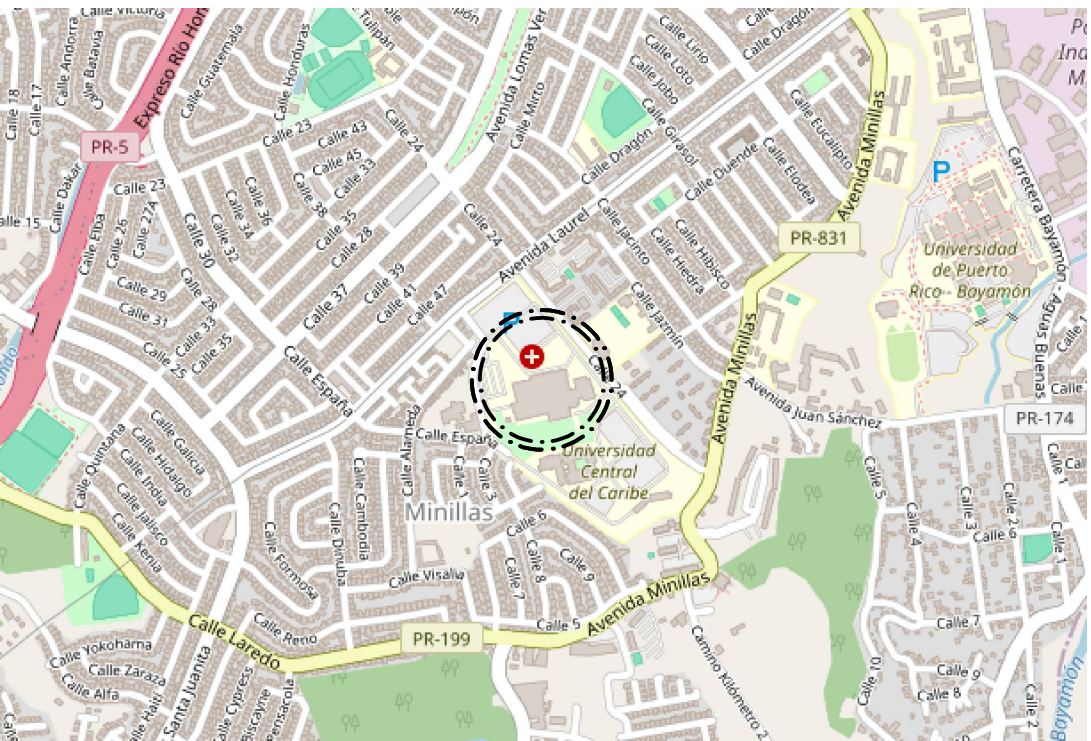
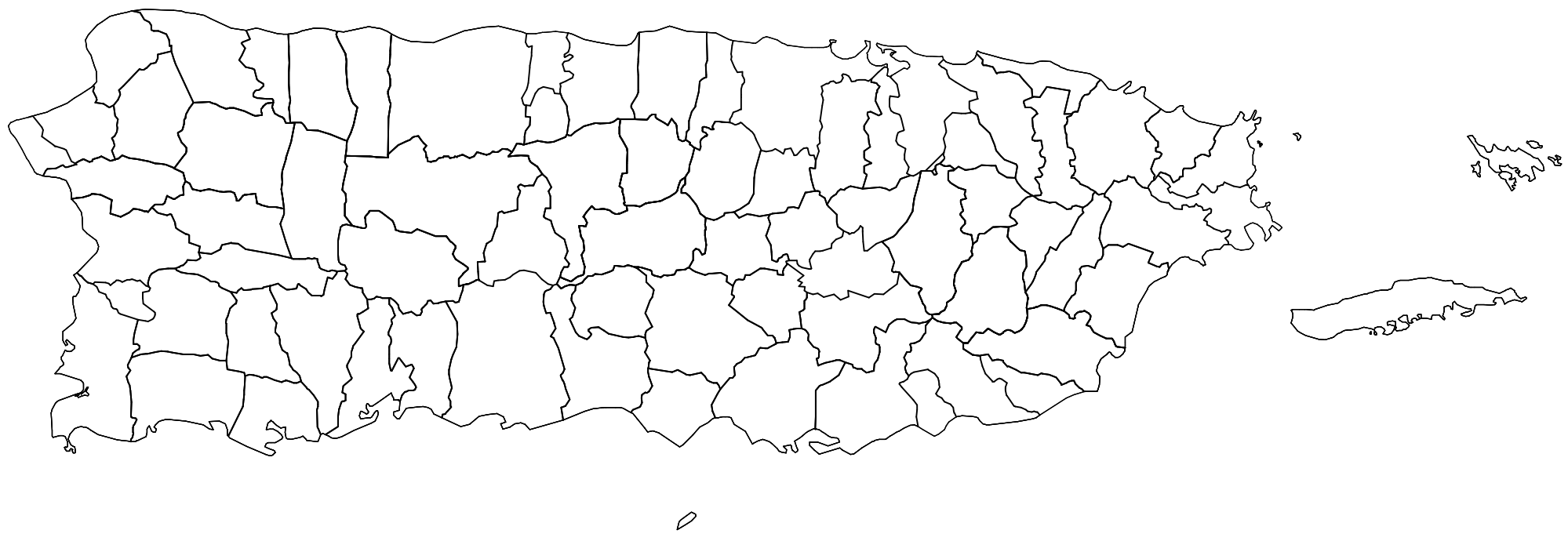
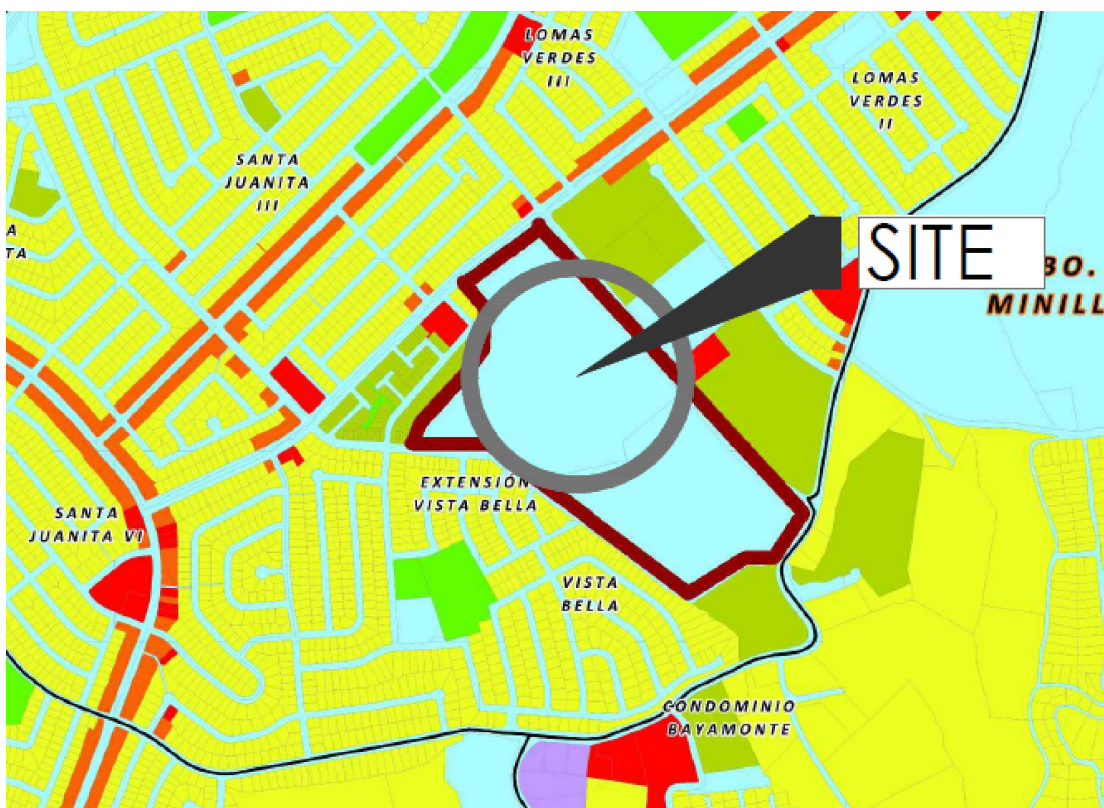


CONSTRUCTION DRAWINGS FOR: TEMPORARY SURGICAL SUITES GROUND LEVEL

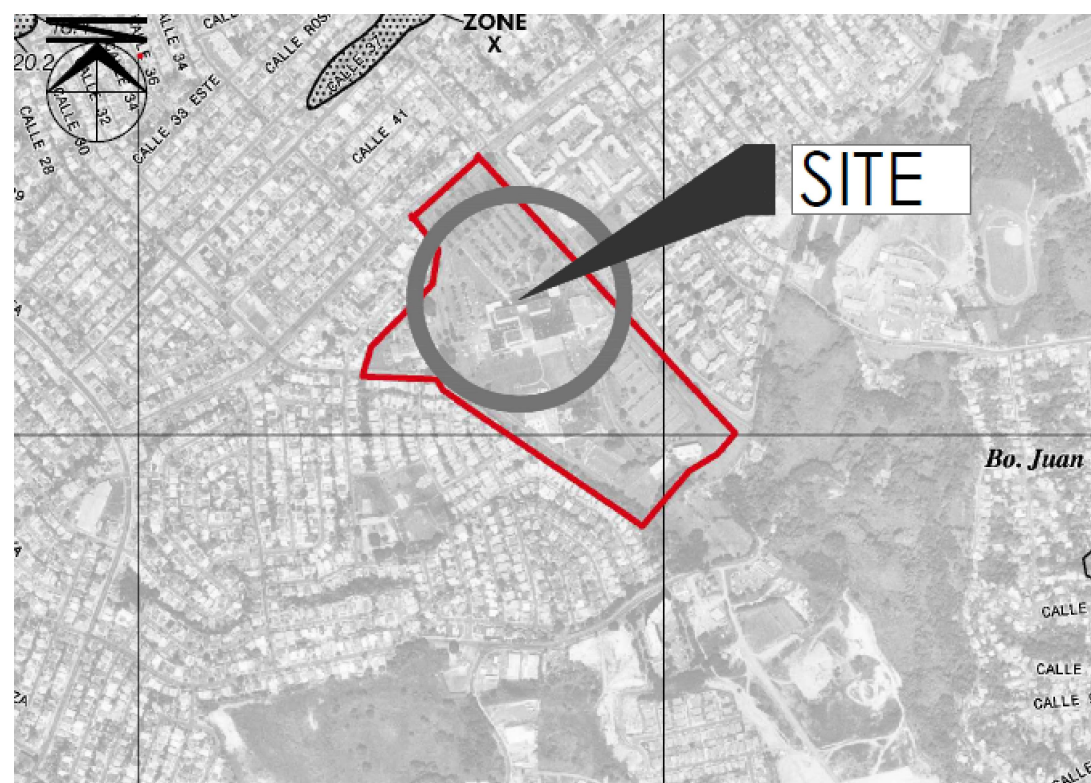
HOSPITAL RAMON RUIZ ARNAU BAYAMON PUERTO RICO



PROJECT LOCATION MAP
WWW.OPENSTREETMAP.ORG PROJECT COORDINATES: 18.43360/-66.05918
N.T.S



PROJECT ZONING MAP
BAYAMON ZONING MAP: 25 16/ene/2003
N.T.S

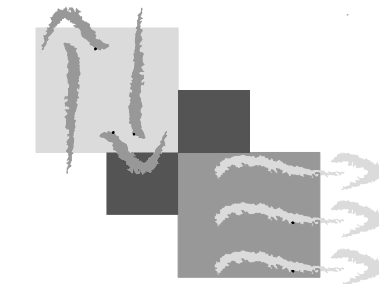


HYDROGRAPHIC MAP
FEMA FIRMETTE: 72000C2030J / NOVEMBER 18, 2009
N.T.S

PROJECT GENERAL NOTES

REV: MAY/25

- THE GENERAL CHARACTER AND SCOPE OF WORK ARE ILLUSTRATED BY THE CONTRACT DOCUMENTS. ANY ADDITIONAL DETAILS AND INFORMATION DEEMED NECESSARY WILL BE FURNISHED BY THE ARCHITECT AS REQUIRED BY THE WORK. THE INSTRUCTION THUS SUPPLIED TO THE CONTRACTOR WILL BE CONSISTENT WITH THE INFORMATION IN THE CONTRACT DOCUMENTS, TRUE DEVELOPMENT THEREOF, AND SHALL BE SO GIVEN THAT THEY CAN BE REASONABLY INTERPRETED AS PART OF THEREOF. THE CONTRACTOR SHALL CONDUCT WORK IN ACCORDANCE WITH THE ADDITIONAL DETAIL DRAWINGS AND INSTRUCTIONS IN THE SAME WAY AS HE CONDUCTS WORK ON THE SHOP DRAWINGS.
- THESE DRAWINGS WHEN USED WITH THE PROJECT SPECIFICATIONS SHALL CONSTITUTE THE SUM OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REFERENCE ALL DRAWINGS AND SPECIFICATIONS CONCURRENTLY. DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY AS REFERRED TO IN THE GENERAL CONDITIONS OF THE PROJECT SPECIFICATION
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXTENT, NATURE AND SCOPE OF WORK DESCRIBED IN THE CONTRACT DOCUMENTS AND SHALL COORDINATE WITH THE OWNERS AND THEIR REPRESENTATIVE, THE INTERFACING OF THE BUILDING OWNER'S WORK, IF ANY IS REQUIRED, AND THE WORK SHOWN AND DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS TO PROVIDE ALL LABOR AND MATERIALS NECESSARY TO EXECUTE ALL WORK AS SHOWN ON THESE DRAWING, WITH THE EXCEPTION OF THOSE ITEMS SPECIFICALLY NOTED AS SEPARATE CONTRACTORS OR "N.I.C." HE SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES, INCLUDING THOSE OPERATING UNDER SEPARATE CONTRACT WITH THE OWNER.
- CONTRACTOR SHALL PAY TO OBTAIN CONSTRUCTION PERMITS, AND SHALL OBTAIN ALL OTHER NECESSARY INSURANCES AND BE RESPONSIBLE FOR ALL FEES, TAXES, APPLICATIONS, AND CERTIFICATES OF INSPECTION REQUIRED WITHIN THE SCOPE OF HIS CONTRACTED WORK.
- ANY WORK THE CONTRACTOR CONSIDERS OUTSIDE THE PROJECT CONTRACT SCOPE SPECIFIED IN THE DRAWINGS SHALL BE PRESENTED TO THE OWNER'S REPRESENTATIVE FOR COST NEGOTIATION AND APPROVAL PRIOR TO ITS EXECUTION. IF THE CONTRACTOR FAILS TO DO SO AND PROCEEDS TO EXECUTE SAID WORK WITHOUT THE APPROVAL OF THE OWNER'S REPRESENTATIVE, IT WILL BE UNDERSTOOD AND ASSUMED THE CONTRACTOR HAS ACCEPTED TO DO THE WORK WITHIN THE SCOPE OF THE AGREED CONTRACT PRICE WITHOUT ANY REQUEST FOR ADDITIONAL PAYMENT OR CONTRACT TIME EXTENSION.
- IN ADDITION TO ALL THE DEMOLITION WORK SPECIFIED IN THE DRAWINGS, THE CONTRACTOR SHALL EXECUTE ANY DEMOLITION WORK THAT MAY BE REQUIRED TO COMPLETE THE FULL SCOPE OF THE PROJECT WITH THE DESIGN INTENT OF ALL THE DISCIPLINES COMPROMISING THE FULL SET OF CONTRACT DOCUMENTS.
- ALL WORK SHALL BE COMPLETED FOR THE AGREED CONTRACT PRICE WITHOUT RECOURSE TO LABOR STOPPAGES OR REVISIONS OF GOVERNING REGULATIONS, CODES AND LAWS.
- IF THE OWNER REQUIRE ADDITIONAL WORK TO BE PERFORMED ON OVERTIME ABOVE AND BEYOND THAT IMPLIED BY THE CONTRACT DOCUMENTS. THE OWNER SHALL GIVE ITS WRITTEN NOTICE AND THE CONTRACTOR SHALL COMPLY THEREWITH AS AGREED.
- THE CONTRACTOR SHALL NOT PROCEED WITH ANY ADDITIONAL WORK OR CHANGES FOR WHICH HE EXPECTS ADDITIONAL COMPENSATION BEYOND THE CONTRACT AMOUNT WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER. FAILURE TO OBTAIN SUCH AUTHORIZATION SHALL INVALIDATE ANY CLAIM FOR EXTRA COMPENSATION.
- THE ENGINEER, WITHOUT INVALIDATING CONTRACT, MAY ORDER EXTRA WORK OR MAY MAKE CHANGE IN WORK.
- WORK SHALL BE EXECUTED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES, AND STANDARDS, AND SHALL CONFORM TO REGULATIONS OF UTILITY COMPANIES HAVING AUTHORITY. RESULTS OF TESTS REQUIRED BY LOCAL GOVERNING AUTHORITY SHALL BE TRANSMITTED DIRECTLY TO SUCH AUTHORITIES.
- ALL WORK REQUIRED BY THE CONTRACT SCOPE TO BE EXECUTED OFF-CONTRACT LIMITS SHALL BE DONE AFTER WORKING HOURS OR AS REQUIRED BY THE OWNER.
- ALL WORK IN THE CONTRACT PREMISES SHALL BE DONE DURING THE WORK HOURS PERMITTED BY THE OWNER.
- COMPLY WITH APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- COMPENSATION INSURANCE MUST BE ON FILE BEFORE A PERMIT CAN BE ISSUED.



JAVIER I. CASTILLO PE
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898 MUNOZ RIVERA AVE., SUITE 209
RIO PIEDRAS, PUERTO RICO 00927
TEL: 787-625-1151 ADM@JCMPE.COM

THE DESIGN AND DRAWINGS ARE INTELLECTUAL PROPERTY OF JAVIER I. CASTILLO PE AND SHALL NOT BE REUSED IN ANY OTHER LOCATION EXCEPT THE ONE WHERE EXPRESSLY DESIGNED HERE. THE DRAWINGS AND SPECS. SHALL BE REPRODUCED ONLY WITH A LETTER OF CONSENT OF THE ENGINEER.

YO, INGENIERO JAVIER I. CASTILLO, LICENCIA 12391, CERTIFICADO QUE SOY EL PROFESIONAL QUE DISEÑO Y PREPARO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTiendo QUE DICHO PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CODIGOS DE CONSTRUCCION VIGENTES DE LAS AGENCIAS, JUNTAS REGULATORIAS Y COMISIONES PUBLICAS CON JURISDICCION. CERTIFICO ADENAS QUE EN LA PREPARACION DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY N.º 2004, SEGUN ENMIENDADA, CONOCIDA COMO LA "LEY PARA LA INVERSION POR LA INDUSTRIA PUERTORRIQUESA" Y CON LA LEY N.º 319 DE 16 DE MAYO DE 1993, SEGUN ENMIENDADA, LEY N.º 96 DE 9 DE JULIO DE 1979, SEGUN ENMIENDADA. SEGUN APLIQUE RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA VA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OMBE Y AGENCIAS CON JURISDICCION.

