIMUM PARTICLE SIZE OF 1-1/2" INCLUDING VARIOUS GRADED SANDS AND GRAVELS CONTAINING SMALL PERCENTAGES OF FINES, GENERALLY GRANULAR AND NON-COHESIVE, EITHER WET OR DRY. SOIL TYPES GW, GP, SW, AND SP ARE INCLUDED IN THIS CLASS.

CLASS III: FINE SAND AND CLAY GRAVELS, INCLUDING FINE SANDS, SAND-CLAY MIXTURES AND GRAVEL-CLAY MIXTURES. SOIL TYPES GM, GC, SM, AND SC ARE INCLUDED IN THIS CLASS.

CLASS IV: SILT, SILTY CLAYS, AND CLAYS, INCLUDING INORGANIC CLAYS AND SILT OF MEDIUM TO HIGH PLASTICITY AND LIQUID LIMITS. SOIL TYPES MH, ML, CH, AND CL ARE INCLUDED IN THIS CLASS. THESE MATERIALS ARE NOT TO BE USED FOR BEDDING, HAUNCHING, OR INITIAL BACKFILL.

CLASS V: THIS CLASS INCLUDES THE ORGANIC SOILS, AS WELL AS SOILS CONTAINING FROZEN EARTH, DEBRIS, ROCKS LARGER THAN 1-1/2" IN DIAMETER AND OTHER FOREIGN MATERIALS. THESE MATERIALS ARE NOT TO BE USED FOR BEDDING, HAUNCHING, OR INITIAL BACKFILL.

1 / P001 EXCAVATION AND BACKFILL DETAIL

SCALE: NONE

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Florida License Number: 86457
850.526.3447
Project Number: 2022-039
Checked By: KAJ
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A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date
1	REBID REVISION #1	02/24/2026

PLUMBING LEGEND, SCHEDULE, NOTES, AND DETAILS

PROJECT NUMBER	22019
DATED	01/31/2025

P001

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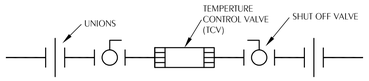
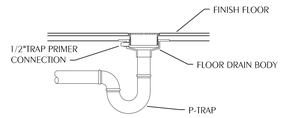
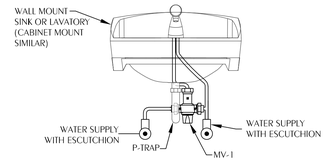


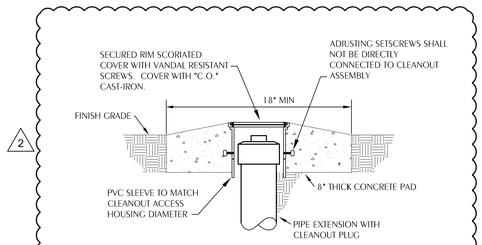
1 P002 THERMOSTATIC TEMPERATURE CONTROL VALVE DETAIL
SCALE: NONE



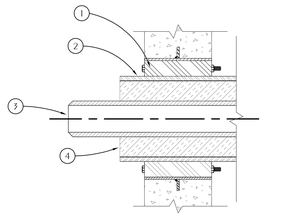
2 P002 FLOOR DRAIN WITH TRAP PRIMER DETAIL
SCALE: NONE



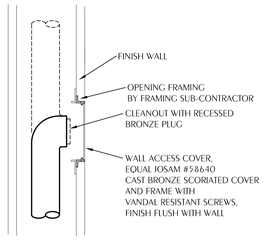
3 P002 LAV/SINK MIXING VALVE DETAIL
SCALE: NONE
NOTE: MIXING VALVE WILL BE TYPICAL FOR L-1, L-2, & SK-1



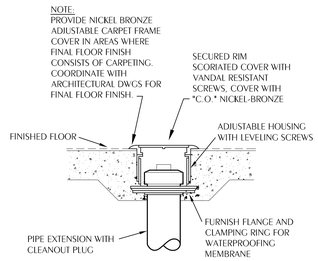
4 P002 CLEANOUT TO GRADE
SCALE: NONE



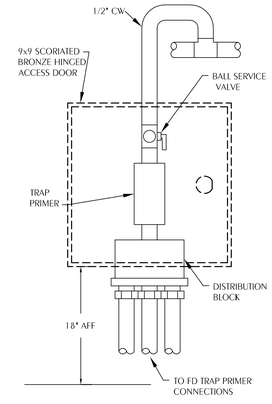
5 P002 TYPICAL PIPE PENETRATION OF WALL
SCALE: 1/8" = 1'-0"



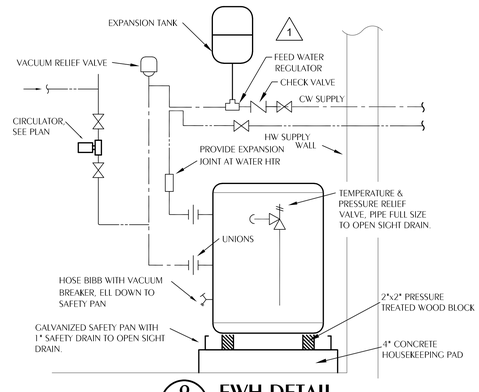
6 P002 CLEANOUT TO WALL
SCALE: NONE



7 P002 CLEANOUT TO FLOOR
SCALE: NONE



8 P002 TRAP PRIMER DETAIL
SCALE: NONE



9 P002 EWH DETAIL
SCALE: NONE

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A New Gymatorium for:
PALM BAY CHARTER SCHOOLS

1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date
1	SANITARY REVISION	07/01/2025
2	REBID REVISION #1	02/24/2026

PLUMBING DETAILS

WATFORD ENGINEERING
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PROJECT NUMBER	22019
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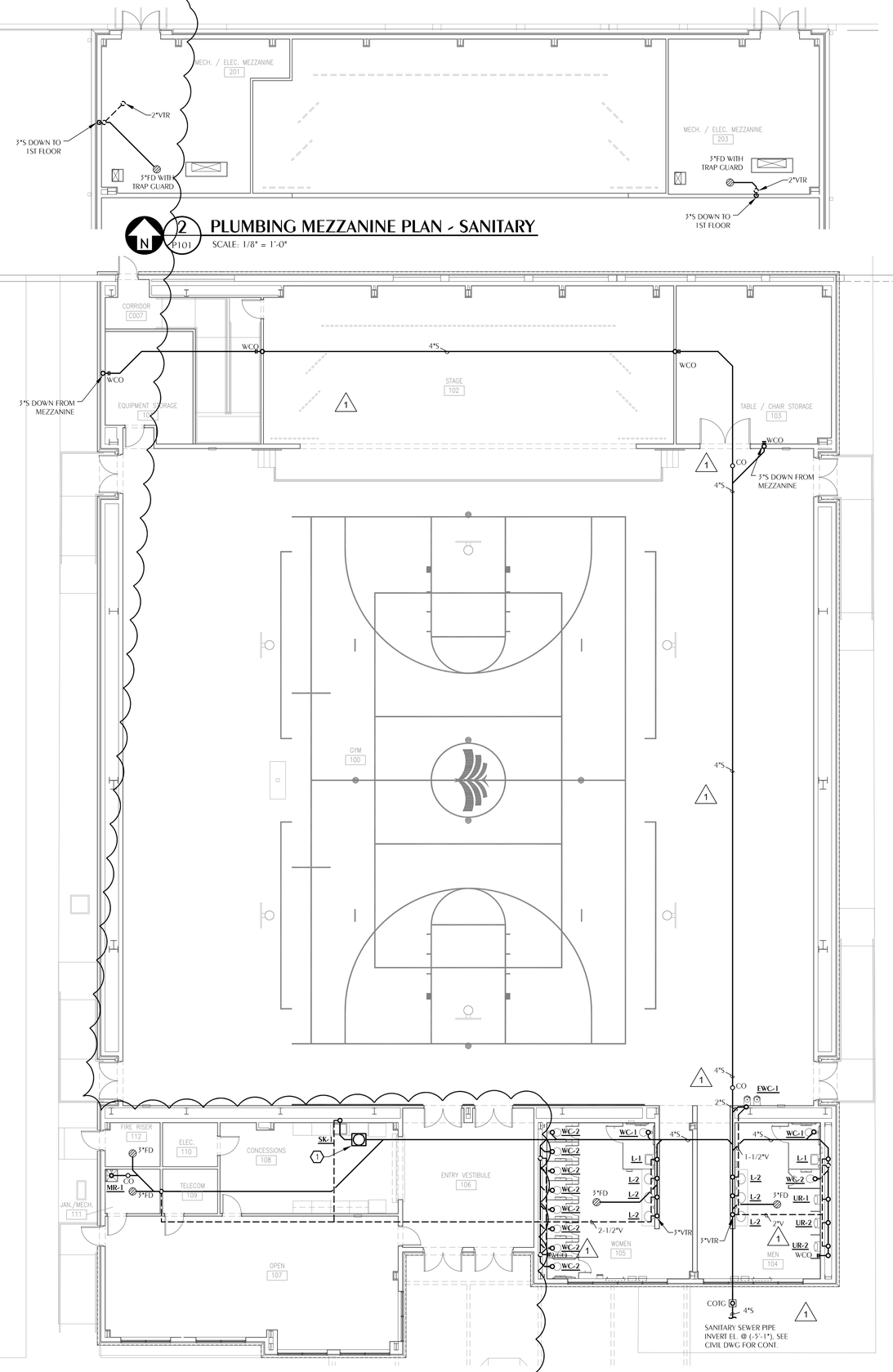

N 2 P101 **PLUMBING MEZZANINE PLAN - SANITARY**
SCALE: 1/8" = 1'-0"

N 1 P101 **PLUMBING PLAN - SANITARY**
SCALE: 1/8" = 1'-0"

REFERENCE:
FINISHED FLOOR ELEVATION = 0'-0"

SHEET NOTES

1. GI-1 GREASE INTERCEPTOR:
SEAMLESS, ROTATIONALLY- MOLDED POLYETHYLENE GREASE INTERCEPTOR WITH A UNIFORM WALL THICKNESS OF 5/16". AVAILABLE FOR ABOVE OR BELOW GRADE INSTALLATION. INTERCEPTOR SHALL HAVE BUILT-IN FLOW CONTROL. FLOW RATE SHALL BE 20GPM AND HAVE A CAPACITY OF 70LBS OR A FLOW RATE SHALL BE 25GPM AND HAVE A CAPACITY OF 65LBS. THE SOLID CAPACITY IS 1.3CAL & LIQUID IS 10CAL. PEDESTRIAN RATED COVER SHALL BE WATER/GAS TIGHT SEAL WITH A MINIMUM OF 450LBS LOAD CAPACITY. 4"FPT INLET/OUTLET, WITH 2" & 3" PLAIN END FITTING ADAPTERS.

GREASE INTERCEPTOR SCHIER GB1

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PLUMBING PLAN - SANITARY

PROJECT NUMBER	22019
DATED	01/31/2025

P101

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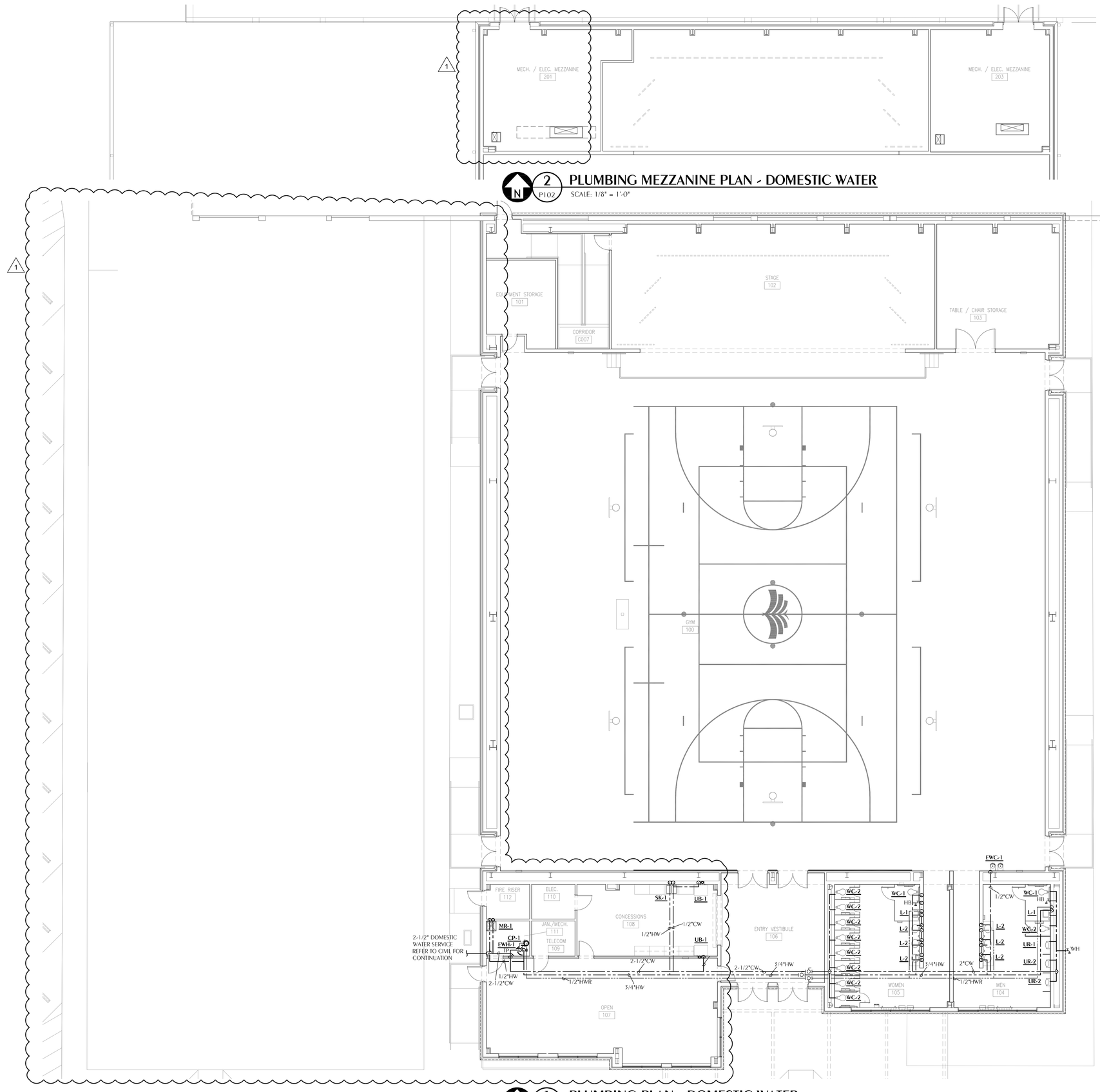

N 2 P102 **PLUMBING MEZZANINE PLAN - DOMESTIC WATER**
SCALE: 1/8" = 1'-0"

N 1 P102 **PLUMBING PLAN - DOMESTIC WATER**
SCALE: 1/8" = 1'-0"

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REVISIONS:

No.	Description	Date
1	REBID REVISION #1	02/24/2026

PLUMBING PLAN - DOMESTIC WATER

PROJECT NUMBER	22019
DATED	01/31/2025

P102

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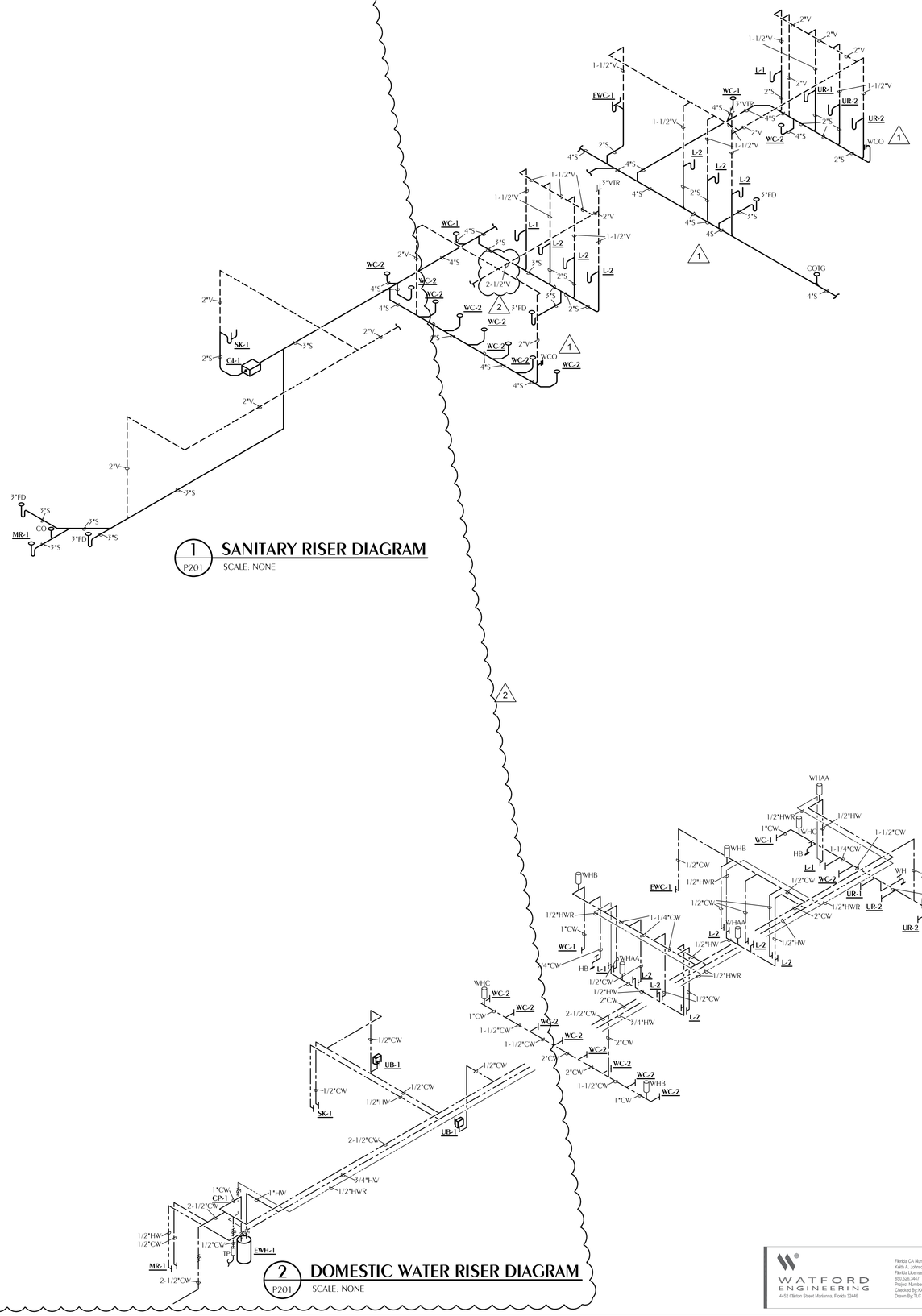

1 P201 **SANITARY RISER DIAGRAM**
SCALE: NONE

2 P201 **DOMESTIC WATER RISER DIAGRAM**
SCALE: NONE

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PLUMBING
RISER DIAGRAMS

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Project Number: 2022-039
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PROJECT NUMBER	22019
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P201

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01/31/2025

LEGEND

AHU-1	EQUIPMENT TAG
1 / M3	DETAIL TAG ("1" INDICATES IDENTIFICATION NUMBER; "M3" INDICATES THE SHEET NUMBER DRAWN ON)
1	SHEET NOTE
	SUPPLY DUCT SECTION POSITIVE PRESSURE
	RETURN OR EXHAUST DUCT NEGATIVE PRESSURE
AxB	RECTANGULAR DUCT SIZE ("A" INDICATES SIDE SHOWN; "B" INDICATES SIDE NOT SHOWN)
	INDICATES RISE IN ELEVATION OF DUCT.
	EXTERNALLY INSULATED DUCTWORK
	DOUBLE WALL SPIRAL DUCTWORK
	INTERNALLY INSULATED DUCTWORK
	FABRIC DISPERSION DUCTWORK
	EXTERNALLY INSULATED ROUND FLEXIBLE DUCTWORK
	DUCT ELBOW WITH TURNING VANES
	RADIUSED DUCT ELBOW
	FLEXIBLE DUCT CONNECTION
	MANUAL VOLUME BALANCING DAMPER
M	MOTORIZED DAMPER
FD	FIRE DAMPER WITH ACCESS DOORS
SD	SMOKE DAMPER WITH ACCESS DOORS
BD	BACKDRAFT DAMPER
	TEE WITH TURNING VANES
	TRANSITION
	FLEX DUCT TAKE OFF WITH MVD SIZE EQUALS DIFFUSER NECK SIZE UNLESS NOTED OTHERWISE
	LOW PROFILE RECTANGULAR TO ROUND SIDE TAKEOFF FITTING WITH MVD; CROWN MODEL 3300-DS OR EQUAL
	BRANCH DUCT TAKEOFF WITH MVD
CO	CLEANOUT
C	CONDENSATE DRAIN LINE
	REF = REFRIGERANT PIPE PAIR

	EXISTING DUCTWORK TO BE DEMOLISHED
18x16e	EXISTING DUCTWORK TO REMAIN
SR-1 / 100	AIR DEVICE TAG. TOP LINE INDICATES TYPE OF DEVICE BOTTOM LINE INDICATES AIRFLOW IN CFM
(2)SR-1 / 100	AIR DEVICE TAG. TOP LINE INDICATES TYPE OF DEVICE BOTTOM LINE INDICATES AIRFLOW IN CFM (2) INDICATES TYPICAL OF TWO DEVICES
TYP	TYPICAL
TEMP	TEMPERATURE
SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
MA	MIXED AIR
OA	OUTDOOR AIR
TA	TRANSFER AIR
EF	EXHAUST FAN
CD	CEILING DIFFUSER
RG	RETURN GRILLE
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
CEF	CEILING MOUNTED EXHAUST FAN
AHU	INDOOR AIR HANDLING UNIT
HP	OUTDOOR HEAT PUMP UNIT
OAU	OUTSIDE AIR PRECONDITIONING UNT
CU	OUTDOOR CONDENSING UNIT-COOLING ONLY
T1	THERMOSTAT AND HUMIDISTAT, "1" INDICATES UNIT CONTROLLED
C	CO2 MONITORING STATION
S	DUCT MOUNTED SMOKE DETECTOR
FD	FLOOR DRAIN
UC	UNDERCUT DOOR ¾"
DG	DOOR GRILLE, REFER TO DOOR SCHEDULE
FD DG	22x22 FIRE RATED DOOR GRILLE WITH AUXILIARY FRAME
AFF	ABOVE FINISHED FLOOR
FD	FIRE DAMPER AT CEILING DIFFUSER OR GRILLE.
XFR	TRANSFER AIR
RLF	PRESSURE RELIEF
	TYPICAL 4 WAY THROW CEILING DIFFUSER
	CEILING DIFFUSER WITH THROW INDICATED
VRF	VARIABLE REFRIGERANT FLOW
E OR (E)	EXISTING
CC	DUCTLESS FCU-CEILING MOUNTED CASSETTE
CAH	DUCTED FCU-CONCEALED AIR HANDLING UNIT
WM	DUCTLESS FCU-WALL MOUNTED UNIT
DP	DEW POINT
	POINT OF CONNECTION TO EXISTING

GENERAL NOTES

1. ALL DUCT DIMENSIONS ARE NET INSIDE.
2. VERIFY COLLAR SIZES ON ALL AIR TERMINALS, EQUIPMENT OUTLETS AND INLETS, TRANSITION DUCTWORK AS NECESSARY. EXTERNALLY INSULATE TRANSITIONS AT EQUIPMENT CONNECTIONS.
3. FIELD VERIFY CLEAR SPACE AVAILABLE, ROUTING PATH, AND CONFLICTS WITH STRUCTURE AND THE WORK OF OTHER TRADES PRIOR TO FABRICATING DUCTWORK. PROVIDE OFFSETS IN DUCTWORK AS REQUIRED, WHETHER SPECIFICALLY INDICATED ON DRAWINGS OR NOT. SUBMIT SHOP DRAWINGS ON DUCTWORK LAYOUT PRIOR TO COMMENCING WORK. MAINTAIN CLEARANCE AROUND ALL LIGHT FIXTURES AS REQUIRED TO REMOVE AND SERVICE FIXTURES. COORDINATE WITH ROOF TRUSSES/STRUCTURE. PRESSURE TEST ALL DUCTWORK FOR LEAKS.
4. CONTRACTOR SHALL INSTALL ALL EQUIPMENT, PIPING, AND DUCTWORK SUCH THAT MANUFACTURERS' RECOMMENDED CLEARANCES ARE MET FOR ALL ACCESS PANELS, MOTORS, FANS, BELTS, FILTERS AND AIR INTAKES. CONDENSATE LINES SHALL BE CLEAR OF FILTER RACK ACCESS.
5. PROVIDE DUCT FLEX CONNECTIONS & VIBRATION ISOLATION FOR ALL UNITS NOT INTERNALLY ISOLATED.
6. ALL SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR INTAKE DUCTWORK SHALL BE GALVANIZED SHEET METAL UNLESS OTHERWISE NOTED.
7. ALL AHU FILTERS SHALL BE OF A READILY AVAILABLE SIZE, OF DISPOSABLE TYPE, AND BE ACCESSIBLE WITHOUT THE USE OF SCREWS OR OTHER MECHANICAL DEVICES REQUIRING TOOLS.
8. PROVIDE ACCESS PANELS IN CEILINGS AS REQUIRED FOR MAINTENANCE AND ADJUSTMENT OF EQUIPMENT LOCATED ABOVE CEILING.
9. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATION OF ALL EQUIPMENT AND UTILITIES.
10. ALL WORK SHALL COMPLY WITH THE EIGHTH EDITION (2023) FLORIDA BUILDING CODE.
11. COORDINATE LOCATION OF ALL CEILING MOUNTED EQUIPMENT WITH ARCHITECTS REFLECTED CEILING PLAN.
12. SLOPE ALL CONDENSATE DRAIN PIPING AT 1/8" PER FOOT.

DUCTWORK NOTES

1. ALL ROUND FLEXIBLE DUCT SHALL BE FLEXMASTER TYPE 8M ACOUSTICAL FLEX OR ENGINEER APPROVED EQUAL. MAXIMUM LENGTH OF ANY FLEXIBLE DUCT RUNOUT SHALL BE 5'-0". WHERE LENGTH REQUIRED EXCEEDS 5'-0", INSTALL EXTERNALLY INSULATED ROUND SNAPLOCK DUCT FOR BALANCE OF DISTANCE TO SPIN-IN TAP AT MAIN DUCT TRUNK.
2. SEAL ALL DUCT PENETRATIONS OF WALLS AIRTIGHT, REGARDLESS OF WHETHER WALLS ARE FIRE RATED OR NOT.
3. ALL SUPPLY AIR DUCTWORK FROM AHU'S (EXCEPT TAKEOFFS TO SUPPLY AIR DIFFUSERS) SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED UNLESS OTHERWISE INDICATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
4. ALL RETURN AIR DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED UNLESS OTHERWISE INDICATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
5. ALL OUTSIDE AIR INTAKE DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
6. STANDARD EXHAUST AIR DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 1/2" W.G., SEAL CLASS A.
7. WHEN ROUTING DUCTWORK OVER LIGHTS, PROVIDE A MINIMUM 6" CLEARANCE BETWEEN DUCT AND LIGHTS.
8. EXTERNALLY INSULATE DUCTWORK WITH 2" THICK FLEXIBLE FIBERGLASS INSULATION.

VENTILATION SCHEDULE

SPACE TYPE	VENTILATION CFM/S.F.	VENTILATION CFM/PERSON
CLASSROOM	0.12	10
CORRIDOR	0.06	0
STORAGE	0.06	0
OFFICE	0.06	5
BREAK	0.18	7.5
CAFETERIA	0.18	7.5
MULTIPURPOSE ASSEMBLY	0.06	7.5
DRESSING ROOM	0.25	0
RESTROOM-INTERMITTENT	0	70/FIXTURE
RESTROOM-CONTINUOUS	0	50/FIXTURE
SHOWER-CONTINUOUS	0	20/FIXTURE
JANITORS CLOSETS	1	0

NOTE:
VENTILATION RATES IN COMPLIANCE WITH ASHRAE STANDARD 62.1-2019.

LOUVER SCHEDULE

MARK	AIRFLOW CFM (MAX)	LOUVER SIZE (WxH) INCHES	FREE AREA FT² (MIN)
LVR-1 / CFM	320	24x12	0.6
LVR-2 / CFM	180	20x12	0.4
LVR-3 / CFM	395	36x12	0.9
LVR-4 / CFM	140	16x12	0.3
LVR-5 / CFM	700	36x18	1.8

1. PROVIDE GREENHECK MODEL "ELF-901DT" (OR EQUAL) EXTRUDED ALUMINUM, WIND-DRIVEN RAIN RESISTANT, STATIONARY LOUVER WITH BIRDSCREEN.
2. FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

FAN SCHEDULE

UNIT	TYPE	CFM	MAX. FAN RPM	ESP (IN. H20)	MAX. MOTOR POWER	SONES/db (MAX.)	BASIS OF DESIGN	MODEL	CONTROL	ELECTRICAL VOLTS/PHASE	NOTES
EF-1	INLINE	320	948	0.25	50 W	1.2	GREENHECK	CSP-A510	INTERLOCK WITH AHU-10 OA DAMPER	115/1	1,2,3,4,5,7
EF-2	CEF	70	799	0.20	10 W	0.3	GREENHECK	SP-A110	INTERLOCK WITH LIGHTS	115/1	1,2,3,4,5,6,7
EF-3	CEF	70	799	0.20	10 W	0.3	GREENHECK	SP-A110	INTERLOCK WITH LIGHTS	115/1	1,2,3,4,5,6,7
EF-4	INLINE	700	801	0.25	318 W	0.3	GREENHECK	CSP-A900	INTERLOCK WITH AHU-8 OA DAMPER	115/1	1,2,3,4,5,7

1. PROVIDE DISCONNECT
2. PROVIDE SOLID STATE SPEED CONTROLLER.
3. PROVIDE BACK DRAFT DAMPER
4. PROVIDE THERMAL OVERLOAD
5. PROVIDE DIRECT DRIVE FAN
6. PROVIDE WHITE FINISH ALUMINUM GRILLE
7. PROVIDE VIBRATION ISOLATION HANGERS.

MINI SPLIT SYSTEM CONDENSING UNIT SCHEDULE

UNIT MHP	BASIS OF DESIGN	MODEL	NOMINAL COOL CAPACITY (BTUH)	DESIGN COOLING OUTDOOR TEMP DB	SEER2	NOMINAL HEAT CAPACITY (BTUH)	DESIGN HEATING OUTDOOR TEMP DB	HSPF	VOLTS/PHASE	MCA (AMPS)	MOP (AMPS)	NOTES
1	MITSUBISHI	PUY-A18NKA7	18000	95.0	19.8	NA	25.0	NA	208/1	11.0	28.0	1,2,3,4

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°(WB)
3. EFFICIENCY VALUES FOR EER, IEER, AND COP ARE BASED ON AHRI 1230 TEST METHOD FOR MIXTURE OR DUCTED AND NON-DUCTED INDOOR UNITS.
4. PROVIDE UNITS WITH EPA APPROVED REFRIGERANT. PROVIDE INSTALLED REFRIGERANT MONITORING SYSTEM

MINI SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE

UNIT	BASIS OF DESIGN	MODEL	TYPE	NOMINAL COOL CAPACITY (BTUH)	DESIGN COOLING EAT °F DB/WB	DESIGN COOLING CAPACITY (BTUH) COOLING TOTAL	DESIGN COOLING CAPACITY (BTUH) COOLING SENSIBLE	NOMINAL HEAT CAPACITY (BTUH)	DESIGN HEATING TOTAL CAPACITY (BTUH)	DESIGN HEATING EAT °F DB	AIRFLOW (CFM)	VOLTS/PHASE	MCA (AMPS)	MOP (AMPS)	NOTES
WM-1.1	MITSUBISHI	PKA-A18LA	WALL MOUNT	18000	18000	18000	18000	NA	NA	NA	310	FED FROM MHP	NA	NA	1,2,3,4,6,7,8

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°(WB)
3. DESIGN COOLING CONDITIONS ARE AT 95°F AMBIENT; DESIGN HEATING CONDITIONS ARE AT 26°F AMBIENT
4. DESIGN CAPACITY IS NET CAPACITY FOR INSTALLATION ACCOUNTING FOR 150 FT PIPE RUN LENGTHS, ETC.
5. DESIGN CAPACITY IS NET CAPACITY FOR INSTALLATION ACCOUNTING FOR 65 FT PIPE RUN LENGTHS, ETC.
6. CALCULATE REFRIGERANT LINE SIZES BASED UPON FINAL FIELD PIPING LAYOUT.
7. EXPOSED (INDOOR OR OUTDOOR) REF PIPING SHALL BE HARD DRAWN COPPER.
8. PROVIDE HARD WIRED REMOTE THERMOSTAT.

100% OUTSIDE AIR UNIT SCHEDULE

UNIT OAU	BASIS OF DESIGN	OAU MODEL	CONFIGURATION	OA (CFM)	WEIGHT (LBS)	ESP (IN. WC)	FAN POWER (HP)	COOLING EAT° (DB/WB)	COOLING LAT° (DP)	COOLING TOTAL (BTUH)	COOLING SENSIBLE (BTUH)	ISMRE2 ASHRAE 90.1 MIN EFFICENCY	ISMRE2 CALCULATED EFFICENCY	HEATING EAT (DB)	HEATING LAT° (F)	HEATING KW	OAU ELECTRICAL VOLTS/PHASE	OAU ELECTRICAL MCA	OAU ELECTRICAL MOP	NOTES
1	GREENHECK	RV-45-30-1-F2	PACKAGED	3500	3251	1	2	83.9/80.5	52.5/51.9	345500	113100	3.8	7.1	25.4	69.8	49.2	208/3	179.2	200	1,2,3,4,5,6

1. DIRECT DRIVE FAN WITH ECM MOTOR
2. REFER TO CONDENSING UNIT SCHEDULE FOR EFFICIENCIES
3. ESP DOES NOT INCLUDE FILTER, CASING, ETC.
4. PROVIDE 100% OUTSIDE AIR DEHUMIDIFICATION UNIT WITH HOT GAS REHEAT.
5. PROVIDE MOTORIZED OA DAMPER
6. PROVIDE COATED INDOOR COILS, NON FUSED DISCONNECT, PHASE FAILURE MONITOR, DIRTY FILTER SWITCH, OUTSIDE AIR TEMPERATURE SENSOR, DISCHARGE AIR TEMPERATURE SENSOR AND LEAVING COIL TEMPERATURE SENSOR.

AIR DEVICE SCHEDULE

MARK	MAX AIRFLOW CFM	AIR DEVICE SIZE	DUCT CONNECTION SIZE	TITUS MODEL
CD-1 / CFM	80	9x9	6Ø	TDC
CD-2 / CFM	245	12x12	8Ø	TDC
CD-3 / CFM	350	12x12	10Ø	TDC
CD-4 / CFM	210	18-1/4Ø	10Ø	TMR
RG,EG,SG,IG,RR,ER				
xx-1 / CFM	450	12x12	12x12	350FL
xx-2 / CFM	1705	22x22	22x22	350FL
xx-3 / CFM	220	8x8	8x8	33RL
xx-4 / CFM	1255	22x22	22x22	33RL
xx-5 / CFM	3170	48x36	48x36	33RL

NOTES:
1. MAX NC=20
2. PROVIDE 2x2 LAY IN PANEL FOR AIR DEVICES IN LAY IN CEILINGS.
3. PROVIDE BEVELED MOUNTING FRAME FOR CEILING DIFFUSERS IN HARD CEILINGS.
4. PROVIDE FLAT MOUNTING FRAME FOR GRILLES LOCATED IN HARD CEILINGS.

AIR PURIFICATION EQUIPMENT SCHEDULE

ZONE AHU	SUPPLY CFM	OA CFM	PRESS. IN. W.C.	BASIS OF DESIGN	MODEL	QUANTITY	ELECTRICAL VOLTS/PHASE	ELECTRICAL WATTS	NOTES
1	915	90	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4
2	825	80	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4
3	1015	100	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4
4	720	75	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4
5	940	95	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4
6	955	85	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4
7	2080	210	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4
8	1895	185	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4
9	7310	1750	-	GPS	GPS-DM48-AC	2	24VAC	12	1,2,3,4
10	1360	135	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4
11	7535	1750	-	GPS	GPS-DM48-AC	2	24VAC	12	1,2,3,4
12	1455	145	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4

1. GPS = GLOBAL PLASMA SOLUTIONS.
2. PROVIDE BASIS OF DESIGN OR APPROVED EQUAL.
3. BI-POLAR IONIZATION SYSTEMS REQUIRING PERISHABLE GLASS TUBES ARE NOT ACCEPTABLE.
4. MANUFACTURER MUST PASS UL-867-2007 OZONE CHAMBER TESTING BY EITHER UL OR ETL

SPLIT SYSTEM HEAT PUMP SCHEDULE

UNIT	SA (CFM)	OA (CFM)	ESP (IN.H20)	FAN (HP)	COOLING MAT °F (DB/WB)	COOLING OAT °F (DB/WB)	COOLING TOTAL (BTUH)	COOLING SENSIBLE (BTUH)	COOLING SEER2	HEATING MAT °F (DB)	HEATING OAT °F (DB)	HEATING TOTAL (BTUH)	HEATING HSPF2	SUPPL HEAT	AHU ELECTRICAL VOLTS/PHASE	AHU ELECTRICAL MCA	AHU ELECTRICAL MOP	HP ELECTRICAL VOLTS/PHASE	HP ELECTRICAL MCA	HP ELECTRICAL MOP	NOTES
1	915	90	0.50	0.50	74.4/63.5	95.0/78.0	26200	19700	14.3	66.0	25.0	7300	7.5	5.0KW	208/1	26	30	208/3	12	20	1,2,3,4,5,8,10,11
2	825	80	0.50	0.50	74.2/63.5	95.0/78.0	23600	17500	14.3	66.0	25.0	5000	7.5	2.1KW	208/1	26	30	208/3	12	20	1,2,3,4,5,8,10,11
3	1015	100	0.50	0.50	74.8/63.7	95.0/78.0	28500	21700	14.3	65.8	25.0	8400	7.5	3.4KW	208/1	26	30	208/3	12	20	1,2,3,4,5,8,10,11
4	720	75	0.50	0.50	74.9/63.9	95.0/78.0	21600	15800	14.3	65.6	25.0	3800	7.5	1.8KW	208/1	26	30	208/3	12	20	1,2,3,4,5,8,10,11
5	940	95	0.50	0.50	74.8/63.6	95.0/78.0	27100	20400	14.3	65.7	25.0	7700	7.5	3.1KW	208/1	26	30	208/3	12	20	1,2,3,4,5,8,10,11
6	955	85	0.50	0.50	74.5/63.3	95.0/78.0	26900	20600	14.3	66.2	25.0	6600	7.5	2.8KW	208/1	26	30	208/3	12	20	1,2,3,4,5,8,10,11
7	2080	210	0.70	1.00	74.3/62.9	95.0/78.0	52000	42800	13.8	65.6	25.0	26100	7.5	9.4KW	208/1	36	40	208/3	18	30	1,2,3,4,5,8,10,11
8	1895	185	0.75	1.00	74.8/63.6	95.0/78.0	49600	39200	13.8	65.7	25.0	24700	7.5	5.9KW	208/1	36	40	208/3	18	30	1,2,3,4,5,8,10,11
9	7310	1750	0.50	7.50	71.9/62.2	95.0/78.0	158000	129100	10.6 EER	70.1	25.0	30000	3.3 COP	10.2KW	208/3	82	90	208/3	39	60	1,2,3,4,5,6,7,8,9,10,11,12
10	1360	135	0.70	1.00	74.9/63.6	95.0/78.0	37900	29100	14.3	65.6	25.0	18800	7.5	6.7KW	208/1	30	30	208/3	18	30	1,2,3,4,5,8,10,11
11	7535	1750	0.50	7.50	71.8/62.1	95.0/78.0	162100	132800	10.6 EER	69.8	25.0	34500	3.3 COP	13.3KW	208/3	82	90	208/3	39	60	1,2,3,4,5,6,7,8,9,10,11,12
12	1455	145	0.50	1.00	74.7/63.4	95.0/78.0	40900	31500	14.3	65.8	25.0	17100	7.5	6.2KW	208/1	30	30	208/3	18	30	1,2,3,4,5,8,10,11

1. PROVIDE 2 " MERV 13 FILTERS.
2. EFFICIENCIES IN ACCORDANCE WITH ARI STANDARD 210/240.
3. ESP DOES NOT INCLUDE FILTER, CASING, ETC.
4. PROVIDE CONTROL KIT TO INCLUDE BLOWER CONTACTOR OR STARTER, TRANSFORMER, ELECTRIC HEATER INTLERLOCKS. ELECTRICAL SERVICE SHALL BE A SINGLE POINT OF CONNECTION.
5. PROVIDE THERMAL EXPANSION VALVES.
6. BELT DRIVE AHU FAN.
7. PRETREATED OUTSIDE AIR.
8. COOLING CAPACITY IS NET AND DOES NOT INCLUDE FAN HEAT.
9. PROVIDE TWO STAGE COMPRESSORS.
10. PROVIDE SEACOAST COATING ON CONDENSER COILS.
11. PROVIDE UNITS WITH EPA APPROVED REFRIGERANT. PROVIDE FACTORY INSTALLED REFRIGERANT MONITORING SYSTEM.
12. PROVIDE TWO 7.5 TON HEAT PUMPS. HP ELECTRICAL DATA IS FOR A SINGLE UNIT.

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100% CONSTRUCTION DOCUMENTS

Keith A. Johnson, State of Florida, Professional Engineer, License No. 86457.
This item has been digitally signed and sealed by Keith A. Johnson on the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.
Date: 2025.01.31 14:30:31-06'00'

KEITH A. JOHNSON LICENSE NO. 86457 STATE OF FLORIDA PROFESSIONAL ENGINEER

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

HVAC LEGEND, SCHEDULES, AND NOTES

PROJECT NUMBER 22019
DATED 01/31/2025

M001

WATFORD ENGINEERING
4452 Clinton Street Marianna, Florida 32446
Florida CA Number: 27525
Keith A. Johnson, PE
Florida License Number: 86457
850.526.3447
Project Number: 2022-039
Checked By:KAJ
Drawn By:BBS

22019
100% CONSTRUCTION DOCUMENTS
01/31/2025

LEGEND

- AHU-1 — EQUIPMENT TAG
- 1 / M3 — DETAIL TAG ("1" INDICATES IDENTIFICATION NUMBER; "M3" INDICATES THE SHEET NUMBER DRAWN ON)
- 1 — SHEET NOTE
- SUPPLY DUCT SECTION POSITIVE PRESSURE
- RETURN OR EXHAUST DUCT NEGATIVE PRESSURE
- AxB — RECTANGULAR DUCT SIZE ("A" INDICATES SIDE SHOWN; "B" INDICATES SIDE NOT SHOWN)
- INDICATES RISE IN ELEVATION OF DUCT.
- EXTERNALLY INSULATED DUCTWORK
- DOUBLE WALL SPIRAL DUCTWORK
- INTERNALLY INSULATED DUCTWORK
- FABRIC DISPERSION DUCTWORK
- EXTERNALLY INSULATED ROUND FLEXIBLE DUCTWORK
- DUCT ELBOW WITH TURNING VANES
- RADIUSED DUCT ELBOW
- FLEXIBLE DUCT CONNECTION
- MANUAL VOLUME BALANCING DAMPER
- M — MOTORIZED DAMPER
- FD — FIRE DAMPER WITH ACCESS DOORS
- SD — SMOKE DAMPER WITH ACCESS DOORS
- BD — BACKDRAFT DAMPER
- TEE WITH TURNING VANES
- TRANSITION
- FLEX DUCT TAKE OFF WITH MVD SIZE EQUALS DIFFUSER NECK SIZE UNLESS NOTED OTHERWISE
- LOW PROFILE RECTANGULAR TO ROUND SIDE TAKEOFF FITTING WITH MVD; CROWN MODEL 3300-DS OR EQUAL
- BRANCH DUCT TAKEOFF WITH MVD
- CO — CLEANOUT
- C — CONDENSANE DRAIN LINE
- REF = REFRIGERANT PIPE PAIR

- EXISTING DUCTWORK TO BE DEMOLISHED
- 18x16e — EXISTING DUCTWORK TO REMAIN
- SR-1 / 100 — AIR DEVICE TAG. TOP LINE INDICATES TYPE OF DEVICE BOTTOM LINE INDICATES AIRFLOW IN CFM
- (2)SR-1 / 100 — AIR DEVICE TAG. TOP LINE INDICATES TYPE OF DEVICE BOTTOM LINE INDICATES AIRFLOW IN CFM (2) INDICATES TYPICAL OF TWO DEVICES

TYP	TYPICAL
TEMP	TEMPERATURE
SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
MA	MIXED AIR
OA	OUTDOOR AIR
TA	TRANSFER AIR
EF	EXHAUST FAN
CD	CEILING DIFFUSER
RG	RETURN GRILLE
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
CEF	CEILING MOUNTED EXHAUST FAN
AHU	INDOOR AIR HANDLING UNIT
HP	OUTDOOR HEAT PUMP UNIT
OAU	OUTSIDE AIR PRECONDITIONING UNIT
CU	OUTDOOR CONDENSING UNIT-COOLING ONLY
T1	THERMOSTAT AND HUMIDISTAT, "1" INDICATES UNIT CONTROLLED
C	CO2 MONITORING STATION
S	DUCT MOUNTED SMOKE DETECTOR
FD	FLOOR DRAIN
UC	UNDERCUT DOOR ¾"
DG	DOOR GRILLE, REFER TO DOOR SCHEDULE
FD DG	22x22 FIRE RATED DOOR GRILLE WITH AUXILIARY FRAME
AFF	ABOVE FINISHED FLOOR
FD	FIRE DAMPER AT CEILING DIFFUSER OR GRILLE.
XFR	TRANSFER AIR
RLF	PRESSURE RELIEF
	TYPICAL 4 WAY THROW CEILING DIFFUSER
	CEILING DIFFUSER WITH THROW INDICATED
VRF	VARIABLE REFRIGERANT FLOW
E OR (E)	EXISTING
CC	DUCTLESS FCU-CEILING MOUNTED CASSETTE
CAH	DUCTED FCU-CONCEALED AIR HANDLING UNIT
WM	DUCTLESS FCU-WALL MOUNTED UNIT
DP	DEW POINT
	POINT OF CONNECTION TO EXISTING

GENERAL NOTES

1. ALL DUCT DIMENSIONS ARE NET INSIDE.
2. VERIFY COLLAR SIZES ON ALL AIR TERMINALS, EQUIPMENT OUTLETS AND INLETS, TRANSITION DUCTWORK AS NECESSARY. EXTERNALLY INSULATE TRANSITIONS AT EQUIPMENT CONNECTIONS.
3. FIELD VERIFY CLEAR SPACE AVAILABLE, ROUTING PATH, AND CONFLICTS WITH STRUCTURE AND THE WORK OF OTHER TRADES PRIOR TO FABRICATING DUCTWORK. PROVIDE OFFSETS IN DUCTWORK AS REQUIRED, WHETHER SPECIFICALLY INDICATED ON DRAWINGS OR NOT. SUBMIT SHOP DRAWINGS ON DUCTWORK LAYOUT PRIOR TO COMMENCING WORK. MAINTAIN CLEARANCE AROUND ALL LIGHT FIXTURES AS REQUIRED TO REMOVE AND SERVICE FIXTURES. COORDINATE WITH ROOF TRUSSES/STRUCTURE. PRESSURE TEST ALL DUCTWORK FOR LEAKS.
4. CONTRACTOR SHALL INSTALL ALL EQUIPMENT, PIPING, AND DUCTWORK SUCH THAT MANUFACTURERS' RECOMMENDED CLEARANCES ARE MET FOR ALL ACCESS PANELS, MOTORS, FANS, BELTS, FILTERS AND AIR INTAKES. CONDENSATE LINES SHALL BE CLEAR OF FILTER RACK ACCESS.
5. PROVIDE DUCT FLEX CONNECTIONS & VIBRATION ISOLATION FOR ALL UNITS NOT INTERNALLY ISOLATED.
6. ALL SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR INTAKE DUCTWORK SHALL BE GALVANIZED SHEET METAL UNLESS OTHERWISE NOTED.
7. ALL AHU FILTERS SHALL BE OF A READILY AVAILABLE SIZE, OF DISPOSABLE TYPE, AND BE ACCESSIBLE WITHOUT THE USE OF SCREWS OR OTHER MECHANICAL DEVICES REQUIRING TOOLS.
8. PROVIDE ACCESS PANELS IN CEILINGS AS REQUIRED FOR MAINTENANCE AND ADJUSTMENT OF EQUIPMENT LOCATED ABOVE CEILING.
9. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATION OF ALL EQUIPMENT AND UTILITIES.
10. ALL WORK SHALL COMPLY WITH THE EIGHTH EDITION (2023) FLORIDA BUILDING CODE.
11. COORDINATE LOCATION OF ALL CEILING MOUNTED EQUIPMENT WITH ARCHITECTS REFLECTED CEILING PLAN.
12. SLOPE ALL CONDENSATE DRAIN PIPING AT 1/8" PER FOOT.

DUCTWORK NOTES

1. ALL ROUND FLEXIBLE DUCT SHALL BE FLEXMASTER TYPE 8M ACOUSTICAL FLEX OR ENGINEER APPROVED EQUAL. MAXIMUM LENGTH OF ANY FLEXIBLE DUCT RUNOUT SHALL BE 5'-0". WHERE LENGTH REQUIRED EXCEEDS 5'-0", INSTALL EXTERNALLY INSULATED ROUND SNAPLOCK DUCT FOR BALANCE OF DISTANCE TO SPIN-IN TAP AT MAIN DUCT TRUNK.
2. SEAL ALL DUCT PENETRATIONS OF WALLS AIRTIGHT, REGARDLESS OF WHETHER WALLS ARE FIRE RATED OR NOT.
3. ALL SUPPLY AIR DUCTWORK FROM AHU'S (EXCEPT TAKEOFFS TO SUPPLY AIR DIFFUSERS) SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A. EXTERNALLY INSULATED UNLESS OTHERWISE INDICATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
4. ALL RETURN AIR DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A. EXTERNALLY INSULATED UNLESS OTHERWISE INDICATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
5. ALL OUTSIDE AIR INTAKE DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
6. STANDARD EXHAUST AIR DUCTWORK SHALL BE LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 1/2" W.G., SEAL CLASS A.
7. WHEN ROUTING DUCTWORK OVER LIGHTS, PROVIDE A MINIMUM 6" CLEARANCE BETWEEN DUCT AND LIGHTS.
8. EXTERNALLY INSULATE DUCTWORK WITH 2" THICK FLEXIBLE FIBERGLASS INSULATION.

VENTILATION SCHEDULE

SPACE TYPE	VENTILATION CFM/S.F.	VENTILATION CFM/PERSON
CLASSROOM	0.12	10
CORRIDOR	0.06	0
STORAGE	0.06	0
OFFICE	0.06	5
BREAK	0.18	7.5
CAFETERIA	0.18	7.5
MULTIPURPOSE ASSEMBLY	0.06	7.5
DRESSING ROOM	0.25	0
RESTROOM-INTERMITTENT	0	70/FIXTURE
RESTROOM-CONTINUOUS	0	50/FIXTURE
SHOWER-CONTINUOUS	0	20/FIXTURE
JANITORS CLOSETS	1	0

NOTE:
VENTILATION RATES IN COMPLIANCE WITH ASHRAE STANDARD 62.1-2019.

LOUVER SCHEDULE

MARK	AIRFLOW CFM (MAX)	LOUVER SIZE (WxH) INCHES	FREE AREA FT² (MIN)
LVR-1 / CFM	320	24x12	0.6
LVR-2 / CFM	180	20x12	0.4
LVR-3 / CFM	395	36x12	0.9
LVR-4 / CFM	140	16x12	0.3
LVR-5 / CFM	700	36x18	1.8

1. PROVIDE GREENHECK MODEL 'EHV-901D' (OR EQUAL) EXTRUDED ALUMINUM, WIND-DRIVEN RAIN RESISTANT, STATIONARY LOUVER WITH BIRDSCREEN.
2. FINISH TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

FAN SCHEDULE

UNIT	TYPE	CFM	MAX. FAN RPM	ESP (IN. H20)	MAX. MOTOR POWER	SONES/db (MAX.)	BASIS OF DESIGN	MODEL	CONTROL	ELECTRICAL VOLTS/PHASE	NOTES
							NOT USED				1
EF-2	CEF	70	799	0.20	10 W	0.3	GREENHECK	SP-A110	INTERLOCK WITH LIGHTS	115/1	1,2,3,4,5,6,7
							NOT USED				1
EF-4	INLINE	700	801	0.25	318 W	0.3	GREENHECK	CSP-A900	INTERLOCK WITH AHU-8 OA DAMPER	115/1	1,2,3,4,5,7

1. PROVIDE DISCONNECT
2. PROVIDE SOLID STATE SPEED CONTROLLER.
3. PROVIDE BACK DRAFT DAMPER
4. PROVIDE THERMAL OVERLOAD
5. PROVIDE DIRECT DRIVE FAN
6. PROVIDE WHITE FINISH ALUMINUM GRILLE
7. PROVIDE VIBRATION ISOLATION HANGERS.

MINI SPLIT SYSTEM CONDENSING UNIT SCHEDULE

UNIT MHP	BASIS OF DESIGN	MODEL	NOMINAL COOL CAPACITY (BTUH)	DESIGN COOLING OUTDOOR TEMP DB	SEER2	NOMINAL HEAT CAPACITY (BTUH)	DESIGN HEATING OUTDOOR TEMP DB	HSPF	VOLTS/PHASE	MCA (AMPS)	MOP (AMPS)	NOTES
1	MITSUBISHI	PUY-A18NKA7	18000	95.0	19.8	NA	25.0	NA	208/1	11.0	28.0	1,2,3,4

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°(WB)
3. EFFICIENCY VALUES FOR EER, IEER, AND COP ARE BASED ON AHRI 1230 TEST METHOD FOR MIXTURE OF DUCTED AND NON-DUCTED INDOOR UNITS.
4. PROVIDE UNITS WITH EPA APPROVED REFRIGERANT. PROVIDE INSTALLED REFRIGERANT MONITORING SYSTEM

MINI SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE

UNIT	BASIS OF DESIGN	MODEL	TYPE	NOMINAL COOL CAPACITY (BTUH)	DESIGN COOLING EAT °F DB/WB	DESIGN COOLING CAPACITY (BTUH) COOLING TOTAL	DESIGN COOLING CAPACITY (BTUH) COOLING SENSIBLE	NOMINAL HEAT CAPACITY (BTUH)	DESIGN HEATING TOTAL CAPACITY (BTUH)	DESIGN HEATING EAT °F DB	AIRFLOW (CFM)	VOLTS/PHASE	MCA (AMPS)	MOP (AMPS)	NOTES
WM-1.1	MITSUBISHI	PKA-A18LA	WALL MOUNT	18000	18000	18000	18000	NA	NA	NA	310	FED FROM MHP	NA	NA	1,2,3,4,6,7,8

1. NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
2. NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°(WB)
3. DESIGN COOLING CONDITIONS ARE AT 95°F AMBIENT; DESIGN HEATING CONDITIONS ARE AT 26°F AMBIENT
4. DESIGN CAPACITY IS NET CAPACITY FOR INSTALLATION ACCOUNTING FOR 150 FT PIPE RUN LENGTHS, ETC.
5. DESIGN CAPACITY IS NET CAPACITY FOR INSTALLATION ACCOUNTING FOR 65 FT PIPE RUN LENGTHS, ETC.
6. CALCULATE REFRIGERANT LINE SIZES BASED UPON FINAL FIELD PIPING LAYOUT.
7. EXPOSED (INDOOR OR OUTDOOR) REF PIPING SHALL BE HARD DRAWN COPPER.
8. PROVIDE HARD WIRED REMOTE THERMOSTAT.

100% OUTSIDE AIR UNIT SCHEDULE

UNIT OAU	BASIS OF DESIGN	OAU MODEL	CONFIGURATION	OA (CFM)	WEIGHT (LBS)	ESP (IN. WC)	FAN POWER (HP)	COOLING EAT° (DB/WB)	COOLING LAT° (DP)	COOLING TOTAL (BTUH)	COOLING SENSIBLE (BTUH)	ISMRE2 ASHRAE 90.1 MIN EFFICENCY	ISMRE2 CALCULATED EFFICENCY	HEATING EAT (DB)	HEATING LAT° (F)	HEATING KW	OAU ELECTRICAL VOLTS/PHASE	OAU ELECTRICAL MCA	OAU ELECTRICAL MOP	NOTES
1	GREENHECK	RV-45-30L-1-F2	PACKAGED	3500	3251	1	2	83.9/80.5	52.5/51.9	345500	113100	3.8	7.1	25.4	69.8	49.2	208/3	179.2	200	1,2,3,4,5,6

1. DIRECT DRIVE FAN WITH ECM MOTOR
2. REFER TO CONDENSING UNIT SCHEDULE FOR EFFICIENCIES
3. ESP DOES NOT INCLUDE FILTER, CASING, ETC.
4. PROVIDE 100% OUTSIDE AIR DEHUMIDIFICATION UNIT WITH HOT GAS REHEAT.
5. PROVIDE MOTORIZED OA DAMPER
6. PROVIDE COATED INDOOR COILS, NON FUSED DISCONNECT, PHASE FAILURE MONITOR, DIRTY FILTER SWITCH, OUTSIDE AIR TEMPERATURE SENSOR, DISCHARGE AIR TEMPERATURE SENSOR AND LEAVING COIL TEMPERATURE SENSOR.

AIR DEVICE SCHEDULE

MARK	MAX AIRFLOW CFM	AIR DEVICE SIZE	DUCT CONNECTION SIZE	TITUS MODEL
CD-1 / CFM	80	9x9	6Ø	TDC
CD-2 / CFM	245	12x12	8Ø	TDC
CD-3 / CFM	350	12x12	10Ø	TDC
CD-4 / CFM	210	18-1/4Ø	10Ø	TMR
RG,EG,SG,IG,RR,ER				
xx-1 / CFM	450	12x12	12x12	350FL
xx-2 / CFM	1705	22x22	22x22	350FL
xx-3 / CFM	220	8x8	8x8	33RL
xx-4 / CFM	1255	22x22	22x22	33RL
xx-5 / CFM	3470	48x36	48x36	33RL

NOTES:
1. MAX NC=20
2. PROVIDE 2x2 LAY IN PANEL FOR AIR DEVICES IN LAY IN CEILINGS.
3. PROVIDE BEVELED MOUNTING FRAME FOR CEILING DIFFUSERS IN HARD CEILINGS.
4. PROVIDE FLAT MOUNTING FRAME FOR GRILLES LOCATED IN HARD CEILINGS.

AIR PURIFICATION EQUIPMENT SCHEDULE

ZONE AHU	SUPPLY CFM	OA CFM	PRESS. IN. W.C.	BASIS OF DESIGN	MODEL	QUANTITY	ELECTRICAL VOLTS/PHASE	ELECTRICAL WATTS	NOTES
-	-	-	-	-	NOT USED	-	-	-	1
-	-	-	-	-	NOT USED	-	-	-	
-	-	-	-	-	NOT USED	-	-	-	
-	-	-	-	-	NOT USED	-	-	-	
-	-	-	-	-	NOT USED	-	-	-	
-	-	-	-	-	NOT USED	-	-	-	
-	-	-	-	-	NOT USED	-	-	-	
8	2020	200	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4
9	1310	1750	-	GPS	GPS-DM48-AC	2	24VAC	12	1,2,3,4
-	-	-	-	-	NOT USED	-	-	-	1
11	2535	1750	-	GPS	GPS-DM48-AC	2	24VAC	12	1,2,3,4
12	1540	145	<0.01	GPS	DM-2	1	24 VAC	11	1,2,3,4

1. GPS = GLOBAL PLASMA SOLUTIONS.
2. PROVIDE BASIS OF DESIGN OR APPROVED EQUAL.
3. BI-POLAR IONIZATION SYSTEMS REQUIRING PERISHABLE GLASS TUBES ARE NOT ACCEPTABLE.
4. MANUFACTURER MUST PASS UL-867-2007 OZONE CHAMBER TESTING BY EITHER UL OR ETL

SPLIT SYSTEM HEAT PUMP SCHEDULE

UNIT	SA (CFM)	OA (CFM)	ESP (IN.H20)	FAN (HP)	COOLING MAT °F (DB/WB)	COOLING OAT °F (DB/WB)	COOLING TOTAL (BTUH)	COOLING SENSIBLE (BTUH)	SEER2	HEATING MAT °F (DB)	HEATING OAT °F (DB)	HEATING TOTAL (BTUH)	HSPF2	SUPPL HEAT	AHU ELECTRICAL VOLTS/PHASE	AHU ELECTRICAL MCA	AHU ELECTRICAL MOP	HP ELECTRICAL VOLTS/PHASE	HP ELECTRICAL MCA	HP ELECTRICAL MOP	NOTES
								NOT USED													1
								NOT USED													
								NOT USED													
								NOT USED													
								NOT USED													
								NOT USED													
								NOT USED													
8	2020	200	0.75	1.00	74.5/63.0	95.0/78.0	52100	39300	14.3	65.7	25.0	38800	7.5	5.9KW	208/1	32	35	208/3	23	35	1,2,3,4,5,8,10,11
9	1310	1750	0.50	1.50	71.9/62.2	95.0/78.0	138000	129100	10.6 EER	70.1	25.0	30000	3.3 COP	10.2KW	208/3	82	90	208/3	39	60	1,2,3,4,5,6,7,8,9,10,11,12
-	-	-	-	-	NOT USED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
11	2535	1750	0.50	2.40	71.8/62.1	95.0/78.0	162100	137800	10.6 EER	69.8	25.0	34500	3.3 COP	13.2KW	208/3	82	90	208/3	58	60	1,2,3,4,5,6,7,8,9,10,11,12
12	1540	145	0.50	1.00	74.7/63.4	95.0/78.0	42900	31300	15.2	65.8	25.0	32200	7.5	6.2KW	208/1	30	30	208/3	18	30	1,2,3,4,5,8,10,11

1. PROVIDE 2 " MERV 13 FILTERS.
2. EFFICIENCIES IN ACCORDANCE WITH ARI STANDARD 210/240.
3. ESP DOES NOT INCLUDE FILTER, CASING, ETC.
4. PROVIDE CONTROL KIT TO INCLUDE BLOWER CONTACTOR OR STARTER, TRANSFORMER, ELECTRIC HEATER INTLERLOCKS. ELECTRICAL SERVICE SHALL BE A SINGLE POINT OF CONNECTION.
5. PROVIDE THERMAL EXPANSION VALVES.
6. BELT DRIVE AHU FAN.
7. PRETREATED OUTSIDE AIR.
8. COOLING CAPACITY IS NET AND DOES NOT INCLUDE FAN HEAT.
9. PROVIDE TWO STAGE COMPRESSORS.
10. PROVIDE SEACOAST COATING ON CONDENSER COILS.
11. PROVIDE UNITS WITH EPA APPROVED REFRIGERANT. PROVIDE FACTORY INSTALLED REFRIGERANT MONITORING SYSTEM.
12. PROVIDE TWO 7.5 TON HEAT PUMPS. HP ELECTRICAL DATA IS FOR A SINGLE UNIT.

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100% CONSTRUCTION DOCUMENTS

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS

1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date
1	REBID REVISION #1	02/24/2026

HVAC LEGEND, SCHEDULES, AND NOTES

PROJECT NUMBER	22019
DATED	01/31/2025

M001

WATFORD ENGINEERING
4452 Clinton Street Marianna, Florida 32446
Florida CA Number: 27525
Keith A. Johnson, PE
Florida License Number: 86457
850.526.3447
Project Number: 2022-039
Checked By:KAJ
Drawn By:BBS

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22019
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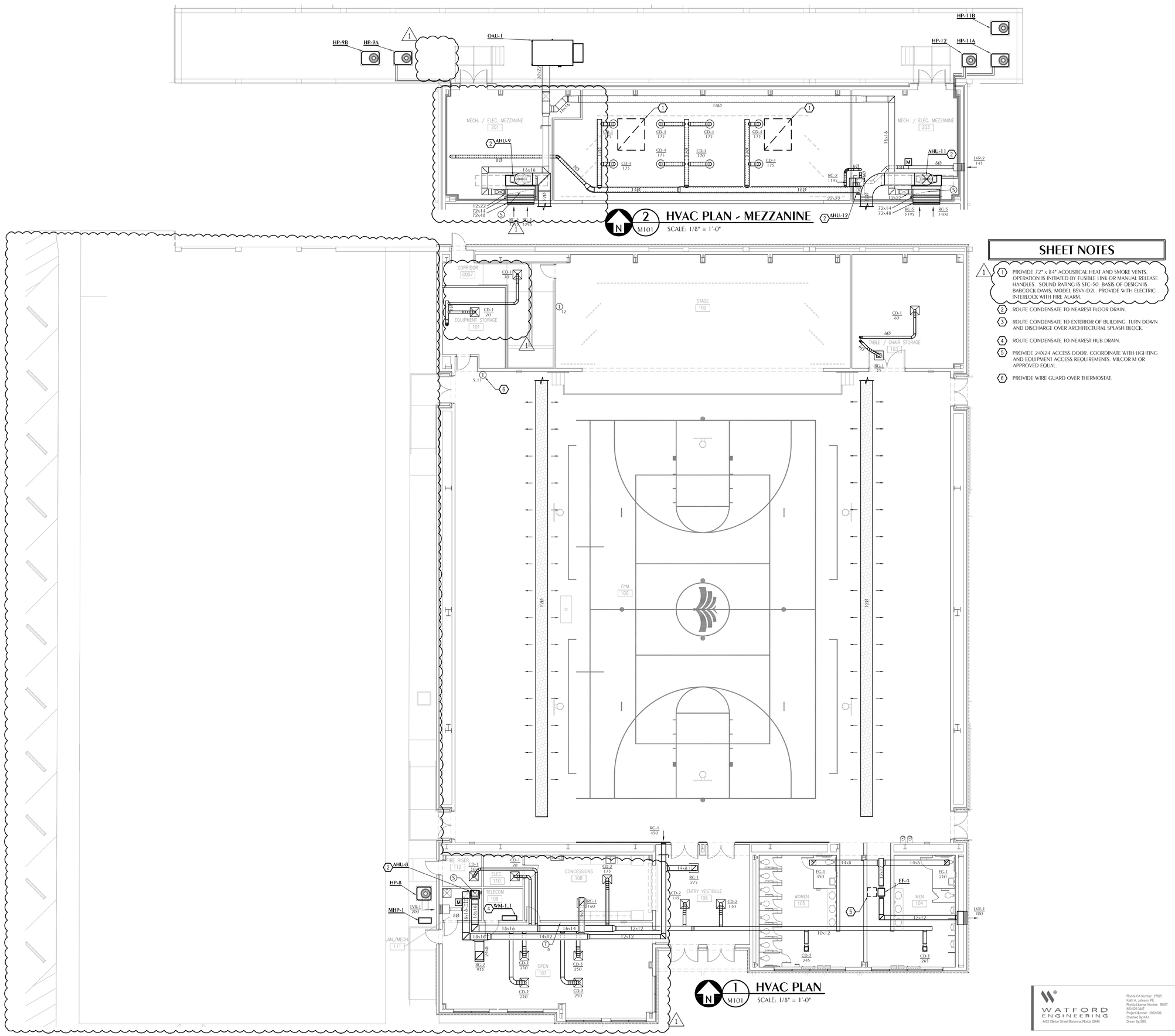
01/31/2025



N 2 M101 **HVAC PLAN - MEZZANINE**
SCALE: 1/8" = 1'-0"

N 1 M101 **HVAC PLAN**
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. PROVIDE 72" x 84" ACOUSTICAL HEAT AND SMOKE VENTS. OPERATION IS INITIATED BY FUSIBLE LINK OR MANUAL RELEASE HANDLES. SOUND RATING IS STC-50. BASIS OF DESIGN IS BABCOCK DAVIS, MODEL BSVV-D2L. PROVIDE WITH ELECTRIC INTERLOCK WITH FIRE ALARM.
2. ROUTE CONDENSATE TO NEAREST FLOOR DRAIN.
3. ROUTE CONDENSATE TO EXTERIOR OF BUILDING. TURN DOWN AND DISCHARGE OVER ARCHITECTURAL SPLASH BLOCK.
4. ROUTE CONDENSATE TO NEAREST HUB DRAIN.
5. PROVIDE 24X24 ACCESS DOOR. COORDINATE WITH LIGHTING AND EQUIPMENT ACCESS REQUIREMENTS. MILCOR M OR APPROVED EQUAL.
6. PROVIDE WIRE GUARD OVER THERMOSTAT.

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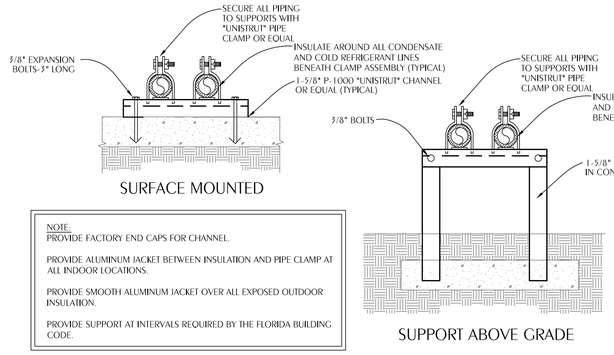
HVAC PLAN

WATFORD ENGINEERING
4452 Clinton Street Marianna, Florida 32446
Florida CA Number: 27925
Keith A. Johnson, PE
Florida License Number: 86457
850.526.3447
Project Number: 2022-039
Checked By: KAJ
Drawn By: SBS

PROJECT NUMBER	22019
DATED	01/31/2025

M101

22019
100% CONSTRUCTION DOCUMENTS
01/31/2025



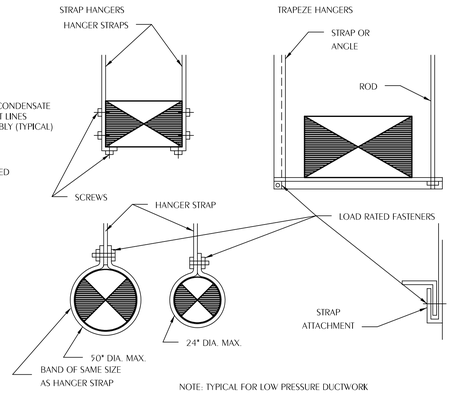
NOTE:
PROVIDE FACTORY END CAPS FOR CHANNEL.

PROVIDE ALUMINUM JACKET BETWEEN INSULATION AND PIPE CLAMP AT ALL INDOOR LOCATIONS.

PROVIDE SMOOTH ALUMINUM JACKET OVER ALL EXPOSED OUTDOOR INSULATION.

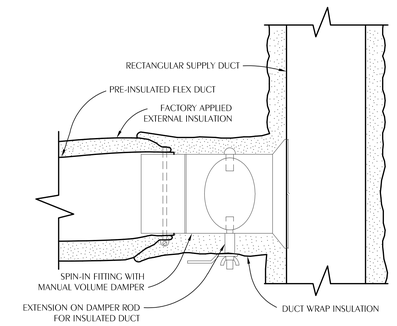
PROVIDE SUPPORT AT INTERVALS REQUIRED BY THE FLORIDA BUILDING CODE.

1 TYPICAL EXTERIOR PIPING SUPPORT DETAIL
M201 SCALE: NONE



NOTE: TYPICAL FOR LOW PRESSURE DUCTWORK

2 DUCT HANGER DETAILS
M201 SCALE: NONE

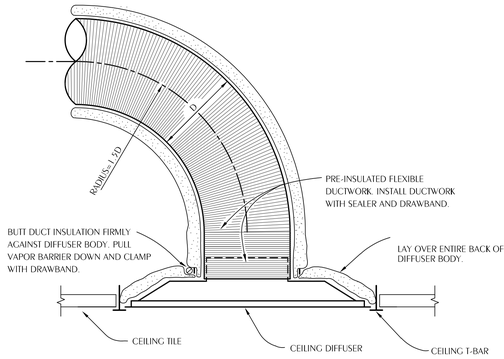


NOTES:
CONNECT FLEXIBLE DUCT TO FITTING WITH DRAWBAND AND SEALER.

ROUND HARD DUCT RUNOUTS SHOULD START WITH SPIN-IN FITTINGS SIMILAR TO THIS DETAIL.

PROVIDE CABLE ACTIVATED DAMPER WITH ADJUSTMENT IN FACE OF CEILING DIFFUSER.

3 TYPICAL FLEX DUCT TAKEOFF DETAIL
M201 SCALE: NONE

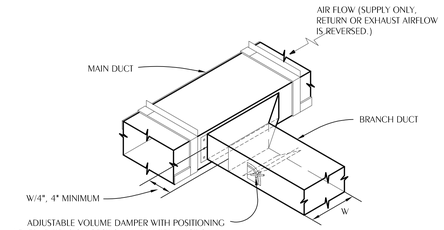


NOTES:
FLEX DUCT SHALL BE NO LONGER THAN 5'-0".

PROVIDE 24x24 LAY IN PANEL FOR DIFFUSERS IN LAY IN CEILINGS.

PROVIDE BEVELED MOUNTING FRAME FOR DIFFUSERS IN HARD CEILINGS.

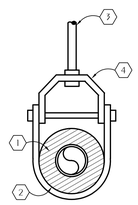
4 TYPICAL FLEX DUCT TAKEOFF DETAIL
M201 SCALE: NONE



NOTES:
PROVIDE CABLE ACTIVATED DAMPER WITH ADJUSTMENT IN FACE OF AIR DEVICE FOR INACCESSIBLE TAKEOFFS LOCATED ABOVE HARD CEILINGS.

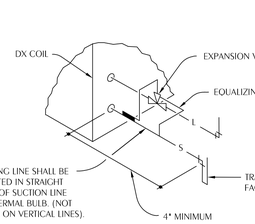
FLEXIBLE INSULATION SHALL BE 2" THICK, ASTM C553, TYPE 1, CLASS B-3 WITH 1 PCF DENSITY AND UL RATED ALUMINUM FOIL VAPOR BARRIER (FSK)

5 TYPICAL BRANCH DUCT TAKEOFF
M201 SCALE: NONE



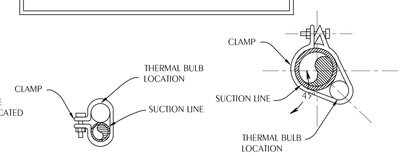
1. INSULATION
2. PIPE COVERING PROTECTION SADDLE
3. HANGER ROD FASTEN TO STRUCTURE PER SPECIFICATION
4. CLEVIS TYPE HANGER

6 OVERHEAD PIPE SUPPORT
M201 SCALE: NONE

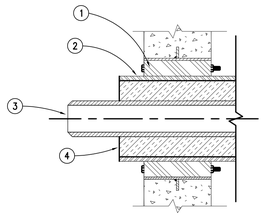


NOTES:
THERMOSTATIC BULB TO BE AS CLOSE TO COIL AS POSSIBLE NOT ALLOWED ON VERTICAL LINES.

INSULATE REFRIGERANT LINES PER SPECIFICATIONS.

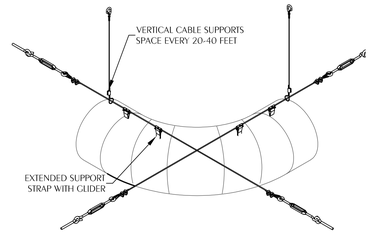


7 REFRIGERANT COIL CONNECTION DETAIL
M201 SCALE: NONE



1. WALL OR FLOOR SEAL APPURTENANCES PER SPECIFICATIONS
2. PIPE SLEEVE PER SPECIFICATIONS
3. PIPING
4. INSULATION

8 TYPICAL WALL PIPE PENETRATION
M201 SCALE: NONE

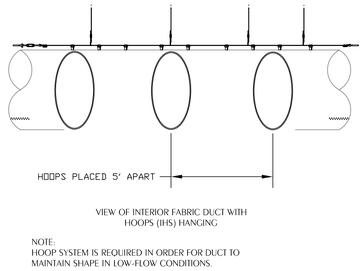


NOTES:
SECURE REFRIGERANT LINES AND CONDENSATE PIPING WITH UNISTRUT.