SEAL



CONSULTANTS

PROJECT OWNER

PROJECT NAME
**NEW TEMPORARY
SURGICAL SUITE**

FACILITY LOCATION
HURRA

LOCATION
BAYAMON, PR

DRAWING NAME
TITLE PAGE

REVISION TABLE

TAG	DESCRIPTION	DATE

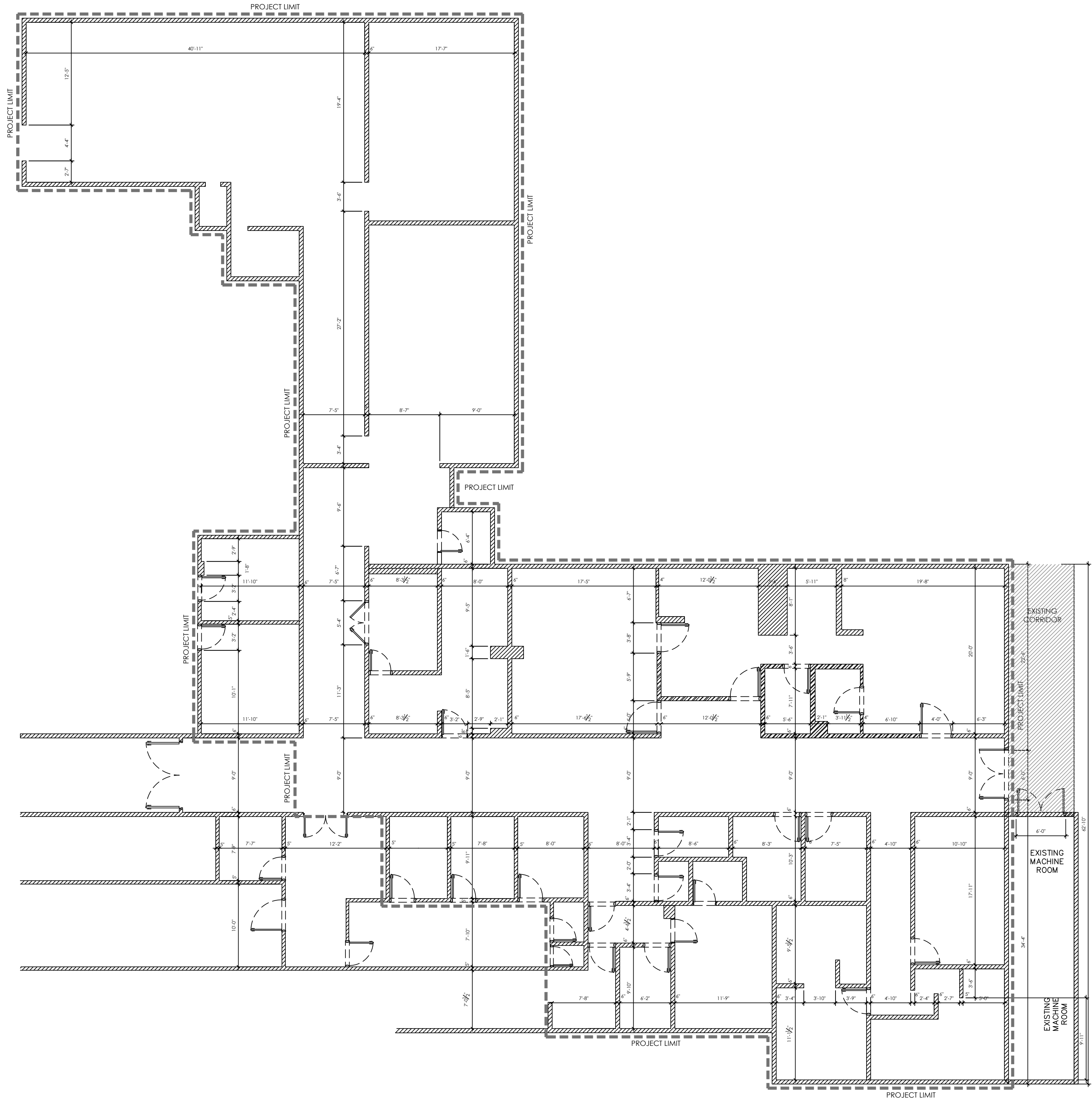
ISSUE FOR BID
12/JAN/2026

THESE DRAWINGS ARE FOR THE CONTRACTOR QUOTATION PROCESS. DRAWINGS WITH THIS SEAL CANT BE USED FOR CONSTRUCTION UNLESS NOTIFIED BY OWNER.

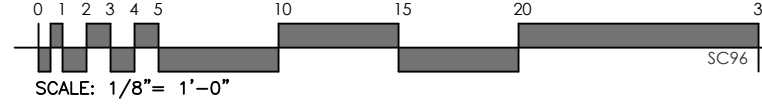
DRAWN BY : AR
REVISE BY : JCM
PROJECT NUMBER XX-XXX
DESIGN YEAR AS SHOWN

T-1

1-10-2024 HURRA Proposed Operating Room V6 final.dwg



EXISTING PARTIASL FLOOR PLAN (GROUND FLOOR)



LEGEND:

- NEW REINFORCED CONCRETE WALL
- NEW CONCRETE BLOCK WALL
- EXISTING WALL
- WALL TO BE DEMOLISHED
- NEW GYPSUM BOARD WALL
- NEW PLYCEM BOARD WALL
- ROOM IDENTIFICATION
REFERS TO ROOM FINISH SCHEDULE
REFERS TO ROOM ZONE
- SYMBOL FOR NEW DOOR
INDICATES DOOR NUMBER
- SYMBOL FOR NEW WINDOW
REFERS TO WINDOW SCHEDULE
- INDICATE BUILDING SECTION
INDICATES SHEET WHERE
SECTION IS DRAWN
- INDICATES PARTIAL SECTION
INDICATES SHEET WHERE
PARTIAL SECTION IS DRAWN
- INDICATES NEW ELEVATION
INDICATES SHEET WHERE
ELEVATION IS DRAWN
- INDICATES NEW WALL SECTION
INDICATES SHEET WHERE
WALL SECTION IS DRAWN
- INDICATES EXISTING ELEVATION
- INDICATES EXISTING WALL SECTION
- INDICATES DETAIL NUMBER
INDICATES SHEET WHERE
DETAIL IS DRAWN
- INDICATES STRUCTURAL DETAILS
INDICATES SHEET WHERE WALL
STRUCTURAL DETAILS IS DRAWN
- INDICATES FINISH MATERIAL
INDICATES CORE MATERIAL
- INDICATES INTERIOR ELEVATIONS
- INDICATES STEEPS
- INDICATES RAMP
- INDICATES NEW ELEVATION
- INDICATES EXISTING ELEVATION
- INDICATES EQUIPMENT ELEVATION
- REVIEW OR REVISION
- N.I.C. NOT INCLUDED IN CONTRACT



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PROJECT OWNER



CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

EXISTING FLOOR PLAN

ISSUE FOR:

TAG	REVISION NAME	DATE
△	REVISION	MM/DD/YY

EX1.0

THE DESIGN AND DRAWINGS ARE INTELLECTUAL PROPERTY OF JAVIER CASTILLO PE AND SHALL NOT BE REUSED ON ANY OTHER LOCATION EXCEPT THE ONE OR WHICH THEY WERE EXPRESSLY DESIGNED. DRAWINGS SHALL BE COPIED OR REPRODUCED UNDER THE WRITTEN CONSENT OF THE ENGINEER.

INGENIERO JAVIER CASTILLO, LICENCIADO 12391, CERTIFICO QUE SOY PROFESIONAL, QUE DISEÑO Y PREPARO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS, TAMBIEN CERTIFICO QUE SON LOS QUE DICHOS PLANOS Y ESPECIFICACIONES CUMPLEN CON DISPOSICIONES VIGENTES DE LOS REGLAMENTOS Y CODIGOS DE DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CODIGOS DE ESTRUCTURACION VIGENTES DE LAS AGENCIAS, JUNTAS ADMINISTRATIVAS O CORPORACIONES PUBLICAS CON JURISDICCION, CERTIFICO ADemas QUE EN LA PREPARACION DE ESTOS PLANOS Y ESPECIFICACIONES NO HE USADO NINGUN TIPO DE COPIA. LEY 14-2004, SEGUN EMENDADA, CONOCIDA COMO LA "LEY PARA LA VERSION POR LA INDUSTRIA PUERTORRIQUENA" Y CON LA (LEY 319 DE 15 DE MAYO DE 1938, SEGUN EMENDADA; LEY NUM. 96 DE JULIO DE 1978, SEGUN EMENDADA; SEGUN APLIQUE. RECONOZCO CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS PLANOS Y ESPECIFICACIONES COMO UN DELITO CONTRA LA AGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR LAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OGPB.

**PARLAMENTO DE
SALUD**



OBJECT NAME

URRA
PROPOSED TEMPORARY
OPERATING ROOM

CATION

AYAMON, PUERTO RICO

AWING NAME

EMOLITION FLOOR PLAN

REVISION	NAME	DATE

EX2.0

DESIGN AND DRAWINGS ARE INTELLECTUAL PROPERTY OF JAVIER LLO PE AND SHALL NOT BE REUSED ON ANY OTHER LOCATION EXCEPT ONE OR WHICH THEY WERE EXPRESSLY DESIGNED. DRAWINGS SHALL BE ED OR REPRODUCED UNDER THE WRITTEN CONSENT OF THE ENGINEER.

ALL DEMOLITION WORK WILL BE COORDINATED WITH THE OWNER OR HIS REPRESENTATIVE.

THE CONTRACTOR WILL INSTALL A 2 HR. FIRE RATED WALL BEFORE BEGINNING ANY DEMOLITION WORK.

THE CONTRACTOR WILL SECURE THE PERIMETER OF THE CONSTRUCTION AND WILL INSTALL SIGNS AND APPLY SECURITY MEASURES TO AVOID ACCESS BY UNAUTHORIZED PERSONNEL.

THE CONTRACTOR SHALL MAINTAIN A FUGITIVE DUST AND RUNOFF SYSTEM ON THE PROJECT DURING CONSTRUCTION.

THE CONTRACTOR WILL INSTALL THE NECESSARY MEASURES FOR THE CONTROL OF SOLID AND CONSTRUCTION WASTE.

THE CONTRACTOR SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY FOUND BETWEEN THE EXISTING STRUCTURE AND WHAT IS INDICATED ON THE PLAN.

THE CONTRACTOR SHALL WORK WITH CARE AND PRECAUTION DURING THE DEMOLITION PHASE, TO AVOID DAMAGE TO THE EXISTING STRUCTURE.

THE CONTRACTOR WILL REMOVE ALL THE ELEMENTS INDICATED IN THE DEMOLITION PLAN AND WILL DISPOSE OF ALL MATERIAL, ACCORDING TO THE PARAMETERS ESTABLISHED FOR THE PROJECT.

THE CONTRACTOR WILL REMOVE ALL DEBRIS FROM THE PROPERTY IN A APPROPRIATE MANNER THAT DOES NOT AFFECT PUBLIC AREAS OUTSIDE THE PROJECT.

THE CONTRACTOR SHALL PROVIDE THE NECESSARY BARRIERS IN THE PERIMETER OF THE PROJECT, TO PROTECT THE PEDESTRIAN WALKING ON THE SIDEWALKS DURING CONSTRUCTION.

THE CONTRACTOR WILL PROVIDE THE NECESSARY BARRIERS IN THE PERIMETER OF THE PROJECT, TO PROTECT THE VEHICULAR AND PEDESTRIAN FLOW IN THE AREA.

THE CONTRACTOR SHALL NOTIFY THE DESIGNER OF ANY PROBLEM HE IDENTIFIES THAT MAY AFFECT THE STRUCTURE IN THE PROJECT AND/OR THE BUILDING AS SOON AS POSSIBLE FOR ITS PROMPT SOLUTION.

THE CONTRACTOR SHALL ELIMINATE ALL EXISTING MATERIAL, UNDERSTANDING, LOOSE CABLES, WOOD, SANITARY PIPES, SCREWS, NAILS, RAILINGS, GRILLES, WHICH WILL NOT BE USED WITHIN THE PROJECT.

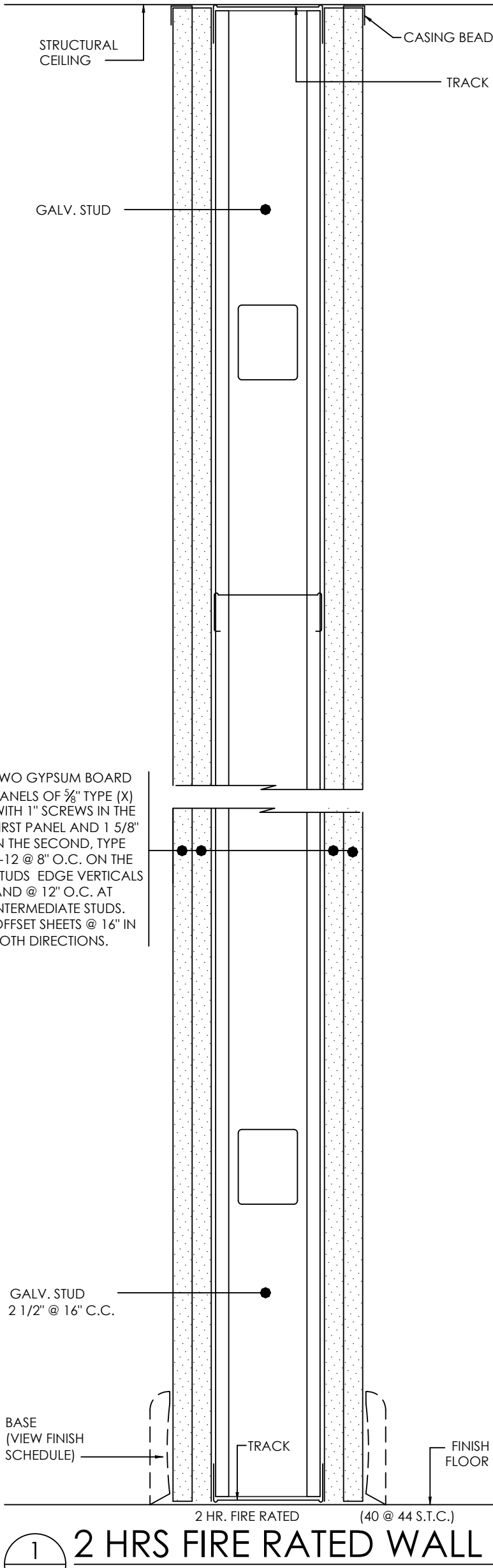
THE CONTRACTOR WILL ENSURE THE ELECTRICAL, POINTS AND PLUMBING CONNECTIONS, BEFORE STARTING ANY CONSTRUCTION STAGE.

CASE OF ANY DOUBT, OMISSION, ERRORS OR DISCREPANCY IN ANY DRAWING AND/OR CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE DESIGNER BEFORE A DECISION IS MADE.

IN THE EVENT OF ANY DISCREPANCY BETWEEN THE DRAWINGS AND TECHNICAL SPECIFICATIONS, THE DRAWINGS WILL TAKE PRIORITY OVER THE SPECIFICATIONS.

- 1 DOOR AND JAMB TO BE REMOVED AND DISPOSE THE MATERIAL.
- 2 WINDOWS OR FIXED GLASS TO BE REMOVED AND FRAME AND DISPOSE THE MATERIAL.
- 3 WALL TO BE DEMOLISH AND DISPOSE THE MATERIAL.
- 4 DEMOLISH A SECTION OF THE WALL FOR A NEW DOOR AND DISPOSE THE MATERIAL
- 5 ALL FINISH FLOOR TO BE REMOVED AND DISPOSE THE MATERIAL
- 6 PLUMBING COMPONENTS TO BE REMOVED AND DISPOSE THE MATERIAL.

	NEW REINFORCED CONCRETE WALL
	NEW CONCRETE BLOCK WALL
	EXISTING WALL
	WALL TO BE DEMOLISHED
	NEW GYPSUM BOARD WALL
	NEW PLYCEM BOARD WALL
	ROOM IDENTIFICATION REFERS TO ROOM FINISH SCHEDULE REFERS TO ROOM ZONE
	SYMBOL FOR NEW DOOR INDICATES DOOR NUMBER
	SYMBOL FOR NEW WINDOW REFERS TO WINDOW SCHEDULE
	INDICATE BUILDING SECTION INDICATES SHEET WHERE SECTION IS DRAWN
	INDICATES PARTIAL SECTION INDICATES SHEET WHERE PARTIAL SECTION IS DRAWN
	INDICATES NEW ELEVATION INDICATES SHEET WHERE ELEVATION IS DRAWN
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	INDICATES EXISTING ELEVATION
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	INDICATES DETAIL NUMBER INDICATES SHEET WHERE DETAIL IS DRAWN
	INDICATES STRUCTURAL DETAILS INDICATES SHEET WHERE WALL STRUCTURAL DETAILS IS DRAWN
	INDICATES FINISH MATERIAL INDICATES CORE MATERIAL
	INDICATES INTERIOR ELEVATIONS
	INDICATES STEEPS
	INDICATES RAMP
	◆ E=100.5 INDICATES NEW ELEVATION
	⊕ E=100.5 INDICATES EXISTING ELEVATION
	⊗ E=100.5 INDICATES EQUIPMENT ELEVATION
	△ REVIEW OR REVISION
N.I.C.	NOT INCLUDED IN CONTRACT



0 1 2 3 4 5 10 15 20 30

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

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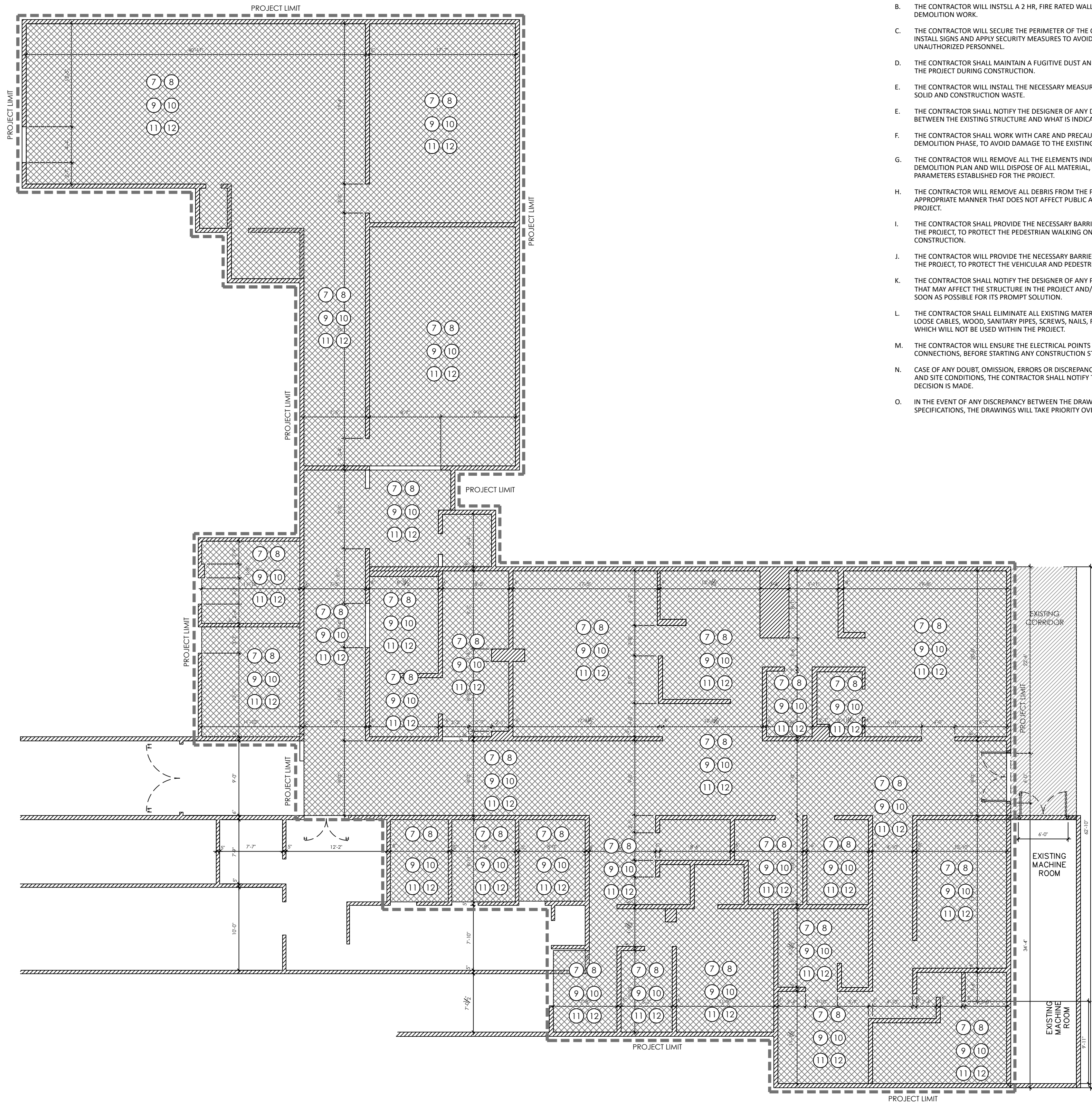
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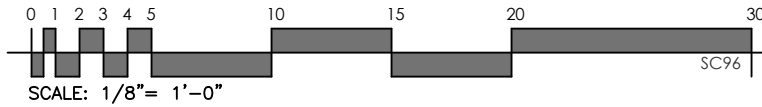
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2

1



DEMOLITION PARTIAL REFLECTED CEILING (GROUND FLOOR)



NOTES:

- ALL DEMOLITION WORK WILL BE COORDINATED WITH THE OWNER OR HIS REPRESENTATIVE.
- THE CONTRACTOR WILL INSTALL A 2 HR, FIRE RATED WALL BEFORE BEGINNING ANY DEMOLITION WORK.
- THE CONTRACTOR WILL SECURE THE PERIMETER OF THE CONSTRUCTION AND WILL INSTALL SIGNS AND APPLY SECURITY MEASURES TO AVOID ACCESS BY UNAUTHORIZED PERSONNEL.
- THE CONTRACTOR SHALL MAINTAIN A FUGITIVE DUST AND RUNOFF SYSTEM ON THE PROJECT DURING CONSTRUCTION.
- THE CONTRACTOR WILL INSTALL THE NECESSARY MEASURES FOR THE CONTROL OF SOLID AND CONSTRUCTION WASTE.
- THE CONTRACTOR SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCY FOUND BETWEEN THE EXISTING STRUCTURE AND WHAT IS INDICATED ON THE PLAN.
- THE CONTRACTOR SHALL WORK WITH CARE AND PRECAUTION DURING THE DEMOLITION PHASE, TO AVOID DAMAGE TO THE EXISTING STRUCTURE.
- THE CONTRACTOR WILL REMOVE ALL THE ELEMENTS INDICATED IN THE DEMOLITION PLAN AND WILL DISPOSE OF ALL MATERIAL ACCORDING TO THE PARAMETERS ESTABLISHED FOR THE PROJECT.
- THE CONTRACTOR WILL REMOVE ALL DEBRIS FROM THE PROPERTY IN AN APPROPRIATE MANNER THAT DOES NOT AFFECT PUBLIC AREAS OUTSIDE THE PROJECT.
- THE CONTRACTOR SHALL PROVIDE THE NECESSARY BARRIERS IN THE PERIMETER OF THE PROJECT, TO PROTECT THE PEDESTRIAN WALKING ON THE SIDEWALKS DURING CONSTRUCTION.
- THE CONTRACTOR WILL PROVIDE THE NECESSARY BARRIERS IN THE PERIMETER OF THE PROJECT, TO PROTECT THE VEHICULAR AND PEDESTRIAN FLOW IN THE AREA.
- THE CONTRACTOR SHALL NOTIFY THE DESIGNER OF ANY PROBLEM HE IDENTIFIES THAT MAY AFFECT THE STRUCTURE IN THE PROJECT AND/OR THE BUILDING AS SOON AS POSSIBLE FOR ITS PROMPT SOLUTION.
- THE CONTRACTOR SHALL ELIMINATE ALL EXISTING MATERIAL, UNDERSTANDING, LOOSE CABLES, WOOD, SANITARY PIPES, SCREWS, NAILS, RAILINGS, GRILLES, WHICH WILL NOT BE USED WITHIN THE PROJECT.
- THE CONTRACTOR WILL ENSURE THE ELECTRICAL POINTS AND PLUMBING CONNECTIONS, BEFORE STARTING ANY CONSTRUCTION STAGE.
- CASE OF ANY DOUBT, OMISSION, ERRORS OR DISCREPANCY IN ANY DRAWING AND SITE CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE DESIGNER BEFORE A DECISION IS MADE.
- IN THE EVENT OF ANY DISCREPANCY BETWEEN THE DRAWINGS AND TECHNICAL SPECIFICATIONS, THE DRAWINGS WILL TAKE PRIORITY OVER THE SPECIFICATIONS.

LEGEND:

- 7 ALL ACOUSTICAL TILE AND SUSPENDED SYSTEM TO BE REMOVED AND DISPOSE THE MATERIAL.
- 8 ALL GYPSUM BOARD CEILING AND FASCIAS TO BE REMOVED AND DISPOSE THE MATERIAL.
- 9 ALL ELECTRICAL COMPONENTS TO BE REMOVED AND DISPOSE THE MATERIAL.
- 10 ALL DUCT'S, SUPPLY AND RETURN COMPONENTS TO BE REMOVED AND DISPOSE THE MATERIAL.
- 11 PLUMBING COMPONENTS TO BE REMOVED AND DISPOSE THE MATERIAL.
- 12 MEDICAL EQUIPMENT TO BE REMOVED AND DISPOSE THE MATERIAL.

NOTES:

- REGARDING ELECTRICITY, ALL COMPONENTS WILL BE REMOVED, UNDERSTOOD LAMPS, RECEPTACLES, PIPES, BOXES, PANELS, LIGHTS, SWITCHES, AMONG OTHERS, EXCEPT THE MAIN TUBING AND MAIN FEEDERS.
- FOR ELECTRICAL DEMOLITION, THE CONTRACTOR SHOULD COORDINATE ALL WORKS WITH THE DESIGNER TO AGREE WHICH COMPONENTS WILL REMAIN AND WHICH WILL BE REMOVED.
- FOR MECHANICAL DEMOLITION, THE CONTRACTOR SHOULD COORDINATE ALL WORKS WITH THE DESIGNER TO AGREE WHICH COMPONENTS WILL REMAIN AND WHICH WILL BE REMOVED.
- ALL ELEMENTS THAT ARE LEFT UNUSED WILL BE REMOVED OR ELIMINATED BY THE CONTRACTOR AND, IN ADDITION, THE CONNECTION POINTS MUST BE ADEQUATELY PROTECTED.

LEGEND:

- NEW REINFORCED CONCRETE WALL
- NEW CONCRETE BLOCK WALL
- EXISTING WALL
- WALL TO BE DEMOLISHED
- NEW GYPSUM BOARD WALL
- NEW PLYCEM BOARD WALL
- ROOM IDENTIFICATION REFERS TO ROOM FINISH SCHEDULE REFERS TO ROOM ZONE
- SYMBOL FOR NEW DOOR INDICATES DOOR NUMBER
- SYMBOL FOR NEW WINDOW REFERS TO WINDOW SCHEDULE
- INDICATE BUILDING SECTION INDICATES SHEET WHERE SECTION IS DRAWN
- INDICATES PARTIAL SECTION INDICATES SHEET WHERE PARTIAL SECTION IS DRAWN
- INDICATES NEW ELEVATION INDICATES SHEET WHERE ELEVATION IS DRAWN
- INDICATES NEW WALL SECTION INDICATES SHEET WHERE WALL SECTION IS DRAWN
- INDICATES EXISTING ELEVATION
- INDICATES EXISTING WALL SECTION
- INDICATES DETAIL NUMBER INDICATES SHEET WHERE DETAIL IS DRAWN
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- INDICATES INTERIOR ELEVATIONS
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PROJECT OWNER



CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

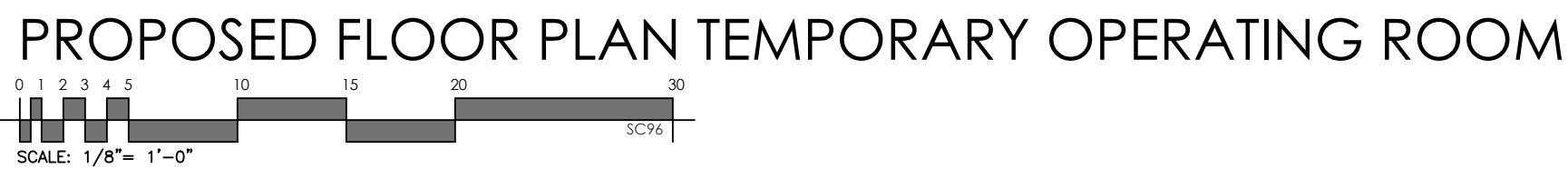
DRAWING NAME
DEMOLITION
REFLECTED CEILING

ISSUE FOR:

TAG	REVISION NAME	DATE
△	REVISION	MM/DD/YY

EX3.0

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

	NEW REINFORCED CONCRETE WALL
	NEW CONCRETE BLOCK WALL
	EXISTING WALL
	WALL TO BE DEMOLISHED
	NEW GYPSUM BOARD WALL
	NEW PLY'CEM BOARD WALL
	ROOM IDENTIFICATION REFERS TO ROOM FINISH SCHEDULE REFERS TO ROOM ZONE
	SYMBOL FOR NEW DOOR INDICATES DOOR NUMBER
	SYMBOL FOR NEW WINDOW REFERS TO WINDOW SCHEDULE
	INDICATE BUILDING SECTION INDICATES SHEET WHERE SECTION IS DRAWN
	INDICATES PARTIAL SECTION INDICATES SHEET WHERE PARTIAL SECTION IS DRAWN
	INDICATES NEW ELEVATION INDICATES SHEET WHERE ELEVATION IS DRAWN
	INDICATES NEW WALL SECTION INDICATES SHEET WHERE WALL SECTION IS DRAWN
	INDICATES EXISTING ELEVATION
	INDICATES EXISTING WALL SECTION
	INDICATES DETAIL NUMBER INDICATES SHEET WHERE DETAIL IS DRAWN
	INDICATES STRUCTURAL DETAILS INDICATES SHEET WHERE WALL STRUCTURAL DETAILS IS DRAWN
	INDICATES FINISH MATERIAL INDICATES CORE MATERIAL
	INDICATES INTERIOR ELEVATIONS
	INDICATES STEEPS
	INDICATES RAMP
	INDICATES NEW ELEVATION
	INDICATES EXISTING ELEVATION
	INDICATES EQUIPMENT ELEVATION
	REVIEW OR REVISION
N.I.C.	NOT INCLUDED IN CONTRACT



YO, **NOENIERO JUAN R. CASTELLO, LICENCIADO 12391**, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO Y PREPARO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APPLICABLES DE LOS REGLAMENTOS Y CODIGOS DE LA LEY 14250A SEGUN ENMIENDADA, CONOCIDA COMO LA "LEY PARA LA INVERSION POR LA INDUSTRIA PUERTORRQUEÑA" Y CON LA LEY NUM. 319 DE 15 DE MAYO DE 1936, SEGUN ENMIENDADA, LEY NUM. 96 DE 1976, SEGUN ENMIENDADA, LEY NUM. 100 DE 1978, SEGUN ENMIENDADA, Y CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR ALGUNO DE LOS AGENTES O EMPLEADOS DE MI FIRMA, O POR ALGUNO DE CUALQUIER ACCION JUICIAL Y DISCIPLINARIA POR LA OGP, DE

PROJECT OWNER



CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME
**PROPOSED
FLOOR PLAN**

ISSUE FOR:
PRELIMINARY DRAWINGS

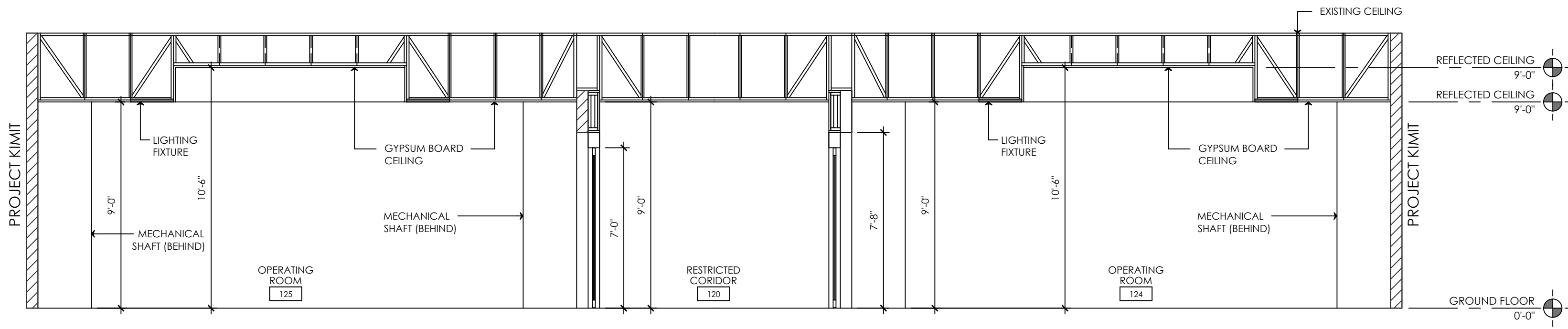
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<u>A</u>	REVISION	MM/DD/YY

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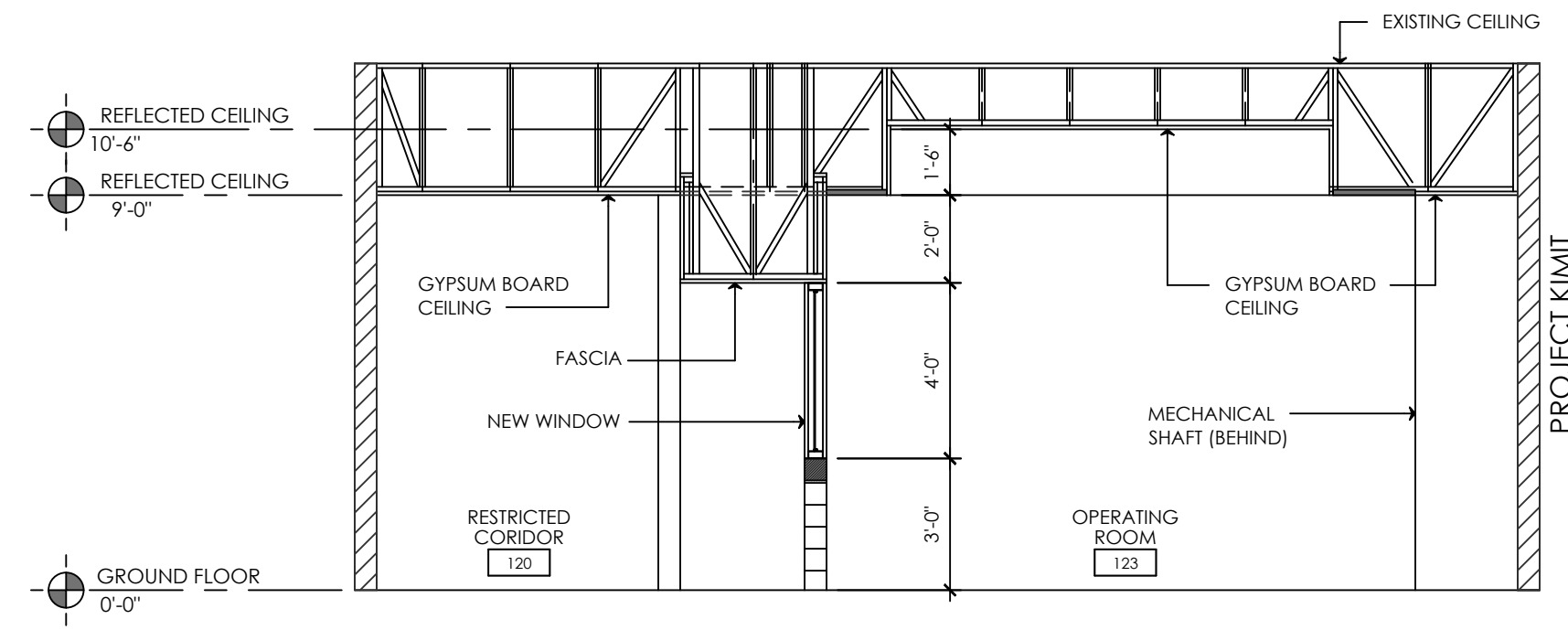
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1-10-2024 HURRA Proposed Operating Room V6 final.dwg

5

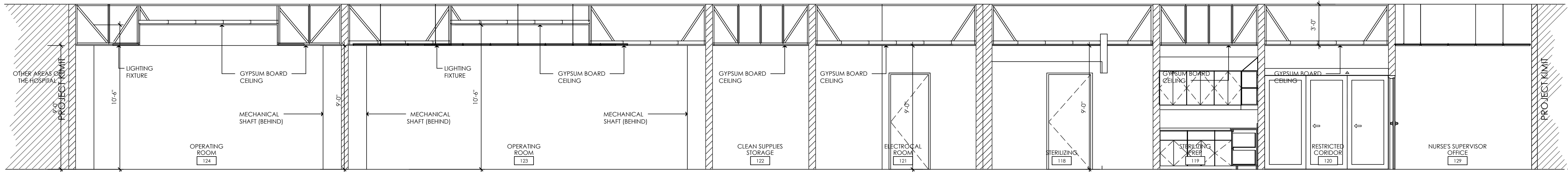


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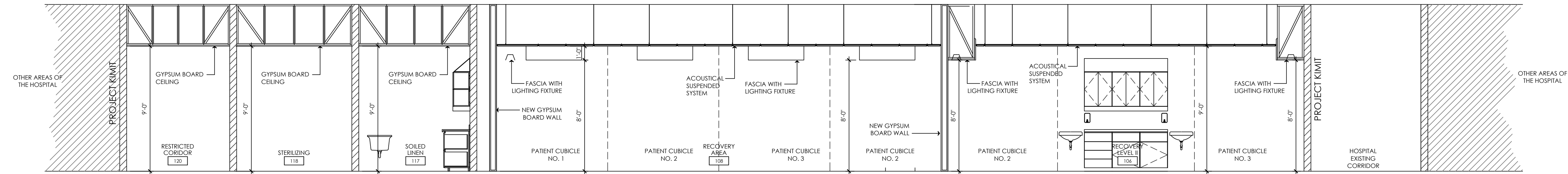
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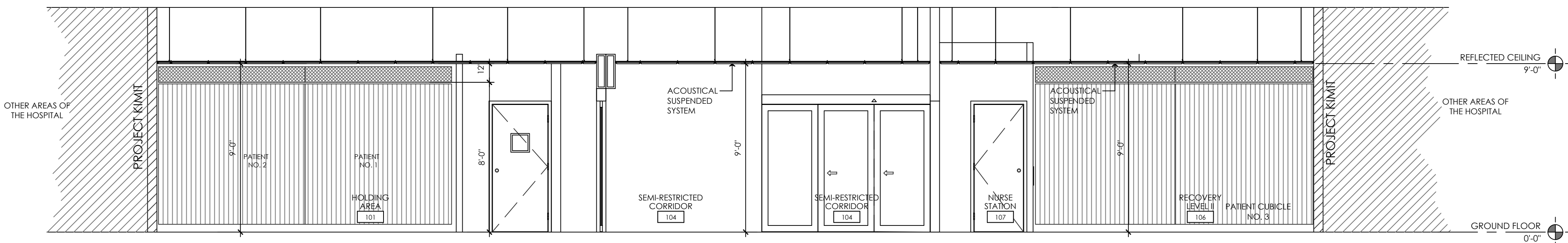
PARTIAL SECTION
SCALE: 1/4"= 1'-0"

3



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

2



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

1

A

B

C

D

E



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PROJECT OWNER

DEPARTAMENTO DE
SALUD



CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

PROPOSED PARTIAL
SECTIONS

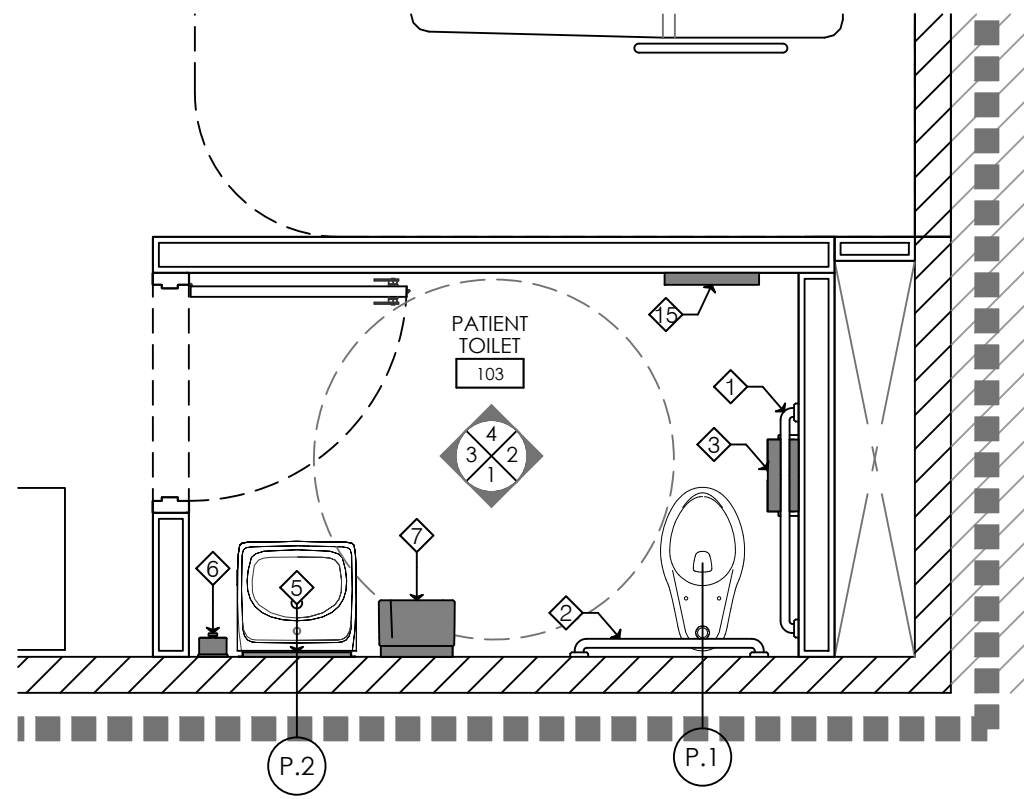
ISSUE FOR:

PRELIMINARY DRAWINGS

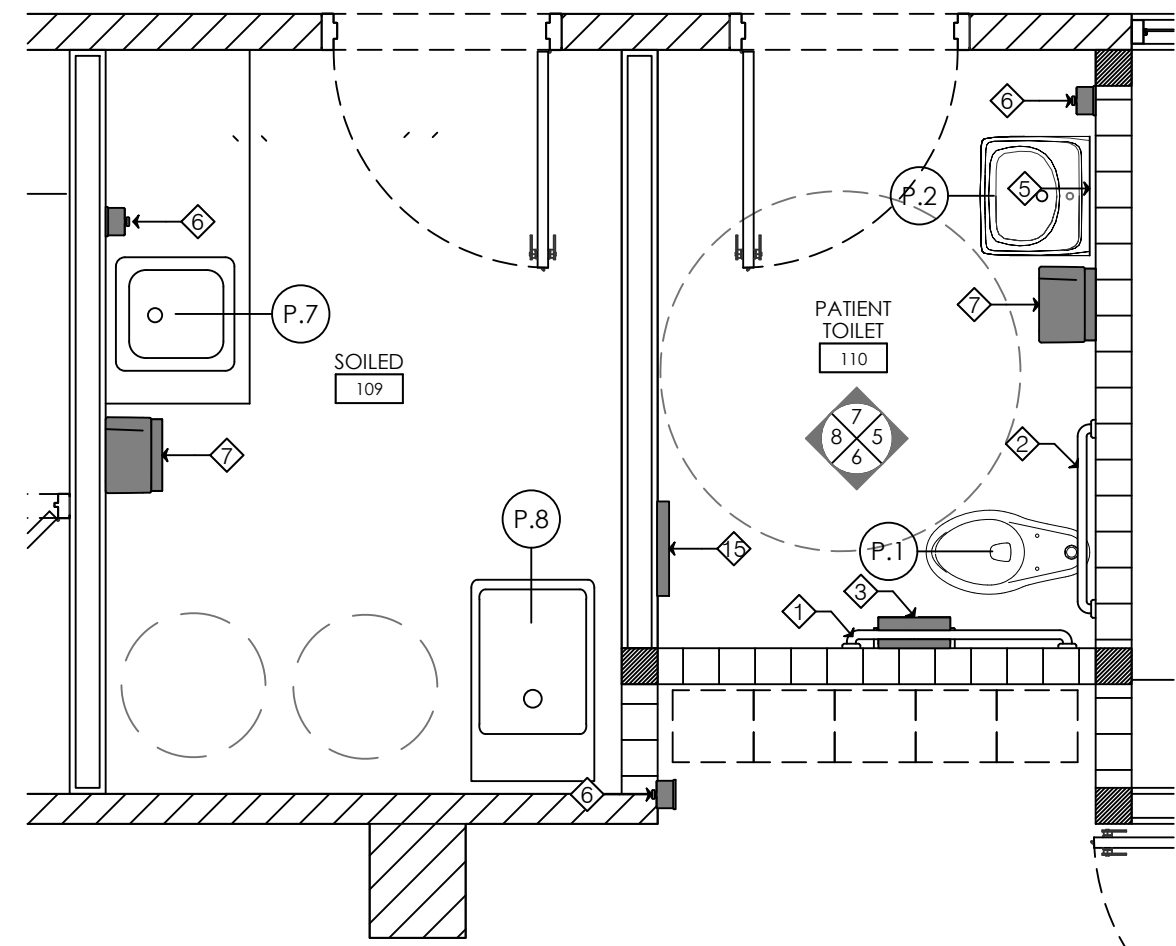
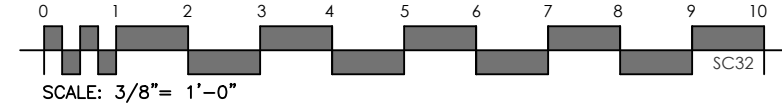
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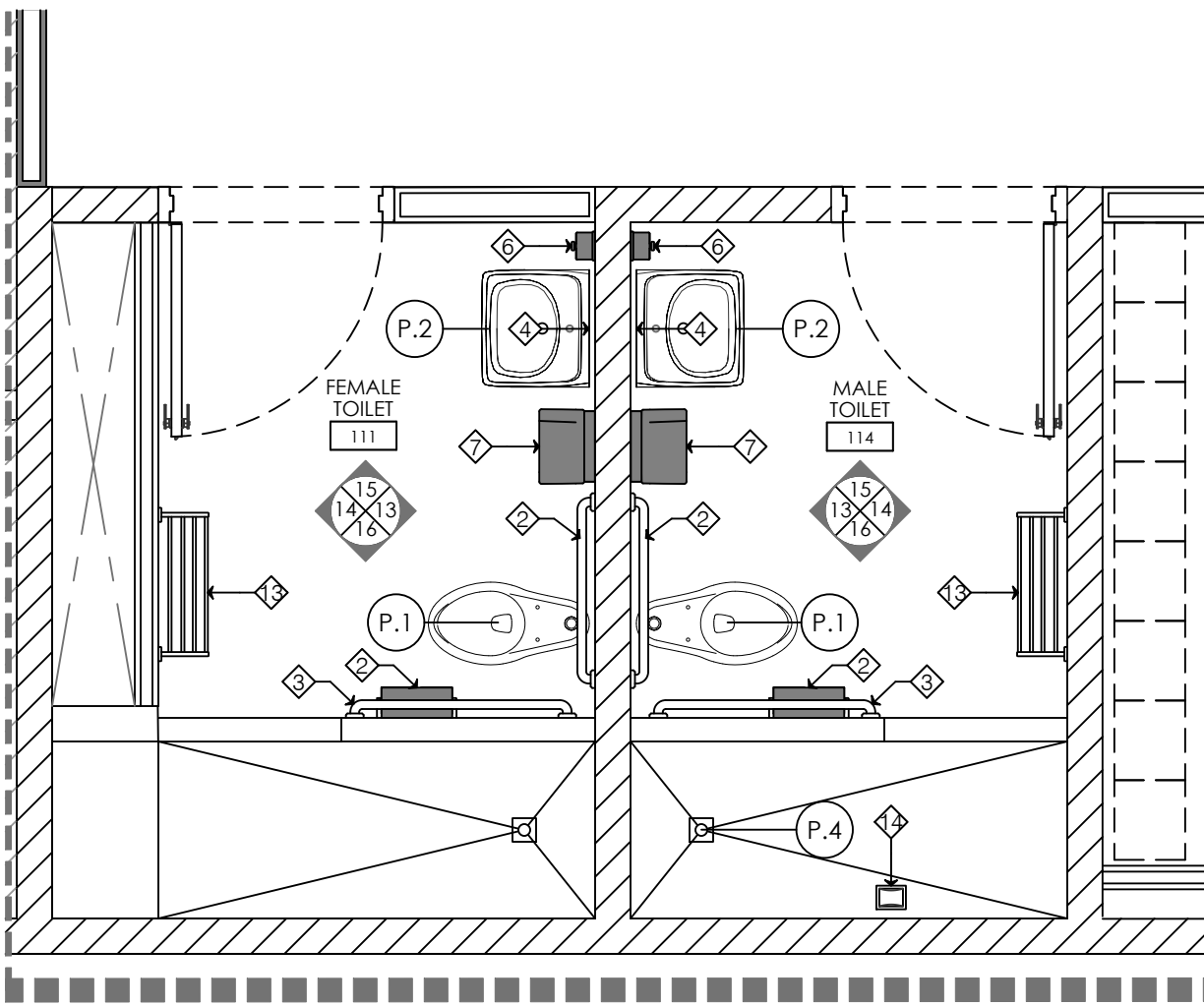
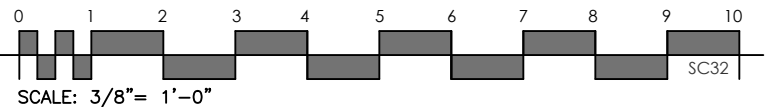
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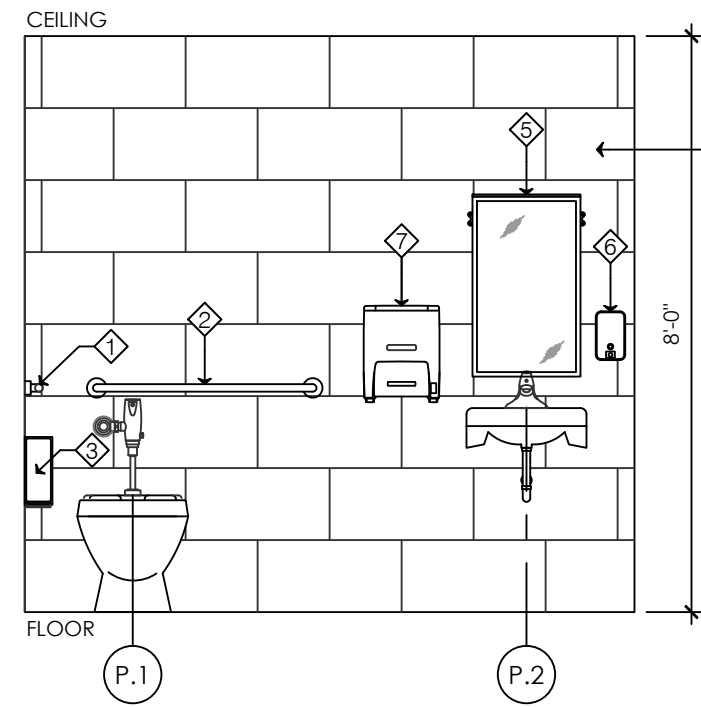
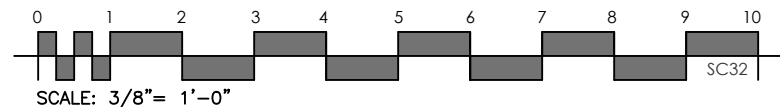
PATIENT TOILET NO. 103



PATIENT TOILET NO. 110 - SOILED NO. 109

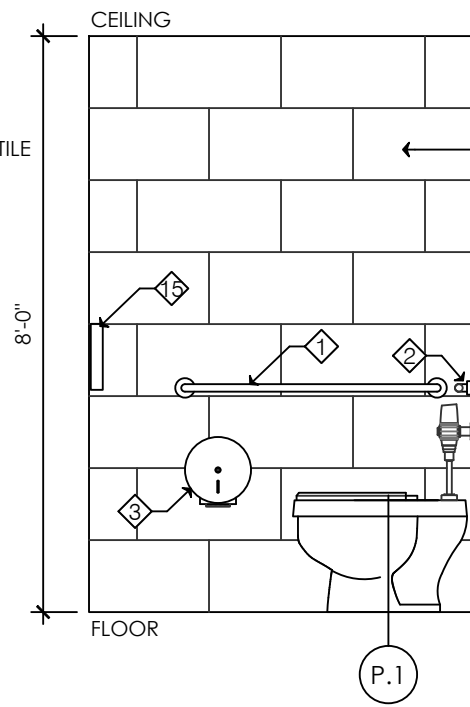


FEMALE TOILET NO. 111 - MALE TOILET NO. 114



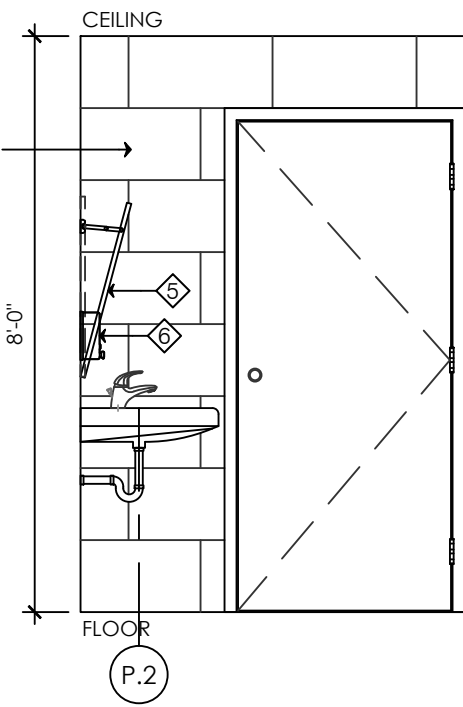
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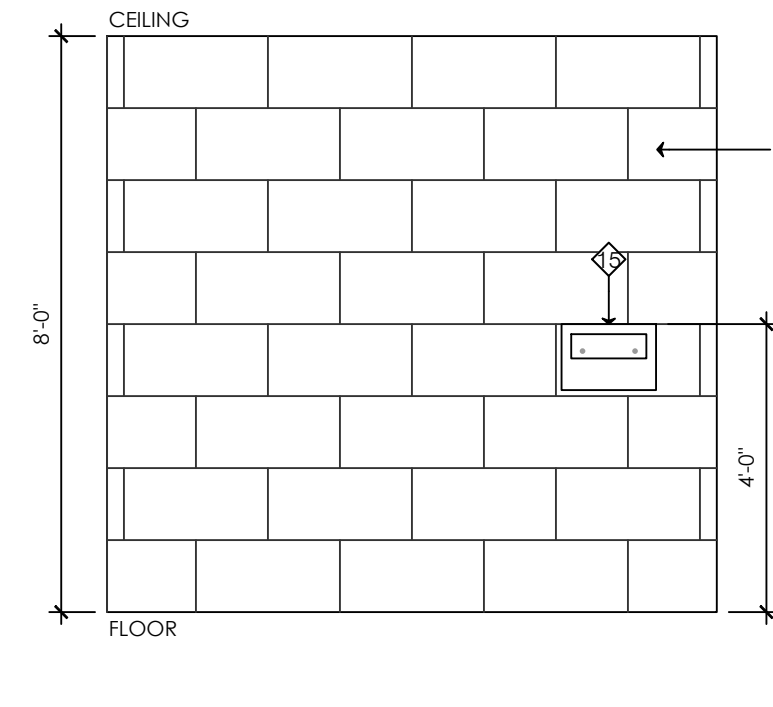
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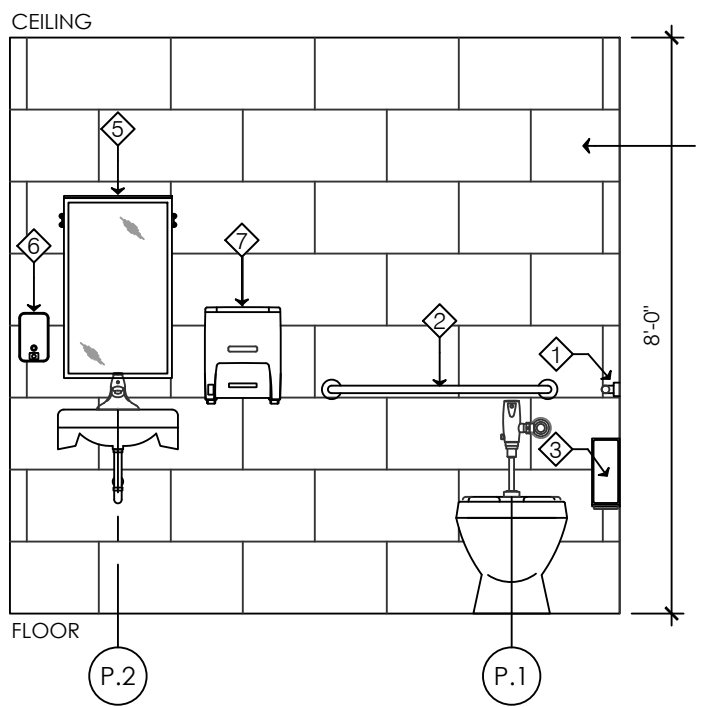
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SCALE: 3/8" = 1'-0"



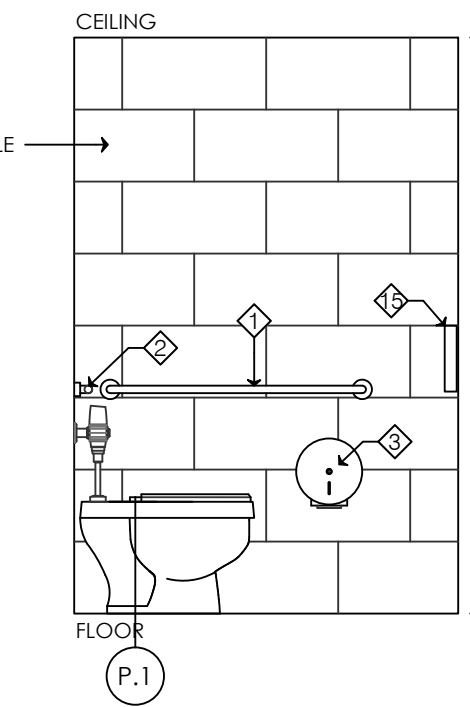
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SCALE: 3/8" = 1'-0"



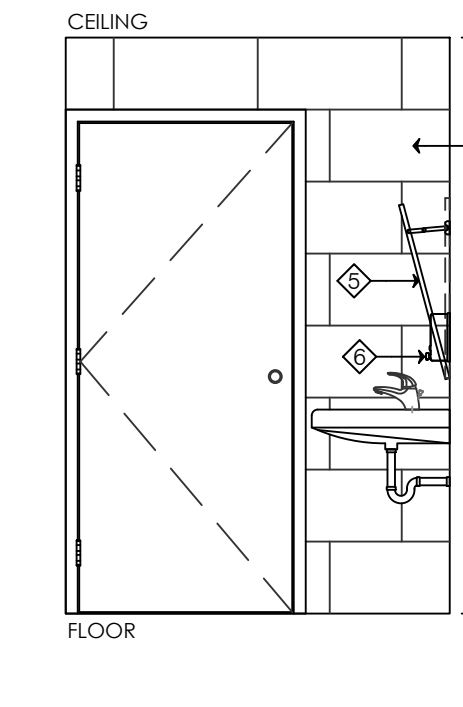
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SCALE: 3/8" = 1'-0"



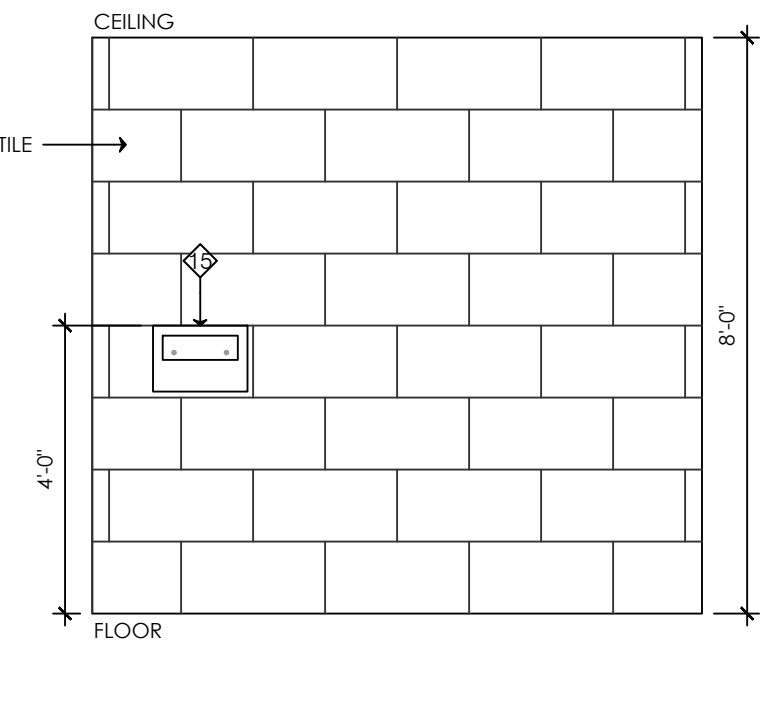
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SCALE: 3/8" = 1'-0"



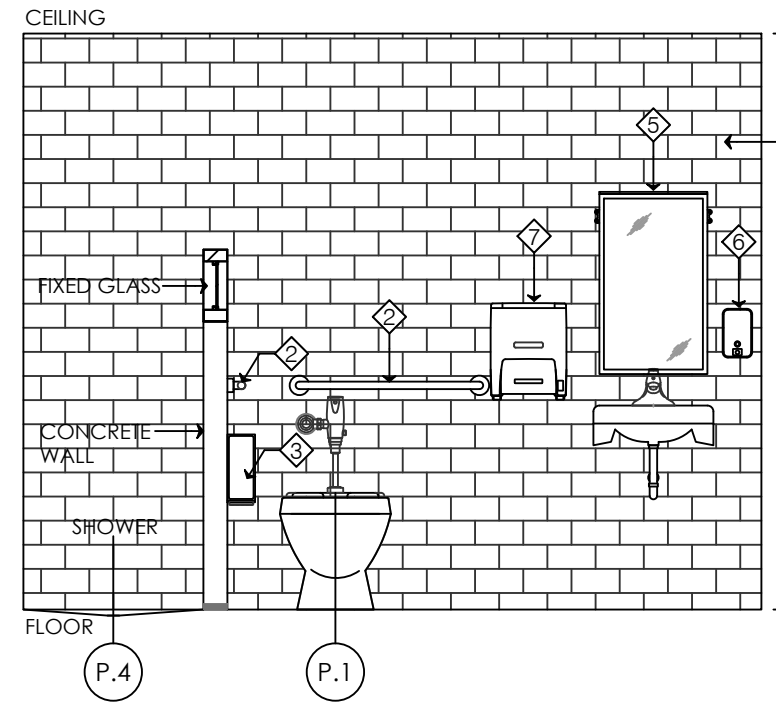
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SCALE: 3/8" = 1'-0"



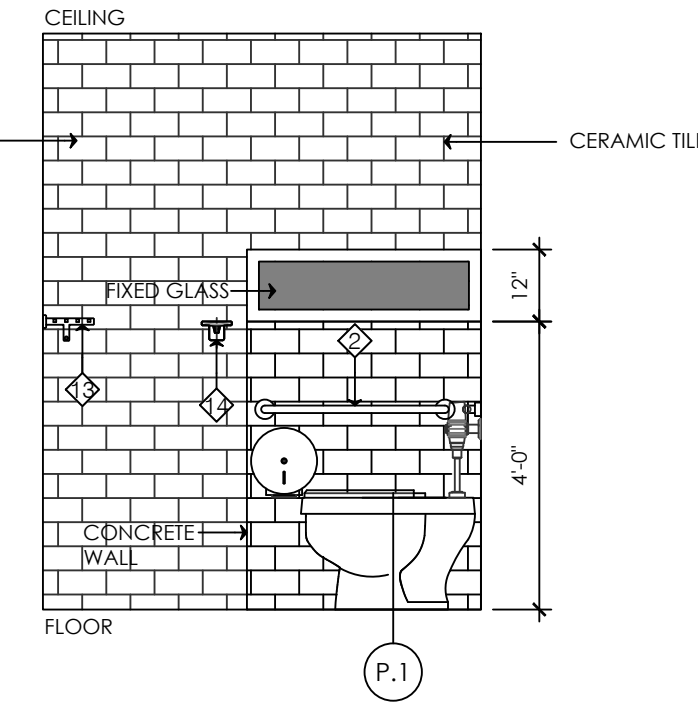
ELEVATION NO. 8

SCALE: 3/8" = 1'-0"