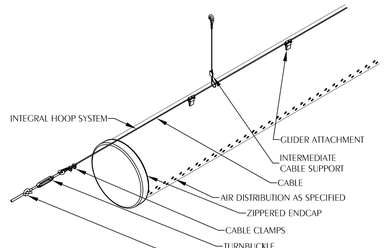
PROVIDE FACTORY FABRICATED RETURN AIR PLENUM OR ENGINEER APPROVED EQUAL.

SIZE COPPER CONDENSATE LINE AT FULL SIZE OF UNIT CONNECTION, BUT IN NO CASE SMALLER THAN 3/4".

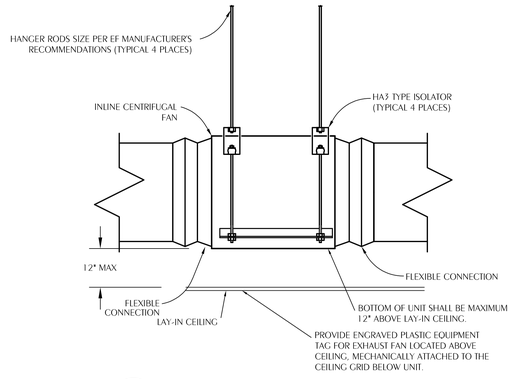
9 VERTICAL UPFLOW AHU DETAIL
M201 SCALE: NONE



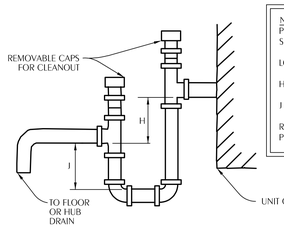
NOTE:
HOOP SYSTEM IS REQUIRED IN ORDER FOR DUCT TO MAINTAIN SHAPE IN LOW-FLOW CONDITIONS.



10 FABRIC DUCT SUSPENSION DETAIL
M201 SCALE: NONE



11 INLINE FAN DETAIL
M201 SCALE: NONE



NOTES:
PIPE TYPE 'L' HARD DRAWN COPPER CONDENSATE LINE AT FULL SIZE OF UNIT CONNECTION, BUT IN NO CASE SMALLER THAN 3/4".

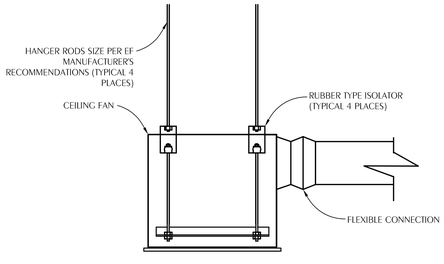
LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING.

H = AIR UNIT TOTAL STATIC PRESSURE + 1"

J = H/2

ROUTE CONDENSATE TO NEAREST FLOOR DRAIN. CONDENSATE PIPE SHALL BE PROVIDED BY THE HVAC CONTRACTOR.

12 NEGATIVE PRESSURE CONDENSATE DRAIN TRAP
M201 SCALE: NONE



13 CEILING FAN DETAIL
M201 SCALE: NONE

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1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

HVAC DETAILS

PROJECT NUMBER	22019
DATED	01/31/2025

M201

WATFORD ENGINEERING
4452 Clinton Street Marianna, Florida 32446
Florida CA Number: 27925
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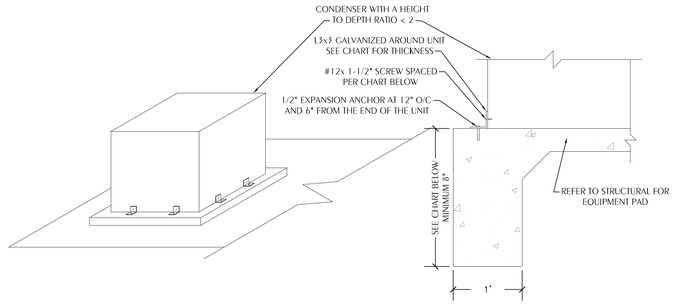
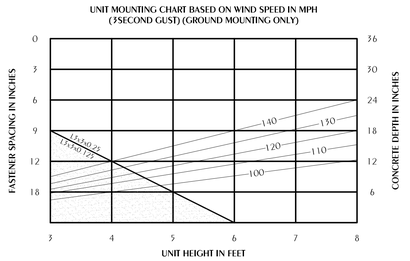


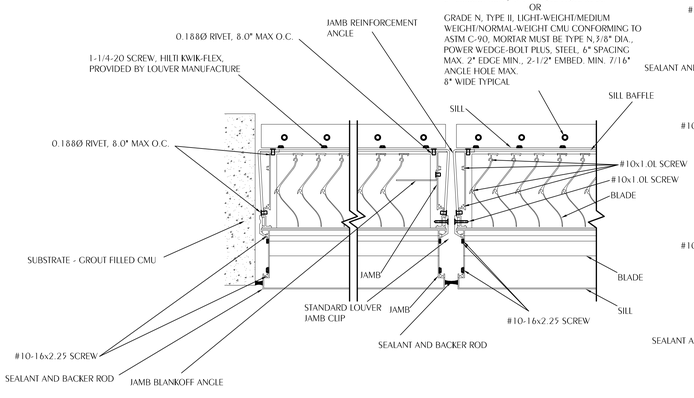


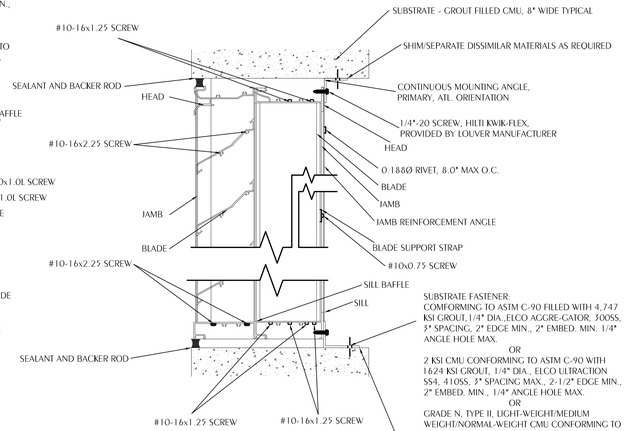
DESIGN CRITERIA:

CODE:	ASCE 7-05
VELOCITY:	SEE BELOW
Kz:	0.70
Kzt:	1.00
Kd:	0.85
IMPORTANCE:	1.15
EXPOSURE:	B
GI:	1.3
GE:	0.85
qz:	
100 mph	17.52 psf
110 mph	21.20 psf
120 mph	25.22 psf
130 mph	29.60 psf
140 mph	34.33 psf
Pdesign:	
100 mph	19.36 psf
110 mph	23.42 psf
120 mph	27.87 psf
130 mph	32.71 psf
140 mph	37.94 psf

1 OUTDOOR MECHANICAL UNIT MOUNTING DETAIL
M202 SCALE: NONE

SUBSTRATE FASTENER:
COMFORMING TO ASTM C-90 FILLED WITH 4,747 KSI GROUT,1/4" DIA.,ELCO AGGRE-GATOR, 3005S, 3" SPACING, 2" EDGE MIN., 2" EMBED. MIN. 1/4" ANGLE HOLE MAX.
OR
2 KSI CMU CONFORMING TO ASTM C-90 WITH 1624 KSI GROUT, 1/4" DIA., ELCO ULTRACTION SS4, 4105S, 3" SPACING MAX., 2-1/2" EDGE MIN., 2" EMBED. MIN., 1/4" ANGLE HOLE MAX.
OR
GRADE N, TYPE II, LIGHT-WEIGHT/MEDIUM WEIGHT/NORMAL-WEIGHT CMU CONFORMING TO ASTM C-90, MORTAR MUST BE TYPE N,3/8" DIA., POWER WEDGE-BOLT PLUS, STEEL, 6" SPACING MAX. 2" EDGE MIN., 2-1/2" EMBED. MIN. 7/16" ANGLE HOLE MAX.
8" WIDE TYPICAL





2 WALL LOUVER DETAIL
M202 SCALE: NONE NOA #:19-0516.09

NOTES:

1. THE INSTALLATION SHOWN HEREIN MUST BE FOLLOWED STRICTLY TO ENSURE COMPLIANCE WITH FLORIDA BUILDING CODE PRODUCT APPROVAL.
2. CONTINUOUS INSTALLATION ANGLES AND FASTENERS ARE SHIPPED LOOSE AND REQUIRE INSTALLATION IN THE FIELD.
3. SHIMS MAY BE REQUIRED TO ACHIEVE CONSISTENT CLEARANCE BETWEEN LOUVER AND OPENING ON ALL SIDES.
4. INSTALLATION DETAIL IS BASED UPON GREENHECK MODEL 'EHV-901D', IF AN ALTERNATE MANUFACTURER'S LOUVER IS USED, IT MUST BE INSTALLED WITH ITS FLORIDA PRODUCT APPROVAL.

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100% CONSTRUCTION DOCUMENTS

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

HVAC DETAILS

WATFORD ENGINEERING
4452 Clinton Street Marianna, Florida 32446
Florida CA Number: 27925
Keith A. Johnson, PE
Florida License Number: 86457
850.526.3447
Project Number: 2022-039
Checked By:KAJ
Drawn By:SBS

PROJECT NUMBER	22019
DATED	01/31/2025

M202

22019
100% CONSTRUCTION DOCUMENTS
01/31/2025

DDC SYSTEM GENERAL NOTES

1. THE DDC CONTRACTOR SHALL CONNECT TO THE EXISTING DAIKIN BUILDING MANAGEMENT DDC SYSTEM TO PERFORM THE INDICATED SEQUENCES, ALL OTHER FUNCTIONS REQUIRED BY THE CONTRACT DOCUMENTS, AND ALL OTHER FUNCTIONS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
2. THE CONTROLS CONTRACTOR SHALL PROVIDE A DDC SYSTEM FOR THE NEW EQUIPMENT THAT MEETS ALL REQUIREMENTS OF THESE CONSTRUCTION DOCUMENTS. THIS SHALL INCLUDE ALL GRAPHICS, AREA CONTROL MEMBERS, TIME SCHEDULING, ETC. ALL WORK SHALL BE THE RESPONSIBILITY OF THIS CONTROLS CONTRACTOR.
3. ALL SEQUENCES ARE SUBJECT TO SAFETIES. DDC CONTRACTOR SHALL PROVIDE ALL NECESSARY AND CUSTOMARY SAFETIES.
4. ALL WIRING SHALL BE IN CONDUIT. ALL CONDUIT SHALL BE IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS, REQUIREMENTS FOR 120 VAC CIRCUITS.
5. ALL CONTROL TUBING SHALL BE RUN IN CONDUIT. ALL CONDUIT SHALL BE IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS, REQUIREMENTS FOR 120 VAC CIRCUITS.
6. CONDUIT SHALL BE RUN PERPENDICULAR AND PARALLEL TO BUILDING LINES IN A FIRST CLASS WORKMANSHIP LIKE MANNER.
7. NO EXPOSED CONDUIT SHALL BE USED IN FINISHED SPACES.
8. PROVIDE WIRE GUARD FOR THERMOSTATS AND TEMPERATURE SENSORS LOCATED IN MULTIPURPOSE ROOMS AND CORRIDORS.
9. THE DDC SYSTEM SHALL COMMUNICATE WITHIN THE BUILDING ON ITS OWN WIRING SYSTEM AND SHALL NOT UTILIZE THE OWNER'S LOCAL AREA NETWORK WITHIN THE BUILDING.

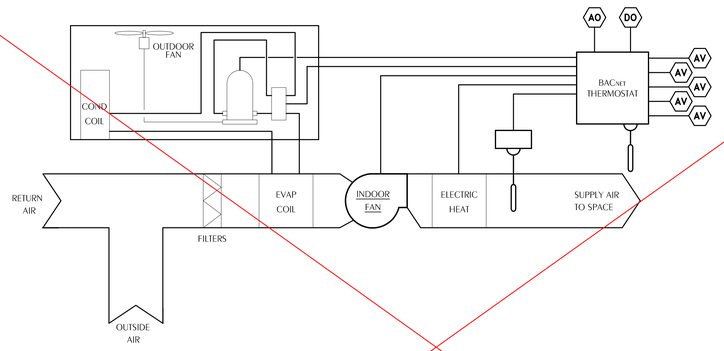
SEQUENCE OF OPERATION
HEAT PUMP-PRETREATED OA

GENERAL: THE UNIT SHALL BE STARTED AUTOMATICALLY BY THE BACnet THERMOSTAT. ALL CONTROLS ACTIVATED SUBJECT TO THE FIRE ALARM RELAY, SAFETIES AND OVERLOADS. THE DDC SYSTEM SHALL INCLUDE A GRAPHIC FOR EACH UNIT AND COMMUNICATE THE INDICATED VALUES AND SETPOINTS ON THE GRAPHIC. THE DDC SHALL POST AN ALARM WHEN THE RELATIVE HUMIDITY EXCEEDS 65% (ADJUSTABLE) AND TEMPERATURE EXCEEDS SETPOINT ±5°F FOR SPACE TEMPERATURE MORE THAN 1 HOUR AFTER OCCUPIED MODE BEGINS.

OCCUPIED MODE: THE INDOOR FAN SHALL RUN CONTINUALLY AND THE HEAT PUMP SHALL CYCLE WITH A CALL FOR HEATING AND COOLING. THE SET POINT FOR COOLING SHALL BE 75°F ADJUSTABLE. THE SET POINT FOR HEATING SHALL BE 70°F ADJUSTABLE. THE SUPPLEMENTAL ELECTRIC HEAT SHALL OPERATE AS A SECOND STAGE OF HEATING ENABLED ONLY DURING DEFROST OR WHEN THE OUTDOOR TEMPERATURE IS BELOW 35°F AND THE HEAT PUMP CAN NOT SATISFY THE CALL FOR HEATING AFTER 20 MINUTES OF RUN TIME.

UNOCCUPIED MODE: THE INDOOR FAN AND HP SHALL CYCLE TO MAINTAIN SET POINT TEMPERATURE. THE SET POINT FOR COOLING SHALL BE 80°F ADJUSTABLE. THE SET POINT FOR HEATING SHALL BE 65°F ADJUSTABLE.

OVERRIDE MODE: THE OVERRIDE MODE SHALL PLACE THE SYSTEM IN OCCUPIED MODE FOR 1 HR AND THE OUTSIDE AIR UNIT FOR THE UNIT IN OVERRIDE SHALL BE PLACED IN OCCUPIED MODE FOR 1 HR.



1 M301 HEAT PUMP-PRETREATED OA CONTROL DIAGRAM
SCALE: NONE

HEAT PUMP-PRETREATED OA POINTS LIST

	HARDWARE POINTS				SOFTWARE POINTS					
POINT NAME	AI	AO	DI	DO	AV	DV	SCHED	TREND	ALARM	GRAPHIC
OCCUPIED/UNOCCUPIED SCHED				X						X
BMS TEMPERATURE SETPOINT		X								X
ZONE TEMP SETPOINT					X					X
ZONE TEMP					X				X	X
ZONE RELATIVE HUMIDITY					X				X	X
SUPPLY AIR TEMP					X					X

SEQUENCE OF OPERATION
100% OUTSIDE AIR UNIT

GENERAL: THE DDC CONTRACTOR SHALL INSTALL FIELD MOUNTED SENSORS PROVIDED BY THE UNIT MANUFACTURER. THE DDC SYSTEM SHALL CONNECT TO THE UNITS BACNET INTERFACE TO READ THE POINTS INDICATED. THE DDC SYSTEM SHALL PROVIDE OCCUPIED/UNOCCUPIED SIGNAL TO THE FACTORY MOUNTED UNIT CONTROLLER, MONITOR ALARM STATUS, AND MONITOR VALUES INDICATED. THE DDC SHALL MONITOR BUILDING RELATIVE HUMIDITY (BACnet POINTS FROM ROOM THERMOSTATS) AND OUTSIDE AIR SUPPLY AIR DEWPOINT TEMPERATURE. WHEN THE OA DEWPOINT SUPPLY AIR TEMPERATURE RISES ABOVE 60°F FOR MORE THAN 10 MINUTES (ADJUSTABLE), THE DDC SHALL POST AN ALARM AND SHUT DOWN THE OUTSIDE AIR UNIT.

THE FOLLOWING SEQUENCE OF OPERATIONS SHALL BE PROVIDED BY THE UNIT MANUFACTURER:

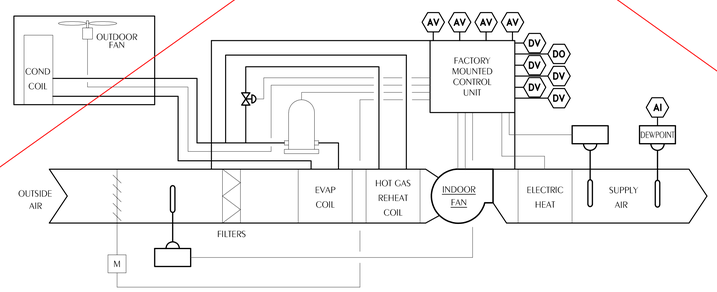
GENERAL: STARTING AND STOPPING OF EQUIPMENT SHALL BE BY A UNIT MOUNTED DIGITAL CONTROLLER. WITH THE DIGITAL CONTROLLER IN THE AUTO POSITION, THE UNIT SHALL BE STARTED AUTOMATICALLY BY THE ELECTRONIC CONTROL SYSTEM AND ALL CONTROLS ACTIVATED SUBJECT TO THE FIRE ALARM RELAY, SAFETIES AND OVERLOADS.

OCCUPIED MODE DEHUMIDIFICATION: THE MOTORIZED OA DAMPER SHALL OPEN TO THE BALANCED POSITION AND THE INDOOR FAN SHALL RUN CONTINUOUSLY. THE UNIT SHALL DEHUMIDIFY SUPPLY AIR ANYTIME THE OUTDOOR AIR DEWPOINT IS ABOVE 55°F. THE UNIT SHALL REHEAT SUPPLY AIR TO SPACE CONDITIONS WITH VARIABLE HOT GAS, MAINTAINING LEAVING AIR TEMPERATURE OF 72°F.

OCCUPIED MODE HEATING: WHEN THE OUTDOOR AIR TEMPERATURE FALLS BELOW 50°F, THE ELECTRIC HEAT SHALL OPERATE AS REQUIRED TO MAINTAIN 70°F LEAVING AIR TEMPERATURE. THE ELECTRIC HEAT SHALL BE LOCKED OUT DURING COOLING.

UNOCCUPIED MODE: THE MOTORIZED OA DAMPER SHALL CLOSE AND THE UNIT SHALL BE NOT OPERATE.

OVERRIDE MODE: THE OVERRIDE MODE SHALL PLACE THE SYSTEM IN OCCUPIED MODE AND THE OUTSIDE AIR DAMPER FOR THE UNIT IN OVERRIDE SHALL OPEN TO THE BALANCED POSITION.



2 M301 100% OUTSIDE AIR UNIT CONTROL DIAGRAM
SCALE: NONE

100% OUTSIDE AIR UNIT POINTS LIST

	HARDWARE POINTS				SOFTWARE POINTS					
POINT NAME	AI	AO	DI	DO	AV	DV	SCHED	TREND	ALARM	GRAPHIC
SCHEDULE				X						X
FAULT						X			X	X
OUTSIDE AIR SUPPLY DEW POINT	X								X	X
OUTDOOR AIR TEMP					X					X
OUTSIDE AIR DEW POINT					X					X
SUPPLY AIR TEMP					X					X
ELECTRIC HEAT					X					X
OA DAMPER						X				X
COMPRESSOR						X				X
FAN START/STOP						X				X
FAN STATUS						X			X	X

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100% CONSTRUCTION DOCUMENTS

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1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

HVAC CONTROLS

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4452 Clinton Street Marianna, Florida 32446
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Keith A. Johnson, PE
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Checked By:KAJ
Drawn By:BBS

PROJECT NUMBER	22019
DATED	01/31/2025

M301

22019
100% CONSTRUCTION DOCUMENTS
01/31/2025

DDC SYSTEM GENERAL NOTES

1. THE DDC CONTRACTOR SHALL PROVIDE A COMPLETE NEW DDC SYSTEM TO PERFORM THE INDICATED SEQUENCES, ALL OTHER FUNCTIONS REQUIRED BY THE CONTRACT DOCUMENTS, AND ALL OTHER FUNCTIONS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM. 1
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8. PROVIDE WIRE GUARD FOR THERMOSTATS AND TEMPERATURE SENSORS LOCATED IN MULTIPURPOSE ROOMS AND CORRIDORS.
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SEQUENCE OF OPERATION
HEAT PUMP-PRETREATED OA

GENERAL: THE UNIT SHALL BE STARTED AUTOMATICALLY BY THE BACnet THERMOSTAT. ALL CONTROLS ACTIVATED SUBJECT TO THE FIRE ALARM RELAY, SAFETIES AND OVERLOADS. THE DDC SYSTEM SHALL INCLUDE A GRAPHIC FOR EACH UNIT AND COMMUNICATE THE INDICATED VALUES AND SETPOINTS ON THE GRAPHIC. THE DDC SHALL POST AN ALARM WHEN THE RELATIVE HUMIDITY EXCEEDS 65% (ADJUSTABLE) AND TEMPERATURE EXCEEDS SETPOINT ±5°F FOR SPACE TEMPERATURE MORE THAN 1 HOUR AFTER OCCUPIED MODE BEGINS.

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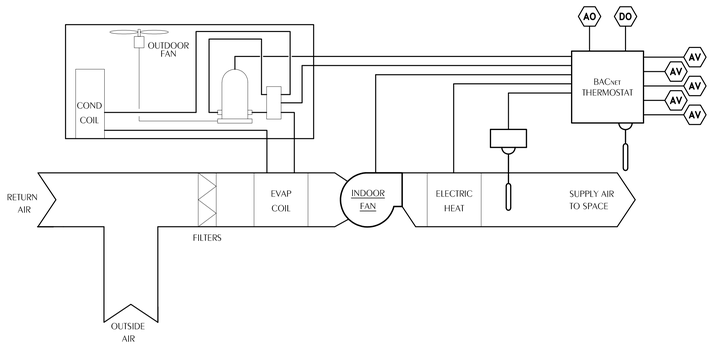

1 M301 **HEAT PUMP-PRETREATED OA CONTROL DIAGRAM**
SCALE: NONE

HEAT PUMP-PRETREATED OA POINTS LIST

	HARDWARE POINTS				SOFTWARE POINTS					
POINT NAME	AI	AO	DI	DO	AV	DV	SCHED	TREND	ALARM	GRAPHIC
OCCUPIED/UNOCCUPIED SCHED				X						X
BMS TEMPERATURE SETPOINT		X								X
ZONE TEMP SETPOINT					X					X
ZONE TEMP					X				X	X
ZONE RELATIVE HUMIDITY					X				X	X
SUPPLY AIR TEMP					X					X

SEQUENCE OF OPERATION
100% OUTSIDE AIR UNIT

GENERAL: THE DDC CONTRACTOR SHALL INSTALL FIELD MOUNTED SENSORS PROVIDED BY THE UNIT MANUFACTURER. THE DDC SYSTEM SHALL CONNECT TO THE UNITS BACNET INTERFACE TO READ THE POINTS INDICATED. THE DDC SYSTEM SHALL PROVIDE OCCUPIED/UNOCCUPIED SIGNAL TO THE FACTORY MOUNTED UNIT CONTROLLER, MONITOR ALARM STATUS, AND MONITOR VALUES INDICATED. THE DDC SHALL MONITOR BUILDING RELATIVE HUMIDITY (BACnet POINTS FROM ROOM THERMOSTATS) AND OUTSIDE AIR SUPPLY AIR DEWPOINT TEMPERATURE. WHEN THE OA DEWPOINT SUPPLY AIR TEMPERATURE RISES ABOVE 60°F FOR MORE THAN 10 MINUTES (ADJUSTABLE), THE DDC SHALL POST AN ALARM AND SHUT DOWN THE OUTSIDE AIR UNIT.

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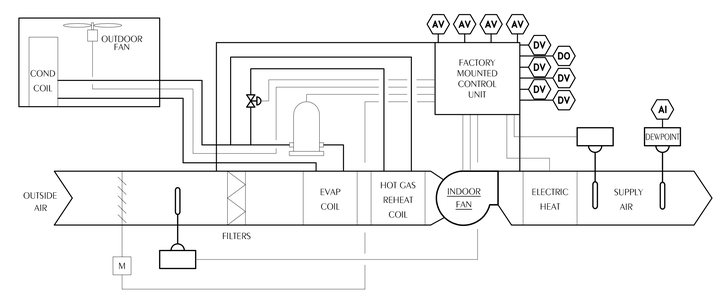
OCCUPIED MODE DEHUMIDIFICATION: THE MOTORIZED OA DAMPER SHALL OPEN TO THE BALANCED POSITION AND THE INDOOR FAN SHALL RUN CONTINUOUSLY. THE UNIT SHALL DEHUMIDIFY SUPPLY AIR ANYTIME THE OUTDOOR AIR DEWPOINT IS ABOVE 55°F. THE UNIT SHALL REHEAT SUPPLY AIR TO SPACE CONDITIONS WITH VARIABLE HOT GAS, MAINTAINING LEAVING AIR TEMPERATURE OF 72°F.

OCCUPIED MODE HEATING: WHEN THE OUTDOOR AIR TEMPERATURE FALLS BELOW 50°F, THE ELECTRIC HEAT SHALL OPERATE AS REQUIRED TO MAINTAIN 70°F LEAVING AIR TEMPERATURE. THE ELECTRIC HEAT SHALL BE LOCKED OUT DURING COOLING.

UNOCCUPIED MODE: THE MOTORIZED OA DAMPER SHALL CLOSE AND THE UNIT SHALL BE NOT OPERATE.

OVERRIDE MODE: THE OVERRIDE MODE SHALL PLACE THE SYSTEM IN OCCUPIED MODE AND THE OUTSIDE AIR DAMPER FOR THE UNIT IN OVERRIDE SHALL OPEN TO THE BALANCED POSITION.



2 M301 **100% OUTSIDE AIR UNIT CONTROL DIAGRAM**
SCALE: NONE

100% OUTSIDE AIR UNIT POINTS LIST

	HARDWARE POINTS				SOFTWARE POINTS					
POINT NAME	AI	AO	DI	DO	AV	DV	SCHED	TREND	ALARM	GRAPHIC
SCHEDULE				X						X
FAULT						X			X	X
OUTSIDE AIR SUPPLY DEW POINT	X								X	X
OUTDOOR AIR TEMP					X					X
OUTSIDE AIR DEW POINT					X					X
SUPPLY AIR TEMP					X					X
ELECTRIC HEAT					X					X
OA DAMPER						X				X
COMPRESSOR						X				X
FAN START/STOP						X				X
FAN STATUS						X			X	X

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100% CONSTRUCTION DOCUMENTS

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS

1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date
1	Addendum #2	04/28/25

HVAC CONTROLS

WATFORD ENGINEERING
4452 Clinton Street Marianna, Florida 32446
Florida CA Number: 27525
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Florida License Number: 86457
850.526.3447
Project Number: 2022-039
Checked By:KAJ
Drawn By:BBS

PROJECT NUMBER	22019
DATED	01/31/2025

M301

22019
100% CONSTRUCTION DOCUMENTS
01/31/2025

SEQUENCE OF OPERATION
HEAT PUMP-UNTREATED OA

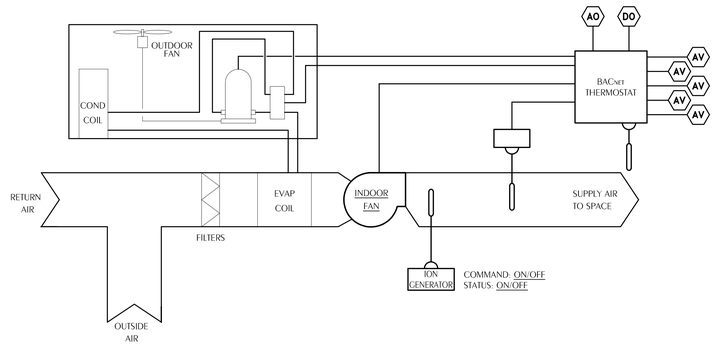
GENERAL: THE UNIT SHALL BE STARTED AUTOMATICALLY BY THE BACnet THERMOSTAT. ALL CONTROLS ACTIVATED SUBJECT TO THE FIRE ALARM RELAY, SAFETIES AND OVERLOADS.

OCCUPIED MODE: THE INDOOR FAN SHALL RUN CONTINUALLY AND THE HEAT PUMP SHALL STAGE COMPRESSORS WITH A CALL FOR HEATING AND COOLING. THE SET POINT FOR COOLING SHALL BE 75°F ADJUSTABLE. THE SET POINT FOR HEATING SHALL BE 70°F ADJUSTABLE.

UNOCCUPIED MODE: THE INDOOR FAN AND HP SHALL CYCLE TO MAINTAIN SET POINT TEMPERATURE. THE SET POINT FOR COOLING SHALL BE 80°F ADJUSTABLE. THE SET POINT FOR HEATING SHALL BE 65°F ADJUSTABLE.

OVERRIDE MODE: THE OVERRIDE MODE SHALL PLACE THE SYSTEM IN OCCUPIED MODE FOR 1 HR.

HUMIDITY CONTROL: UPON A CALL FOR DEHUMIDIFICATION (SETPOINT EQUALS 60%, ADJUSTABLE), THE UNIT SHALL BE PLACED IN COOLING MODE ON LOW FAN SPEED UNTIL THE CALL FOR DEHUMIDIFICATION HAS BEEN SATISIFIED OR THE SPACE TEMPERATURE FALLS 2°F. BELOW COOLING SETPOINT.



1 M302 HEAT PUMP-UNTREATED OA CONTROL DIAGRAM
SCALE: NONE

HEAT PUMP-UNTREATED OA POINTS LIST

	HARDWARE POINTS				LOCAL CONTROLLER POINTS				
POINT NAME	AI	AO	DI	DO	AV	DV	SCHED	TREND	ALARM
OCCUPIED/UNOCCUPIED SCHED							X		
ZONE TEMP SETPOINT					X				
ZONE TEMP					X				
ZONE RELATIVE HUMIDITY					X				
SUPPLY AIR TEMP					X				

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100% CONSTRUCTION DOCUMENTS

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS

1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

HVAC CONTROLS

WATFORD ENGINEERING
4452 Clinton Street Marianna, Florida 32446
Florida CA Number: 27825
Keith A. Johnson, PE
Florida License Number: 86457
850.526.3447
Project Number: 2022-039
Checked By: KAJ
Drawn By: SBS

PROJECT NUMBER 22019
DATED 01/31/2025

M302

22019
100% CONSTRUCTION DOCUMENTS
10/1/2026

ELECTRICAL LEGEND

A–1 'B' — A–1 ADJACENT TO ARROW INDICATES HOMERUN OF CIRCUIT NO. 1 TO PANEL A; "B" INDICATES FIXTURE TYPE; MARKS ACROSS RACEWAY RUN INDICATES THE NUMBER OF NO. 12 CONDUCTORS; UNLESS NOTED OTHERWISE NO MARKS INDICATES TWO NO. 12 CONDUCTORS AND ONE NO. 12 GREEN GROUND CONDUCTOR IN 1/2" CONDUIT (2#12 & 1#12 GND–1/2"C)

CEILING FIXTURE

CEILING FIXTURE WITH INTEGRAL EMERGENCY BATTERY BACKUP

WALL BRACKET FIXTURE

2' X 2' FIXTURE; CEILING MOUNTED; ARROW INDICATES LENS DIRECTION

2' X 2' FIXTURE WITH INTEGRAL EMERGENCY BATTERY OR CONNECTED TO AN EMERGENCY CIRCUIT AS INDICATED; CEILING MOUNTED; ARROW INDICATES LENS DIRECTION

1' x 4' FIXTURE; CEILING MOUNTED

LED 1' x 4' FIXTURE WITH INTEGRAL EMERGENCY BATTERY OR CONNECTED TO AN EMERGENCY CIRCUIT AS INDICATED; MOUNTING TYPE DEFINED ON LIGHTING FIXTURE SCHEDULE

LED WALL MOUNTED FIXTURE; MOUNTING TYPE DEFINED ON LIGHTING FIXTURE SCHEDULE

HIGH BAY FIXTURE; PENDANT MOUNTED

HIGH BAY EMERGENCY FIXTURE; PENDANT MOUNTED

POLE MOUNTED LIGHT FIXTURE.

EXIT SIGN; CEILING MOUNTED; ARROWS AS NOTED; SHADED SECTION INDICATES LIGHTED FACE OF EXIT SIGN

WG — EXIT SIGN; BACK MOUNTED; ARROWS AS NOTED; SHADED SECTION INDICATES LIGHTED FACE OF EXIT SIGN; WG, IF SHOWN, INDICATES WIRE GUARD

JUNCTION BOX; MOUNTED ABOVE CEILING

JUNCTION BOX; MOUNTED FLUSH IN WALL WITH BLANK COVER

DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBELL SERIES HBL5352

CEILING MOUNTED DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; MT FLUSH IN CEILING UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBELL SERIES HBL5352

CEILING MOUNTED QUAD RECEPTACLE; 125V; 20A; 3 POLE GND; MT FLUSH IN CEILING UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBELL SERIES HBL5352

DUPLEX FLOOR RECEPTACLE, 125 V, 20 A; NEMA 5–20R; HUBBELL SERIES HBL5352

QUAD RECEPTACLE; 125V; 20A; 3 POLE GND; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBELL SERIES HBL5352

TAMPER RESISTANT DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBELL SERIES HBL SERIES BR20xxTR

TAMPER RESISTANT QUAD RECEPTACLE; 125V; 20A; 3 POLE GND; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBELL SERIES HBL SERIES BR20xxTR

TAMPER RESISTANT DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; GFI; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBELL SERIES GFTR20

QUAD RECEPTACLE; TAMPER RESISTANT; 125V; 20A; 3 POLE GND; GFI; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBELL SERIES GFTR20

QUAD RECEPTACLE; 125V; 20A; 3 POLE GND; GFI; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA GF–5–20R; HUBBELL SERIES GF5362

DUPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; GFI; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA GF–5–20R; HUBBELL SERIES GF5362

WP — LETTERS "WP" ADJACENT TO SYMBOL INDICATES GFI WEATHER RESISTANT RECEPTACLE; HUBBELL HBLGFTW20 SERIES WITH WEATHERPROOF COVER; HUBBELL/TAYMAC MR420CW COVER.

DUPLEX RECEPTACLE FOR TELEVISION WITH SURGE PROTECTION, LED AND ALARM; 125V; 20A; 2 POLE; 3 WIRE; GND; SEE TELECOM PLANS FOR MOUNTING DETAILS. NEMA 5–20R; HUBBELL SERIES HBL5362SA

COMBINATION POWER/TELECOM FLOOR BOX; FOUR DUPLEX RECEPTACLES; 125V; 20A; 3 POLE GND; NEMA 5–20R; HUBBELL SERIES HBL5352; REFER TO TELECOM AND A/V PLANS FOR FLOOR BOX PART NUMBERS, INSTALLATION DETAILS AND LOCATION.

LETTERS +XX" ADJACENT TO SYMBOL INDICATES RECEPTACLE MOUNTING HEIGHT.
- +AC" = ABOVE COUNTER.
- +DF" = VERIFY HEIGHT FOR DRINKING FOUNTAIN WITH MECHANICAL CONTRACTOR
- +TV" = VERIFY HEIGHT OF TV WITH OWNER.
- +SB" = SMARTBOARD/INTERACTIVE FLAT PANEL TV RECEPTACLE, VERIFY MOUNTING REQUIREMENTS WITH TELECOM PLANS.
- +TS" = TEACHER STATION RECEPTACLE, VERIFY MOUNTING REQUIREMENTS WITH TELECOM PLANS.
- +DW" = DISHWASHER RECEPTACLE, VERIFY MOUNTING REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- +REF" = REFRIGERATOR, VERIFY & COORDINATE MOUNTING HEIGHT WITH REFRIGERATOR MANUFACTURER.

SIMPLEX RECEPTACLE; 125V; 20A; 3 POLE GND; MT 18" AFF TO C/L UNLESS NOTED OTHERWISE; NEMA 5–20R; HUBBELL SERIES HBL5351

S — WALL SWITCH; 120/277V; 20A; 1 POLE; A.C. ONLY; MT 48" AFF TO C/L; HUBBELL SERIES HBL1221

Sv — WALL SWITCH; 120/277V; 20A; VACANCY SENSOR DUAL TECHNOLOGY MULTI–WAY TYPE; MT 48" AFF TO C/L; REFER TO SPECS; WATTSTOPPER #DW–100–W.

S2 — WALL MOUNT SINGLE POLE–DOUBLE THROW KEYED MOMENTARY SWITCH; 120/277V; 20A; MT 48" AFF TO C/L; WATTSTOPPER #1250–L

Sx — LOW VOLTAGE WALL SWITCH; CONNECT TO LOCAL NON–NETWORKED POWER PACK OR ROOM CONTROLLER; MT 48" AFF TO C/L; REFER TO SPECS; SEE LIGHTING CONTROL DETAILS. NUMBER "x" INDICATES BUTTON COUNT; REFER TO LOW VOLTAGE SWITCH MATRIX FOR SPECIFIC INFORMATION.

MOTOR CONTROL SWITCH; 600V; 30A; 2 POLE; A.C. ONLY; NEAR OR ON EQUIPMENT BEING SERVED; HUBBELL–BRYANT 30102D.

WP — NEMA 3R MOTOR CONTROL SWITCH; 600V; 30A; 2 POLE; A.C. ONLY; NEAR OR ON EQUIPMENT BEING SERVED; HUBBELL–BRYANT 30322D.

LIGHTING CONTROLS ROOM CONTROLLER; INSTALL CONCEALED ABOVE CEILING SPACE; REFER TO LIGHTING CONTROLS DETAILS

ELM — EMERGENCY RELAY; EQUAL TO WATTSTOPPER #ELCU–200. MOUNT ABOVE CEILING; UNLESS NOTED OTHERWISE. REFER TO EMERGENCY LIGHTING RELAY CONNECTION DETAIL.

LOW VOLTAGE OCCUPANCY SENSOR; 360° DUAL–TECHNOLOGY TYPE; CEILING MOUNTED; UNLESS OTHERWISE NOTED; REFER TO LIGHTING CONTROLS DETAILS

LOW VOLTAGE VACANCY SENSOR; 360° DUAL–TECHNOLOGY TYPE; CEILING MOUNTED; UNLESS OTHERWISE NOTED; REFER TO LIGHTING CONTROLS DETAILS

LOW VOLTAGE DAYLIGHTING SENSOR; CEILING MOUNTED; UNLESS OTHERWISE NOTED; REFER TO LIGHTING CONTROLS DETAILS

HIGH BAY PASSIVE INFRARED OCCUPANCY SENSOR; CEILING MOUNTED; CONNECT TO LIGHTING CONTROL PANEL, UNLESS OTHERWISE NOTED.

P — PHOTOCELL; REFER TO LIGHTING CONTROL DIAGRAM

PANEL; 120/208V; MT 72" AFF TO TOP

T — TRANSFORMER; SIZE AND RATING AS NOTED

NON–FUSED DISCONNECT SWITCH; AMP SIZE AS NOTED

FUSED DISCONNECT SWITCH; AMP SIZE AS NOTED; FUSE SIZE PER EQUIPMENT NAMEPLATE DATA

M — MOTOR; FURNISHED BY OTHERS

RACEWAY INSTALLED CONCEALED IN WALLS AND/OR ABOVE CEILING

RACEWAY INSTALLED CONCEALED IN FLOOR SLAB AND/OR BELOW GRADE

RACEWAY INSTALLED EXPOSED

LV — LOW VOLTAGE CONDUCTOR; COORDINATE WITH DEVICE CONNECTION REQUIREMENTS.

FLEXIBLE CONDUIT CONNECTION

CONDUIT STUB UP WITH FLEXIBLE CONDUIT CONNECTION TO EQUIPMENT

ELECTRICAL GENERAL NOTES

A. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT SIZE AND LOCATION OF EQUIPMENT WHICH IS FURNISHED BY OTHERS AND CONNECTED BY ELECTRICAL.

B. RECEPTACLES, SWITCHES AND COVERPLATES COLOR SHALL BE SELECTED BY THE ARCHITECT FROM STANDARD COLORS.

C. VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGHING–IN WALL FOR SWITCHES.

D. LOCATION OF LIGHTING FIXTURES, DISCONNECT SWITCHES, ETC. FOR MECHANICAL EQUIPMENT/ROOM SHALL BE COORDINATED WITH FINAL MECHANICAL EQUIPMENT LOCATION TO PROVIDE NATIONAL ELECTRIC CODE REQUIRED ACCESS SPACE.

E. FINAL CONNECTION TO ALL MOTORS SHALL BE WITH FLEXIBLE CONDUIT CONNECTION.

F. ALL EXIT AND EMERGENCY FIXTURES SHALL BE CONNECTED TO LIGHT CIRCUIT AHEAD OF LOCAL SWITCH.

G. ALL PANELBOARDS, BACKBOARDS, TERMINAL CABINETS, ETC SHALL HAVE CUSTOM ENGRAVED MICARTA NAMEPLATE MECHANICALLY AFFIXED IDENTIFYING SYSTEM.

H. PROVIDE GREEN GROUND CONDUCTOR IN ALL CIRCUITS – SIZE PER N.E.C.

I. ALL EXPOSED CONDUITS, BOXES, STRAPS AND HANGERS IN THE CONTRACT AREA WHETHER NEW OR EXISTING THAT ARE PART OF THE ELECTRICAL SYSTEM SHALL BE PAINTED TO MATCH ADJACENT FINISH.

J. PROVIDE CONCRETE MARKER AT END OF ALL CONDUITS STUBBED OUT OF BUILDING FOR FUTURE USE. MARKER SHALL BE 6" DIA X 18" HIGH WITH 2" ABOVE FINISHED GRADE. INSCRIBE IN TOP OF MARKER "E" FOR ELECTRICAL,"T" FOR TELEPHONE,"V" FOR TV CABLE,"F" FOR FIRE ALARM, AND "IC" FOR INTERCOM.

K. GENERAL CONTRACTOR SHALL FIELD–VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. FAILURE TO DO SO INDICATES THAT THE CONTRACTOR ACCEPTS THE CONDITIONS AS THEY EXIST, AND SHALL PERFORM THE WORK REQUIRED AS SHOWN AND SPECIFIED.

L. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND REVIEW THE MECHANICAL AND SPECIAL EQUIPMENT SUBMITTALS PRIOR TO SUBMITTING THE ELECTRICAL SUBMITTALS. ANY ELECTRICAL EQUIPMENT, CONDUIT, AND WIRE SIZE CHANGES RESULTING FROM THIS REVIEW SHALL ALSO BE SUBMITTED FOR APPROVAL.

M. FIRE ALARM LOW VOLTAGE SOURCE AND BATTERY STANDBY SHALL ENERGIZE ALL ITEMS IN FIRE ALARM SYSTEM THAT REQUIRE POWER.

N. VERIFY EXACT LOCATION OF ALL FLOOR OUTLETS WITH THE ARCHITECT PRIOR TO ROUGHING–IN.

O. FINAL CONNECTION TO ALL DRY TYPE TRANSFORMERS SHALL BE WITH FLEXIBLE CONDUIT CONNECTION

P. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FAULT CURRENT CALCULATIONS FOR THE SERVICE EQUIPMENT AND SHALL MARK THE EQUIPMENT WITH THE AVAILABLE FAULT CURRENT AND DATE OF THE CALCULATION PER NEC 110.24. REFER TO TYPICAL SERVICE EQUIPMENT FAULT CURRENT LABEL DETAIL.

Q. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ARC FAULT LABELS PER NFPA 70E ARTICLE 110.16 FOR NEW EQUIPMENT. THE OWNER SHALL PROVIDE AVAILABLE CALCULATION DATA FOR THE EXISTING EQUIPMENT IN THE ELECTRICAL SYSTEM. REFER TO TYPICAL ARC FLASH HAZARD LABEL DETAIL.

R. PROVIDE NEUTRAL AT ALL LINE VOLTAGE SWITCH LOCATIONS PER N.E.C. 404.2(C).

S. PROVIDE 'LSI' TRIP UNITS FOR ALL BREAKERS GREATER THAN OR EQUAL TO 200A.

T. PROVIDE BUSHINGS ON ALL CONDUIT.

ABBREVIATIONS

AFF – ABOVE FINISHED FLOOR
AHU – AIR HANDLING UNIT
C. – CONDUIT
C/L – CENTERLINE
CP – CIRCULATION PUMP
EC – ELECTRICAL CONTRACTOR
EF – EXHAUST FAN
EMT – ELECTRICAL METALLIC TUBING
EWC – ELECTRIC WATER COOLER
EWH – ELECTRIC WATER HEATER
GFI – GROUND FAULT PROTECTION
GND – GROUND CONDUCTOR
HP – HEAT PUMP
IMC – INTERMEDIATE METAL CONDUIT
LSI – INDICATES BREAKER SETTING (LONG, SHORT, INSTANTANEOUS)
LTG – LIGHTING
LTS – LIGHTS
MHP – MINI–SPLIT HEAT PUMP
MW – MINI–SPLIT WALL MOUNT
NEC – NATIONAL ELECTRIC CODE (NFPA–70)
NFPA – NATIONAL FIRE PROTECTION ASSOCIATION
OAU – OUTDOOR AIR UNIT
PC – POLYCARBONATE COVER
PVC – POLYVINYL CHLORIDE CONDUIT
REC – RECEPTACLE
UNO – UNLESS NOTED OTHERWISE
WG – WIRE GUARD (SIZE AS REQUIRED)
WP – WEATHERPROOF

DRAWING SHEET INDEX

Sheet Number	Sheet Title
E001	LEGEND AND NOTES
E101	SITE PLAN - ELECTRICAL
E201	FLOOR PLAN - POWER
E202	FLOOR PLAN - HVAC POWER
E203	FLOOR PLAN - FIRE ALARM
E204	FLOOR PLAN - LIGHTING
E205	FLOOR PLAN - AV POWER & THEATRICAL LIGHTING
E206	MEZZANINE PLAN - ELECTRICAL
E301	ELECTRICAL DETAILS
E302	LIGHTING FIXTURE SCHEDULE AND CONTROLS
E303	LIGHTING CONTROLS DETAILS
E304	LIGHTING CONTROLS DETAILS
E401	SINGLE LINE POWER & FIRE ALARM RISER DIAGRAMS
E501	MECHANICAL EQUIPMENT & PANEL SCHEDULES
E601	GROUNDING DETAILS

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A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

LEGEND AND NOTES

PROJECT NUMBER 22019
DATED 03/12/2026

E001

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22019
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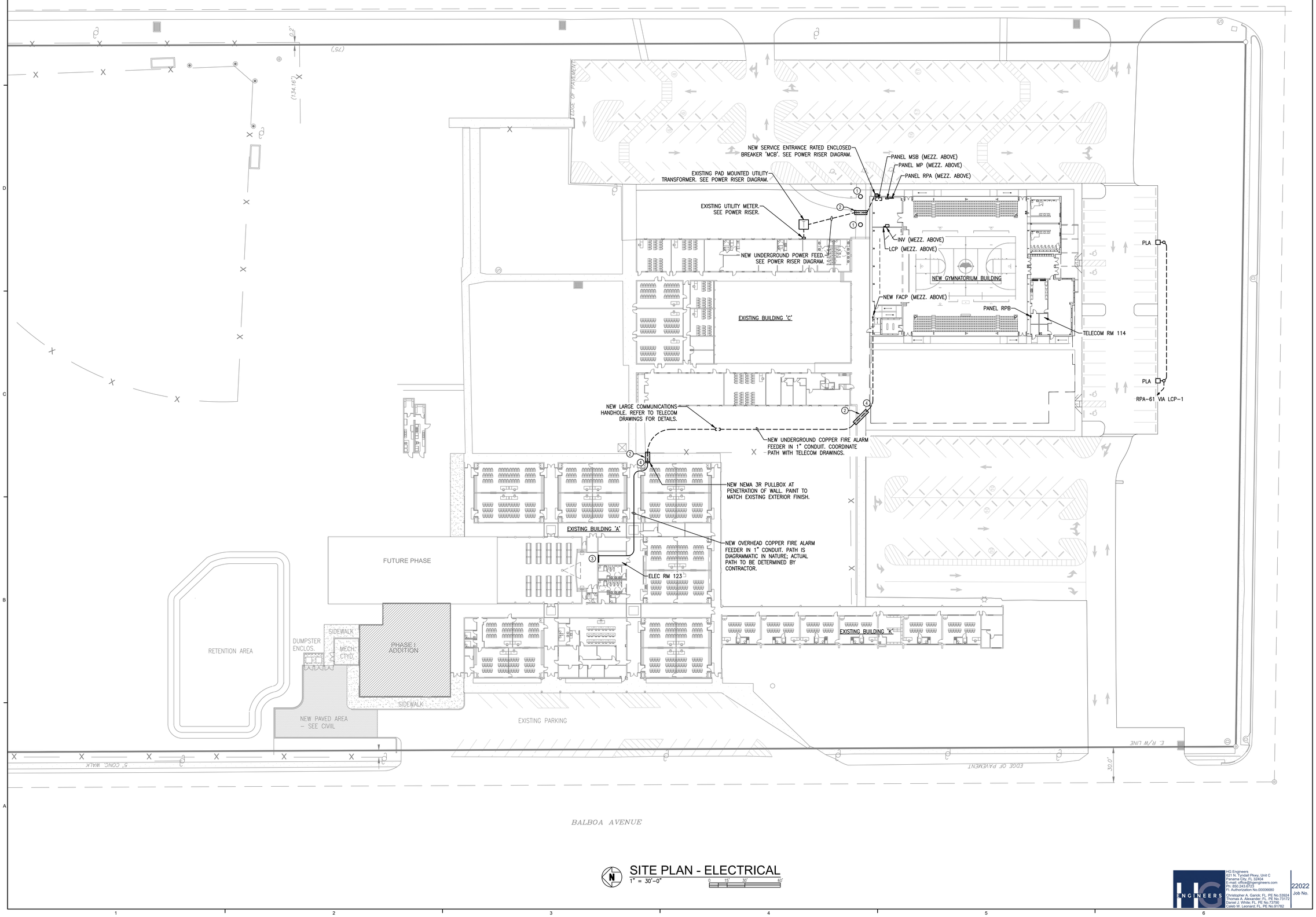
10/13/2025

SPECIAL NOTE

REFER TO TELECOM PLANS FOR ADDITIONAL CONDUIT REQUIREMENTS TO BE PROVIDED BY ELECTRICAL CONTRACTOR.

KEYNOTES

1. DEMO AND REMOVE EXISTING CANOPY LIGHT FIXTURES IN THEIR ENTIRETY. ENSURE THAT THE EXISTING CIRCUIT CONDUIT AND CONDUCTORS, IF FEEDING OTHER DEVICES OR FIXTURES, ARE EXTENDED AS NECESSARY TO MAINTAIN CIRCUIT CONTINUITY.
2. SAW, CUT AND PATCH EXISTING SIDEWALK AS REQUIRED.
3. EXISTING EDWARDS IO-SERIES FIRE ALARM CONTROL PANEL WITH AUDIO NOTIFICATION SYSTEM AND POWER SUPPLIES. NEW SYSTEM SHALL BE FULLY COMPATIBLE WITH EXISTING SYSTEM.
4. PROVIDE SURGE PROTECTION FOR FIRE ALARM CABLING WITHIN 6 FEET UPON EXITING AND ENTERING BUILDINGS.



SITE PLAN - ELECTRICAL

1" = 30'-0"

0 15' 30' 60'

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A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

SITE PLAN - ELECTRICAL

PROJECT NUMBER	22019
DATED	03/12/2026

E101

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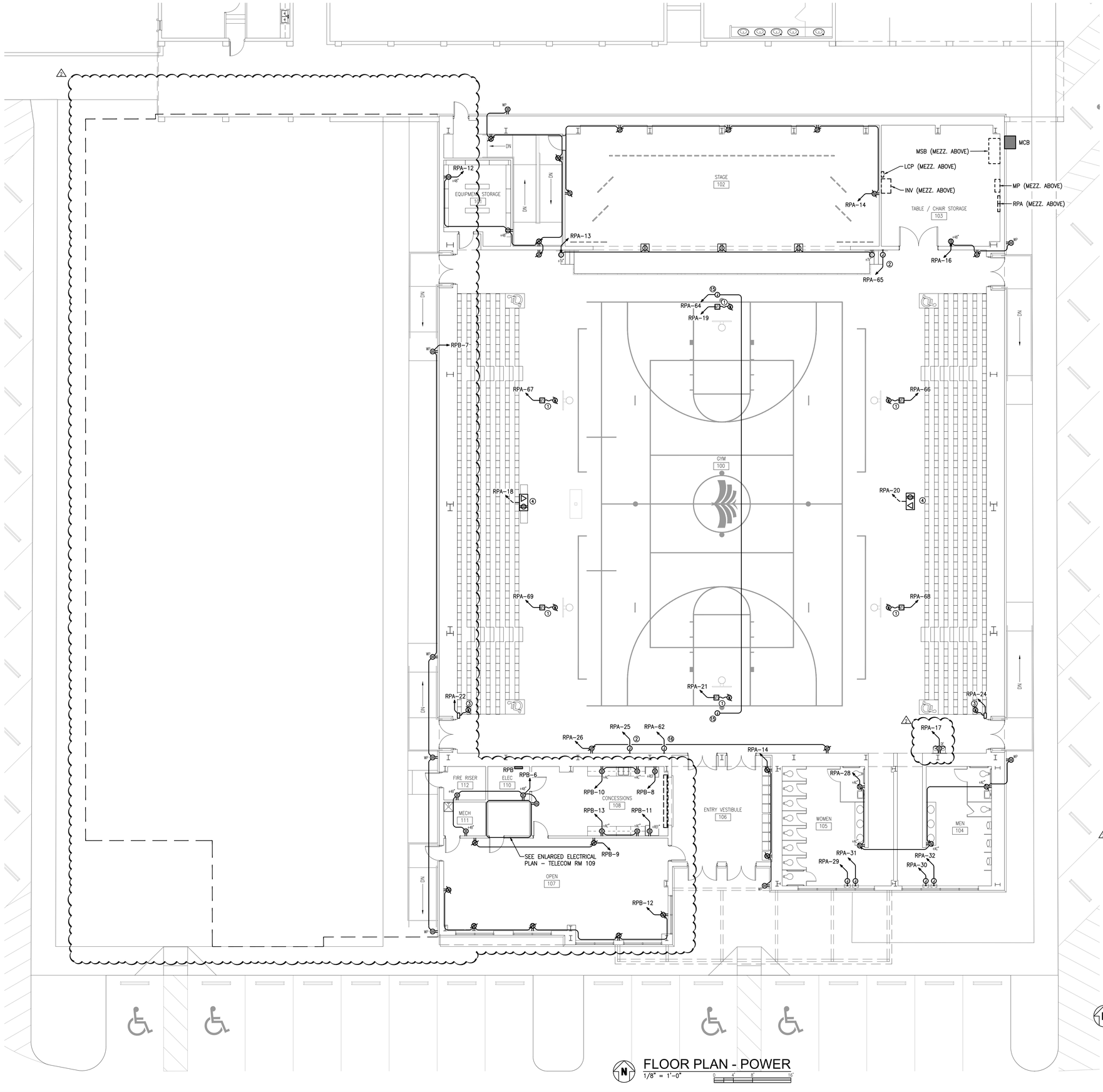


FLOOR PLAN - POWER

1/8" = 1'-0"

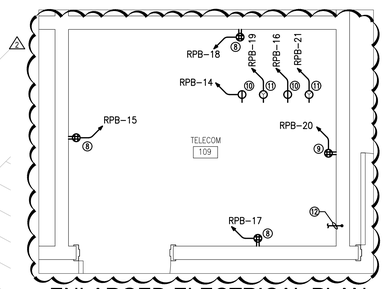
0 4' 8' 16'

KEYNOTES

1. INSTALL 4-SQUARE JUNCTION BOX (POWER) AND CONTROL WIRING (BY OTHERS) FOR GOAL HOIST SYSTEM. CONCEAL CONDUIT ALONG CEILING JOISTS. INSTALL GOAL HOIST CONTROLS (2-GANG BOX) AT LOCATION SELECTED BY OWNER/ARCHITECT. INSTALL PER MANUFACTURERS SPECIFICATIONS. COORDINATE FINAL LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO ROUGHING IN.
2. INSTALL JUNCTION BOX FOR SCOREBOARD POWER AND CONTROLS. INSTALL PER MANUFACTURERS REQUIREMENTS. COORDINATE FINAL LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO ROUGHING IN.
3. INSTALL DISCONNECT SWITCH FOR CONNECTION TO MOTORIZED AUTOMATIC BLEACHER. COORDINATE ELECTRICAL REQUIREMENTS WITH MANUFACTURER PRIOR TO PURCHASING AND INSTALLING EQUIPMENT. INSTALL CONTROLS AS REQUIRED. COORDINATE FINAL LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO ROUGHING IN.
4. PROVIDE FLOOR BOX DATA AND POWER FOR SCORER'S TABLE. REFER TO TELECOM DRAWINGS FOR DETAILS. COORDINATE LOCATION WITH OWNER/ARCHITECT. COORDINATE INSTALLATION WITH TELECOM CONTRACTOR.
5. NOT USED
6. NOT USED
7. NOT USED
8. PROVIDE DEDICATED 120V 20A QUAD RECEPTACLE CIRCUIT. ROUGH-IN WALL BOX FLUSH WITH FACE OF BACKBOARD. EXTEND EMT CONDUIT FROM BOX CONCEALED BEHIND BACKBOARD. SEE TELECOM DRAWINGS.
9. PROVIDE DEDICATED 120V 20A QUAD RECEPTACLE CIRCUIT MOUNTED DIRECTLY UNDER CCTV ENCLOSURE. ROUGH-IN WALL BOX FLUSH WITH FACE OF BACKBOARD. EXTEND EMT CONDUIT FROM BOX CONCEALED BEHIND BACKBOARD. SEE TELECOM DRAWINGS.
10. INSTALL DEDICATED 120V 20A SIMPLEX RECEPTACLE ON BACKSIDE OF CABLE RUNWAY IN NON-METALLIC BOX FOR SURGE SUPPRESSOR POWER. SEE TELECOM DRAWINGS.
11. INSTALL DEDICATED 120V L5-30 30A RECEPTACLE ON REAR OF RACK FOR 3000VA UPS. PROVIDE 2#10, #10G, IN 3/4"C SEE TELECOM DRAWINGS.
12. INSTALL 3/4" EMT CONDUIT WITH PULLSTRING TO MAIN CIRCUIT BREAKER MCB. SEE TELECOM DRAWINGS.
13. NOT USED
14. NOT USED
15. INSTALL JUNCTION BOX FOR SHOT CLOCK POWER AND CONTROLS. INSTALL PER MANUFACTURERS REQUIREMENTS. COORDINATE FINAL LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO ROUGHING IN.
16. INSTALL JUNCTION BOX FOR BASKETBALL HOIST OPERATOR SWITCHES. INSTALL PER MANUFACTURERS REQUIREMENTS. COORDINATE FINAL LOCATIONS WITH ARCHITECTURAL PLANS PRIOR TO ROUGHING IN.

SPECIAL NOTE

REFER TO TELECOM, AV, AND THEATRICAL PLANS FOR ADDITIONAL CONDUIT REQUIREMENTS TO BE PROVIDED BY ELECTRICAL CONTRACTOR.



ENLARGED ELECTRICAL PLAN - TELECOM RM 109

1/2" = 1'-0"

0 1' 2' 4'

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1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

FLOOR PLAN - POWER

PROJECT NUMBER	22019
DATED	03/12/2026

E201

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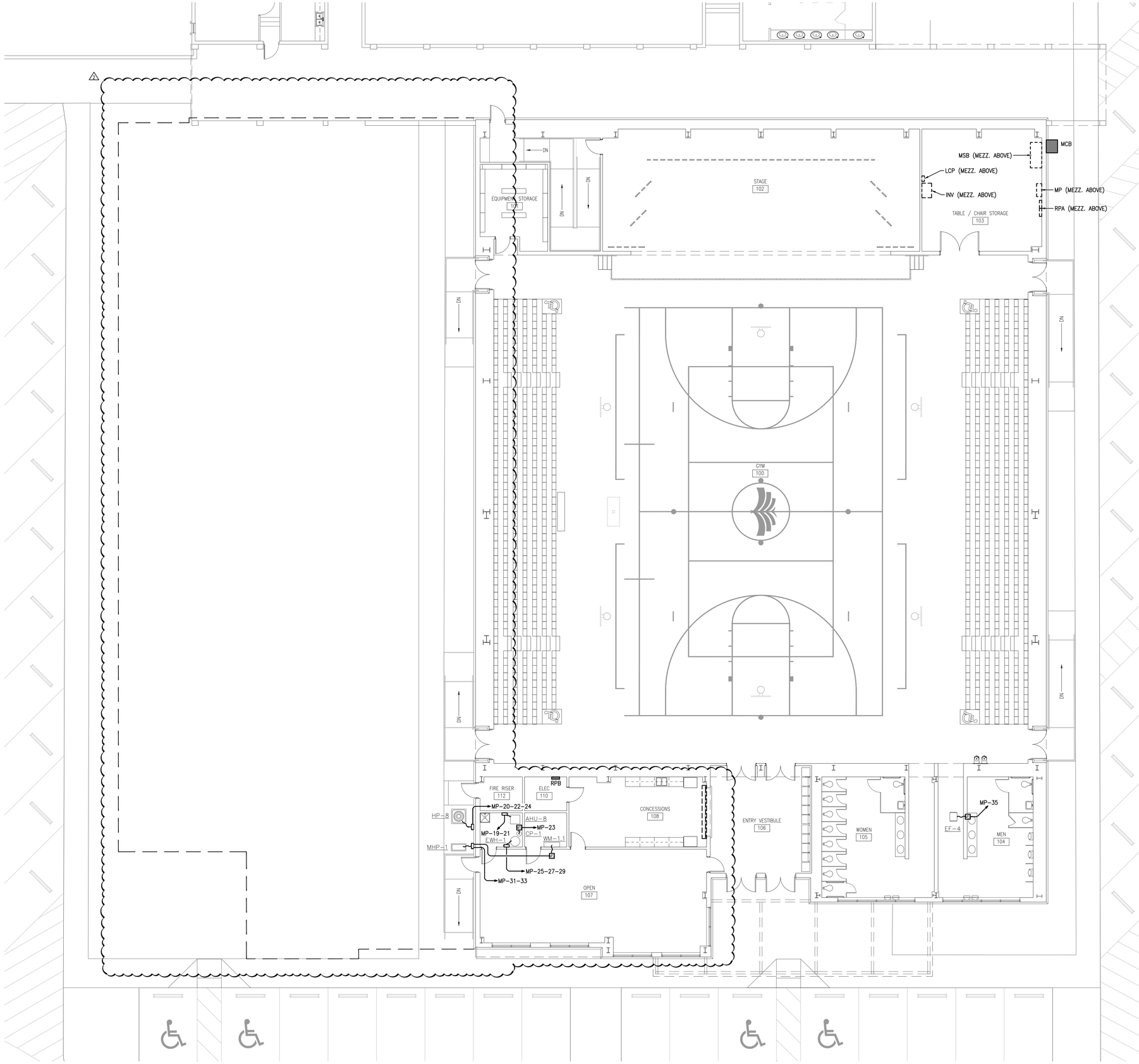

FLOOR PLAN - HVAC POWER
1/8" = 1'-0"
0 4' 8' 16'

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REVISIONS:

No.	Description	Date

FLOOR PLAN - HVAC POWER

PROJECT NUMBER	22019
DATED	03/12/2026

E202

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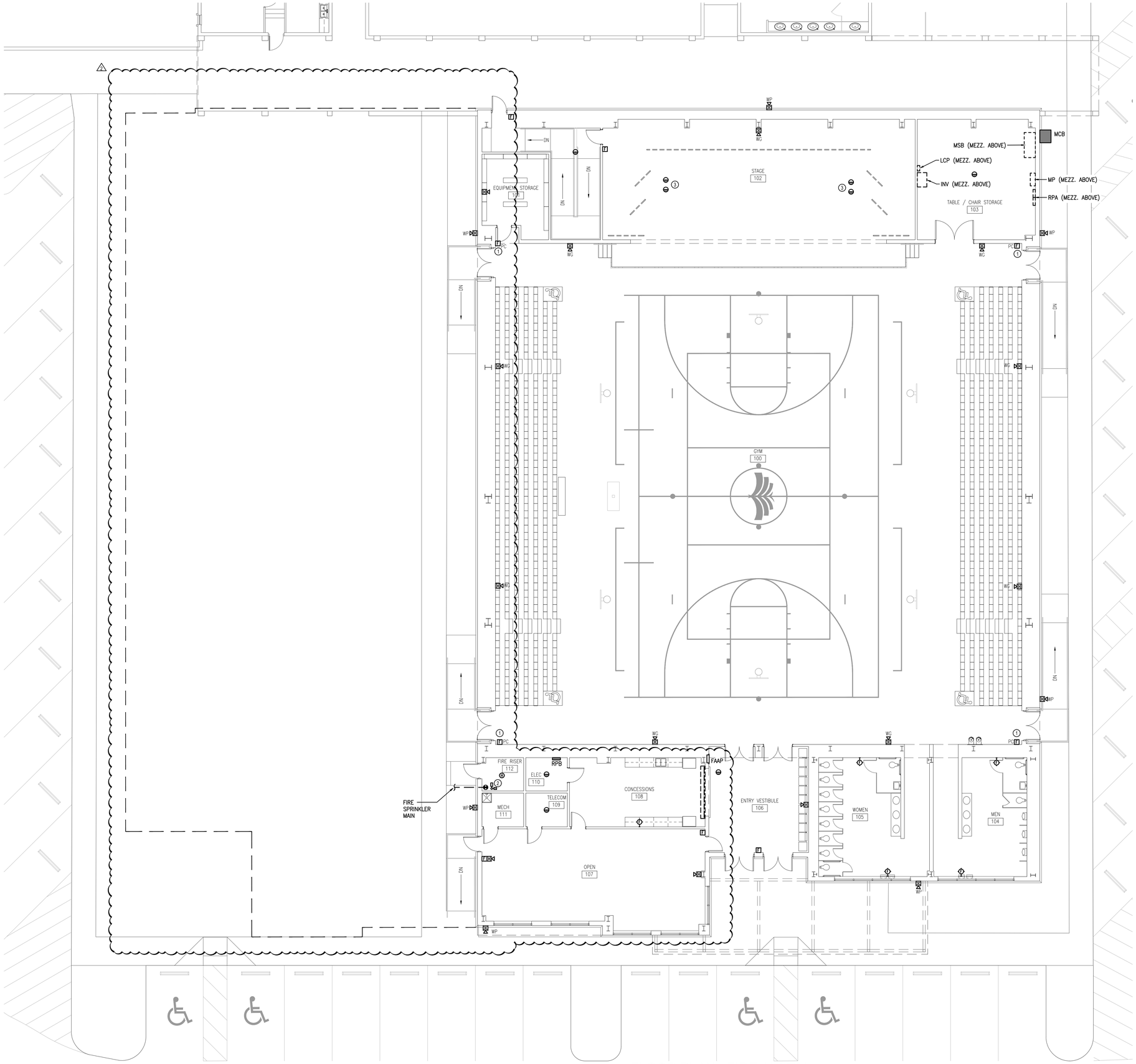
KEYNOTES

1. INSTALL PROTECTIVE POLYCARBONATE SHIELD.
2. VERIFY QUANTITY & LOCATION WITH FIRE SPRINKLER SUPPLIER.
3. ONE SMOKE DETECTOR TO SERVE THE ABOVE-STAGE SPACE. THE SECOND SMOKE DETECTOR TO SERVE THE BENEATH-STAGE CAVITY.



FLOOR PLAN - FIRE ALARM
1/8" = 1'-0"

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REVISIONS:

No.	Description	Date

FLOOR PLAN - FIRE ALARM

PROJECT NUMBER	22019
DATED	03/12/2026

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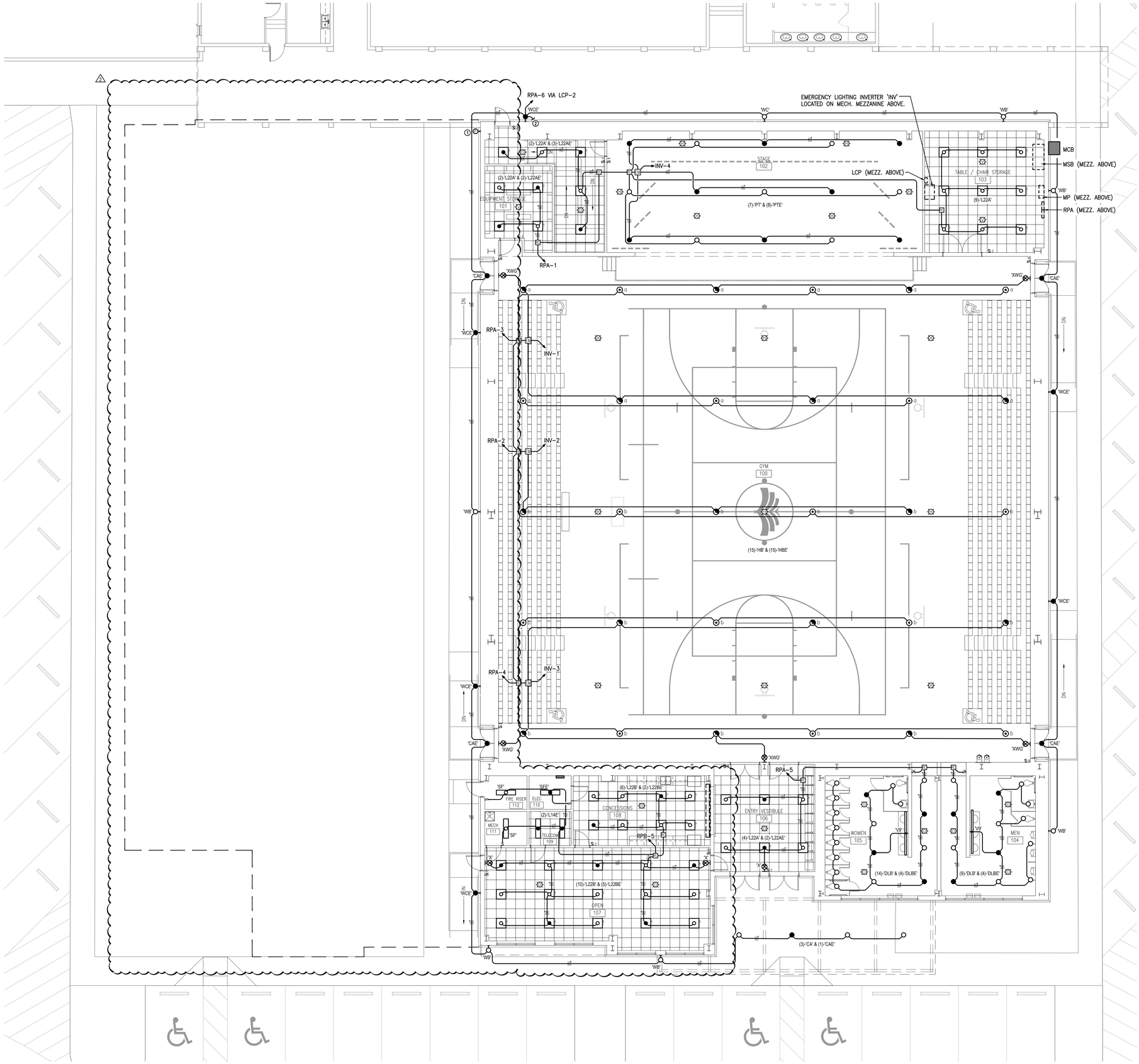
12/12/2025



KEYNOTES

1. MOUNT PHOTOCELL AS HIGH AS POSSIBLE FACING NORTH. REFER TO LIGHTING CONTROL DETAILS.
2. CONNECT TO MEZZANINE EXTERIOR LIGHTING CIRCUIT.