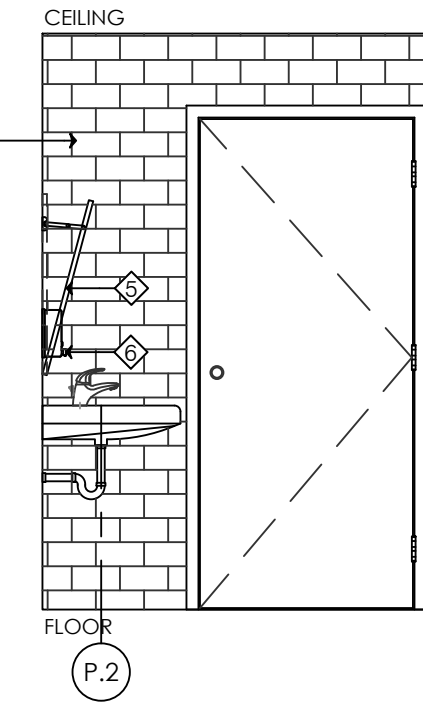
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SCALE: 3/8" = 1'-0"



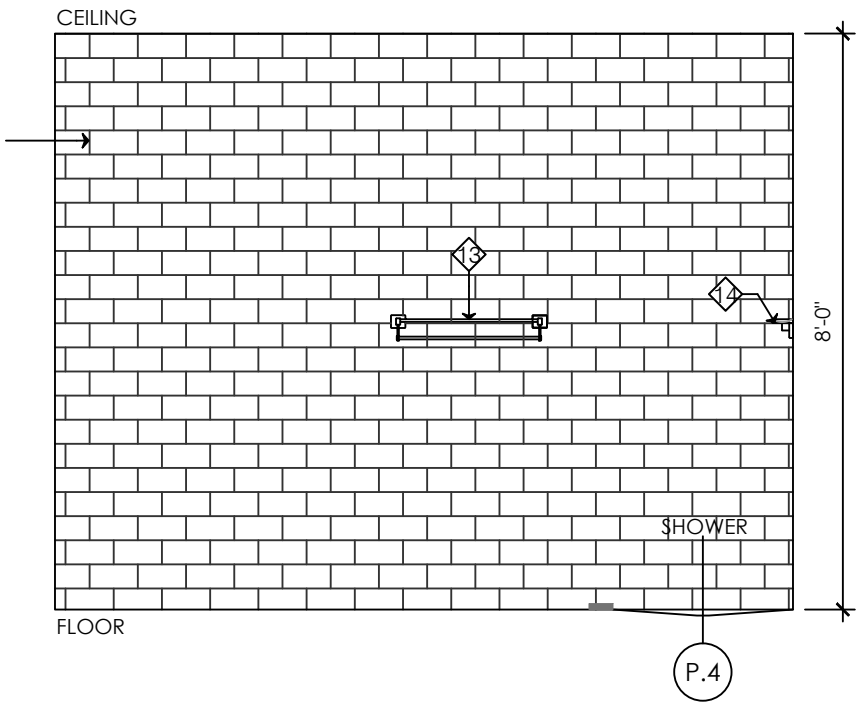
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SCALE: 3/8" = 1'-0"



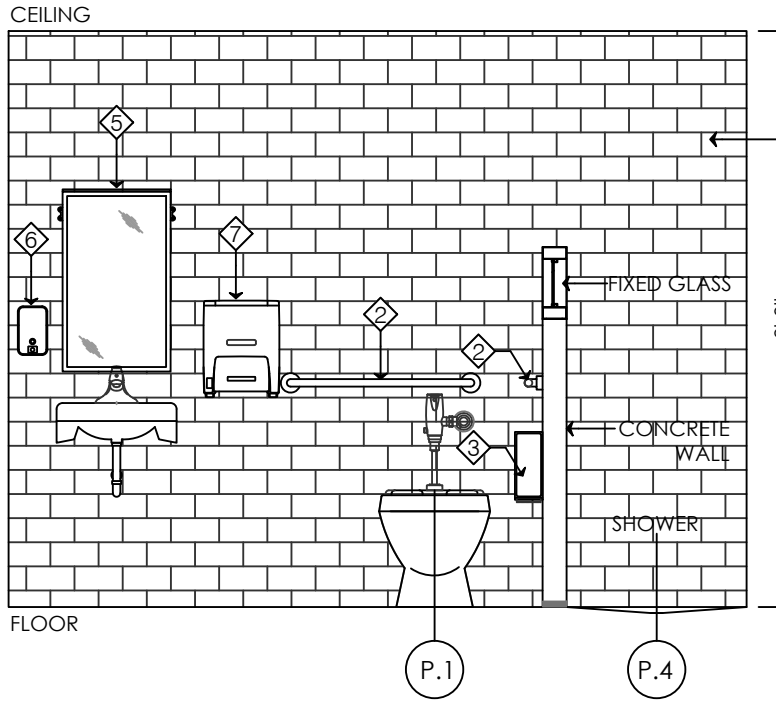
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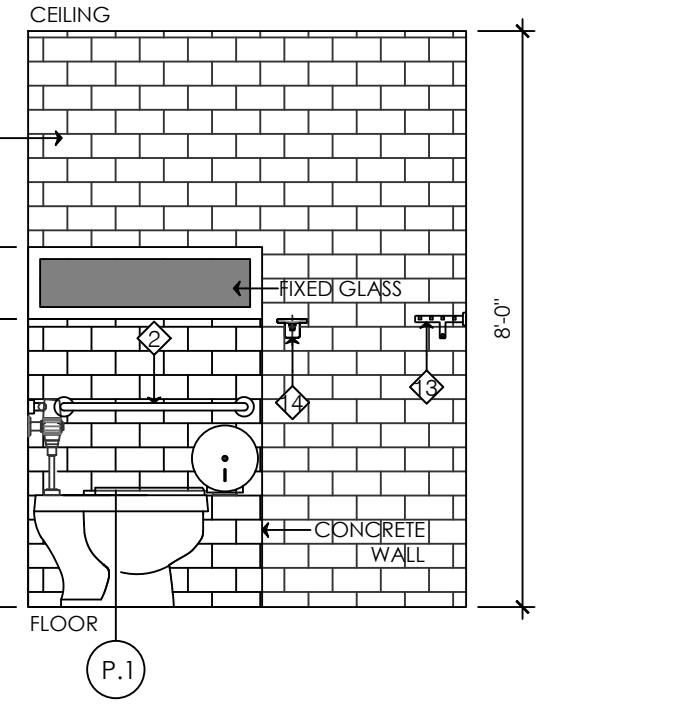
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SCALE: 3/8" = 1'-0"



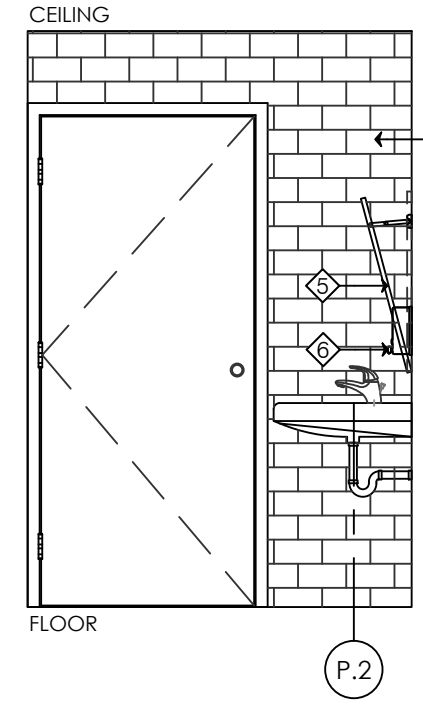
ELEVATION NO. 13

SCALE: 3/8" = 1'-0"



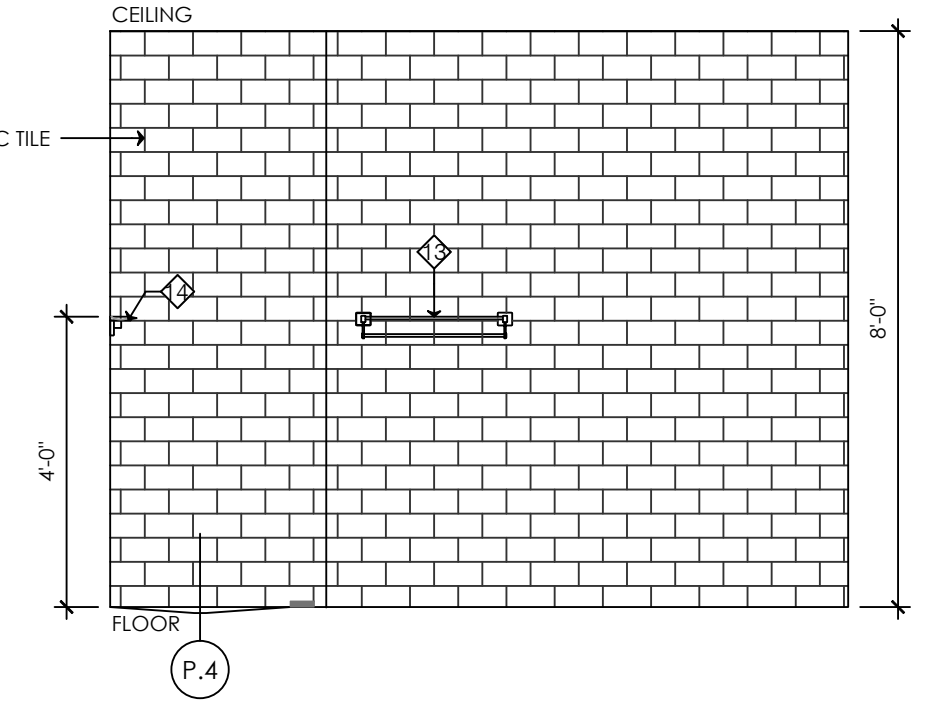
ELEVATION NO. 14

SCALE: 3/8" = 1'-0"



ELEVATION NO. 15

SCALE: 3/8" = 1'-0"



ELEVATION NO. 16

SCALE: 3/8" = 1'-0"



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PROJECT OWNER



CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

PROPOSED ENLARGED
PLANS AND DETAILS

ISSUE FOR:

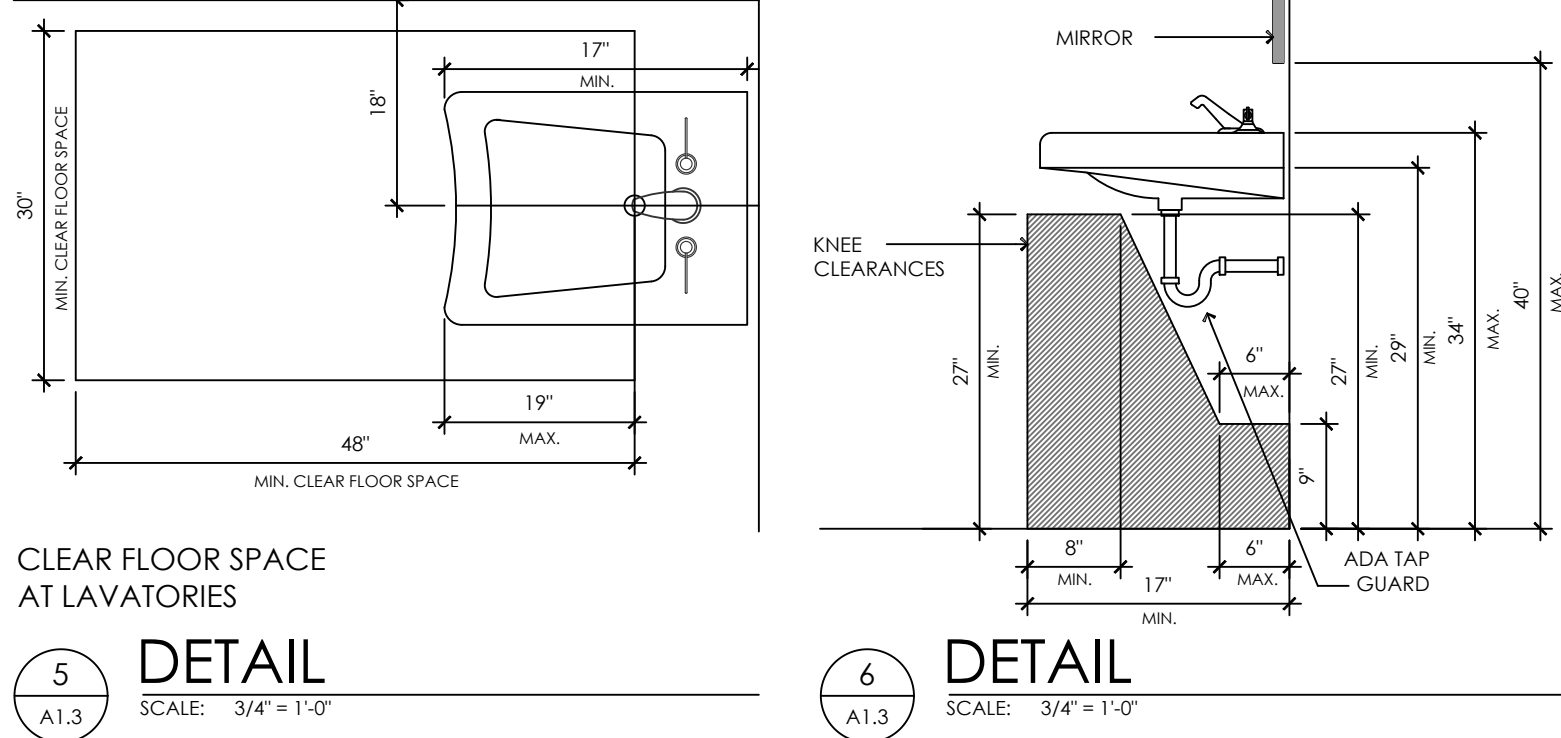
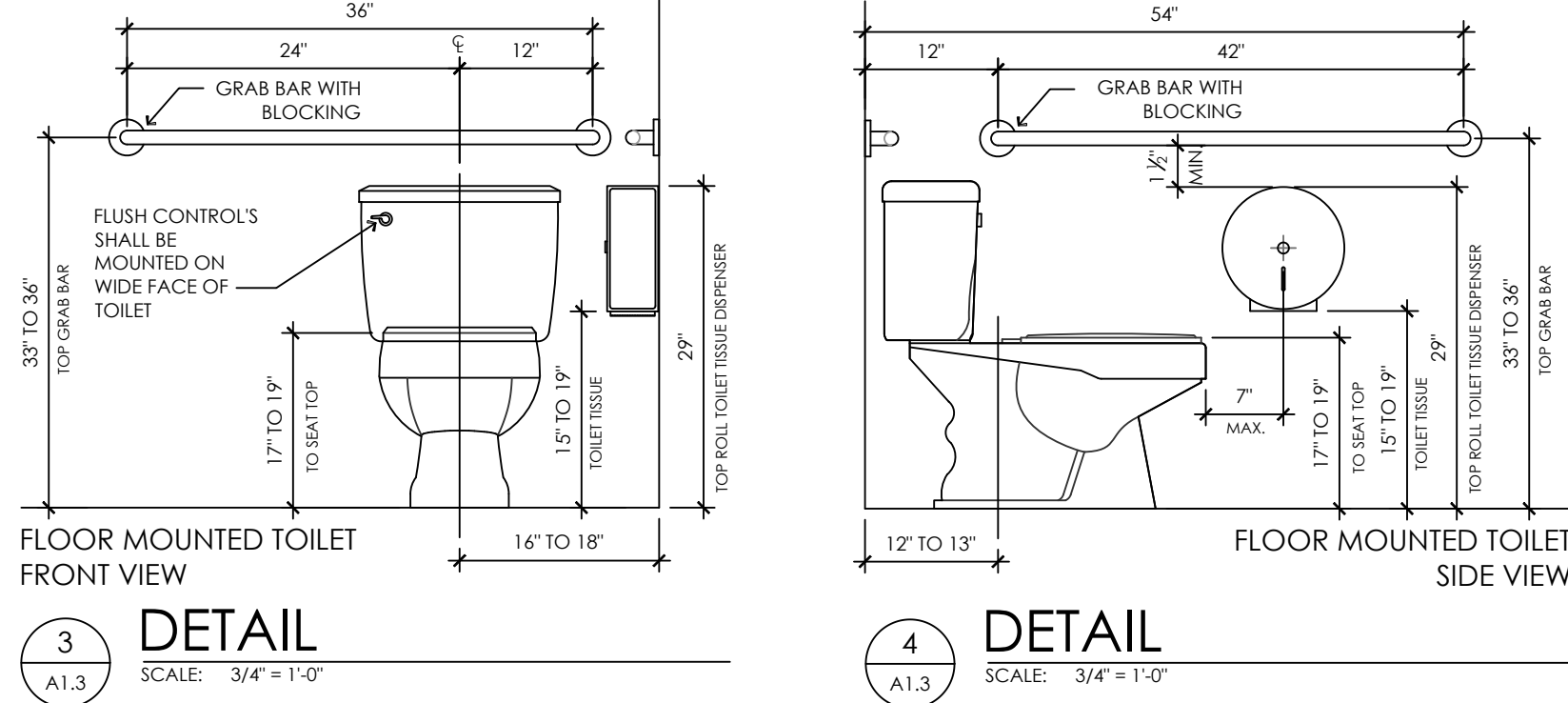
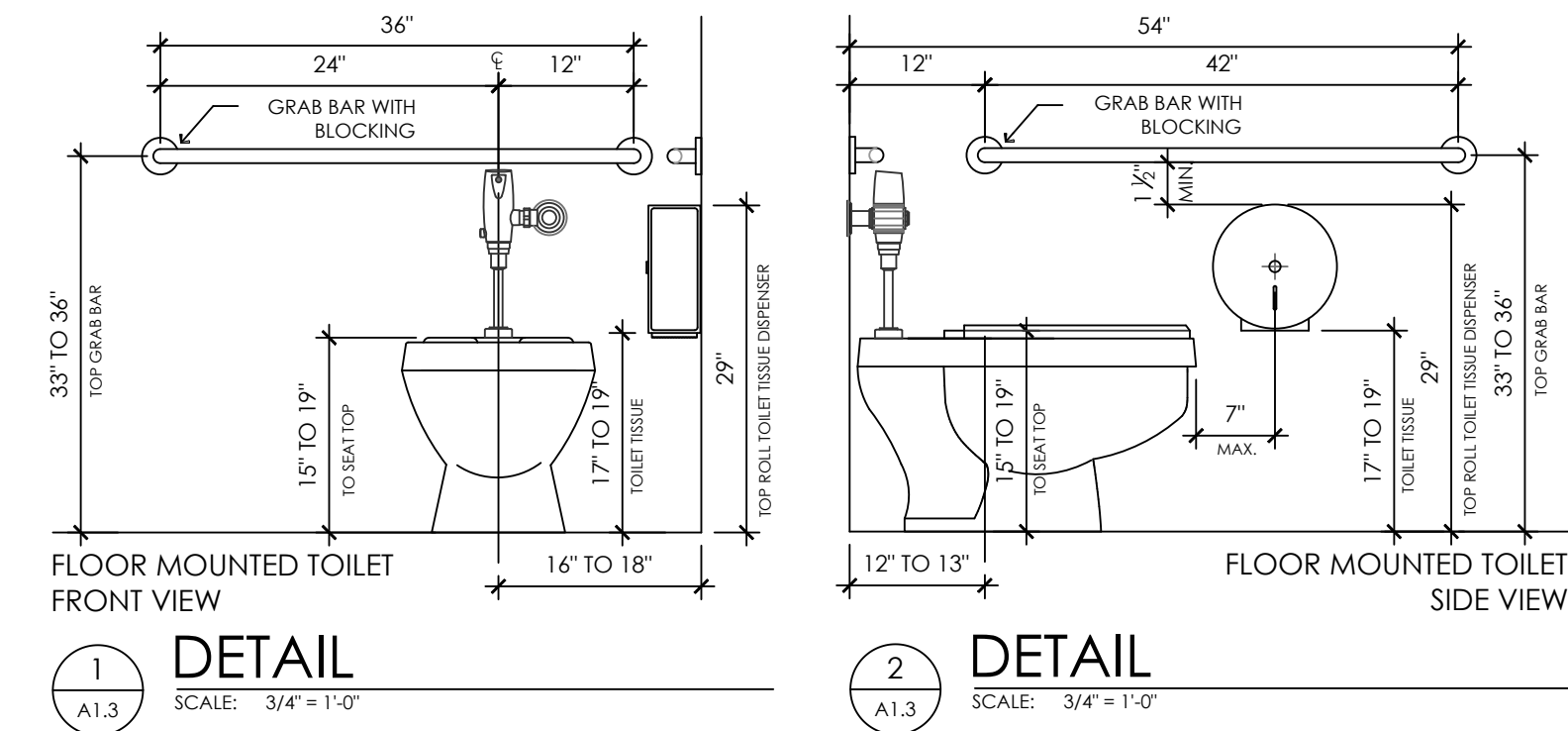
PRELIMINARY DRAWINGS