FLOOR PLAN - LIGHTING
1/8" = 1'-0"
0 4' 8' 16'

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No.	Description	Date

FLOOR PLAN - LIGHTING

PROJECT NUMBER	22019
DATED	03/12/2026

E204

HG ENGINEERS
HG Engineers
821 N. Tyndall Pkwy, Unit C
Panama City, FL 32404
E-mail: office@hgengineers.com
Ph: 850.243.8727
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Christopher A. Garick: FL. PE No.53924
Thomas A. Alexander: FL. PE No.73172
Daniel J. White: FL. PE No.73170
Caleb W. Leonard: FL. PE No.91782

22022 Job No.

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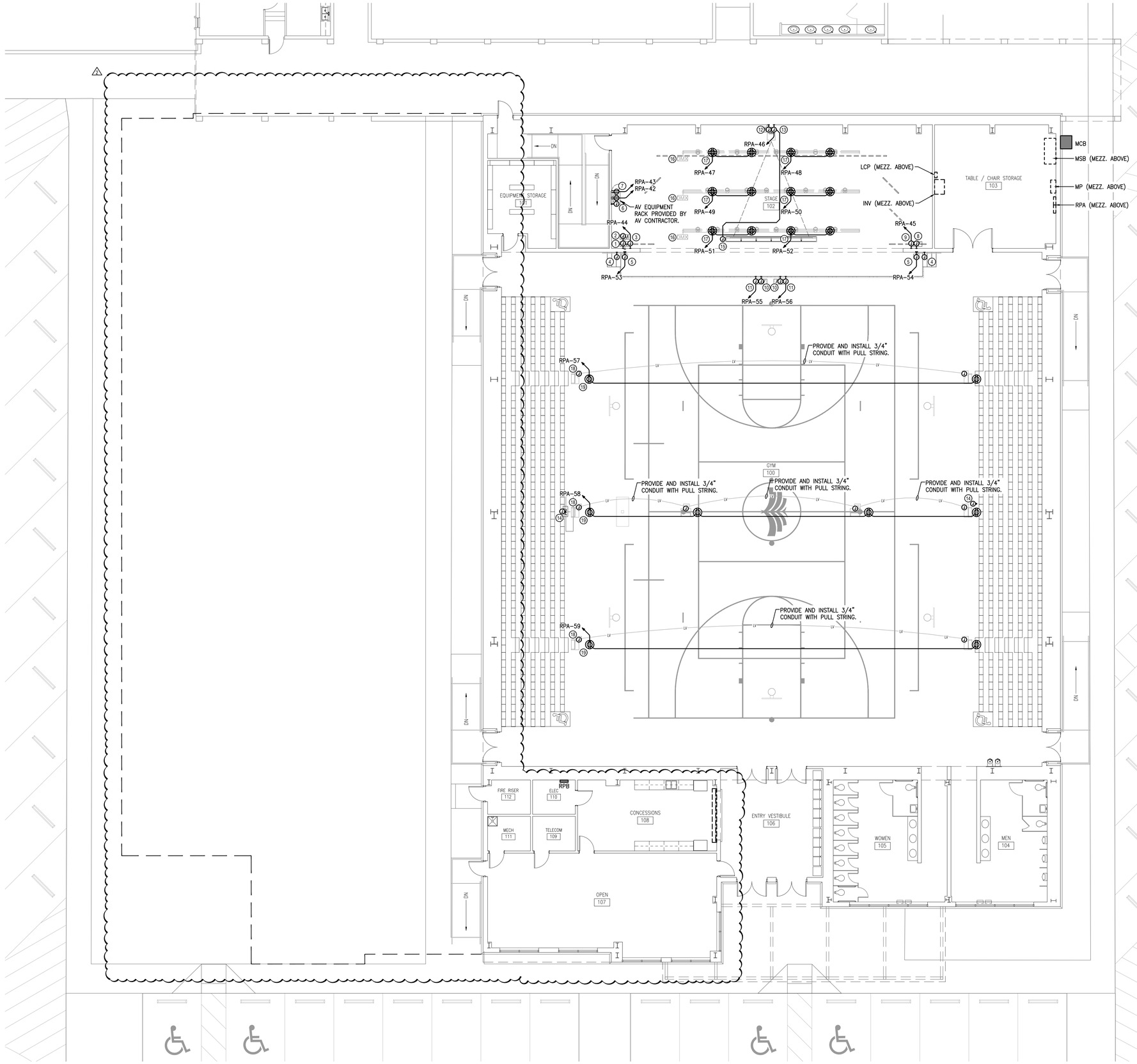
22019
100% CONSTRUCTION DOCUMENTS
12/12/2025



KEYNOTES

1. INSTALL 8" X 8" JUNCTION BOX RECESSED IN-WALL 18" AFF FOR AV INPUT PLATE. PROVIDE AND INSTALL 1" CONDUIT FROM AV INPUT PLATE TO WALL REMOTE. PROVIDE AND INSTALL THREE 1" CONDUITS FROM AV INPUT PLATE TO STAGE JUNCTION BOX AT AV EQUIPMENT RACK IN EQUIPMENT STORAGE RM 101. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL BOXES, CONDUIT AND POWER. AV CONNECTOR PLATE PROVIDED AND INSTALLED BY AV CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
2. PROVIDE AND INSTALL RECESSED IN-WALL 2-GANG JUNCTION BOX 60" AFF FOR AV INPUT PLATE AND AV WALL REMOTE. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL BOXES, CONDUIT AND POWER. WALL REMOTE PROVIDED AND INSTALLED BY AV CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
3. AV COMPONENT POWER. PROVIDE AND INSTALL 120V 20A DEDICATED CIRCUIT ADJACENT TO AV INPUT PLATE FOR AV COMPONENT POWER. REFER TO AV/THEATRICAL DRAWINGS.
4. LOUDSPEAKER JUNCTION BOX. INSTALL SINGLE GANG JUNCTION BOX 84" AFF. INSTALL 1" CONDUIT TO STAGE JUNCTION BOX AT AV EQUIPMENT RACK. INSTALL 120V 20A DEDICATED CIRCUIT ADJACENT TO JUNCTION BOX 84" AFF FOR LOUDSPEAKER POWER. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
5. PROVIDE AND INSTALL 120V 20A DEDICATED CIRCUIT ADJACENT TO JUNCTION BOX 84" AFF FOR LOUDSPEAKER POWER. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
6. INSTALL STAGE JUNCTION BOX RECESSED IN-WALL 18" AFF. SIZE JUNCTION BOX BASED ON QUANTITY AND SIZE OF CONDUIT TERMINATIONS PER NEC. INSTALL 1" CONDUIT FROM STAGE JUNCTION BOX TO 'OVER STAGE' AREA FOR SUSPENDED MICROPHONE CABLES. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
7. INSTALL TWO 120V 20A DEDICATED RECEPTACLE CIRCUITS ADJACENT TO STAGE JUNCTION BOX FOR AV COMPONENT POWER. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
8. PROVIDE AND INSTALL 8" X 8" AV JUNCTION BOX 18" AFF RECESSED IN-WALL. PROVIDE AND INSTALL THREE 1" CONDUITS TO STAGE JUNCTION BOX AT AV EQUIPMENT RACK IN EQUIPMENT STORAGE RM 101. BOXES AND CONDUIT PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. AV CONNECTOR PLATE PROVIDED AND INSTALLED BY AV CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
9. PROVIDE AND INSTALL 120V 20A DEDICATED CIRCUIT FOR AV COMPONENT POWER. REFER TO AV/THEATRICAL DRAWINGS.
10. PROVIDE AND INSTALL SINGLE GANG BOX IN VERTICAL STEP RISER. PROVIDE AND INSTALL 1" CONDUIT TO STAGE JUNCTION BOX AT AV EQUIPMENT RACK IN EQUIPMENT ROOM 101. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
11. PROVIDE AND INSTALL 120V 20A DEDICATED CIRCUIT ADJACENT TO AV JUNCTION BOX FOR AV COMPONENT POWER. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
12. PROVIDE AND INSTALL 2-GANG JUNCTION BOX 9'-0" AFF. PROVIDE AND INSTALL 1" CONDUIT TO STAGE JUNCTION BOX AT AV EQUIPMENT RACK IN EQUIPMENT STORAGE 101. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. PROJECTOR PROVIDED AND INSTALLED BY AV CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
13. PROVIDE AND INSTALL 120V 20A SHARED CIRCUIT 9'-0" AFF FOR PROJECTOR AND PROJECTION SCREEN POWER. REFER TO AV/THEATRICAL DRAWINGS.
14. PROVIDE AND INSTALL 1" CONDUIT FROM SCORER'S DESK FLOOR BOX TO AV EQUIPMENT RACK IN EQUIPMENT STORAGE RM 101 FOR GYM AV INPUT. FLOOR BOX AND CONDUIT PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. AV CONNECTOR PLATE PROVIDED AND INSTALLED BY AV CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
15. PROVIDE AND INSTALL 120V 20A SHARED CIRCUIT WITH PROJECTOR. PROVIDE AND INSTALL 1" CONDUIT TO STAGE JUNCTION BOX AT AV EQUIPMENT RACK FOR UP/DOWN CONTROL CABLING. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. PROJECTION SCREEN PROVIDED AND INSTALLED BY AV CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
16. PROVIDE AND INSTALL 1" CONDUIT TO FROM DMX JUNCTION BOX ON BATTEN TO STAGE JUNCTION BOX IN EQUIPMENT STORAGE RM 101 FOR DMX CABLING. CONDUIT, BOXES & POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. STAGE LIGHTING LED FIXTURES, 1.5" PIPE BATTEN & DMX CABLING PROVIDED AND INSTALLED BY AV CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
17. PROVIDE AND INSTALL 120V 20A CIRCUITS (TWO QUADRAPLEX RECEPTACLES PER CIRCUIT) FOR DMX AND STAGE LIGHTING FIXTURE POWER. COORDINATE LOCATION AND INSTALLATION WITH AV/THEATRICAL LIGHTING CONTRACTOR. STAGE LIGHTING LED FIXTURES, 1.5" PIPE BATTEN & DMX CABLING PROVIDED AND INSTALLED BY AV CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
18. PROVIDE AND INSTALL SINGLE GANG JUNCTION BOX TO STEEL STRUCTURE. PROVIDE AND INSTALL 1" CONDUIT TO FROM LOUDSPEAKER JUNCTION BOX TO AV EQUIPMENT RACK IN EQUIPMENT STORAGE RM 101. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. LOUDSPEAKER PROVIDED AND INSTALLED BY AV CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.
19. PROVIDE AND INSTALL 120V 20A CIRCUIT PER ROW OF LOUDSPEAKERS. MOUNT CEILING RECEPTACLE ADJACENT TO LOUDSPEAKER. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. LOUDSPEAKER PROVIDED AND INSTALLED BY AV CONTRACTOR. REFER TO AV/THEATRICAL DRAWINGS.

SPECIAL NOTE

REFER TO TELECOM, AV, AND THEATRICAL PLANS FOR ADDITIONAL CONDUIT REQUIREMENTS TO BE PROVIDED BY ELECTRICAL CONTRACTOR.

FLOOR PLAN - AV POWER & THEATRICAL LIGHTING

1/8" = 1'-0"

0 4' 8' 16'

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100% CONSTRUCTION DOCUMENTS

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

FLOOR PLAN - AV POWER & THEATRICAL LIGHTING

PROJECT NUMBER	22019
DATED	03/12/2026

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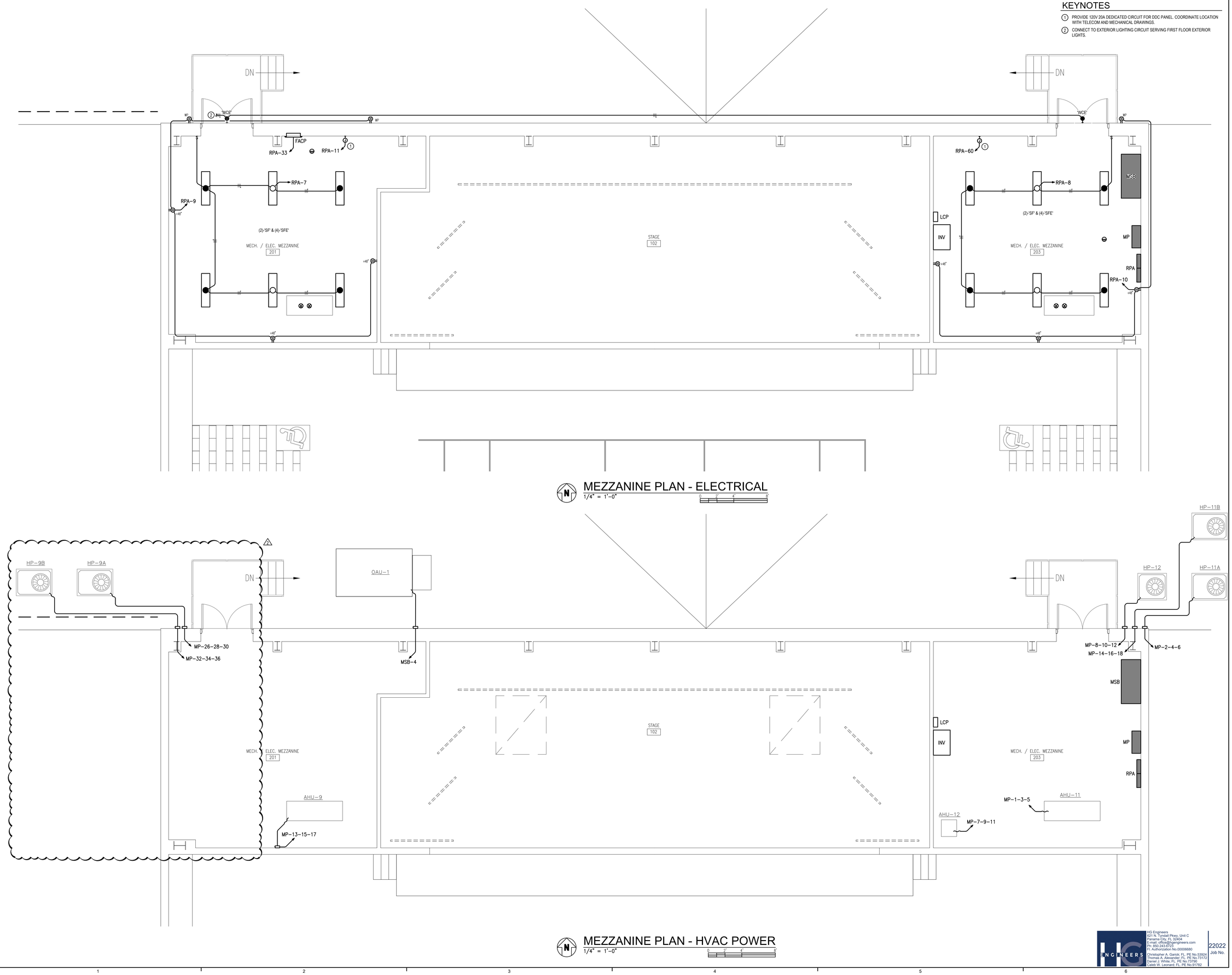
KEYNOTES

1. PROVIDE 120V 20A DEDICATED CIRCUIT FOR DDC PANEL. COORDINATE LOCATION WITH TELECOM AND MECHANICAL DRAWINGS.
2. CONNECT TO EXTERIOR LIGHTING CIRCUIT SERVING FIRST FLOOR EXTERIOR LIGHTS.



MEZZANINE PLAN - ELECTRICAL

1/4" = 1'-0"

MEZZANINE PLAN - HVAC POWER

1/4" = 1'-0"

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MEZZANINE PLAN - ELECTRICAL

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E206

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10/13/2025

WARNING

MAXIMUM AVAILABLE FAULT CURRENT

____ SYMMETRICAL RMS AMPERES

__/__/__ DATE OF CALCULATION

____ EQUIPMENT NAME

COMPANY RESPONSIBLE FOR CALCULATION CONTACT INFORMATION; COMPANY NAME, ADDRESS, PHONE NUMBER

ORANGE

WHITE

4"H x 6"W VINYL LABEL WITH BLACK LETTERING PER ANSI Z535 STANDARDS.

TYPICAL SERVICE EQUIPMENT FAULT CURRENT LABEL DETAIL
NOT TO SCALE

WARNING

Arc Flash and Shock Risks Appropriate PPE Required

ARC FLASH RISK PROTECTION		MINIMUM PPE
Incident Energy:	1.3 cal/cm^2	▪ 4 cal/sq cm, FR shirt (long-sleeve) plus FR pants (long), or FR coverall, rainwear as needed.
Arc Flash Boundary	19 in	
SHOCK PROTECTION		
Shock Risk When Cover is Removed	480 VAC	▪ Hardhat + Safety Glasses or Goggles + Ear Canal Inserts
Limited Approach:	42 in	▪ Glove Class 00
Restricted Approach:	12 in	▪ Leather work shoes

Bus ID: ____ Calculated Fault Current: ____

Prot Device ID: ____ Date of Analysis: ____

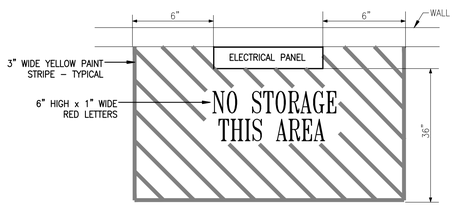
Warning: Changes in equipment settings or system configuration may invalidate the calculated results.

ORANGE

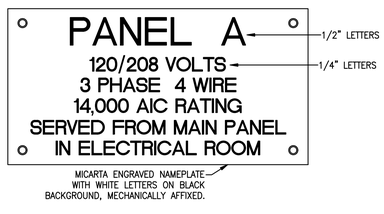
WHITE

4"H x 6"W VINYL LABEL WITH BLACK LETTERING PER ANSI Z535 STANDARDS.

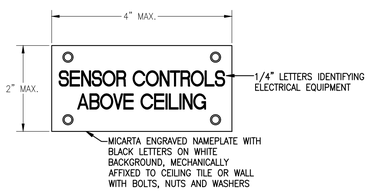
TYPICAL ARC FLASH HAZARD LABEL DETAIL
NOT TO SCALE



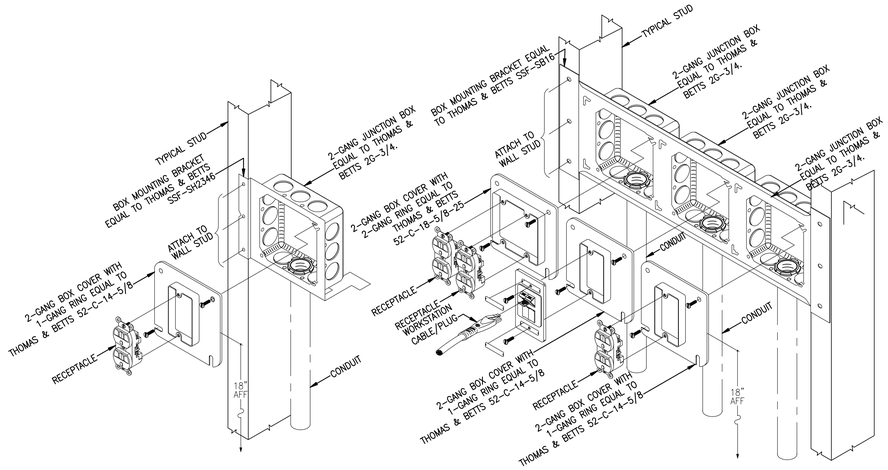
TYPICAL FLOOR MARKING AT ELECTRICAL PANELS
NOT TO SCALE



TYPICAL ELECTRICAL EQUIPMENT NAMEPLATE
NOT TO SCALE

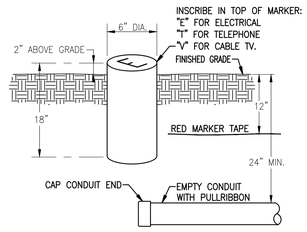


TYPICAL ELECTRICAL EQUIPMENT ABOVE CEILING NAMEPLATE
NOT TO SCALE

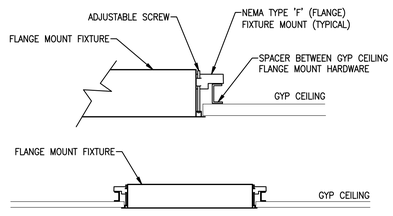


TYPICAL POWER OUTLET INSTALLATION DETAIL
NOT TO SCALE

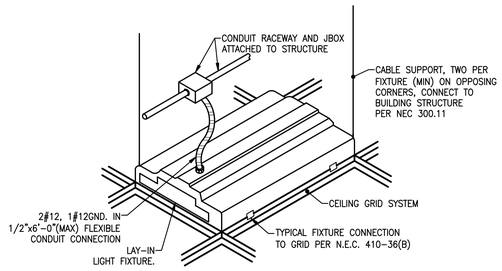
TYPICAL POWER/COMMUNICATIONS OUTLET INSTALLATION DETAIL
NOT TO SCALE



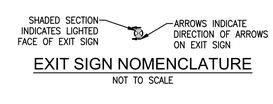
CONDUIT MARKER DETAIL
NOT TO SCALE



FLANGE MOUNT FIXTURE IN GYP BOARD CEILING
NOT TO SCALE

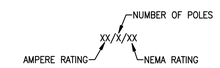


LAY-IN FIXTURE CABLE SUPPORT DETAIL
NOT TO SCALE



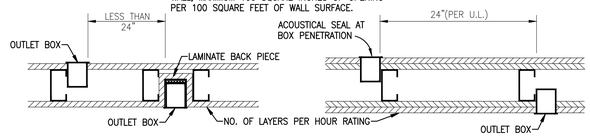
EXIT SIGN NOMENCLATURE
NOT TO SCALE

GENERAL NOTE
REFER TO MECHANICAL SCHEDULE FOR DISCONNECT, CONDUIT, AND WIRE SIZE.



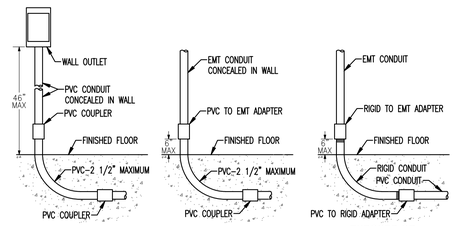
DISCONNECT SWITCH DESCRIPTION NOMENCLATURE

note:
FOR ONE HOUR OR TWO HOUR FIRE OR SMOKE WALL; MAXIMUM 100 SQUARE INCHES OF OPENING PER 100 SQUARE FEET OF WALL SURFACE.



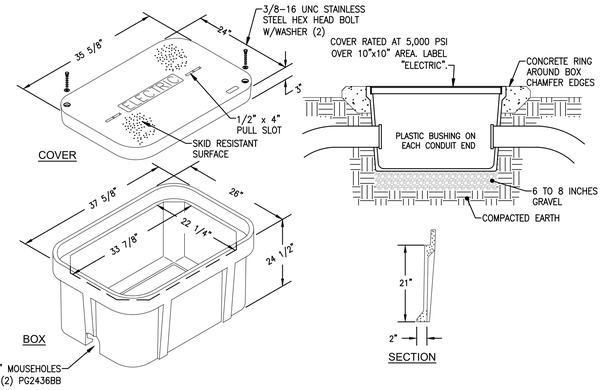
FIVE SIDED ELECTRICAL BOX — ADJACENT ELECTRICAL BOXES

WALL DETAILS - ELECTRICAL BOX INSTALLATION
NOT TO SCALE

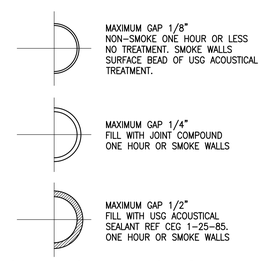


WITH OUTLET BOX — WITHOUT OUTLET BOX — EXPOSED OR FEEDER CONDUIT

PVC STUB-UP DETAILS
NOT TO SCALE

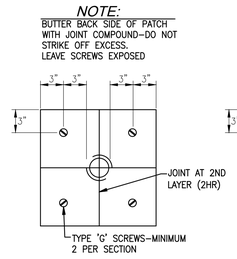


ELECTRICAL PULLBOX DETAIL
NOT TO SCALE

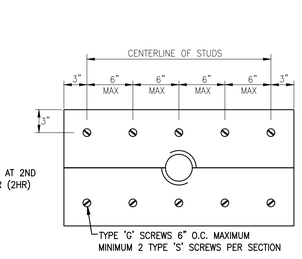


SMALL DIAMETER GAPS IN ONE HOUR WALLS

NOTE:
BUTTER BACK SIDE OF PATCH WITH JOINT COMPOUND-DO NOT STRIKE OFF EXCESS. LEAVE SCREWS EXPOSED



OPENINGS UP TO 3" DIA.



OPENINGS OVER 3" DIA.

WALL PENETRATIONS —APPLIES TO ALL CORRIDOR, SMOKE AND FIRE RATED WALLS
NOT TO SCALE

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REVISIONS:

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ELECTRICAL DETAILS

PROJECT NUMBER	22019
DATED	03/12/2026

E301

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10/13/2025

LIGHTING FIXTURE SCHEDULE

Project: #2022 - PALM BAY GYMNATORIUM

Note: Per electrical specifications, alternate fixtures shall be submitted to the engineer for prior approval a minimum of (10) ten business days prior to bid date. Any alternate fixtures not submitted for prior approval will not be reviewed.

Luminaire Designation	Manufacturer	Catalog Number	Connected Voltage	Luminaire Load (va)	Lamping Source	Color Rendering Index (CRI)	Kelvin Temperature	Mounting	Comments
CA	GARDCO	SFC-5R-48L-250-NW-G2-UNV-MGY	120	38	LED	80	4000	CANOPY SURFACE	
CAE	GARDCO	SFC-5R-48L-250-NW-G2-UNV-MGY	120	38	LED	80	4000	CANOPY SURFACE	PROVIDE WITH BATTERY PACK CAPABLE OF OPERATING FIXTURE FOR 90-MINUTES UPON LOSS OF POWER. IF EXTERNAL BATTERY PACK REQUIRED, MOUNT INDOORS ABOVE ACCESSIBLE CEILING.
DLB	HE WILLIAMS	6DR-TL-L15/840-DIM-UNV-OW-OF-CS-N	120	14	LED	80	4000	CEILING RECESSED	
DLBE	HE WILLIAMS	6DR-TL-L15/840-EM/10W-DIM-UNV-OW-OF-CS-N	120	14	LED	80	4000	CEILING RECESSED	
HB	TGS	CHB-P-150W-40K-WD-U-D-W-PM	120	150	LED	80	4000	PENDANT MOUNT 25'-0" AFF TO BOTTOM OF FIXTURE	WIRE GUARD: CHB-P-WG-W. SPECIFY PENDANT LENGTH
HBE	TGS	CHB-P-150W-40K-WD-U-D-W-PM	120	150	LED	80	4000	PENDANT MOUNT 25'-0" AFF TO BOTTOM OF FIXTURE	WIRE GUARD: CHB-P-WG-W. SPECIFY PENDANT LENGTH, HOMERUN VIA INVERTER.
L14E	HE WILLIAMS	LT-14-L63/840-EM/10W-AF-DRV-UNV	120	49	LED	80	4000	CEILING GRID LAY-IN	
L22A	HE WILLIAMS	LT-22-L27/840-AF-DIM-UNV	120	22	LED	80	4000	CEILING GRID LAY-IN	
L22AE	HE WILLIAMS	LT-22-L27/840-EM/10W-AF-DIM-UNV	120	22	LED	80	4000	CEILING GRID LAY-IN	
L22B	HE WILLIAMS	LT-22-L39/840-AF-DIM-UNV	120	34	LED	80	4000	CEILING GRID LAY-IN	
L22BE	HE WILLIAMS	LT-22-L39/840-EM/10W-AF-DIM-UNV	120	34	LED	80	4000	CEILING GRID LAY-IN	
PLA	GARDCO	ECF-S-48L-900-NW-G2-AR-3-UNV-DD-TLRDS-BZ	-	135	LED	70	4000	POLE MOUNTED 18'-0" AFG TO BOTTOM OF FIXTURE	MOUNT TO POLE - PL(POLE)
PT	HE WILLIAMS	6CR-TL-L30/840-WHT-DIM-UNV-OW-CS-PM36	120	28	LED	80	4000	PENDANT MOUNT 20'-0" AFF TO BOTTOM OF FIXTURE	SPECIFY PENDANT LENGTH
PTE	HE WILLIAMS	6CR-TL-L30/840-WHT-DIM-UNV-OW-CS-PM36	120	28	LED	80	4000	PENDANT MOUNT 20'-0" AFF TO BOTTOM OF FIXTURE	SPECIFY PENDANT LENGTH, HOMERUN VIA INVERTER
SF	HE WILLIAMS	39-4-L30/840-A-DRV-UNV	120	23	LED	80	4000	CEILING SURFACE MOUNT	
SFE	HE WILLIAMS	39-4-L30/840-A-EM/10WLP-DRV-UNV	120	23	LED	80	4000	CEILING SURFACE MOUNT	
V9	HE WILLIAMS	P2WDP-5W-C1R-108-40K-WH	120	45	LED	80	4000	WALL MOUNT 6" ABOVE VANITY MIRROR TO BOTTOM OF FIXTURE	
WB	HE WILLIAMS	VWM-V-L20-740-T3-DBZ-SDGL-DIM-UNV	120	27	LED	80	4000	WALL MOUNT 10'-0" AFG TO BOTTOM OF FIXTURE	
WC	HE WILLIAMS	WPAL-L49/850-BZ-DIM-UNV	120	69	LED	80	5000	WALL MOUNT 8'-0" AFG TO BOTTOM OF FIXTURE	
WCE	HE WILLIAMS	WPAL-L49/850-BZ-EM/6W-DIM-UNV	120	69	LED	80	5000	WALL MOUNT 8'-0" AFG TO BOTTOM OF FIXTURE	WITH EMERGENCY BATTERY
X	HE WILLIAMS	EXIT-R-EM-WHT-SDT-D	120	4	LED	-	-	WALL MOUNT ABOVE DOOR AT 8'-0" AFF TO BOTTOM OF FIXTURE	
XWG	HE WILLIAMS	EXIT-R-EM-WHT-SDT-WG-D	120	4	LED	-	-	WALL MOUNT ABOVE DOOR AT 8'-0" AFF TO BOTTOM OF FIXTURE	
PL(POLE)	VALMONT	R170830506T4-D1-335	-	-	-	-	-	CONCRETE BASE	REFER TO POLE BASE DETAIL

LIGHTING CONTROL PANEL

PANEL LCP

VOLTAGE: 120V **SUPPLY CIRCUIT:** RPA-63 **MOUNTING:** SURFACE
PANEL: LMCP8-115/277-8 **AIC RATING:** 10k MINIMUM
NEMA RATING 1 **OPTIONS:** **LOCATION** MEZZ. RM 201

RELAY	LOAD (VA)	LINE FEED	SERVING	VOLTAGE	VOLTAGE	SERVING	LINE FEED	LOAD (VA)	RELAY
1	270	RPA-61	PARKING/SITE LIGHTING	120V	120V	BUILDING EXTERIOR	RPA-6	1003	2
3	--	--	SPARE	120V	120V	SPARE	--	--	4
5	--	--	SPARE	120V	120V	SPARE	--	--	6
7	--	--	SPARE	120V	120V	SPARE	--	--	8

LIGHTING CONTROL GENERAL NOTES

A. THE DIAGRAMS ARE NOT INTENDED TO SHOW EXACT QUANTITIES OF DEVICES. REFER TO PLAN FOR ESTIMATED DEVICE QUANTITIES AND LOCATIONS.

B. THE LOCAL DEVICE INTERCONNECTIONS FOR ALL LIGHTING CONTROL DEVICES SHALL BE OF THE TOPOLOGY FREE TYPE.

C. COLORS FOR ALL DEVICES AND DEVICE COVERS SHALL BE SELECTED BY THE ARCHITECT.

D. ALL DATA LINE SWITCHES SHALL INCLUDE CUSTOM ENGRAVED LABEL INDICATING FUNCTION OF SWITCH. COORDINATE EXACT LABEL DESCRIPTIONS WITH OWNER PRIOR TO INSTALLATION.

E. PROVIDE ADDITIONAL POWER AND CONTROL MODULES AS RECOMMENDED BY THE SYSTEM SUPPLIER.

F. THE DIAGRAMS REPRESENT A TYPICAL SYSTEM AND ARE NOT INTENDED FOR INSTALLATION, SYSTEM SUPPLIER SHALL PROVIDE INSTALLATION DRAWINGS AND WIRING DIAGRAMS.

G. E.C. SHALL COORDINATE FIELD PROGRAMMING OF LIGHTING CONTROL SYSTEM WITH SYSTEM PROGRAMMER, SPECIFYING ENGINEER, AND OWNER TO ENSURE PROPER OPERATION AND TIME SCHEDULES.

H. ALL EMERGENCY AND EXIT LIGHTING CIRCUITS SHALL BE CONNECTED TO CONTINUOUS POWER SOURCE AHEAD OF RELAY PANEL OR INDIVIDUAL RELAY COMPONENTS.

I. INSTALL ALL CEILING SENSORS MINIMUM OF 6FT CLEAR OF DUCT REGISTERS.

J. THE LIGHTING CONTROL AND EMERGENCY LIGHTING SYSTEMS SHALL BE CAPABLE OF BEING ACCESSED VIA THE LOCAL AREA NETWORK AND REMOTELY VIA AUTHORIZED PERSONNEL ONLY.

K. PROGRAMMER / COMMISSIONING AGENT SHALL BE CERTIFIED BY THE EQUIPMENT MANUFACTURER ON THE SYSTEM INSTALLED.

L. THE MANUFACTURER CERTIFIED TECHNICIAN WILL MEET ONSITE WITH THE ELECTRICAL CONTRACTORS TO COORDINATE INSTALLATION DETAILS, REVIEW BEST PRACTICES, AND DISCUSS PROJECT SPECIFIC CHALLENGES; PRIOR TO THE INSTALLATION BEING STARTED, ENABLING THE CONTRACTORS TO WORK WITH THE TECHNICIAN TO PREPARE AND MAKE CHANGES UP FRONT.

M. THE MANUFACTURER'S LIGHTING SYSTEMS TEAM SHALL WORK ONSITE AFTER FIXTURE AND CONTROLS INSTALLATION IS COMPLETED. THE MANUFACTURER'S AGENT IS TO VERIFY THE PROJECT IS REVIEWED AND CHECKED FOR PROPER WIRING, INSTALLATION AND FUNCTIONALITY OF THE SYSTEM AS A WHOLE. ANY PROBLEMS SHALL BE ADDRESSED AND RESOLVED WITH THE ONSITE CONTRACTORS.

N. MANUFACTURER'S TECHNICIANS SHALL MAP OUT THE FIXTURE LOCATIONS AND ADDRESSES WITHIN THE LIGHTING CONTROL SOFTWARE. ASTRONOMIC TIMECLOCK EVENTS, SCENES, AND SCHEDULES ARE PROGRAMMED ACCORDING TO A PRE-DEFINED SCRIPT. THESE EVENTS, SCENES, AND SCHEDULES ARE TESTED AND FINALIZED FOR FINAL APPROVAL BY THE PROJECT'S OWNERSHIP.

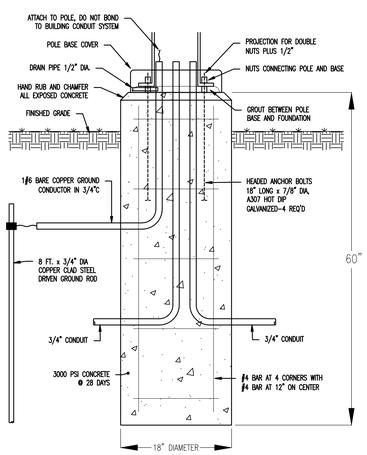
O. MANUFACTURER'S TECHNICIANS SHALL PROVIDE TRAINING FOR SYSTEM USERS AND THE SYSTEM MAINTENANCE TEAM. THE DETAILS OF THE TECHNOLOGY SHALL BE COVERED FROM A MAINTENANCE AND TROUBLESHOOTING POINT OF VIEW. THIS COVERS THE LIGHTING CONTROL SYSTEM AND ITS CORE FUNCTIONALITY, WITH A FOCUS ON HOW TO EDIT EXISTING SCENES AND ASTRONOMIC LIGHTING EVENTS.

P. THE MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE IN-DEPTH TRAINING TO THE END USER ON MANAGING THE SPECIFIC CONTROL SYSTEM, GIVING THEM THE TOOLS AND KNOWLEDGE TO OPERATE THEIR SYSTEM.

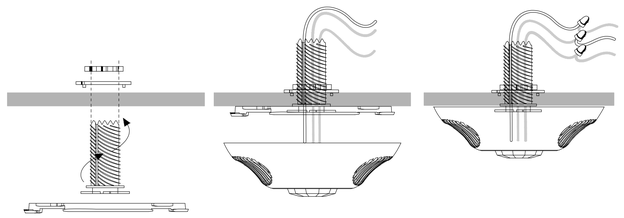
2

Lighting Space and Zones				Sequence of Opperations									Low Voltage Switch Matrix (Button Labels to be designated by owner during installation)			
		ZONE OF CONTROL		CONTROL SCENARIOS									CONNECT TO NON-NETWORKED LOCAL ROOM CONTROL			
Space Type	Room Number	Description	Designator	Manual On	Manual Off	Dimming	Multi-Level Control	Timeclock On	Timeclock Off	Occupancy Sensor On	Vacancy Sensor Off	Daylight Harvesting	Photo Sensor On	SL2 (2-Button)	SL4 (4-Button)	SL8 (8-Button)	Control Detail #
GYM	100	ZONE A	a	X	X	X					X					X	7
		ZONE B	b	X	X	X					X						
EQUIPMENT STORAGE	101			X	X					X	X			X			5
STAGE	102			X	X	X					X				X		6
ENTRY VESTIBULE	106			X	X					X	X			X			1
OPEN	107			X	X					X	X			X			5
CONCESSIONS	108			X	X					X				X			5
RESTROOMS	TYPICAL			X						X	X						4
CORRIDORS	TYPICAL			X	X					X							1
EXISTING CANOPY - NORTH	N/A							X	X				X				9
BUILDING EXTERIOR	N/A							X	X				X				9
PARKING/SITE LIGHTING	N/A							X	X				X				9

2



POLE PL - CONCRETE POLE BASE FOR FIXTURE "PLA"
NOT TO SCALE



OCCUPANCY SENSOR MOUNTING DETAIL
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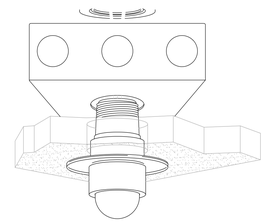
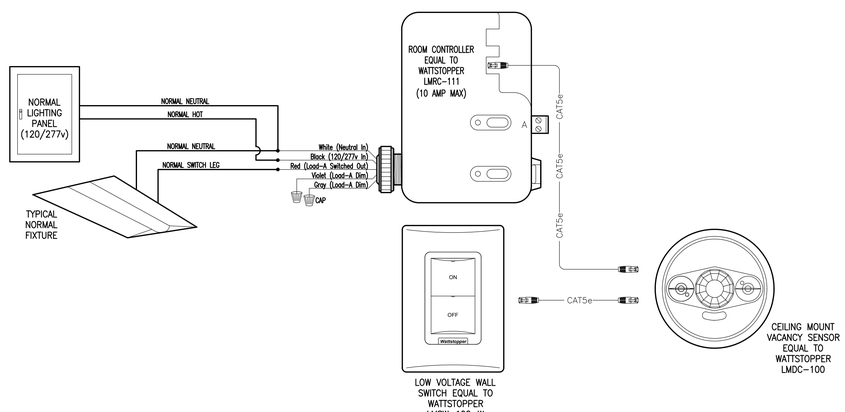


INDOOR PHOTOCELL MOUNTING DETAIL
NOT TO SCALE



LIGHTING CONTROL DETAIL #1
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100% CONSTRUCTION DOCUMENTS

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

LIGHTING FIXTURE SCHEDULE AND CONTROLS

PROJECT NUMBER	22019
DATED	03/12/2026

E302

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22022 Job No.

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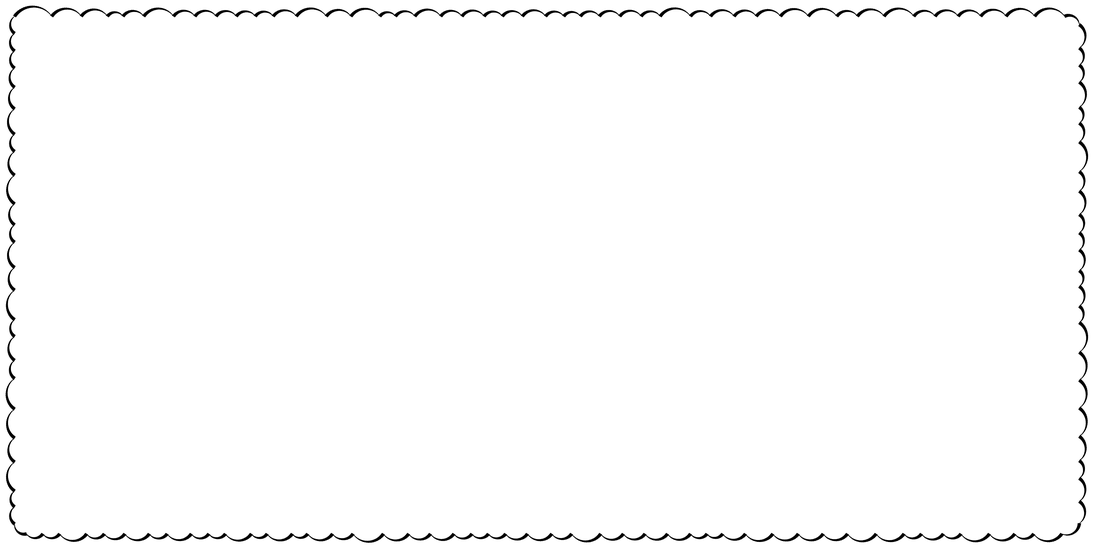
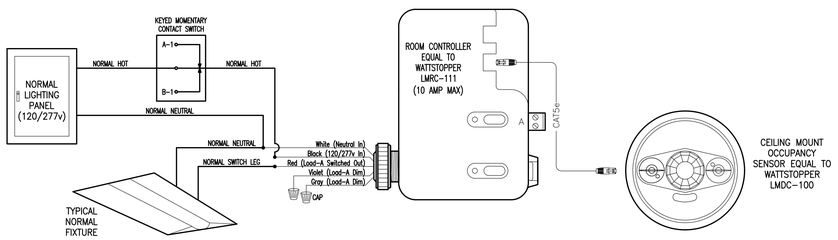
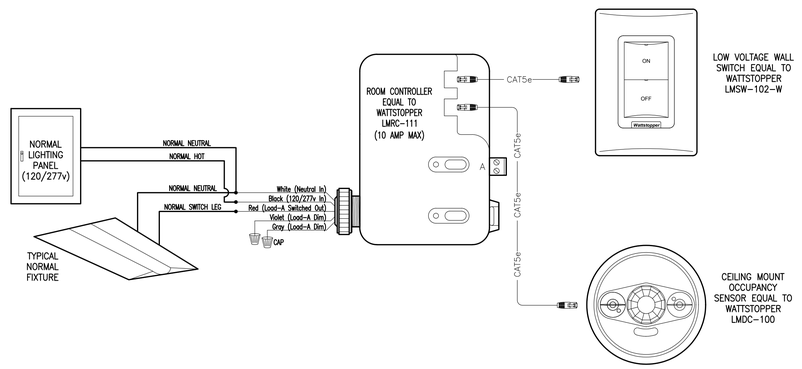


LIGHTING CONTROL DETAIL #2
NOT TO SCALE

LIGHTING CONTROL DETAIL #3
NOT TO SCALE



LIGHTING CONTROL DETAIL #4
NOT TO SCALE



LIGHTING CONTROL DETAIL #5
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A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

LIGHTING CONTROLS DETAILS

PROJECT NUMBER	22019
DATED	03/12/2026

E303

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22019
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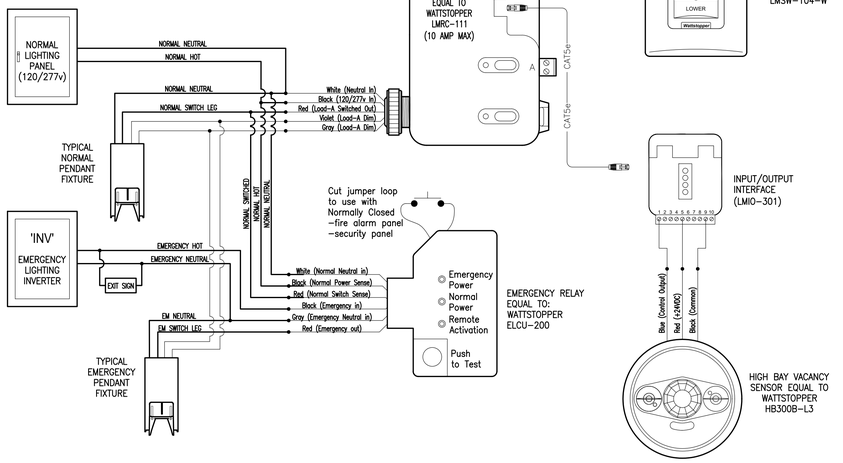
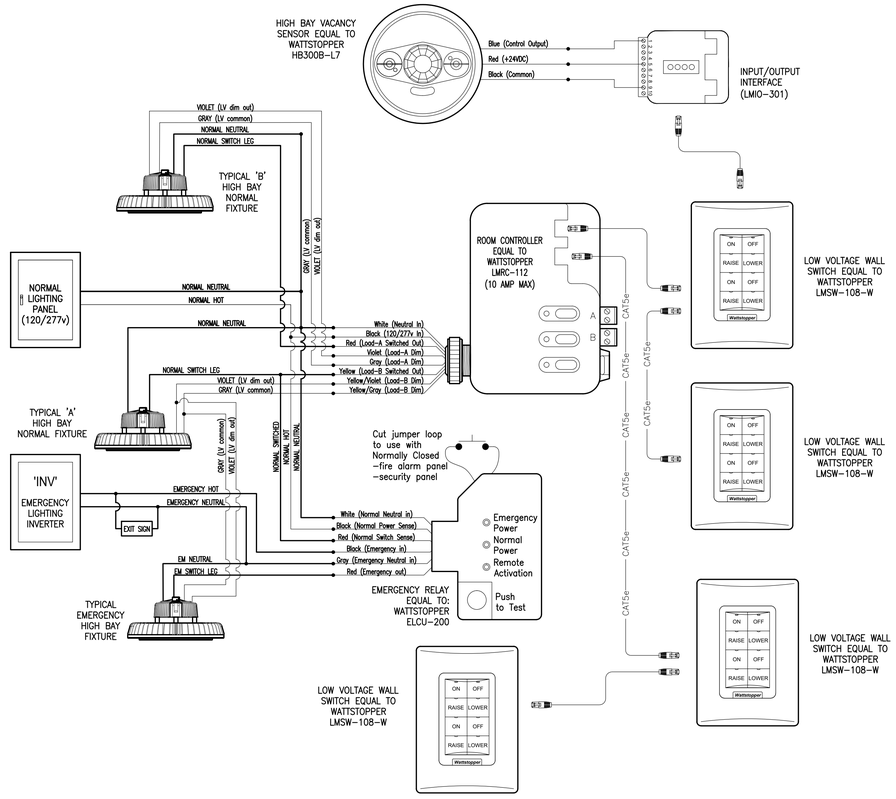
03/12/2026



LIGHTING CONTROL DETAIL #6
NOT TO SCALE



LIGHTING CONTROL DETAIL #7
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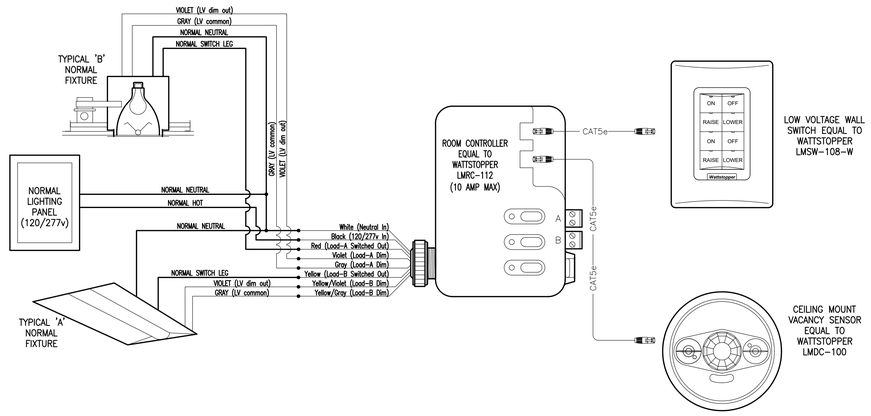

LIGHTING CONTROL DETAIL #8
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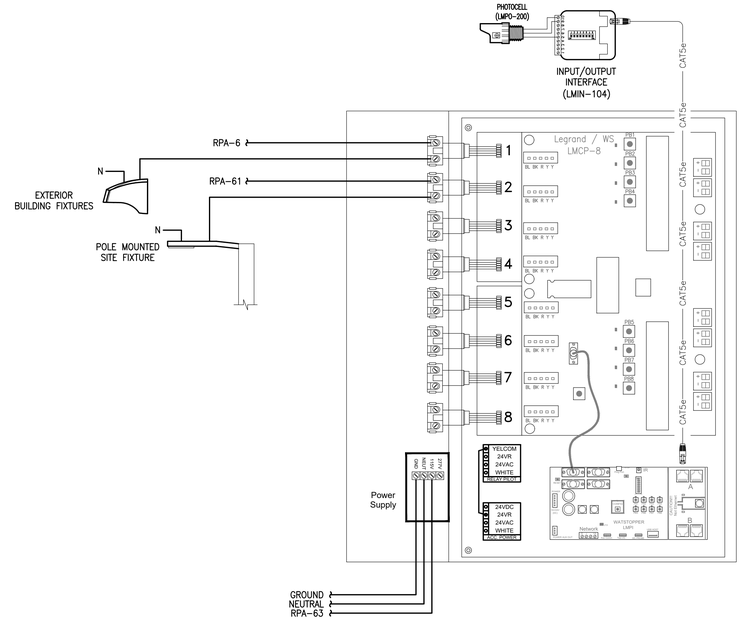

LIGHTING CONTROL DETAIL #9
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A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

LIGHTING CONTROLS DETAILS

PROJECT NUMBER	22019
DATED	03/12/2026

E304

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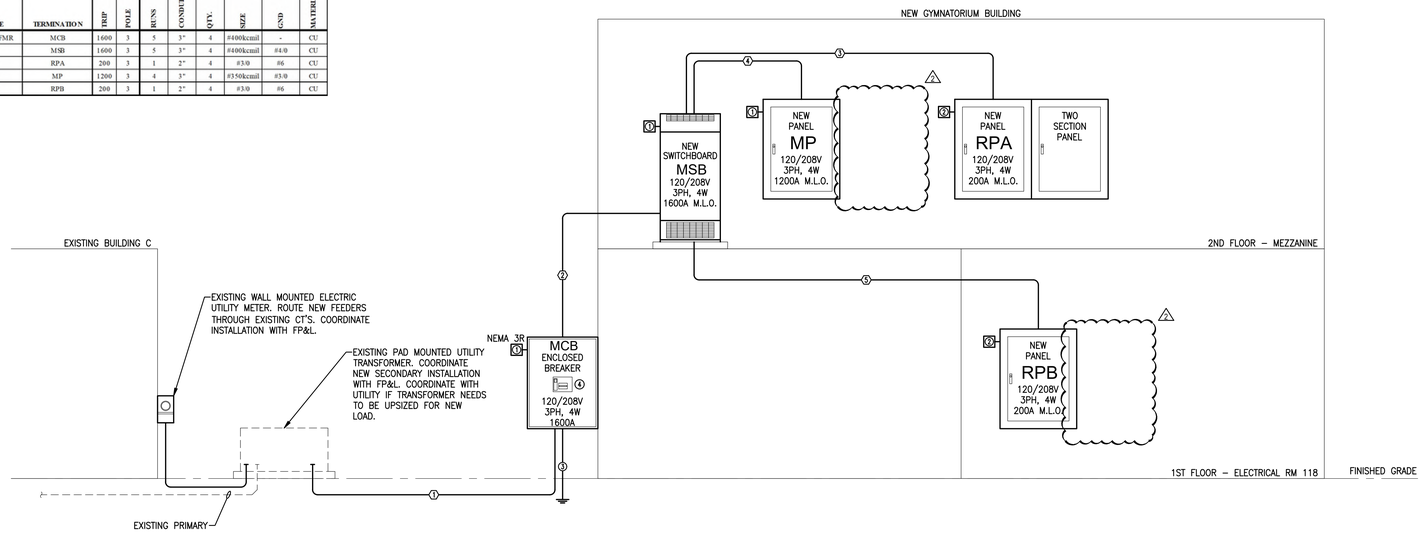
Caleb W. Leonard: FL. PE No.91782

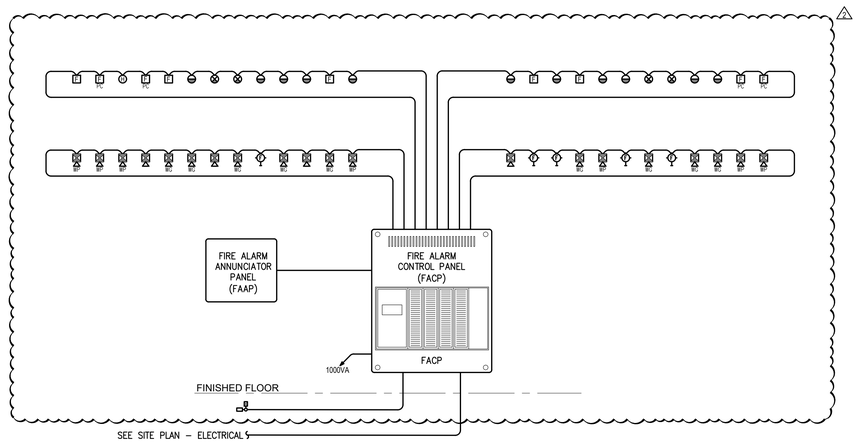
22022 Job No.

#	EQUIPMENT		BREAKER		CONDUCTOR / CONDUIT SIZE					
DESIGNATION	SOURCE	TERMINATION	TRIP	POLE	RUNS	CONDUIT	CONDUCTORS			
							QTY.	SIZE	GND	MATERIAL
1	UTILITY XFMR	MCB	1600	3	5	3"	4	#400kcmil	-	CU
2	MCB	MSB	1600	3	5	3"	4	#400kcmil	#4/0	CU
3	MSB	RPA	200	3	1	2"	4	#3/0	#6	CU
4	MSB	MP	1200	3	4	3"	4	#350kcmil	#3/0	CU
5	MSB	RPB	200	3	1	2"	4	#3/0	#6	CU



SINGLE LINE POWER RISER DIAGRAM

NOT TO SCALE



FIRE ALARM SYSTEM RISER

NOT TO SCALE

KEYNOTES

1. INSTALL SURGE SUPPRESSOR WITH 4#6, 1#10 GROUND IN 1" CONDUIT; LOCATE SURGE SUPPRESSOR SO LEAD LENGTH DOES NOT EXCEED 14 INCHES PER 1449–2014 4TH EDITION. PROVIDE FUSES PER MANUFACTURER RECOMMENDATIONS.
2. INSTALL SURGE SUPPRESSOR WITH 4#10, 1#10 GROUND IN 3/4" CONDUIT; LOCATE SURGE SUPPRESSOR SO LEAD LENGTH DOES NOT EXCEED 14 INCHES PER ANSI/UL 1449–2014 4TH EDITION. PROVIDE FUSES PER MANUFACTURER RECOMMENDATIONS.
3. REFER TO GROUNDING DETAILS.
4. SERVICE ENTRANCE RATED ENCLOSED BREAKER. LSI TYPE. SURFACE MOUNT NEMA 3R. 65K AIC MIN.

***** SPECIAL NOTE *****

PROVIDE 'LSI' TRIP UNITS FOR BREAKERS GREATER THAN OR EQUAL TO 200A.

LEGEND

FIRE ALARM WIRING

FIRE ALARM RISER GENERAL NOTES

A. THIS DIAGRAM IS NOT INTENDED TO SHOW EXACT QUANTITIES OF DEVICES. REFER TO PLAN FOR DEVICE QUANTITIES AND LOCATIONS.

B. THE RISER REPRESENTS A TYPICAL SYSTEM AND IS NOT INTENDED FOR INSTALLATION, SYSTEM SUPPLIER SHALL PROVIDE INSTALLATION DRAWINGS AND WIRING DIAGRAMS.

C. PROVIDE ADDITIONAL MONITOR AND CONTROL MODULES AS RECOMMENDED BY THE SYSTEM SUPPLIER.

D. FIRE ALARM SYSTEM SHALL HAVE U.L. APPROVED DIGITAL ALARM DIALER/COMMUNICATOR TO SEND ALARM SIGNAL TO MONITORING SERVICE.

E. FIRE ALARM SYSTEM LOW VOLTAGE SOURCE AND BATTERY STAND–BY SHALL ENERGIZE ALL ITEMS IN FIRE ALARM SYSTEM THAT REQUIRE POWER.

F. REFER TO MECHANICAL DRAWINGS FOR SMOKE AND/OR SMOKE/FIRE DAMPER LOCATIONS. CONNECT TO FIRE ALARM SYSTEM AND TO 120V POWER.

G. VERIFY LOCATION AND QUANTITIES OF FLOW AND TAMPER SWITCHES WITH SPRINKLER CONTRACTOR.

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A New Gymatorium for:
PALM BAY CHARTER SCHOOLS

1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

SINGLE LINE POWER & FIRE ALARM RISER DIAGRAMS

PROJECT NUMBER	22019
DATED	03/12/2026

E401

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22022 Job No.

22019
100% CONSTRUCTION DOCUMENTS
10/1/2026

SWITCHBOARD

MSB

SYSTEM 208/120V 3Φ 4W
RATING 1600A M.L.O. 65,000 AIC MINIMUM
ENCLOSURE NEMA 1 FREE STANDING; 4' CONCRETE PAD
OPTIONS BOLT ON BREAKERS

CKT #	SERVING	CKT BKR UNIT	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)
1	PANEL MP	LSI	1200	3	181496
2	PANEL RPA	LSI	200	3	46787
3	PANEL RPB	LSI	200	3	17857
4	OUTSIDE AIR HANDLER UNIT - OAU	LSI	200	3	47951
5	EMERGENCY LIGHTING INVERTER - INV	-	40	1	2774
6	SPACE ONLY (100A FRAME)	-	-	3	-
7	SPACE ONLY (200A FRAME)	-	-	3	-
8	SPACE ONLY (200A FRAME)	-	-	3	-
9	SPACE ONLY (60A FRAME)	-		3	-
10	SURGE PROTECTIVE DEVICE	-	60	3	-

TOTAL CONNECTED LOAD = 296865 VA / 360 = 824.6 A

NOTES:

*** SPECIAL NOTE ***
PROVIDE 'LSI' TRIP UNITS FOR BREAKERS GREATER THAN OR EQUAL TO 200A.

POWER PANEL

RPA

SYSTEM 208/120V 3Φ 4W
RATING 200A M.L.O. 65,000 AIC MINIMUM
ENCLOSURE NEMA 1 SURFACE MOUNT
OPTIONS BOLT ON BREAKERS; TWO EQUAL SECTIONS

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	LTG - EQ/CHAIR STO, STAGE - 101-103	20	1	816	1500	1	20	LTG - GYM 100 - CNTR	2
3	LTG - GYM 100 - N.	20	1	1500	1500	1	20	LTG - GYM 100 - S.	4
5	LTG - ENTRY, MENS, WOMENS - 104-106	20	1	572	1003	1	20	LTG - EXTERIOR BLDG/CANOPY LIGHTING	6
7	LTG - MEZZ 201	20	1	138	138	1	20	LTG - MEZZ 203	8
9	REC - MEZZ 201	20	1	540	540	1	20	REC - MEZZ 203	10
11	DDC PANEL - MEZZANINE 201	20	1	500	1260	1	20	REC - EQ. STORAGE 101, GYM 100 N.	12
13	REC - FLR REC STAGE, TV'S STAGE - 102	20	1	1040	900	1	20	REC - STAGE 102	14
15	A/V EQUIPMENT - TABLE/CHAIR STO 103	20	1	1000	540	1	20	REC - ENTRY VESTIBULE/ EXTERIOR	16
17	REC- EWC-1 - GYM	20	1	600	500	1	20	GYM 100 - SCORER'S TABLE W.	18
19	BASKETBALL GOAL - GYM 100 N.	20	1	1000	500	1	20	GYM 100 - SCORER'S TABLE E.	20
21	BASKETBALL GOAL - GYM 100 S.	20	1	1000	1500	1	20	GYM 100 - BLEACHERS W.	22
23	SPARE	20	1	---	1500	1	20	GYM 100 - BLEACHERS E.	24
25	GYM 100 S. - WALL SCOREBOARD	20	1	1200	360	1	20	REC - GYM 100 S.	26
27	SPARE	20	1	---	720	1	20	REC - MENS 105/WOMENS 104	28
29	HAND DRYER - WOMENS	20	1	1000	1000	1	20	HAND DRYER - MENS	30
31	HAND DRYER - WOMENS	20	1	1000	1000	1	20	HAND DRYER - MENS	32
33	FIRE ALARM CONTROL PANEL (FACP) - 106*	20	1	500	---	1	20	SPARE	34
35	SPARE	20	1	---	---	1	20	SPARE	36
37	SPARE	20	1	---	---	1	20	SPARE	38
39	SPARE	20	1	---	790	1	20	REC - CONF 110 - SW.	40
41	REC - CORR C001, SUPPLIES 115	20	1	900	500	1	20	REC - AV COMPONENT PWR - EQ STO 101	42
43	REC - AV COMPONENT PWR - EQ STO 101	20	1	500	500	1	20	AV COMPONENT - STAGE 102	44
45	AV COMPONENT - STAGE 102	20	1	500	500	1	20	PROJECTOR AND PROJECTION SCREEN	46
47	CLG REC - STAGE LTG - 102	20	1	720	720	1	20	CLG REC - STAGE LTG - 102	48
49	CLG REC - STAGE LTG - 102	20	1	720	720	1	20	CLG REC - STAGE LTG - 102	50
51	CLG REC - STAGE LTG - 102	20	1	720	720	1	20	CLG REC - STAGE LTG - 102	52
53	STAGE LEFT - LOUDSPEAKER	20	1	500	500	1	20	STAGE RIGHT - LOUDSPEAKER	54
55	AV COMPONENT - FRONT STAGE 102	20	1	500	500	1	20	AV COMPONENT - FRONT STAGE 102	56
57	GYM 100 - LOUDSPEAKERS - N. ROW	20	1	360	720	1	20	GYM 100 - LOUDSPEAKERS - CNTR. ROW	58
59	GYM 100 - LOUDSPEAKERS - S. ROW	20	1	360	500	1	20	DDC PANEL - MEZZANINE 203	60
61	LTG - PARKING LOT - SOUTH	20	1	270	500	1	20	GYM 100 - HOIST SWITCHES	62
63	LIGHTING CONTROL PANEL (LCP)	20	1	500	1000	1	20	GYM 100 - SHOT CLOCKS	64
65	GYM 100 N. - WALL SCOREBOARD	20	1	1200	1000	1	20	BASKETBALL GOAL - GYM 100 NE.	66
67	BASKETBALL GOAL - GYM 100 NW.	20	1	1000	1000	1	20	BASKETBALL GOAL - GYM 100 SE.	68
69	BASKETBALL GOAL - GYM 100 SW.	20	1	1000	-	1	20	SPARE	70
71	SPARE	20	1	-	-	1	20	SPARE	72
73	SPARE	20	1	-	-	1	20	SPARE	74
75	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	76
77	SPACE ONLY	-	-	-	-	-	-	SPACE ONLY	78
79	SPACE ONLY	-	-	-	0	3	30	SURGE PROTECTIVE DEVICE	80
81	SPACE ONLY	-	-	-	-	-	-	----	82
83	SPACE ONLY	-	-	-	-	-	-	----	84

TOTAL CONNECTED LOAD = 46787 VA / 360 = 130.0 A

NOTES:
* PROVIDE BREAKER LABELED "FIRE ALARM CIRCUIT" WITH RED HANDLE LOCKABLE IN THE ON POSITION.

POWER PANEL

RPB

SYSTEM 208/120V 3Φ 4W
RATING 200A M.L.O. 10,000 AIC MINIMUM
ENCLOSURE NEMA 1 SURFACE MOUNT
OPTIONS BOLT ON BREAKERS

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	SPARE	20	1	---	---	1	20	SPARE	2
3	SPARE	20	1	---	---	1	20	SPARE	4
5	LTG - CONCESSION & OPEN	20	1	957	720	1	20	REC - ELEC RM 110	6
7	REC - EXTERIOR WEST	20	1	720	1500	1	20	REC - CONCESSION 108 - REF	8
9	REC - OPEN 107	20	1	360	1200	1	20	REC - CONCESSION 108	10
11	REC - CONCESSION 108 - REF	20	1	1500	900	1	20	REC - OPEN 107	12
13	REC - CONCESSION 108	20	1	1200	500	1	20	REC - DED. SIMPLEX REC - TELECOM 109	14
15	REC - DEDICATED QUAD - TELECOM 109	20	1	720	500	1	20	REC - DED. SIMPLEX REC - TELECOM 109	16
17	REC - DEDICATED QUAD - TELECOM 109	20	1	360	360	1	20	REC - DEDICATED QUAD - TELECOM 109	18
19	REC - DED. 30A REC - TELECOM 109	30	1	3000	360	1	20	REC - DEDICATED QUAD - TELECOM 109	20
21	REC - DED. 30A REC - TELECOM 109	30	1	3000	---	1	20	SPARE	22
23	SPARE	20	1	---	---	1	20	SPARE	24
25	SPARE	20	1	---	---	1	20	SPARE	26
27	SPARE	20	1	---	---	1	20	SPARE	28
29	SPARE	20	1	---	---	1	20	SPARE	30
31	SPACE ONLY	--	-	---	---	-	--	SPACE ONLY	32
33	SPACE ONLY	--	-	---	---	-	--	SPACE ONLY	34
35	SPACE ONLY	--	-	---	---	-	--	SPACE ONLY	36
37	SPACE ONLY	--	-	---	0	3	30	SURGE PROTECTIVE DEVICE	38
39	SPACE ONLY	--	-	---	---	-	--	----	40
41	SPACE ONLY	--	-	---	---	-	--	----	42

TOTAL CONNECTED LOAD = 17857 VA / 360 = 49.6 A

POWER PANEL

MP

SYSTEM 208/120V 3Φ 4W
RATING 1200A M.L.O. 65,000 AIC MINIMUM
ENCLOSURE NEMA 1 SURFACE MOUNT
OPTIONS BOLT ON BREAKERS

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)		CKT BKR POLE	CKT BKR TRIP	SERVING	CKT #
1	AHU-11	90	3	28718	20000	3	60	HP-11A	2
3	----	--	-	---	---	-	--	----	4
5	----	--	-	---	---	-	--	----	6
7	AHU-12	30	3	10738	8000	3	30	HP-12	8
9	----	--	-	---	---	-	--	----	10
11	----	--	-	---	---	-	--	----	12
13	AHU-9	90	3	28718	20000	3	60	H9-11B	14
15	----	--	-	---	---	-	--	----	16
17	----	--	-	---	---	-	--	----	18
19	AHU-8	40	2	7481	10000	3	35	HP-8	20
21	----	--	-	---	---	-	--	----	22
23	CP-1 - CIRCULATION PUMP - MECH 120	15	1	65	---	-	--	----	24
25	EWH-1 - WATER HEATER - MECH 120	15	3	5000	20000	3	60	HP-9A	26
27	----	--	-	---	---	-	--	----	28
29	----	--	-	---	---	-	--	----	30
31	MINISPLIT - MHP-1/WM-1.1	25	2	1600	20000	3	60	HP-9B	32
33	----	--	-	---	---	-	--	----	34
35	EF-4 - WOMENS 105, MENS 104	20	1	1176	---	-	--	----	36
37	SPARE	20	1	---	---	1	20	SPARE	38
39	SPARE	20	1	---	---	1	20	SPARE	40
41	SPARE	20	1	---	---	1	20	SPARE	42
43	SPARE	20	1	---	---	1	20	SPARE	44
45	SPARE	20	1	---	---	1	20	SPARE	46
47	SPARE	20	1	---	---	1	20	SPARE	48
49	SPACE ONLY	--	-	---	---	-	--	SPACE ONLY	50
51	SPACE ONLY	--	-	---	---	-	--	SPACE ONLY	52
53	SPACE ONLY	--	-	---	---	-	--	SPACE ONLY	54
55	SPACE ONLY	--	-	---	0	3	60	SURGE PROTECTIVE DEVICE	56
57	SPACE ONLY	--	-	---	---	-	--	----	58
59	SPACE ONLY	--	-	---	---	-	--	----	60

TOTAL CONNECTED LOAD = 181496 VA / 360 = 504.2 A

Emergency Lighting Inverter

INVERTER INV

INPUT VOLTAGE 120V **OUPUT VOLTAGE** 120V
PART NUMBER CHLORIDE#: CHT-AA-3.5-S0-05A-00-Z-0-Z*
SUPPLY CIRCUIT MDP-13; 2#8, #10G, 3/4"C

CKT #	SERVING	CKT BKR TRIP	CKT BKR POLE	CONNECTED LOAD (VA)
1	LTG - GYM RM 100 - NORTH	20	1	1050
2	LTG - GYM RM 100 - CENTER	20	1	750
3	LTG - GYM RM 100 - SOUTH	20	1	750
4	LTG - STAGE RM 102 - HOUSE LTS	20	1	224
5	SPARE	20	1	-

TOTAL CONNECTED LOAD = 2774 VA / 120 VOLT = 23.1 A

NOTES:
* PROVIDE COMPLETE FACTORY STARTUP.

MECHANICAL EQUIPMENT SCHEDULE

(VERIFY ALL EQUIPMENT CIRCUIT REQUIREMENTS WITH MANUFACTURERS SHOP DRAWINGS PRIOR TO ROUGH-IN)

EQUIPMENT DESIGNATION	DESCRIPTION	CFM	VOLT	Φ	ELECTRICAL LOAD: MOTOR(S) FLA QTY	LARGEST	SUM OF REMAINING	ELECTRIC HEAT KW	OTHER VA	TOTAL CONNECTED VA	PROTECTION: MCA	MOCP	SPECIFIED TRIP	SPECIFIED POLE	CONDUCTOR / CONDUIT SIZE: SETS	CONDUCTORS QTY.	SIZE	GND	CONDUIT	DISC.	REMARKS
AHU-8	AIR HANDLER UNIT	2070	208	1	1	7.6		5.9		7481	32	35	40	2	1	4	#8	#10	3/4"	60/3/1	
AHU-9	AIR HANDLER UNIT	7310	208	3	1	24.2		20		28718	82	90	90	3	1	4	#3	#8	1-1/4"	100/3/1	
AHU-11	AIR HANDLER UNIT	7535	208	3	1	24.2		20		28718	82	90	90	3	1	4	#3	#8	1-1/4"	BREAKER	
AHU-12	AIR HANDLER UNIT	1599	208	3	1	7.6		8		10738	30	30	30	3	1	4	#10	#10	3/4"	BREAKER	
HP-8	HEAT PUMP		208	3	1			10		10000	23	35	35	3	1	4	#8	#10	3/4"	60/3/3R	
HP-9A	HEAT PUMP		208	3	3			20		20000	39	60	60	3	1	4	#6	#10	1"	60/3/3R	
HP-9B	HEAT PUMP		208	3	3			20		20000	39	60	60	3	1	4	#6	#10	1"	60/3/3R	
HP-11A	HEAT PUMP		208	3	3			20		20000	39	60	60	3	1	4	#6	#10	1"	60/3/3R	
HP-11B	HEAT PUMP		208	3	3			20		20000	39	60	60	3	1	4	#6	#10	1"	60/3/3R	
HP-12	HEAT PUMP		208	3	2			8		8000	18	30	30	3	1	4	#10	#10	3/4"	30/3/3R	
OAU-1	OUTDOOR AIR HANDLER	3500	208	3	6	55.8	77.3			47951	179.2	200	200	3	1	4	#3/0	#6	2"	200/3/3R	
CP-1	CIRCULATION PUMP		120	1	1	0.54				65	0.7	15	15	1	1	2	#12	#12	3/4"	MOTOR SWITCH	
EF-1	EXHAUST FAN	300	120	1	1	3.3				396	4.1	15	15	1	1	2	#12	#12	3/4"	MOTOR SWITCH	INTERLOCK WITH AHU-10 OUTSIDE AIR DAMPER
EF-4	EXHAUST FAN	700	120	1	1	3				360	3.8	15	15	1	1	2	#12	#12	3/4"	MOTOR SWITCH	INTERLOCK WITH AHU-8 OUTSIDE AIR DAMPER
EWH-1	ELECTRIC WATER HEATER		208	3	1			5		5000	13.9	15	15	3	1	4	#12	#12	3/4"	30/3/1	
MHP-1	MINI-SPLIT OUTDOOR UNIT	1590	208	1	2	7	0.5			1560	11	28	25	2	1	3	#10	#10	3/4"	30/2/3R	
WM-1.1	MINI-SPLIT INDOOR UNIT	455	208	1	1	0.19				40	1	15	15	2	1	3	#12	#12	3/4"	MOTOR SWITCH	INDOOR UNIT IS POWERED BY OUTDOOR UNIT

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100% CONSTRUCTION DOCUMENTS

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

MECHANICAL EQUIPMENT & PANEL SCHEDULES

PROJECT NUMBER 22019
DATED 03/12/2026

E501

HG Engineers
621 N. Tyndall Pkwy, Unit C
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FL Authorization No.00006680
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Thomas A. Alexander: FL. PE No.73172
Daniel J. White: FL. PE No.73790
Caleb W. Leonard: FL. PE No.91782

22022 Job No.

22019
100% CONSTRUCTION DOCUMENTS
12/12/2025

GENERAL NOTES

1 BOND HOT AND COLD WATER PIPING SYSTEMS.

2 CONDUCTOR SIZES SHOWN ARE MINIMUM AND MAY BE LARGER THAN THE MINIMUM SIZES REQUIRED BY NEC.

3 INSTALL GROUNDING CONNECTIONS TO BUILDING STRUCTURE AND WATER PIPES AT LOCATIONS THAT ARE VISIBLE AND ACCESSIBLE FOR INSPECTION, MAINTENANCE, AND TESTING.

4 INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC SERVICE ENTRANCE CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250-66 USING THE SERVICE PHASE CONDUCTOR SIZE.

5 INSTALL AN INSULATED THROAT GROUNDING BUSHING ON EACH METALLIC FEEDER CONDUIT. BOND TO GROUND BUS USING CONDUCTOR THAT IS SIZED BASED ON NEC TABLE 250-122 USING THE FEEDER CIRCUIT OVERCURRENT DEVICE SIZE OR THE SEPARATELY DERIVED SYSTEM OVERCURRENT DEVICE SIZE.

KEYNOTES

① INSTALL GROUNDED (NEUTRAL) CONDUCTOR SAME SIZE AS THE LARGEST PHASE CONDUCTOR IF THE LINE-TO-NEUTRAL LOAD EXCEEDS 5% OF THE CONNECTED LOAD. IF NEUTRAL LOAD IS SMALLER, INSTALL THE NEC MINIMUM GROUNDED CONDUCTOR.

② INSTALL GROUNDING ELECTRODE CONDUCTOR, SIZED BASED ON NEC TABLE 250-66 USING THE SERVICE PHASE CONDUCTOR SIZE, BUT NOT SMALLER THAN NO 4.

③ INSTALL EQUIPMENT GROUNDING CONDUCTOR SIZED BASED ON NEC TABLE 250-122 USING THE FEEDER OVERCURRENT DEVICE SIZE.

④ 20 FOOT MINIMUM X 3/4" DIAMETER COPPER CLAD STEEL SECTIONAL DRIVEN GROUND ROD.

⑤ INSTALL BONDING JUMPER WIRE THAT IS SIZED BASED ON NEC TABLE 250-66 OR 250.28(D)(1) USING THE SERVICE OR SEPARATELY-DERIVED SYSTEM PHASE PHASE CONDUCTOR SIZE.

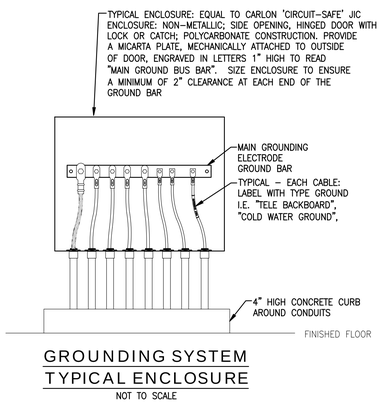
⑥ INSTALL A CONCRETE-ENCASED MAIN GROUNDING ELECTRODE IN THE BUILDING FOUNDATION PER NEC ARTICLE 250.52 (A) (3).

⑦ BOND EACH PERIMETER STRUCTURAL STEEL COLUMN TO THE CONCRETE-ENCASED MAIN GROUNDING ELECTRODE. USE COMPRESSION CONNECTORS THAT MEET IEEE 837 REQUIREMENTS OR USE EXOTHERMIC WELDS.

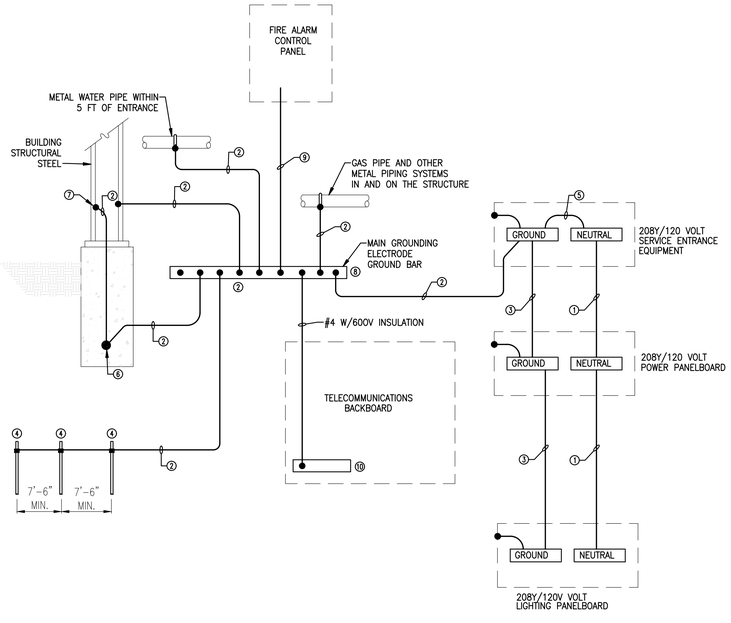
⑧ INSTALL A "MAIN GROUND ELECTRODE GROUND BAR" FOR SINGLE POINT GROUNDING. LOCATE AT AN ACCESSIBLE POINT NEAR THE SERVICE ENTRANCE EQUIPMENT. MAKE CONNECTIONS TO THE GROUND ELECTRODE CONDUCTOR USING IRREVERSIBLE CONNECTORS OR EXOTHERMIC WELDS. MAKE OTHER CONNECTIONS TO THE GROUND BAR USING TWO-HOLE COMPRESSION SPADE LUGS THAT MEET IEEE 837 REQUIREMENTS. LABEL EACH CONNECTION TO THE GROUND BAR

⑨ FIRE ALARM CONTROL PANEL GROUND – #6 COPPER CONDUCTOR.

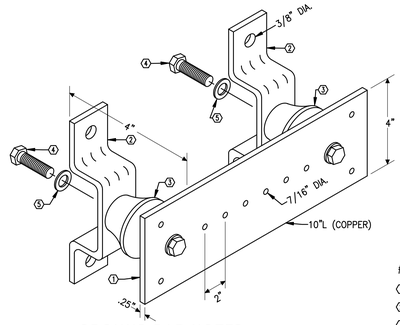
⑩ INSTALL A COPPER GROUNDING BAR IN EACH TELECOMMUNICATIONS ROOM. CONNECT TO THE "MAIN GROUNDING ELECTRODE GROUND BAR" USING 600V INSULATED #4 COPPER CABLE AND COMPRESSION SPADE LUGS.



GROUNDING SYSTEM
TYPICAL ENCLOSURE
NOT TO SCALE



208Y/120V GROUNDING SYSTEM DIAGRAM
NOT TO SCALE



GROUND BAR NOTES:

1 INSTALL ONE BAR AT EACH COMMUNICATIONS ROOM.

2 ROUTE 1#4 BARE CU IN 1"CONDUIT FROM GROUND BAR TO BUILDING ELECTRICAL SERVICE ENTRANCE GROUND.

3 CONNECT BARS WITH 1#6 BARE CU IN 1" CONDUIT.

#	DESCRIPTION
①	GROUND BAR
②	WALL MTG. BRACKET
③	INSULATORS
④	5/8" X 1" H.H.C.S. BOLT
⑤	5/8" LOCKWASHER

INSULATED GROUNDING BAR DETAIL
NOT TO SCALE

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100% CONSTRUCTION DOCUMENTS

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS

1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date

GROUNDING DETAILS

PROJECT NUMBER	22019
DATED	03/12/2026

E601

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621 N. Tyndall Pkwy, Unit C
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Thomas A. Alexander, FL. PE No.73172
Daniel J. White, FL. PE No.73790
Caleb W. Leonard, FL. PE No.91782

22022 Job No.

RIGID CONDUIT NOTE

PROVIDE RIGID THREADED CONDUIT (RMC) WITH THREADED MALLEABLE IRON FITTINGS AS INDICATED FOR BACKBONE CONDUIT. MAINTAIN ELECTRICAL CONTINUITY FROM END-TO-END AND GROUND PER "CC GROUNDING NOTES" AND "GENERAL ABOVEGROUND CONDUIT NOTES".

GENERAL CONDUIT PATHWAYS NOTE

RUN ALL CABLING IN CONDUIT PATHWAYS AS INDICATED. THE CONTRACTOR AGREES TO USE THE CONDUIT SYSTEM AS SHOWN, OR SHALL PROVIDE ADDITIONAL CONDUIT AT NO ADDITIONAL COST TO THE OWNER AS REQUIRED TO PROPERLY INSTALL ALL CABLING INDICATED, WITHOUT DAMAGE TO CABLING. ALL CONDUIT SHALL CONFORM TO REQUIREMENTS OF THE CONTRACT DOCUMENTS, WHETHER SPECIFICALLY SHOWN ON THE DRAWINGS OR NOT.

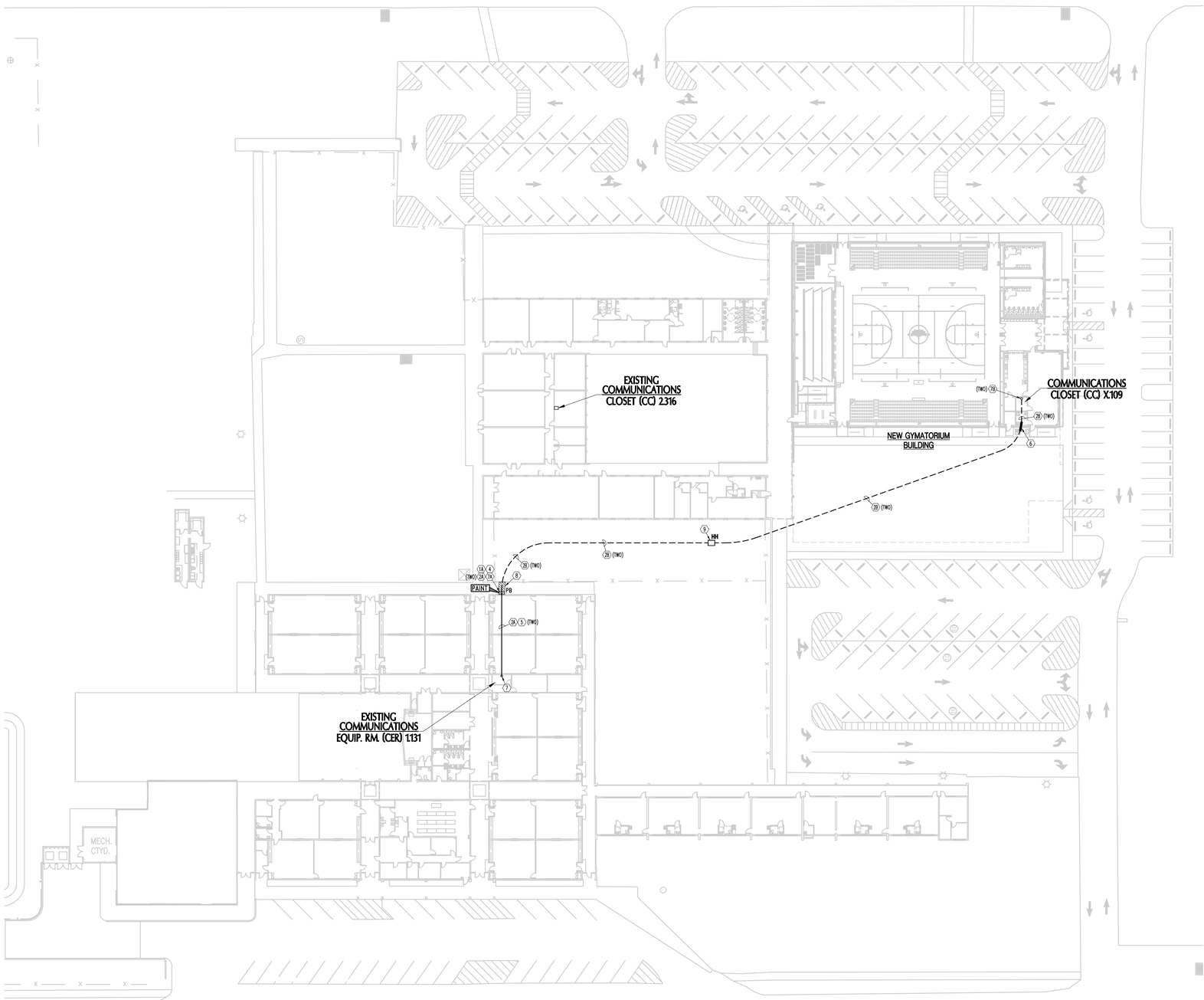
DOCUMENTATION OF EXISTING CONDITIONS

THE PROJECT MAY REQUIRE THAT THE CONTRACTOR WORK ABOVE CEILINGS IN EXISTING OCCUPIED BUILDINGS. IN ALL SUCH CASES, THE CONTRACTOR SHALL PROVIDE PHOTOGRAPHIC DOCUMENTATION OF THE CONDITIONS OF ALL EXISTING CEILINGS (TO REMAIN) WHERE WORK IS TO BE PERFORMED USING A HIGH RESOLUTION DIGITAL CAMERA PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR SHALL PROVIDE DIGITAL FILES OF ALL PHOTOGRAPHS (WITH AREAS LABELED) TO THE OWNER'S PROJECT MANAGER. THE CONTRACTOR SHALL REPLACE ALL CEILING TILES OR REPAIR OTHER CEILING TYPE FINISHES (MATCH EXISTING) DAMAGED AS A RESULT OF WORK UNDER THIS CONTRACT.

FIRESTOPPING NOTE:

THE CONTRACTOR SHALL FIRESTOP ALL PENETRATIONS OF ALL FLOORS AND ALL WALLS WHICH EXTEND TO THE UNDERSIDE OF THE FLOOR OR ROOF DECK ABOVE. FIRESTOPPING SHALL BE ACCOMPLISHED USING UL CLASSIFIED SYSTEMS WITH FIRE RATING EQUAL TO OR GREATER THAN THE FIRE RATING OF THE FLOOR OR WALL ASSEMBLY PENETRATED. FIRESTOP SYSTEMS SHALL BE 3M, NELSON OR ENGINEER APPROVED EQUAL. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. THE CONTRACTOR SHALL SUBMIT A MANUFACTURER'S STANDARD DETAIL FOR EACH TYPE OF FLOOR AND WALL PENETRATION REQUIRED FOR THIS PROJECT. ALL OTHER PENETRATIONS OR OPENINGS IN NON-FIRE RATED WALLS SHALL BE REPAIRED AND SEALED WITH MATERIALS TO MATCH THE CONSTRUCTION OF THE WALL.

THE CONTRACTOR SHALL PROVIDE DETAILS FOR EACH DIFFERENT TYPE OF FIRESTOP ASSEMBLY REQUIRED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO INSTALLATION. EACH DETAIL SHALL INCLUDE THE TEST ASSEMBLY NUMBER AND A DESCRIPTION OF THE MATERIALS TO BE USED. HAVE APPROVED FIRESTOPPING DETAILS AVAILABLE AT PROJECT SITE AT TIME OF INSPECTION.



COMMUNICATIONS SITE PLAN

SCALE: 1" = 30'-0"

NOTE: SITE PLAN SCALE IS APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY ALL DISTANCES IN THE FIELD PRIOR TO BIDS.

CONDUIT WORK NOTE

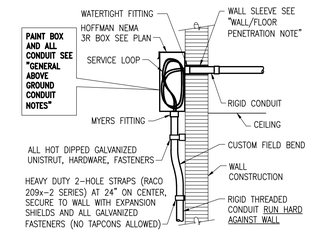
ALL CONDUIT WORK INDICATED SHALL BE PROVIDED AS PART OF THIS CONTRACT AND SHALL BE PERFORMED BY A LICENSED CERTIFIED ELECTRICAL CONTRACTOR IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRIC CODE. PERMANENTLY LABEL ALL CONDUITS.

NIGHT WORK NOTE:

ALL WORK WITHIN EXISTING OCCUPIED BUILDINGS SHALL BE ACCOMPLISHED ON WEEKDAYS OR AT NIGHT WHEN SCHOOL IS NOT IN REGULAR SESSION. EXACT TIMES SHALL BE AS DIRECTED BY THE SCHOOL PRINCIPAL. WORK DURING THE DAY AND ON WEEKENDS SHALL NOT BE ALLOWED UNLESS SPECIFICALLY APPROVED IN WRITING BY THE SCHOOL PRINCIPAL. ALL EXISTING SYSTEMS SHALL BE MAINTAINED IN FULL WORKING ORDER AT ALL TIMES.

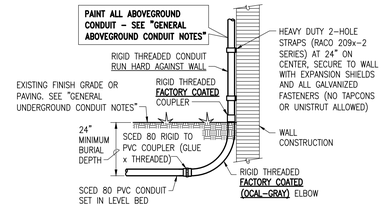
PROJECT NOTE (ALL SHEETS):

ALL MATERIALS AND EQUIPMENT INDICATED AND REQUIRED FOR A COMPLETE AND FINISHED INSTALLATION SHALL BE NEW AND SHALL BE PROVIDED BY THE CONTRACTOR UNDER THIS PROJECT UNLESS SPECIFICALLY INDICATED TO BE EXISTING OR TO BE PROVIDED BY OTHERS.



BUILDING ENTRANCE - NEMA 3R BOX AT CONDUIT PENETRATION OF WALL OR FASCIA

NOT TO SCALE



BUILDING ENTRANCE - CONDUIT TURNING DOWN INTO EARTH

NOT TO SCALE

COMMUNICATIONS SITE PLAN KEY NOTES:

1A NEMA 3R PULLBOX AT PENETRATION OF WALL, GALVANIZED STEEL WITH FACTORY PAINTED FINISH, SIZE 12"x 12"x 6", HOFFMAN A-12R12G (NO EQUAL).

2A 2" RIGID METALLIC CONDUIT (RMC OUTDOORS, RMC OR IMC INDOORS). SEE "GENERAL ABOVEGROUND CONDUIT NOTES".

2B 2" PVC CONDUIT (UNDERGROUND), SCHEDULE 80, RUN UNDERGROUND DIRECT BURIED. MINIMUM BURIAL DEPTH 24" BELOW FINISHED GRADE. PROVIDE CONTINUOUS WARNING TAPE (ORANGE 3" WIDE - DETECTABLE - CARLON MAT3061) OVER ALL BURIED CONDUIT AT 6" BELOW FINISH GRADE. INSTALL 3/8" MARKED PULL TAPE (CARLON TL382) ALONG WITH REQUIRED CABLES. SEE "GENERAL UNDERGROUND CONDUIT NOTES".

4 CONDUIT PENETRATION THRU BUILDING EXTERIOR WALL/FLOOR/SOFFIT/FASCIA, SEE "WALL/FLOOR/SOFFIT/FASCIA PENETRATION NOTE".

5 ROUTE BACKBONE CONDUIT THRU BUILDING ABOVE CEILING AND UP HIGH ALONG UNDERSIDE OF ROOF STRUCTURE. SEE "GENERAL ABOVEGROUND CONDUIT NOTES".

6 SLEEVE CONDUIT WITH 6'-0" LONG SECTION OF SCHEDULE 80 PVC SLEEVE (4" SLEEVE FOR 2" CONDUIT & 6" SLEEVE FOR 3" CONDUIT) WHERE CONDUIT PENETRATES OR PASSES UNDER FOUNDATION/FOUNDATION WALL.

7 TURN RIGID (RMC OR IMC) CONDUIT DOWN AT EXISTING COMMUNICATIONS BACKBOARD, TO 6" BELOW CEILING, TRIM CEILING TILE NEATLY AND TERMINATE WITH UL LISTED RIGID CONDUIT THREADED MALLEABLE IRON INSULATED GROUNDING BUSHING WITH BRONZE LUG (O-Z/GEDNEY TYPE IBC-1-BC) PRIOR TO INSTALLING CABLING AND BOND TO EXISTING GROUNDING BUSBAR WITH #6 AWG INSULATED (GREEN) COPPER GROUNDING CONDUCTOR.

7A TURN RIGID CONDUIT UP FROM UNDERGROUND, UP EXTERIOR WALL, AND INTO NEMA 3R BOX TO ENTER BUILDING, GROUP TOGETHER WITH EXISTING. PAINT TO MATCH WALL. SEE "BUILDING ENTRANCE - NEMA 3R BOX AT CONDUIT PENETRATION OF WALL OR FASCIA" AND "BUILDING ENTRANCE - CONDUIT TURNING DOWN INTO EARTH".

7B TURN SCHED 80 PVC CONDUIT UP, SLEEVE AND SEAL FLOOR PENETRATION AND TERMINATE WITH CARLON E997x SERIES END BELL AT 4" A.F.F. SEE ENLARGED FLOOR PLANS FOR LOCATION OF CONDUIT TURNING UP.

8 SAW CUT AND PATCH EXISTING SIDEWALK TO MATCH EXISTING.

9 LARGE COMMUNICATIONS HANDHOLE, SEE DETAIL.

WALL/FLOOR/SOFFIT/FASCIA PENETRATION NOTE:

FIRE-RATED WALLS AND FLOORS:
THE CONTRACTOR SHALL FIRESTOP ALL PENETRATIONS OF ALL FLOORS AND ALL WALLS THAT EXTEND TO THE UNDERSIDE OF THE FLOOR OR ROOF DECK ABOVE. FIRESTOPPING SHALL BE ACCOMPLISHED USING UL CLASSIFIED SYSTEMS WITH FIRE RATING EQUAL TO OR GREATER THAN THE FIRE RATING OF THE FLOOR OR WALL ASSEMBLY PENETRATED. FIRESTOP SYSTEMS SHALL BE 3M, NELSON OR ENGINEER APPROVED EQUAL. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. THE CONTRACTOR SHALL SUBMIT A MANUFACTURER'S STANDARD DETAIL FOR EACH TYPE OF FIRE-RATED WALL AND FLOOR PENETRATION REQUIRED FOR THIS PROJECT.

INTERIOR NON FIRE-RATED WALLS:
ALL OPENINGS IN WALLS THAT DO NOT EXTEND TO THE UNDERSIDE OF THE FLOOR OR ROOF DECK ABOVE SHALL BE SLEEVED, REPAIRED AND COMPLETELY SEALED WITH MATERIALS TO MATCH THE WALL CONSTRUCTION.

EXTERIOR WALLS:
SLEEVE WALL OPENING WITH SECTION OF SCHEDULE 40 PVC CONDUIT SIZED TO ACCEPT CONDUIT WITH ±1/4" ANNULAR SPACE FOR CAULK. SEAL BETWEEN SLEEVE AND CONDUIT WITH BACKER AND DOUBLE APPLICATION OF CLEAR LIFETIME SILICONE CAULK (BOTH SIDES). REPAIR WALL OPENING AROUND SLEEVE WITH NON-SHRINK HYDRAULIC GROUT FINISHED SMOOTH TO WALL SURFACE (BOTH SIDES). FINISH PAINT TO MATCH EXISTING BUILDING WALL COLOR.

SOFFITS:
PENETRATE SOFFIT CENTERED IN FLAT PART OF PANEL. CUT CIRCULAR OPENING IN FASCIA NO MORE THAN 1/4" LARGER THAN SLEEVE DIAMETER. COVER OPENING AND MAKE WEATHERTIGHT WITH STAINLESS STEEL ESCUTCHEON SET IN BED OF CLEAR LIFETIME SILICONE CAULK AND SECURED WITH SS SCREWS.

FASCIA:
PENETRATE FASCIA CENTERED IN FLAT PART OF PANEL. CUT CIRCULAR OPENING IN FASCIA NO MORE THAN 1/4" LARGER THAN SLEEVE DIAMETER. PROVIDE SLEEVE SAME AS FOR EXTERIOR WALLS AND SEAL WATERTIGHT (SLEEVE TO FASCIA AND SLEEVE TO CONDUIT) WITH BACKING AND DOUBLE APPLICATION OF CLEAR LIFETIME SILICONE CAULK (BOTH SIDES). COVER OPENING WITH STAINLESS STEEL ESCUTCHEON SET IN BED OF CLEAR LIFETIME SILICONE CAULK AND MAKE WEATHERTIGHT. SECURED WITH SS SCREWS.

COMMUNICATIONS SITE PLAN LEGEND:

- PB — COMMUNICATIONS PULL BOX, SIZE AS INDICATED.
- HH — COMMUNICATIONS HAND HOLE. SEE HAND HOLE DETAILS.
- ——— COMMUNICATIONS BACKBONE CONDUIT RUN ABOVEGROUND, QUANTITY AS INDICATED.
- — — — COMMUNICATIONS BACKBONE CONDUIT RUN UNDERGROUND, QUANTITY AS INDICATED.

Graphic Scale
30 15 0 30FT 60FT
SCALE: 1" = 30'-0"

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100% CONSTRUCTION DOCUMENTS

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1104 Balboa Avenue, Panama City, FL 32401

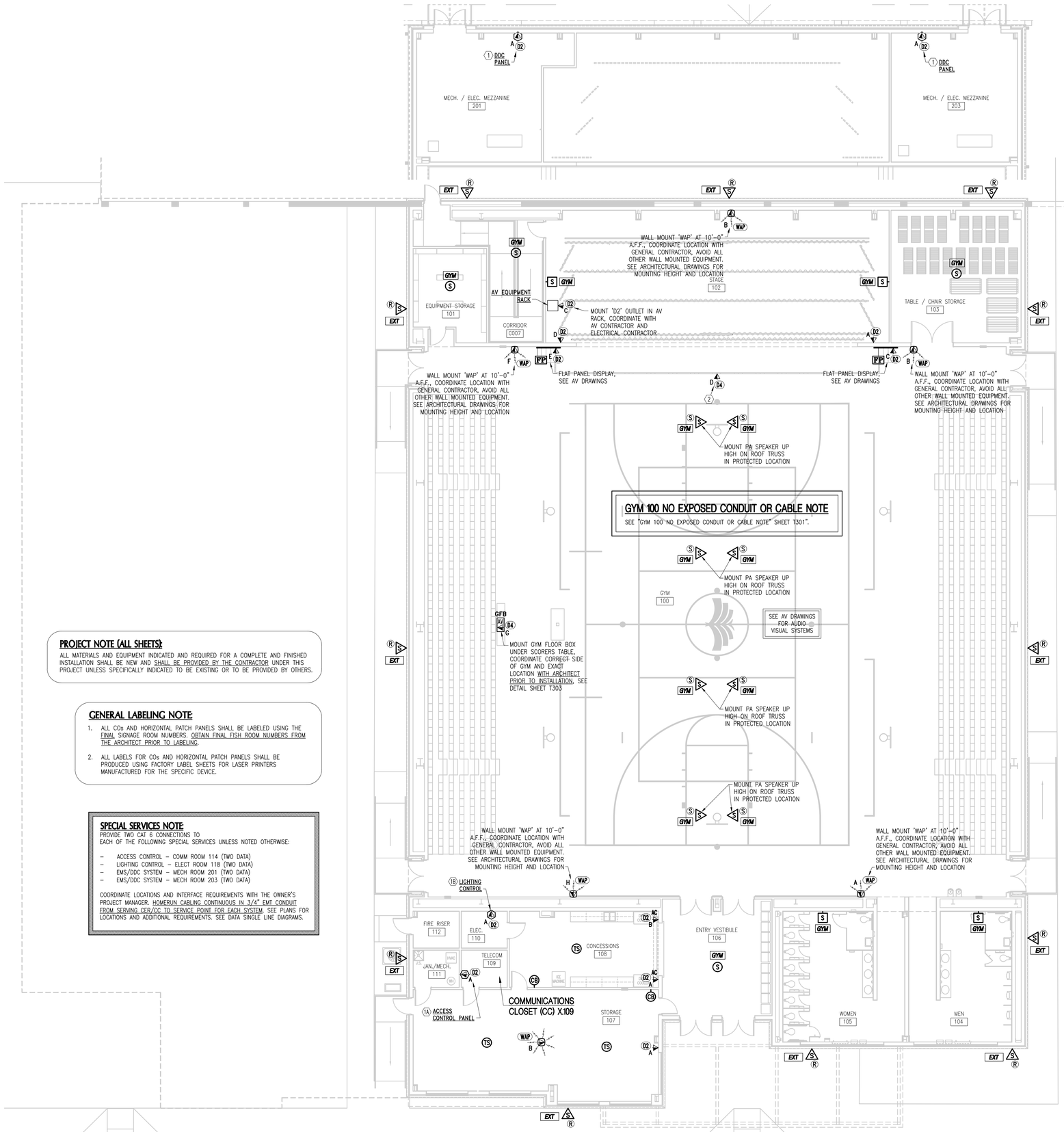
REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

COMMUNICATIONS SITE PLAN

PROJECT NUMBER	22019
DATED	01/31/2025

T101



PROJECT NOTE (ALL SHEETS):

ALL MATERIALS AND EQUIPMENT INDICATED AND REQUIRED FOR A COMPLETE AND FINISHED INSTALLATION SHALL BE NEW AND SHALL BE PROVIDED BY THE CONTRACTOR UNDER THIS PROJECT UNLESS SPECIFICALLY INDICATED TO BE EXISTING OR TO BE PROVIDED BY OTHERS.

GENERAL LABELING NOTE:

1. ALL COs AND HORIZONTAL PATCH PANELS SHALL BE LABELED USING THE FINAL SIGNAGE ROOM NUMBERS. OBTAIN FINAL FISH ROOM NUMBERS FROM THE ARCHITECT PRIOR TO LABELING.
2. ALL LABELS FOR COs AND HORIZONTAL PATCH PANELS SHALL BE PRODUCED USING FACTORY LABEL SHEETS FOR LASER PRINTERS MANUFACTURED FOR THE SPECIFIC DEVICE.

SPECIAL SERVICES NOTE

PROVIDE TWO CAT 6 CONNECTIONS TO EACH OF THE FOLLOWING SPECIAL SERVICES UNLESS NOTED OTHERWISE:

- ACCESS CONTROL – COMM ROOM 114 (TWO DATA)
- LIGHTING CONTROL – ELECT ROOM 118 (TWO DATA)
- EMS/DDC SYSTEM – MECH ROOM 201 (TWO DATA)
- EMS/DDC SYSTEM – MECH ROOM 203 (TWO DATA)

COORDINATE LOCATIONS AND INTERFACE REQUIREMENTS WITH THE OWNER'S PROJECT MANAGER. HOMERUN CABLING CONTINUOUS IN 3/4" EMT CONDUIT FROM SERVING CER/CC TO SERVICE POINT FOR EACH SYSTEM. SEE PLANS FOR LOCATIONS AND ADDITIONAL REQUIREMENTS. SEE DATA SINGLE LINE DIAGRAMS.

COMMUNICATIONS OUTLET NOTE

COMMUNICATIONS OUTLET LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EACH OUTLET WITH THE ARCHITECT, THE OWNER'S PROJECT MANAGER AND THE ELECTRICAL CONTRACTOR PRIOR TO THE CONDUIT AND DEVICE BOX ROUGH-IN. PARTICULAR ATTENTION SHALL BE GIVEN TO COORDINATION OF OUTLET LOCATIONS RELATIVE TO WINDOWS, CASEWORK AND OTHER OBSTRUCTIONS. ALL COMMUNICATIONS OUTLETS (CO's) SHALL BE LOCATED AT 18" A.F.F. UNLESS INDICATED OTHERWISE ON FLOOR PLANS AND DETAILS OR SO DIRECTED BY ARCHITECT IN THE FIELD. FOR MOUNTING HEIGHTS OF LARGE SURFACE RACEWAY AND BOXES AT STUDENT COMPUTER STATIONS AND TEACHER STATIONS, SEE LARGE RACEWAY DETAILS.

COMMUNICATIONS LEGEND

- GYM 100 — ARCHITECT'S ROOM NUMBER, SEE "GENERAL LABELING NOTE."
- D2 A — COMMUNICATIONS OUTLET (CO), TYPE 'D2'. SEE DETAILS. LETTER INDICATES DESIGNATION OF OUTLET IN ROOMS WITH MORE THAN ONE OUTLET.
- D4 A — COMMUNICATIONS OUTLET (CO), TYPE 'D4'. SEE DETAILS. LETTER INDICATES DESIGNATION OF OUTLET IN ROOMS WITH MORE THAN ONE OUTLET.
- GFB AV D4 A — COMMUNICATIONS OUTLET (CO) MOUNTED IN GYM FLOOR BOX, TYPE 'D4', AV AND POWER. LETTER INDICATES DESIGNATION OF OUTLET IN ROOMS WITH MORE THAN ONE OUTLET. SEE "HIGH LOAD CAPACITY GYMNASIUM FLOOR BOX DETAIL", SHEET T303. SEE ELECTRICAL DRAWINGS AND AV DRAWINGS.
- WAP A — WIRELESS ACCESS POINT (WAP) MOUNTED IN CEILING OR ON WALL AS INDICATED. SEE WIRELESS ACCESS POINT (WAP) MOUNTING DETAILS. LETTER INDICATES DESIGNATION OF WAP IN ROOMS WITH MORE THAN ONE WAP.
- D2 A — SPECIAL SERVICE OUTLET (CO), TYPE 'D2'. SEE "SPECIAL SERVICES NOTE" AND PLANS. RUN CABLING CONTINUOUS TO CC IN CONDUIT. LETTER INDICATES DESIGNATION OF OUTLET IN ROOMS WITH MORE THAN ONE OUTLET.
- IFP — INTERACTIVE FLAT PANEL, SEE DETAILS.
- FP — FLAT PANEL, SEE DETAILS.
- GYM — INTERCOM/PA SYSTEM ONE-WAY SPEAKER HARD-WIRED ZONE NAME.
- TS — INDOOR CEILING MOUNT TALKBACK INTERCOM/PA SPEAKER. IN LAY-IN CEILINGS CAREHAWK SPL-24-RTRJ. IN HARD CEILINGS 8-INCH ROUND SPEAKERS CAREHAWK WITH BRIDGE AND BACKBOX. IN ROOMS WITH EXPOSED ROOF STRUCTURE OR IN ROOMS WITH INACCESSIBLE HARD CEILINGS CAREHAWK VANDAL RESISTANT SURFACE WALL MOUNT SPEAKER WITH PAINTED STEEL ANGLED ENCLOSURE. CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATION AND QUANTITIES OF SPEAKER TYPES BASED ON CEILING CONDITIONS.
- S S — INDOOR CEILING MOUNT ONE-WAY INTERCOM/PA SPEAKER WITH TWO RJ45 JACKS FOR DAISY CHAINING OF MULTIPLE SPEAKERS ON SAME ZONE. IN LAY-IN CEILINGS CAREHAWK SPL-24-RTRJ. IN HARD CEILINGS 8-INCH ROUND SPEAKERS CAREHAWK WITH BRIDGE AND BACKBOX. IN ROOMS WITH EXPOSED ROOF STRUCTURE OR IN ROOMS WITH INACCESSIBLE HARD CEILINGS CAREHAWK VANDAL RESISTANT SURFACE WALL MOUNT SPEAKER WITH PAINTED STEEL ANGLED ENCLOSURE. CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATION AND QUANTITIES OF SPEAKER TYPES BASED ON CEILING CONDITIONS.
- S R A — OUTDOOR ONE-WAY PA VANDAL RESISTANT SPEAKER, RECESSED MOUNT 16 WATT, TELECOR STB-16 SPEAKER AND FLUSH MOUNT FACEPLATE ASSEMBLY WITH TELECOR H16 FULLY RECESSED FACTORY BACKBOX. FLUSH MOUNT IN WALL AT FINAL HEIGHT AND LOCATION AS DIRECTED BY THE ARCHITECT. COORDINATE WITH GENERAL CONTRACTOR AND ARCHITECT PRIOR TO ROUGH-IN. PROVIDE 3/4" CONDUIT SLEEVE THRU WALL AND SET JUNCTION BOX IN ACCESSIBLE LOCATION ABOVE LAY-IN CEILING, THEN FREE ROUTE CABLING ABOVE CEILING TO SERVING CC. SEE "SPEAKER ATTACHMENT NOTES".
- S S A — GYM SPEAKERS – OUTDOOR/INDOOR GRADE HEAVY DUTY ONE-WAY INTERCOM/PA SPEAKER WITH VOLUME CONTROL, SURFACE MOUNT 5 WATT HORN TYPE SPEAKER, CAREHAWK. MOUNT SPEAKER BASE DIRECTLY TO GYM ROOF TRUSS. RUN 3/4" CONDUIT HARD AGAINST ROOF TRUSS ALONG WITH OTHER UTILITIES OVER TO ACCESSIBLE LOCATION ABOVE LAY-IN CEILING, THEN FREE ROUTE CABLING ABOVE CEILING TO SERVING CC. GENERAL CONTRACTOR PAINT CONDUIT TO MATCH GYM ROOF STRUCTURE. SEE "SPEAKER ATTACHMENT NOTES" SHEET T305.
- CB — INTERCOM/PA CALL SWITCH, CAREHAWK CS100. FLUSH MOUNT IN WALL AT 48" A.F.F. USING CONCEALED CONDUIT ROUGH-IN. SEE DETAILS.

ABBREVIATIONS

CER	COMMUNICATIONS EQUIPMENT ROOM	RMC	RIGID METALLIC CONDUIT	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CC	COMMUNICATIONS CLOSET	IMC	INTERMEDIATE METALLIC CONDUIT	OFOI	OWNER FURNISHED OWNER INSTALLED
CO	COMMUNICATIONS OUTLET	HH	HAND HOLE	CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
A.F.F.	ABOVE FINISHED FLOOR	WP	WATERPROOF	AV, A/V	AUDIO-VISUAL
AC	ABOVE COUNTER	SS	STAINLESS STEEL	WAP	WIRELESS ACCESS POINT
N.I.C.	NOT IN CONTRACT	IFP	INTERACTIVE FLAT PANEL DISPLAY	CM	CONSTRUCTION MANAGER
HPP	HORIZONTAL PATCH PANEL	FP	FLAT PANEL DISPLAY	PM	PROJECT MANAGER
PB	PULLBOX	SCED	SCHEDULE	GC	GENERAL CONTRACTOR
GALV	GALVANIZED STEEL	TYP	TYPICAL	PA	PUBLIC ADDRESS SYSTEM
DDC	DIRECT DIGITAL CONTROLS (HVAC)	ARCH	ARCHITECTURAL	EXT	EXTERIOR
EMS	ENERGY MANAGEMENT SYSTEM = DDC (HVAC)	SCS	STRUCTURED CABLING SYSTEM	CCTV	CLOSED CIRCUIT TELEVISION SECURITY CAMERA SYSTEM
IP	INTERNET PROTOCOL	SCSC	STRUCTURED CABLING SYSTEM CONTRACTOR		

COMMUNICATIONS FLOOR PLAN KEY NOTES:

(1) EMS/DDC SYSTEM CONNECTION: SEE SPECIAL SERVICES NOTE. RUN CABLING CONTINUOUS IN CONDUIT. PROVIDE "BISCUIT" STYLE 'D2' OUTLET LABELED WITH "DDC" AND SERVING CLOSET. MOUNT OUTLET INSIDE THE EMS/DDC PANEL LOCATION AS DIRECTED BY THE DDC CONTRACTOR. FINAL LOCATION OF DDC PANEL IS UNKNOWN – COORDINATE WITH THE GENERAL CONTRACTOR AND THE EMS/DDC SYSTEM INSTALLER FOR FINAL DDC PANEL LOCATION. SEE DATA SINGLE LINE FOR CABLING.

(1A) ACCESS CONTROL PANEL CONNECTION: SEE SPECIAL SERVICES NOTE. RUN CABLING CONTINUOUS IN CONDUIT. PROVIDE "BISCUIT" STYLE 'D2' OUTLET LABELED WITH "ACCESS CONTROL" AND SERVING CLOSET. MOUNT INSIDE ACCESS CONTROL PANEL. COORDINATE WITH GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR, AND ACCESS CONTROL SYSTEM CONTRACTOR. ACCESS CONTROL SYSTEM CONTRACTOR IS RESPONSIBLE FOR ANY UL SECONDARY LISTED SURGE PROTECTION DEVICE REQUIRED TO PROTECT ACCESS CONTROL PANEL. SEE DATA SINGLE LINE FOR CABLING.

(1B) LIGHTING CONTROL PANEL CONNECTION: SEE SPECIAL SERVICES NOTE. RUN CABLING CONTINUOUS IN CONDUIT. PROVIDE "BISCUIT" STYLE "D2" OUTLET LABELED WITH "LIGHTING CONTROL" AND SERVING CLOSET. MOUNT OUTLET INSIDE THE LIGHTING CONTROL PANEL AS DIRECTED BY THE ELECTRICAL CONTRACTOR. FINAL LOCATION OF LCP PANEL IS UNKNOWN – COORDINATE WITH THE GENERAL CONTRACTOR AND THE ELECTRICAL CONTRACTOR FOR FINAL LCP PANEL LOCATION. SEE DATA SINGLE LINE FOR CABLING.

(2) MOUNT CO FLUSH ON VERTICAL FACE OF STAGE WALL – USE BELDEN STAINLESS STEEL FACEPLATE THIS APPLICATION. RUN 1" SCHEDULE 80 PVC CONDUIT DOWN CONCEALED IN WALL AND TURN TO RUN UNDER FLOOR SLAB TO SERVING CC. RUN UNDERGROUND CONDUIT STRAIGHT "AS THE CROW FLIES" FROM POINT OF TURNING DOWN THRU FLOOR SLAB TO RUN UNDERGROUND OVER TO POINT OF TURNING UP IN SERVING CC WITH NO ELBOWS OR TIGHT BENDS OTHER THAN THE TWO ELBOWS WHERE TURNING DOWN FROM OUTLET AND TURNING UP INTO THE CC. IN CC TURN CONDUITS UP THRU FLOOR IN LOCATION SHOWN ON ENLARGED CC FLOOR PLAN AND TERMINATE AT 4" A.F.F. WITH END BELL. MAKE ALL UNDERGROUND JOINTS WATERTIGHT. ELECTRICAL CONTRACTOR VALIDATE CONTINUITY OF CONDUIT, BLOW OR VACUUM ALL WATER OUT OF CONDUIT, AND INSTALL HEAVY DUTY PULL STRING CONTINUOUS FROM END TO END OF EACH CONDUIT PRIOR TO FLOOR SLAB POUR. ELECTRICAL CONTRACTOR PROVIDE 10' OF PULL STRING SLACK AT EACH END. TEMPORARILY CAP CONDUIT ENDS TO PREVENT ENTRY OF WATER AND DIRT. STRUCTURED CABLING SYSTEM CONTRACTOR AGAIN BLOW WATER OUT OF CONDUITS PRIOR TO INSTALLING CABLES. SCSC PROVIDE ALL BURIAL GRADE CATEGORY 6 CABLE. SEE CC ENLARGED FLOOR PLAN AND GENERAL ABOVEGROUND CONDUIT NOTES.

COMMUNICATIONS FLOOR PLAN

SCALE: 1/8" = 1'-0"

Graphic Scale
8 4 0 8FT 16FT
SCALE: 1/8" = 1'-0"

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100% CONSTRUCTION DOCUMENTS

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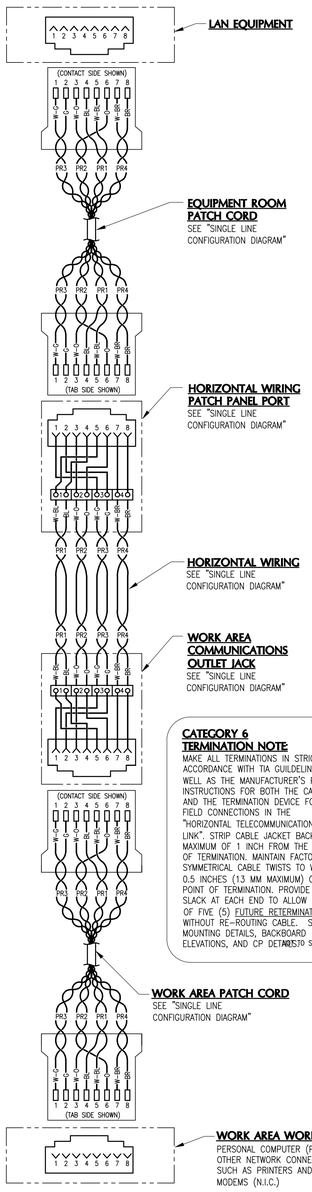
REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

COMMUNICATIONS FLOOR PLAN

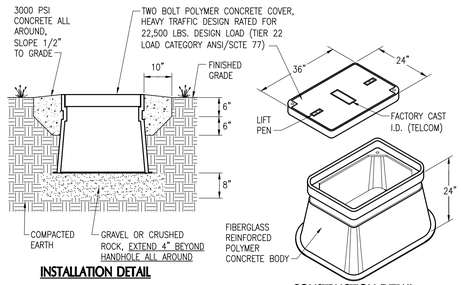
PROJECT NUMBER	22019
DATED	01/31/2025

T201



TYPICAL POINT-TO-POINT WIRING DIAGRAM WORK AREA WORKSTATION TO LAN EQUIPMENT CATEGORY 6 "HORIZONTAL TELECOMMUNICATIONS CHANNEL"

NOT TO SCALE



INSTALLATION DETAIL

CONSTRUCTION DETAIL

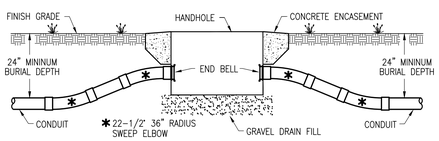
COMMUNICATIONS HANDHOLE NOTES:

1) HANDHOLE SHALL BE 36"x24"x24" DEEP, OLDCASTLE H SERIES. COVER AND BODY SHALL BOTH BE HEAVY TRAFFIC RATED, 22,500 POUND DESIGN LOAD, ANSI/SCTE 77 TIER 22 LOAD CATEGORY. COVER LOGO SHALL BE "TELCOM" OR "COMMUNICATIONS". INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS AND THE REQUIREMENTS OF THIS PROJECT.

2) TERMINATE CONDUITS ENTERING HANDHOLE WITH END BELL (CARLON E997). CONSTRUCT CONDUIT RISE TO ENTER BOX FROM SIDE WITH 22-1/2° SWEEP ELBOWS. SEE "TYPICAL HANDHOLE CONDUIT ENTRY DETAIL". DO NOT ENTER HANDHOLE FROM BOTTOM.

LARGE COMMUNICATIONS HANDHOLE TYPICAL DETAILS

NOT TO SCALE



TYPICAL HANDHOLE CONDUIT ENTRY DETAIL

NOT TO SCALE

GENERAL ABOVEGROUND CONDUIT NOTES:

1. SEE PLANS, NOTES AND DETAILS FOR SPECIAL REQUIREMENTS TO RUN HORIZONTAL CABLING, SECURITY CAMERA CABLING, AND ACCESS CONTROL SYSTEM CABLING IN CONDUIT UNDERGROUND – ALL SUCH CABLING SHALL BE BURIAL GRADE GEL FILLED.
2. CONDUIT INSTALLER PROVIDE PULL STRINGS IN ALL HORIZONTAL CABLE CONDUITS AND PULL TAPE IN ALL BACKBONE CONDUITS FOR USE BY CABLING INSTALLER.
3. LOCATION AND ROUTING OF ABOVEGROUND CONDUITS IS APPROXIMATE AND DEPICTS DESIGN INTENT ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING FINAL CONDUIT ROUTING IN THE FIELD. THE CONTRACTOR SHALL COORDINATE THE FINAL ROUTING OF CONDUITS TO AVOID CONFLICTS WITH OTHER TRADES, WHILE MINIMIZING CHANGES IN DIRECTION AND OVERALL CONDUIT LENGTH. OBTAIN APPROVAL OF ENGINEER PRIOR TO ANY CHANGES IN ROUTING. CONDUIT INSTALLER – PROVIDE PULL TAPE IN ALL BACKBONE CABLING CONDUITS CONTINUOUS FROM END TO END.
4. FREE-ROUTE CATEGORY 6 AND CATEGORY 6A HORIZONTAL CABLES NOT OTHERWISE INDICATED TO BE HOMERUN IN CONDUIT. SEE "HORIZONTAL CABLE ROUTING NOTE" AND "HORIZONTAL CABLING CONDUIT SLEEVES NOTE". LIMITED TO CABLES ABOVE CEILINGS – NO EXPOSED CABLES ALLOWED.
5. PROVIDE A HOMERUN CONDUIT RUN CONTINUOUSLY CONCEALED IN WALLS AND OVERHEAD FROM EACH IP SECURITY CAMERA TO SERVING CC. EACH HOMERUN CONDUIT SHALL BE 3/4" TRADE SIZE. SEE "IP SECURITY CAMERA CONDUIT NOTES" THIS SHEET. CONDUIT INSTALLER SHALL PROVIDE PULL STRINGS IN ALL HORIZONTAL CONDUITS CONTINUOUS FROM END TO END.
6. PROVIDE A HOMERUN CONDUIT RUN CONTINUOUSLY CONCEALED IN WALLS AND OVERHEAD FROM EACH SPECIAL SERVICE OUTLET TO SERVING CC. EACH HOMERUN CONDUIT SHALL BE 3/4" TRADE SIZE. CONDUIT INSTALLER SHALL PROVIDE PULL STRINGS IN ALL HORIZONTAL CONDUITS CONTINUOUS FROM END TO END.
7. CONDUITS RUN INDOORS SHALL BE RUN CONCEALED OVERHEAD ABOVE CEILINGS UNLESS LOCATED IN SPACES WITHOUT CEILINGS, IN AN UNFINISHED SPACE SUCH AS EQUIPMENT ROOMS. INDOOR CONDUIT SHALL BE EMT WITH STEEL FITTINGS EXCEPT WHERE RIGID THREADED CONDUIT IS INDICATED. DIE CAST EMT FITTINGS ARE NOT ALLOWABLE. FITTINGS IN EXPOSED INDOOR LOCATIONS SHALL BE STEEL COMPRESSION TYPE. FITTINGS IN CONCEALED INDOOR LOCATIONS SHALL BE STEEL SET SCREW TYPE. SUPPORT EXPOSED CONDUIT AT A MINIMUM OF 4'-0" ON CENTER WITH 2-HOLE HEAVY DUTY GALVANIZED STEEL HARDWARE. DO NOT RUN CONDUITS BELOW SLAB EXCEPT AS SPECIFICALLY INDICATED.
8. WHERE RIGID CONDUIT (RMC) IS INDICATED, PROVIDE ALL THREADED WATERTIGHT RIGID GALVANIZED THREADED FITTINGS. IN ALL LOCATIONS WHERE INDICATED OUTDOORS PROVIDE RIGID CONDUIT ONLY (RMC). WHERE INDICATED INDOORS CONTRACTOR MAY PROVIDE IMC CONDUIT, BUT ALL FITTINGS SHALL BE THREADED RMC. MAINTAIN ELECTRICAL CONTINUITY FROM END-TO-END AND TERMINATE/GROUND WITH UL LISTED BONDING BUSHING.
9. SUPPORT CONDUIT DIRECTLY FROM BUILDING STRUCTURE USING APPROVED HARDWARE. DO NOT SUPPORT CONDUIT FROM OTHER SYSTEMS COMPONENTS OR SUPPORTS. ROUTE ALL CONDUITS AS HIGH AS POSSIBLE. WHERE CONDUIT IS EXPOSED RUN HARD AGAINST WALL OR UNDERSIDE OF ROOF/FLOOR DECK. RUN ALL CONDUITS PARALLEL/PERPENDICULAR AND PLUMB WITH BUILDING LINES.
10. CONDUIT BODIES SUCH AS 'LB' FITTINGS ARE NOT ALLOWABLE.
11. PROVIDE PULLBOXES OF THE SAME TYPE AND SIZE AS THOSE INDICATED ON DRAWINGS FOR EACH RUN OF CONDUIT AT EVERY 100 FEET ON CENTER AND AT EACH END OF CONDUIT RUNS CONTAINING A TOTAL OF TWO 90 deg BENDS OR A COMBINATION OF LESSER BENDS TOTALING 180 deg (MINIMUM REQUIREMENTS – PROVIDE WHETHER SPECIFICALLY INDICATED OR NOT). CONDUIT RUNS CONTAINING MORE THAN TWO 90 deg BENDS WITHOUT A PULLBOX ARE NOT ALLOWABLE. FACTORY CONDUIT ELBOWS AND ALL OTHER BENDS SHALL HAVE A MINIMUM RADIUS OF SIX TIMES THE INTERNAL CONDUIT DIAMETER. CONDUIT OFFSETS AND PULLBOXES REQUIRED TO SUIT FIELD CONDITIONS AND TO CONFORM TO THESE REQUIREMENTS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
12. PULLBOXES FOR BACKBONE CONDUITS SHALL BE AS INDICATED. PULL BOXES FOR HOMERUN CONDUITS SHALL BE 4" WIDE x 4" LONG x 2-1/8" DEEP NEMA 1 GALVANIZED STEEL WITH SCREW COVER. WHERE HOMERUN CONDUITS ARE TIGHTLY RACKED WITH UNIFORM SPACING, WIDER PULL BOXES MAY BE PROVIDED TO SERVE MULTIPLE CONDUITS. TERMINATE CONDUITS AT OPPOSITE ENDS OF PULLBOXES. DO NOT TERMINATE CONDUITS IN PULLBOXES AT RIGHT ANGLES TO EACH OTHER. HOMERUN CONDUITS SHALL NOT BE COMBINED INTO LARGER CONDUITS SERVING MULTIPLE OUTLETS. PROVIDE INDIVIDUAL HOMERUN CONDUITS FROM EACH SECURITY CAMERA.
13. WHERE CONDUIT AND PULLBOXES ARE LOCATED ABOVE NON-ACCESSIBLE CEILINGS OR SOFFITS (EXAMPLE PLASTER, METAL, OR GYPSUM BOARD), INSTALL AN 24"x 24" ALL ALUMINUM CEILING ACCESS DOOR IN CEILING DIRECTLY BELOW EACH SUCH PULLBOX. ACCESS DOORS SHALL BE LARSEN'S L-LCP, ALL ALUMINUM CONSTRUCTION AND FASTENERS. PROVIDE ACCESS DOORS FACTORY PRIMED FOR PAINTING. FINISH PAINT WITH TWO COATS ENAMEL AFTER INSTALLATION TO MATCH EXISTING CEILING, SOFFIT, OR WALL.
14. TERMINATE ALL CONDUIT ENDS WITH THREADED PLASTIC INSULATING BUSHINGS (PUSH-ON NOT ALLOWABLE). BUSHINGS MUST FIT TIGHTLY ON CONDUIT CONNECTOR THREADS. INSTALL ALL BUSHINGS PRIOR TO PULLING CABLE. CONDUIT INSTALLER PROVIDE PULL STRINGS IN ALL HORIZONTAL CABLE CONDUITS AND PULL TAPE IN ALL BACKBONE CONDUITS FOR USE BY CABLING INSTALLER. LEAVE 10'-0" OF PULL TAPE SLACK AT EACH END OF BACKBONE CONDUIT AND TAPE EXCESS INTO ROLL.
15. IDENTIFICATION: IDENTIFY ALL COMMUNICATIONS CONDUITS AND PULLBOXES ABOVE LAY-IN CEILINGS, ACCESS DOORS AND IN ROOF SPACE WITH BLUE PAINT AT EVERY PULLBOX AND ON CONDUIT AT EACH COUPLER (PAINT ENTIRE COUPLER). DO NOT PAINT CONDUIT COUPLERS AND ENCLOSURES IN CC. IDENTIFY ALL BACKBONE CONDUIT PULLBOXES. PAINT WITH 1" TALL LETTER STENCIL (COLOR BLUE) THE WORDS "TELCOM" ON EACH PULLBOX COVER. LETTERING SHALL BE LEVEL AND SQUARE AND AT CENTER OF PULLBOX COVER.
16. IDENTIFICATION: IDENTIFY ALL CCTV IP SECURITY CAMERA CONDUITS AND PULLBOXES ABOVE LAY-IN CEILINGS, ACCESS DOORS AND IN ROOF SPACE WITH RED PAINT AT EVERY PULLBOX AND ON CONDUIT AT EACH COUPLER (PAINT ENTIRE COUPLER). DO NOT PAINT CONDUIT COUPLERS AND ENCLOSURES IN CC. IDENTIFY ALL CCTV CONDUIT PULLBOXES. PAINTING WITH 1" TALL LETTER STENCIL (COLOR GREEN) THE WORDS "CCTV" ON EACH PULLBOX COVER. LETTERING SHALL BE LEVEL AND SQUARE AND AT CENTER OF PULLBOX COVER.
17. IDENTIFICATION: IDENTIFY ALL INTERCOM/PA CONDUIT SLEEVES AND PULLBOXES ABOVE LAY-IN CEILINGS, ACCESS DOORS AND IN ROOF SPACE WITH YELLOW PAINT AT EVERY PULLBOX AND ON CONDUIT AT EACH COUPLER (PAINT ENTIRE COUPLER). DO NOT PAINT CONDUIT COUPLERS AND ENCLOSURES IN CC. PAINT WITH 1" TALL LETTER STENCIL (COLOR YELLOW) THE WORDS "INTERCOM/PA" ON EACH PULLBOX COVER. LETTERING SHALL BE LEVEL AND SQUARE AND AT CENTER OF PULLBOX COVER.
14. PAINTING: PAINT ALL OUTDOOR CONDUITS WHERE ENTERING EXISTING BUILDING, SEE SITE PLAN. COLORS SHALL MATCH EXISTING ADJACENT SURFACES (INCLUDING MATCHING COLOR AND LUSTER FOR BRICK WALLS). PREP ALL GALVANIZED SURFACES BY THOROUGHLY WASHING WITH VINEGAR, THEN PRIME WITH GLIDDEN "GRIPPER" GL-3250 GREY PRIMER. PREP FACTORY PAINTED BOXES BY ROUGHENING WITH SANDPAPER, PRIMING, AND PAINTING. FINISH ALL SURFACES WITH TWO COATS PREMIUM GRADE ACRYLIC LATEX EXTERIOR PAINT, COLOR TO MATCH ADJACENT SURFACE. PROVIDE SEMI-GLOSS PAINT AT FASCIAS AND OTHER PRE-FINISHED METAL SURFACES AND SURFACES FINISHED WITH SEMI-GLOSS PAINT. PROVIDE FLAT PAINT AT BRICK WALLS AND OTHER FLAT FINISHED SURFACES.

GENERAL UNDERGROUND CONDUIT NOTES:

1. LOCATION AND ROUTING OF NEW UNDERGROUND CONDUIT IS APPROXIMATE. THE CONTRACTOR SHALL COORDINATE THE FINAL LOCATION AND ROUTING OF CONDUIT TO AVOID CONFLICTS WITH BURIED UTILITIES AND OTHER OBSTRUCTIONS. SIGNIFICANT CHANGES TO CONDUIT ROUTING SHALL REQUIRE THE APPROVAL OF THE ENGINEER.
2. ALL BURIED CONDUIT SHALL BE SCHEDULE 80 ELECTRICAL GRADE PVC CONDUIT. ALL PVC CONDUIT JOINTS SHALL BE CLEANED AND GLUED FOR A WATERTIGHT CONNECTION. TERMINATE ENDS OF PVC CONDUIT AT CLOSETS AND HANDHOLES WITH END BELLS.
3. SEAL ALL UNDERGROUND CONDUITS WATERTIGHT AT ALL HANDHOLE EXITS AND AT ALL BUILDING ENTRY POINTS FOLLOWING CABLE INSTALLATION TO PREVENT THE ENTRY OF WATER INTO BUILDINGS, AND TO PREVENT THE ENTRY OF WATER OR DEBRIS INTO THE CONDUITS FROM THE BUILDING OR HANDHOLES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION OF ALL EXISTING BURIED UTILITIES PRIOR TO COMMENCING ANY EXCAVATION REQUIRED FOR WORK UNDER THE PROJECT. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITIES THAT OCCURS AS A RESULT OF OPERATIONS PERFORMED UNDER THIS CONTRACT AT NO ADDITIONAL COST TO THE OWNER. REPAIRS SHALL BE MADE USING MATERIALS & METHODS TO MATCH EXISTING CONSTRUCTION AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO RE-COVERING.
5. LOCATION OF HANDHOLES SHOWN IS INTENDED TO PLACE HANDHOLES IN ACCESSIBLE SODDED, PLANTED OR PAVED AREAS. COORDINATE LOCATIONS WITH DRAINAGE STRUCTURES, SIDEWALKS, OTHER OUTSIDE STRUCTURES, AND LANDSCAPING TO AVOID CONFLICTS.
6. PROVIDE HANDHOLES IN UNDERGROUND CONDUIT AS INDICATED AND ADDITIONAL HANDHOLES AS REQUIRED DUE TO CHANGES IN CONDUIT DIRECTION. INSTALL A HANDHOLE IN EACH CONDUIT RUN OF LONGER THAN 500 FEET OR CONTAINING THE EQUIVALENT OF MORE THAN TWO 90° BENDS. INSTALL HANDHOLES AFTER BENDS AS INDICATED. DO NOT USE HANDHOLES TO MAKE A CHANGE IN DIRECTION.
7. RESTORE TO THEIR ORIGINAL ELEVATION AND CONDITION UNPAVED SURFACES DISTURBED DURING INSTALLATION OF UNDERGROUND CONDUIT. PRESERVE AND REPLACE SOD OR TOPSOIL AFTER INSTALLATION IS COMPLETED. REPLACE SOD THAT IS DAMAGED WITH SOD OF TYPE AND QUALITY EQUAL TO THAT REMOVED.
8. WHERE TRENCHES OR OTHER EXCAVATIONS ARE MADE IN AREAS OF EXISTING WALKWAYS WHERE SURFACE TREATMENT OF ANY KIND EXISTS, RESTORE SUCH SURFACE TREATMENT TO THE SAME THICKNESS AND IN THE SAME KIND AS PREVIOUSLY EXISTED (EXCEPT AS OTHERWISE INDICATED) AND TO MATCH AND TIE INTO THE ADJACENT AND SURROUNDING SURFACES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXTENT OF EXISTING SURFACE TREATMENT SUCH AS CONCRETE OR ASPHALTIC PAVING. THE DRAWINGS SHALL NOT BE CONSTRUED AS PROVIDING ACCURATE REPRESENTATION OF THE TYPE, LOCATION OR EXTENT OF SURFACE TREATMENT OF ANY KIND.
10. THE MINIMUM BEND RADIUS FOR ALL UNDERGROUND CONDUITS SHALL BE 10 TIMES THE INTERNAL CONDUIT DIAMETER.
11. BURIED WARNING AND IDENTIFICATION TAPE: PROVIDE METALLIC DETECTION TAPE MANUFACTURED SPECIFICALLY FOR WARNING AND IDENTIFICATION OF BURIED UTILITIES. INSTALL TAPE DIRECTLY ABOVE EACH BURIED CONDUIT AT DEPTH OF 10 TO 12 INCHES BELOW GRADE FOR ENTIRE LENGTH OF CONDUIT. TAPE SHALL BE DETECTABLE BY ANY STANDARD NON-FERRIC METAL DETECTOR. PROVIDE TAPE IN ROLLS, 2 INCHES MINIMUM WIDTH, COLOR ORANGE, WITH WARNING AND IDENTIFICATION IMPRINTED IN BOLD BLACK LETTERS CONTINUOUSLY AND REPEATEDLY OVER ENTIRE TAPE LENGTH. WARNING AND IDENTIFICATION SHALL READ "CAUTION BURIED COMMUNICATIONS LINE BELOW". USE PERMANENT CODE AND LETTER COLORING UNAFFECTED BY MOISTURE AND OTHER SUBSTANCES CONTAINED IN BACKFILL MATERIAL.
12. UNDERGROUND CONDUIT VALIDATION – FOLLOWING INSTALLATION OF UNDERGROUND CONDUITS, PERFORM THE FOLLOWING OPERATION FOR EACH CONDUIT: CLEAN, LUBRICATE AND VALIDATE EACH INSTALLED CONDUIT FOR SERVICEABILITY BY RUNNING A FULL SIZE RUBBER DUCT SWAB THROUGH THE CONDUIT FROM END TO END. CONDUITS THAT ARE OBSTRUCTED MAY BE CLEANED USING A WIRE BRUSH MANDREL, THEN REVALIDATED WITH THE FULL SIZE RUBBER DUCT SWAB. CONDUITS THAT DO NOT ALLOW PASSAGE OF THE FULL SIZE RUBBER DUCT SWAB SHALL BE REPLACED.
13. PULL TAPES: AS BACKBONE CABLING RUNS ARE INSTALLED CONDUIT INSTALLER SHALL PROVIDE A CONTINUOUS MARKED PULL TAPE (MULE TAPE WP2500P 2500 LB. TENSILE STRENGTH) FOR THE FULL LENGTH OF THE END-TO-END CABLE RUN WITH 10 FEET OF SLACK AT EACH END PULLED IN ALONGSIDE CABLING. BUNDLE SLACK NEATLY AT EACH END AND TIE OFF TO CONDUIT SUPPORT STRUT AT EACH END. PROVIDE CONTINUOUS FACTORY UNCUT LENGTHS OF PULL TAPE FROM END-TO-END – UNDER NO CIRCUMSTANCES SHALL PULL PARTIAL LENGTH SECTION OF PULL TAPE BE TIED TOGETHER.
14. SPARE CONDUITS: FOR CONDUITS THAT ARE INDICATED AS SPARE, INSTALL A CONTINUOUS MARKED PULL TAPE (CARLON TL382 1800 LB. TENSILE STRENGTH) FOR THE FULL LENGTH OF THE END-TO-END CONDUIT RUN WITH 10 FEET OF SLACK AT EACH END, TIE EACH END OF THE TAPE TO A BLANK DUCT PLUG WITH ROPE TIE TAB, PUSH SLACK TAPE BACK INTO CONDUIT, AND INSTALL A DUCT PLUG IN EACH CONDUIT END FOR A WATERTIGHT SEAL.

IP SECURITY CAMERA SPECIAL CONDUIT NOTES:

1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING FINAL CONDUIT ROUTING IN THE FIELD. THE CONTRACTOR SHALL COORDINATE THE FINAL ROUTING OF CONDUITS TO CONCEAL CONDUITS AND TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, OTHER UTILITIES AND OBSTACLES, WHILE MINIMIZING CHANGES IN DIRECTION AND OVERALL CONDUIT LENGTH. ALL CONDUIT SHALL BE RUN OVERHEAD AND CONCEALED EXCEPT AS SPECIFICALLY INDICATED. BEST ROUTING WITHIN BUILDINGS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR WITH THE LIMITATIONS SPECIFIED IN THESE NOTES AND THE CONTRACT DOCUMENTS IN GENERAL.
2. A HOMERUN CONDUIT SHALL BE RUN TO EACH CAMERA. CONDUITS RUN INDOORS SHALL BE RUN CONCEALED OVERHEAD ABOVE CEILINGS UNLESS LOCATED IN SPACES WITHOUT CEILINGS, IN SPACES WITH EXPOSED ROOF STRUCTURE, OR AS OTHERWISE SPECIFICALLY INDICATED. INDOOR CONDUIT SHALL BE EMT WITH STEEL COMPRESSION FITTINGS. DIE CAST EMT FITTINGS ARE NOT ALLOWABLE. SUPPORT EXPOSED CONDUIT AT A MINIMUM OF 4'-0" ON CENTER WITH 2-HOLE HEAVY DUTY GALVANIZED STEEL HARDWARE.
3. HOMERUN CONDUITS FROM CC SHALL BE A MAXIMUM OF 260 FEET LONG. PROVIDE PULLBOXES AT EVERY 100 FEET ON CENTER AND AT EACH END OF CONDUIT RUNS CONTAINING A TOTAL OF TWO 90 deg BENDS OR A COMBINATION OF LESSER BENDS TOTALING 180 deg (MINIMUM REQUIREMENTS – PROVIDE WHETHER SPECIFICALLY INDICATED OR NOT). CONDUIT RUNS CONTAINING MORE THAN TWO 90 deg BEND WITHOUT A PULLBOX ARE NOT ALLOWABLE. FACTORY CONDUIT ELBOWS AND ALL OTHER BENDS SHALL HAVE A MINIMUM RADIUS OF SIX TIMES THE INTERNAL CONDUIT DIAMETER. CONDUIT OFFSETS AND PULLBOXES REQUIRED TO SUIT FIELD CONDITIONS AND TO CONFORM TO THESE REQUIREMENTS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. PULL BOXES FOR 3/4" HOMERUN CONDUITS SHALL BE 4"x4"x2-1/8" WITH BLANK COVER.
4. IDENTIFICATION: IDENTIFY ALL INDOOR IP CAMERA CONDUITS, PULLBOXES ABOVE LAY-IN CEILINGS AND ACCESS DOORS WITH GREEN PAINT AT EVERY PULLBOX AND ON CONDUIT AT EACH COUPLER (PAINT ENTIRE COUPLER). IDENTIFY ALL CCTV CONDUIT PULLBOXES BY PAINTING WITH 1" TALL LETTER STENCIL (COLOR GREEN) THE WORDS "CCTV" ON EACH PULLBOX COVER. LETTERING SHALL BE LEVEL AND SQUARE AND AT CENTER OF PULLBOX COVER. DO NOT PAINT CONDUIT COUPLERS AND ENCLOSURES IN CC.
5. SEE ADDITIONAL NOTES FOR SECURITY CAMERAS ON SEC SHEETS.

FREE-ROUTED HORIZONTAL CABLING CONDUIT SLEEVES NOTE

CONDUIT SLEEVES FOR FREE-ROUTED HORIZONTAL CAT 6 AND CAT 6A CABLING: FINAL ROUTING PATHS FOR HORIZONTAL CABLING SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD. FOR THIS REASON CONDUIT SLEEVES ARE NOT INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE EMT CONDUIT SLEEVES IN THE QUANTITIES AND LOCATIONS REQUIRED TO SUIT THE CONTRACTOR SELECTED HORIZONTAL CABLE ROUTING AND AS REQUIRED FOR A COMPLETE INSTALLATION, REGARDLESS OF WHETHER THOSE SLEEVES ARE INDICATED ON THE DRAWINGS OR NOT, AND AT NO ADDITIONAL COST TO THE OWNER. AT ALL LOCATIONS WHERE HORIZONTAL CABLING RUNS THRU MECHANICAL OR ELECTRICAL EQUIPMENT ROOMS, STORAGE ROOMS, OR ANY OTHER TYPE OF ROOM WITH EXPOSED STRUCTURE CEILING, ALL SUCH CABLING SHALL BE RUN IN CONTINUOUS CONDUIT SLEEVES EXTENDING TO THE NEAREST ACCESSIBLE LAY-IN CEILING AT BOTH ENDS. IN ADDITION, THE CONTRACTOR SHALL PROVIDE CONDUIT SLEEVES TRAVERSING INACCESSIBLE (HARD) CEILING OR SOFFIT AREAS AND EXTENDING TO THE NEAREST ACCESSIBLE LAY-IN CEILING AT BOTH ENDS FOR CABLE PASS-THRU – PROVIDE ACCESS PANELS IN INACCESSIBLE CEILINGS AS REQUIRED TO INSTALL SLEEVES. SLEEVES SHALL BE SIZED FOR MAXIMUM 30 PERCENT CABLE FILL AND SHALL BE CONSTRUCTED AND PROVIDED WITH PULL BOXES AND ACCESS DOORS PER THE GENERAL ABOVEGROUND CONDUIT NOTES. GENERAL CONTRACTOR PAINT EXPOSED CONDUIT SLEEVES IN ALL FINISHED/OCCUPIED SPACES WITH NO CEILINGS TO MATCH ADJACENT SURFACES.

FREE-ROUTED HORIZONTAL CABLE ROUTING NOTE

ALL COMMUNICATIONS CABLE NOT SHOWN TO BE INSTALLED IN CONDUIT SHALL BE RUN ABOVE CEILINGS AND SHALL BE ROUTED UP HIGH DIRECTLY UNDER THE BUILDING ROOF STRUCTURE AND PROPERLY SUPPORTED WITH APPROVED HANGERS AT 4'-0" ON CENTER TO THE NEAREST WIRE BASKET CABLE TRAY (SEE 'WIRE BASKET CABLE TRAY NOTES' THIS SHEET). DO NOT RUN CABLES CLOSER THAN 6" BELOW ROOF DECK (TO AVOID DAMAGE FROM LONG SCREWS USED IN FUTURE ROOF REPLACEMENTS). RUN ALL CABLING ABOVE DUCTWORK, PIPING, CONDUITS AND ALL OTHER WORK BY OTHER TRADES AND PLACE FOR MAXIMUM PHYSICAL PROTECTION. BUNDLE CABLES TOGETHER AND ROUTE PARALLEL AND PERPENDICULAR TO BUILDING LINES. HANGERS SHALL BE ERICO CADDY "CABLECAT" CATEGORY-5 WITH WIDE BASE LOOP. SEE "CATEGORY 6 & CATEGORY 6A CABLE J-HOOK SCHEDULE" FOR MINIMUM J-HOOK SIZES AND MAXIMUM CABLE BUNDLE CABLE REQUIREMENTS. BUNDLE CABLES AT 4'-0" O.C. WITH VELCRO, COLOR BLUE FOR CATEGORY 6 CABLES AND COLOR RED FOR CATEGORY 6A WAP CABLES. ATTACH HANGERS TO THE BUILDING STRUCTURE. DO NOT ATTACH HANGERS TO CEILING GRID OR SUPPORT WIRES, CONDUITS, DUCTWORK, PIPING, OR ANY OTHER SYSTEM COMPONENT OR WORK OF OTHER TRADES. INSTALL CABLES TO AVOID ELECTROMAGNETIC INTERFERENCE FROM MOTORS, TRANSFORMERS, GENERATORS, ELEVATORS, POWER CABLES/CONDUITS, LIGHTING FIXTURES, ETC. DO NOT ROUTE CABLE THRU FIRE DAMPERS, HVAC DUCTS, VENTILATING SHAFTS, OR GRATES. DO NOT BLOCK ACCESS TO PULL/JUNCTION BOXES, HATCHES, DOORS, UTILITY ACCESS PANELS, MECHANICAL SERVICE AREAS, ELECTRICAL SERVICE AREAS, OR ANY OTHER SPACE ASSOCIATED WITH SERVICE OR ACCESS OF ANY TYPE. DO NOT RUN HORIZONTAL CABLING ABOVE CEILINGS OF CHEMICAL STORAGE ROOMS.

DUST CONTROL NOTE !

THE GENERAL CONTRACTOR AND THE STRUCTURED CABLING SYSTEM CONTRACTOR SHALL SHARE FULL RESPONSIBILITY FOR PROTECTING ALL COMMUNICATIONS OUTLETS AND THE CER/CC FROM DUST AND DEBRIS DURING CONSTRUCTION AND UNTIL FINAL COMPLETION OF THE PROJECT. THE SCS SHALL NOT INSTALL WIRE MANAGERS, PATCH PANELS, OR DRESS OUT AND TERMINATE CABLES UNTIL THE CC ARE COMPLETELY ISOLATED FROM DUST INFILTRATION WITH PLASTIC SHEETING AND DUCT TAPE. ALL COS JACKS SHALL BE PROTECTED BY BAGGING AND SEALING DUST TIGHT AT ALL TIMES AFTER CONNECTIVITY DEVICES ARE INSTALLED. ALL SYSTEM COMPONENTS THAT, IN THE SOLE JUDGMENT OF THE ENGINEER, ARE EXPOSED TO EXCESSIVE ACCUMULATION OF CONSTRUCTION DUST/DEBRIS AT ANY STAGE OF THE PROJECT SHALL BE REMOVED AND REPLACED WITH NEW COMPONENTS AT NO ADDITIONAL COST TO THE OWNER.

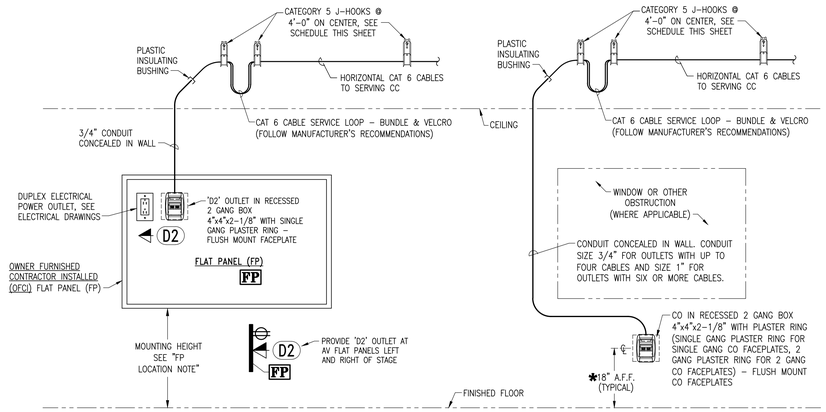
USE OF SCS FACILITIES BY BY OTHER TRADES

CC:	THE CC WITH ALL RELATED SPACE, BACKBOARDS, CABLE RUNWAY, ETC. ARE DEDICATED TO STRUCTURED CABLING SYSTEM COMPONENTS ONLY AND SHALL NOT BE USED IN ANY WAY BY ANY OTHER TRADE WITH THE EXCEPTION OF ELECTRICAL POWER AND HVAC WORK SPECIFICALLY ASSOCIATED WITH THAT SPACE.
J-HOOKS:	CATEGORY 5 J-HOOKS INDICATED ON 'TEL' DRAWINGS ARE DEDICATED TO SCS CABLING (HORIZONTAL CATEGORY 6 AND CATEGORY 6A CABLES) AND SHALL NOT BE USED FOR ANY OTHER TYPE OF CABLING.
CONDUITS:	CONDUITS INDICATED ON 'TEL' DRAWINGS ARE DEDICATED TO SCS CABLING AND SHALL NOT BE USED FOR ANY OTHER TYPE OF CABLING.

GYM 100 NO EXPOSED CONDUIT OR CABLE NOTE

EXPOSED CONDUIT OR CABLE IS NOT ALLOWED IN GYM 100 AND ADJACENT EXPOSED ROOF STRUCTURE AREAS AS FOLLOWS (EXCEPT THAT LIMITED EXPOSED CONDUIT IS ALLOWED IN THE GYM FOR STRUCTURE MOUNTED INTERCOM/PA HORN SPEAKERS).

ALL CONDUIT AND CABLE FOR COMMUNICATIONS OUTLETS, WAPs, EXTERIOR INTERCOM/PA SPEAKERS, SECURITY CAMERAS, SECURE DOORS AND OTHER DEVICES SHOWN MOUNTED IN THE NORTH AND EAST WALLS OF GYM 100, STAGE 102 AND TABLE/CHAIR STORAGE 103 AND IN MECH/ELEC MEZZANINES 201 AND 203 SHALL BE RUN CONCEALED IN WALLS DOWN TO TURN AND RUN UNDERGROUND BELOW SLAB TO SERVING CC. CONDUITS SHALL BE 1" SCHEDULE 80 PVC WITHIN WALLS AND BELOW SLAB. 3/4" CONDUIT SIZES INDICATED IN DETAILS SHOWING CONDUIT AND CABLE RUN ABOVE THE FLOOR SLAY DO NOT APPLY – PROVIDE ALL 1" CONDUITS FOR BURIAL APPLICATIONS. IN SERVING CC TURN CONDUITS UP IN TIGHT RECTANGULAR UNIFORM GROUPING SEPARATED BY SERVICE (DO NOT MIX SYSTEMS) THRU FLOOR SLAB IN LOCATION SHOWN ON ENLARGED CC FLOOR PLAN AND TERMINATE AT 4" A.F.F. WITH END BELL. RUN UNDERGROUND CONDUIT STRAIGHT "AS THE CROW FLIES" FROM POINT OF TURNING DOWN THRU FLOOR SLAB TO RUN UNDERGROUND OVER TO POINT OF TURNING UP IN SERVING CC. THE ONLY BENDS OR CHANGES IN DIRECTION IN EACH UNDERGROUND CONDUIT SHALL BE THOSE TWO 90 DEGREE ELBOWS,



TYPICAL FLUSH MOUNT 'D2' OUTLET AND DUPLEX POWER AT 'FP' MOUNTING DETAIL

NOT TO SCALE

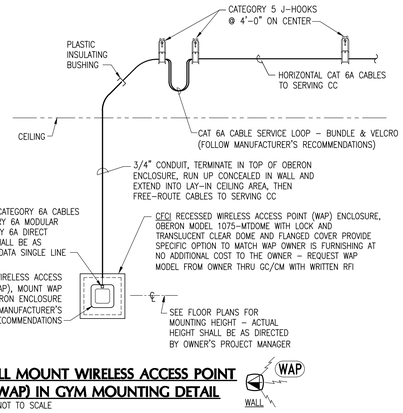
FP LOCATION NOTE:
PRIOR TO INSTALLING FPs, ASSOCIATED CONDUITS AND POWER OBTAIN PLAN AND MOUNTING HEIGHT DIMENSIONS FROM OWNER AND ARCHITECT FOR FP PLACEMENT. DO NOT SCALE FP LOCATIONS FROM "I" DRAWINGS OR ANY OTHER DRAWINGS. REQUEST INFORMATION THRU GENERAL CONTRACTOR IN WRITING.