TAG	REVISION	NAME	DATE
△	REVISION		MM/DD/YY

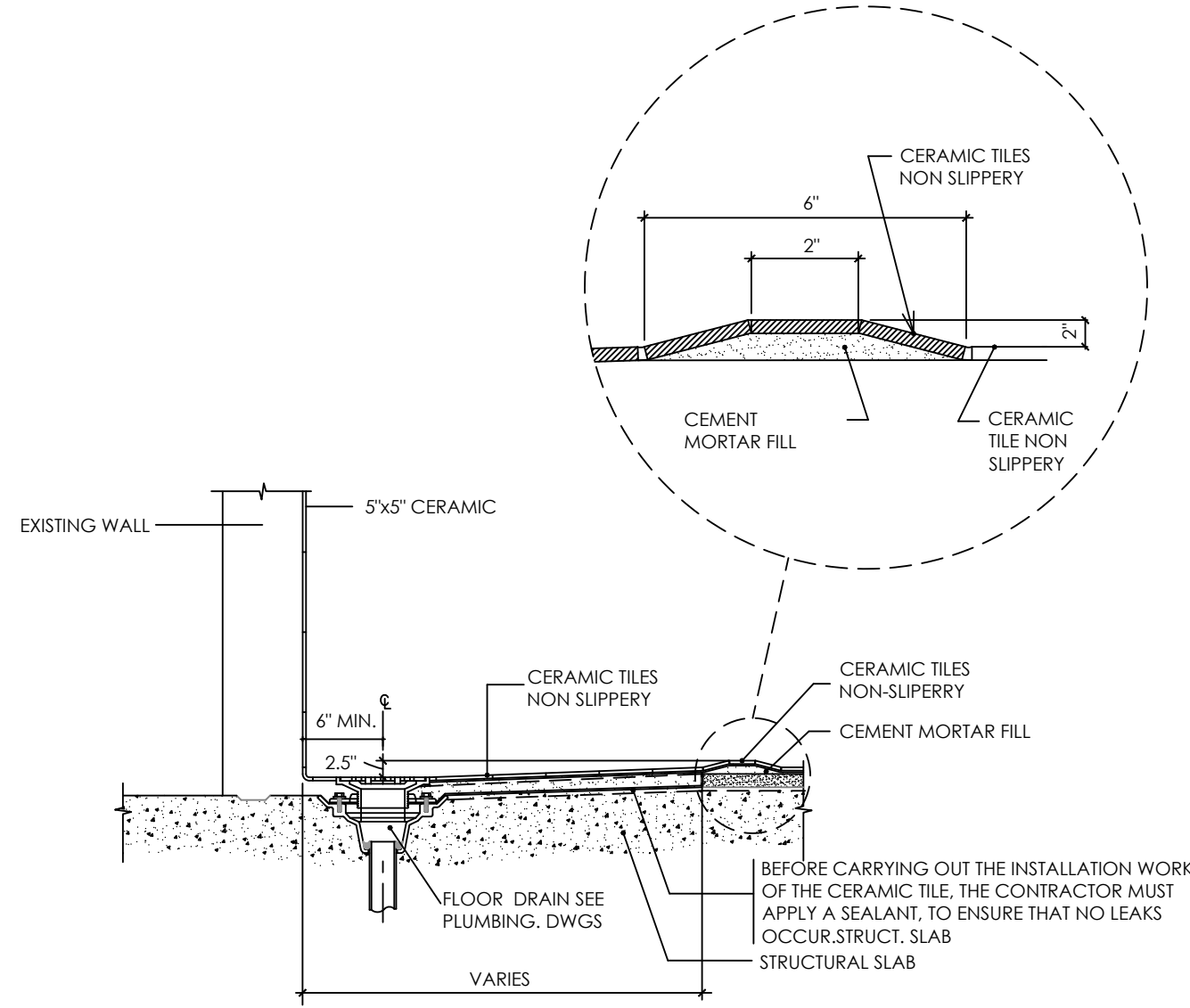
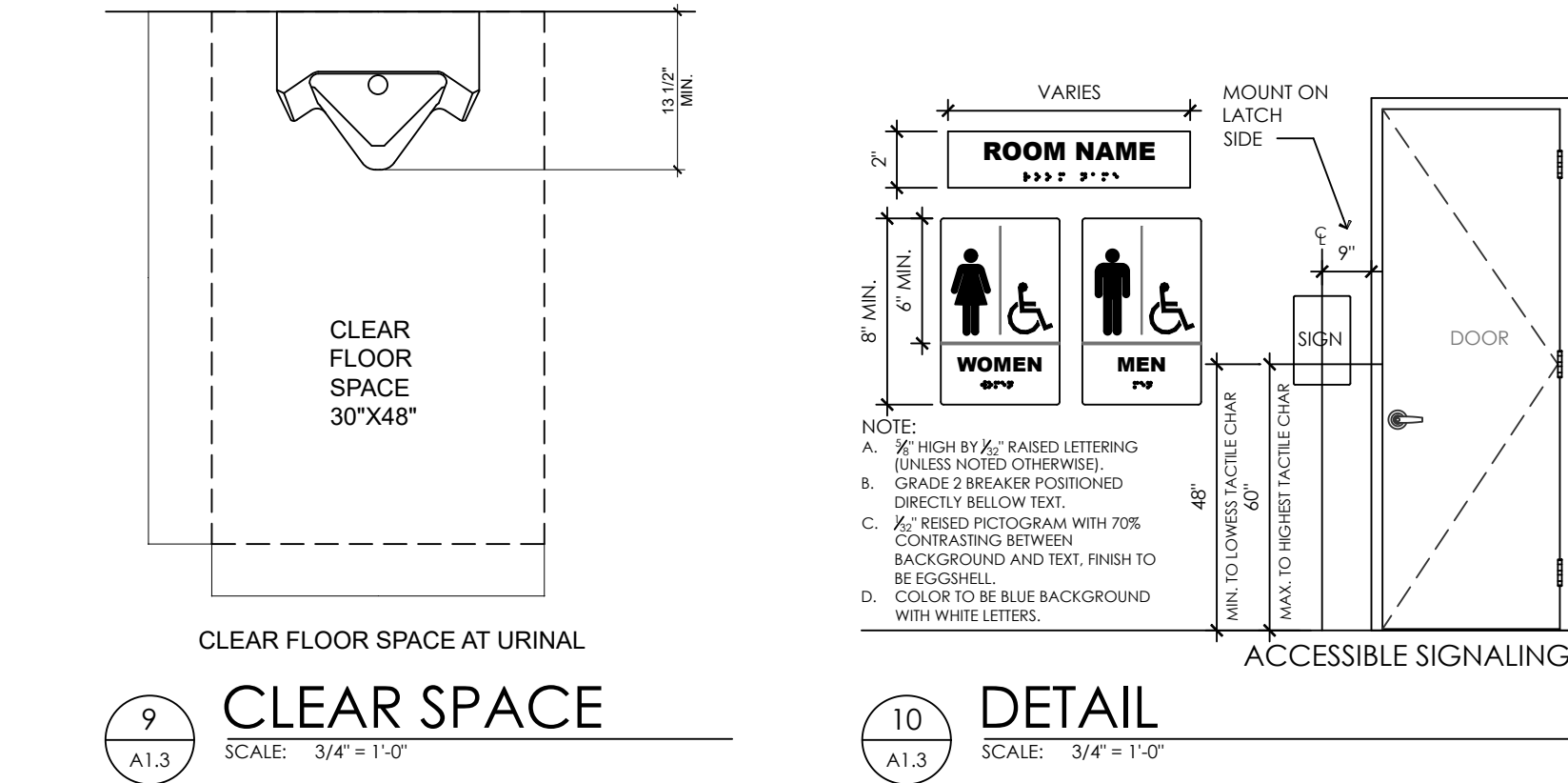
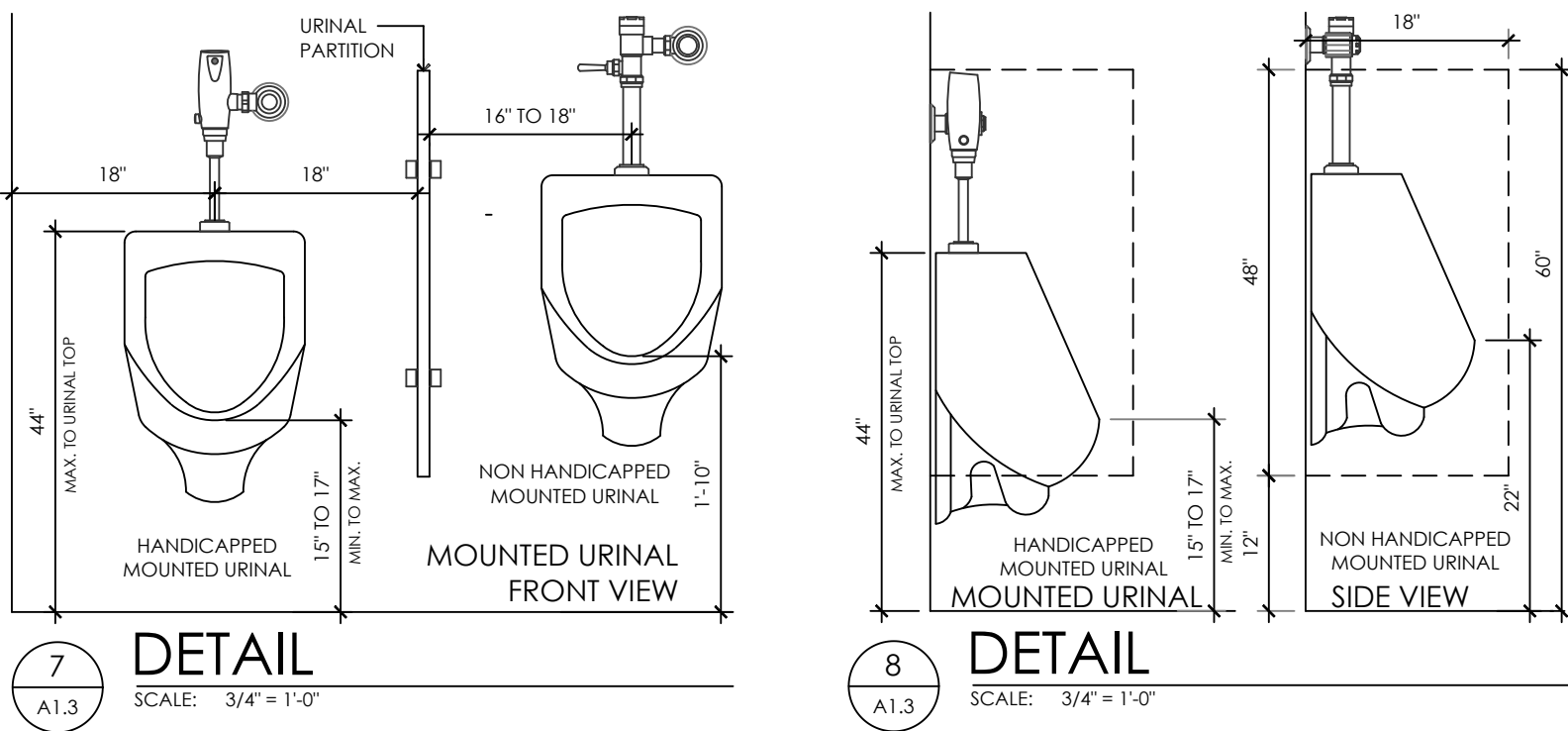
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5



4



11 TYPICAL SHOWER BASIN SECTION (HANDICAPPED)
SCALE: 3/4" = 1'-0"

IMPORTANT NOTE

1. BEFORE APPLYING OR INSTALLING ANY PRODUCT OR MATERIAL ON THE EXISTING FLOOR, A SELF-LEVELING MUST BE APPLIED. SUBMIT BY APPROVAL.

2. BEFORE APPLYING OR INSTALLING ANY PRODUCT OR MATERIAL ON THE FLOOR WHERE THE SHOWERS WILL GO, A SEALANT MUST BE APPLIED TO PREVENT LEAKAGE. SUBMIT FOR APPROVAL.

3

EQUIPMENT SCHEDULE				
TAG.	EQUIPMENT	MODEL	BRAND	DESCRIPTION
P.1	WATER CLOSET (ADA)	3043.6+60	AMERICAN STANDARD	MADERA 16 1/2" HEIGHT 1.6 GPF FLUSHOMETER TOILET SYSTEM, LESS EVERCLEAN, ELONGATED BOWL, HIGH EFFICIENCY
P.2	LAVATORY (ADA)	9141.011	AMERICAN STANDARD	WHEELCHAIR USERS LAVATORY, VITREOUS CHINA, WALL MOUNTED, 4" CENTERS SET HOLES, FRONT OVERFLOW.
P.4	SHOWER	0355.912	AMERICAN STANDARD	SINGLE CONTROL CENTERSET FAUCET
P.5	LAVATORY (HAND SINK)	0356.041	AMERICAN STANDARD	LUCERNE WALL HUNG LAVATORY, 4" CENTER HOLES BACK AND SIDE SPLASH SHIELDS
P.6	SURGICAL SCRUB SINK	SS64	MAC MEDICAL	DUAL STATION SS 64 SERIES (27.5"d x 64"w x 37"h) STAINLESS STEEL, BY MAC MEDICAL
P.7	SINK	9028000.075	AMERICAN STANDARD	DUAL STATION SS 64 SERIES (27.5"d x 64"w x 37"h) STAINLESS STEEL, BY MAC MEDICAL
P.8	UTILITY SERVICE SINK	692008.020	AMERICAN STANDARD	LAKEWELL WALL HUNG CAST IRON UTILITY SERVICE SINK BY AMERICAN STANDARD

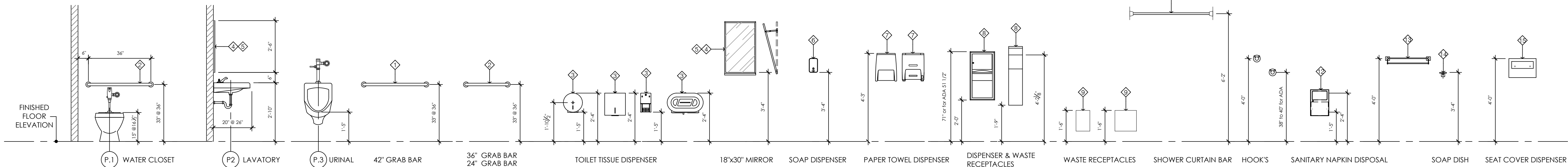
ACCESSORIES SCHEDULE				
TAG.	ACCESSORIES	MODEL	BRAND	DESCRIPTION
1	42" GRAB BAR	812 [001-48]	BRADEX	1 1/2" HEAVY DUTY STAINLESS STEEL GRAB BAR WITH CONCEALED MOUNTING
2	36" GRAB BAR	812 [001-36]	BRADEX	1 1/2" HEAVY DUTY STAINLESS STEEL GRAB BAR WITH CONCEALED MOUNTING
3	ROLL TOILET TISSUE DISPENSER	B-9890	BOBRICK	SURFACE MOUNTED, STAINLESS STEEL SINGLE JUMBO TOILET ROLL HOLDER
4	18" x 30" MIRROR	780-1830	BRADEX	STANDARD MIRROR WITH ANGLE FRAME, WELDED CORNER AND THEIR RESISTANT MOUNTING
5	18" x 30" TILT MIRROR	740-1830	BRADEX	STANDARD FIX TILT MIRROR WITH WELDED CORNERS
6	SOAP DISPENSER	B-2111	BOBRICK	CLASSIC SERIES, SURFACE MOUNTED, SOAP DISPENSER
7	PAPER TOWEL DISPENSER	B-3699	BOBRICK	SINGLE ROLL TOILET TISSUE DISPENSER SURFACE MOUNTING
8	PAPER TOWEL RECEPTACLE	B-3699	BOBRICK	CLASSIC SERIES, SURFACE MOUNTED, PAPER TOWEL DISPENSER AND WASTE RECEPTACLE
9	WASTE REEPTACLE	5424	BRADEX	SINGLE ROLL TOILET TISSUE DISPENSER SURFACE MOUNTING
10	SHOWER CURTAIN ROD	5424	BOBICK	CLASSIC SERIES, HEAVY DUTY SHOWER CURTAIN ROD, 1" x 60" GA. 20, STAINLESS STEEL, SATIN FINISH
11	HOOK	B-549	BOBICK	SURFACE MOUNTED, DOUBLE COAT HOOD, STAINLESS STEEL, SATIN FINISH
12	TOILET TISSUE DISPENSER	B-2888	BOBRICK	SSURFACE MOUNTED, MULI ROLL TOILET TISSUE DISPENSER
13	TOWEL BAR	B-676	BOBICK	SURFACE MOUNTED, TOWEL SHELF WITH TOWEL BAR
14	SOAP DISH	B-6807	BOBICK	SURFACE MOUNTED, SOAP DISH, STAINLESS STEEL, SATIN FINISH
15	SEAT COVER DISPENSEER	B-221	BOBRICK	SURFACE MOUNTED, TOILET SEAT COVER DISPENSER
16	LOCKERS		LTON	DOBLE TIER 12"h x 18" d x 82" h ANTIMICROBIAL HEALTHCARE LOCKER 3 WIDE MODULE

NOTE:

2

FAUCET SCHEDULE				
TAG.	EQUIPMENT	MODEL	BRAND	DESCRIPTION
P.2	LAVATORY (ADA)	6114.110.002	American standard	MONTERREY, SINGLE CONTROL CENTERSET FAUCET 1.5 gpm PRESSURE COMPENSATING AERATOR
P.4	SHOWER	0355.912	AMERICAN STANDARD	SINGLE CONTROL CENTERSET FAUCET
P.5	LAVATORY (HAND SINK)	7545.170	AMERICAN STANDARD	MONTERREY TWO HANDLE CENTERSET LAVATORY FAUCET

1



STANDARD EQUIPMENT AND ACCESSORIES HEIGHT



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YO, INGENIERO JAVIER I. CASTILLO, LICENCIA 12391, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO Y PREPARO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTiendo QUE DICHO PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CODIGOS DE CONSTRUCCION VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PUBLICAS CON JURISDICCION. CERTIFICO ADENAS QUE EN LA PREPARACION DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY 14-099, SEGUN ENMIENDADA, CONOCIDA COMO LA LEY PARA LA INVERSION POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA LEY NOM. 310 DE 15 DE MAYO DE 1938, SEGUN ENMIENDADA, LEY NOM. 96 DE 6 DE JULIO DE 1976, SEGUN ENMIENDADA, SEGUN APLIQUE. RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OSPE.

PROJECT OWNER



CONSULTANT

PROJECT NAME

**HURRA
PROPOSED TEMPORARY
OPERATING ROOM**

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME
**DETAILS - EQUIPMENT
AND ACCESIRUES**

ISSUE FOR:

TAG	REVISION	NAME	DATE
△	REVISION		MM/DD/YY

A1.3

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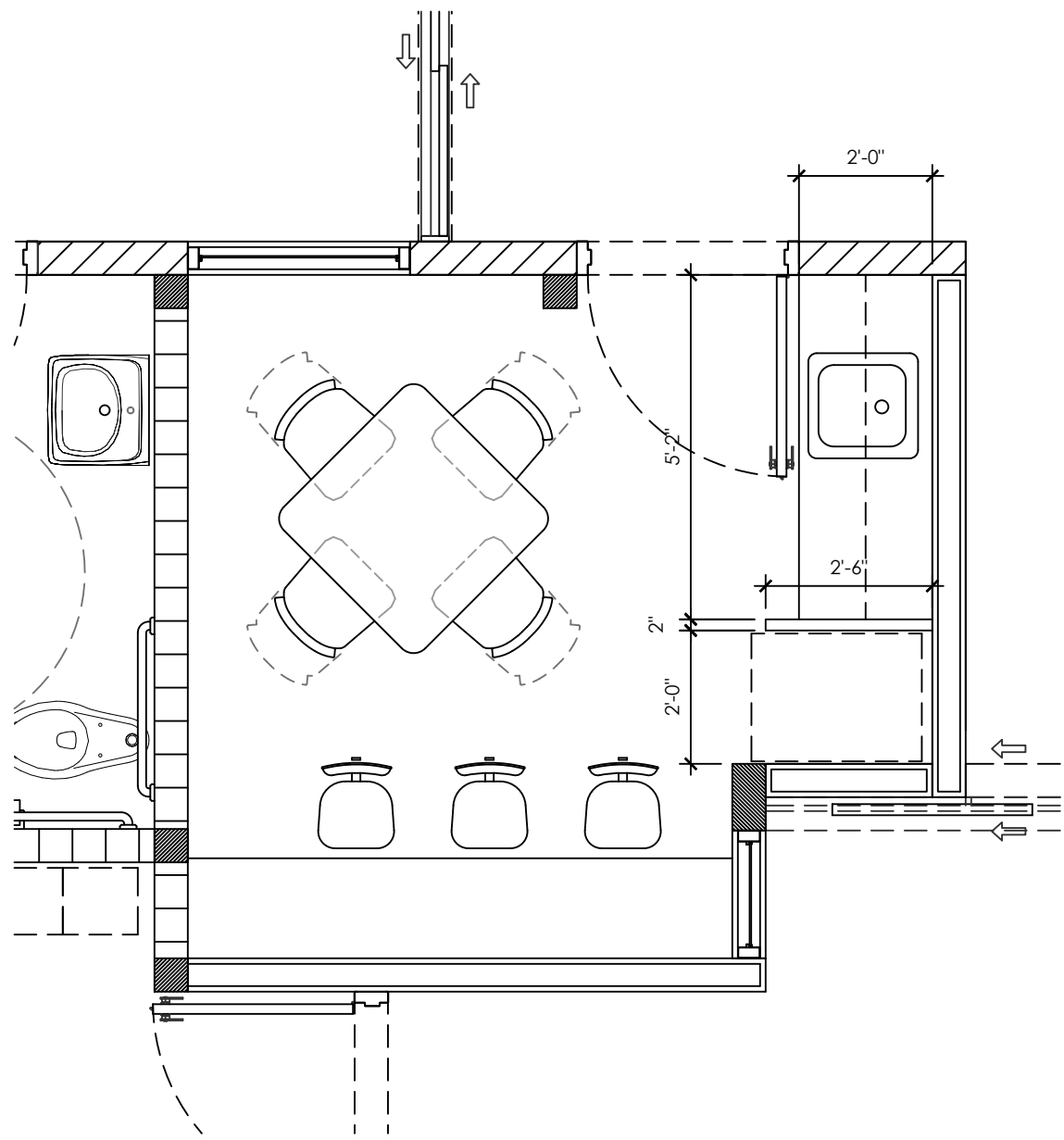
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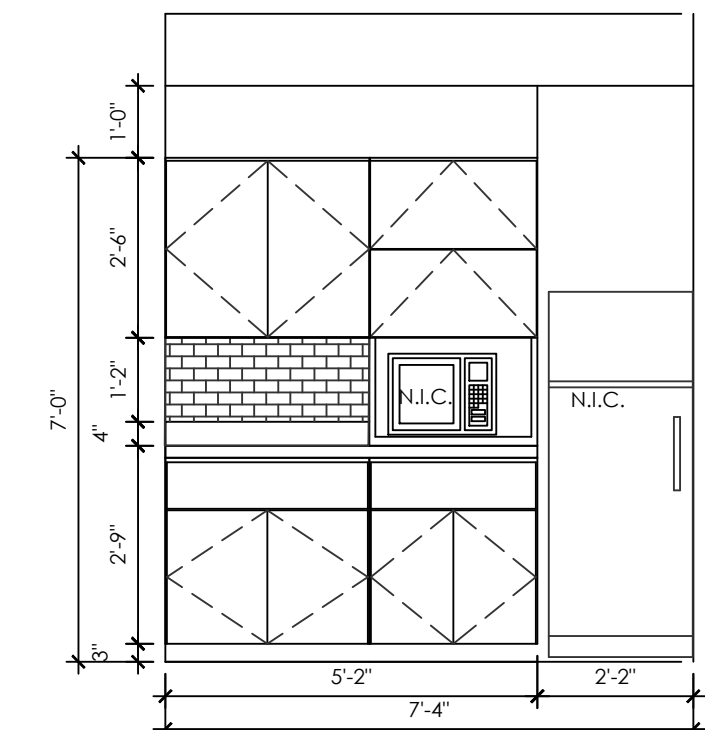
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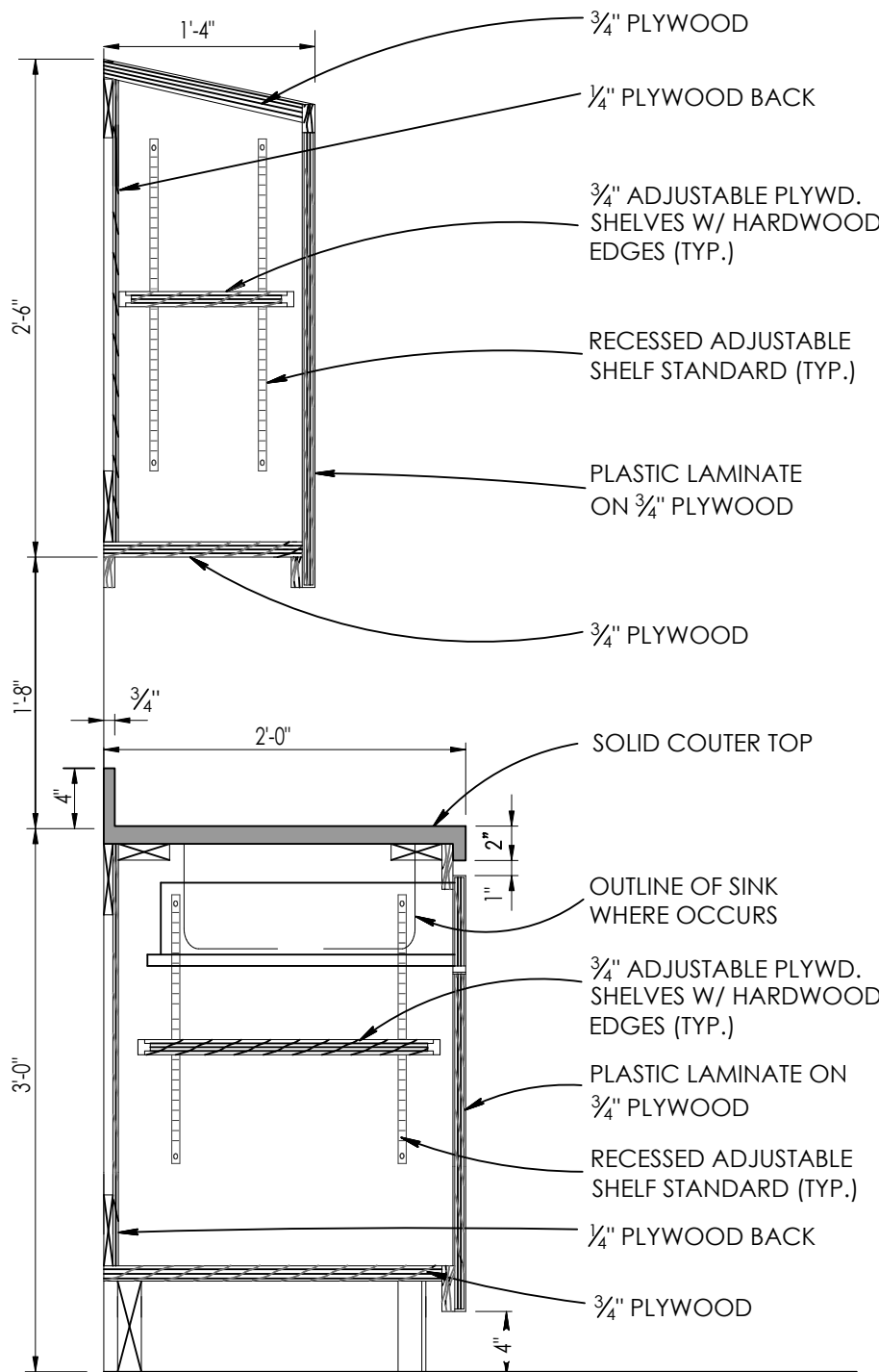
STAFF LOUNGE NO. 1112
SCALE: 3/8" = 1'-0"



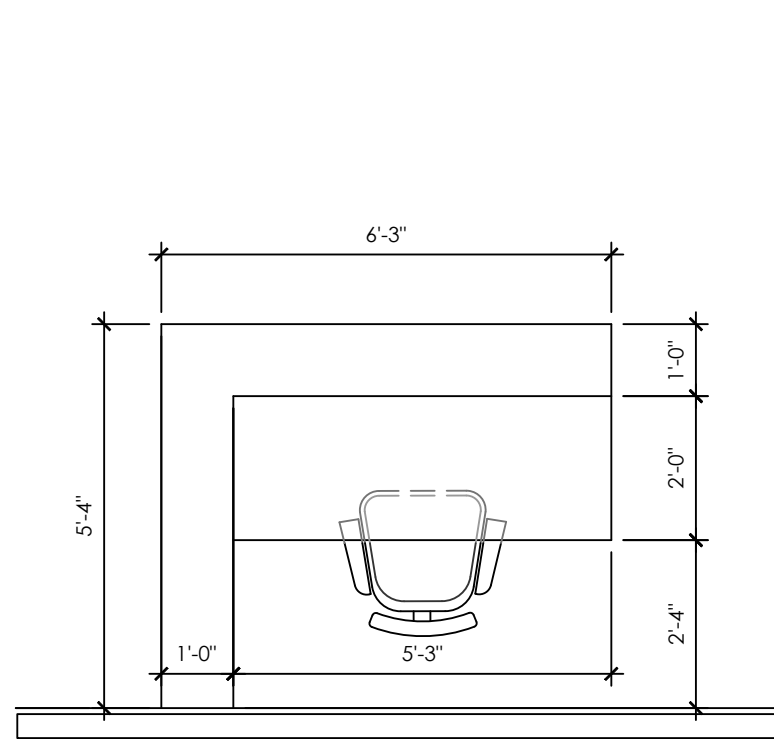
LOUNGE CABINET ELEVATION
SCALE: 3/8" = 1'-0"

IMPORTANT NOTE

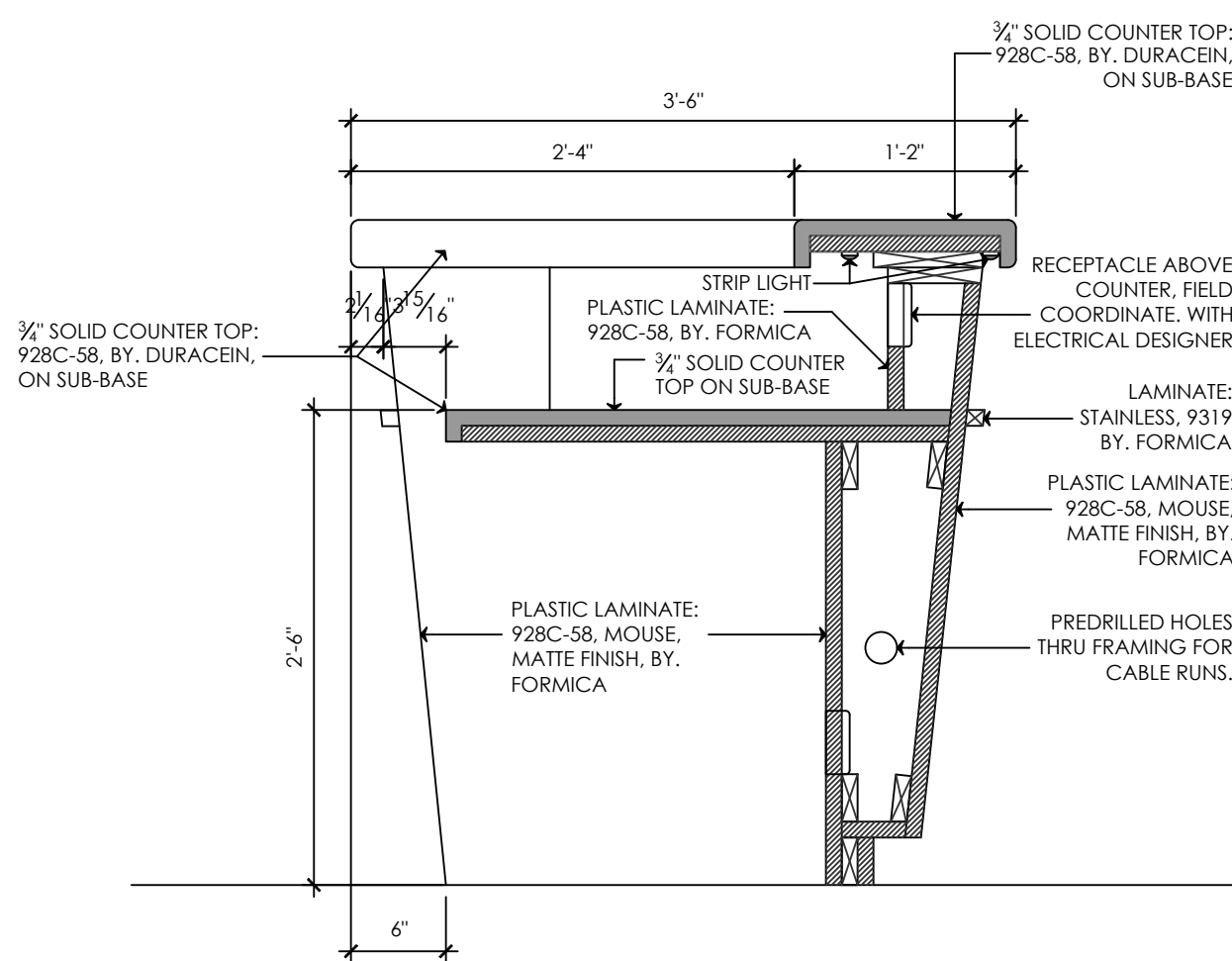
1. BEFORE APPLYING OR INSTALLING ANY PRODUCT OR MATERIAL ON THE EXISTING FLOOR, A SELF LEVELING MUST BE APPLIED. SUBMIT BY APPROVAL.
2. BEFORE APPLYING OR INSTALLING ANY PRODUCT OR MATERIAL ON THE FLOOR WHERE THE SHOWERS WILL GO, A SEALANT MUST BE APPLIED TO PREVENT LEAKAGE. SUBMIT FOR APPROVAL.



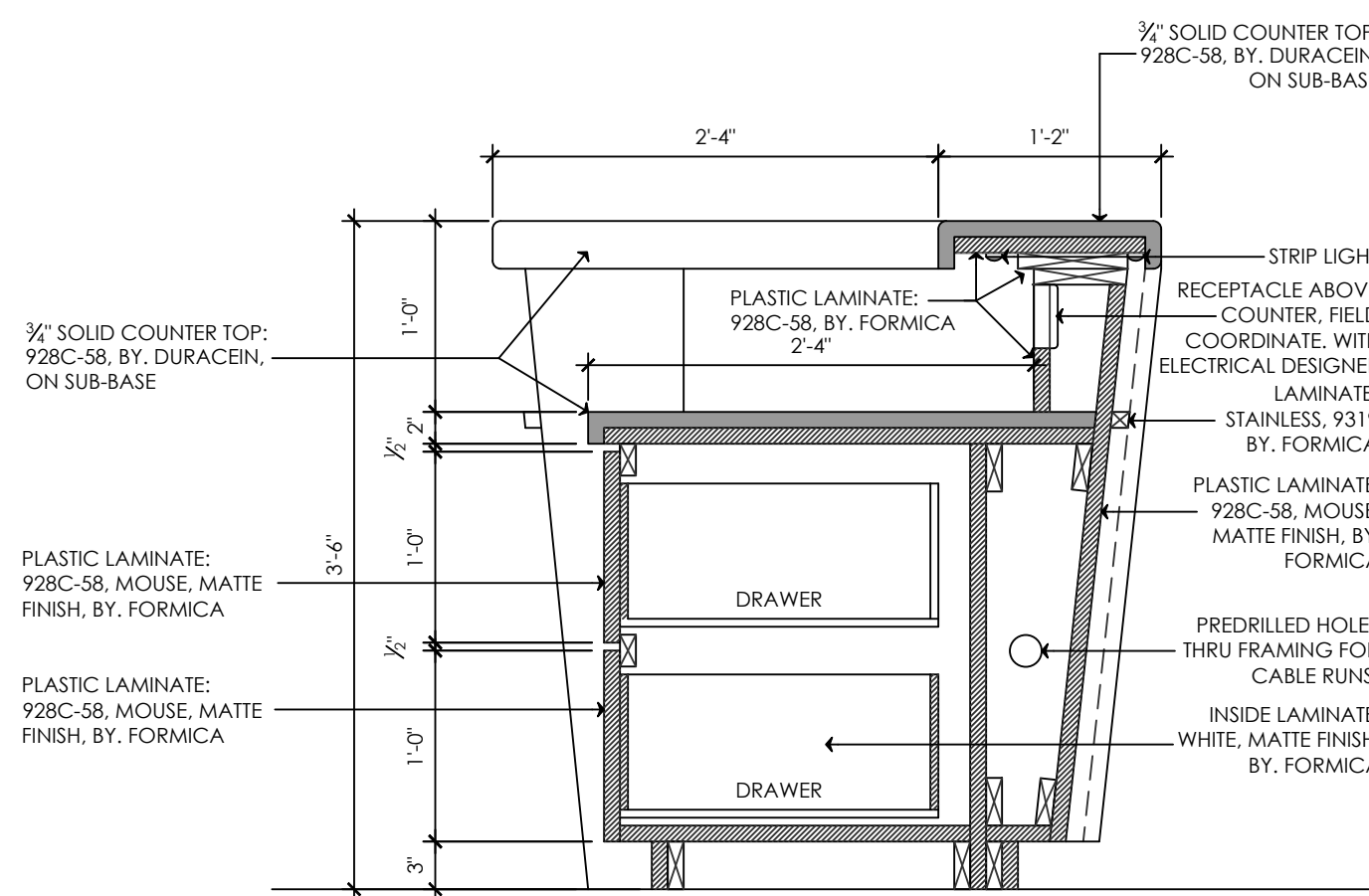
LAUNGE CABINET
SCALE: 3/4" = 1'-0"



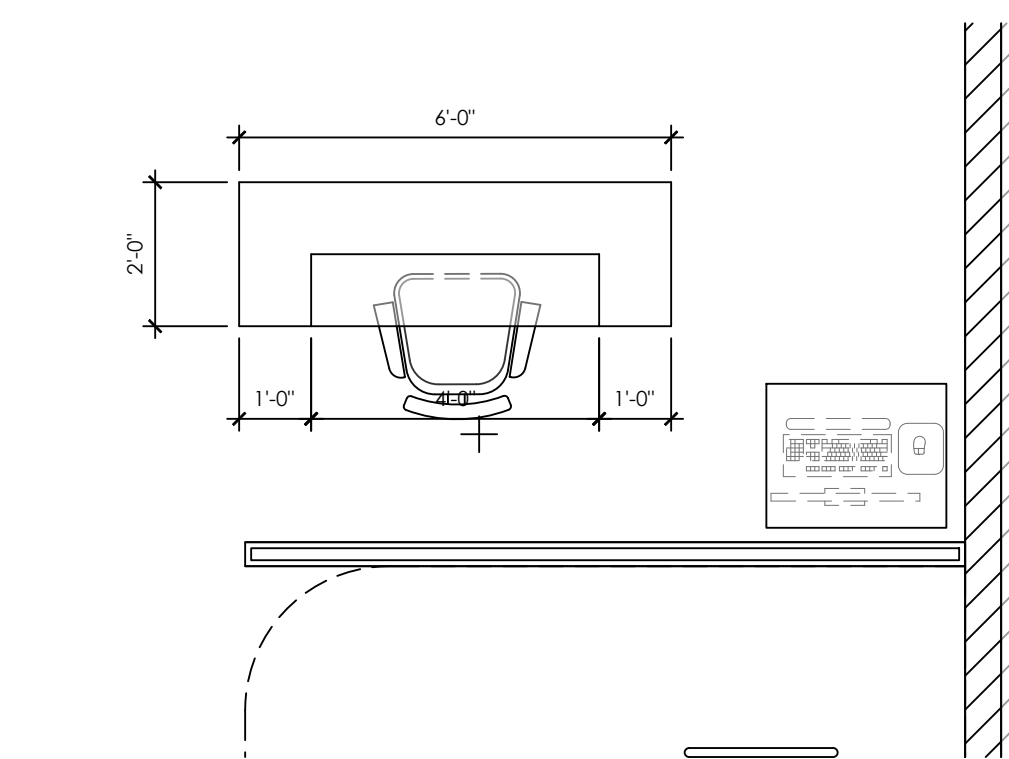
NURSE STATION NO. 107
SCALE: 3/8" = 1'-0"