***NOTES:**

1) COMMUNICATIONS OUTLET (CO) MOUNTING HEIGHT MAY VARY AT CABINETS OR CASEWORK. LOCATE AND MOUNT CO's AS DIRECTED BY ARCHITECT IN FIELD. MATCH HEIGHT OF ADJACENT ELECTRICAL POWER OUTLETS.
2) MOUNTING HEIGHT OF COMMUNICATIONS OUTLET (CO) SHOWN TO BE MOUNTED ABOVE COUNTER (AC) SHALL BE COORDINATED WITH THE ARCHITECT AND THE GENERAL CONTRACTOR IN THE FIELD PRIOR TO ROUGH-IN.
3) REFER TO ARCHITECTURAL DRAWINGS INTERIOR ELEVATIONS FOR CASEWORK DRAWINGS.

TYPICAL FLUSH MOUNT COMMUNICATIONS OUTLET (CO) MOUNTING DETAIL

NOT TO SCALE D2 D4



WALL MOUNT WIRELESS ACCESS POINT (WAP) IN GYM MOUNTING DETAIL

NOT TO SCALE WAP WALL

CATEGORY 6 & CATEGORY 6A CABLE J-HOOK SCHEDULE			
J-HOOK SIZE, ERICO CADDY CAT HP SERIES PART #	MAXIMUM BUNDLE SIZE (NUMBER OF CABLES)		NOTES
	CATEGORY 6	CATEGORY 6A	
CAT32HP	24	24	NOTES 1, 2, 3

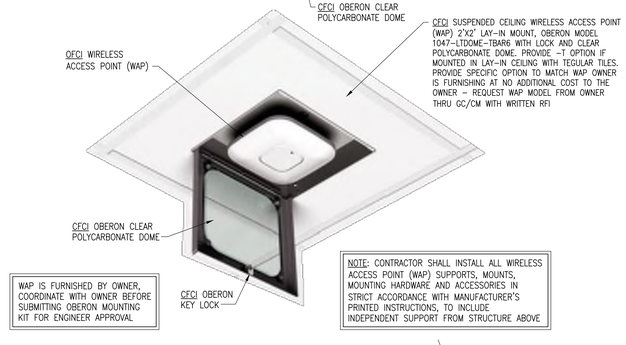
NOTES:

1. USE CADDY CAT32HP SIZE J-HOOKS FOR ALL CABLE TYPES AND APPLICATIONS.
2. LIMIT BUNDLE SIZE TO 24 CABLES MAXIMUM FOR ALL CABLE TYPES AND APPLICATIONS.
3. ALWAYS RUN CAT 6 CABLES AND CAT 6A CABLES IN SEPARATE CABLE BUNDLES, J-HOOKS AND SLEEVES.

ATTACHMENT NOTES

ALL ATTACHMENTS SHALL BE MADE WITH HIGH STRENGTH/HIGH LOAD COMMERCIAL GRADE FASTENERS. ALL FASTENERS AND MISCELLANEOUS RELATED HARDWARE SHALL BE STAINLESS STEEL. TAP-CONS OR RAM-SET TYPE FASTENERS ARE NOT ALLOWABLE. ATTACHMENTS AT VARIOUS BUILDING WALL CONSTRUCTIONS SHALL BE AS FOLLOWS AS A MINIMUM REQUIREMENT, COMPLY WITH MORE STRINGENT FASTENER SPECIFICATIONS WHEN REQUIRED BY THE LOADING APPLICATION OR RECOMMENDED BY THE MANUFACTURER OF EACH SYSTEM COMPONENT:

1. AT FRAMED WALLS WITH GYP BOARD FINISH OR AT OPEN BLOCK CELLS OF CMU WALLS PROVIDE TOGGLER 'SNAP-TOGGLE' TOGGLE BOLTS. AT FRAMED WALLS FASTENERS SHALL BE PLACED AT STUDS.
2. AT BRICK WALLS, BLOCK WEBS AND FILLED CELLS OF CMU WALLS, AND AT CONCRETE WALLS, PROVIDE COMMERCIAL GRADE HIGH LOAD EXPANSION ANCHORS SUCH AS TOGGLER 'ALLIGATOR' SOLID-WALL ANCHORS WITH STAINLESS STEEL FASTENERS.
3. FASTENERS SHALL BE FULL SIZE OF FASTENER HOLES/OPENING IN EQUIPMENT TO BE SECURED (ALLOWING FOR STANDARD CLEARANCES – FASTENERS SIZE 1/16" LESS THAN HOLE SIZE).



LAY-IN CEILING RECESSED MOUNT WIRELESS ACCESS POINT (WAP) MOUNTING DETAILS

NOT TO SCALE WAP

DAG ARCHITECTS

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100% CONSTRUCTION DOCUMENTS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER BICSI Gregory A. Cook BICSI ID # 104998 EXPIRES 12-31-27 RCDD

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

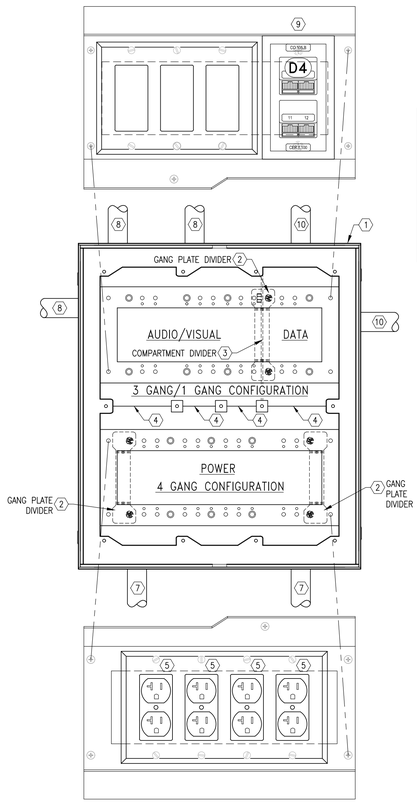
No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

COMMUNICATIONS TYPICAL DETAILS

PROJECT NUMBER	22019
DATED	01/31/2025

T302

Premier Engineering Group, LLC
2425 W. Nine Mile Road, Suite 2 Pensacola, Florida 32534
Florida Certificate of Authorization #9308
Phone: (850) 469-0404 Fax: (850) 432-0905
Premier Project #22024



GYM FLOOR BOX FINISH NOTE:

GENERAL CONTRACTOR COORDINATE WORK OF FLOOR FINISH PROVIDER TO INSTALL FLOOR FINISH MATCHING ADJACENT SURFACES INSET INTO FLOOR BOX COVER CAVITY FOR TILE/STONE/WOOD AND CARPETED FLOORS. THE FLOOR BOX MANUFACTURERS HAVE DIFFERENT TYPES OF COVERS FOR EACH TYPE OF FLOOR FINISH – THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE REQUIRED FLOOR BOX COVER FOR EACH AREA BASED ON FLOOR FINISH. FINAL HEIGHT OF HIGH LOAD FLOOR BOXES AND LARGE FLOOR BOXES IN TILE/STONE/WOOD FLOOR AREAS AT TOP OF COVER AND INSET FINISH SHALL BE ABSOLUTELY FLUSH WITH TOP OF SURROUNDING FLOOR FINISH. COVER FLANGE OF LARGE FLOOR BOXES IN CARPETED AREAS SHALL SIT ON TOP OF SURROUNDING CARPET AND CARPET SHALL BE FLUSH WITH TOP OF COVER FLANGE.

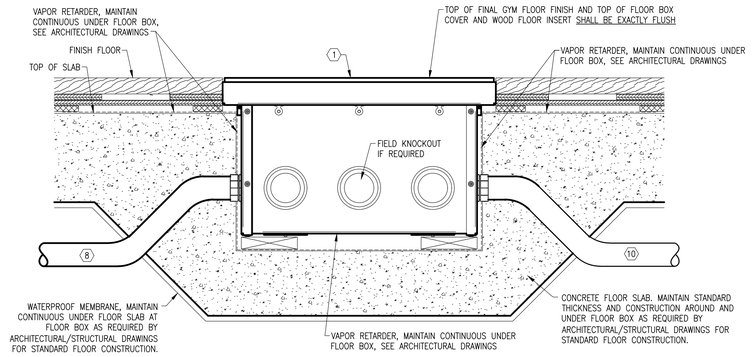
HIGH LOAD CAPACITY GYM FLOOR BOX KEY NOTES:

1. BY ELECTRICAL CONTRACTOR: HIGH LOAD CAPACITY RECTANGULAR 8-GANG FLOOR BOX, FSR FLH20 WITH RECESSED COVER FOR WOOD FLOOR INSERT. GENERAL CONTRACTOR COORDINATE WITH BOX MANUFACTURER AND ELECTRICAL CONTRACTOR TO SELECT COVER WITH RECESS DEPTH AND PERIMETER WALL THICKNESS DIMENSION TO SUIT WOOD FLOOR INSERT – BOTH DIMENSIONS ARE FACTORY OPTIONS. GENERAL CONTRACTOR PROVIDE WOOD FLOOR INSERT IN COVER RECESS TO MATCH GYM FLOOR.

   INSTALL FLOOR BOX IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. SEE DETAIL THIS SHEET. INSTALL FACTORY FURNISHED MUDCAP TO PREVENT ENTRY OF CONCRETE DURING POUR. COORDINATE WITH GENERAL CONTRACTOR.

   COMPLETE INSTALLATION OF DEVICES PER NOTES FOLLOWING.

2. BY ELECTRICAL CONTRACTOR: FACTORY GANG PLATE DIVIDER.
3. BY ELECTRICAL CONTRACTOR: FACTORY COMPARTMENT DIVIDER.
4. BY ELECTRICAL CONTRACTOR: FACTORY CENTER DIVIDER.
5. ELECTRICAL POWER RECEPTACLES, SEE ELECTRICAL DRAWINGS.
7. BY ELECTRICAL CONTRACTOR: PROVIDE QUANTITY AND SIZE OF POWER CONDUITS WITH WATERTIGHT FITTINGS INDICATED ON ELECTRICAL DRAWINGS AND SPECIFICATIONS.
8. BY ELECTRICAL CONTRACTOR: PROVIDE QUANTITY AND SIZE OF A/V CONDUITS WITH WATERTIGHT FITTINGS INDICATED ON A/V DRAWINGS. TERMINATE IN A/V SECTION OF FLOOR BOX.
9. BY STRUCTURED CABLING SYSTEM CONTRACTOR: STANDARD 'D4' COMMUNICATION OUTLET. SEE FACEPLATE DETAILS.
10. BY ELECTRICAL CONTRACTOR: PROVIDE ONE 1" COMMUNICATIONS HOMERUN CONDUIT FOR EACH 'D4' OUTLET INDICATED ON PLAN PLUS ONE 1" EMPTY CONDUIT W/PULLSTRING. RUN MINIMUM OF TWO 1" SCHEDULE 80 PVC CONDUITS – RUN CONDUITS UNDERGROUND TO SERVING CC AND TERMINATE AT 4" A.F.F. WITH END BELL. SEE "GENERAL ABOVEGROUND CONDUIT NOTES."



HIGH LOAD CAPACITY GYMNASIUM FLOOR BOX DETAIL

NOT TO SCALE

(AT SCORER'S TABLE)

GFB AV 4 D4 = 4 CAT 6 JACKS IN ONE 'D4' CO + AV + POWER

UNDERGROUND CONDUITS - WATERTIGHT REQUIREMENTS

ALL UNDERGROUND CONDUITS FOR COMMUNICATIONS AND AUDIO-VISUAL CABLING SERVED BY FLOOR BOXES SHALL BE SCHEDULE 80 PVC, SHALL HAVE CONDUIT ENTRY INTO FLOOR BOXES SEALED WITH LEXEL CAULK/ADHESIVE, AND SHALL OTHERWISE BE MADE FULLY WATERTIGHT TO PROTECT THE CABLES FROM WATER INTRUSION.

NO CABLES SHALL BE INSTALLED IN THE UNDERGROUND CONDUITS UNTIL THE ENTIRE BUILDING IS UNDER ROOF, FULLY ENCLOSED AND AIR CONDITIONED, AT WHICH TIME THE CONDUIT SHALL BE VACUUMED BY THE ELECTRICAL CONTRACTOR TO REMOVE ALL WATER AND THE CONDUITS LEFT TO DRY COMPLETELY.

AT THAT POINT THE STRUCTURED CABLING SYSTEM CONTRACTOR SHALL VACUUM THE CONDUITS A SECOND TIME TO VERIFY THAT ALL WATER HAS BEEN REMOVED BEFORE INSTALLING ANY CABLES. CABLES PULLED INTO CONDUITS CONTAINING WATER OR CABLES INSTALLED IN CONDUITS FOUND TO CONTAIN WATER FOLLOWING THE CABLE INSTALLATION SHALL BE REMOVED AND REPLACED WITH NEW AT NO COST TO THE OWNER.

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PALM BAY CHARTER SCHOOLS

1104 Balboa Avenue, Panama City, FL 32401

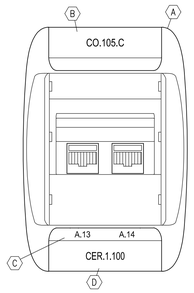
REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

COMMUNICATIONS TYPICAL FLOOR BOX DETAILS

PROJECT NUMBER	22019
DATED	01/31/2025

T303



TYPE "D1ITV" CO KEY NOTES:

(A) SINGLE GANG FACEPLATE, COLOR ELECTRIC WHITE, BELDEN AX101747. PROVIDE WITH FACTORY CLEAR TOP LABEL COVER AND ADDITIONAL BELDEN AX101773 CLEAR BOTTOM LABEL COVER. PROVIDE WITH ONE 2 PORT ANGLED INSERT, COLOR ELECTRIC WHITE, BELDEN AX102413 AND TWO TIA CATEGORY 6+ 8-PIN MODULAR JACKS, COLOR ELECTRIC WHITE, BELDEN REVCONNECT RV6MJKUEW. PROVIDE WITH ONE BELDEN AX101759 1-UNIT FILLER INSERT AND ONE BELDEN AX101763 2-UNIT FILLER INSERT, BOTH COLOR ELECTRIC WHITE.

(B) LASER PRINTED LABEL INDICATING OUTLET IDENTIFIER – SEE "CO IDENTIFICATION NOMENCLATURE". TEXT SHALL BE MINIMUM 12 POINT ARIAL NARROW FONT.

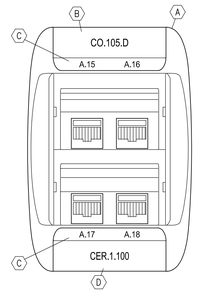
(C) LASER PRINTED LABEL INDICATING ITV, SERVING HORIZONTAL PATCH PANEL ALPHA IDENTIFIER AND JACK PORT NUMBER – SEE "CO IDENTIFICATION NOMENCLATURE". TEXT SHALL BE MINIMUM 12 POINT ARIAL NARROW FONT.

(D) LASER PRINTED LABEL INDICATING SERVING CER. TEXT SHALL BE MINIMUM 12 POINT ARIAL NARROW FONT.

TYPE "D2" COMMUNICATIONS OUTLET (CO)

NOT TO SCALE

(D2 = TWO DATA/VOICE) ◀ D2



TYPE "D4" CO KEY NOTES:

(A) SINGLE GANG FACEPLATE, COLOR ELECTRIC WHITE, BELDEN AX101747. PROVIDE WITH FACTORY CLEAR TOP LABEL COVER AND ADDITIONAL BELDEN AX101773 CLEAR BOTTOM LABEL COVER. PROVIDE WITH TWO 2 PORT ANGLED INSERTS, COLOR ELECTRIC WHITE, BELDEN AX102413 AND FOUR TIA CATEGORY 6+ 8-PIN MODULAR JACKS, COLOR ELECTRIC WHITE, BELDEN REVCONNECT RV6MJKUEW.

(B) LASER PRINTED LABEL INDICATING OUTLET IDENTIFIER – SEE "CO IDENTIFICATION NOMENCLATURE". TEXT SHALL BE MINIMUM 12 POINT ARIAL NARROW FONT.

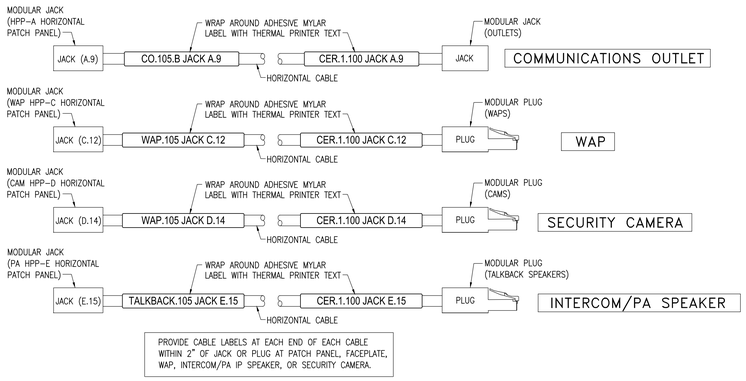
(C) LASER PRINTED LABEL INDICATING SERVING HORIZONTAL PATCH PANEL ALPHA IDENTIFIER AND JACK PORT NUMBERS – SEE "CO IDENTIFICATION NOMENCLATURE". TEXT SHALL BE MINIMUM 12 POINT ARIAL NARROW FONT.

(D) LASER PRINTED LABEL INDICATING SERVING CER. TEXT SHALL BE MINIMUM 12 POINT ARIAL NARROW FONT.

TYPE "D4" COMMUNICATIONS OUTLET (CO)

NOT TO SCALE

(D4 = FOUR DATA/VOICE) ◀ D4



HORIZONTAL CABLE IDENTIFIER LABELS

NOT TO SCALE

CATEGORY 6 and 6A HORIZONTAL PATCH PANEL TERMINATION/LABELING REQUIREMENTS

HORIZONTAL PATCH PANEL I.D. NOMENCLATURE

CER.1.100.A
- HORIZONTAL PATCH PANEL IDENTIFIER
- CER NUMBER

CER.1.100.A INDICATES THE FIRST HORIZONTAL PATCH PANEL IN CER.1.100 (LETTER PATCH PANELS BEGINNING WITH 'A' TOP TO BOTTOM AND LEFT TO RIGHT)

1) TERMINATE CATEGORY 6 HORIZONTAL CABLING ON HORIZONTAL PATCH PANELS IN NUMERICAL ORDER BY ROOM NUMBER. REFER TO FLOOR PLANS FOR ROOM NUMBER AND LOCATION. TERMINATE JACKS FOR EACH 'CO' SEQUENTIALLY IN ORDER OF ASSIGNED PATCH PANEL PORT NUMBER.

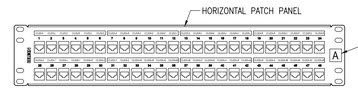
2) PROVIDE OVERALL IDENTIFICATION TAG FOR EACH HORIZONTAL PATCH PANEL IN ACCORDANCE WITH "HORIZONTAL PATCH PANEL I.D. NOMENCLATURE". TAG CONSTRUCTION AND LAYOUT SHALL BE PER "TYPICAL HORIZONTAL PATCH PANEL LAMINATED I.D. TAG DETAIL".

3) PROVIDE ENGRAVED TAG FOR EACH HORIZONTAL PATCH PANEL INDICATING LETTER IDENTIFIER. SEE "TYPICAL HPP ENGRAVED TAG DETAIL."

HORIZONTAL PATCH PANEL PORT NUMBER IDENTIFICATION

A.12
- PATCH PANEL CONSECUTIVE PORT NUMBER
- PATCH PANEL IDENTIFIER

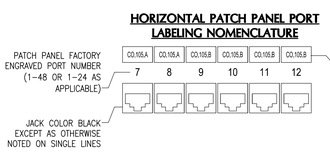
A.12 INDICATES 'CO' OUTLET TERMINATED ON PATCH PANEL 'A' PORT 12.



TYPICAL HPP ENGRAVED TAG DETAIL

NOT TO SCALE

HORIZONTAL PATCH PANEL PORT LABELING NOMENCLATURE

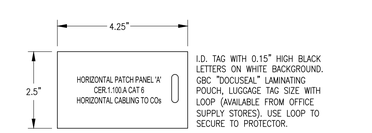


LASER PRINTED LABEL INSIDE FACTORY LABEL HOLDER – PRINT WITH ROOM NUMBER AND OUTLET IDENTIFIER IN WHICH OUTLET IS LOCATED.

NOTE: FOR INTERCOM/PA PATCH PANELS, THE NOMENCLATURE SHALL MATCH THE SPEAKER IDENTIFIER LABEL, NOT STANDARD 'CO' LABELING.

NOTE: FOR WAP PATCH PANELS, REPLACE 'CO' WITH 'WAP'.

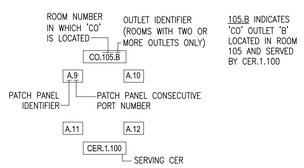
NOTE: FOR CAM PATCH PANELS, REPLACE 'CO' WITH 'CAM'.



TYPICAL HORIZONTAL PATCH PANEL LAMINATED I.D. TAG DETAIL

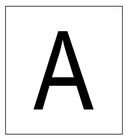
NOT TO SCALE

CO IDENTIFICATION NOMENCLATURE



105.B INDICATES 'CO' OUTLET 'B' LOCATED IN ROOM 105 AND SERVED BY CER.1.100

ENGRAVED PLASTIC TAG WITH 1/2" HIGH WHITE LETTER ON BLACK BACKGROUND. TAG SHALL HAVE ALL EDGES BEVELED AND SMOOTH, SECURE TAG WITH DOUBLE SIDED TAPE ON FAR RIGHT SIDE OF PATCH PANEL FRONT FACE



TYPICAL HORIZONTAL PATCH PANEL ENGRAVED TAG DETAIL

NOT TO SCALE

SEE "COMMUNCATIONS TYPICAL LABELING DETAILS"

GENERAL LABELING NOTES:

1. ROOM NUMBERS INDICATED THIS SHEET TO INCLUDE COMMUNICATIONS ROOM NUMBERS ARE PROTOTYPICAL TO INDICATE REQUIRED LABELING METHODS AND ARE NOT BASED ON ACTUAL ROOM NUMBERS FOR THIS PROJECT.
2. ALL LABELS SHALL BE BASED ON THE FINAL FLORIDA INVENTORY OF SCHOOL HOUSES ("FISH") ACTUAL ROOM NUMBERS. OBTAIN FINAL 'FISH' ROOM NUMBERS FROM THE ARCHITECT PRIOR TO LABELING.
3. ALL LABELS FOR COMMUNICATIONS OUTLETS AND HORIZONTAL PATCH PANELS SHALL BE PRODUCED USING FACTORY NON-ADHESIVE LABEL SHEETS FOR LASER PRINTERS MANUFACTURED FOR THE SPECIFIC DEVICE AND USING LABELING SOFTWARE PROVIDED BY MANUFACTURER'S REPRESENTATIVE.
4. ALL LABELS SHALL BE HEIGHT OF PLASTIC LABEL HOLDERS AND SAME HEIGHT AND WIDTH AS INDIVIDUAL PAPER LABELS FACTORY FURNISHED WITH THE COMMUNICATIONS OUTLETS OR PATCH PANEL LABEL HOLDERS (LABELS SHALL COMPLETELY FILL PLASTIC LABEL HOLDERS).
5. ALL LABELS SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER, STRAIGHT AND CENTERED ON LABEL HOLDERS.

GENERAL TEXT WIDTH NOTE:

USE ARIAL NARROW FONT, WHICH IS VERY COMPRESSED BY WIDTH. IF ADDITIONAL WIDTH COMPRESSION IS REQUIRED FOR UNUSUALLY LONG LABELS, USE THE MS WORD FORMAT-FONT-CHARACTER SPACING-SPACING-CONDENSED-BY X POINTS (USE POINT REDUCTIONS OF LESS THAN ONE IN TENTHS OF A POINT – USE NO MORE REDUCTION THAN REQUIRED TO FIT LABEL).

FACEPLATE AND DEVICE COLOR NOTE

VERIFY ALL FACEPLATE AND DEVICE COLORS WITH THE ARCHITECT AND OWNER'S PROJECT MANAGER PRIOR TO PRE-INSTALLATION SUBMITTALS. PROVIDE ALTERNATE COLOR STANDARD WITH THE MANUFACTURER AT NO ADDITIONAL COST TO THE OWNER IF SO DIRECTED. COORDINATE WITH THE ENGINEER PRIOR TO ORDERING MATERIALS.

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No.	Description	Date
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COMMUNICATIONS TYPICAL FACEPLATE & LABELING DETAILS

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T304

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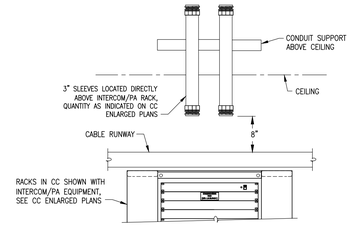
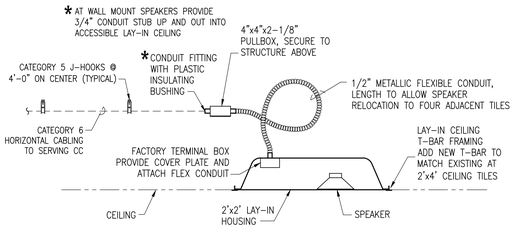


TYPICAL HOMERUN SPEAKER CONDUITS AT CC DETAIL

NOT TO SCALE



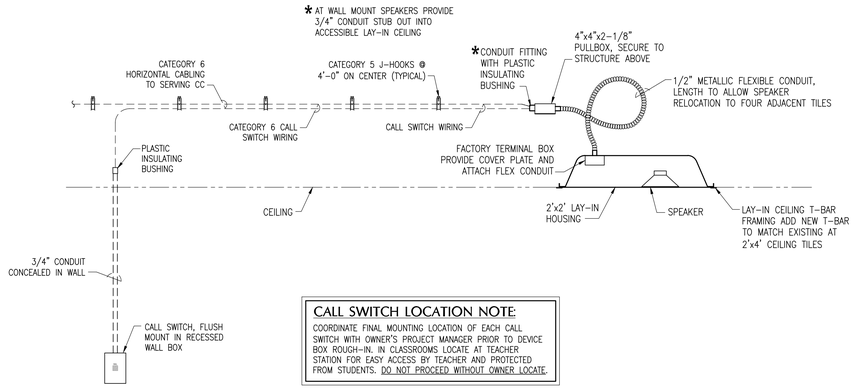
TYPICAL ONE-WAY SPEAKER MOUNTING DETAIL

NOT TO SCALE

SPEAKER ATTACHMENT NOTES

ALL ATTACHMENTS SHALL BE MADE WITH HIGH STRENGTH/HIGH LOAD COMMERCIAL GRADE FASTENERS. ALL FASTENERS AND MISCELLANEOUS RELATED HARDWARE SHALL BE STAINLESS STEEL. TAP-CONS OR RAM-SET TYPE FASTENERS ARE NOT ALLOWABLE. ATTACHMENTS AT VARIOUS BUILDING WALL CONSTRUCTIONS SHALL BE AS FOLLOWS AS A MINIMUM REQUIREMENT. COMPLY WITH MORE STRINGENT FASTENER SPECIFICATIONS WHEN REQUIRED BY THE LOADING APPLICATION OR RECOMMENDED BY THE MANUFACTURER OF EACH SYSTEM COMPONENT:

1. AT FRAMED WALLS WITH GYP BOARD FINISH OR AT OPEN BLOCK CELLS OF CMU WALLS PROVIDE TOGGLER "SNAP-TOGGLE" TOGGLE BOLTS. AT FRAMED WALLS FASTENERS SHALL BE PLACED AT STUDS.
2. AT BRICK WALLS, BLOCK WEBS AND FILLED CELLS OF CMU WALLS, AND AT CONCRETE WALLS, PROVIDE COMMERCIAL GRADE HIGH LOAD EXPANSION ANCHORS SUCH AS TOGGLER 'ALLIGATOR' SOLID-WALL ANCHORS WITH STAINLESS STEEL FASTENERS.
3. AT METAL SOFFIT OR FASCIA CONSTRUCTION PROVIDE STAINLESS STEEL THRU BOLTS ALL THE WAY THRU SOFFIT OR FASCIA FRAMING. PROVIDE SUPPLEMENTARY FRAMING ON INTERIOR AS REQUIRED FOR SECURE MOUNTING.
4. FASTENERS SHALL BE FULL SIZE OF FASTENER HOLES/OPENING IN EQUIPMENT TO BE SECURED (ALLOWING FOR STANDARD CLEARANCES – FASTENERS SIZE 1/16" LESS THAN HOLE SIZE).



CALL SWITCH LOCATION NOTE:

COORDINATE FINAL MOUNTING LOCATION OF EACH CALL SWITCH WITH OWNER'S PROJECT MANAGER PRIOR TO DEVICE BOX ROUGH-IN. IN CLASSROOMS LOCATE AT TEACHER STATION FOR EASY ACCESS BY TEACHER AND PROTECTED FROM STUDENTS. DO NOT PROCEED WITHOUT OWNER LOCATE.

TYPICAL TALKBACK SPEAKER/CALL SWITCH STATION MOUNTING DETAIL

NOT TO SCALE

INTERCOM/PA GENERAL NOTES

1. RUN CABLING CONTINUOUSLY IN CONDUIT IN ALL AREAS WITH NO CEILING AND EXPOSED ROOF STRUCTURE TO ACCESSIBLE LAY-IN CEILING SPACE. WORK WITH CC TO ROUTE CONDUITS THRU AREA FOR LOWEST POSSIBLE VISIBILITY. RUN WITH OTHER TRADES WHEREVER POSSIBLE. PREP, PRIME AND PAINT ALL EXPOSED CONDUIT TO MATCH ADJACENT SURFACES.
2. PROVIDE CONDUIT FOR EXTERIOR SPEAKERS EXTENDING INTO THE BUILDING TO ACCESSIBLE LAY-IN CEILING SPACE.
6. PROVIDE CONDUIT SLEEVES WITH INSULATING BUSHING EACH END TURNING DOWN INTO SERVING CCs FOR ENTRY OF FREE ROUTED CABLES INTO CCs. SIZE SLEEVES FOR 30% FILL.
7. IDENTIFY ALL INDOOR INTERCOM/PA, SLEEVES, CONDUIT AND PULLBOXES ABOVE LAY-IN CEILINGS, AT ACCESS DOORS, IN ROOF SPACE, AND IN ALL EXPOSED LOCATIONS (EXCEPT WITHIN CER/CCs) WITH YELLOW PAINT AT EVERY PULLBOX AND ON CONDUIT AT EACH COUPLER (PAINT ENTIRE COUPLER).
8. ALL HORIZONTAL INTERCOM/PA (NETWORK) CABLES TO TALKBACK SPEAKERS SHALL BE FOUR PAIR 24 AWG UTP CATEGORY 6 RISER (CMR) RATED JACKET WITH YELLOW JACKET SHALL BE FREE ROUTED FROM THE SERVING CC TO EACH TALKBACK SPEAKER AS INDICATED ON THE SINGLE LINE DIAGRAM. IN NO CASE SHALL CABLES BE DAISY-CHAINED BETWEEN MULTIPLE TALKBACK SPEAKERS OR ANY OTHER INTERCOM/PA DEVICE EXCEPT AS INDICATED FROM CALL SWITCH TO ASSOCIATED TALKBACK SPEAKER IN SAME ROOM. PUNCH CABLES DOWN ON PATCH PANELS IN CC AND DIRECT CONNECTORIZE AT SPEAKERS USING CATEGORY 6 PLUG PER SINGLE LINE DIAGRAM.
9. ALL HORIZONTAL INTERCOM/PA (SPEAKER SIGNAL AND POWER) CABLES TO ONE-WAY SPEAKERS SHALL BE FOUR PAIR 24 AWG UTP CATEGORY 6 RISER (CMR) RATED JACKET WITH YELLOW JACKET AND SHALL BE FREE ROUTED FROM THE CC TO THE NEAREST ONE-WAY SPEAKER ON THAT ZONE, THEN DAISY-CHAINED TO OTHER ONE-WAY SPEAKERS ON THE SAME ZONE AND IN CLOSE PROXIMITY TO THE FIRST ONE-WAY SPEAKER. PUNCH CABLES DOWN ON 110 WIRING BLOCKS IN CC AND DIRECT TERMINATE ON WIRING TERMINALS AT ONE-WAY SPEAKERS. SEE INTERCOM SINGLE LINE WIRING DIAGRAMS FOR MAXIMUM SPEAKER QUANTITIES PER DAISY-CHAIN.
10. MAKE ALL NON-NETWORK WIRING CONNECTIONS ON FACTORY WIRING TERMINALS OF SPEAKERS AND CALL SWITCHES. WHERE FACTORY WIRE LEADS ONLY ARE PROVIDED AT SPEAKERS MAKE CONNECTIONS USING SCOTCHLOK 'UR2' SEALANT FILLED CONNECTORS USING ONLY 3M FACTORY TERMINATION TOOLS. WHERE WIRE-TO-WIRE CONNECTIONS ARE REQUIRED MAKE CONNECTIONS USING SCOTCHLOK 'UR2' CONNECTORS.
11. CEILING MOUNT SPEAKER LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE EXACT SPEAKER LOCATIONS WITHIN CEILING GRID WITH LIGHT FIXTURES, HVAC AIR DISTRIBUTION DEVICES, FIRE ALARM DEVICES, AND ANY OTHER CEILING MOUNTED DEVICES TO AVOID CONFLICTS. PLACE AS NEAR TO LOCATION INDICATED AS POSSIBLE IN SYMMETRICAL PATTERN. MOUNT TALKBACK SPEAKERS IN CLASSROOMS FOR EASE OF USE BY TEACHER (TALKBACK/CALLOUT) WHILE MAINTAINING ADEQUATE SOUND DISTRIBUTION THROUGHOUT CLASSROOM SPACE.

DIRECT CONNECT NOTE

DIRECT TERMINATE CATEGORY 6 CABLES FOR INTERCOM/PA TALKBACK SPEAKERS WITH PLATINUM TOOLS EZEX-RJ45 TERMINATION SYSTEM WITH EZEX44 OR EZEX48 CONNECTOR AS REQUIRED TO SUIT CABLE CONDUCTOR AND OVERALL JACKET DIAMETERS. INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS USING FACTORY EXO CRIMP FRAME WITH EXO-EX DIE (100061C). CABLE JACKET MUST BE EXTENDED INTO THE CONNECTOR FOR STRAIN RELIEF.

INTERCOM/PA SYSTEM HORIZONTAL CABLING CONDUIT SLEEVES NOTE:

CONDUIT SLEEVES FOR INTERCOM/PA SYSTEM HORIZONTAL CABLING: FINAL ROUTING PATHS FOR HORIZONTAL CABLING SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR IN THE FIELD. FOR THIS REASON CONDUIT SLEEVES ARE NOT INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE EMT CONDUIT SLEEVES IN THE QUANTITIES AND LOCATIONS REQUIRED TO SUIT THE CONTRACTOR SELECTED HORIZONTAL CABLE ROUTING AND AS REQUIRED FOR A COMPLETE INSTALLATION, REGARDLESS OF WHETHER THOSE SLEEVES ARE INDICATED ON THE DRAWINGS OR NOT, AND AT NO ADDITIONAL COST TO THE OWNER. AT ALL LOCATIONS WHERE HORIZONTAL CABLING RUNS THRU MECHANICAL OR ELECTRICAL EQUIPMENT ROOMS, STORAGE ROOMS, OR ANY OTHER TYPE OF ROOM WITH EXPOSED STRUCTURE CEILING, ALL SUCH CABLING SHALL BE RUN IN CONTINUOUS CONDUIT SLEEVES EXTENDING TO THE NEAREST ACCESSIBLE LAY-IN CEILING AT BOTH ENDS. IN ADDITION, THE CONTRACTOR SHALL PROVIDE CONDUIT SLEEVES TRAVERSING INACCESSIBLE (HARD) CEILING OR SOFFIT AREAS AND EXTENDING TO THE NEAREST ACCESSIBLE LAY-IN CEILING AT BOTH ENDS FOR CABLE PASS-THRU. SLEEVES SHALL BE SIZED FOR MAXIMUM 30 PERCENT CABLE FILL AND SHALL BE CONSTRUCTED PER THE GENERAL ABOVEGROUND CONDUIT NOTES. GENERAL CONTRACTOR PAINT EXPOSED CONDUIT SLEEVES IN ALL FINISHED/OCCUPIED SPACES WITH EXPOSED STRUCTURE TO MATCH ADJACENT SURFACES. ALL SLEEVES SHALL BE NEW AND SHALL BE USED FOR INTERCOM/PA SYSTEM CABLING ONLY. STRUCTURED CABLING SYSTEM SLEEVES SHALL NOT BE USED UNDER ANY CIRCUMSTANCES.

INTERCOM/PA SYSTEM HORIZONTAL CABLE ROUTING NOTE

ALL INTERCOM/PA SYSTEM CABLING NOT SHOWN TO BE INSTALLED IN CONDUIT SHALL BE RUN ABOVE CEILINGS AND SHALL BE ROUTED UP HIGH DIRECTLY UNDER THE BUILDING ROOF STRUCTURE AND PROPERLY SUPPORTED WITH APPROVED HANGERS AT 4'-0" ON CENTER, BUT DO NOT RUN CABLES CLOSER THAN 6" BELOW ROOF DECK (TO AVOID DAMAGE FROM LONG SCREWS USED IN FUTURE ROOF REPLACEMENTS). RUN ALL CABLING ABOVE DUCTWORK, PIPING, CONDUITS AND ALL OTHER WORK BY OTHER TRADES AND PLACE FOR MAXIMUM PHYSICAL PROTECTION. BUNDLE INTERCOM/PA CABLES TOGETHER AND ROUTE PARALLEL AND PERPENDICULAR TO BUILDING LINES. HANGERS SHALL BE ERICO CADDY "CABLECAT" CATEGORY-5 WITH WIDE BASE LOOP. BUNDLE CABLES AT 4'-0" O.C. WITH PLENUM RATED VELCRO, COLOR YELLOW. ATTACH HANGERS TO THE BUILDING STRUCTURE. DO NOT ATTACH HANGERS TO CEILING GRID OR SUPPORT WIRES, CONDUITS, DUCTWORK, PIPING, OR ANY OTHER SYSTEM COMPONENT OR WORK OF OTHER TRADES. INSTALL CABLES TO AVOID ELECTROMAGNETIC INTERFERENCE FROM MOTORS, TRANSFORMERS, GENERATORS, ELEVATORS, POWER CABLES/CONDUITS, LIGHTING FIXTURES, ETC. DO NOT ROUTE CABLE THRU FIRE DAMPERS, HVAC DUCTS, VENTILATING SHAFTS, OR GRATES. DO NOT BLOCK ACCESS TO PULL/JUNCTION BOXES, HATCHES, DOORS, UTILITY ACCESS PANELS, MECHANICAL SERVICE AREAS, ELECTRICAL SERVICE AREAS, OR ANY OTHER SPACE ASSOCIATED WITH SERVICE OR ACCESS OF ANY TYPE. ALL HANGERS, SUPPORTS AND VELCRO WRAPS SHALL BE NEW AND SHALL BE USED FOR INTERCOM/PA SYSTEM CABLING ONLY. STRUCTURED CABLING SYSTEM CABLE HANGERS SHALL NOT BE USED UNDER ANY CIRCUMSTANCES.

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INTERCOM/PA SYSTEM NOTES & LABELING DETAILS

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DATED 01/31/2025

T305

FIBER PATCH CORD NOTE:
FIBER PATCH CORDS CONNECTING TO OWNER FURNISHED EQUIPMENT SHALL HAVE ENDS TO SUIT THE EQUIPMENT. THE CONTRACTOR SHALL CONTACT THE OWNER'S PROJECT MANAGER PRIOR TO PURCHASING FIBER PATCH CORDS TO DETERMINE THE TYPES OF FIBER PATCH CORD ENDS REQUIRED.

FIBER OPTIC BACKBONE CABLE NOMENCLATURE

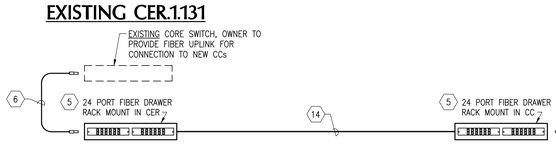
CER.1.131 / CC.X.109
- CER.1.131 — TELCOM ROOM NUMBER POINT OF ORIGIN
- CC.X.109 — TELCOM ROOM NUMBER POINT OF ENDING

FIBER OPTIC CABLE LABELING
LABEL ALL FIBER OPTIC CABLES AS INDICATED WITH PERMANENT MYLAR WRAP WRITE-ON MARKERS

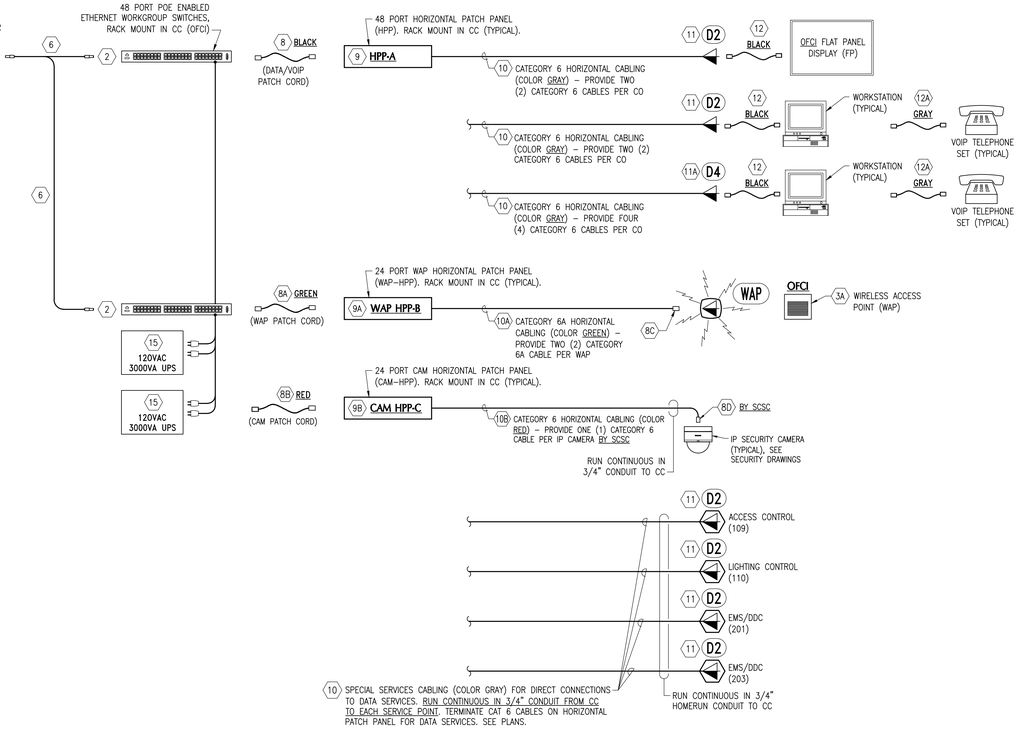
USER/SERVICE COLOR SCHEDULE

SERVICE	EQUIPMENT ROOM PATCH CORDS	PATCH PANEL JACK COLOR	HORIZONTAL CABLING	'CO' MODULAR JACKS	WORK AREA PATCH CORDS
DATA	CAT 6 – BLACK	CAT 6 JACK – BLACK	CAT 6 – GRAY	CAT 6 – MATCH FACEPLATE	CAT 6 – BLACK
VOIP	CAT 6 – BLACK	CAT 6 JACK – BLACK	CAT 6 – GRAY	CAT 6 – MATCH FACEPLATE	CAT 6 – GRAY
WAP	CAT 6A – GREEN	CAT 6A JACK – GREEN	CAT 6A – GREEN	N/A	N/A
CAM	CAT 6A – RED	CAT 6A JACK – RED	CAT 6A – RED	N/A	N/A
INTERCOM/PA	CAT 6 – YELLOW	CAT 6 JACK – YELLOW	CAT 6 – YELLOW	N/A	N/A

EXISTING CER.1.131



COMMUNICATIONS CLOSET - CC.X.109



DATA SYSTEM SINGLE LINE KEY NOTES:

2. OWNER FURNISHED CONTRACTOR INSTALLED (OFCI): 24 OR 48 PORT POE ENABLED ETHERNET WORKGROUP SWITCH WITH FIBER UPLINK. MOUNT IN RACK AS DIRECTED BY OWNER'S PROJECT MANAGER AND COMPLETE ALL PATCHING – SEE SPECIFICATIONS.

3A. OWNER FURNISHED CONTRACTOR INSTALLED (OFCI): WIRELESS ACCESS POINT.

5. FIBER DRAWER FOR OS2 SINGLEMODE BACKBONE CABLING, SPECIFICATION GRADE, 24 FIBER (12 DUPLEX PORTS), RACK MOUNT 1U. BELDEN FX ECX-01U. PROVIDE WITH TWO (2) 12 FIBER (6 DUPLEX PORTS) 'LC' SHUTTERED SINGLEMODE FIBER FUSION SPLICE CASSETTES, COLOR BLUE. BELDEN FCSXORLDFP. SPLICE CASSETTES SHALL BE FACTORY PRE-LOADED AND SHALL INCLUDE FACTORY 250 MICRON AND 900 MICRON PIGTAILS WITH HEAT SHRINK SLEEVES READY FOR FIELD FUSION SPLICING. SECURE FIBER OPTIC CABLE ASSEMBLY TO FIBER DRAWER USING FACTORY STRAIN RELIEF ATTACHMENTS. LABEL PORTS WITH SOURCE (CER), DESTINATION (CC) AND NUMERICAL PORT NUMBER.

6. FIBER OPTIC PATCH CORD, DUPLEX FIBER, SINGLEMODE, DUAL 'LC' CONNECTORS BOTH ENDS. BELDEN, COLOR YELLOW. PROVIDE QUANTITIES AND LENGTHS AS SCHEDULED THIS SHEET. FOR FIBER PATCH CORDS CONNECTING OWNER FURNISHED EQUIPMENT, PROVIDE 'LC' X OTHER END AS REQUIRED TO SUIT EQUIPMENT. VERIFY END CONNECTORS REQUIRED PRIOR TO PURCHASING, SEE "FIBER PATCH CORD NOTE" THIS SHEET.

8. EQUIPMENT ROOM DATA/VOIP PATCH CORDS, FACTORY TERMINATED AND TESTED CATEGORY 6+ MODULAR PATCH CORD (UTP) 4-PAIR UNSHIELDED CABLE WITH 23 GAGE SOLID COPPER CONDUCTORS, COLOR BLACK. PROVIDE WITH 8-PIN MODULAR PLUG ON BOTH ENDS AND TIA 568A PIN/PAIR ASSIGNMENTS, BELDEN C6011xxxxx (NO EQUAL). FIELD BUILT OR ASSEMBLED PATCH CORDS WILL NOT BE ACCEPTED. PROVIDE PATCH CORD QUANTITIES AND LENGTHS AS SCHEDULED THIS SHEET. PROVIDE DOCUMENTATION OF FACTORY TESTING AT SUBMITTAL.

8A. EQUIPMENT ROOM WAP PATCH CORDS, FACTORY TERMINATED AND TESTED CATEGORY 6A MODULAR PATCH CORD (UTP) 4-PAIR UNSHIELDED CABLE WITH 23 GAGE SOLID COPPER CONDUCTORS, COLOR GREEN. PROVIDE WITH 8-PIN MODULAR PLUG ON BOTH ENDS AND TIA 568A PIN/PAIR ASSIGNMENTS, BELDEN C601100xxx (NO EQUAL). FIELD BUILT OR ASSEMBLED PATCH CORDS WILL NOT BE ACCEPTED. PROVIDE PATCH CORD QUANTITIES AND LENGTHS AS SCHEDULED THIS SHEET. PROVIDE DOCUMENTATION OF FACTORY TESTING AT SUBMITTAL.

8B. EQUIPMENT ROOM CAM PATCH CORDS, FACTORY TERMINATED AND TESTED CATEGORY 6+ MODULAR PATCH CORD (UTP) 4-PAIR UNSHIELDED CABLE WITH 23 GAGE SOLID COPPER CONDUCTORS, COLOR RED. PROVIDE WITH 8-PIN MODULAR PLUG ON BOTH ENDS AND TIA 568A PIN/PAIR ASSIGNMENTS, BELDEN C6011xxxxx (NO EQUAL). FIELD BUILT OR ASSEMBLED PATCH CORDS WILL NOT BE ACCEPTED. PROVIDE PATCH CORD QUANTITIES AND LENGTHS AS SCHEDULED THIS SHEET. PROVIDE DOCUMENTATION OF FACTORY TESTING AT SUBMITTAL.

8C. DIRECT TERMINATE CATEGORY 6A CABLES FOR WAPS WITH MALE CATEGORY 6 MODULAR PLUG, 8P8C, GOLD PLATED CONTACTS WITH INTEGRAL STRAIN RELIEF BOOT, BELDEN REVConnect 'RVAFPUBK' WITH CABLE DIAMETER RANGE MATCHING CATEGORY 6 CABLE PROVIDED. INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS USING FACTORY FURNISHED DIE SET AND HAND CRIMP TOOL. CABLE JACKET MUST BE EXTENDED THRU THE STAIN RELIEF BOOT AND INTO THE CABLE JACKET STRAIN RELIEF CRIMP TABS AND PROPERLY SECURED.

8D. DIRECT TERMINATE CATEGORY 6 CABLES FOR IP SECURITY CAMERAS WITH PLATINUM TOOLS ezEX-RJ45 TERMINATION SYSTEM WITH ezEX44 OR ezEX48 CONNECTOR AS REQUIRED TO SUIT CABLE CONDUCTOR AND OVERALL JACKET DIAMETERS. INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS USING FACTORY EXO CRIMP FRAME WITH EXO–EX DIE (100061C). CABLE JACKET MUST BE EXTENDED INTO THE CONNECTOR FOR STRAIN RELIEF.

9. HORIZONTAL UN-LOADED PATCH PANEL, 48 PORT, TIA 568A PINOUT, BELDEN RVMPPF2U48BK-P. PROVIDE WITH FACTORY PLASTIC LABELING WINDOWS AND BELDEN AX107527 ACCESSORY NON-ADHESIVE LABEL SHEETS, FACTORY CABLE MANAGEMENT BAR, AND MOUNTING HARDWARE. PROVIDE WITH TIA CATEGORY 6+ 8-PIN MODULAR JACKS IN ALL PORTS, BELDEN REVCONNECT RV6MJKUBK COLOR BLACK TO MATCH THE USER/SERVICE COLOR SCHEDULE.

9A. HORIZONTAL UN-LOADED WAP PATCH PANEL, 24 PORT, TIA 568A PINOUT, BELDEN RVMPPF1U24BK-P. PROVIDE WITH FACTORY PLASTIC LABELING WINDOWS AND BELDEN AX107527 ACCESSORY NON-ADHESIVE LABEL SHEETS, FACTORY CABLE MANAGEMENT BAR, AND MOUNTING HARDWARE. PROVIDE WITH TIA CATEGORY 6A 10GX 8-PIN MODULAR JACKS IN ALL PORTS, BELDEN RV4MJKUGN COLOR GREEN TO MATCH THE USER/SERVICE COLOR SCHEDULE.

9B. HORIZONTAL UN-LOADED CAM PATCH PANEL, 24 PORT, TIA 568A PINOUT, BELDEN RVMPPF1U24BK-P. PROVIDE WITH FACTORY PLASTIC LABELING WINDOWS AND BELDEN AX107527 ACCESSORY NON-ADHESIVE LABEL SHEETS, FACTORY CABLE MANAGEMENT BAR, AND MOUNTING HARDWARE. PROVIDE WITH TIA CATEGORY 6+ 8-PIN MODULAR JACKS IN ALL PORTS, BELDEN RVCONNECT RV6MJKURD COLOR RED TO MATCH THE USER/SERVICE COLOR SCHEDULE.

10. TIA CATEGORY 6 DATA/VOIP HORIZONTAL CABLING, 4 PAIR UTP, 23 GAGE SOLID COPPER CONDUCTORS. MAXIMUM INSTALLED LENGTH 90 METERS (295'). PROVIDE DOCUMENTATION OF CURRENT UL CERTIFICATION WITH SUBMITTALS. PROVIDE WITH CMR (RISER) JACKET, COLOR GREY. SEE SCHEDULE THIS SHEET FOR APPROVED CABLES.

10A. TIA CATEGORY 6A WAP HORIZONTAL CABLING, 4 PAIR UTP, 23 GAGE SOLID COPPER CONDUCTORS. MAXIMUM INSTALLED LENGTH 90 METERS (295'). PROVIDE DOCUMENTATION OF CURRENT UL CERTIFICATION WITH SUBMITTALS. PROVIDE WITH CMR (RISER) JACKET, COLOR GREEN. SEE SCHEDULE THIS SHEET FOR APPROVED CABLES.

10B. TIA CATEGORY 6 CAM HORIZONTAL CABLING, 4 PAIR UTP, 23 GAGE SOLID COPPER CONDUCTORS. MAXIMUM INSTALLED LENGTH 90 METERS (295'). PROVIDE DOCUMENTATION OF CURRENT UL CERTIFICATION WITH SUBMITTALS. PROVIDE WITH CMR (RISER) JACKET, COLOR RED. SEE SCHEDULE THIS SHEET FOR APPROVED CABLES.

11. TYPE "D2" COMMUNICATIONS OUTLET (CO) WITH TWO (2) CATEGORY 6 8-PIN MODULAR JACKS. SEE PLANS AND DETAILS.

11A. TYPE "D4" COMMUNICATIONS OUTLET (CO) WITH FOUR (4) CATEGORY 6 8-PIN MODULAR JACKS. SEE PLANS AND DETAILS.

12. WORKSTATION DATA PATCH CORDS, FACTORY TERMINATED AND TESTED CATEGORY 6+ MODULAR PATCH CORD (UTP) 4-PAIR UNSHIELDED CABLE WITH 23 GAGE SOLID COPPER CONDUCTORS, COLOR BLACK. PROVIDE WITH 8-PIN MODULAR PLUG ON BOTH ENDS AND TIA 568A PIN/PAIR ASSIGNMENTS, BELDEN C60110Oxxx (NO EQUAL). FIELD BUILT OR ASSEMBLED PATCH CORDS WILL NOT BE ACCEPTED. PROVIDE PATCH CORD QUANTITIES AND LENGTHS AS SCHEDULED THIS SHEET. PROVIDE DOCUMENTATION OF FACTORY TESTING AT SUBMITTAL.

12A. WORKSTATION VOIP PATCH CORDS, FACTORY TERMINATED AND TESTED CATEGORY 6+ MODULAR PATCH CORD (UTP) 4-PAIR UNSHIELDED CABLE WITH 23 GAGE SOLID COPPER CONDUCTORS, COLOR GRAY. PROVIDE WITH 8-PIN MODULAR PLUG ON BOTH ENDS AND TIA 568A PIN/PAIR ASSIGNMENTS, BELDEN C6011xxxxx (NO EQUAL). FIELD BUILT OR ASSEMBLED PATCH CORDS WILL NOT BE ACCEPTED. PROVIDE PATCH CORD QUANTITIES AND LENGTHS AS SCHEDULED THIS SHEET. PROVIDE DOCUMENTATION OF FACTORY TESTING AT SUBMITTAL.

14. FIBER OPTIC BACKBONE "BLACK" CABLE, LOOSE TUBE PE JACKET DIRECT BURIAL GRADE OUTSIDE PLANT, DRY WATER BLOCK CABLE CORE, GEL FILLED BUFFER TUBES. 24 FIBER COUNT, 24 STRANDS SINGLEMODE (0.40 dB/km @ 1310nm, 0.30 dB/km @ 1550 nm). GENERAL CABLE AQ0244MA–DWB OR ENGINEER APPROVED EQUAL BY CORNING, BELDEN OR SUPERIOR ESSEX. AT BOTH ENDS PROVIDE SLACK IN CABLE BEHIND FIBER DRAWER TO ALLOW DRAWER PULL-OUT. SECURE FIBER OPTIC CABLE ASSEMBLY TO FIBER DRAWER USING FACTORY STRAIN RELIEF ATTACHMENTS. AT BOTH ENDS TERMINATE FIBERS ON 250 MICRON FUSION SPLICE PIGTAILS WITH HEAT SHRINK SLEEVES IN BELDEN UNLOADED CASSETTES USING FIELD FUSION SPLICER IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. NEATLY ORGANIZE TERMINATED FIBER WITHIN FIBER DRAWER AND SECURE. RUN CABLE CONTINUOUS FROM SOURCE TO DESTINATION WITH NO SPLICES OR TERMINATIONS.

15. UNINTERRUPTIBLE POWER SUPPLY (UPS), 3000 VA, PROVIDED BY SCSC. RACK MOUNT IN CC. SEE RACK ELEVATIONS.

APPROVED CATEGORY 6 & CATEGORY 6A HORIZONTAL CABLES

APPLICATION	MANUFACTURER	PART NUMBER	UL JACKET	JACKET COLOR
RISER CAT 6 (DATA/VOIP)	MOHAWK	ADVANCENET 6E M57196	CMR	GRAY
	BERK-TEK	LANMARK 2000 11098648	CMR	GRAY
	GENERAL	GENSPEED 6500 7133933	CMR	GRAY
	BELDEN	3600 SERIES 3613008x1000	CMR	GRAY
RISER CAT 6 (CAMERAS)	MOHAWK	ADVANCENET M57207	CMR	RED
	BERK-TEK	LANMARK 2000 10170693	CMR	RED
	GENERAL	GENSPEED 6500 7133934	CMR	RED
	BELDEN	3600 SERIES 3612xxx	CMR	RED
RISER CAT 6A (WAP)	MOHAWK	GIGALAN10 SD M59151	CMR	GREEN
	BERK-TEK	LANMARK-SST 11091203	CMR	GREEN
	GENERAL	GENSPEED 10MTP 7143854	CMR	GREEN
	BELDEN	10GXS13002	CMR	GREEN
RISER CAT 6 (INTERCOM/PA)	MOHAWK	6 LAN M58294	CMR	YELLOW
	BERK-TEK	LANMARK 2000 10170693	CMR	YELLOW
	GENERAL	GENSPEED 6000 7133962	CMR	YELLOW
	BELDEN	2400 SERIES 2412004	CMR	YELLOW
OSP BURIAL GRADE CAT 6	BERK-TEK	LANMARK-1000 OSP 11072213	NOT RATED	BLACK PE
	GENERAL	GENSPEED OSP 7136100	NOT RATED	BLACK PE
	BELDEN	OSP6U 010	NOT RATED	BLACK PE
OSP BURIAL GRADE CAT 6A	BERK-TEK	LANMARK-10G OSP 11094458	NOT RATED	BLACK PE
	GENERAL	GENSPEED OSP 8136100	NOT RATED	BLACK PE
	BELDEN	OSP6AU 010	NOT RATED	BLACK PE

DATA PATCH CORD SCHEDULE

TYPE	LENGTH/QT'Y	LENGTH/QT'Y	LENGTH/QT'Y	LENGTH/QT'Y	LENGTH/QT'Y	LENGTH/QT'Y	LENGTH/QT'Y	LENGTH/QT'Y	LENGTH/QT'Y
6 FIBER	1M / 5	2M / 10	3M / 8	10M / 6	-- / --	-- / --	-- / --	-- / --	-- / --
8 DATA/VOIP	1' / 125	3' / 50	5' / 25	-- / --	-- / --	-- / --	-- / --	-- / --	-- / --
8A WAP	1' / 30	3' / 15	5' / 5	-- / --	-- / --	-- / --	-- / --	-- / --	-- / --
8B CAM	1' / 20	3' / 10	5' / 5	-- / --	-- / --	-- / --	-- / --	-- / --	-- / --
12 DATA	-- / --	3' / 25	5' / 50	7' / 75	10' / 25	-- / --	-- / --	-- / --	-- / --
12A VOIP	-- / --	-- / --	5' / 10	7' / 15	10' / 10	-- / --	-- / --	-- / --	-- / --

DATA PATCH CORD SCHEDULE NOTES:

1) FURNISH PATCH CORDS TO OWNER LOOSE PRIOR TO INSTALLATION. VERIFY ALL QUANTITIES AND LENGTHS WITH THE OWNER'S PROJECT MANAGER AND PROVIDE SIGNED COPY OF RECEIPT TO ENGINEER AT PROJECT SUBSTANTIAL COMPLETION.

2) SEE SPECIFICATIONS FOR DETAILED REQUIREMENTS FOR PATCH CORD DELIVERY AND INSTALLATION. ALL PATCH CORDS SHALL BE NEATLY ROUTED, BUNDLED AND SECURED AT 6" ON CENTER WITH BLACK VELCRO STRAPS. BUNDLE DATA PATCH CORDS SEPARATELY, DO NOT BUNDLE WITH VOICE PATCH CORDS. BUNDLE FIBER OPTIC PATCH CORDS SEPARATELY FROM COPPER PATCH CORDS.

3) PROVIDE EXCEL SPREADSHEET IDENTIFYING CONNECTIONS MADE, SEE SPECIFICATIONS.

DATA SYSTEM SINGLE LINE CONFIGURATION DIAGRAM

NOT TO SCALE

NOTE RUN ALL CABLES CONTINUOUS BETWEEN TERMINATION POINTS INDICATED WITH NO INTERMEDIATE SLICES OR TERMINATIONS.

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100% CONSTRUCTION DOCUMENTS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER BICSI Gregory A. Cook BICSI ID # 104998 EXPIRES 12-31-27 RCDD

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS

1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

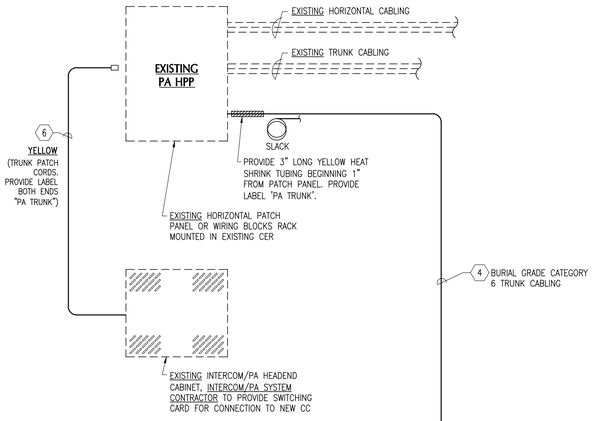
DATA SYSTEM SINGLE LINE DIAGRAM

PROJECT NUMBER 22019
DATED 01/31/2025

T401

Premier Engineering Group, LLC
2425 W. Nine Mile Road, Suite 2 Pensacola, Florida 32534
Florida Certificate of Authorization #9308
Phone: (850) 469-0405 Fax: (850) 432-0905
Premier Project #22024

EXISTING CER.1.131



INTERCOM/PA SYSTEM SINGLE LINE KEY NOTES:

3 BY INTERCOM/PA SYSTEM CONTRACTOR: 32 PORT SWITCHING MODULE, CAREHAWK SS32. PROVIDES ANNUNCIATION CALL-IN AND BIDIRECTIONAL COMMUNICATIONS WITH DISPLAY ADMIN CONSOLES. RACK MOUNT USING CAREHAWK PART #84103 RACK MOUNT KIT, QUANTITY AS REQUIRED. BOND DIRECTLY TO CC GROUNDING BUSBAR WITH #10 AWG INSULATED GROUNDING CONDUCTOR (GREEN) AND HEAVY DUTY COMPRESSION RING CONNECTORS, MATCH RING SIZE TO FASTENER SIZE, ATTACH TO SS32 AT FACTORY DESIGNATED AND MASKED OFF POINT AT CASING MOUNTING FLANGE FOR CLEAN METAL-TO-METAL CONTACT. ROUTE GROUNDING CONDUCTOR ALONG AND SECURE TO BACK OF RACK USING SCSC PROVIDED NYLON CABLE STANDOFF BRACKETS, UP TO CABLE RUNWAY AND IN A DIRECT PATH PARALLEL TO RUNWAY LINES OVER TO BACKBOARD AND DOWN TO BUSBAR, ROUTE WITH AND SECURE SAME AS OTHER GROUNDING CONDUCTORS BY SCSC.

4 BY INTERCOM/PA SYSTEM CONTRACTOR: SIX OSP BURIAL GRADE CATEGORY 6 CABLES, BELDEN '05PBU' (NO EQUAL). PULL IN ALONG WITH FIBER OPTIC BACKBONE CABLING TO CC. TWO CABLES ARE SPARE, TERMINATE, TEST, LABEL AND COIL 20 FEET SLACK EACH END ON BACK OF VERTICAL CABLE RUNWAY AT UNDERGROUND CONDUIT ENTRY. PROVIDE INDUSTRIAL GRADE SURGE PROTECTION AT EACH END, DITEK OR ENGINEER APPROVED EQUAL – INSTALL AND BOND TO GROUND IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

6 BY INTERCOM/PA SYSTEM CONTRACTOR: EQUIPMENT ROOM INTERCOM/PA PATCH CORDS, FACTORY TERMINATED AND TESTED CATEGORY 6 MODULAR PATCH CORD (UTP) 4-PAIR UNSHIELDED CABLE WITH 23 GAGE SOLID COPPER CONDUCTORS, COLOR YELLOW. PROVIDE WITH 8-PIN MODULAR PLUG ON BOTH ENDS AND TIA 568A PIN/PAIR ASSIGNMENTS, BELDEN C6011xxxxx (NO EQUAL). FIELD BUILT OR ASSEMBLED PATCH CORDS WILL NOT BE ACCEPTED. PROVIDE PATCH CORD QUANTITIES AND LENGTHS AS REQUIRED PLUS 25% SPARE. PROVIDE DOCUMENTATION OF FACTORY TESTING AT SUBMITTAL.

7 BY INTERCOM/PA SYSTEM CONTRACTOR: HORIZONTAL UN-LOADED PATCH PANEL, 48 PORT, TIA 568A PINOUT, BELDEN RVMPPF2U48BK-P. PROVIDE WITH FACTORY PLASTIC LABELING WINDOWS AND BELDEN AX107527 ACCESSORY NON-ADHESIVE LABEL SHEETS, FACTORY CABLE MANAGEMENT BAR, AND MOUNTING HARDWARE. PROVIDE WITH TIA CATEGORY 6+ 8-PIN MODULAR JACKS IN ALL PORTS. BELDEN REVCONNECT RV6MJKUYL COLOR YELLOW TO MATCH THE USER/SERVICE COLOR SCHEDULE. SEE SCHEDULE ON SHEET T401. SEE CATEGORY 6 CABLE NOTE BELOW FOR PINOUT.

8 BY INTERCOM/PA SYSTEM CONTRACTOR: TIA CATEGORY 6 INTERCOM/PA HORIZONTAL CABLING, 4 PAIR UTP, 23 GAGE SOLID COPPER CONDUCTORS. MAXIMUM INSTALLED LENGTH 90 METERS (295'). PROVIDE DOCUMENTATION OF CURRENT UL CERTIFICATION WITH SUBMITTALS. PROVIDE WITH CMR (RISER) JACKET, COLOR YELLOW. SEE SCHEDULE ON SHEET T401 FOR APPROVED CABLES. PINOUT FOR THE CAREHAWK SYSTEM IS NOT TIA 568A OR 568B BUT IS CUSTOM FOR THE CAREHAWK SYSTEM, PUNCH DOWN ACCORDINGLY.

ALLOWANCE FOR INTERCOM/PA SYSTEM

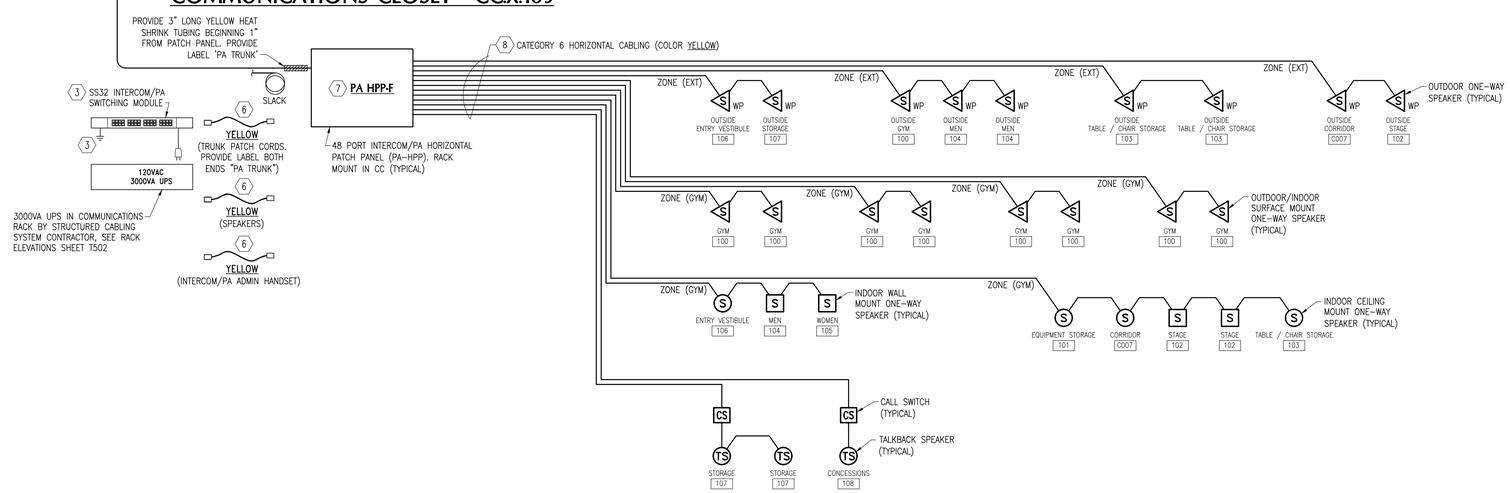
THE GENERAL CONTRACTOR SHALL INCLUDE AN ALLOWANCE FOR THE PROVISION OF A COMPLETE INTERCOM/PA SYSTEM FOR THIS PROJECT IN THE BASE BID. ALL REFERENCES TO MATERIALS AND LABOR ASSOCIATED WITH THE INTERCOM/PA SYSTEM WITHIN THE CONTRACT DOCUMENTS SHALL BE INCLUDED IN THIS ALLOWANCE UNLESS SPECIFICALLY INDICATED OTHERWISE. THE AMOUNT OF THE ALLOWANCE SHALL BE ISSUED AS AN ADDENDUM PRIOR TO THE BID DATE. THE SCOPE OF WORK FOR THE ALLOWANCE SHALL INCLUDE:

1. THE INTERCOM/PA SYSTEM COMPLETE WITH ALL DEVICES AND EQUIPMENT DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS, TO INCLUDE A FULL INTERFACE TO THE EXISTING SCHOOL CAREHAWK INTERCOM/PA SYSTEM AND THREE NEW ADMIN CONSOLES.
2. ALL DEVICES AND EQUIPMENT IN THE INTERCOM/PA SYSTEM PROVIDER'S COST PROPOSAL AND ASSOCIATED STATEMENT OF WORK.
3. ALL OTHER DEVICES AND EQUIPMENT REQUIRED FOR A COMPLETE SYSTEM.
4. ALL ASSOCIATED CABLING.
5. ALL WIRING AND CABLING, ALL CABINETS AND ENCLOSURES AND ALL PROGRAMMING AND SETUP REQUIRED TO MAKE THE SYSTEM FULLY OPERATIONAL AND FUNCTIONAL TO THE SATISFACTION OF THE OWNER.
6. AN INTERFACE TO THE TELEPHONE SYSTEM TO ALLOW INTERCOM/PA CALLS TO BE MADE THRU ANY VOIP TELEPHONE SET ANYWHERE ON CAMPUS.

RELATED WORK TO BE PROVIDED BY OTHERS UNDER THE BASE BID BUT NOT INCLUDED IN THE SCOPE OF THE ALLOWANCE SHALL INCLUDE A 'D2' SPECIAL SERVICES COMMUNICATIONS OUTLET AT THE INTERCOM/PA SYSTEM FOR CONNECTION TO THE VOIP TELEPHONE SYSTEM (BY THE STRUCTURED CABLING SYSTEM CONTRACTOR), CONDUIT FOR ALL INTERCOM/PA SYSTEM WIRING AND CABLING (BY THE ELECTRICAL CONTRACTOR); AND ALL POWER AND GROUNDING REQUIRED FOR THE SYSTEM (BY THE ELECTRICAL CONTRACTOR). EACH ELECTRICAL CONTRACTOR PROVIDING A BID FOR THIS PROJECT SHALL BE RESPONSIBLE FOR COORDINATING THE ASSOCIATED CONDUIT, POWER AND GROUNDING WORK WITH THE SYSTEM PROVIDER PRIOR TO BIDS – BUT THE SCOPE OF CONDUIT AND POWER WORK SHALL NOT BE LESS THAN THAT DESCRIBED ON THE DRAWINGS.

THE INTERCOM/PA SYSTEM CONTRACTOR SHALL BE JACKSONVILLE SOUND & COMMUNICATIONS, TALLAHASSEE FL. CONTACT JAMIE BAKER AT SCOTT POWELL@JSCSYSTEMS.NET OR (850) 656-1705.

COMMUNICATIONS CLOSET - CC.X.109



INTERCOM/PA SYSTEM SINGLE LINE CONFIGURATION DIAGRAM

NOT TO SCALE

NOTE

SEE FLOOR PLAN FOR SPEAKER AND CALL BUTTON QUANTITIES IF GREATER THAN THE QUANTITY SHOWN ON THE SINGLE LINE.

NOTE: RUN ALL CABLES CONTINUOUS BETWEEN TERMINATION POINTS INDICATED WITH NO INTERMEDIATE SLICES OR TERMINATIONS.

DAG ARCHITECTS

DAG Architects AR0009694
455 Harrison Ave., Panama City, FL 32401
850.387.1671
www.DAGarchitects.com

100% CONSTRUCTION DOCUMENTS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER BICSI Gregory A. Cook BICSI ID # 104998 EXPIRES 12-31-27 RCDD

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS

1104 Balboa Avenue, Panama City, FL 32401

REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

INTERCOM/PA SYSTEM SINGLE LINE DIAGRAM

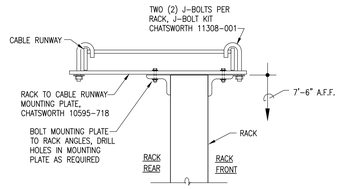
PROJECT NUMBER	22019
DATED	01/31/2025

T402

Premier Engineering Group, LLC
2425 W. Nine Mile Road, Suite 2, Pensacola, Florida 32534
Florida Certificate of Authorization #9906
Phone: (850) 469-0403 Fax: (850) 432-0905
Premier Project #220204

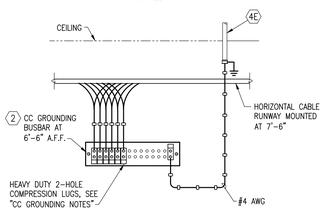
CABLE RUNWAY MOUNTING HEIGHT NOTE

BOTTOM OF CABLE RUNWAY MUST BE MOUNTED AT EXACTLY 7'-6" ABOVE THE FINSHED FLOOR TO ALLOW INSTALLATION OF 7'-6" HIGH RACKS. RACKS ARE 7'-6" HIGH TO ALLOW CABLE RUNWAY TO CLEAR DOOR FRAMES.



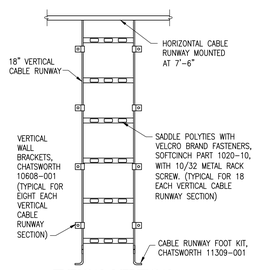
TYPICAL CABLE RUNWAY RACK SUPPORT DETAIL

NOT TO SCALE



TYPICAL CC GROUNDING BUSBAR DETAIL

NOT TO SCALE



7C TYPICAL VERTICAL CABLE RUNWAY DETAIL

NOT TO SCALE

CC ENLARGED FLOOR PLAN KEY NOTES:

1. PLYWOOD BACKBOARD, 8'-0" HIGH X FULL WIDTH OF WALL AS INDICATED, MOUNT WITH BOTTOM AT 6" ABOVE FINISH FLOOR. ROUGH ALL ELECTRICAL OUTLETS INTO WALL BEHIND BACKBOARD AND BACKBOARD FOR FLUSH MOUNT INSTALLATION OF FACEPLATES. COORDINATE WORK WITH ELECTRICAL CONTRACTOR TO ENSURE THAT POWER RECEPTACLES ARE PROPERLY LOCATED. POWER CONDUITS ARE RECESSED INTO WALL AND BACKBOARD, AND FACEPLATES ARE FLUSH ON FACE OF BACKBOARD. FILL AND SAND SMOOTH ALL SEAMS, COUNTERSUNK SCREW HOLES AND VOIDS. PRIME WITH TWO COATS PRIMER, SANDING SMOOTH AFTER EACH COAT. PRETREAT BARE PLYWOOD WITH FLAMECHECK M-111 AND ALLOW TO DRY BEFORE PAINTING. APPLY FIRST COAT WITH FIRE RETARDANT PAINT – ADD 8 OUNCES OF FLAMECHECK M-111PA TO ONE GALLON OF ACRYLIC PAINT, THOROUGHLY MIX AND APPLY TWO FULL COATS FOR 2 MIL THICKNESS PER MANUFACTURER'S PRINTED RECOMMENDATIONS. FINISH WITH THICK COAT OF SEMI-GLOSS ACRYLIC PAINT, COLOR BATTLESHIP GREY. FINAL SURFACE SHALL BE UNIFORMLY SMOOTH AND EVEN. TOUCH UP AT END OF PROJECT.

   SPECIAL BACKBOARD DUST CONTROL NOTE: COMPLETE ALL BACKBOARD WORK INCLUDING FINISH PAINTING PRIOR TO INSTALLATION OF RACKS AND BACKBOARD MOUNTED EQUIPMENT AND PRIOR TO PULLING CABLING INTO CC.

2. CC GROUNDING BUSBAR, HARGER GBI-14420G WITH TWO ROWS OF 7/16"ø HOLES AT 1" SPACING EACH WAY. MAKE ALL CONNECTIONS WITH TWO HOLE LONG BARREL COMPRESSION LUGS (HARGER GECLB4-2C FOR #4 AWG, GECLB6-2C FOR #6 AWG) AND BOND TO BUSBAR WITH TWO 3/8"ø SS HEX HEAD CAP SCREWS WITH SS LOCKING NUTS. SEE "CC GROUNDING NOTES" AND "VOICE SYSTEM SINGLE LINE CONFIGURATION DIAGRAM".

3. BY ELECTRICAL CONTRACTOR: 120 VAC 20 AMP DOUBLE DUPLEX POWER RECEPTACLE. ROUGH-IN WALL BOX FLUSH WITH FACE OF BACKBOARD. EXTEND EMT CONDUIT FROM BOX CONCEALED BEHIND BACKBOARD. SEE ELECTRICAL DRAWINGS.

3A. BY ELECTRICAL CONTRACTOR: 120 VAC 20 AMP DOUBLE DUPLEX POWER RECEPTACLE. MOUNT DIRECTLY UNDER CCTV ENCLOSURE CHASE NIPPLE FOR POWER CORD PASS-THRU. ROUGH-IN WALL BOX FLUSH WITH FACE OF BACKBOARD. EXTEND EMT CONDUIT FROM BOX CONCEALED BEHIND BACKBOARD. SEE ELECTRICAL DRAWINGS.

3B. BY ELECTRICAL CONTRACTOR: 120 VAC 20 AMP SIMPLEX POWER RECEPTACLE WITH DEDICATED 120 VAC 20 AMP CIRCUIT. MOUNT ON BACKSIDE OF CABLE RUNWAY IN NON-METALLIC SINGLE GANG BOX TO SERVE RACK MOUNTED POWER SURGE SUPPRESSOR. PROVIDE 1/2" PVC ELECTRICAL CONDUIT FROM BACKBOARD ALONG UNDERSIDE OF CABLE RUNWAY, SAME AS REQUIRED FOR 30 AMP POWER OUTLET. PAINT FLAT BLACK. SEE ELECTRICAL DRAWINGS.

3C. ELECTRICAL CONTRACTOR: 120 VAC L5-30 30 AMP POWER RECEPTACLE WITH DEDICATED 120 VAC 30 AMP CIRCUIT. MOUNT ON HEAVY DUTY (3/16" THICK) BLANK FILLER PLATE ON REAR OF RACK AS INDICATED TO SERVE 3000 VA UPS. RUN POWER CIRCUIT FROM BACKBOARD IN PVC ELECTRICAL CONDUIT UNDER CABLE RUNWAY AND IN FLEXIBLE NON-METALLIC CONDUIT INSIDE OF RACK CHANNEL CONCEALED – MAINTAIN MINIMUM SEPARATION FROM DATA CABLING. PAINT ALL FLAT BLACK. SEE "TYPICAL POWER CONDUIT TO UPS 30 AMP POWER OUTLET DETAIL", "TYPICAL 3000 VA UPS 30 AMP POWER OUTLET MOUNTING DETAIL" AND "TYPICAL RACK POWER DISTRIBUTION DIAGRAM" DETAILS, SHEET T6.2. SEE ELECTRICAL DRAWINGS.

4. UNDERGROUND BACKBONE CONDUIT. SEE "COMMUNICATIONS SITE PLAN" FOR CONDUIT REQUIREMENTS AND ROUTING. SEE SINGLE LINE CONFIGURATION DIAGRAMS SHEETS FOR CABLE REQUIREMENTS. TURN UP WITH CONDUIT CENTERLINE AT 6" FROM BACKBOARD AND TERMINATE AT 4" A.F.F WITH PVC END BELL PRIOR TO INSTALLING CABLING.

4B. 3/4" HOMERUN CONDUITS FOR DIRECT CONNECTIONS TO SPECIAL SERVICES. SEE "SPECIAL SERVICES NOTE" SHEET T201. STUB CONDUITS THRU CEILING TILE (TRIM TILE CLOSE AROUND CONDUIT) AND TERMINATE AT 8" ABOVE CABLE RUNWAY.

4C. EMT CONDUIT SLEEVES (CAT 6 & CAT 6A) UP INTO CEILING SPACE, SIZE AS INDICATED. STUB CONDUIT SLEEVE THRU CEILING TILE (TRIM TILE CLOSE AROUND CONDUIT) AND TERMINATE AT 8" ABOVE CABLE RUNWAY. SECURE EACH SLEEVE ABOVE AND BELOW CEILING – PROVIDE SUPPORTS AS REQUIRED. CONNECTORIZE EACH END OF CONDUIT AND INSTALL PLASTIC INSULATING BUSHINGS ON CONNECTORS BEFORE PULLING CABLING. LOCATE SLACK CABLE ABOVE CEILING (NOT IN CC CABLE RUNWAY), COIL SLACK CABLE IN NEAT "U BENDS" BUNDLED WITH VELCRO AND SECURED TO ROOF STRUCTURE. BOND STRUT TO GROUNDING BUSBAR.

4D. EMT CONDUIT SLEEVES (INTERCOM/PA) UP THRU CEILING AND INTO PULL BOX ABOVE, SIZE AS INDICATED, QUANTITY AS INDICATED OR PROVIDE ADDITIONAL SLEEVES IF SO DIRECTED BY INTERCOM/PA SYSTEM PROVIDER. STUB CONDUIT SLEEVE THRU CEILING TILE (TRIM TILE CLOSE AROUND CONDUIT) AND TERMINATE AT 8" ABOVE CABLE RUNWAY. SECURE EACH SLEEVE ABOVE AND BELOW CEILING – PROVIDE SUPPORTS AS REQUIRED. CONNECTORIZE EACH END OF CONDUIT AND INSTALL PLASTIC INSULATING BUSHINGS ON CONNECTORS BEFORE PULLING CABLING. LOCATE SLACK CABLE IN PULL BOX ABOVE CEILING, COIL SLACK CABLE IN NEAT "U BENDS" BUNDLED WITH VELCRO. BOND STRUT TO GROUNDING BUSBAR.

4E. BY ELECTRICAL CONTRACTOR: 3/4" EMT CONDUIT TO BUILDING MAIN ELECTRICAL PANEL FOR GROUNDING CONDUCTOR. PROVIDE WITH INSULATED GROUNDING BUSHING – MALLEABLE IRON, STEEL CITY #BG-80Z.

5. FLOOR MOUNT EQUIPMENT RACK. REFER TO RACK ELEVATION DETAILS.

7. 18" WIDE CABLE RUNWAY, CHATSWORTH 10250-718, COLOR BLACK. PROVIDE BUTT-SPLICE KIT, CHATSWORTH 11301-001 TO BUTT-SPLICE SECTIONS OF CABLE RUNWAY (PAINT BEFORE INSTALLING AND TOUCH UP AFTER INSTALLATION). INSTALL ALL CABLE RUNWAY, FITTINGS, AND ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.

7F. CABLE RUNWAY WALL ANGLE SUPPORT KIT, CHATSWORTH 11421-718.

7G. 18" WIDE CABLE RUNWAY, MOUNTED VERTICALLY FROM CONDUIT ENTRANCE IN FLOOR TO 7'-6". SEE "TYPICAL VERTICAL CABLE RUNWAY DETAIL".

8. 1" UNDERGROUND HOMERUN CONDUIT FROM COs, WAPS, INTERCOM/PA SPEAKERS, SECURITY CAMERAS, SECURE DOORS AND MONITORED DOORS SHOWN TO HAVE CABLES RUN BELOW GRADE. SEE COMMUNICATIONS FLOOR PLANS, IP SECURITY CAMERA PLANS AND ACCESS CONTROL PLANS FOR CONDUIT REQUIREMENTS. SEE SINGLE LINE DIAGRAMS SHEETS FOR CABLE REQUIREMENTS. TURN UP WITH CONDUITS GROUPED TIGHT TOGETHER BY APPLICATION AND TERMINATE AT 4" A.F.F WITH PVC END BELL PRIOR TO INSTALLING CABLING.

CC GENERAL NOTES:

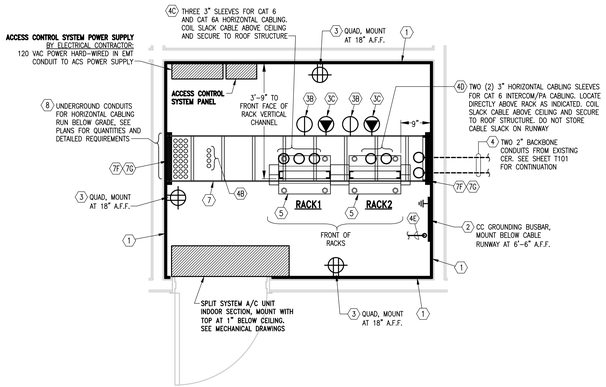
CABLE ROUTING: ROUTE CABLING IN CABLE RUNWAY. BUNDLE FIBER OPTIC, VOICE BACKBONE AND HORIZONTAL CABLING SEPARATELY. SECURE BUNDLES WITH BLACK VELCRO AT MINIMUM OF 12" ON CENTER IN CABLE RUNWAY AND AT MINIMUM OF 6" ON CENTER IN RACK VERTICAL CABLING SECTIONS. THE FINISHED INSTALLATION SHALL MEET THE APPROVAL OF THE ENGINEER FOR OVERALL QUALITY, ORGANIZATION, AND NEATNESS OF APPEARANCE. SEE SINGLE LINE CONFIGURATION DIAGRAMS FOR CABLE TYPES AND QUANTITIES.

BACKBOARD LAYOUT: BACKBOARD AND RACK ARRANGEMENT AND EQUIPMENT LOCATIONS INDICATED ARE DRAWN TO SCALE. DO NOT MODIFY LAYOUT WITHOUT PRIOR APPROVAL OF ENGINEER. USE ALL BLACK HARDWARE ON FACE OF RACKS.

CC FASTENERS: ALL ATTACHMENTS MADE TO CABLE TRAY OR RACKS SHALL HAVE SCREWS, BOLTS OR ANY OTHER MOUNTING HARDWARE INSTALLED IN DIRECTION AWAY FROM ANY COMMUNICATIONS CABLING. SELF TAPPING SCREWS ARE NOT ACCEPTABLE. ALL MOUNTING SCREWS SHALL BE BLACK.

CC PAINTING: TOUCH-UP PAINT ALL NICKS AND SCRATCHES ON ALL RACKS, CABLE RUNWAY, BACKBOARDS, ETC. AFTER INSTALLATION IS COMPLETE. TOUCH-UP SHALL BE DONE USING MANUFACTURER PROVIDED PAINT TO MATCH. ALL SCREWS, NUTS, AND BOLTS SHALL BE PAINTED TO MATCH HARDWARE.

CATEGORY 6 TERMINATIONS: MAKE ALL TERMINATIONS IN STRICT ACCORDANCE WITH TIA GUIDELINES AS WELL AS THE MANUFACTURER'S PRINTED INSTRUCTIONS FOR BOTH THE CABLE AND THE TERMINATION DEVICE FOR ALL FIELD CONNECTIONS IN THE "HORIZONTAL TELECOMMUNICATIONS LINK". STRIP CABLE JACKET BACK A MAXIMUM OF 1 INCH FROM THE POINT OF TERMINATION. MAINTAIN FACTORY SYMMETRICAL CABLE TWISTS TO WITHIN 0.5 INCHES (13 MM MAXIMUM) OF THE POINT OF TERMINATION. PROVIDE CABLE SLACK AT EACH END TO ALLOW MINIMUM OF FIVE (5) FUTURE RETERMINATIONS WITHOUT RE-ROUTING CABLE. SEE CO MOUNTING DETAILS, BACKBOARD ELEVATIONS, AND CC DETAILS.



NORTH

CC.X.109 - ENLARGED FLOOR PLAN

SCALE: 1/2" =1'-0"

ELECTRICAL CONTRACTOR NOTE

IN CC, RECESS ALL POWER CONDUITS AND DEVICE BOXES INTO WALLS BEHIND BACKBOARD TO ALLOW FLUSH MOUNTING OF POWER OUTLET FACE PLATES. DO NOT SURFACE MOUNT CONDUITS ON BACKBOARDS

CC LIGHT FIXTURE NOTE

LOCATE LIGHT FIXTURES TO CLEAR CABLE RUNWAY FOR LAMP CHANGE/FIXTURE MAINTENANCE, REGARLESS OF FIXTURE LAYOUT INDICATED ON ELECTRICAL DRAWINGS. PROVIDE UNIFORM 50 FOOTCANDLE LIGHT LEVEL AT 48" A.F.F.

CC GROUNDING NOTES

1. ALL GROUND CONNECTIONS SHALL BE MADE WITH HEAVY DUTY 2 HOLE COMPRESSION LUGS (HARGER GECLB4-2C FOR #4AWG, GECLB6-2C FOR #6AWG) AND 3/8"ø SS HEX HEAD CAP SCREWS WITH SS LOCKING NUTS (TWO SCREWS AND NUTS PER 2 HOLE LUG).
2. PROVIDE GROUNDING BUSBAR IN "CC" AS INDICATED. ELECTRICAL CONTRACTOR GROUND MAIN BUSBAR TO BUILDING MAIN ELECTRICAL SERVICE GROUND (BUILDING IN WHICH CC IS LOCATED) WITH #4 AWG INSULATED (GREEN) SOLID COPPER GROUNDING CONDUCTOR. RUN CONDUCTOR FROM BUSBAR LOCATION TO BUILDING MAIN ELECTRICAL SERVICE GROUND IN EMT CONDUIT. PROVIDE UL LISTED RIGID CONDUIT THREADED MALLEABLE IRON INSULATED GROUNDING BUSHING WITH BRONZE LUG (O-Z/GEDNEY TYPE IBC-L-BC) AT BOTH CONDUIT ENDS AND GROUND EACH END PER NEC. GROUNDING TO BUILDING STRUCTURE, CONDUITS, UTILITY PIPING, OR ELECTRICAL SUBPANELS IN LIEU OF BONDING TO BUILDING MAIN ELECTRICAL SERVICE GROUND IS NOT ACCEPTABLE.
3. GROUND ALL COMMUNICATION RACKS WITH #6 AWG INSULATED (GREEN) SOLID COPPER GROUNDING CONDUCTOR TO MAIN GROUNDING BUSBAR. GROUND RACKS INDIVIDUALLY TO BUSBAR (DO NOT LOOP GROUNDS). ROUTE CONDUCTOR ALONG RACK REAR AND IN CABLE RUNWAY TO GROUNDING BUSBAR.
4. GROUND EACH CONDUIT AND CONDUIT SUPPORT STRUT WITH #6 AWG INSULATED (GREEN) SOLID COPPER GROUNDING CONDUCTOR TO GROUNDING BUSBAR. ROUTE CONDUCTOR IN CABLE RUNWAY TO GROUNDING BUSBAR.
5. GROUND CABLE RUNWAY WITH #6 AWG INSULATED (GREEN) SOLID COPPER GROUNDING CONDUCTOR TO GROUNDING BUSBAR. ROUTE CONDUCTOR IN CABLE RUNWAY TO GROUNDING BUSBAR.
6. PROVIDE UL LISTED RIGID CONDUIT THREADED MALLEABLE IRON INSULATED GROUNDING BUSHING WITH BRONZE LUG (O-Z/GEDNEY TYPE IBC-L-BC) ON END OF BACKBONE CONDUITS AND GROUND TO BUSBAR WITH #6 AWG INSULATED (GREEN) COPPER GROUNDING CONDUCTOR. PLASTIC INSULATING BUSHING IS ALSO REQUIRED.

Graphic Scale

2 1 0 2FT 4FT

SCALE: 1/2" = 1'-0"

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100% CONSTRUCTION DOCUMENTS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER BICSI Gregory A. Cook BICSI ID # 104998 EXPIRES 12-31-27 RCDD

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

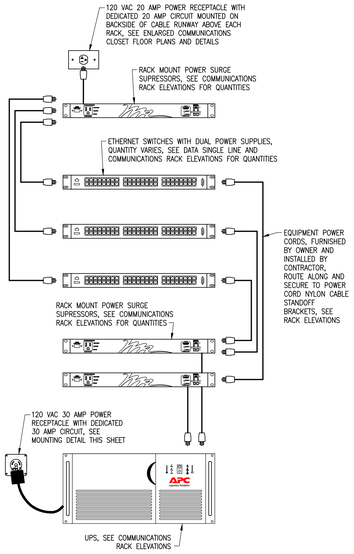
REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

COMMUNICATIONS CLOSET ENLARGED FLOOR PLAN

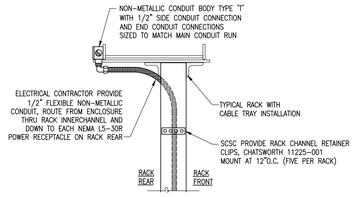
PROJECT NUMBER	22019
DATED	01/31/2025

T501

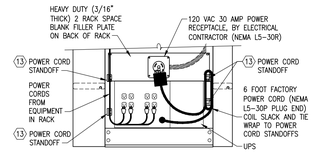


TYPICAL RACK POWER DISTRIBUTION DIAGRAM

NOT TO SCALE



TYPICAL POWER CONDUIT TO UPS 30 AMP POWER OUTLET DETAIL



POWER CORD ROUTING DETAIL AT UPS PARTIAL RACK REAR ELEVATIONS

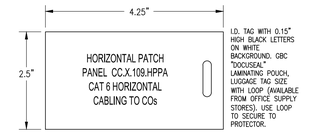
ENGRAVED PLASTIC TAG WITH 1/2" HIGH WHITE LETTER ON BLACK BACKGROUND. TAG SHALL HAVE ALL EDGES BEVELED AND SMOOTH, SECURE TAG WITH DOUBLE SIDED TAPE ON FAR RIGHT SIDE OF PATCH PANEL FRONT FACE

A

TYPICAL HORIZONTAL PATCH PANEL ENGRAVED TAG DETAIL

NOT TO SCALE

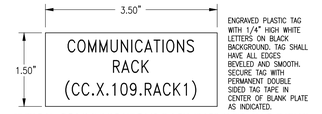
SEE "COMMUNICATIONS TYPICAL LABELING DETAILS"



TYPICAL HORIZONTAL PATCH PANEL LAMINATED I.D. TAG DETAIL

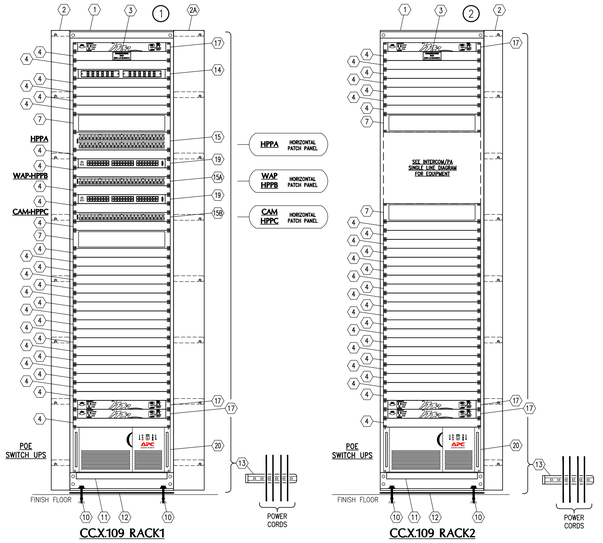
NOT TO SCALE

SEE "COMMUNICATIONS TYPICAL LABELING DETAILS"



TYPICAL COMMUNICATIONS RACK ENGRAVED TAG DETAIL

FULL SIZE



CCX.109 RACK1 CCX.109 RACK2

COMMUNICATIONS RACK ELEVATIONS

SCALE: 1"= 1'-0"

COMMUNICATIONS RACK ELEVATION KEY NOTES:

1. UNIVERSAL 7'-6" HIGH x 19" WIDE ALUMINUM FLOOR MOUNT RACK WITH UNIVERSAL 5/8", 5/8", 1/2" ALTERNATING HOLE PATTERN FRONT AND BACK, AND BLACK BAKED ENAMEL FINISH, CHATSWORTH 46353-705. PROVIDE WITH GROUND TERMINAL BLOCK, CHATSWORTH 08009-001.
2. DOUBLE SIDED VERTICAL CABLE MANAGER WITH INTEGRAL HINGED FRONT DOOR/COVER, SIZE 3.65" x 7'-6", COLOR BLACK, CHATSWORTH "CCS" 30161-705.
2A. DOUBLE SIDED VERTICAL CABLE MANAGER WITH INTEGRAL HINGED FRONT DOOR/COVER, SIZE 6" x 7'-6", COLOR BLACK, CHATSWORTH "CCS" 30162-705.
3. IDENTIFICATION TAG AT TOP OF RACK, SEE "TYPICAL COMMUNICATIONS RACK ENGRAVED TAG DETAIL".
4. ONE RACK SPACE BLANK FILLER PLATE, COLOR BLACK, CHATSWORTH 30026-701.
7. TWO RACK SPACE HINGED HORIZONTAL CABLE MANAGER ON FRONT SIDE OF RACK, PANDUIT WMPHF2E.
10. CONCRETE FLOOR RACK MOUNTING KIT, CHATSWORTH 40604-001.
11. RACK BASE DUST COVER, BLACK ENAMEL FINISH, CHATSWORTH 41050-719.
12. RACK ISOLATION KIT, CHATSWORTH 10605-019.
13. NYLON CABLE STANDOFF BRACKET, CHATSWORTH 10001-001. MOUNT ON BACK LEFT SIDE OF ALL RACKS AT 12" ON CENTER FOR ROUTING GROUNDING CONDUCTORS AND POWER EXTENSION CORDS UP AND DOWN RACKS. TYWRAP EACH CONDUCTOR AND CORD INDIVIDUALLY ON STANDOFF. (NOT SHOWN ON ELEVATIONS)
14. FIBER DRAWER FOR BACKBONE CABLES, 24 PORT, RACK MOUNT. SEE "DATA SINGLE LINE CONFIGURATION DIAGRAM".
15. 48 PORT CATEGORY 6 HORIZONTAL PATCH PANEL (HPP), SEE "DATA SINGLE LINE CONFIGURATION DIAGRAM".
15A. 48 PORT CATEGORY 6A WAP HORIZONTAL PATCH PANEL (WAP-HPP), SEE "DATA SINGLE LINE CONFIGURATION DIAGRAM".
15B. 24 PORT CATEGORY 6 HORIZONTAL PATCH PANEL (CAM-HPP), SEE "DATA SINGLE LINE CONFIGURATION DIAGRAM".
17. RACKMOUNT POWER SURGE SUPRESSOR, MIDDLE ATLANTIC PDX-92OR-SP, COLOR BLACK, WITH EIGHT 120 VAC POWER RECEPTACLES ON BACK OF UNIT, ONE 120 VAC CONVENIENCE OUTLET ON FRONT, FRONT POWER SWITCH, AND 9' POWER CORD.
19. OWNER FURNISHED CONTRACTOR INSTALLED (OFCI): 48 PORT POE ETHERNET WORKGROUP SWITCH FOR DATA, VOIP, IP SECURITY CAMERAS AND WAP CONNECTIONS. SEE "DATA SYSTEM SINGLE LINE CONFIGURATION DIAGRAM". WHERE EQUIPMENT VARIES IN SIZE OR QUANTITY FROM THAT INDICATED, PROVIDE BLANK FILLER PLATES TO COVER ALL UNUSED RACK SPACES.
20. SCSC PROVIDE: AMERICAN POWER CONVERSION SMX3000LVNC (4 RACK UNITS HIGH – 2 POST MOUNTING) 3000 VA RACK MOUNT UPS, (QUANTITY ONE PER RACK – FOR POE ETHERNET WORKGROUP SWITCHES), PROVIDE WITH FACTORY NETWORK CARD. ELECTRICAL CONTRACTOR PROVIDE RACK MOUNT 120 VAC L5-30R 30 AMP DEDICATED CIRCUIT RECEPTACLE FOR EACH UPS. SEE "TYPICAL POWER CONDUIT TO UPS 30 AMP POWER OUTLET DETAIL" AND "TYPICAL 3000 VA UPS 30 AMP POWER OUTLET MOUNTING DETAIL" DETAILS, THIS SHEET.

Graphic Scale

1 .5 0 1FT 2FT

SCALE: 1" = 1'-0"

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100% CONSTRUCTION DOCUMENTS

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A New Gymatorium for:
PALM BAY CHARTER SCHOOLS

1104 Balboa Avenue, Panama City, FL 32401

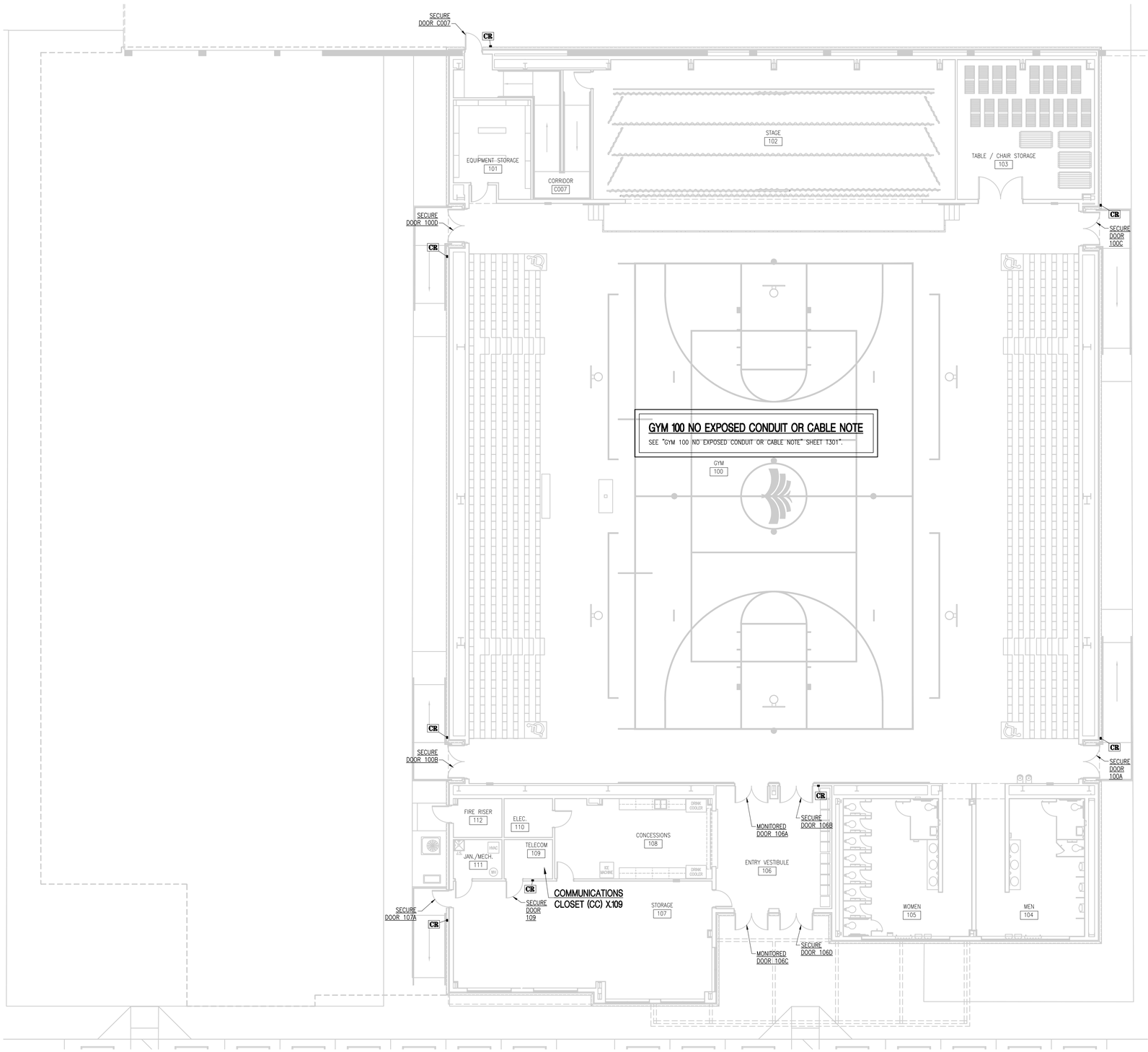
REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

COMMUNICATIONS RACK ELEVATIONS

PROJECT NUMBER	22019
DATED	01/31/2025

T502



SECURE SIDE MOUNTING

ALL CONDUIT AT SECURE DOORS SHALL BE INSTALLED ON THE SECURE SIDE (SIDE OPPOSITE CARD READER).

ACCESS CONTROL SYSTEM FLOOR PLAN

SCALE: 1/8" = 1'-0"

PROJECT NOTE (ALL SHEETS):

ALL MATERIALS AND EQUIPMENT INDICATED AND REQUIRED FOR A COMPLETE AND FINISHED INSTALLATION SHALL BE NEW AND SHALL BE PROVIDED BY THE CONTRACTOR UNDER THIS PROJECT UNLESS SPECIFICALLY INDICATED TO BE EXISTING OR PROVIDED BY OTHERS.

Graphic Scale

8 4 0 8FT 16FT

SCALE: 1/8" = 1'-0"

CR LOCATION NOTE

CARD READER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND INTENDED ONLY TO SHOW DOOR SERVED AND UNSECURE SIDE MOUNTING. THE OWNER'S PROJECT MANAGER WILL LOCATE ALL LISTED DEVICES IN THE FIELD ANYWHERE IN THE GENERAL VICINITY OF THE DOOR SERVED OR AREA INDICATED AT NO ADDITIONAL COST TO THE OWNER. CC/CM, ACSC AND EC COORDINATE FINAL LOCATIONS WITH OWNER AND ARCHITECT PRIOR TO BEGINNING ROUGH-IN. DEVICE HEIGHTS SHALL BE AS DIRECTED BY THE ARCHITECT.

STOREFRONT NOTE

MOUNT ALL CARD READERS FLUSH IN WALL. MOUNT CARD READERS IN STOREFRONT FRAMING ONLY WHERE SPECIFICALLY DIRECTED BY THE OWNER AND ACSC. GENERAL CONTRACTOR REQUEST DIRECTION FROM THE OWNER AND ACSC PRIOR TO COMMENCEMENT OF ANY RELATED WORK AND REVIEW EACH SECURE DOOR INSTALLATION. WHERE STOREFRONT MOUNTING IS REQUIRED SEE "GENERAL CONDUIT NOTES – ACCESS CONTROL SYSTEM" NOTE 3 SHEET ACS301 AND ACSC PROVIDE NARROW STILE CARD READER. THE GENERAL CONTRACTOR AND STOREFRONT SYSTEM INSTALLER SHALL PROVIDE THE ELECTRICAL CONTRACTOR ACCESS TO THE FRAMING TO RUN THE WIRING AS EACH DOOR IS INSTALLED.

NO EXPOSED CONDUIT OR CABLE NOTE

SEE T SHEET FLOOR PLANS FOR NOTES PROHIBITING EXPOSED CONDUIT OR CABLING AT AREAS WITH EXPOSED ROOF STRUCTURE IN AND AROUND THE GYM. PROVIDE BURIAL GRADE CABLES IN ALL UNDERGROUND CONDUITS.

ACCESS CONTROL SYSTEM LEGEND

CLASSROOM 127	ARCHITECT'S ROOM NUMBER, SEE "GENERAL LABELING NOTE"
ACS	ACCESS CONTROL SYSTEM PANEL
CR	CARD READER

ABBREVIATIONS

CC	COMMUNICATIONS CLOSET
CP	COMMUNICATIONS PANEL
ACS	ACCESS CONTROL SYSTEM
ACSC	ACCESS CONTROL SYSTEM CONTRACTOR
SCSC	STRUCTURED CABLING SYSTEM CONTRACTOR
EC	ELECTRICAL CONTRACTOR
CM/GC	CONSTRUCTION MANAGER

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REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

ACCESS CONTROL SYSTEM FLOOR PLAN

PROJECT NUMBER	22019
DATED	01/31/2025

ACS101

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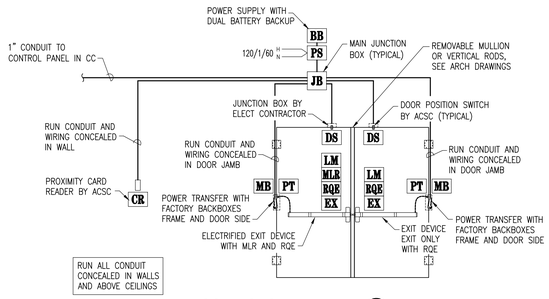
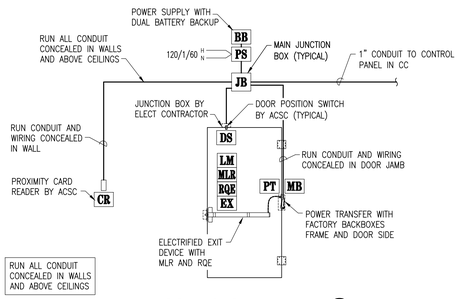


DOOR ROUGH-IN DETAIL (1)

N.T.S.

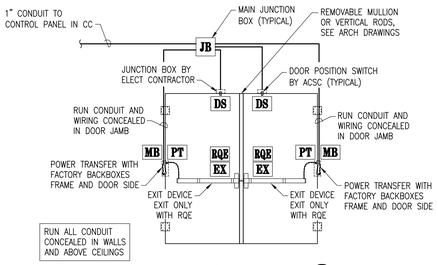
DOORS 100A, 100B, 100C, 100D, 106B, 106D



DOOR ROUGH-IN DETAIL (2)

N.T.S.

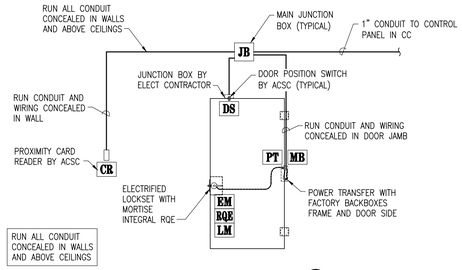
DOORS 107A



DOOR ROUGH-IN DETAIL (3)

N.T.S.

DOORS 106A & 106C - MONITORED ONLY



DOOR ROUGH-IN DETAIL (4)

N.T.S.

DOOR 107, 109

INTRUSION ALARM NOTES

THE ACS CONTRACTOR SHALL SETUP THE INTRUSION ALARM SYSTEM AS AN EXTENSION OF AND FULLY INTEGRATED INTO THE OWNER'S MONITORCAST ACCESS CONTROL SYSTEM FOR A SEAMLESS USER INTERFACE.

ALL SECURE DOORS ARE MECHANICAL FREE EGRESS AT ALL TIMES. ALL SECURE DOORS SHALL FAIL SECURE (LOCKED) UPON A POWER FAILURE. A FIRE ALARM EVENT SHALL NOT UNLOCK ANY SECURE DOOR.

ALL SECURE DOORS SHALL HAVE REQUEST TO EXIT INTEGRAL TO THE DOOR HARDWARE SUCH THAT EGRESS THRU A SECURE DOOR FROM THE SECURE SIDE SHALL NOT GENERATE AN INTRUSION ALARM.

THE INTRUSION ALARM SHALL OPERATE ON AN ARMED/DISARMED MODE BASIS, WITH THE MODE BASED ON TIME OF DAY.

IN ADDITION THE OWNER SHALL HAVE THE ABILITY TO INDEX THE SYSTEM TO MULTIPLE SPECIAL EVENT MODES.

ARMED MODE – GENERAL:
IN THE ARMED MODE ALL SECURE DOORS ARE ELECTRICALLY LOCKED AND MAY BE ENTERED ONLY BY INDIVIDUALS WITH VALID CARD READER CREDENTIAL AND PERMISSION TO ENTER THE BUILDING DURING THE TIME WHEN THE SYSTEM IS ARMED.

UNARMED MODE – GENERAL:
IN THE UNARMED MODE ALL SECURE DOORS ARE ELECTRICALLY LOCKED AND MAY BE ENTERED ONLY BY INDIVIDUALS WITH VALID CARD READER CREDENTIAL AND PERMISSION TO ENTER THE BUILDING DURING THE TIME WHEN THE SYSTEM IS UNARMED. ALTERNATELY THE OWNER MAY CHOOSE TO HAVE ONE OR MORE SECURE DOORS ELECTRICALLY UNLOCKED DURING THE TIME WHEN THE SYSTEM IS UNARMED.

THE OWNER MAY ELECT TO SET SYSTEM ARMED AND UNARMED MODES BASED ON TIME OF DAY ONLY, OR TO KEEP THE SYSTEM IN ARMED MODE AT ALL TIMES.

AN INTRUSION ALARM SHALL BE GENERATED ANYTIME A SECURE DOOR IS ELECTRICALLY LOCKED AND IS FORCED OPEN AS SENSED BY THE DOOR POSITION SWITCH, EXCEPT FOR EXCEPTIONS ON A DOOR-BY-DOOR AND TIME-OF-DAY BASIS AS DIRECTED BY THE OWNER. IN ARMED MODE A DOOR-HELD-OPEN NOTIFICATION MAY BE GENERATED FIRST, FOLLOWED BY AN INTRUSION ALARM, AS DIRECTED BY THE OWNER.

AN INTRUSION ALARM SHALL AUTOMATICALLY INITIATE A LOCKDOWN, UNLESS OTHERWISE DIRECTED BY THE OWNER.

SEE "EMERGENCY NOTIFICATION NOTE" FOR REQUIREMENTS RELATED TO EMERGENCY NOTIFICATION OF INTRUSION ALARMS. THE OWNER MAY ELECT TO HAVE UP TO FIVE DIFFERENT LEVELS OR TYPES OF ALARM NOTIFICATION FOR INTRUSION ALARMS.

THESE MODES OF OPERATION MAY VARY AT THE OWNER'S DIRECTION AND NO ADDITIONAL COST TO THE OWNER.

THESE OPERATING NOTES ARE FOR GENERAL INFORMATION ONLY AND ARE NOT INTENDED TO CONVEY THE FULL SCOPE OF ACS CONTRACTOR WORK. IT SHALL BE THE SOLE RESPONSIBILITY OF THE ACS CONTRACTOR TO COORDINATE ALL REQUIRED DETAILS OF BUILDING OPERATIONAL MODES ALONG WITH DETAILS OF SYSTEM OPERATION WITH THE OWNER'S PROJECT MANAGER AND OTHER OWNER PERSONNEL, AND SHALL INCORPORATE RELATED DETAILS IN THE CONTRACTOR'S AS-BUILT DRAWINGS. INTENDED SYSTEM OPERATION SHALL BE APPROVED BY THE OWNER'S PROJECT MANAGER PRIOR TO SYSTEM SETUP AND PROGRAMMING. PROVIDE A MINIMUM OF 4 HOURS TRAINING TO STAFF ACROSS THE FIRST YEAR OF OPERATION, WITH TIMES AND DURATION SET BY THE OWNER'S PROJECT MANAGER. FOLLOWING OCCUPANCY OF THE SCHOOL THE ACSC SHALL CONTINUE TO FINE TUNE OPERATING MODES WITH THE INVOLVEMENT OF THE SCHOOL PRINCIPAL AND THE OWNER'S PROJECT MANAGER FOR THE FIRST YEAR OF OPERATION.

EMERGENCY NOTIFICATION NOTE

THE ACS CONTRACTOR SHALL WORK CLOSELY WITH THE OWNER, OWNER'S SERVICE PROVIDERS, AND STRUCTURED CABLING SYSTEM CONTRACTOR TO PROVIDE EITHER A DIALUP OR DATA CONNECTION TO BOTH THE INTRUSION ALARM SYSTEM AND THE LOCKDOWN/PANIC SYSTEM AND SHALL PROVIDE ALL HARDWARE, PROGRAMMING AND SETUP AS REQUIRED TO IMMEDIATELY SEND EMERGENCY NOTIFICATION TO OWNER DESIGNATED RECEIVING STATIONS OF AN ALARM EVENT GENERATED FROM EITHER SYSTEM. LOCKDOWN/PANIC AND INTRUSION ALARM EVENTS SHALL BE REPORTED SEPARATELY UNLESS OTHERWISE DIRECTED BY THE OWNER. IN ADDITION THE ACSC SHALL REPORT ALARM EVENTS TO OWNER DESIGNATED DISTRICT EMPLOYEES OR OTHER INDIVIDUALS OR COMPANIES BY ANY COMBINATION OF TEXT, EMAIL OR OTHER NOTIFICATION METHOD AS DIRECTED BY THE OWNER.

ALARM REPORTING

TYPICAL SECURE DOOR OPERATION

PRESENTING VALID CREDENTIAL TO CARD READER SIGNALS TIMED ELECTRIC RETRACTION OF THE EXIT DEVICE LATCH BOLT ON ACTIVE LEAF (RIGHT HAND RETURN LEAF). ELECTRIC LOCKING MECHANISM IN ACTIVE LEAF SHALL ALWAYS FAIL SECURE (LOCKS ON LOSS OF POWER). INACTIVE LEAF IS FOR EXIT ONLY. DOOR POSITION SWITCHES TOGETHER WITH LATCH MONITORS INTEGRAL TO EACH EXIT DEVICE AND LOCKSET TIED TO INTRUSION ALARM SYSTEM MONITOR STATUS OF EACH DOOR LEAF FOR DOOR HELD OPEN OR UNAUTHORIZED ENTRY. REQUEST-TO-EXIT SWITCHES INTERNAL TO BOTH EXIT DEVICES ARE ACTIVATED UPON EXITING THROUGH EITHER LEAF SIGNALING AUTHORIZED EXITING. MECHANICAL FREE EGRESS SHALL ALWAYS BE POSSIBLE THROUGH EITHER LEAF.

DOOR POSITION SWITCH NORMALLY OPEN

DOOR POSITION SWITCHES SHALL BE NORMALLY OPEN. EACH DPS SHALL BE HELD IN CLOSED POSITION BY MAGNET WHEN DOOR IS CLOSED AND MAGNET IS WITHIN MANUFACTURER'S SPECIFIED GAP DISTANCE FROM SWITCH. DPS SHALL MOVE TO OPEN POSITION WHEN DOOR IS OPENED (CIRCUIT IS OPENED AND CURRENT DOES NOT FLOW). CIRCUIT IS ALSO OPENED IF WIRE IS CUT. OPEN CIRCUIT SHALL GENERATE ALARM STATE UNLESS RQE IS SIGNALED.

CARD READER NOTES

CARD READERS SHALL BE HID 'SIGNO 40NKS' OR CARD READER STANDARD WITH THE SCHOOL DISTRICT AT THE TIME OF PROJECT MATERIAL SUBMITTALS. THE OWNER WILL PROVIDE FINAL DIRECTION ON THE CARD READER PART NUMBER TO USE. ALL CARD READERS SHALL BE INSTALLED USING OPTIONAL GASKET HID PART NUMBER IP65GSKT TO MAKE THE INSTALLATION WATERTIGHT TO IP66 STANDARDS.

PROVIDE SINGLE GANG DEEP WALL BOX FOR ALL CARD READERS UNLESS OTHERWISE DIRECTED BY ACCESS CONTROL SYSTEM CONTRACTOR. PROVIDE MASONRY BOX WHERE MOUNTED IN BRICK. UNDER NO CIRCUMSTANCES SHALL OVERSIZE OPENINGS BE COVERED WITH PLATES AND THE DEVICES MOUNTED ON THE PLATES. BRICK OPENING SHALL BE COMPLETELY COVERED AND CONCEALED BY THE CARD READER. MAKE INSTALLATION WATERTIGHT.

LOCKDOWN/PANIC NOTES

PROVIDE LOCKDOWN/PANIC SWITCH AT UNDERCOUNTER LOCATION AT RECEPTION COUNTER AS INDICATED ON THE PLANS. HARD-WIRE TO ACS CONTROL PANEL IN HOMERUN CONDUIT. LOCKDOWN/PANIC SWITCH SHALL BE MACNASPHERE MK-3045T (PREVIOUSLY INTERLOCK 3045-W) WITH ACTUATING LEVER. PULLING LEVER OPENS THE CIRCUIT AND LOCKS ALL DOORS WITH ELECTRIC LOCKING DEVICE. CLOSING LEVER CLOSES THE CIRCUIT AND RETURNS THE DOOR LOCKS TO THE STATE DETERMINED BY THE ACCESS CONTROL SYSTEM. MOUNT CONCEALED UNDER COUNTER ANYWHERE AT AS DIRECTED BY THE OWNER – LOCATE FOR READY ACCESS BY SCHOOL STAFF SEATED IN A NORMAL WORK POSITION. GC/CM REQUEST EXACT LOCKDOWN/PANIC SWITCH LOCATIONS FROM OWNER PRIOR TO COMMENCEMENT OF ROUGH-IN.

THE ACCESS CONTROL SYSTEM SHALL IMMEDIATELY ELECTRICALLY LOCK ALL SECURE DOORS UPON ACTIVATION OF LOCKDOWN/PANIC SWITCH BY SCHOOL PERSONNEL. THE ACCESS CONTROL SYSTEM SHALL ALSO IMMEDIATELY LOCK ALL SECURE DOORS UPON A FORCED ENTRY ALARM FROM THE INTRUSION ALARM SYSTEM. THE LOCKDOWN SHALL BE RELEASED AND SECURE DOORS PLACED IN NORMAL STATUS FOR THE CURRENT TIME ONLY WHEN LOCKDOWN/PANIC SWITCH IS RETURNED TO NORMAL POSITION. ALL SECURE DOORS WITH ELECTRIC LOCKING DEVICES SHALL FAIL SECURE UPON LOSS OF POWER FOR ANY REASON. FREE EGRESS SHALL ALWAYS BE AVAILABLE AT ALL SECURE DOORS.

SECURE SIDE MOUNTING

ALL CONDUIT AT SECURE SHALL BE INSTALLED ON THE SECURE SIDE (SIDE OPPOSITE CARD READER).

ACCESS CONTROL SYSTEM LEGEND

BB	BATTERY BACKUP	LD	LOCKDOWN SWITCH
CR	CARD READER	LM	LATCH MONITOR
DS	DOOR POSITION SWITCH	MB	MORTAR BOX
EX	RIM EXIT DEVICE	PB	PUSHBUTTON UNLOCK
EM	ELECTRIFIED LOCKSET	PS	POWER SUPPLY
IC	SECURITY INTERCOM	PT	POWER TRANSFER
JB	JUNCTION BOX	RQE	REQUEST TO EXIT
		(1)	DOOR DETAIL NUMBER
		#1	DOOR HARDWARE SPEC NUMBER

DOOR ORIENTATION NOTE:

RIGHT HAND/LEFT HAND ORIENTATION FOR EACH DOOR SHALL BE IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS – DOOR LAYOUTS INDICATED ON THIS SHEET ARE DIAGRAMMATIC AND NOT INTENDED TO PROVIDE CORRECT ORIENTATION.

ACS ABBREVIATIONS

ACS	ACCESS CONTROL SYSTEM
GC/CM	GENERAL CONTRACTOR / CONSTRUCTION MANAGER
EC	ELECTRICAL CONTRACTOR
ACSC	ACCESS CONTROL SYSTEM CONTRACTOR
SCSC	STRUCTURED CABLING SYSTEM CONTRACTOR

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REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

ACCESS CONTROL SYSTEM DETAILS

PROJECT NUMBER 22019
DATED 01/31/2025

ACS201

GENERAL CONDUIT NOTES - ACCESS CONTROL SYSTEM

1. RUN ALL ACCESS CONTROL SYSTEM CABLING CONTINUOUSLY IN CONDUIT. ALL INTERIOR CONDUIT SHALL BE EMT WITH STEEL COMPRESSION FITTINGS (SCREW FITTINGS AND DIE CAST FITTINGS ARE NOT ALLOWABLE). CONDUIT SIZE SHALL BE 1" MINIMUM OR LARGER AS INDICATED, EXCEPT WHERE 1/2" CONDUIT IS SPECIFICALLY ALLOWED AT LOCAL DOOR DEVICES. WHERE CONDUIT SIZE IS NOT SPECIFICALLY INDICATED PROVIDE SIZE AS REQUIRED FOR EACH CONDUIT RUN WITH MAXIMUM 30% CONDUIT FILL RATE.
2. ELECTRICAL CONTRACTOR PROVIDE ALL CONDUIT AS INDICATED AND ALL ADDITIONAL CONDUIT AS REQUIRED FOR A COMPLETE SYSTEM. THE ACS IS TO BE PROVIDED UNDER AN ALLOWANCE AND THE SYSTEM PROVIDER IS IDENTIFIED (SEE "ALLOWANCE FOR ACCESS CONTROL SYSTEM" THIS SHEET). PRIOR TO BIDS EACH BIDDER FOR ELECTRICAL WORK SHALL CONTACT THE ACS PROVIDER, SHALL OBTAIN A SCOPE OF WORK FOR ASSOCIATED CONDUIT WORK TO INCLUDE ANY CONDUIT REQUIRED BY THE PROVIDER IN ADDITION TO THAT INDICATED ON THE DRAWINGS ALONG WITH ALL CONDUIT INDICATED ON THE DRAWINGS, AND SHALL INCLUDE AS PART OF THE BASE BID ALL SUCH CONDUIT WORK.
3. WHERE DOORS ARE MOUNTED IN A STOREFRONT SYSTEM AND THE OWNER DIRECTS THE ACSC TO MOUNT THE ASSOCIATED CARD READERS IN THE STOREFRONT SYSTEM RUN ALL WIRING IN CONDUIT PROVIDED BY THE ELECTRICAL CONTRACTOR CONCEALED IN STOREFRONT SYSTEM FRAMING. AT CONTRACTOR'S OPTION WIRING WITHIN THE STOREFRONT MAY BE RUN CONTINUOUSLY IN STAINLESS STEEL ARMORED FLEXIBLE CONDUIT, SIZE AS REQUIRED, CONNECTING TO THE EMT WITH A FITTING MADE FOR THAT PURPOSE CONCEALED IN A JUNCTION BOX ABOVE THE CEILING, BUT UNDER NO CIRCUMSTANCES SHALL ANY WIRING BE RUN WITHIN STOREFRONT FRAMING WITHOUT CONDUIT. CLOSELY COORDINATE REQUIREMENTS WITH GENERAL CONTRACTOR AND STOREFRONT SUPPLIER PRIOR TO MANUFACTURER OF STOREFRONT SYSTEM. DO NOT MOUNT CARD READERS IN STOREFRONT FRAMING UNLESS SPECIFICALLY DIRECTED TO DO SO BY THE OWNER.
4. RUN 1" HOMERUN CONDUIT FROM ACCESS CONTROL SYSTEM PANEL TO EACH SECURE DOOR JUNCTION BOX 'JB'. RUN 1/2" CONDUIT FROM 'JB' CONTINUOUS TO EACH POWER TRANSFER BACKBOX, EACH DOOR POSITION SWITCH JUNCTION BOX AND EACH CARD READER JUNCTION BOX. PROVIDE OTHER CONDUITS AS INDICATED IN DOOR DETAILS AND ELSEWHERE ON THE DRAWINGS AND AS REQUIRED BY THE ACSC.
5. RUN CONDUIT AND MOUNT MAIN JUNCTION BOXES FOR EACH SECURE DOOR ON THE SECURE SIDE OF THE DOOR SERVED IN AN ACCESSIBLE/SERVICABLE LOCATION ABOVE A LAY-IN CEILING AS CLOSE TO THE DOOR AS POSSIBLE OR IN A NEARBY ELECTRICAL EQUIPMENT ROOM. MOUNT ACS PANELS AND ASSOCIATED POWER SUPPLIES IN COMM ROOMS ONLY. MOUNT POWER SUPPLIES NEXT TO OR INSIDE OF ACS PANELS.
6. FIRE WALLS: FIRESTOP ALL FLOOR PENETRATIONS AND ALL PENETRATIONS OF FIRE RATED WALLS. FIRESTOP USING ASSEMBLY UL LISTED FOR THE SPECIFIC APPLICATION AND FLOOR OR WALL RATING. INSTALL IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS AND THE CONDITIONS OF THE UL LISTING.
7. SMOKE WALL PENETRATIONS AND PENETRATIONS OF WALLS EXTENDING UP TO THE STRUCTURE ABOVE: ALL CONDUIT PENETRATIONS OF ALL WALLS INDICATED ON THE ARCHITECTURAL DRAWINGS AS SMOKE WALLS/BARRIERS/PARITIONS AND ALL WALLS INDICATED ON THE ARCHITECTURAL DRAWINGS AS EXTENDING UP TO THE STRUCTURE ABOVE SHALL BE SEALED SMOKETIGHT WITH STI SMOKE 'N' SOUND SEALANT WITH UL LISTED 'L' SMOKE RATING AND 'ST' ACOUSTICAL RATING OF 62. SEALANT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS FOR ¼" SEALANT CAULK ON BOTH SIDES OF THE WALL. SEALANT INSTALLATION ON ONLY ONE SIDE OF THE WALL IS NOT ACCEPTABLE. AT THE CONTRACTOR'S OPTION PROVIDE AN ALTERNATE ACOUSTICAL SEALANT WITH EQUAL 'ST' RATING AT THRU PENETRATIONS OF NON-SMOKE WALLS THAT EXTEND UP TO THE STRUCTURE ABOVE FOR SOUND ISOLATION. INSTALL SAME AS INDICATED FOR STI SMOKE 'N' SOUND ABOVE.
8. RUN ALL CONDUIT CONCEALED ABOVE CEILINGS AND IN WALLS. EXPOSED WIRING, SURFACE RACEWAY AND ARMORED DOOR LOOPS AND CABLES ARE NOT ALLOWED.
9. EC PROVIDE HEAVY DUTY PULL STRINGS IN ALL CONDUITS SERVING SECURE DOORS AND DEVICES AND PROVIDE PULL TAPE IN ALL BACKBONE CONDUITS BETWEEN ACS PANELS FOR USE BY CABLING INSTALLER – RUN CONTINUOUS FROM PULL POINT TO PULL POINT WITH NOT LESS THAN 10 FEET SLACK COILED AT EACH END.
10. LOCATION AND ROUTING OF ABOVEGROUND CONDUITS IS APPROXIMATE AND DEPICTS GENERAL DESIGN INTENT ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING FINAL CONDUIT ROUTING IN THE FIELD. THE CONTRACTOR SHALL COORDINATE THE FINAL ROUTING OF CONDUITS TO AVOID CONFLICTS WITH OTHER TRADES, WHILE MINIMIZING CHANGES IN DIRECTION AND OVERALL CONDUIT LENGTH.
11. CONDUITS SHALL BE RUN CONCEALED OVERHEAD ABOVE CEILINGS UNLESS LOCATED IN SPACES WITHOUT CEILINGS OR IN AN UNFINISHED SPACE SUCH AS EQUIPMENT ROOMS. SUPPORT EXPOSED CONDUIT AT A MINIMUM OF 4'-0" ON CENTER WITH 2-HOLE HEAVY DUTY GALVANIZED STEEL HARDWARE.
12. SUPPORT CONDUIT DIRECTLY FROM BUILDING STRUCTURE USING APPROVED HARDWARE. DO NOT SUPPORT CONDUIT FROM OTHER SYSTEMS COMPONENTS OR SUPPORTS. ROUTE ALL CONDUITS AS HIGH AS POSSIBLE. WHERE CONDUIT IS EXPOSED RUN HARD AGAINST WALL OR UNDERSIDE OF ROOF/FLOOR DECK. RUN ALL CONDUITS PARALLEL/PERPENDICULAR AND PLUMB WITH BUILDING LINES.
13. CONDUIT BODIES SUCH AS 'LB' FITTINGS ARE NOT ALLOWABLE.
14. PROVIDE PULLBOXES OF THE SAME TYPE AND SIZE AS THOSE INDICATED ON DRAWINGS FOR EACH RUN OF CONDUIT AT EVERY 100 FEET ON CENTER AND AT EACH END OF CONDUIT RUNS CONTAINING A TOTAL OF TWO 90 deg BENDS OR A COMBINATION OF LESSER BENDS TOTALING 180 deg (MINIMUM REQUIREMENTS – PROVIDE WHETHER SPECIFICALLY INDICATED OR NOT). CONDUIT RUNS CONTAINING MORE THAN TWO 90 deg BENDS WITHOUT A PULLBOX ARE NOT ALLOWABLE. FACTORY CONDUIT ELBOWS AND ALL OTHER BENDS SHALL HAVE A MINIMUM RADIUS OF SIX TIMES THE INTERNAL CONDUIT DIAMETER. CONDUIT OFFSETS AND PULLBOXES REQUIRED TO SUIT FIELD CONDITIONS AND TO CONFORM TO THESE REQUIREMENTS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
15. PULL BOXES SHALL BE 4" WIDE x 4" LONG x 2-1/8" DEEP NEMA 1 GALVANIZED STEEL WITH SCREW COVER. WHERE CONDUITS ARE TIGHTLY RACKED WITH UNIFORM SPACING, WIDER PULL BOXES MAY BE PROVIDED TO SERVE MULTIPLE CONDUITS. TERMINATE CONDUITS AT OPPOSITE ENDS OF PULLBOXES. DO NOT TERMINATE CONDUITS IN PULLBOXES AT RIGHT ANGLES TO EACH OTHER. HOMERUN CONDUITS SHALL NOT BE COMBINED INTO LARGER CONDUITS SERVING MULTIPLE DOORS OR DEVICES.
16. TERMINATE ALL CONDUIT ENDS WITH THREADED PLASTIC INSULATING BUSHINGS (PUSH-ON NOT ALLOWABLE). BUSHINGS MUST FIT TIGHTLY ON CONDUIT CONNECTOR THREADS. INSTALL ALL BUSHINGS PRIOR TO PULLING CABLE.
17. IDENTIFICATION: IDENTIFY ALL INDOOR ACS CONDUITS AND PULLBOXES ABOVE LAY-IN CEILINGS AT EVERY PULLBOX AND ON CONDUIT AT EACH COUPLER (PAINT ENTIRE COUPLER) WITH GREEN PAINT. DO NOT PAINT CONDUIT COUPLERS AND ENCLOSURES IN EQUIPMENT ROOMS. CONDUIT IN FINISHED SPACES WITH EXPOSED STRUCTURE CEILING SHALL BE PAINTED BY THE GENERAL CONTRACTOR TO MATCH ADJACENT FINISHES AND OTHER EXPOSED UTILITIES.

ACSC, EC, SCSC AND GC/CM COORDINATION NOTES

1. THE ACSC SHALL PROVIDE THE ACCESS CONTROL SYSTEM NOTIFICATION OF ALARMS TO OWNER IDENTIFIED CENTRAL RECEIVING STATIONS, OTHER WORK SHOWN TO BE BY THE ACSC IN THE DRAWINGS AND SPECIFICATIONS, AND ALL OTHER WORK REQUIRED FOR COMPLETE AND FULLY FUNCTIONAL SYSTEMS.
2. THE ACSC WILL FULLY INTEGRATE THE ACCESS CONTROL SYSTEM INTO THE OWNER'S EXISTING DSX ACCESS CONTROL SYSTEM SOFTWARE FOR MANAGEMENT OF THE ACCESS CONTROL SYSTEM TO INCLUDE INTRUSION, LOCKDOWN AND PANIC.
3. THE ACSC SHALL PROVIDE ALL LOW VOLTAGE WIRING ASSOCIATED WITH THE SYSTEM LISTED ABOVE.
4. THE ACSC SHALL PROVIDE A DETAILED STATEMENT OF WORK WITH INCLUSIONS AND EXCLUSIONS TO THE GC/CM AND EC FOR FINAL COORDINATION, ALONG WITH WIRING DIAGRAMS, INSTALLATION, OPERATION AND MAINTENANCE MANUALS, AND OTHER INFORMATION REQUIRED FOR THE GC AND EC TO COMPLETE THEIR ASSOCIATED WORK IN A TIMELY MANNER IN ACCORDANCE WITH THE OVERALL PROJECT SCHEDULE.
5. THE GC/CM SHALL PROVIDE OVERALL COORDINATION AND SCHEDULING FOR THE SYSTEM LISTED ABOVE TO INCLUDE DIRECT COORDINATION BETWEEN THE ACSC AND EC FOR ROUGH-IN AND OTHER WORK ITEMS THAT ARE TIME CRITICAL. THE GC/CM SHALL ALSO PROVIDE OVERALL COORDINATION OF EQUIPMENT LOCATIONS WITH THE ARCHITECT, OWNER, EC AND ACSC.
6. THE EC AND ACSC SHALL COORDINATE PROJECT REQUIREMENTS AS SOON AS THE ACSC IS IDENTIFIED BY THE OWNER AND CONTINUALLY DURING THE COURSE OF THE PROJECT.
7. THE EC SHALL PROVIDE ALL CONDUIT, BOXES, ENCLOSURES, PULL STRINGS AND TAPES, SLEEVES, FIRESTOPPING, SMOKESTOPPING, POWER, GROUNDING, AND ALL OTHER WORK REQUIRED BY CODE OR FOR COMPLETE AND FULLY FUNCTIONAL SYSTEMS BUT NOT PROVIDED BY THE ACSC OR SPECIFICALLY IDENTIFIED AS PROVIDED BY OTHERS, WHETHER SPECIFICALLY SHOWN OR NOT.
8. THE EC SHALL WIRE AND MAKE ALL CONNECTIONS TO ALL ELECTRIFIED DOOR HARDWARE AND DOOR HARDWARE THAT REQUIRES ANY TYPE OF 120 VAC WIRING CONNECTION. SEE DOOR HARDWARE SPECIFICATION SECTION 087100 AND ARCHITECTURAL AND ELECTRICAL DRAWINGS.
9. ACCESS CONTROL SYSTEM PANELS – CATEGORY 6 OUTLET: CATEGORY 6 CABLING AND MODULAR OUTLETS FOR NETWORK CONNECTIONS TO ACSC PANELS SHALL BE PROVIDED BY THE STRUCTURED CABLING SYSTEM CONTRACTOR (SCSC) COMPLETE TO INCLUDE PATCH PANELS, TERMINATION, LABELING, TESTING, AND PATCHING TO ASSIGNED NETWORK CONNECTIONS. THE CATEGORY 6 CABLES SHALL BE TERMINATED ON A BISCUIT JACK BY THE SCSC INSIDE THE ACSC PANELS. SCSC AND ACSC COORDINATE FINAL OUTLET LOCATIONS WITHIN PANELS. THE SCSC SHALL ALSO PROVIDE CATEGORY 6 CABLING AND FACEPLATES FOR EACH SECURITY VIDEO INTERCOM SYSTEM OUTDOOR STATION AND INDOOR STATION.

ACCESS CONTROL SYSTEM GENERAL NOTES:

1. REFER TO SPECIFICATION SECTION 087100 – DOOR HARDWARE TO CROSS REFERENCE DOOR HARDWARE SET NUMBERS TO INDIVIDUAL DOOR NUMBERS ALONG WITH OTHER INFORMATION FOR SECURE DOORS TO INCLUDE OPERATION. DOOR HARDWARE INDICATED ON ACS DRAWINGS IS FOR INFORMATION ONLY. SEE DOOR HARDWARE SPECIFICATION FOR FINAL DOOR HARDWARE REQUIREMENTS. ALL DOOR HARDWARE COMPONENTS LISTED IN SPECIFICATION SECTION 087100 – DOOR HARDWARE SHALL BE PROVIDED BY THE DOOR HARDWARE PROVIDER UNLESS SPECIFICALLY INDICATED TO BE PROVIDED BY OTHERS. CARD READERS AND DOOR POSITION SWITCHES SHALL BE PROVIDED BY THE ACCESS CONTROL SYSTEM CONTRACTOR. POWER SUPPLIES AT ALL SECURE DOORS WITH EXIT DEVICES SHALL BE PROVIDED AS PART OF THE DOOR HARDWARE PACKAGE AND SHALL BE THE SAME MANUFACTURER AS THE EXIT DEVICE. POWER SUPPLIES SERVING ACCESS CONTROL SYSTEM PANELS AND DOORS WITH ELECTRIFIED LOCKSETS SHALL BE PROVIDED BY THE ACSC AND SHALL BE LOCATED IN OR DIRECTLY ADJACENT TO ACCESS CONTROL SYSTEM PANELS IN COMM ROOMS. ALL POWER SUPPLIES SHALL HAVE DUAL BATTERY BACKUP AND SHALL BE TURNED OVER TO THE ELECTRICAL CONTRACTOR FOR INSTALLATION. LOW VOLTAGE WIRING SHALL BE PROVIDED BY THE ACCESS CONTROL SYSTEM CONTRACTOR. ALL CONDUIT FOR LOW VOLTAGE WIRING SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. 120VAC POWER AND ALL CONDUIT FOR POWER SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
2. ALL DOORS SHALL FAIL SECURE UPON LOSS OF POWER TO LOCKING DEVICE FOR ANY REASON.
3. ALL DOORS SHALL HAVE MECHANICAL FREE EGRESS FROM SECURE SIDE TO UNSECURE SIDE UNLESS SPECIAL CIRCUMSTANCES DICTATE OTHERWISE AS SPECIFICALLY DESCRIBED IN THE DOOR HARDWARE SPECIFICATIONS.
4. ALL DOORS SHALL HAVE REQUEST TO EXIT SWITCH INTEGRAL TO THE ELECTRIFIED DOOR LOCKING DEVICES AS PART OF THE DOOR HARDWARE PACKAGE. REQUEST TO EXIT SWITCH SHALL INDICATE AUTHORIZED EGRESS FROM SECURE SIDE TO UNSECURE SIDE AND PREVENT ACTIVATION OF THE INTRUSION ALARM.
5. ALL SECURE DOOR MAIN JUNCTION BOXES SHALL BE 12"x12"x6" NEMA 1 SCREW COVER AND SHALL BE INSTALLED IN ACCESSIBLE LOCATION ABOVE LAY-IN CEILING AS CLOSE TO DOOR OR GATE SERVED AS POSSIBLE.
6. MOUNT ALL CARD READERS FLUSH IN WALL. WHERE STOREFRONT MOUNTING IS REQUIRED BY THE OWNER SEE "GENERAL CONDUIT NOTES" NOTE 3 THIS SHEET AND ACSC PROVIDE NARROW STILE CARD READER.
7. PROVIDE WEATHERPROOF CARD READERS, ROUGH-IN AND MOUNTING AT ALL LOCATIONS.
8. CARD READER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND INTENDED ONLY TO SHOW DOOR SERVED AND UNSECURE SIDE MOUNTING. THE OWNER'S PROJECT MANAGER AND ARCHITECT PROVIDE DIRECTION ON EXACT LOCATION OF ALL CARD READERS IN THE FIELD – WHICH MAY BE ANYWHERE IN THE VICINITY OF THE DOOR SERVED AT NO ADDITIONAL COST TO THE OWNER. THE GC SHALL REQUEST LOCATIONS WELL PRIOR TO COMMENCEMENT OF ROUGH-IN.
9. THE GC/CM SHALL PROVIDE OVERALL COORDINATION AND SCHEDULING FOR THE ACCESS CONTROL SYSTEM INCLUDING DIRECT COORDINATION BETWEEN THE ACSC AND EC FOR ROUGH-IN AND OTHER WORK ITEMS THAT ARE TIME CRITICAL. THE GC SHALL ALSO PROVIDE OVERALL COORDINATION OF EQUIPMENT LOCATIONS (CARD READERS AND KEYPADS) WITH THE ARCHITECT, OWNER, EC AND ACSC.
10. PROVIDE WALL/MORTAR/JUNCTION BOXES AT ALL POWER TRANSFERS, AND DOOR POSITION SWITCHES REGARDLESS OF WALL TYPE AND WHETHER DOOR FRAMES ARE MORTAR FILLED OR NOT. CONNECT CONDUIT TO BOXES WITH MORTAR TIGHT COMPRESSION FITTINGS. PROVIDE GROMMETS WHERE WIRING PASSES THRU OPENINGS IN METAL COMPONENTS. COMPLY WITH CODE FOR PROTECTION OF CONDUITS IN CONTACT WITH MORTAR OR CONCRETE.
11. FINAL DOOR NUMBERS SHALL BE BASIS FOR SYSTEM LABELING AND PROGRAMMING SHALL BE BASED ON FINAL ROOM NUMBERS USED FOR ROOM SIGNAGE. FINAL NUMBERING/LABELING SCHEME FOR DOORS OTHER SECURITY DEVICES SHALL BE WORKED OUT IN CLOSE COORDINATION WITH THE OWNER'S PROJECT MANAGER AND ARCHITECT.

ACCESS CONTROL SYSTEM CABLING REQUIREMENTS

1. PROVIDE JACKETED WIRE FOR ALL APPLICATIONS.
2. PROVIDE SHIELDED CABLE WHERE RECOMMENDED BY THE CONNECTED EQUIPMENT MANUFACTURER. TERMINATE SHIELD PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. HOMERUN CARD READER CABLE FROM READER TO SERVING ACCESS CONTROL SYSTEM PANEL. PROVIDE SLACK IN CABLE AT MAIN PULL BOX AT EACH SECURE DOOR. MAKE ALL WIRING CONNECTIONS TO CABLE IN MAIN PULL BOX AT EACH SECURE DOOR.
4. FOR PURPOSES OF BIDS THE ACS CONTRACTOR SHALL PROVIDE THE FOLLOWING WIRING FOR THE ACS AND OTHER SECURITY SYSTEMS. FOLLOWING BIDS THE ACSC SHALL SHALL PROVIDE WIRING AS REQUIRED FOR EACH APPLICATION AT NO ADDITIONAL COST TO THE OWNER.
5. PROVIDE THE FOLLOWING WIRING TO EACH CARD READER:
   4-CONDUCTOR/18 AWG, 3-PAIR/22 AWG, 2-CONDUCTOR/22 AWG, 4-CONDUCTOR/22 AWG
6. PROVIDE WIRING AS REQUIRED TO ALL OTHER ACCESS CONTROL AND INTRUSION ALARM SYSTEM DEVICES AND POWER SUPPLIES.
7. CONDUCTOR QUANTITIES AND GAUGES ARE MINIMUM, PROVIDE HIGHER CONDUCTOR COUNT AND LARGER GAUGES AS REQUIRED FOR EACH WIRED DEVICE PER MANUFACTURER'S INSTRUCTIONS.

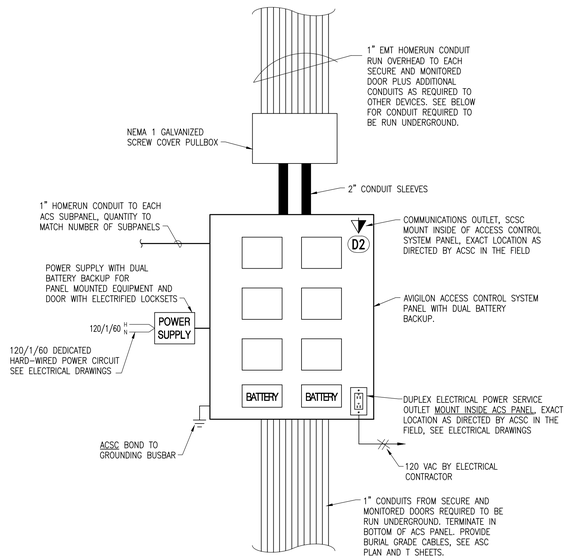
ALLOWANCE FOR ACCESS CONTROL SYSTEM

THE GENERAL CONTRACTOR SHALL INCLUDE AN ALLOWANCE FOR THE PROVISION OF A COMPLETE ACCESS CONTROL SYSTEM WITH INTEGRATED INTRUSION ALARM FOR THIS PROJECT IN THE BASE BID. ALL REFERENCES TO MATERIALS AND LABOR ASSOCIATED WITH THE ACCESS CONTROL SYSTEM WITHIN THE CONTRACT DOCUMENTS SHALL BE INCLUDED IN THIS ALLOWANCE UNLESS SPECIFICALLY INDICATED OTHERWISE. THE AMOUNT OF THE ALLOWANCE SHALL BE ISSUED AS AN ADDENDUM PRIOR TO THE BID DATE.

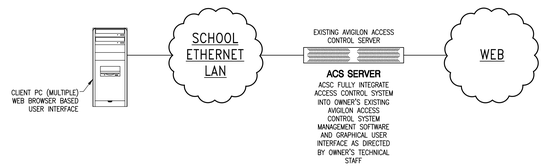
THE SCOPE OF WORK SHALL INCLUDE THE ACCESS CONTROL SYSTEM COMPLETE WITH ALL WORK INDICATED ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS, ALL DEVICES, EQUIPMENT AND WORK DESCRIBED IN THE INTEGRATOR'S COST PROPOSAL AND ASSOCIATED STATEMENT OF WORK. ALL OTHER DEVICES, EQUIPMENT AND WORK REQUIRED FOR A COMPLETE SYSTEM, ALL WIRING AND CABLING (EXCEPT AS INDICATED BELOW FOR CATEGORY 6 CABLING BY THE SCSC), AND ALL PROGRAMMING AND SETUP REQUIRED TO MAKE THE SYSTEM FULLY OPERATIONAL AND FUNCTIONAL TO THE SATISFACTION OF THE OWNER.

RELATED WORK TO BE PROVIDED BY OTHERS UNDER THE BASE BID BUT NOT INCLUDED IN THE SCOPE OF THE ALLOWANCE SHALL INCLUDE CONDUIT FOR ALL ACCESS CONTROL SYSTEM WIRING AND CABLING AND ALL POWER AND GROUNDING REQUIRED FOR THE ACCESS CONTROL SYSTEM. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE ASSOCIATED CONDUIT, POWER AND GROUNDING WORK WITH THE ACCESS CONTROL SYSTEM CONTRACTOR – BUT THE SCOPE OF CONDUIT, POWER AND GROUNDING WORK SHALL NOT BE LESS THAN THAT DESCRIBED ON THE DRAWINGS. THE SCSC SHALL PROVIDE CATEGORY 6 CABLING TO EACH ACCESS CONTROL SYSTEM PANEL AS INDICATED ON THE DRAWINGS.

THE ACCESS CONTROL SYSTEM PROVIDER SHALL BE UNDER MULTI-YEAR CONTRACT WITH THE OWNER, SHALL BE AVIGILON CERTIFIED AND SHALL BE MCA (CONTACT TONY COOPER – EMAIL TONYCOOPER@CALLMC.COM).



TYPICAL ACCESS CONTROL SYSTEM PANEL DETAIL
NOT TO SCALE



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REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

ACCESS CONTROL SYSTEM DETAILS

PROJECT NUMBER 22019
DATED 01/31/2025

ACS301

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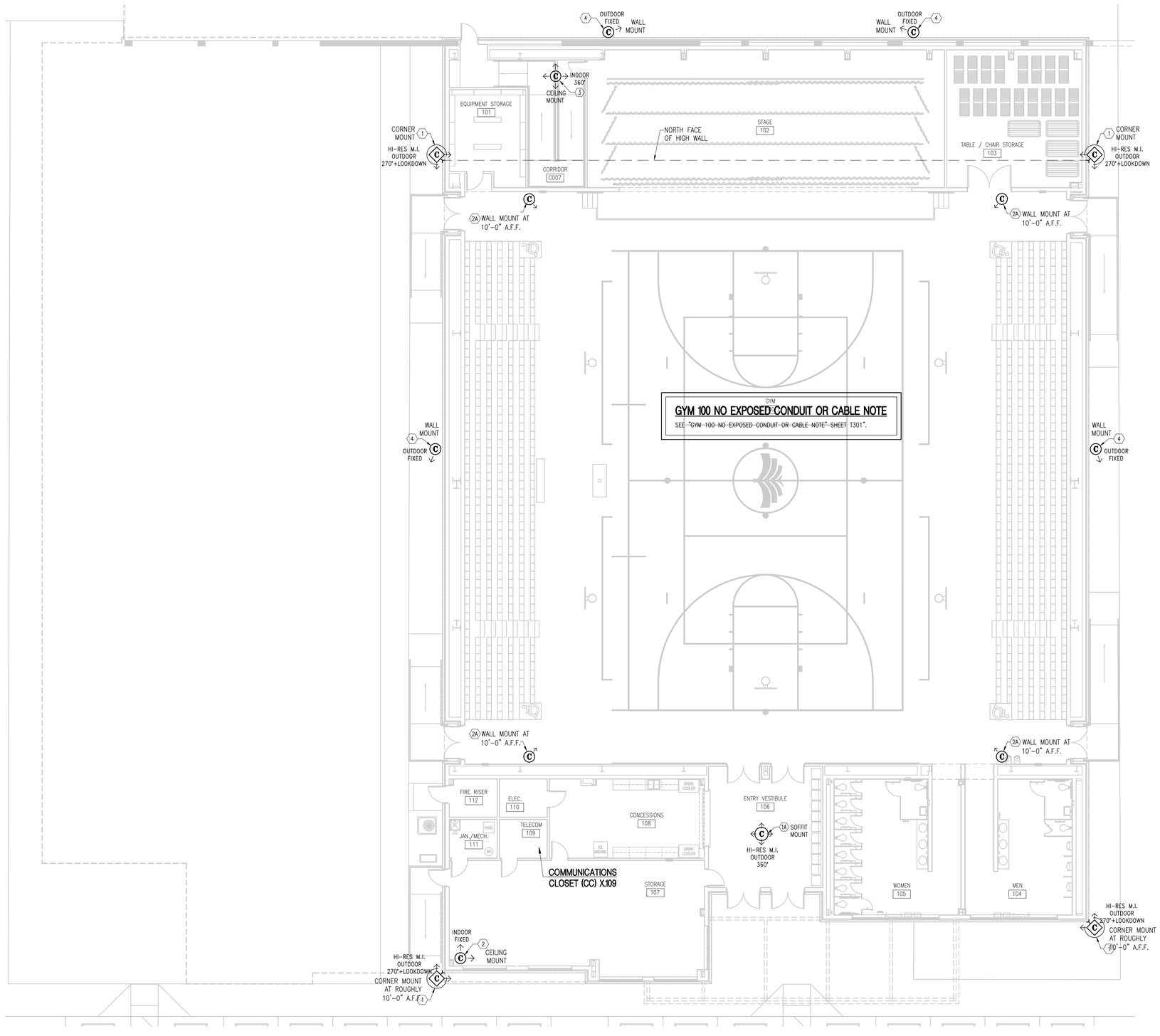

IP SECURITY CAMERA SYSTEM FLOOR PLAN KEY NOTES

(1) iPRO WV-S8574L 33 MEGAPIXEL HI-RES 4 X 4K MULTI-IMAGER OUTDOOR FIXED IK10 VANDAL CAMERA WITH BUILT-IN IRLED (COILOR WHITE) – CORNER MOUNT, INSTALL AND SETUP FOR 270 DEGREE VIEW PLUS DOWNLOOK. VERIFY EXACT LOCATION WITH OWNER AND CAMERA INTEGRATOR PRIOR TO INSTALLATION. CORNER MOUNT USING iPRO WV-QSR503F1-W SHROUD, iPRO WV-QWL506M1-W OUTDOOR WALL MOUNT AND iPRO WV-QCN500-W CORNER MOUNT ADAPTER (ALL COLOR WHITE). LOCATE CORNER MOUNT AND DRILL HOLE THROUGH CORNER OF WALL IN EXACT LOCATION REQUIRED FOR CONDUIT TO EXTEND THRU FACTORY OPENING IN CORNER MOUNT AND TERMINATE IN FACTORY CONDUIT CONNECTOR IN WALL MOUNT. UNDER NO CIRCUMSTANCES WILL EXPOSED CONDUIT OR WIRING BE ALLOWED AT CAMERA MOUNTING. SET CORNER MOUNT IN FULL BED OF LEXEL CLEAR SEALANT/ADHESIVE AND SECURE TO STRUCTURE WITH EIGHT 3/8" DIAMETER STAINLESS STEEL BOLTS AND WASHERS. SECURE WALL MOUNT TO CORNER MOUNT WITH FOUR 3/8" DIAMETER STAINLESS STEEL BOLTS AND WASHERS. MAKE ALL PENETRATIONS OF WALL WATERTIGHT WITH LEXEL SEALANT. EXTEND 3/4" CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.

(1A) iPRO WV-S8574L 33 MEGAPIXEL HI-RES 4 X 4K MULTI-IMAGER OUTDOOR FIXED CAMERA (COLOR WHITE) – DIRECT SOFFIT MOUNT. INSTALL AND SETUP FOR 270 DEGREE VIEW PLUS DOWNLOOK COVERAGE. VERIFY EXACT LOCATION WITH OWNER, ARCHITECT AND CAMERA INTEGRATOR PRIOR TO INSTALLATION. UNDER NO CIRCUMSTANCES WILL EXPOSED CONDUIT OR WIRING BE ALLOWED AT CAMERA MOUNTING. MOUNT ON SOFFIT USING USING FACTORY FURNISHED ATTACHMENT PLATE SECURED TO RECESSED ELECTRICAL GANG BOX. FIRMLY SECURE ELECTRICAL BOX TO SOFFIT SUPPORT STRUCTURE – ADD ADDITIONAL SUPPORT STRUCTURE AS REQUIRED. CAMERA INTEGRATOR PROVIDE INFORMATION TO ELECTRICAL CONTRACTOR ON COMPATIBLE GANG BOX. EXTEND 3/4" CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.

(2) iPRO WV-S22500-V3L 5MP INDOOR FIXED IK10 VANDAL CAMERA WITH BUILT-IN IRLED (COLOR WHITE)– CEILING MOUNT. VERIFY EXACT LOCATION WITH OWNER AND CAMERA INTEGRATOR PRIOR TO INSTALLATION. FLUSH MOUNT IN LAY-IN CEILING USING PANASONIC WV-QEM100-W EMBEDDED CEILING MOUNT BRACKET. SUPPORT MOUNTING BRACKET FROM ROOF STRUCTURE ABOVE. EXTEND CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.

(2A) iPRO WV-S22700-V2L 5MP INDOOR FIXED IK10 VANDAL CAMERA WITH BUILT-IN IRLED (COLOR WHITE) – WALL MOUNT. VERIFY EXACT LOCATION WITH OWNER AND CAMERA INTEGRATOR PRIOR TO INSTALLATION. FLUSH WALL MOUNT ON COMPATIBLE OCTAGON RECESSED METAL GANG BOX (OR AS RECOMMENDED BY CAMERA INTEGRATOR) USING iPRO WV-QAT502-W (OR CURRENT MODEL) GANGBOX ADAPTER. EXTEND CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.

(3) iPRO WV-S4176A 12 MEGAPIXEL INDOOR 360 DEGREE IK10 VANDAL CAMERA WITH BUILT-IN IRLED (COLOR WHITE) – CEILING MOUNT FOR 360 DEGREE VIEW. VERIFY EXACT LOCATION WITH OWNER AND CAMERA INTEGRATOR PRIOR TO INSTALLATION. MOUNT ON CEILING USING DOUBLE GANG ELECTRICAL BOX WITH DOUBLE GANG PLASTER RING (OR AS RECOMMENDED BY CAMERA INTEGRATOR) SUPPORTED CEILING SUPPORT STRUCTURE AND iPRO FACTORY PROVIDED CAMERA ATTACHMENT PLATE. EXTEND CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.

(4) iPRO WV-S25700-V2LN 4K OUTDOOR FIXED IK10 VANDAL CAMERA WITH BUILT-IN IRLED (COLOR WHITE) – WALL MOUNT. VERIFY EXACT LOCATION WITH OWNER AND CAMERA INTEGRATOR PRIOR TO INSTALLATION. WALL MOUNT USING iPRO WV-QSR501-W SHROUD AND iPRO WV-QWL501-W OUTDOOR WALL MOUNT (ALL COLOR WHITE). LOCATE WALL MOUNT AND DRILL HOLE THROUGH WALL IN EXACT LOCATION REQUIRED FOR CONDUIT TO TERMINATE IN FACTORY CONDUIT CONNECTOR IN WALL MOUNT. UNDER NO CIRCUMSTANCES WILL EXPOSED CONDUIT OR WIRING BE ALLOWED AT CAMERA MOUNTING. SET WALL MOUNT IN FULL BED OF LEXEL CLEAR SEALANT/ADHESIVE AND SECURE TO STRUCTURE WITH FOUR 3/8" DIAMETER STAINLESS STEEL BOLTS. MAKE ALL PENETRATIONS OF WALL WATERTIGHT WITH LEXEL CLEAR SEALANT. SECURE WALL MOUNT TO CORNER MOUNT WITH FOUR 3/8" DIAMETER STAINLESS STEEL BOLTS AND WASHERS. MAKE ALL PENETRATIONS OF WALL WATERTIGHT WITH LEXEL SEALANT. EXTEND CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.

(5) HALO 2C SMART DETECTOR OR EQUAL BY TITON ULTRA, INSTALL IN CEILING IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS. CAMERA INTEGRATOR SETUP IN VIDEO INSIGHT AS DIRECTED BY OWNER. EXTEND 3/4" CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.

NO EXPOSED CONDUIT OR CABLE NOTE

EXPOSED CONDUIT AND EXPOSED CABLE IS PROHIBITED AT ALL SECURITY CAMERAS. SEE T SHEET FLOOR PLANS FOR NOTES PROHIBITING EXPOSED CONDUIT OR CABLING AT AREAS WITH EXPOSED ROOF STRUCTURE IN AND AROUND THE GYM. PROVIDE BURIAL GRADE CABLES IN ALL UNDERGROUND CONDUITS.

BURIAL GRADE CABLE NOTE

RUN ALL ACS AND SECURITY CAMERA CONDUIT AND CABLING UNDERGROUND LOCATED ON THE NON CER SIDE OF THE BUILDING TO SERVING COMMUNICATIONS EQUIPMENT ROOM CER.107. IN ALL SUCH CASES THE ACS CONTRACTOR SHALL PROVIDE BURIAL GRADE CABLE. CABLE SHALL BE CONTINUOUS FROM EACH SECURE OR MONITORED DOOR TO THE ACCESS CONTROL SYSTEM PANEL PULL BOX AND FROM EACH SECURITY CAMERA TO THE RACK MOUNTED CATEGORY 6 PATCH PANEL WITH NO TERMINATIONS OR SPLICES. THE CONTRACTOR SHALL INCLUDE A SUBMITTAL FOR EACH TYPE OF BURIAL GRADE CABLE FOR ENGINEER APPROVAL IN THE SUBMITTAL PACKAGE.

SECURITY LEGEND

CLASSROOM 127 — ARCHITECT'S ROOM NUMBER, SEE "SECURITY DEVICE IDENTIFICATION NOTE."

- OUTDOOR WALL MOUNT FIXED SECURITY CAMERA
- INDOOR CEILING MOUNT FIXED SECURITY CAMERA
- INDOOR CEILING MOUNT 360 DEGREE FIXED SECURITY CAMERA.
- OUTDOOR CORNER MOUNT HI-RES MULTI-IMAGER (M.I.) 270 DEGREE FIXED SECURITY CAMERA.

ABBREVIATIONS

CER	COMMUNICATIONS EQUIPMENT ROOM
CC	COMMUNICATIONS CLOSET
SCSC	STRUCTURED CABLING SYSTEM CONTRACTOR
EC	ELECTRICAL CONTRACTOR
CM/GC	CONSTRUCTION MANAGER

SECURITY DEVICE IDENTIFICATION NOTE:

ALL CAMERAS AND OTHER SECURITY DEVICES SHALL BE IDENTIFIED BASED ON FINAL FISH ROOM NUMBERS OR AS OTHERWISE DIRECTED BY THE OWNER DURING CONSRUCTION. OBTAIN FINAL ROOM NUMBERS FROM THE ARCHITECT PRIOR TO IDENTIFYING AND LABELING DEVICES.

PROJECT NOTE (ALL SHEETS):

ALL MATERIALS AND EQUIPMENT INDICATED AND REQUIRED FOR A COMPLETE AND FINISHED INSTALLATION SHALL BE NEW AND SHALL BE PROVIDED BY THE CONTRACTOR UNDER THIS PROJECT UNLESS SPECIFICALLY INDICATED TO BE PROVIDED BY OTHERS.

IP SECURITY CAMERA SYSTEM FLOOR PLAN

SCALE: 1/8" = 1'-0"

DIRECT CONNECT NOTE

DIRECT TERMINATE CATEGORY 6 CABLE FOR SECURITY CAMERAS WITH MALE MODULAR PLUG. ALL CATEGORY 6 DIRECT CONNECT PLUGS SHALL BE AS INDICATED ON THE DATA SINGLE LINE.

CAMERA FASTENER SIZE NOTE:

FASTENER SIZES INDICATED FOR CAMERA MOUNTS ARE APPROXIMATE AND MUST BE VERIFIED WITH THE ACTUAL HARDWARE RECEIVED. FASTENERS FOR THREADED CONNECTIONS SHALL BE SAME SIZE AS THREADED HOLE. FASTENERS FOR SMOOTH HOLES SHALL BE 1/16" SMALLER THAN HOLE DIAMETER. ALL FASTENERS SHALL BE STAINLESS STEEL.

Graphic Scale

8 4 0 8FT 16FT

SCALE: 1/8" = 1'-0"

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100% CONSTRUCTION DOCUMENTS

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A New Gymatorium for:
PALM BAY CHARTER SCHOOLS

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REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

IP SECURITY CAMERA SYSTEM FLOOR PLAN

PROJECT NUMBER 22019
DATED 01/31/2025

SEC101

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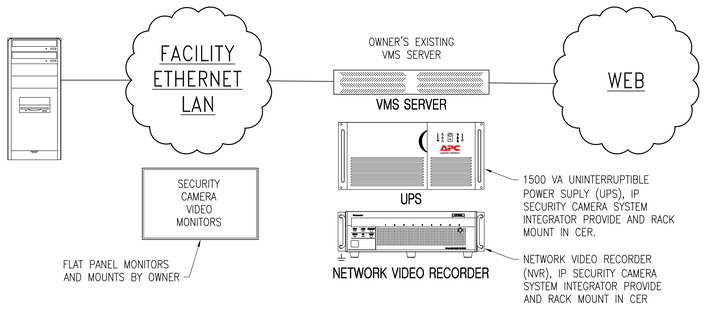
Florida Certificate of Authorization #9308
Phone: (850) 469-0405 Fax: (850) 432-0905
Premier Project #220324



AVIGILON SOFTWARE

AVIGILON SOFTWARE VIDEO MANAGEMENT SOFTWARE (VMS) IS EXISTING FOR PALM BAY CHARTER SCHOOL. UNDER THIS PROJECT THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL FULLY INTEGRATE THE SECURITY CAMERAS AND HALO DETECTORS PROVIDED UNDER THIS PROJECT INTO THE EXISTING SOFTWARE. PROVIDE EXPANSION, PROGRAMMING, SETUP, LICENSING, AND ALL OTHER WORK REQUIRED TO INTEGRATE THE CAMERAS INTO THE AVIGILON SYSTEM FOR THE FULL RANGE OF FUNCTIONS AVAILABLE FROM THE MANUFACTURER FOR EACH CAMERA AND DESIRABLE FOR THE VARIOUS CAMERA VIEWING AND RECORDING APPLICATIONS ENCOMPASSED BY THIS PROJECT.

NETWORK VIDEO RECORDER

THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL PROVIDE A NETWORK VIDEO RECORDER (NVR) RACK MOUNTED IN THE CER WITH RAID 5 OR 6 STORAGE. HARD DRIVES SHALL BE VIDEO SURVEILLANCE GRADE (PURPLE). THE NVR SHALL HAVE SUFFICIENT UNUSED HARD DRIVE SLOTS TO ALLOW AT LEAST 50% EXPANSION OF STORAGE IN THE FUTURE, AFTER THE HARD DRIVES FOR THIS PROJECT ARE INSTALLED. SUFFICIENT STORAGE SHALL BE PROVIDED UNDER THIS PROJECT TO ARCHIVE 30 DAYS OF VIDEO WITH ALL CAMERAS RECORDING AT FULL RESOLUTION IN COLOR AND AT A MINIMUM OF 15 FRAMES PER SECOND. THE INTEGRATOR SHALL UTILIZE H.265 SMARTCODEC WHERE FACTORY INTEGRATED IN THE SPECIFIED CAMERAS (PREFERRED) OR H.264 SMARTCODEC WHERE H.265 IS NOT FACTORY INTEGRATED. SETUP TO OPTIMIZE STORAGE WITHOUT SACRIFICING STORED VIDEO QUALITY. IF SO DIRECTED BY THE OWNER THE CAMERA INTEGRATOR SHALL EXPAND THE STORAGE CAPACITY OF THE EXISTING NVR AS REQIRED TO MEET THESE REQUIREMENTS.

ALLOWANCE FOR IP SECURITY CAMERA SYSTEM INTEGRATOR

THE GENERAL CONTRACTOR SHALL INCLUDE AN ALLOWANCE FOR ALL WORK BY THE IP SECURITY CAMERA SYSTEM INTEGRATOR IN THE BASE BID.

THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL ALSO BE THE ACCESS CONTROL SYSTEM CONTRACTOR AND THE INTRUSION ALARM SYSTEM CONTRACTOR FOR THIS PROJECT. SEE "ALLOWANCE FOR ACCESS CONTROL SYSTEM" NOTE SHEET ACS301.

THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL PROVIDE WORK AS SPECIFICALLY INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS AND AS DESCRIBED IN THE IP SECURITY CAMERA SYSTEM INTEGRATOR ALLOWANCE COST PROPOSAL AND ASSOCIATED SCOPE OF WORK STATEMENT. THE ALLOWANCE COST AND SCOPE OF WORK STATEMENT WILL BE ISSUED IN AN ADDENDUM PRIOR TO BIDS.

THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL PROVIDE ALL CAMERAS, LOCATE CAMERAS PRIOR TO ROUGH-IN, TEST THE OPERATION OF EACH INSTALLED CAMERA, SET FINAL CAMERA VIEWING ANGLES, FIELDS OF VIEW, LENS SETTINGS, COMPRESSION SETTINGS AND OTHER CAMERA SETTINGS FOR OPTIMUM PERFORMANCE, SHALL PROVIDE A NEW NVR WITH STORAGE CAPACITY AS REQUIRED OR SHALL EXPAND THE EXISTING NVR, SHALL PROVIDE SOFTWARE UPGRADES AND REGISTER CAMERA LICENSES, SHALL PROVIDE FINAL SETUP, PROGRAMMING, TESTING AND OWNER TRAINING FOR THE SYSTEM, AND SHALL MAKE THE SYSTEM FULLY OPERATIONAL AND FUNCTIONAL TO THE SATISFACTION OF THE OWNER.

RELATED WORK TO BE PROVIDED BY OTHERS UNDER THE BASE BID BUT NOT INCLUDED IN THE SCOPE OF THE ALLOWANCE SHALL INCLUDE WORK BY THE SCSC AS INDICATED ON THE DRAWINGS. THE SCSC SHALL PROVIDE ALL CATEGORY 6 CABLING, PATCH PANELS, TERMINATION AND TESTING, AND CLOSE COORDINATION WITH THE GC/CM, ELECTRICAL CONTRACTOR AND THE IP SECURITY CAMERA SYSTEM INTEGRATOR.

ADDITIONAL RELATED WORK TO BE PROVIDED BY OTHERS UNDER THE BASE BID BUT NOT INCLUDED IN THE SCOPE OF THE ALLOWANCE SHALL INCLUDE CONDUIT REQUIRED FOR WIRING AND CABLING, AND ALL POWER AND GROUNDING REQUIRED FOR THE IP SECURITY CAMERA SYSTEM. EACH ELECTRICAL CONTRACTOR PROVIDING A BID FOR THIS PROJECT SHALL BE RESPONSIBLE FOR COORDINATING THE ASSOCIATED CONDUIT, POWER AND GROUNDING WORK WITH THE SCSC – BUT THE SCOPE OF CONDUIT, POWER AND GROUNDING WORK SHALL NOT BE LESS THAN THAT DESCRIBED ON THE DRAWINGS.

THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL BE UNDER CONTRACT WITH THE OWNER, SHALL BE AVIGILON CERTIFIED AND SHALL BE MCA (CONTACT TONY COOPER – EMAIL TONYCOOPER@CALLMC.COM).

IP SECURITY CAMERA LOCATION NOTES

MOUNTING LOCATIONS INDIATED FOR CAMERAS ARE APPROXIMATE AND SHALL BE COORDINATED IN DETAIL BEFORE ANY ROUGH-IN BEGINS. THE CM SHALL TAKE THE LEAD IN COORDINATING FINAL CAMERA LOCATIONS WITH THE ARCHITECT, DISTRICT SECURITY STAFF AND CAMERA INTEGRATOR. SEE SPECIFICATIONS. THE CM AND CAMERA INTEGRATOR SHALL COORDINATE ROUGH-IN REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR BASED ON THE CAMERA LOCATIONS DETERMINED BY THIS EFFORT.

THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL INDOOR CEILING MOUNTED CAMERAS WITH LIGHTING FIXTURES AND OTHER CEILING MOUNTED DEVICES THAT EXTEND BELOW THE CEILING ALONG WITH CEILING FEATURES INVOLVING CHANGES IN CEILING HEIGHT THAT WILL IMPEDE FULL CAMERA VIEWS.

THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL INDOOR WALL MOUNTED CAMERAS WITH ALL NEARBY WALL MOUNTED OR CEILING MOUNTED LIGHTING FIXTURES AND OTHER DEVICES THAT WILL IMPEDE FULL CAMERA VIEWS.

THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL OUTDOOR CAMERAS WITH LIGHT FIXTURES, CANOPIES, SOFFITS, GUTTER DOWNSPOUTS, POLES AND ANY OTHER OBSTRUCTION THAT WILL IMPEDE FULL CAMERA VIEWS.

WHERE GUTTER DOWNSPOUTS OR OTHER OBSTRUCTIONS INTERFERE WITH A CAMERAS FULL FIELD OF VIEW TIGHT TO THE BUILDING EXTERIOR, PROVIDE STANDOFF PADDING USING KING STARBOARD, 1-1/2" THICK, COLOR TO MATCH COLOR OF CAMERA MOUNT AS CLOSELY AS POSSIBLE. MAKE CUTS STRAIGHT AND SQUARE AND FILE EDGES SMOOTH. PROVIDE MULTIPLE STANDOFF PADS AS REQUIRED TO COMPLETELY CLEAR DOWNSPOUT OR OBSTRUCTION AND PROVIDE FULL CAMERA VIEW AS INDICATED.

ALL FINAL CAMERA LOCATIONS SHALL PROVIDE AN UNOBSTRUCTED VIEW OF THE AREA SERVED BY EACH CAMERA.

CAMERA COORDINATION NOTES

THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT, BOXES, ENCLOSURES, PULL STRINGS, FIRESTOPPING, SMOKESTOPPING, POWER, GROUNDING, AND ALL OTHER WORK REQUIRED BY CODE OR FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM BUT NOT SPECIFICALLY IDENTIFIED AS PROVIDED BY OTHERS,.

THE SCSC SHALL PROVIDE ALL CATEGORY 6 CABLING FOR NETWORK CONNECTIONS TO IP SECURITY CAMERAS COMPLETE TO INCLUDE PATCH PANELS, TERMINATION, LABELING, TESTING, AND PREPPING SLACK AT CAMERA LOCATIONS FOR FINAL CONNECTIONS TO CAMERAS.

THE IP CAMERA SYSTEM INTEGRATOR SHALL PROVIDE CAMERAS, MOUNTS, DIRECTION TO EC AND GC FOR EXACT LOCATION OF CAMERAS, NETWORK VIDEO RECORDER EXPANSION, SETTING OF CAMERA VIEWS, CAMERA SETUP, NETWORK VIDEO RECORDER SETUP, INTEGRATION OF SYSTEM INTO OWNER'S EXJISTING VMS, AND ALL OTHER WORK REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM.

RECORDING OF CAMERA IMAGES TO THE NETWORK VIDEO RECORDER SHALL BE MADE AT HIGHEST CAMERA RESOLUTION SETTINGS IN COLOR WHEN AMBIENT LIGHT LEVELS ALLOW AND IN BLACK AND WHITE DURING LOW LIGHT CONDITIONS. FRAMES PER SECOND SHALL BE AS DIRECTED BY COUNTY STAFF (15 FPS MINIMUM). ALL OTHER SETTINGS TO INCLUDE COMPRESSION SHALL BE MADE TO OPTIMIZE IMAGE QUALITY WHILE MINIMIZING STORAGE REQUIREMENTS.

IP SECURITY CAMERAS GENERAL ABOVEGROUND CONDUIT NOTES

1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING FINAL CONDUIT ROUTING IN THE FIELD. THE CONTRACTOR SHALL COORDINATE THE FINAL ROUTING OF CONDUITS TO CONCEAL CONDUITS AND TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, OTHER UTILITIES AND OBSTACLES, WHILE MINIMIZING CHANGES IN DIRECTION AND OVERALL CONDUIT LENGTH. ALL CONDUIT SHALL BE RUN OVERHEAD AND CONCEALED EXCEPT AS SPECIFICALLY INDICATED. BEST ROUTING WITHIN BUILDINGS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR WITH THE LIMITATIONS SPECIFIED IN THESE NOTES AND THE CONTRACT DOCUMENTS IN GENERAL.
2. CONDUITS RUN INDOORS SHALL BE RUN CONCEALED OVERHEAD ABOVE CEILINGS UNLESS LOCATED IN SPACES WITHOUT CEILINGS, IN SPACES WITH EXPOSED ROOF STRUCTURE, OR AS OTHERWISE SPECIFICALLY INDICATED. INDOOR CONDUIT SHALL BE EMT WITH STEEL COMPRESSION FITTINGS. DIE CAST EMT FITTINGS ARE NOT ALLOWABLE. SUPPORT EXPOSED CONDUIT AT A MINIMUM OF 4'-0" ON CENTER WITH 2-HOLE HEAVY DUTY GALVANIZED STEEL HARDWARE.
3. SUPPORT CONDUIT DIRECTLY FROM BUILDING STRUCTURE USING APPROVED HARDWARE. DO NOT SUPPORT CONDUIT FROM OTHER SYSTEMS COMPONENTS OR SUPPORTS UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. ROUTE ALL CONDUITS AS HIGH AS POSSIBLE, BUT DO NOT RUN CONDUITS CLOSER THAN 6" BELOW ROOF DECK (TO AVOID DAMAGE FROM LONG SCREWS USED IN FUTURE ROOF REPLACEMENTS). RUN ALL CONDUITS PARALLEL/PERPENDICULAR AND PLUMB WITH BUILDING LINES.
4. CONDUIT BODIES SUCH AS 'LB' FITTINGS ARE NOT ALLOWABLE.
5. HOMERUN CONDUITS FROM CCs SHALL BE A MAXIMUM OF 260 FEET LONG. PROVIDE PULLBOXES AT EVERY 100 FEET ON CENTER AND AT EACH END OF CONDUIT RUNS CONTAINING A TOTAL OF TWO 90 deg BENDS OR A COMBINATION OF LESSER BENDS TOTALING 180 deg (MINIMUM REQUIREMENTS – PROVIDE WHETHER SPECIFICALLY INDICATED OR NOT). CONDUIT RUNS CONTAINING MORE THAN TWO 90 deg BEND WITHOUT A PULLBOX ARE NOT ALLOWABLE. FACTORY CONDUIT ELBOWS AND ALL OTHER BENDS SHALL HAVE A MINIMUM RADIUS OF SIX TIMES THE INTERNAL CONDUIT DIAMETER. CONDUIT OFFSETS AND PULLBOXES REQUIRED TO SUIT FIELD CONDITIONS AND TO CONFORM TO THESE REQUIREMENTS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. PULL BOXES FOR 3/4" HOMERUN CONDUITS SHALL BE 4"x4"x2-1/8" WITH BLANK COVER.
6. TERMINATE CONDUITS AT OPPOSITE ENDS OF PULLBOXES. DO NOT TERMINATE CONDUITS AT RIGHT ANGLES TO EACH OTHER EXCEPT AS SPECIFICALLY INDICATED.
7. TERMINATE ALL CONDUIT ENDS WITH THREADED PLASTIC INSULATING BUSHINGS (PUSH-ON NOT ALLOWABLE). BUSHINGS MUST FIT TIGHTLY ON CONDUIT CONNECTOR THREADS. INSTALL ALL BUSHINGS PRIOR TO PULLING CABLE.
8. IDENTIFICATION: IDENTIFY ALL INDOOR IP CAMERA CONDUITS, PULLBOXES ABOVE LAY-IN CEILINGS, ACCESS DOORS, IN ROOF SPACE, AND IN ALL EXPOSED LOCATIONS WITH RED PAINT AT EVERY PULLBOX AND ON CONDUIT AT EACH COUPLER (PAINT ENTIRE COUPLER). IDENTIFY ALL CCTV CONDUIT PULLBOXES BY PAINTING WITH 1" TALL LETTER STENCIL (COLOR RED) THE WORDS "CCTV" ON EACH PULLBOX COVER. LETTERING SHALL BE LEVEL AND SQUARE AND AT CENTER OF PULLBOX COVER.

FIRESTOPPING NOTE:

THE CONTRACTOR SHALL FIRESTOP ALL PENETRATIONS OF ALL FLOORS AND ALL WALLS WHICH EXTEND TO THE UNDERSIDE OF THE FLOOR OR ROOF DECK ABOVE. FIRESTOPPING SHALL BE ACCOMPLISHED USING UL CLASSIFIED SYSTEMS WITH FIRE RATING EQUAL TO OR GREATER THAN THE FIRE RATING OF THE FLOOR OR WALL ASSEMBLY PENETRATED. FIRESTOP SYSTEMS SHALL BE 3M, NELSON OR ENGINEER APPROVED EQUAL. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. THE CONTRACTOR SHALL SUBMIT A MANUFACTURER'S STANDARD DETAIL FOR EACH TYPE OF FLOOR AND WALL PENETRATION REQUIRED FOR THIS PROJECT. ALL OTHER PENETRATIONS OR OPENINGS IN NON-FIRE RATED WALLS SHALL BE REPAIRED AND SEALED WITH MATERIALS TO MATCH THE CONSTRUCTION OF THE WALL.

THE CONTRACTOR SHALL PROVIDE DETAILS FOR EACH DIFFERENT TYPE OF FIRESTOP ASSEMBLY REQUIRED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO INSTALLATION. EACH DETAIL SHALL INCLUDE THE TEST ASSEMBLY NUMBER AND A DESCRIPTION OF THE MATERIALS TO BE USED. HAVE APPROVED FIRESTOPPING DETAILS AVAILABLE AT PROJECT SITE AT TIME OF INSPECTION.

CAMERA ATTACHMENT NOTES:

ALL CAMERA ATTACHMENTS SHALL BE MADE VANDAL-RESISTANT WITH NON-REMOVEABLE FASTENERS. FASTENER SIZES SHALL BE FULL SIZE ACCOMMODATED BY EQUIPMENT HOLE SIZE.

FASTENER SIZES INDICATED FOR CAMERA MOUNTS ARE APPROXIMATE AND MUST BE VERIFIED WITH THE ACTUAL HARDWARE RECEIVED. FASTENERS FOR THREADED CONNECTIONS SHALL BE SAME SIZE AS THREADED HOLE. FASTENERS FOR SMOOTH HOLES SHALL BE 1/16" SMALLER THAN HOLE DIAMETER. ALL FASTENERS AND MISCELLANEOUS RELATED HARDWARE SHALL BE STAINLESS STEEL.

ATTACHMENTS AT VARIOUS WALL CONSTRUCTIONS SHALL BE AS FOLLOWS:

1. AT FRAMED WALLS AND AT OPEN CELLS OF CMU WALLS, PROVIDE STAINLESS STEEL "SNAP-TOGGLER" TOGGLE BOLTS. ATTACH TO FRAMING OF FRAMED WALLS.
2. AT METAL SOFFIT OR FASCIA CONSTRUCTION PROVIDE STAINLESS STEEL THRU BOLTS ALL THE WAY THRU SOFFIT OR FASCIA FRAMING. PROVIDE SUPPLEMENTARY FRAMING ON INTERIOR AS REQUIRED FOR SECURE MOUNTING.
3. AT BRICK WALLS, BLOCK WEBS AND FILLED CELLS OF CMU WALLS, AND AT CONCRETE WALLS, PROVIDE COMMERCIAL GRADE HIGH LOAD EXPANSION ANCHORS SUCH AS TOGGLER 'ALLIGATOR' SOLID-WALL ANCHORS WITH STAINLESS STEEL FASTENERS.

ABBREVIATIONS

CER	COMMUNICATIONS EQUIPMENT ROOM
CC	COMMUNICATIONS CLOSET
SCSC	STRUCTURED CABLING SYSTEM CONTRACTOR
EC	ELECTRICAL CONTRACTOR
CM/GC	CONSTRUCTION MANAGER / GENERAL CONTRACTOR

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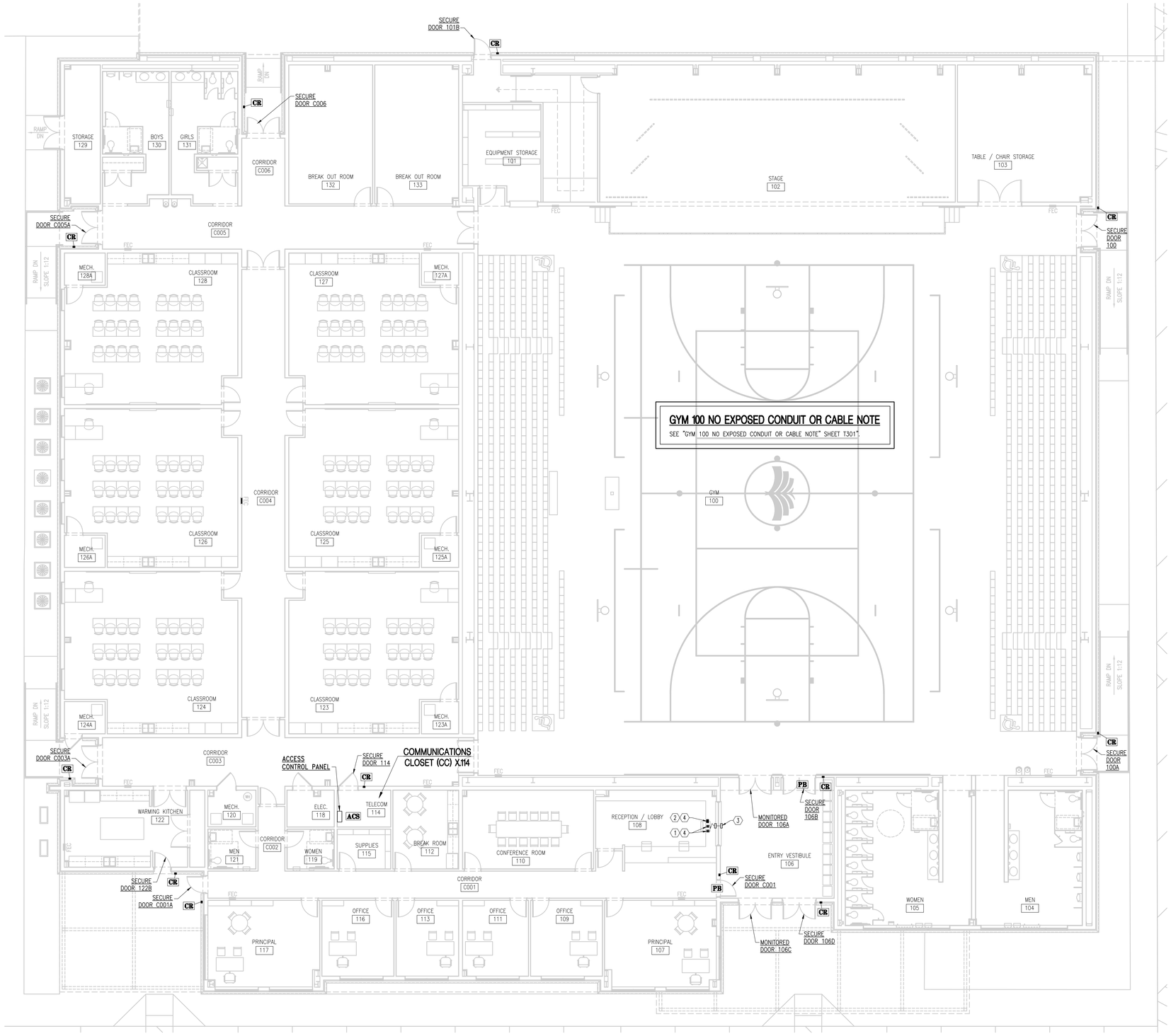
REVISIONS:

No.	Description	Date
4	ADDENDUM NO. 4	3/30/26

IP SECURITY CAMERA SYSTEM DETAILS

PROJECT NUMBER 22019
DATED 01/31/2025

SEC201



CR LOCATION NOTE

CARD READER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND INTENDED ONLY TO SHOW DOOR SERVED AND UNSECURE SIDE MOUNTING. THE OWNER'S PROJECT MANAGER WILL LOCATE ALL LISTED DEVICES IN THE FIELD ANYWHERE IN THE GENERAL VICINITY OF THE DOOR SERVED OR AREA INDICATED AT NO ADDITIONAL COST TO THE OWNER. CC/CM, ACSC AND EC COORDINATE FINAL LOCATIONS WITH OWNER AND ARCHITECT PRIOR TO BEGINNING ROUGH-IN. DEVICE HEIGHTS SHALL BE AS DIRECTED BY THE ARCHITECT.

STOREFRONT NOTE

MOUNT ALL CARD READERS FLUSH IN WALL. MOUNT CARD READERS IN STOREFRONT FRAMING ONLY WHERE SPECIFICALLY DIRECTED BY THE OWNER AND ACSC. GENERAL CONTRACTOR REQUEST DIRECTION FROM THE OWNER AND ACSC PRIOR TO COMMENCEMENT OF ANY RELATED WORK AND REVIEW EACH SECURE DOOR INSTALLATION. WHERE STOREFRONT MOUNTING IS REQUIRED SEE "GENERAL CONDUIT NOTES – ACCESS CONTROL SYSTEM" NOTE 3 SHEET ACS301 AND ACSC PROVIDE NARROW STILE CARD READER. THE GENERAL CONTRACTOR AND STOREFRONT SYSTEM INSTALLER SHALL PROVIDE THE ELECTRICAL CONTRACTOR ACCESS TO THE FRAMING TO RUN THE WIRING AS EACH DOOR IS INSTALLED.

ACCESS CONTROL SYSTEM FLOOR PLAN KEY NOTES

1. ACSC PROVIDE PUSHBUTTONS FOR TIMED UNLOCK OF SECURE DOORS INDICATED C001 AND 106B). PROVIDE TWO PUSHBUTTONS LOCATED AT KNEE SPACE OF RECEPTION CASEWORK. MOUNT CONCEALED UNDER RECEPTION COUNTER IN EXACT LOCATION AS DIRECTED BY OWNER'S PROJECT MANAGER IN THE FIELD FOR CONVENIENT ACCESS BY RECEPTION STAFF. WHERE DRAWER OR KEYBOARD TRAYS EXIST AT KNEE SPACES MOUNT PUSHBUTTONS ON SIDE OF KNEE SPACE JUST BELOW DRAWER OR KEYBOARD TRAYS. EXTEND ARMORED CABLE ACCORDINGLY. PUSHBUTTONS SHALL BE ALLEGION 660-PB. SET TIME DELAY FOR DELAYED DOOR RE-LOCKING IN COORDINATION WITH OWNER USING SDC "10TD MINI-TIMER" ADJUSTABLE TIME DELAY MODULE. PROVIDE END-OF-LINE MOV FOR EACH DOOR. RUN 3/4" EMT CONDUIT FOR EACH SET OF PUSHBUTTONS FROM BELOW COUNTER INTO KNEE WALL AND UP CONCEALED IN WALL AND ABOVE CEILING TO MAIN JUNCTION BOX FOR EACH SECURE DOOR – SEE KEY NOTE 4 FOR CONDUIT CONTINUATION BELOW COUNTER. PROVIDE ENGRAVED PLASTIC TAGS ON LIP OF COUNTER TO IDENTIFY DOOR SERVED BY EACH PUSHBUTTON AS DIRECTED BY OWNER.
2. ACSC PROVIDE LOCKDOWN/PANIC SWITCH LOCATED AT KNEE SPACE OF RECEPTION CASEWORK. MOUNT CONCEALED UNDER RECEPTION COUNTER IN EXACT LOCATION AS DIRECTED BY OWNER'S PROJECT MANAGER IN THE FIELD FOR CONVENIENT ACCESS BY RECEPTION STAFF. WHERE DRAWER OR KEYBOARD TRAYS EXIST AT KNEE SPACES MOUNT LOCKDOWN SWITCHES ON SIDE OF KNEE SPACE JUST BELOW DRAWER OR KEYBOARD TRAYS. EXTEND ARMORED CABLE ACCORDINGLY. LOCKDOWN SWITCHES SHALL BE MAGNASPHERE MK-3045T (PREVIOUSLY INTERLOGIX 3045-W). RUN 3/4" EMT CONDUIT FOR EACH LOCKDOWN SWITCH FROM UNDER COUNTER INTO KNEE WALL AND UP CONCEALED IN WALL AND HOMERUNNED ABOVE CEILING TO ACCESS CONTROL SYSTEM ENCLOSURE IN SERVING CC – SEE KEY NOTE 4 FOR CONDUIT CONTINUATION BELOW COUNTER. PROVIDE ENGRAVED PLASTIC TAGS ON LIP OF COUNTER TO IDENTIFY EACH LOCKDOWN SWITCH AS DIRECTED BY OWNER.
3. ACSC PROVIDE TALK-THRU DEVICE, NORCON TTU-3X-NC WITH NOISE CANCELLING OPTION. ADJUST SETTINGS FOR BEST SOUND QUALITY AND TRAIN SCHOOL STAFF IN USE OF SYSTEM. ELECTRICAL CONTRACTOR PROVIDE CONCEALED 120 VAC ELECTRICAL POWER CONNECTION AND INSTALL CONNECTING WIRING USING SMALL STAINLESS STEEL FLEX ARMORED CABLE CONCEALED BELOW COUNTER AND IN KNEE WALL. LOCATION IS TO BE DETERMINED IN THE FIELD – LOCATE ANYWHERE ALONG ADMIN RECEPTION COUNTER AS DIRECTED BY OWNER'S PROJECT MANAGER.
4. AT EACH SET OF PUSHBUTTONS AND AT EACH LOCKDOWN/PANIC SWITCH PROVIDE WIREMOLD V5748S SHALLOW METAL RACEWAY SURFACE JUNCTION BOX WITH STAINLESS STEEL BLANK PLATE AND TERMINATE 3/4" CONDUIT DESCRIBED IN KEY NOTES 1 AND 2 ON EACH BOX. DRILL HOLE IN JUNCTION BOX FOR CONNECTION OF STAINLESS STEEL ARMORED CABLE (ONE ARMORED CABLE FOR EACH PUSHBUTTON AND ONE FOR EACH LOCKDOWN SWITCH) AND CONNECT EACH ARMORED CABLE TO BOX WITH FITTING INTENDED FOR PURPOSE. FROM BOX RUN ARMORED CABLE CONCEALED ALONG UNDERSIDE OF COUNTERTOP AND SECURE TO COUNTERTOP AT MINIMUM OF 8" ON CENTER USING STAINLESS STEEL CUSHIONED CLAMPS. TERMINATE ARMORED CABLE AT EACH PUSHBUTTON AND LOCKDOWN SWITCH WITH CUSHIONED CLAMP.

NO EXPOSED CONDUIT OR CABLE NOTE

SEE T SHEET FLOOR PLANS FOR NOTES PROHIBITING EXPOSED CONDUIT OR CABLING AT AREAS WITH EXPOSED ROOF STRUCTURE IN AND AROUND THE GYM. PROVIDE BURIAL GRADE CABLES IN ALL UNDERGROUND CONDUITS.

ACCESS CONTROL SYSTEM LEGEND

- CLASSROOM 127 — ARCHITECT'S ROOM NUMBER, SEE "GENERAL LABELING NOTE"
- ACS — ACCESS CONTROL SYSTEM PANEL
- CR — CARD READER
- PB — DOOR CONTROLLED BY UNLOCK PUSHBUTTON
- LD — LOCKDOWN SWITCH
- TT — TALK-THRU DEVICE

ABBREVIATIONS

CC	COMMUNICATIONS CLOSET
CP	COMMUNICATIONS PANEL
ACS	ACCESS CONTROL SYSTEM
ACSC	ACCESS CONTROL SYSTEM CONTRACTOR
SCSC	STRUCTURED CABLING SYSTEM CONTRACTOR
EC	ELECTRICAL CONTRACTOR
CM/GC	CONSTRUCTION MANAGER

SECURE SIDE MOUNTING

ALL CONDUIT AT SECURE DOORS SHALL BE INSTALLED ON THE SECURE SIDE (SIDE OPPOSITE CARD READER).

NORTH

ACCESS CONTROL SYSTEM FLOOR PLAN

SCALE: 1/8" = 1'-0"

PROJECT NOTE (ALL SHEETS):

ALL MATERIALS AND EQUIPMENT INDICATED AND REQUIRED FOR A COMPLETE AND FINISHED INSTALLATION SHALL BE NEW AND SHALL BE PROVIDED BY THE CONTRACTOR UNDER THIS PROJECT UNLESS SPECIFICALLY INDICATED TO BE EXISTING OR PROVIDED BY OTHERS.

Graphic Scale

8 4 0 8FT 16FT

SCALE: 1/8" = 1'-0"

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REVISIONS:

No.	Description	Date

ACCESS CONTROL SYSTEM FLOOR PLAN

PROJECT NUMBER	22019
DATED	01/31/2025

ACS101

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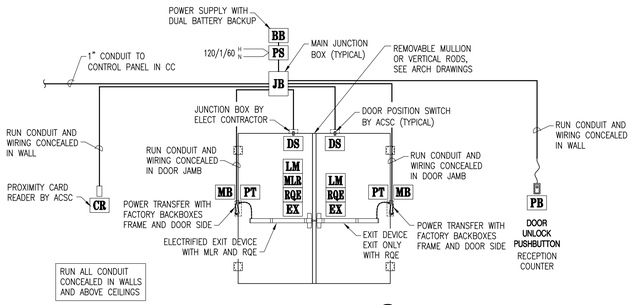
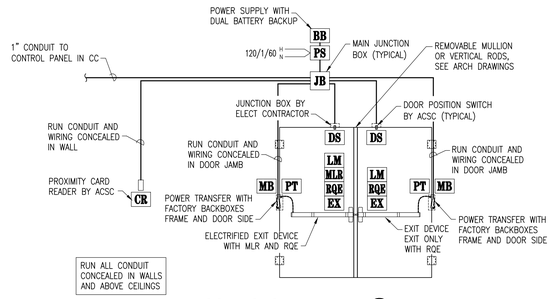


DOOR ROUGH-IN DETAIL (1)

N.T.S.

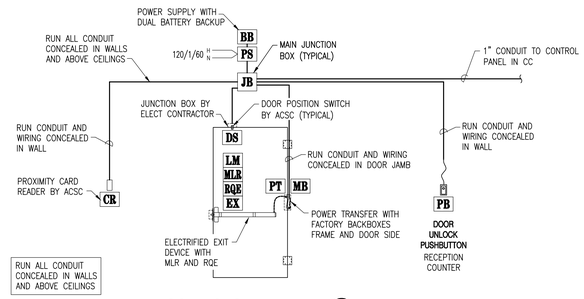
DOOR 106B | #10



DOOR ROUGH-IN DETAIL (2)

N.T.S.

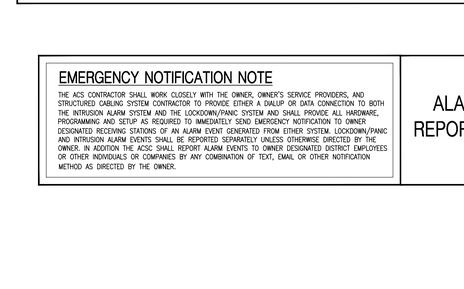
DOORS 100, 100A, C003A, C005A, C006, 106D | #01 | #03



DOOR ROUGH-IN DETAIL (3)

N.T.S.

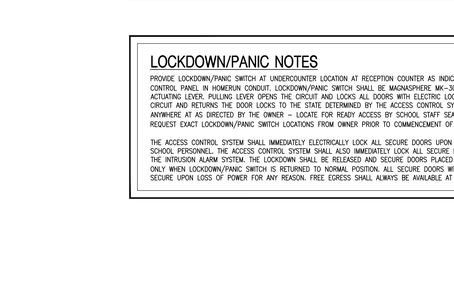
DOOR C001 | #12



DOOR ROUGH-IN DETAIL (4)

N.T.S.

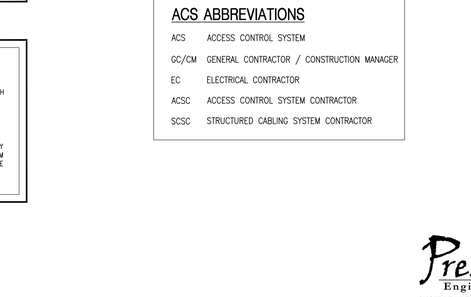
DOORS 101B, 122B, C001A | #04 | #05



DOOR ROUGH-IN DETAIL (5)

N.T.S.

DOORS 106A & 106C - MONITORED ONLY | #02 | #11



DOOR ROUGH-IN DETAIL (6)

N.T.S.

DOORS 114, 122B | #??

INTRUSION ALARM NOTES

THE ACS CONTRACTOR SHALL SETUP THE INTRUSION ALARM SYSTEM AS AN EXTENSION OF AND FULLY INTEGRATED INTO THE OWNER'S MONITORCAST ACCESS CONTROL SYSTEM FOR A SEAMLESS USER INTERFACE.

ALL SECURE DOORS ARE MECHANICAL FREE EGRESS AT ALL TIMES. ALL SECURE DOORS SHALL FAIL SECURE (LOCKED) UPON A POWER FAILURE. A FIRE ALARM EVENT SHALL NOT UNLOCK ANY SECURE DOOR.

ALL SECURE DOORS SHALL HAVE REQUEST TO EXIT INTEGRAL TO THE DOOR HARDWARE SUCH THAT EGRESS THRU A SECURE DOOR FROM THE SECURE SIDE SHALL NOT GENERATE AN INTRUSION ALARM.

THE INTRUSION ALARM SHALL OPERATE ON AN ARMED/DISARMED MODE BASIS, WITH THE MODE BASED ON TIME OF DAY.

IN ADDITION THE OWNER SHALL HAVE THE ABILITY TO INDEX THE SYSTEM TO MULTIPLE SPECIAL EVENT MODES.

ARMED MODE – GENERAL:
IN THE ARMED MODE ALL SECURE DOORS ARE ELECTRICALLY LOCKED AND MAY BE ENTERED ONLY BY INDIVIDUALS WITH VALID CARD READER CREDENTIAL AND PERMISSION TO ENTER THE BUILDING DURING THE TIME WHEN THE SYSTEM IS ARMED.

UNARMED MODE – GENERAL:
IN THE UNARMED MODE ALL SECURE DOORS ARE ELECTRICALLY LOCKED AND MAY BE ENTERED ONLY BY INDIVIDUALS WITH VALID CARD READER CREDENTIAL AND PERMISSION TO ENTER THE BUILDING DURING THE TIME WHEN THE SYSTEM IS UNARMED. ALTERNATELY THE OWNER MAY CHOOSE TO HAVE ONE OR MORE SECURE DOORS ELECTRICALLY UNLOCKED DURING THE TIME WHEN THE SYSTEM IS UNARMED.

THE OWNER MAY ELECT TO SET SYSTEM ARMED AND UNARMED MODES BASED ON TIME OF DAY ONLY, OR TO KEEP THE SYSTEM IN ARMED MODE AT ALL TIMES.

AN INTRUSION ALARM SHALL BE GENERATED ANYTIME A SECURE DOOR IS ELECTRICALLY LOCKED AND IS FORCED OPEN AS SENSED BY THE DOOR POSITION SWITCH, EXCEPT FOR EXCEPTIONS ON A DOOR-BY-DOOR AND TIME-OF-DAY BASIS AS DIRECTED BY THE OWNER. IN ARMED MODE A DOOR-HELD-OPEN NOTIFICATION MAY BE GENERATED FIRST, FOLLOWED BY AN INTRUSION ALARM, AS DIRECTED BY THE OWNER.

AN INTRUSION ALARM SHALL AUTOMATICALLY INITIATE A LOCKDOWN, UNLESS OTHERWISE DIRECTED BY THE OWNER.

SEE "EMERGENCY NOTIFICATION NOTE" FOR REQUIREMENTS RELATED TO EMERGENCY NOTIFICATION OF INTRUSION ALARMS. THE OWNER MAY ELECT TO HAVE UP TO FIVE DIFFERENT LEVELS OR TYPES OF ALARM NOTIFICATION FOR INTRUSION ALARMS.

THESE MODES OF OPERATION MAY VARY AT THE OWNER'S DIRECTION AND NO ADDITIONAL COST TO THE OWNER.

THESE OPERATING NOTES ARE FOR GENERAL INFORMATION ONLY AND ARE NOT INTENDED TO CONVEY THE FULL SCOPE OF ACS CONTRACTOR WORK. IT SHALL BE THE SOLE RESPONSIBILITY OF THE ACS CONTRACTOR TO COORDINATE ALL REQUIRED DETAILS OF BUILDING OPERATIONAL MODES ALONG WITH DETAILS OF SYSTEM OPERATION WITH THE OWNER'S PROJECT MANAGER AND OTHER OWNER PERSONNEL, AND SHALL INCORPORATE RELATED DETAILS IN THE CONTRACTOR'S AS-BUILT DRAWINGS. INTENDED SYSTEM OPERATION SHALL BE APPROVED BY THE OWNER'S PROJECT MANAGER PRIOR TO SYSTEM SETUP AND PROGRAMMING. PROVIDE A MINIMUM OF 4 HOURS TRAINING TO STAFF ACROSS THE FIRST YEAR OF OPERATION, WITH TIMES AND DURATION SET BY THE OWNER'S PROJECT MANAGER. FOLLOWING OCCUPANCY OF THE SCHOOL THE ACSC SHALL CONTINUE TO FINE TUNE OPERATING MODES WITH THE INVOLVEMENT OF THE SCHOOL PRINCIPAL AND THE OWNER'S PROJECT MANAGER FOR THE FIRST YEAR OF OPERATION.

EMERGENCY NOTIFICATION NOTE

THE ACS CONTRACTOR SHALL WORK CLOSELY WITH THE OWNER, OWNER'S SERVICE PROVIDERS, AND STRUCTURED CABLING SYSTEM CONTRACTOR TO PROVIDE EITHER A DIALUP OR DATA CONNECTION TO BOTH THE INTRUSION ALARM SYSTEM AND THE LOCKDOWN/PANIC SYSTEM AND SHALL PROVIDE ALL HARDWARE, PROGRAMMING AND SETUP AS REQUIRED TO IMMEDIATELY SEND EMERGENCY NOTIFICATION TO OWNER DESIGNATED RECEIVING STATIONS OF AN ALARM EVENT GENERATED FROM EITHER SYSTEM. LOCKDOWN/PANIC AND INTRUSION ALARM EVENTS SHALL BE REPORTED SEPARATELY UNLESS OTHERWISE DIRECTED BY THE OWNER. IN ADDITION THE ACSC SHALL REPORT ALARM EVENTS TO OWNER DESIGNATED DISTRICT EMPLOYEES OR OTHER INDIVIDUALS OR COMPANIES BY ANY COMBINATION OF TEXT, EMAIL OR OTHER NOTIFICATION METHOD AS DIRECTED BY THE OWNER.

ALARM REPORTING

TYPICAL SECURE DOOR OPERATION

PRESENTING VALID CREDENTIAL TO CARD READER SIGNALS TIMED ELECTRIC RETRACTION OF THE EXIT DEVICE LATCH BOLT ON ACTIVE LEAF (RIGHT HAND RETURN LEAF). ELECTRIC LOCKING MECHANISM IN ACTIVE LEAF SHALL ALWAYS FAIL SECURE (LOCKS ON LOSS OF POWER). INACTIVE LEAF IS FOR EXIT ONLY. DOOR POSITION SWITCHES TOGETHER WITH LATCH MONITORS INTEGRAL TO EACH EXIT DEVICE AND LOCKSET TIED TO INTRUSION ALARM SYSTEM MONITOR STATUS OF EACH DOOR LEAF FOR DOOR HELD OPEN OR UNAUTHORIZED ENTRY. REQUEST-TO-EXIT SWITCHES INTERNAL TO BOTH EXIT DEVICES ARE ACTIVATED UPON EXITING THROUGH EITHER LEAF SIGNALING AUTHORIZED EXITING. MECHANICAL FREE EGRESS SHALL ALWAYS BE POSSIBLE THROUGH EITHER LEAF.

DOOR POSITION SWITCH NORMALLY OPEN

DOOR POSITION SWITCHES SHALL BE NORMALLY OPEN. EACH DPS SHALL BE HELD IN CLOSED POSITION BY MAGNET WHEN DOOR IS CLOSED AND MAGNET IS WITHIN MANUFACTURER'S SPECIFIED GAP DISTANCE FROM SWITCH. DPS SHALL MOVE TO OPEN POSITION WHEN DOOR IS OPENED (CIRCUIT IS OPENED AND CURRENT DOES NOT FLOW). CIRCUIT IS ALSO OPENED IF WIRE IS CUT. OPEN CIRCUIT SHALL GENERATE ALARM STATE UNLESS RQE IS SIGNALED.

CARD READER NOTES

CARD READERS SHALL BE HID 'SIGNO 40NKS' OR CARD READER STANDARD WITH THE SCHOOL DISTRICT AT THE TIME OF PROJECT MATERIAL SUBMITTALS. THE OWNER WILL PROVIDE FINAL DIRECTION ON THE CARD READER PART NUMBER TO USE. ALL CARD READERS SHALL BE INSTALLED USING OPTIONAL GASKET HID PART NUMBER IP65GSKT TO MAKE THE INSTALLATION WATERTIGHT TO IP66 STANDARDS.

PROVIDE SINGLE GANG DEEP WALL BOX FOR ALL CARD READERS UNLESS OTHERWISE DIRECTED BY ACCESS CONTROL SYSTEM CONTRACTOR. PROVIDE MASONRY BOX WHERE MOUNTED IN BRICK. UNDER NO CIRCUMSTANCES SHALL OVERSIZE OPENINGS BE COVERED WITH PLATES AND THE DEVICES MOUNTED ON THE PLATES. BRICK OPENING SHALL BE COMPLETELY COVERED AND CONCEALED BY THE CARD READER. MAKE INSTALLATION WATERTIGHT.

LOCKDOWN/PANIC NOTES

PROVIDE LOCKDOWN/PANIC SWITCH AT UNDERCOUNTER LOCATION AT RECEPTION COUNTER AS INDICATED ON THE PLANS. HARD-WIRE TO ACS CONTROL PANEL IN HOMERUN CONDUIT. LOCKDOWN/PANIC SWITCH SHALL BE MAGNASPHERE MK-3045T (PREVIOUSLY INTERLOCK 3045-W) WITH ACTUATING LEVER. PULLING LEVER OPENS THE CIRCUIT AND LOCKS ALL DOORS WITH ELECTRIC LOCKING DEVICE. CLOSING LEVER CLOSES THE CIRCUIT AND RETURNS THE DOOR LOCKS TO THE STATE DETERMINED BY THE ACCESS CONTROL SYSTEM. MOUNT CONCEALED UNDER COUNTER ANYWHERE AT AS DIRECTED BY THE OWNER – LOCATE FOR READY ACCESS BY SCHOOL STAFF SEATED IN A NORMAL WORK POSITION. GC/CM REQUEST EXACT LOCKDOWN/PANIC SWITCH LOCATIONS FROM OWNER PRIOR TO COMMENCEMENT OF ROUGH-IN.

THE ACCESS CONTROL SYSTEM SHALL IMMEDIATELY ELECTRICALLY LOCK ALL SECURE DOORS UPON ACTIVATION OF LOCKDOWN/PANIC SWITCH BY SCHOOL PERSONNEL. THE ACCESS CONTROL SYSTEM SHALL ALSO IMMEDIATELY LOCK ALL SECURE DOORS UPON A FORCED ENTRY ALARM FROM THE INTRUSION ALARM SYSTEM. THE LOCKDOWN SHALL BE RELEASED AND SECURE DOORS PLACED IN NORMAL STATUS FOR THE CURRENT TIME ONLY WHEN LOCKDOWN/PANIC SWITCH IS RETURNED TO NORMAL POSITION. ALL SECURE DOORS WITH ELECTRIC LOCKING DEVICES SHALL FAIL SECURE UPON LOSS OF POWER FOR ANY REASON. FREE EGRESS SHALL ALWAYS BE AVAILABLE AT ALL SECURE DOORS.

SECURE SIDE MOUNTING

ALL CONDUIT AT SECURE SHALL BE INSTALLED ON THE SECURE SIDE (SIDE OPPOSITE CARD READER).

ACCESS CONTROL SYSTEM LEGEND

BB	BATTERY BACKUP	LD	LOCKDOWN SWITCH
CR	CARD READER	LM	LATCH MONITOR
DS	DOOR POSITION SWITCH	MB	MORTAR BOX
EX	RIM EXIT DEVICE	PB	PUSHBUTTON UNLOCK
EM	ELECTRIFIED LOCKSET	PS	POWER SUPPLY
IC	SECURITY INTERCOM	PT	POWER TRANSFER
JB	JUNCTION BOX	RQE	REQUEST TO EXIT
		(1)	DOOR DETAIL NUMBER
		#1	DOOR HARDWARE SPEC NUMBER

DOOR ORIENTATION NOTE:

RIGHT HAND/LEFT HAND ORIENTATION FOR EACH DOOR SHALL BE IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS – DOOR LAYOUTS INDICATED ON THIS SHEET ARE DIAGRAMMATIC AND NOT INTENDED TO PROVIDE CORRECT ORIENTATION.

ACS ABBREVIATIONS

ACS	ACCESS CONTROL SYSTEM
GC/CM	GENERAL CONTRACTOR / CONSTRUCTION MANAGER
EC	ELECTRICAL CONTRACTOR
ACSC	ACCESS CONTROL SYSTEM CONTRACTOR
SCSC	STRUCTURED CABLING SYSTEM CONTRACTOR

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REVISIONS:

No.	Description	Date

ACCESS CONTROL SYSTEM DETAILS

PROJECT NUMBER 22019
DATED 01/31/2025

ACS201

GENERAL CONDUIT NOTES - ACCESS CONTROL SYSTEM

1. RUN ALL ACCESS CONTROL SYSTEM CABLING CONTINUOUSLY IN CONDUIT. ALL INTERIOR CONDUIT SHALL BE EMT WITH STEEL COMPRESSION FITTINGS (SCREW FITTINGS AND DIE CAST FITTINGS ARE NOT ALLOWABLE). CONDUIT SIZE SHALL BE 1" MINIMUM OR LARGER AS INDICATED, EXCEPT WHERE 1/2" CONDUIT IS SPECIFICALLY ALLOWED AT LOCAL DOOR DEVICES. WHERE CONDUIT SIZE IS NOT SPECIFICALLY INDICATED PROVIDE SIZE AS REQUIRED FOR EACH CONDUIT RUN WITH MAXIMUM 30% CONDUIT FILL RATE.
2. ELECTRICAL CONTRACTOR PROVIDE ALL CONDUIT AS INDICATED AND ALL ADDITIONAL CONDUIT AS REQUIRED FOR A COMPLETE SYSTEM. THE ACS IS TO BE PROVIDED UNDER AN ALLOWANCE AND THE SYSTEM PROVIDER IS IDENTIFIED (SEE "ALLOWANCE FOR ACCESS CONTROL SYSTEM" THIS SHEET). PRIOR TO BIDS EACH BIDDER FOR ELECTRICAL WORK SHALL CONTACT THE ACS PROVIDER, SHALL OBTAIN A SCOPE OF WORK FOR ASSOCIATED CONDUIT WORK TO INCLUDE ANY CONDUIT REQUIRED BY THE PROVIDER IN ADDITION TO THAT INDICATED ON THE DRAWINGS ALONG WITH ALL CONDUIT INDICATED ON THE DRAWINGS, AND SHALL INCLUDE AS PART OF THE BASE BID ALL SUCH CONDUIT WORK.
3. WHERE DOORS ARE MOUNTED IN A STOREFRONT SYSTEM AND THE OWNER DIRECTS THE ACSC TO MOUNT THE ASSOCIATED CARD READERS IN THE STOREFRONT SYSTEM RUN ALL WIRING IN CONDUIT PROVIDED BY THE ELECTRICAL CONTRACTOR CONCEALED IN STOREFRONT SYSTEM FRAMING. AT CONTRACTOR'S OPTION WIRING WITHIN THE STOREFRONT MAY BE RUN CONTINUOUSLY IN STAINLESS STEEL ARMORED FLEXIBLE CONDUIT, SIZE AS REQUIRED, CONNECTING TO THE EMT WITH A FITTING MADE FOR THAT PURPOSE CONCEALED IN A JUNCTION BOX ABOVE THE CEILING, BUT UNDER NO CIRCUMSTANCES SHALL ANY WIRING BE RUN WITHIN STOREFRONT FRAMING WITHOUT CONDUIT. CLOSELY COORDINATE REQUIREMENTS WITH GENERAL CONTRACTOR AND STOREFRONT SUPPLIER PRIOR TO MANUFACTURER OF STOREFRONT SYSTEM. DO NOT MOUNT CARD READERS IN STOREFRONT FRAMING UNLESS SPECIFICALLY DIRECTED TO DO SO BY THE OWNER.
4. RUN 1" HOMERUN CONDUIT FROM ACCESS CONTROL SYSTEM PANEL TO EACH SECURE DOOR JUNCTION BOX 'JB'. RUN 1/2" CONDUIT FROM 'JB' CONTINUOUS TO EACH POWER TRANSFER BACKBOX, EACH DOOR POSITION SWITCH JUNCTION BOX AND EACH CARD READER JUNCTION BOX. PROVIDE OTHER CONDUITS AS INDICATED IN DOOR DETAILS AND ELSEWHERE ON THE DRAWINGS AND AS REQUIRED BY THE ACSC.
5. RUN CONDUIT AND MOUNT MAIN JUNCTION BOXES FOR EACH SECURE DOOR ON THE SECURE SIDE OF THE DOOR SERVED IN AN ACCESSIBLE/SERVICABLE LOCATION ABOVE A LAY-IN CEILING AS CLOSE TO THE DOOR AS POSSIBLE OR IN A NEARBY ELECTRICAL EQUIPMENT ROOM. MOUNT ACS PANELS AND ASSOCIATED POWER SUPPLIES IN COMM ROOMS ONLY. MOUNT POWER SUPPLIES NEXT TO OR INSIDE OF ACS PANELS.
6. FIRE WALLS: FIRESTOP ALL FLOOR PENETRATIONS AND ALL PENETRATIONS OF FIRE RATED WALLS. FIRESTOP USING ASSEMBLY UL LISTED FOR THE SPECIFIC APPLICATION AND FLOOR OR WALL RATING. INSTALL IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS AND THE CONDITIONS OF THE UL LISTING.
7. SMOKE WALL PENETRATIONS AND PENETRATIONS OF WALLS EXTENDING UP TO THE STRUCTURE ABOVE: ALL CONDUIT PENETRATIONS OF ALL WALLS INDICATED ON THE ARCHITECTURAL DRAWINGS AS SMOKE WALLS/BARRIERS/PARITIONS AND ALL WALLS INDICATED ON THE ARCHITECTURAL DRAWINGS AS EXTENDING UP TO THE STRUCTURE ABOVE SHALL BE SEALED SMOKETIGHT WITH STI SMOKE 'N' SOUND SEALANT WITH UL LISTED 'L' SMOKE RATING AND 'ST' ACOUSTICAL RATING OF 62. SEALANT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS FOR ¼" SEALANT CAULK ON BOTH SIDES OF THE WALL. SEALANT INSTALLATION ON ONLY ONE SIDE OF THE WALL IS NOT ACCEPTABLE. AT THE CONTRACTOR'S OPTION PROVIDE AN ALTERNATE ACOUSTICAL SEALANT WITH EQUAL 'ST' RATING AT THRU PENETRATIONS OF NON-SMOKE WALLS THAT EXTEND UP TO THE STRUCTURE ABOVE FOR SOUND ISOLATION. INSTALL SAME AS INDICATED FOR STI SMOKE 'N' SOUND ABOVE.
8. RUN ALL CONDUIT CONCEALED ABOVE CEILINGS AND IN WALLS. EXPOSED WIRING, SURFACE RACEWAY AND ARMORED DOOR LOOPS AND CABLES ARE NOT ALLOWED.
9. EC PROVIDE HEAVY DUTY PULL STRINGS IN ALL CONDUITS SERVING SECURE DOORS AND DEVICES AND PROVIDE PULL TAPE IN ALL BACKBONE CONDUITS BETWEEN ACS PANELS FOR USE BY CABLING INSTALLER – RUN CONTINUOUS FROM PULL POINT TO PULL POINT WITH NOT LESS THAN 10 FEET SLACK COILED AT EACH END.
10. LOCATION AND ROUTING OF ABOVEGROUND CONDUITS IS APPROXIMATE AND DEPICTS GENERAL DESIGN INTENT ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING FINAL CONDUIT ROUTING IN THE FIELD. THE CONTRACTOR SHALL COORDINATE THE FINAL ROUTING OF CONDUITS TO AVOID CONFLICTS WITH OTHER TRADES, WHILE MINIMIZING CHANGES IN DIRECTION AND OVERALL CONDUIT LENGTH.
11. CONDUITS SHALL BE RUN CONCEALED OVERHEAD ABOVE CEILINGS UNLESS LOCATED IN SPACES WITHOUT CEILINGS OR IN AN UNFINISHED SPACE SUCH AS EQUIPMENT ROOMS. SUPPORT EXPOSED CONDUIT AT A MINIMUM OF 4'-0" ON CENTER WITH 2-HOLE HEAVY DUTY GALVANIZED STEEL HARDWARE.
12. SUPPORT CONDUIT DIRECTLY FROM BUILDING STRUCTURE USING APPROVED HARDWARE. DO NOT SUPPORT CONDUIT FROM OTHER SYSTEMS COMPONENTS OR SUPPORTS. ROUTE ALL CONDUITS AS HIGH AS POSSIBLE. WHERE CONDUIT IS EXPOSED RUN HARD AGAINST WALL OR UNDERSIDE OF ROOF/FLOOR DECK. RUN ALL CONDUITS PARALLEL/PERPENDICULAR AND PLUMB WITH BUILDING LINES.
13. CONDUIT BODIES SUCH AS 'LB' FITTINGS ARE NOT ALLOWABLE.
14. PROVIDE PULLBOXES OF THE SAME TYPE AND SIZE AS THOSE INDICATED ON DRAWINGS FOR EACH RUN OF CONDUIT AT EVERY 100 FEET ON CENTER AND AT EACH END OF CONDUIT RUNS CONTAINING A TOTAL OF TWO 90 deg BENDS OR A COMBINATION OF LESSER BENDS TOTALING 180 deg (MINIMUM REQUIREMENTS – PROVIDE WHETHER SPECIFICALLY INDICATED OR NOT). CONDUIT RUNS CONTAINING MORE THAN TWO 90 deg BENDS WITHOUT A PULLBOX ARE NOT ALLOWABLE. FACTORY CONDUIT ELBOWS AND ALL OTHER BENDS SHALL HAVE A MINIMUM RADIUS OF SIX TIMES THE INTERNAL CONDUIT DIAMETER. CONDUIT OFFSETS AND PULLBOXES REQUIRED TO SUIT FIELD CONDITIONS AND TO CONFORM TO THESE REQUIREMENTS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
15. PULL BOXES SHALL BE 4" WIDE x 4" LONG x 2-1/8" DEEP NEMA 1 GALVANIZED STEEL WITH SCREW COVER. WHERE CONDUITS ARE TIGHTLY RACKED WITH UNIFORM SPACING, WIDER PULL BOXES MAY BE PROVIDED TO SERVE MULTIPLE CONDUITS. TERMINATE CONDUITS AT OPPOSITE ENDS OF PULLBOXES. DO NOT TERMINATE CONDUITS IN PULLBOXES AT RIGHT ANGLES TO EACH OTHER. HOMERUN CONDUITS SHALL NOT BE COMBINED INTO LARGER CONDUITS SERVING MULTIPLE DOORS OR DEVICES.
16. TERMINATE ALL CONDUIT ENDS WITH THREADED PLASTIC INSULATING BUSHINGS (PUSH-ON NOT ALLOWABLE). BUSHINGS MUST FIT TIGHTLY ON CONDUIT CONNECTOR THREADS. INSTALL ALL BUSHINGS PRIOR TO PULLING CABLE.
17. IDENTIFICATION: IDENTIFY ALL INDOOR ACS CONDUITS AND PULLBOXES ABOVE LAY-IN CEILINGS AT EVERY PULLBOX AND ON CONDUIT AT EACH COUPLER (PAINT ENTIRE COUPLER) WITH GREEN PAINT. DO NOT PAINT CONDUIT COUPLERS AND ENCLOSURES IN EQUIPMENT ROOMS. CONDUIT IN FINISHED SPACES WITH EXPOSED STRUCTURE CEILING SHALL BE PAINTED BY THE GENERAL CONTRACTOR TO MATCH ADJACENT FINISHES AND OTHER EXPOSED UTILITIES.

ACSC, EC, SCSC AND GC/CM COORDINATION NOTES

1. THE ACSC SHALL PROVIDE THE ACCESS CONTROL SYSTEM NOTIFICATION OF ALARMS TO OWNER IDENTIFIED CENTRAL RECEIVING STATIONS, OTHER WORK SHOWN TO BE BY THE ACSC IN THE DRAWINGS AND SPECIFICATIONS, AND ALL OTHER WORK REQUIRED FOR COMPLETE AND FULLY FUNCTIONAL SYSTEMS.
2. THE ACSC WILL FULLY INTEGRATE THE ACCESS CONTROL SYSTEM INTO THE OWNER'S EXISTING DSX ACCESS CONTROL SYSTEM SOFTWARE FOR MANAGEMENT OF THE ACCESS CONTROL SYSTEM TO INCLUDE INTRUSION, LOCKDOWN AND PANIC.
3. THE ACSC SHALL PROVIDE ALL LOW VOLTAGE WIRING ASSOCIATED WITH THE SYSTEM LISTED ABOVE.
4. THE ACSC SHALL PROVIDE A DETAILED STATEMENT OF WORK WITH INCLUSIONS AND EXCLUSIONS TO THE GC/CM AND EC FOR FINAL COORDINATION, ALONG WITH WIRING DIAGRAMS, INSTALLATION, OPERATION AND MAINTENANCE MANUALS, AND OTHER INFORMATION REQUIRED FOR THE GC AND EC TO COMPLETE THEIR ASSOCIATED WORK IN A TIMELY MANNER IN ACCORDANCE WITH THE OVERALL PROJECT SCHEDULE.
5. THE GC/CM SHALL PROVIDE OVERALL COORDINATION AND SCHEDULING FOR THE SYSTEM LISTED ABOVE TO INCLUDE DIRECT COORDINATION BETWEEN THE ACSC AND EC FOR ROUGH-IN AND OTHER WORK ITEMS THAT ARE TIME CRITICAL. THE GC/CM SHALL ALSO PROVIDE OVERALL COORDINATION OF EQUIPMENT LOCATIONS WITH THE ARCHITECT, OWNER, EC AND ACSC.
6. THE EC AND ACSC SHALL COORDINATE PROJECT REQUIREMENTS AS SOON AS THE ACSC IS IDENTIFIED BY THE OWNER AND CONTINUALLY DURING THE COURSE OF THE PROJECT.
7. THE EC SHALL PROVIDE ALL CONDUIT, BOXES, ENCLOSURES, PULL STRINGS AND TAPES, SLEEVES, FIRESTOPPING, SMOKESTOPPING, POWER, GROUNDING, AND ALL OTHER WORK REQUIRED BY CODE OR FOR COMPLETE AND FULLY FUNCTIONAL SYSTEMS BUT NOT PROVIDED BY THE ACSC OR SPECIFICALLY IDENTIFIED AS PROVIDED BY OTHERS, WHETHER SPECIFICALLY SHOWN OR NOT.
8. THE EC SHALL WIRE AND MAKE ALL CONNECTIONS TO ALL ELECTRIFIED DOOR HARDWARE AND DOOR HARDWARE THAT REQUIRES ANY TYPE OF 120 VAC WIRING CONNECTION. SEE DOOR HARDWARE SPECIFICATION SECTION 087100 AND ARCHITECTURAL AND ELECTRICAL DRAWINGS.
9. ACCESS CONTROL SYSTEM PANELS – CATEGORY 6 OUTLET: CATEGORY 6 CABLING AND MODULAR OUTLETS FOR NETWORK CONNECTIONS TO ACSC PANELS SHALL BE PROVIDED BY THE STRUCTURED CABLING SYSTEM CONTRACTOR (SCSC) COMPLETE TO INCLUDE PATCH PANELS, TERMINATION, LABELING, TESTING, AND PATCHING TO ASSIGNED NETWORK CONNECTIONS. THE CATEGORY 6 CABLES SHALL BE TERMINATED ON A BISCUIT JACK BY THE SCSC INSIDE THE ACSC PANELS. SCSC AND ACSC COORDINATE FINAL OUTLET LOCATIONS WITHIN PANELS. THE SCSC SHALL ALSO PROVIDE CATEGORY 6 CABLING AND FACEPLATES FOR EACH SECURITY VIDEO INTERCOM SYSTEM OUTDOOR STATION AND INDOOR STATION.

ACCESS CONTROL SYSTEM GENERAL NOTES:

1. REFER TO SPECIFICATION SECTION 087100 – DOOR HARDWARE TO CROSS REFERENCE DOOR HARDWARE SET NUMBERS TO INDIVIDUAL DOOR NUMBERS ALONG WITH OTHER INFORMATION FOR SECURE DOORS TO INCLUDE OPERATION. DOOR HARDWARE INDICATED ON ACS DRAWINGS IS FOR INFORMATION ONLY. SEE DOOR HARDWARE SPECIFICATION FOR FINAL DOOR HARDWARE REQUIREMENTS. ALL DOOR HARDWARE COMPONENTS LISTED IN SPECIFICATION SECTION 087100 – DOOR HARDWARE SHALL BE PROVIDED BY THE DOOR HARDWARE PROVIDER UNLESS SPECIFICALLY INDICATED TO BE PROVIDED BY OTHERS. CARD READERS AND DOOR POSITION SWITCHES SHALL BE PROVIDED BY THE ACCESS CONTROL SYSTEM CONTRACTOR. POWER SUPPLIES AT ALL SECURE DOORS WITH EXIT DEVICES SHALL BE PROVIDED AS PART OF THE DOOR HARDWARE PACKAGE AND SHALL BE THE SAME MANUFACTURER AS THE EXIT DEVICE. POWER SUPPLIES SERVING ACCESS CONTROL SYSTEM PANELS AND DOORS WITH ELECTRIFIED LOCKSETS SHALL BE PROVIDED BY THE ACSC AND SHALL BE LOCATED IN OR DIRECTLY ADJACENT TO ACCESS CONTROL SYSTEM PANELS IN COMM ROOMS. ALL POWER SUPPLIES SHALL HAVE DUAL BATTERY BACKUP AND SHALL BE TURNED OVER TO THE ELECTRICAL CONTRACTOR FOR INSTALLATION. LOW VOLTAGE WIRING SHALL BE PROVIDED BY THE ACCESS CONTROL SYSTEM CONTRACTOR. ALL CONDUIT FOR LOW VOLTAGE WIRING SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. 120VAC POWER AND ALL CONDUIT FOR POWER SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
2. ALL DOORS SHALL FAIL SECURE UPON LOSS OF POWER TO LOCKING DEVICE FOR ANY REASON.
3. ALL DOORS SHALL HAVE MECHANICAL FREE EGRESS FROM SECURE SIDE TO UNSECURE SIDE UNLESS SPECIAL CIRCUMSTANCES DICTATE OTHERWISE AS SPECIFICALLY DESCRIBED IN THE DOOR HARDWARE SPECIFICATIONS.
4. ALL DOORS SHALL HAVE REQUEST TO EXIT SWITCH INTEGRAL TO THE ELECTRIFIED DOOR LOCKING DEVICES AS PART OF THE DOOR HARDWARE PACKAGE. REQUEST TO EXIT SWITCH SHALL INDICATE AUTHORIZED EGRESS FROM SECURE SIDE TO UNSECURE SIDE AND PREVENT ACTIVATION OF THE INTRUSION ALARM.
5. ALL SECURE DOOR MAIN JUNCTION BOXES SHALL BE 12"x12"x6" NEMA 1 SCREW COVER AND SHALL BE INSTALLED IN ACCESSIBLE LOCATION ABOVE LAY-IN CEILING AS CLOSE TO DOOR OR GATE SERVED AS POSSIBLE.
6. MOUNT ALL CARD READERS FLUSH IN WALL. WHERE STOREFRONT MOUNTING IS REQUIRED BY THE OWNER SEE "GENERAL CONDUIT NOTES" NOTE 3 THIS SHEET AND ACSC PROVIDE NARROW STILE CARD READER.
7. PROVIDE WEATHERPROOF CARD READERS, ROUGH-IN AND MOUNTING AT ALL LOCATIONS.
8. CARD READER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND INTENDED ONLY TO SHOW DOOR SERVED AND UNSECURE SIDE MOUNTING. THE OWNER'S PROJECT MANAGER AND ARCHITECT PROVIDE DIRECTION ON EXACT LOCATION OF ALL CARD READERS IN THE FIELD – WHICH MAY BE ANYWHERE IN THE VICINITY OF THE DOOR SERVED AT NO ADDITIONAL COST TO THE OWNER. THE GC SHALL REQUEST LOCATIONS WELL PRIOR TO COMMENCEMENT OF ROUGH-IN.
9. THE GC/CM SHALL PROVIDE OVERALL COORDINATION AND SCHEDULING FOR THE ACCESS CONTROL SYSTEM INCLUDING DIRECT COORDINATION BETWEEN THE ACSC AND EC FOR ROUGH-IN AND OTHER WORK ITEMS THAT ARE TIME CRITICAL. THE GC SHALL ALSO PROVIDE OVERALL COORDINATION OF EQUIPMENT LOCATIONS (CARD READERS AND KEYPADS) WITH THE ARCHITECT, OWNER, EC AND ACSC.
10. PROVIDE WALL/MORTAR/JUNCTION BOXES AT ALL POWER TRANSFERS, AND DOOR POSITION SWITCHES REGARDLESS OF WALL TYPE AND WHETHER DOOR FRAMES ARE MORTAR FILLED OR NOT. CONNECT CONDUIT TO BOXES WITH MORTAR TIGHT COMPRESSION FITTINGS. PROVIDE GROMMETS WHERE WIRING PASSES THRU OPENINGS IN METAL COMPONENTS. COMPLY WITH CODE FOR PROTECTION OF CONDUITS IN CONTACT WITH MORTAR OR CONCRETE.
11. FINAL DOOR NUMBERS SHALL BE BASIS FOR SYSTEM LABELING AND PROGRAMMING SHALL BE BASED ON FINAL ROOM NUMBERS USED FOR ROOM SIGNAGE. FINAL NUMBERING/LABELING SCHEME FOR DOORS OTHER SECURITY DEVICES SHALL BE WORKED OUT IN CLOSE COORDINATION WITH THE OWNER'S PROJECT MANAGER AND ARCHITECT.

ACCESS CONTROL SYSTEM CABLING REQUIREMENTS

1. PROVIDE JACKETED WIRE FOR ALL APPLICATIONS.
2. PROVIDE SHIELDED CABLE WHERE RECOMMENDED BY THE CONNECTED EQUIPMENT MANUFACTURER. TERMINATE SHIELD PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. HOMERUN CARD READER CABLE FROM READER TO SERVING ACCESS CONTROL SYSTEM PANEL. PROVIDE SLACK IN CABLE AT MAIN PULL BOX AT EACH SECURE DOOR. MAKE ALL WIRING CONNECTIONS TO CABLE IN MAIN PULL BOX AT EACH SECURE DOOR.
4. FOR PURPOSES OF BIDS THE ACS CONTRACTOR SHALL PROVIDE THE FOLLOWING WIRING FOR THE ACS AND OTHER SECURITY SYSTEMS. FOLLOWING BIDS THE ACSC SHALL SHALL PROVIDE WIRING AS REQUIRED FOR EACH APPLICATION AT NO ADDITIONAL COST TO THE OWNER.
5. PROVIDE THE FOLLOWING WIRING TO EACH CARD READER:
   4-CONDUCTOR/18 AWG, 3-PAIR/22 AWG, 2-CONDUCTOR/22 AWG, 4-CONDUCTOR/22 AWG
6. PROVIDE WIRING AS REQUIRED TO ALL OTHER ACCESS CONTROL AND INTRUSION ALARM SYSTEM DEVICES AND POWER SUPPLIES.
7. CONDUCTOR QUANTITIES AND GAUGES ARE MINIMUM, PROVIDE HIGHER CONDUCTOR COUNT AND LARGER GAUGES AS REQUIRED FOR EACH WIRED DEVICE PER MANUFACTURER'S INSTRUCTIONS.

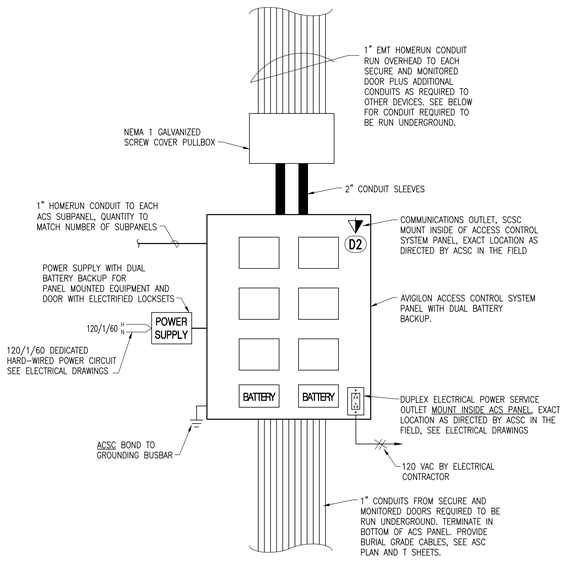
ALLOWANCE FOR ACCESS CONTROL SYSTEM

THE GENERAL CONTRACTOR SHALL INCLUDE AN ALLOWANCE FOR THE PROVISION OF A COMPLETE ACCESS CONTROL SYSTEM WITH INTEGRATED INTRUSION ALARM FOR THIS PROJECT IN THE BASE BID. ALL REFERENCES TO MATERIALS AND LABOR ASSOCIATED WITH THE ACCESS CONTROL SYSTEM WITHIN THE CONTRACT DOCUMENTS SHALL BE INCLUDED IN THIS ALLOWANCE UNLESS SPECIFICALLY INDICATED OTHERWISE. THE AMOUNT OF THE ALLOWANCE SHALL BE ISSUED AS AN ADDENDUM PRIOR TO THE BID DATE.

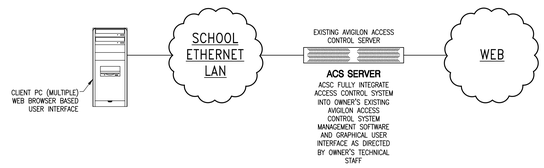
THE SCOPE OF WORK SHALL INCLUDE THE ACCESS CONTROL SYSTEM COMPLETE WITH ALL WORK INDICATED ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS, ALL DEVICES, EQUIPMENT AND WORK DESCRIBED IN THE INTEGRATOR'S COST PROPOSAL AND ASSOCIATED STATEMENT OF WORK. ALL OTHER DEVICES, EQUIPMENT AND WORK REQUIRED FOR A COMPLETE SYSTEM, ALL WIRING AND CABLING (EXCEPT AS INDICATED BELOW FOR CATEGORY 6 CABLING BY THE SCSC), AND ALL PROGRAMMING AND SETUP REQUIRED TO MAKE THE SYSTEM FULLY OPERATIONAL AND FUNCTIONAL TO THE SATISFACTION OF THE OWNER.

RELATED WORK TO BE PROVIDED BY OTHERS UNDER THE BASE BID BUT NOT INCLUDED IN THE SCOPE OF THE ALLOWANCE SHALL INCLUDE CONDUIT FOR ALL ACCESS CONTROL SYSTEM WIRING AND CABLING AND ALL POWER AND GROUNDING REQUIRED FOR THE ACCESS CONTROL SYSTEM. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE ASSOCIATED CONDUIT, POWER AND GROUNDING WORK WITH THE ACCESS CONTROL SYSTEM CONTRACTOR – BUT THE SCOPE OF CONDUIT, POWER AND GROUNDING WORK SHALL NOT BE LESS THAN THAT DESCRIBED ON THE DRAWINGS. THE SCSC SHALL PROVIDE CATEGORY 6 CABLING TO EACH ACCESS CONTROL SYSTEM PANEL AS INDICATED ON THE DRAWINGS.

THE ACCESS CONTROL SYSTEM PROVIDER SHALL BE UNDER MULTI-YEAR CONTRACT WITH THE OWNER, SHALL BE AVIGILON CERTIFIED AND SHALL BE MCA (CONTACT TONY COOPER – EMAIL TONYCOOPER@CALLMC.COM).



TYPICAL ACCESS CONTROL SYSTEM PANEL DETAIL
NOT TO SCALE



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100% CONSTRUCTION DOCUMENTS

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REVISIONS:

No.	Description	Date

ACCESS CONTROL SYSTEM DETAILS

PROJECT NUMBER	22019
DATED	01/31/2025

ACS301

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Florida Certificate of Authorization #9308
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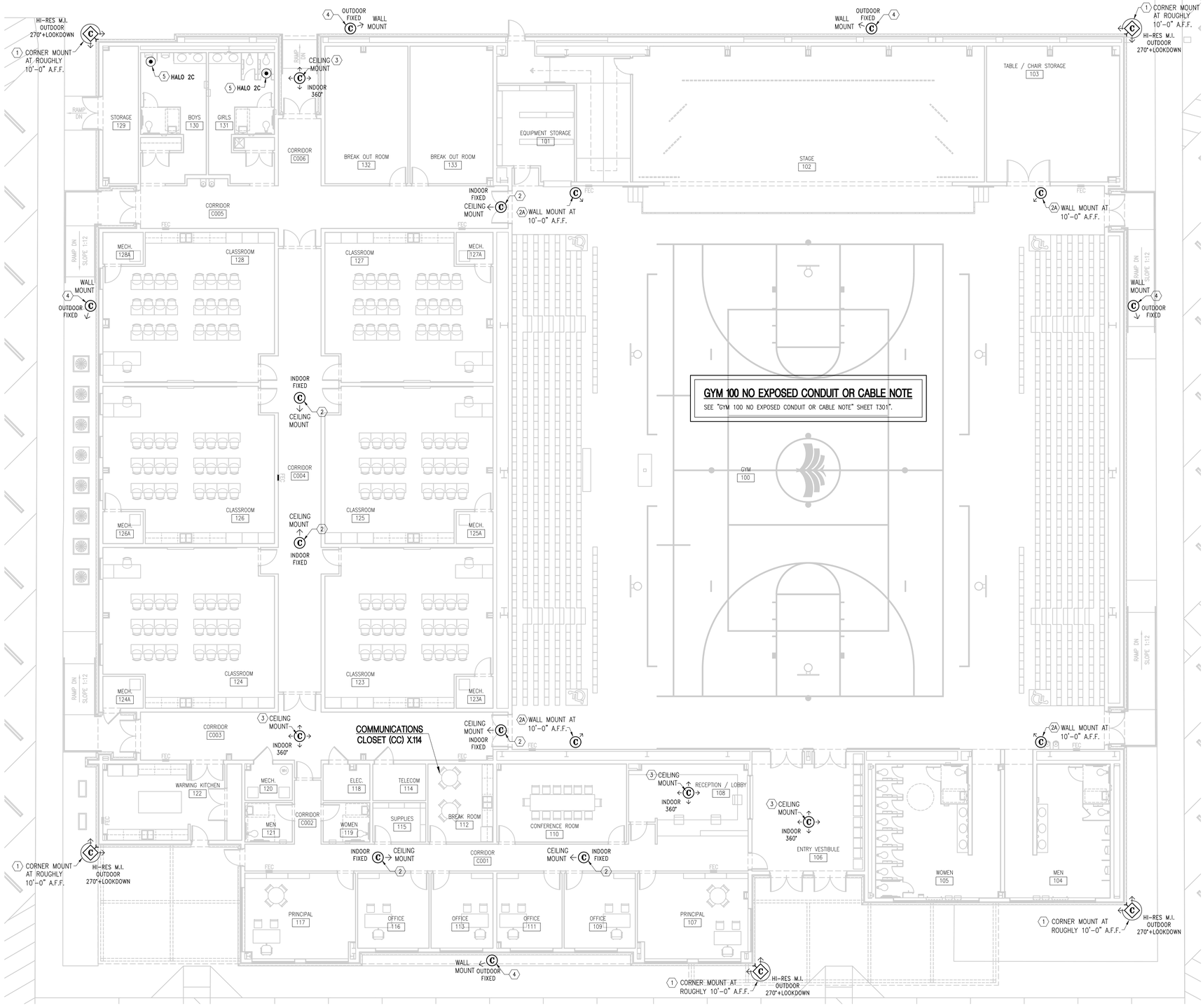
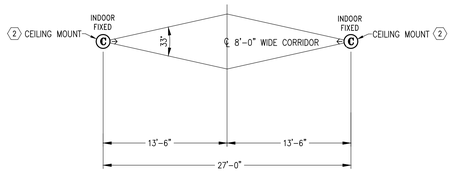


GYM 100 NO EXPOSED CONDUIT OR CABLE NOTE

SEE "GYM 100 NO EXPOSED CONDUIT OR CABLE NOTE" SHEET T301".



CORRIDOR MODE

FOR INDOOR FIXED CAMERAS WITH OPPOSING VIEW IN 8'-0" WIDE CORRIDORS AND TAGGED WITH KEY NOTE 2 (iPRO MODEL WV-S22500-V3L), CONFIGURE FOR CORRIDOR VIEW AS FOLLOWS:

1. LOCATE CENTER OF CORRIDOR IN BOTH DIRECTIONS (CORRIDOR WIDTH AND LENGTH).
2. SET EACH CAMERA AT 13'-6" FROM CORRIDOR CENTER FOR TOTAL DISTANCE BETWEEN CAMERAS OF 27'-0".
3. SET CAMERA TO CORRIDOR MODE AT 3:4 ASPECT RATIO FOR 2304X3072 RESOLUTION (REVERSES 4:3 ASPECT RATIO).
4. SET CAMERA HORIZONTAL ANGULAR FIELD OF VIEW TO FACTORY MINIMUM OF 33 DEGREES NOTING THAT HORIZONTAL AND VERTICAL FIELDS OF VIEW ARE REVERSED WITH CAMERA SET FOR CORRIDOR MODE. ADJUST DISTANCE FOR ACTUAL MINIMUM ANGULAR FIELD OF VIEW FOR CAMERA FURNISHED.
5. WHERE CAMERA VIEWS MEET AT CENTER OF CORRIDOR HORIZONTAL FIELD OF VIEW SHOULD EQUAL WIDTH OF CORRIDOR.
6. SET VERTICAL ADJUSTING ANGLE TO MAXIMIZE VIEW OF FLOOR WITH MINIMUM VIEW OF CEILING AT END OF CORRIDOR.
7. FOR CORRIDOR C001 SPACE CAMERAS AT 38'-4".

CORRIDOR C004 CAMERA LAYOUT DIAGRAM

NOT TO SCALE

IP SECURITY CAMERA SYSTEM FLOOR PLAN KEY NOTES

1. iPRO WV-S8574L 33 MEGAPIXEL HI-RES 4 X 4K MULTI-IMAGER OUTDOOR FIXED IK10 VANDAL CAMERA WITH BUILT-IN IRLED (COLOR WHITE) – CORNER MOUNT, INSTALL AND SETUP FOR 270 DEGREE VIEW PLUS DOWNLOOK. VERIFY EXACT LOCATION WITH OWNER AND CAMERA INTEGRATOR PRIOR TO INSTALLATION. CORNER MOUNT USING iPRO WV-QSR503-W SHROUD, iPRO WV-QWL501-W OUTDOOR WALL MOUNT AND iPRO WV-QCN500-W CORNER MOUNT ADAPTER (ALL COLOR WHITE). LOCATE CORNER MOUNT AND DRILL HOLE THROUGH CORNER OF WALL IN EXACT LOCATION REQUIRED FOR CONDUIT TO EXTEND THRU FACTORY OPENING IN CORNER MOUNT AND TERMINATE IN FACTORY CONDUIT CONNECTOR IN WALL MOUNT. UNDER NO CIRCUMSTANCES WILL EXPOSED CONDUIT OR WIRING BE ALLOWED AT CAMERA MOUNTING. SET CORNER MOUNT IN FULL BED OF LEXEL CLEAR SEALANT/ADHESIVE AND SECURE TO STRUCTURE WITH EIGHT 3/8" DIAMETER STAINLESS STEEL BOLTS AND WASHERS. SECURE WALL MOUNT TO CORNER MOUNT WITH FOUR 3/8" DIAMETER STAINLESS STEEL BOLTS AND WASHERS. MAKE ALL PENETRATIONS OF WALL WATERTIGHT WITH LEXEL SEALANT. EXTEND CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.
2. iPRO WV-S22500-V3L 5MP INDOOR FIXED IK10 VANDAL CAMERA WITH BUILT-IN IRLED (COLOR WHITE)– CEILING MOUNT. VERIFY EXACT LOCATION WITH OWNER AND CAMERA INTEGRATOR PRIOR TO INSTALLATION. FLUSH MOUNT IN LAY-IN CEILING USING PANASONIC WV-QEM100-W EMBEDDED CEILING MOUNT BRACKET. SUPPORT MOUNTING BRACKET FROM ROOF STRUCTURE ABOVE. EXTEND CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.
2A. iPRO WV-S22700-V2L 5MP INDOOR FIXED IK10 VANDAL CAMERA WITH BUILT-IN IRLED (COLOR WHITE) – WALL MOUNT. VERIFY EXACT LOCATION WITH OWNER AND CAMERA INTEGRATOR PRIOR TO INSTALLATION. FLUSH WALL MOUNT ON COMPATIBLE OCTAGON RECESSED METAL GANG BOX (OR AS RECOMMENDED BY CAMERA INTEGRATOR) USING iPRO WV-QAT502-W (OR CURRENT MODEL) GANGBOX ADAPTER. EXTEND CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.
3. iPRO WV-S4176A 12 MEGAPIXEL INDOOR 360 DEGREE IK10 VANDAL CAMERA WITH BUILT-IN IRLED (COLOR WHITE) – CEILING MOUNT FOR 360 DEGREE VIEW. VERIFY EXACT LOCATION WITH OWNER AND CAMERA INTEGRATOR PRIOR TO INSTALLATION. MOUNT ON CEILING USING DOUBLE GANG ELECTRICAL BOX WITH DOUBLE GANG PLASTER RING (OR AS RECOMMENDED BY CAMERA INTEGRATOR) SUPPORTED CEILING SUPPORT STRUCTURE AND iPRO FACTORY PROVIDED CAMERA ATTACHMENT PLATE. EXTEND CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.
4. iPRO WV-S25700-V2LN 4K OUTDOOR FIXED IK10 VANDAL CAMERA WITH BUILT-IN IRLED (COLOR WHITE) – WALL MOUNT. VERIFY EXACT LOCATION WITH OWNER AND CAMERA INTEGRATOR PRIOR TO INSTALLATION. WALL MOUNT USING iPRO WV-QSR501-W SHROUD AND iPRO WV-QWL501-W OUTDOOR WALL MOUNT (ALL COLOR WHITE). LOCATE WALL MOUNT AND DRILL HOLE THROUGH WALL IN EXACT LOCATION REQUIRED FOR CONDUIT TO TERMINATE IN FACTORY CONDUIT CONNECTOR IN WALL MOUNT. UNDER NO CIRCUMSTANCES WILL EXPOSED CONDUIT OR WIRING BE ALLOWED AT CAMERA MOUNTING. SET WALL MOUNT IN FULL BED OF LEXEL CLEAR SEALANT/ADHESIVE AND SECURE TO STRUCTURE WITH FOUR 3/8" DIAMETER STAINLESS STEEL BOLTS. MAKE ALL PENETRATIONS OF WALL WATERTIGHT WITH LEXEL CLEAR SEALANT. SECURE WALL MOUNT TO CORNER MOUNT WITH FOUR 3/8" DIAMETER STAINLESS STEEL BOLTS AND WASHERS. MAKE ALL PENETRATIONS OF WALL WATERTIGHT WITH LEXEL SEALANT. EXTEND CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.
5. HALO 2C SMART DETECTOR, INSTALL IN CEILING IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS. CAMERA INTEGRATOR SETUP IN VIDEO INSIGHT AS DIRECTED BY OWNER. EXTEND 3/4" CONDUIT TO 4"X4"X2-1/8" NEMA 1 PULL BOX MOUNTED INDOORS IN NEAREST ACCESSIBLE LOCATION ABOVE LAY-IN CEILING NEAR CAMERA, THEN RUN 3/4" CONDUIT FROM PULL BOX CONCEALED CONTINUOUS TO SERVING CC. SCSC PROVIDE CATEGORY 6 CABLE FOR NETWORK AND POE SERVICES CONTINUOUS FROM CAMERA TO SERVING CC.

BURIAL GRADE CABLE NOTE

RUN ALL ACS AND SECURITY CAMERA CONDUIT AND CABLING UNDERGROUND LOCATED ON THE NON CER SIDE OF THE BUILDING TO SERVING COMMUNICATIONS EQUIPMENT ROOM CER.107. IN ALL SUCH CASES THE ACS CONTRACTOR SHALL PROVIDE BURIAL GRADE CABLE. CABLE SHALL BE CONTINUOUS FROM EACH SECURE OR MONITORED DOOR TO THE ACCESS CONTROL SYSTEM PANEL PULL BOX AND FROM EACH SECURITY CAMERA TO THE RACK MOUNTED CATEGORY 6 PATCH PANEL WITH NO TERMINATIONS OR SPLICES. THE CONTRACTOR SHALL INCLUDE A SUBMITTAL FOR EACH TYPE OF BURIAL GRADE CABLE FOR ENGINEER APPROVAL IN THE SUBMITTAL PACKAGE.

NO EXPOSED CONDUIT OR CABLE NOTE

SEE 1 SHEET FLOOR PLANS FOR NOTES PROHIBITING EXPOSED CONDUIT OR CABLING AT AREAS WITH EXPOSED ROOF STRUCTURE IN AND AROUND THE GYM. PROVIDE BURIAL GRADE CABLES IN ALL UNDERGROUND CONDUITS.

SECURITY LEGEND

CLASSROOM 127 — ARCHITECT'S ROOM NUMBER, SEE "SECURITY DEVICE IDENTIFICATION NOTE."

- OUTDOOR WALL MOUNT FIXED SECURITY CAMERA
- INDOOR CEILING MOUNT FIXED SECURITY CAMERA
- INDOOR CEILING MOUNT 360 DEGREE FIXED SECURITY CAMERA.
- OUTDOOR CORNER MOUNT HI-RES MULTI-IMAGER (M.I.) 270 DEGREE FIXED SECURITY CAMERA.

ABBREVIATIONS

CER	COMMUNICATIONS EQUIPMENT ROOM
CC	COMMUNICATIONS CLOSET
SCSC	STRUCTURED CABLING SYSTEM CONTRACTOR
EC	ELECTRICAL CONTRACTOR
CM/GC	CONSTRUCTION MANAGER

SECURITY DEVICE IDENTIFICATION NOTE:

ALL CAMERAS AND OTHER SECURITY DEVICES SHALL BE IDENTIFIED BASED ON FINAL FISH ROOM NUMBERS OR AS OTHERWISE DIRECTED BY THE OWNER DURING CONSRUCTION. OBTAIN FINAL ROOM NUMBERS FROM THE ARCHITECT PRIOR TO IDENTIFYING AND LABELING DEVICES.

PROJECT NOTE (ALL SHEETS):

ALL MATERIALS AND EQUIPMENT INDICATED AND REQUIRED FOR A COMPLETE AND FINISHED INSTALLATION SHALL BE NEW AND SHALL BE PROVIDED BY THE CONTRACTOR UNDER THIS PROJECT UNLESS SPECIFICALLY INDICATED TO BE PROVIDED BY OTHERS.

IP SECURITY CAMERA SYSTEM FLOOR PLAN

SCALE: 1/8" = 1'-0"

DIRECT CONNECT NOTE

DIRECT TERMINATE CATEGORY 6 CABLE FOR SECURITY CAMERAS WITH MALE MODULAR PLUG. ALL CATEGORY 6 DIRECT CONNECT PLUGS SHALL BE AS INDICATED ON THE DATA SINGLE LINE.

CAMERA FASTENER SIZE NOTE:

FASTENER SIZES INDICATED FOR CAMERA MOUNTS ARE APPROXIMATE AND MUST BE VERIFIED WITH THE ACTUAL HARDWARE RECEIVED. FASTENERS FOR THREADED CONNECTIONS SHALL BE SAME SIZE AS THREADED HOLE. FASTENERS FOR SMOOTH HOLES SHALL BE 1/16" SMALLER THAN HOLE DIAMETER. ALL FASTENERS SHALL BE STAINLESS STEEL.

Graphic Scale

8 4 0 8FT 16FT

SCALE: 1/8" = 1'-0"

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100% CONSTRUCTION DOCUMENTS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER BICSI Gregory A. Cook BICSI ID # 104998 EXPIRES 12-31-27 RCDD

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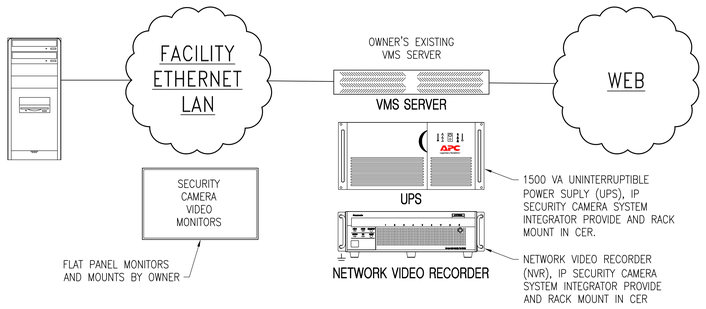
REVISIONS:

No.	Description	Date

IP SECURITY CAMERA SYSTEM FLOOR PLAN

PROJECT NUMBER	22019
DATED	01/31/2025

SEC101



AVIGILON SOFTWARE

AVIGILON SOFTWARE VIDEO MANAGEMENT SOFTWARE (VMS) IS EXISTING FOR PALM BAY CHARTER SCHOOL. UNDER THIS PROJECT THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL FULLY INTEGRATE THE SECURITY CAMERAS AND HALO DETECTORS PROVIDED UNDER THIS PROJECT INTO THE EXISTING SOFTWARE. PROVIDE EXPANSION, PROGRAMMING, SETUP, LICENSING, AND ALL OTHER WORK REQUIRED TO INTEGRATE THE CAMERAS INTO THE AVIGILON SYSTEM FOR THE FULL RANGE OF FUNCTIONS AVAILABLE FROM THE MANUFACTURER FOR EACH CAMERA AND DESIRABLE FOR THE VARIOUS CAMERA VIEWING AND RECORDING APPLICATIONS ENCOMPASSED BY THIS PROJECT.

NETWORK VIDEO RECORDER

THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL PROVIDE A NETWORK VIDEO RECORDER (NVR) RACK MOUNTED IN THE CER WITH RAID 5 OR 6 STORAGE. HARD DRIVES SHALL BE VIDEO SURVEILLANCE GRADE (PURPLE). THE NVR SHALL HAVE SUFFICIENT UNUSED HARD DRIVE SLOTS TO ALLOW AT LEAST 50% EXPANSION OF STORAGE IN THE FUTURE, AFTER THE HARD DRIVES FOR THIS PROJECT ARE INSTALLED. SUFFICIENT STORAGE SHALL BE PROVIDED UNDER THIS PROJECT TO ARCHIVE 30 DAYS OF VIDEO WITH ALL CAMERAS RECORDING AT FULL RESOLUTION IN COLOR AND AT A MINIMUM OF 15 FRAMES PER SECOND. THE INTEGRATOR SHALL UTILIZE H.265 SMARTCODEC WHERE FACTORY INTEGRATED IN THE SPECIFIED CAMERAS (PREFERRED) OR H.264 SMARTCODEC WHERE H.265 IS NOT FACTORY INTEGRATED. SETUP TO OPTIMIZE STORAGE WITHOUT SACRIFICING STORED VIDEO QUALITY. IF SO DIRECTED BY THE OWNER THE CAMERA INTEGRATOR SHALL EXPAND THE STORAGE CAPACITY OF THE EXISTING NVR AS REQIRED TO MEET THESE REQUIREMENTS.

ALLOWANCE FOR IP SECURITY CAMERA SYSTEM INTEGRATOR

THE GENERAL CONTRACTOR SHALL INCLUDE AN ALLOWANCE FOR ALL WORK BY THE IP SECURITY CAMERA SYSTEM INTEGRATOR IN THE BASE BID.

THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL ALSO BE THE ACCESS CONTROL SYSTEM CONTRACTOR AND THE INTRUSION ALARM SYSTEM CONTRACTOR FOR THIS PROJECT. SEE "ALLOWANCE FOR ACCESS CONTROL SYSTEM" NOTE SHEET ACS301.

THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL PROVIDE WORK AS SPECIFICALLY INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS AND AS DESCRIBED IN THE IP SECURITY CAMERA SYSTEM INTEGRATOR ALLOWANCE COST PROPOSAL AND ASSOCIATED SCOPE OF WORK STATEMENT. **THE ALLOWANCE COST AND SCOPE OF WORK STATEMENT WILL BE ISSUED IN AN ADDENDUM PRIOR TO BIDS.**

THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL PROVIDE ALL CAMERAS, LOCATE CAMERAS PRIOR TO ROUGH-IN, TEST THE OPERATION OF EACH INSTALLED CAMERA, SET FINAL CAMERA VIEWING ANGLES, FIELDS OF VIEW, LENS SETTINGS, COMPRESSION SETTINGS AND OTHER CAMERA SETTINGS FOR OPTIMUM PERFORMANCE, SHALL PROVIDE A NEW NVR WITH STORAGE CAPACITY AS REQUIRED OR SHALL EXPAND THE EXISTING NVR, SHALL PROVIDE SOFTWARE UPGRADES AND REGISTER CAMERA LICENSES, SHALL PROVIDE FINAL SETUP, PROGRAMMING, TESTING AND OWNER TRAINING FOR THE SYSTEM, AND SHALL MAKE THE SYSTEM FULLY OPERATIONAL AND FUNCTIONAL TO THE SATISFACTION OF THE OWNER.

RELATED WORK TO BE PROVIDED BY OTHERS UNDER THE BASE BID BUT NOT INCLUDED IN THE SCOPE OF THE ALLOWANCE SHALL INCLUDE WORK BY THE SCSC AS INDICATED ON THE DRAWINGS. THE SCSC SHALL PROVIDE ALL CATEGORY 6 CABLING, PATCH PANELS, TERMINATION AND TESTING, AND CLOSE COORDINATION WITH THE GC/CM, ELECTRICAL CONTRACTOR AND THE IP SECURITY CAMERA SYSTEM INTEGRATOR.

ADDITIONAL RELATED WORK TO BE PROVIDED BY OTHERS UNDER THE BASE BID BUT NOT INCLUDED IN THE SCOPE OF THE ALLOWANCE SHALL INCLUDE CONDUIT REQUIRED FOR WIRING AND CABLING, AND ALL POWER AND GROUNDING REQUIRED FOR THE IP SECURITY CAMERA SYSTEM. EACH ELECTRICAL CONTRACTOR PROVIDING A BID FOR THIS PROJECT SHALL BE RESPONSIBLE FOR COORDINATING THE ASSOCIATED CONDUIT, POWER AND GROUNDING WORK WITH THE SCSC – BUT THE SCOPE OF CONDUIT, POWER AND GROUNDING WORK SHALL NOT BE LESS THAN THAT DESCRIBED ON THE DRAWINGS.

THE IP SECURITY CAMERA SYSTEM INTEGRATOR SHALL BE UNDER CONTRACT WITH THE OWNER, SHALL BE AVIGILON CERTIFIED AND SHALL BE MCA (CONTACT TONY COOPER – EMAIL TONYCOOPER@CALLMC.COM).

IP SECURITY CAMERA LOCATION NOTES

MOUNTING LOCATIONS INDIATED FOR CAMERAS ARE APPROXIMATE AND SHALL BE COORDINATED IN DETAIL BEFORE ANY ROUGH-IN BEGINS. THE CM SHALL TAKE THE LEAD IN COORDINATING FINAL CAMERA LOCATIONS WITH THE ARCHITECT, DISTRICT SECURITY STAFF AND CAMERA INTEGRATOR. SEE SPECIFICATIONS. THE CM AND CAMERA INTEGRATOR SHALL COORDINATE ROUGH-IN REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR BASED ON THE CAMERA LOCATIONS DETERMINED BY THIS EFFORT.

THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL INDOOR CEILING MOUNTED CAMERAS WITH LIGHTING FIXTURES AND OTHER CEILING MOUNTED DEVICES THAT EXTEND BELOW THE CEILING ALONG WITH CEILING FEATURES INVOLVING CHANGES IN CEILING HEIGHT THAT WILL IMPEDE FULL CAMERA VIEWS.

THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL INDOOR WALL MOUNTED CAMERAS WITH ALL NEARBY WALL MOUNTED OR CEILING MOUNTED LIGHTING FIXTURES AND OTHER DEVICES THAT WILL IMPEDE FULL CAMERA VIEWS.

THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL OUTDOOR CAMERAS WITH LIGHT FIXTURES, CANOPIES, SOFFITS, GUTTER DOWNSPOUTS, POLES AND ANY OTHER OBSTRUCTION THAT WILL IMPEDE FULL CAMERA VIEWS.

WHERE GUTTER DOWNSPOUTS OR OTHER OBSTRUCTIONS INTERFERE WITH A CAMERAS FULL FIELD OF VIEW TIGHT TO THE BUILDING EXTERIOR, PROVIDE STANDOFF PADDING USING KING STARBOARD, 1-1/2" THICK, COLOR TO MATCH COLOR OF CAMERA MOUNT AS CLOSELY AS POSSIBLE. MAKE CUTS STRAIGHT AND SQUARE AND FILE EDGES SMOOTH. PROVIDE MULTIPLE STANDOFF PADS AS REQUIRED TO COMPLETELY CLEAR DOWNSPOUT OR OBSTRUCTION AND PROVIDE FULL CAMERA VIEW AS INDICATED.

ALL FINAL CAMERA LOCATIONS SHALL PROVIDE AN UNOBSTRUCTED VIEW OF THE AREA SERVED BY EACH CAMERA.

CAMERA COORDINATION NOTES

THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT, BOXES, ENCLOSURES, PULL STRINGS, FIRESTOPPING, SMOKESTOPPING, POWER, GROUNDING, AND ALL OTHER WORK REQUIRED BY CODE OR FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM BUT NOT SPECIFICALLY IDENTIFIED AS PROVIDED BY OTHERS,.

THE SCSC SHALL PROVIDE ALL CATEGORY 6 CABLING FOR NETWORK CONNECTIONS TO IP SECURITY CAMERAS COMPLETE TO INCLUDE PATCH PANELS, TERMINATION, LABELING, TESTING, AND PREPPING SLACK AT CAMERA LOCATIONS FOR FINAL CONNECTIONS TO CAMERAS.

THE IP CAMERA SYSTEM INTEGRATOR SHALL PROVIDE CAMERAS, MOUNTS, DIRECTION TO EC AND GC FOR EXACT LOCATION OF CAMERAS, NETWORK VIDEO RECORDER EXPANSION, SETTING OF CAMERA VIEWS, CAMERA SETUP, NETWORK VIDEO RECORDER SETUP, INTEGRATION OF SYSTEM INTO OWNER'S EXJISTING VMS, AND ALL OTHER WORK REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM.

RECORDING OF CAMERA IMAGES TO THE NETWORK VIDEO RECORDER SHALL BE MADE AT HIGHEST CAMERA RESOLUTION SETTINGS IN COLOR WHEN AMBIENT LIGHT LEVELS ALLOW AND IN BLACK AND WHITE DURING LOW LIGHT CONDITIONS. FRAMES PER SECOND SHALL BE AS DIRECTED BY COUNTY STAFF (15 FPS MINIMUM). ALL OTHER SETTINGS TO INCLUDE COMPRESSION SHALL BE MADE TO OPTIMIZE IMAGE QUALITY WHILE MINIMIZING STORAGE REQUIREMENTS.

IP SECURITY CAMERAS GENERAL ABOVEGROUND CONDUIT NOTES

1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING FINAL CONDUIT ROUTING IN THE FIELD. THE CONTRACTOR SHALL COORDINATE THE FINAL ROUTING OF CONDUITS TO CONCEAL CONDUITS AND TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE, OTHER UTILITIES AND OBSTACLES, WHILE MINIMIZING CHANGES IN DIRECTION AND OVERALL CONDUIT LENGTH. ALL CONDUIT SHALL BE RUN OVERHEAD AND CONCEALED EXCEPT AS SPECIFICALLY INDICATED. BEST ROUTING WITHIN BUILDINGS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR WITH THE LIMITATIONS SPECIFIED IN THESE NOTES AND THE CONTRACT DOCUMENTS IN GENERAL.
2. CONDUITS RUN INDOORS SHALL BE RUN CONCEALED OVERHEAD ABOVE CEILINGS UNLESS LOCATED IN SPACES WITHOUT CEILINGS, IN SPACES WITH EXPOSED ROOF STRUCTURE, OR AS OTHERWISE SPECIFICALLY INDICATED. INDOOR CONDUIT SHALL BE EMT WITH STEEL COMPRESSION FITTINGS. DIE CAST EMT FITTINGS ARE NOT ALLOWABLE. SUPPORT EXPOSED CONDUIT AT A MINIMUM OF 4'-0" ON CENTER WITH 2-HOLE HEAVY DUTY GALVANIZED STEEL HARDWARE.
3. SUPPORT CONDUIT DIRECTLY FROM BUILDING STRUCTURE USING APPROVED HARDWARE. DO NOT SUPPORT CONDUIT FROM OTHER SYSTEMS COMPONENTS OR SUPPORTS UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. ROUTE ALL CONDUITS AS HIGH AS POSSIBLE, BUT DO NOT RUN CONDUITS CLOSER THAN 6" BELOW ROOF DECK (TO AVOID DAMAGE FROM LONG SCREWS USED IN FUTURE ROOF REPLACEMENTS). RUN ALL CONDUITS PARALLEL/PERPENDICULAR AND PLUMB WITH BUILDING LINES.
4. CONDUIT BODIES SUCH AS 'LB' FITTINGS ARE NOT ALLOWABLE.
5. HOMERUN CONDUITS FROM CCs SHALL BE A MAXIMUM OF 260 FEET LONG. PROVIDE PULLBOXES AT EVERY 100 FEET ON CENTER AND AT EACH END OF CONDUIT RUNS CONTAINING A TOTAL OF TWO 90 deg BENDS OR A COMBINATION OF LESSER BENDS TOTALING 180 deg (MINIMUM REQUIREMENTS – PROVIDE WHETHER SPECIFICALLY INDICATED OR NOT). CONDUIT RUNS CONTAINING MORE THAN TWO 90 deg BEND WITHOUT A PULLBOX ARE NOT ALLOWABLE. FACTORY CONDUIT ELBOWS AND ALL OTHER BENDS SHALL HAVE A MINIMUM RADIUS OF SIX TIMES THE INTERNAL CONDUIT DIAMETER. CONDUIT OFFSETS AND PULLBOXES REQUIRED TO SUIT FIELD CONDITIONS AND TO CONFORM TO THESE REQUIREMENTS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. PULL BOXES FOR 3/4" HOMERUN CONDUITS SHALL BE 4"x4"x2-1/8" WITH BLANK COVER.
6. TERMINATE CONDUITS AT OPPOSITE ENDS OF PULLBOXES. DO NOT TERMINATE CONDUITS AT RIGHT ANGLES TO EACH OTHER EXCEPT AS SPECIFICALLY INDICATED.
7. TERMINATE ALL CONDUIT ENDS WITH THREADED PLASTIC INSULATING BUSHINGS (PUSH-ON NOT ALLOWABLE). BUSHINGS MUST FIT TIGHTLY ON CONDUIT CONNECTOR THREADS. INSTALL ALL BUSHINGS PRIOR TO PULLING CABLE.
8. IDENTIFICATION: IDENTIFY ALL INDOOR IP CAMERA CONDUITS, PULLBOXES ABOVE LAY-IN CEILINGS, ACCESS DOORS, IN ROOF SPACE, AND IN ALL EXPOSED LOCATIONS WITH RED PAINT AT EVERY PULLBOX AND ON CONDUIT AT EACH COUPLER (PAINT ENTIRE COUPLER). IDENTIFY ALL CCTV CONDUIT PULLBOXES BY PAINTING WITH 1" TALL LETTER STENCIL (COLOR RED) THE WORDS "CCTV" ON EACH PULLBOX COVER. LETTERING SHALL BE LEVEL AND SQUARE AND AT CENTER OF PULLBOX COVER.

FIRESTOPPING NOTE:

THE CONTRACTOR SHALL FIRESTOP ALL PENETRATIONS OF ALL FLOORS AND ALL WALLS WHICH EXTEND TO THE UNDERSIDE OF THE FLOOR OR ROOF DECK ABOVE. FIRESTOPPING SHALL BE ACCOMPLISHED USING UL CLASSIFIED SYSTEMS WITH FIRE RATING EQUAL TO OR GREATER THAN THE FIRE RATING OF THE FLOOR OR WALL ASSEMBLY PENETRATED. FIRESTOP SYSTEMS SHALL BE 3M, NELSON OR ENGINEER APPROVED EQUAL. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. THE CONTRACTOR SHALL SUBMIT A MANUFACTURER'S STANDARD DETAIL FOR EACH TYPE OF FLOOR AND WALL PENETRATION REQUIRED FOR THIS PROJECT. ALL OTHER PENETRATIONS OR OPENINGS IN NON-FIRE RATED WALLS SHALL BE REPAIRED AND SEALED WITH MATERIALS TO MATCH THE CONSTRUCTION OF THE WALL.

THE CONTRACTOR SHALL PROVIDE DETAILS FOR EACH DIFFERENT TYPE OF FIRESTOP ASSEMBLY REQUIRED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO INSTALLATION. EACH DETAIL SHALL INCLUDE THE TEST ASSEMBLY NUMBER AND A DESCRIPTION OF THE MATERIALS TO BE USED. HAVE APPROVED FIRESTOPPING DETAILS AVAILABLE AT PROJECT SITE AT TIME OF INSPECTION.

CAMERA ATTACHMENT NOTES:

ALL CAMERA ATTACHMENTS SHALL BE MADE VANDAL-RESISTANT WITH NON-REMOVEABLE FASTENERS. FASTENER SIZES SHALL BE FULL SIZE ACCOMMODATED BY EQUIPMENT HOLE SIZE.

FASTENER SIZES INDICATED FOR CAMERA MOUNTS ARE APPROXIMATE AND MUST BE VERIFIED WITH THE ACTUAL HARDWARE RECEIVED. FASTENERS FOR THREADED CONNECTIONS SHALL BE SAME SIZE AS THREADED HOLE. FASTENERS FOR SMOOTH HOLES SHALL BE 1/16" SMALLER THAN HOLE DIAMETER. ALL FASTENERS AND MISCELLANEOUS RELATED HARDWARE SHALL BE STAINLESS STEEL.

ATTACHMENTS AT VARIOUS WALL CONSTRUCTIONS SHALL BE AS FOLLOWS:

1. AT FRAMED WALLS AND AT OPEN CELLS OF CMU WALLS, PROVIDE STAINLESS STEEL "SNAP-TOGGLER" TOGGLE BOLTS. ATTACH TO FRAMING OF FRAMED WALLS.
2. AT METAL SOFFIT OR FASCIA CONSTRUCTION PROVIDE STAINLESS STEEL THRU BOLTS ALL THE WAY THRU SOFFIT OR FASCIA FRAMING. PROVIDE SUPPLEMENTARY FRAMING ON INTERIOR AS REQUIRED FOR SECURE MOUNTING.
3. AT BRICK WALLS, BLOCK WEBS AND FILLED CELLS OF CMU WALLS, AND AT CONCRETE WALLS, PROVIDE COMMERCIAL GRADE HIGH LOAD EXPANSION ANCHORS SUCH AS TOGGLER 'ALLIGATOR' SOLID-WALL ANCHORS WITH STAINLESS STEEL FASTENERS.

ABBREVIATIONS

CER	COMMUNICATIONS EQUIPMENT ROOM
CC	COMMUNICATIONS CLOSET
SCSC	STRUCTURED CABLING SYSTEM CONTRACTOR
EC	ELECTRICAL CONTRACTOR
CM/GC	CONSTRUCTION MANAGER / GENERAL CONTRACTOR

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100% CONSTRUCTION DOCUMENTS

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EXPIRES 12-31-27
RCDD

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PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

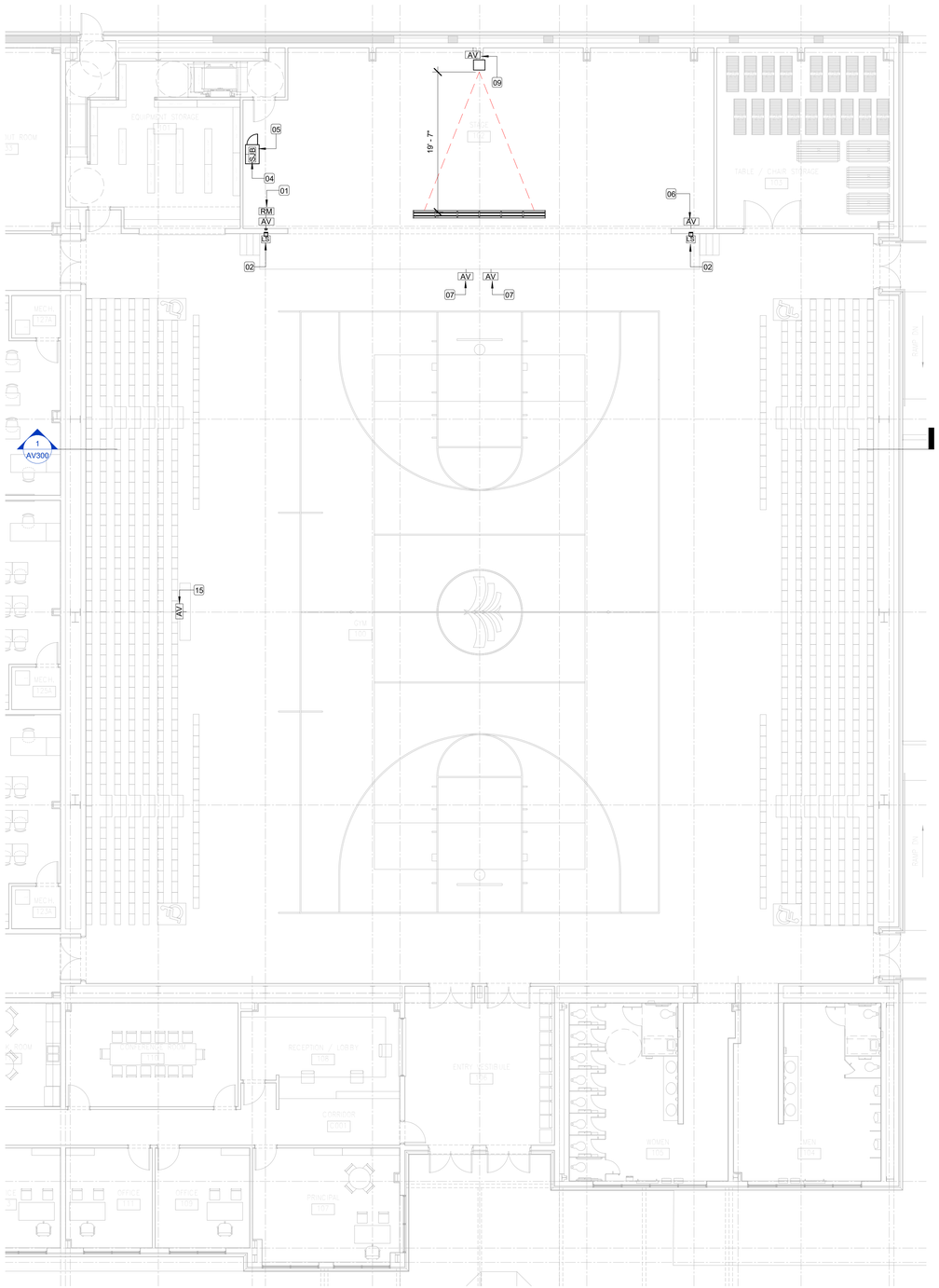
REVISIONS:

No.	Description	Date

IP SECURITY CAMERA SYSTEM DETAILS

PROJECT NUMBER 22019
DATED 01/31/2025

SEC200



1 AV FLOOR
SCALE: 1/8" = 1'-0"

AV Keynote Legend	
Key Value	Keynote Text
01	AV INPUT PLATE & AV WALL REMOTE. MOUNT 8 X 8 JUNCTION BOX [AV] @ 18" A.F.F. IN WALL AND 2 GANG BOX [RM] @ 60" A.F.F. WHERE SHOWN. CONNECT [RM] TO [AV] WITH 1" CONDUIT. ROUTE (3) 1" CONDUIT FROM [AV] TO [SJB] AT AV EQUIPMENT RACK ON STAGE. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. AV CONNECTOR PLATE PROVIDED AND INSTALLED BY AV CONTRACTOR. PROVIDE 120V 20A CIRCUIT ADJACENT TO [AV] FOR AV COMPONENT POWER.
02	LOUDSPEAKER JUNCTION BOX. MOUNT 1 GANG BOX @ 84" A.F.F. WHERE SHOWN. ROUTE 1" CONDUIT TO [SJB] AT AV EQUIPMENT RACK. PROVIDE 120V 20A CIRCUIT ADJACENT TO [AV] BOX @ 84" A.F.F. FOR LOUDSPEAKER POWER. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
04	STAGE J-BOX MOUNTED AT 18" A.F.F. IN WALL WHERE SHOWN. SIZE JUNCTION BOX BASED ON QUANTITY AND SIZE OF CONDUIT TERMINATIONS. PROVIDE (2) 120V 20A CIRCUITS (RECEPTACLES) ADJACENT TO [SJB] FOR AV COMPONENT POWER. ROUTE 1" CONDUIT FROM [SJB] TO 'OVER STAGE' AREA FOR SUSPENDED MICROPHONE CABLES. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
05	AV EQUIPMENT RACK. PROVIDED BY AV CONTRACTOR.
06	AV JUNCTION BOX. MOUNT 8X8 BOX @ 18" A.F.F. IN WALL WHERE SHOWN. ROUTE (3) 1" CONDUIT TO [SJB] AT AV EQUIPMENT RACK. BOXES AND CONDUIT PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. AV CONNECTOR PLATE PROVIDED AND INSTALLED BY AV CONTRACTOR. PROVIDE 120V 20A CIRCUIT ADJACENT TO [AV] FOR AV COMPONENT POWER.
07	1 GANG BOX IN VERTICAL STEP RISER. ROUTE 1" CONDUIT TO [SJB] AT AV EQUIPMENT RACK. PROVIDE 120V 20A CIRCUIT ADJACENT TO [AV] FOR AV COMPONENT POWER. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
09	VIDEO PROJECTOR. MOUNT 2 GANG BOX AT 9' A.A.F. ON BACK STAGE WALL WHERE SHOWN. ROUTE 1" CONDUIT TO [SJB] AT AV EQUIPMENT RACK. PROVIDE 120V 20A SHARED CIRCUIT FOR PROJECTOR AND SCREEN POWER. BOXES, CONDUIT AND POWER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. WALL SHELF FOR PROJECTOR PROVIDED BY GENERAL CONTRACTOR. VERIFY SIZE WITH AV CONTRACTOR / CONSULTANT. PROJECTOR PROVIDED AND INSTALLED BY AV CONTRACTOR.
15	GYM AV INPUT AT SCORER'S DESK. ROUTE 1" CONDUIT FROM SCORER'S DESK FLOOR BOX TO AV EQUIPMENT RACK IN EQUIPMENT STORAGE. FLOOR BOX AND CONDUIT PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. AV CONNECTOR PLATE PROVIDED AND INSTALLED BY AV CONTRACTOR.

OWNERSHIP OF SERVICE: ALL REPORTS, PLANS, SPECIFICATIONS, COMPUTER FILES, FIELD DATA, NOTES AND OTHER DOCUMENTS AND INSTRUMENTS PREPARED BY THE CONSULTANT AS AN INSTRUMENT OF SERVICES SHALL REMAIN THE PROPERTY OF THE CONSULTANT. THE CONSULTANT SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THERETO.
PURSUANT TO FLORIDA STATUTES, SECTION 558.0035, AN INDIVIDUAL EMPLOYEE OR AGENT MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.

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CONSTRUCTION
DOCUMENTS

A New Gymatorium for:
PALM BAY CHARTER SCHOOLS
1104 Balboa Avenue, Panama City, FL 32401

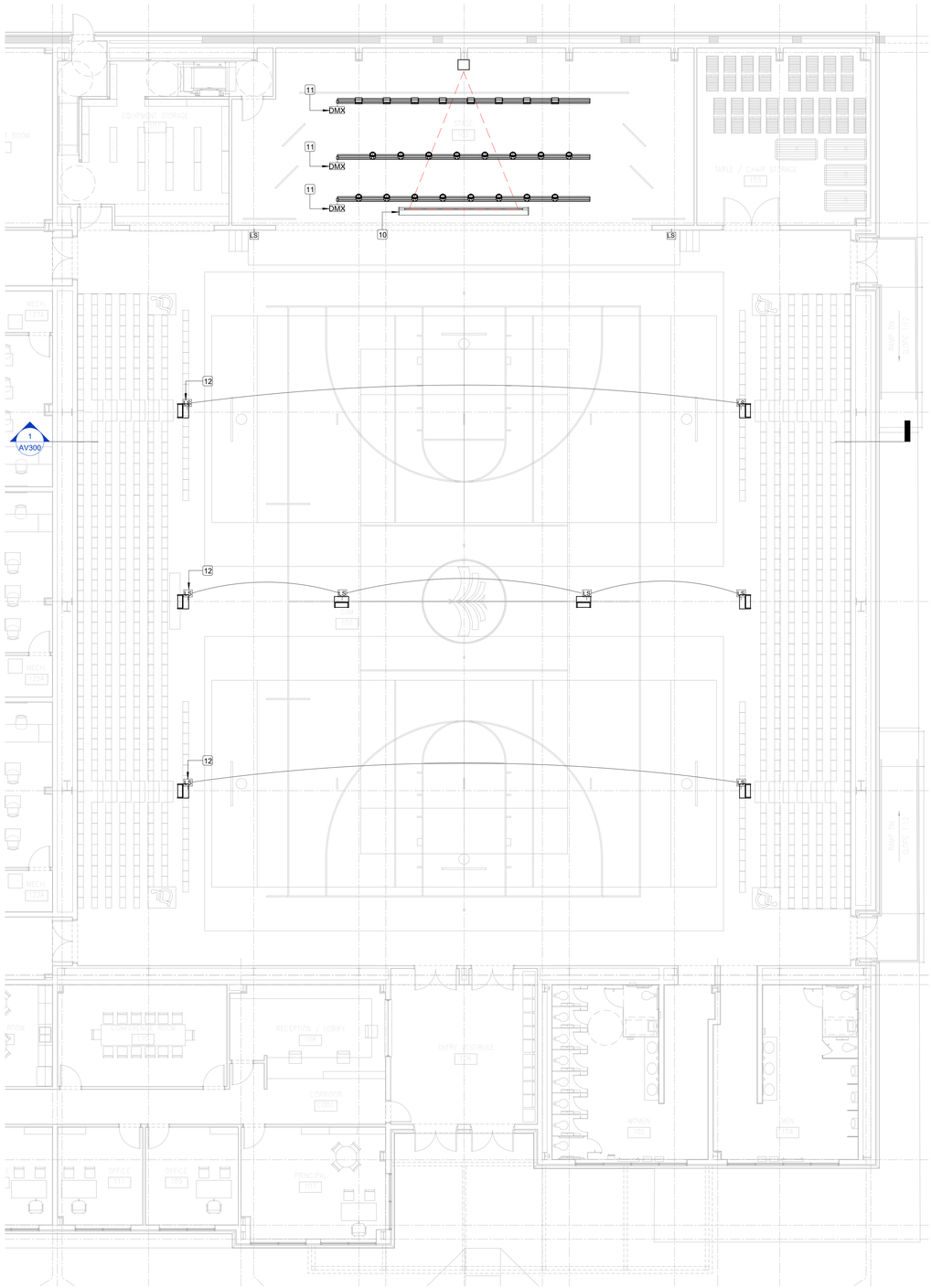
REVISIONS:

No.	Description	Date

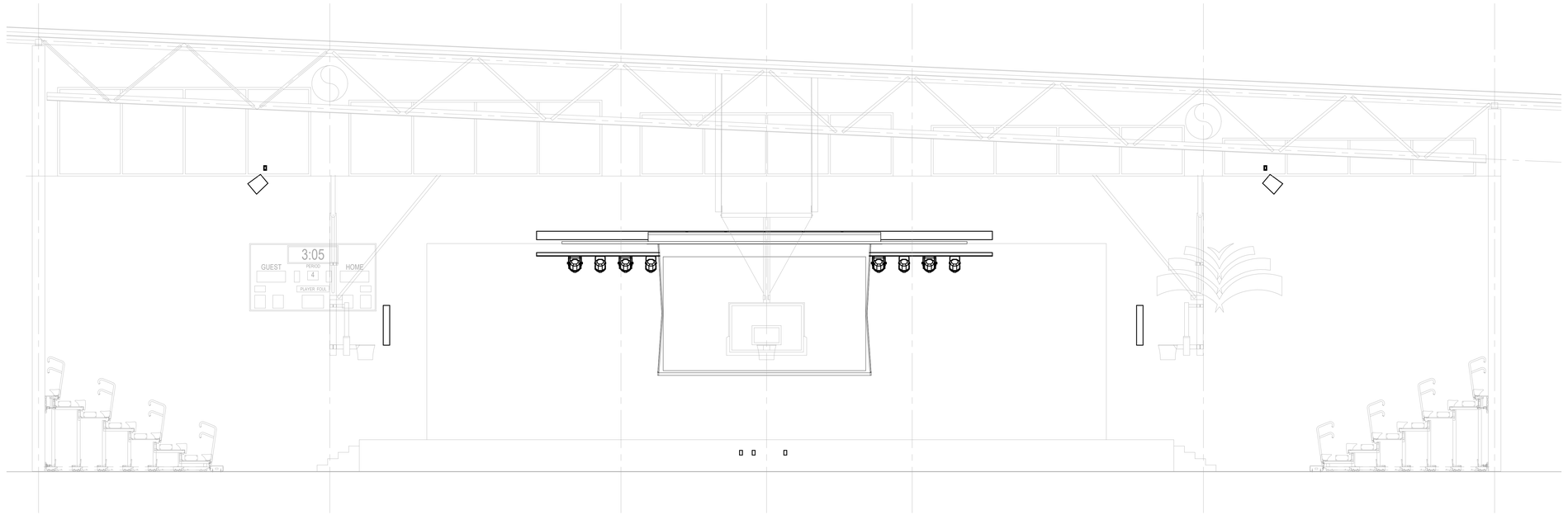
AV FLOOR PLAN

Project Number	22019
Dated	01/31/2025
Drawn By	Author
Approved By	Approver
PM	Designer

AV100


11
DMX
11
DMX
11
DMX
10
LS
LS
12
LS
LS
12
LS
LS
12
LS
LS
1
AV300
COLORADO STORAGE
100
MEN
100
WOMEN
100
MECH.
100
MECH.
100
MECH.
100
RECEPTION / LOBBY
100
ENTRY VESTIBULE
100
OFFICE
100
OFFICE
100
PRINCIPAL
100
WORK
100
DEN
100
STORAGE
100
STORAGE
100
STORAGE

22019
100% CONSTRUCTION DOCUMENTS
01/31/2025



1 AV STAGE ELEVATION

SCALE: 1/4" = 1'-0"

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DOCUMENTS

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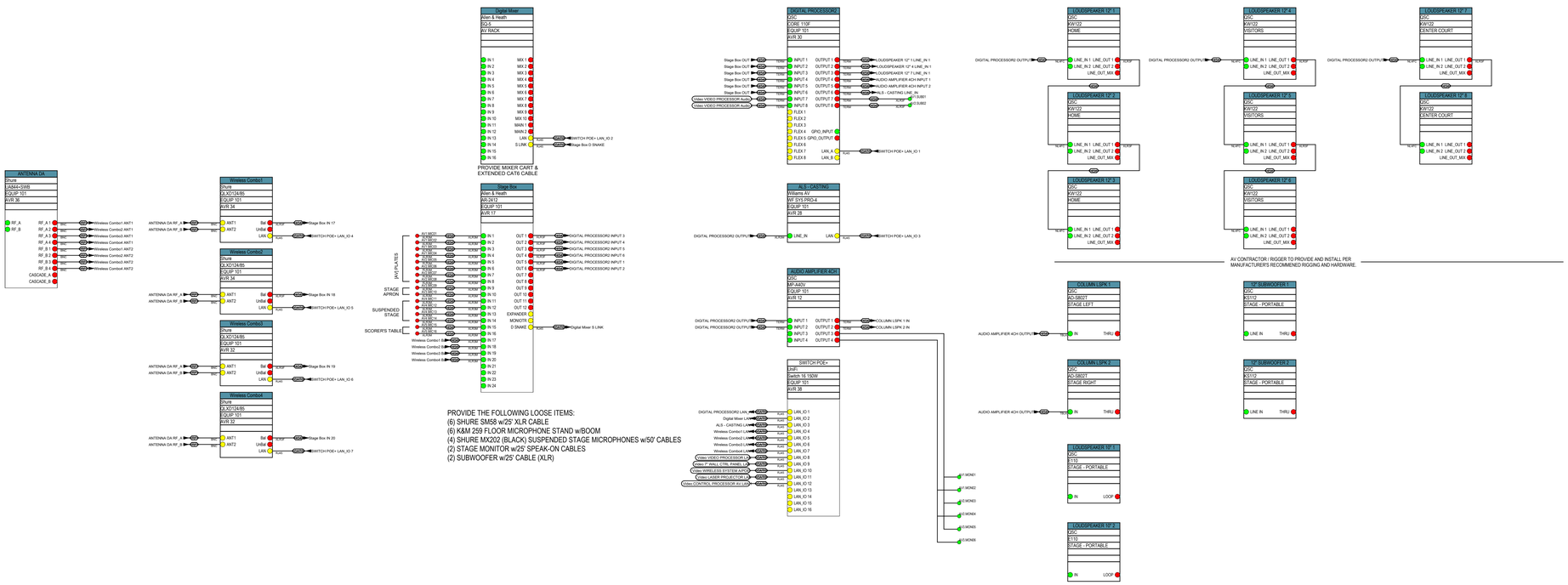
REVISIONS:

No.	Description	Date

AV SECTIONS & ELEVATIONS

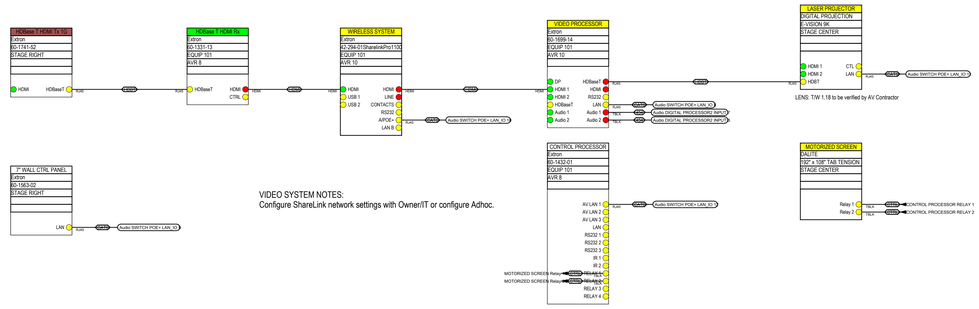
Project Number	22019
Dated	01/31/2025
Drawn By	Author
Approved By	Approver
PM	Designer

AV300



1 AUDIO SYSTEM SCHEMATIC

SCALE: 12" = 1'-0"



VIDEO SYSTEM NOTES:
Configure ShareLink network settings with Owner/IT or configure Adhoc.

2 VIDEO SYSTEM SCHEMATIC

SCALE: 12" = 1'-0"

Provide DMX cabling and jumpers as requried.
Provide safety cables per fixture.
Provide programming & training as required.

3 STAGE LIGHTING SYSTEM SCHEMATIC

SCALE: 12" = 1'-0"

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AV SYSTEM SCHEMATIC - PART 1

Project Number	22019
Dated	01/31/2025
Drawn By	Author
Approved By	Approver
PM	Designer

AV400

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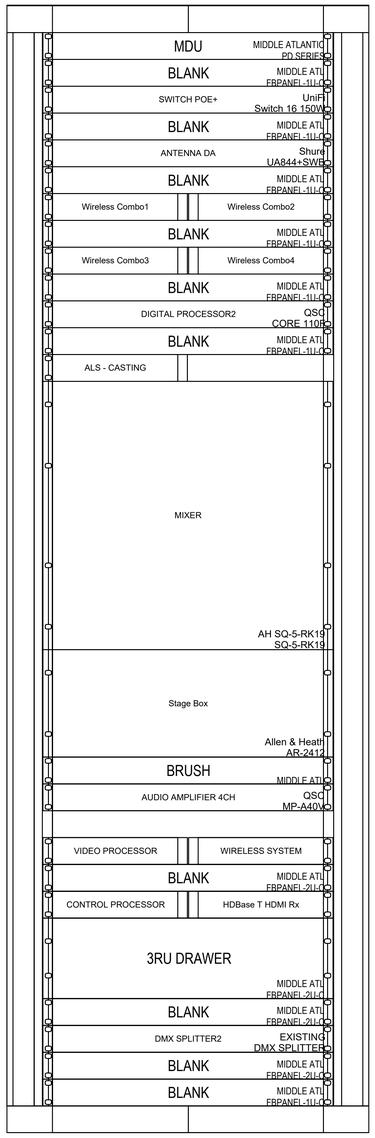
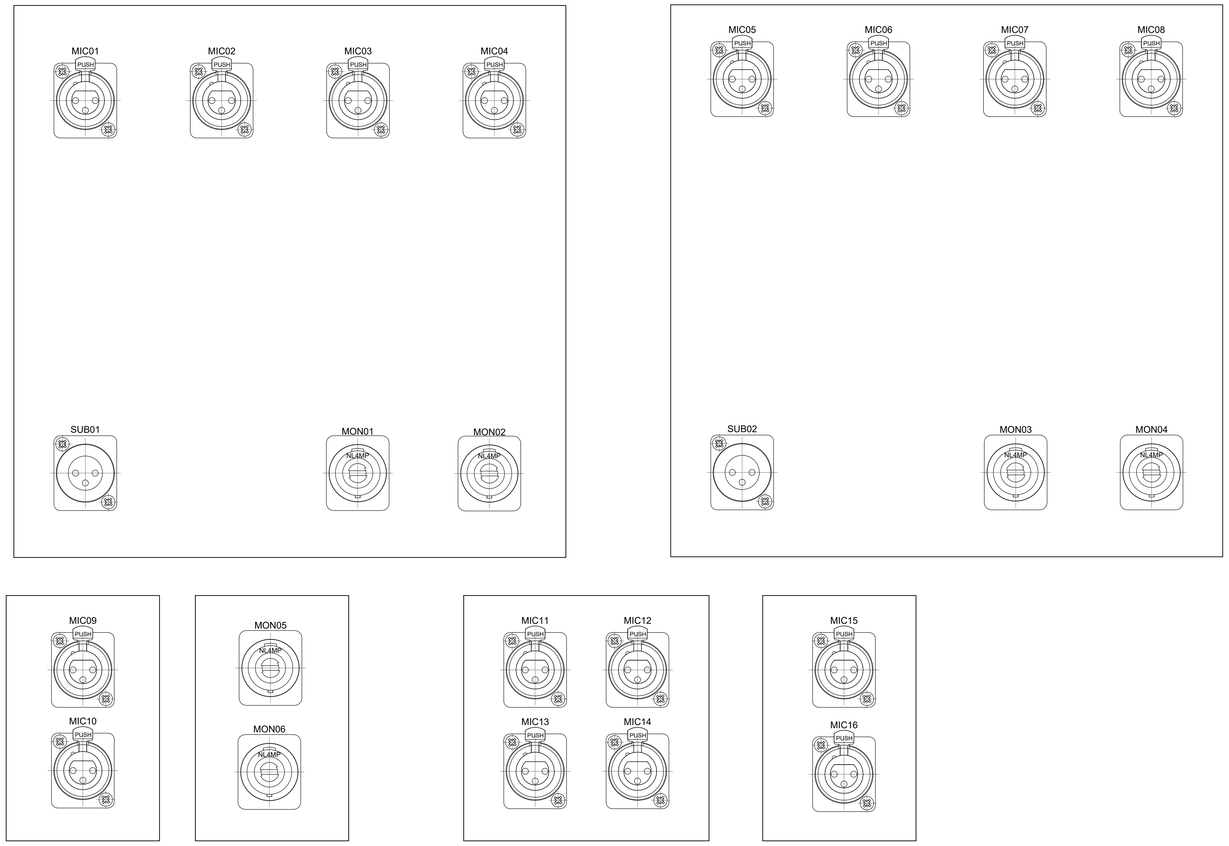
01/31/2025



1 AV EQUIPMENT RACK

SCALE: 3" = 1'-0"



2 AV PLATE DETAILS

SCALE: 12" = 1'-0"

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REVISIONS:

No.	Description	Date

AV SYSTEM SCHEMATIC - PART 2

Project Number	22019
Dated	01/31/2025
Drawn By	Author
Approved By	Approver
PM	Designer

AV401