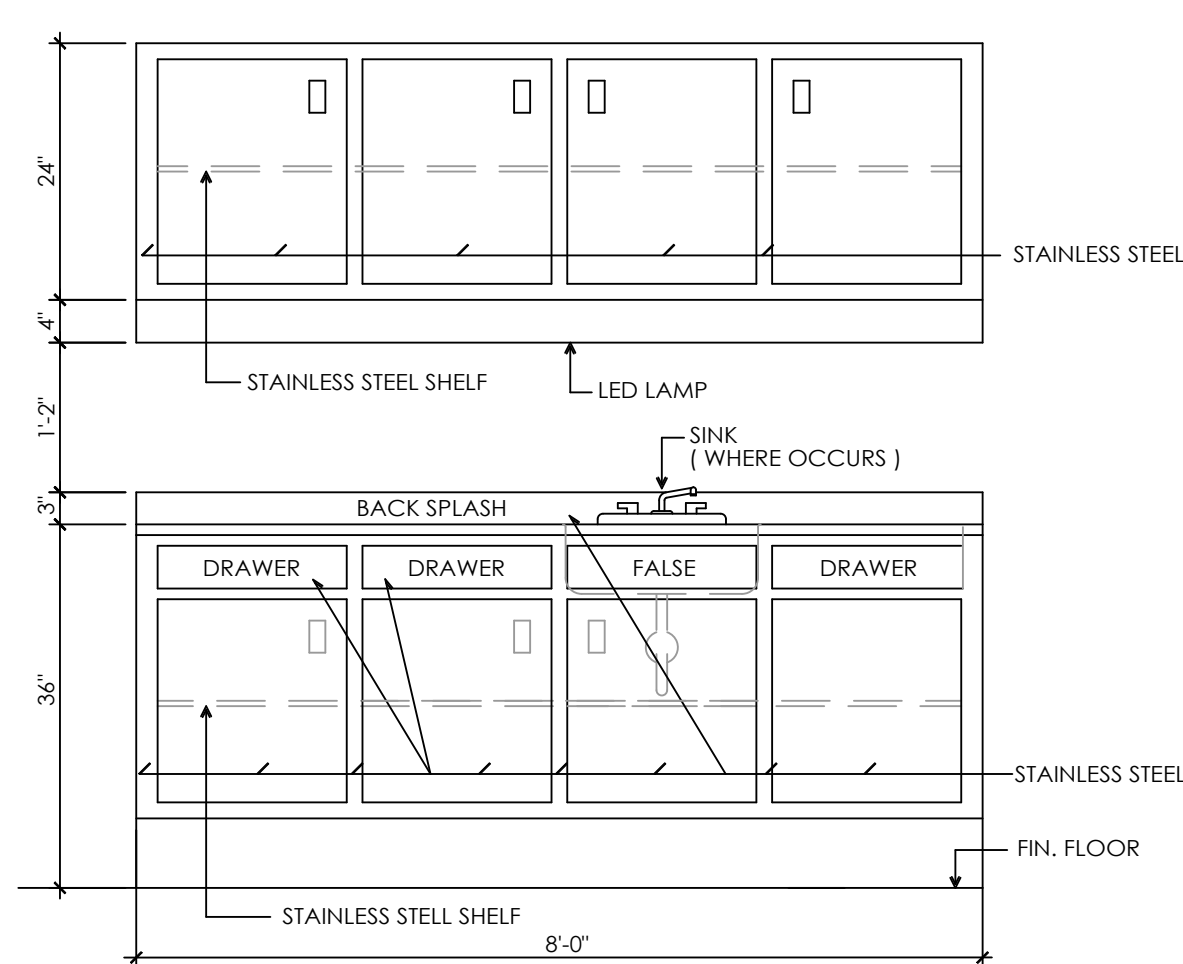
NURSES STATION
SCALE: 1" = 1'-0"



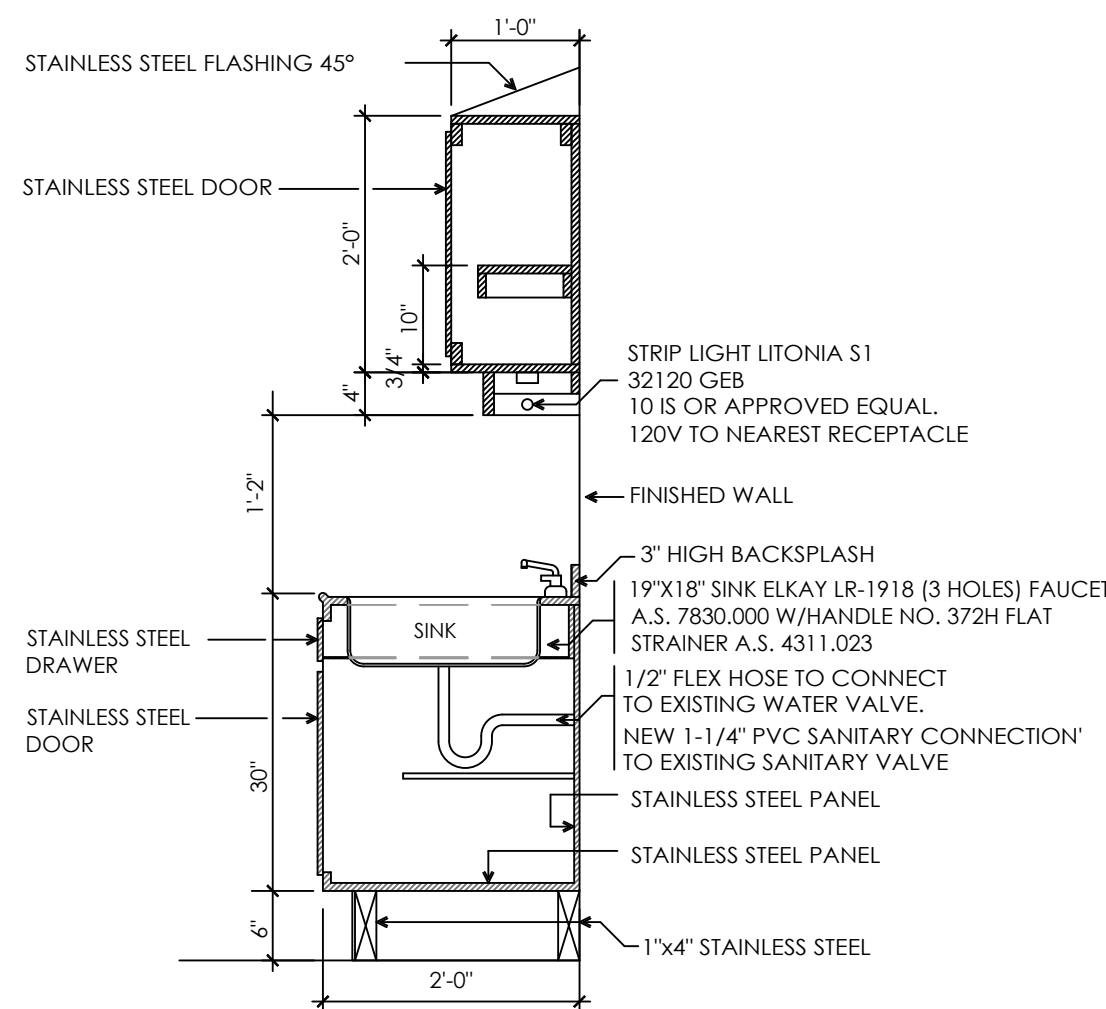
NURSES STATION
SCALE: 1" = 1'-0"



NURSE STATION NO. 102
SCALE: 3/8" = 1'-0"



CLEAN UTILITY CABINET
SCALE: 1/2" = 1'-0"



CLEAN UTILITY CABINET
SCALE: 1/2" = 1'-0"

FINISHES SCHEDULE														
ROOM NUMBER	ROOM NAME	FLOOR				BASE		WALLS			CEILING		REMARKS	
		MATERIAL				MATERIAL		MATERIAL			MATERIAL			
		RESILOR TERRAZO 10 SYSTEM BY SHERWIN WILLIAMS					6' EDP-RESILOR TERRAZO 10 BY SHERWIN WILLIAMS	CERAMIC OR PORCELAIN TILE	MIPOLAM PANEL	CERAMIC TILE	STAINLESS STEEL PANEL	PANIT		ACOUSTICAL SUSPENSION GRID 24" x 24" ACOUSTICAL TILES
	NOTE: FOR ALL ITEMS IN THIS SECTION, THE CONTRACTOR MUST SUPPLY SAMPLES TO THE ARCHITECT AND / OR OWNER FOR APPROVAL PRIOR TO SETTING.													
100	HOLDING ENTRANCE	■					■				■		■	
101	HOLDING AREA	■					■				■		■	
102	NURSE STATION						■				■		■	
103	PATIENT TOILET	■					■		■				■	
104	SEMI-RESTRICTED CORRIDOR	■					■					■	■	
105	TEMP. STORAGE	■					■				■		■	
106	RECOVERY LEVEL II	■						■			■		■	
107	NURSE STATION						■				■		■	
108	RECOVERY AREA	■					■		■				■	■
109	SOILED	■							■				■	
110	PATIENT TOILET												■	
111	FEMALE TOILET	■					■			■			■	
112	STAFF LOCKER'S	■					■			■			■	■
113	STAFF GOWNING	■					■				■			
114	MALE TOILET	■					■		■					
115	DOCTOR'S WORK AREA											■	■	
116	JANITOR	■										■	■	
117	SOILED LINEN	■					■							
118	STERILIZING ROOM										■		■	
119	STERILIZING PREP.	■					■				■		■	
120	RESTRICTED CORIDOR	■					■				■		■	
121	ELECTRICAL ROOM	■												
122	CLEAN SUPPLIES STORAGE	■					■						■	
123	OPERATING ROOM									■			■	
124	OPERATING ROOM	■					■						■	
125	OPERATING ROOM						■			■			■	
126	MEDICAL PREP.	■					■				■		■	
127	MEDICAL PREP.	■					■				■		■	
128	MEDICAL PREP.	■								■			■	
129	MEDICINE CIRURGICAL STORAGE	■					■				■		■	
130	MEDICINE CIRURGICAL STORAGE	■					■				■		■	
FINISHES NOTES:										IMPORTANT NOTE: It is the contractor's responsibility to visit the project and verify the existing conditions, before estimating costs and performing any work.				
1-	THE CONTRACTOR WILL BE RESPONSIBLE FOR APPLYING THE BEST PRACTICES IN THE FINISHES IN ALL THE STAGES OF THE PROJECT.													
2-	THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING ALL MATERIALS, LABOR AND FINISHES NECESSARY FOR THE OPERATION OF THE PROJECT.													
3-	THE CONTRACTOR WILL PROVIDE ALL THE APPROPRIATE DOCUMENTATION AND PRODUCTS TO BE USED FOR EACH FINISH.													
4-	The contractor will inspect and ensure that existing walls are prepared and repaired, including conditioning, repairing, PUTTIFY, and painting or any other application to ensure the wall surface and finish are adequate. According to best construction practices.													

NOTE: THESE SPECIFICATIONS ARE A SUGGESTION. THE OWNER HAS THE POWER TO SELECT THE COLOR AND THE SLAB OF THEIR PREFERENCE. THE CONTRACTOR WILL SUBMIT SAMPLES FOR THE FINAL SELECTION.	MIPOLAM WALL: MIPOLAM WALL PANELS DECOCLEAN (4' x 8' x 0.08" (2mm)) COLOR: CHALK BY: GERFLOR (WWW.GERFLORUSA.COM) THESE SPECIFICATIONS ARE A SUGGESTION. THE OWNER HAS THE POWER TO SELECT THE COLOR AND THE MIPOLAM OF THEIR PREFERENCE. THE CONTRACTOR WILL SUBMIT SAMPLES FOR THE FINAL SELECTION. THIS MATERIAL WILL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS	STAINLESS STEEL WALL: OPERATING ROOM STAINLESS STEEL WALL COVERING SMOOTH PANELS (4' x 10') GAUGE: #16 THESE SPECIFICATIONS ARE A SUGGESTION. THE OWNER HAS THE POWER TO SELECT THE COLOR AND THE MIPOLAM OF THEIR PREFERENCE. THE CONTRACTOR WILL SUBMIT SAMPLES FOR THE FINAL SELECTION. THIS MATERIAL WILL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS

FINISH TYPE SCHEDULE			
FINISH TYPE	MODEL	BRAND	DESCRIPTION
SOLID COUNTER TOP	PM4407	DURASEIN	SOLID COUNTER TOP, PM4407, SNOWY, BY DURASEIN
PLASTIC LAMINATE COUNTER TOP	6280-S8	FORMICA	MIDNIGHT STONCR, MATTE FINISH, BY FORMICA
STAINLESS STEEL CABINET	-	-	STAINLESS STEEL PANEL
PLASTIC LAMINATE CABINET BODY	928C-S8	FORMICA	COLORCORE2 928C-S8, MOUSE, MATTE FINISH, GRIS SOURIS, BY FORMICA
PLASTIC LAMINATE INSIDE CABINET	WHITE	FORMICA	MATTE FINISH
NOTE:	THESE SPECIFICATIONS ARE A SUGGESTION. THE OWNER HAS THE POWER TO SELECT THE COLOR AND THE MATERIAL OF THEIR PREFERENCE. THE CONTRACTOR WILL SUBMIT SAMPLES FOR THE FINAL SELECTION.		



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PROJECT OWNER

DEPARTAMENTO DE
SALUD



CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

FINISHES AND
FURNUTURE

ISSUE FOR:

TAG	REVISION	NAME	DATE
△	REVISION		MM/DD/YY

A1.4

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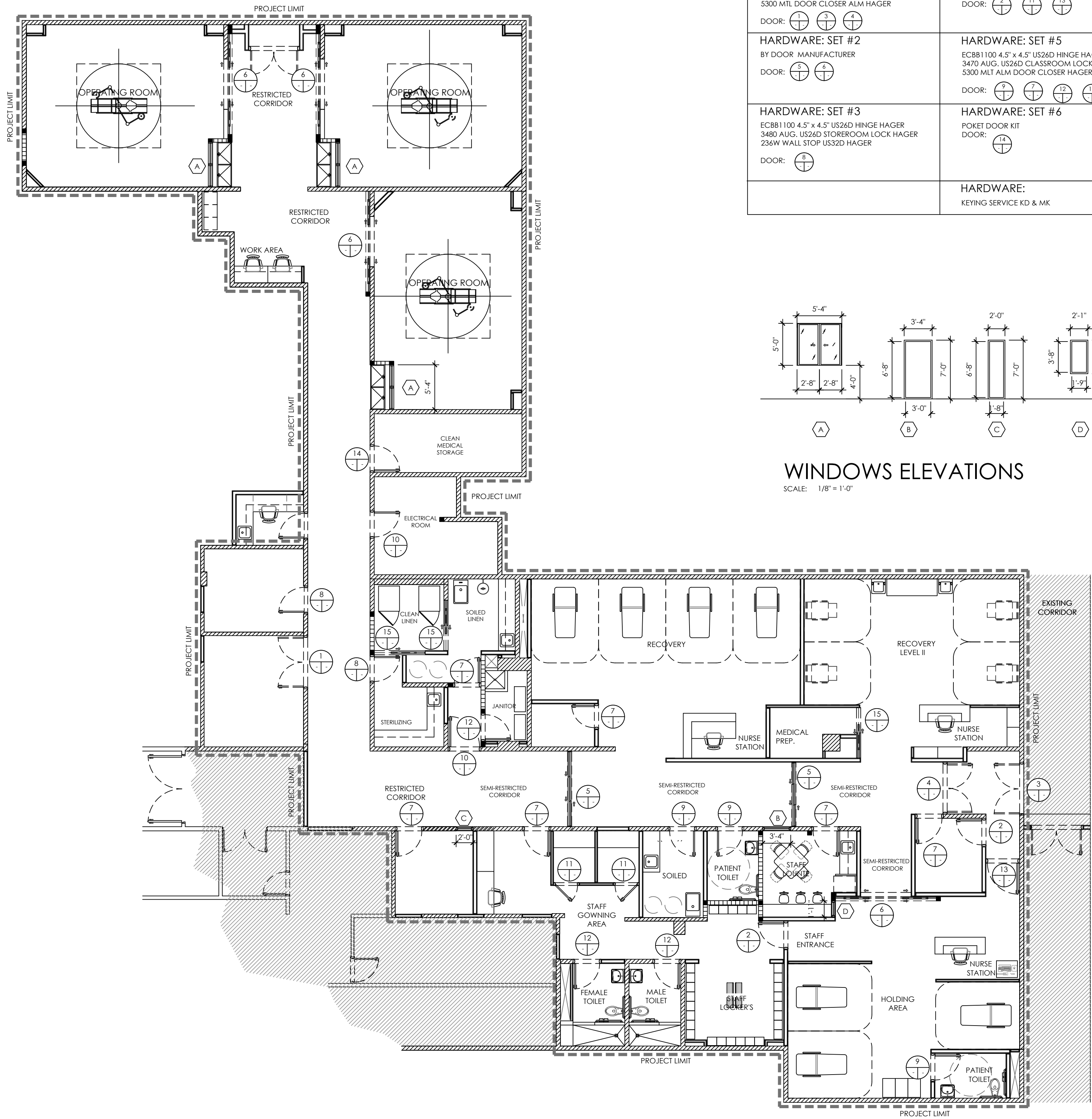
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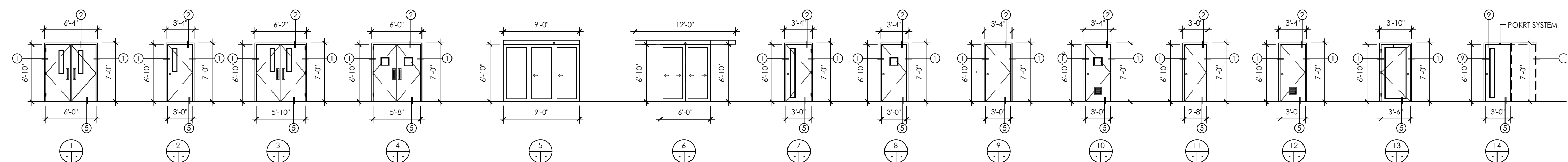
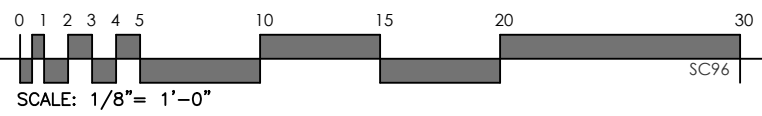
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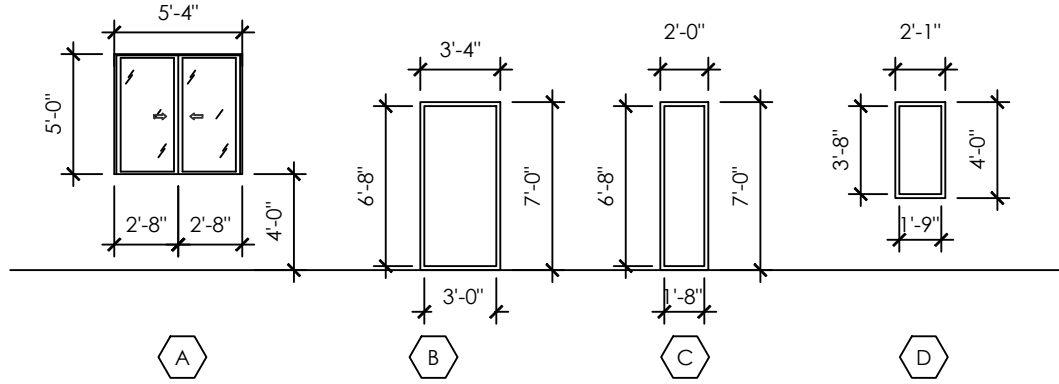
DOOR AND WINDOWS IDENTIFICATIONS PLAN TEMPORARY OPERATING ROOM



DOOR ELEVATIONS

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

DOOR HARDWARE SCHEDULE	
HARDWARE: SET #1 ECB81100 4.5" x 4.5" US26D HINGE HAGER 4701 SVR LBR 36" x 84" ALM HAGER 47CE TRM ALM HAGER 3902 1-1/4" MORT. CYLINDER US26D HAGER 5300 MTL DOOR CLOSER ALM HAGER DOOR:	HARDWARE: SET #7 ECB81100 4.5" x 4.5" US26D HINGE HAGER 3440 AUG. US26D PRIVACY LOCK HAGER 5300 MTL ALM DOOR CLOSER HAGER DOOR:
HARDWARE: SET #2 BY DOOR MANUFACTURER DOOR:	HARDWARE: SET #5 ECB81100 4.5" x 4.5" US26D HINGE HAGER 3470 AUG. US26D CLASSROOM LOCK HAGER 5300 MTL ALM DOOR CLOSER HAGER DOOR:
HARDWARE: SET #3 ECB81100 4.5" x 4.5" US26D HINGE HAGER 3480 AUG. US26D STOREROOM LOCK HAGER 236W WALL STOP US32D HAGER DOOR:	HARDWARE: SET #6 POKET DOOR KIT DOOR:
HARDWARE: KEYING SERVICE KD & MK	



WINDOWS ELEVATIONS

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

DOOR SCHEDULE																			
SYMBOL	OPENING		DOOR					FRAME					REMARKS						
	FINISHED SIZE		SIZE		THICKNESS OR GAUGE	MODEL OR STYLE	TYPE	GLASS	MATERIAL	TYPE	DETAIL								
	WIDTH	HEIGHT	WIDTH	HEIGHT							JAMB	HEAD		BASE					
	76"	84"	72"	82"	GA. #16	A14 SERIES STEELCRAFT	FG	1/4" B/G	STEEL Ga. 14	F(a/b)	3	4	5	SEE SPECS					
	40"	84"	36"	82"	GA. #16	HP SERIES STEELCRAFT	N	1/4" B/G	STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	64"	84"	56"	82"	GA. #16	HP SERIES STEELCRAFT	NG	1/4" WIRE GLASS	STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	40"	84"	36"	82"	GA. #16	HP SERIES STEELCRAFT	F		STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	40"	84"	36"	82"	GA. #16	HP SERIES STEELCRAFT	F-L		STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	40"	84"	40"	82"	GA. #16	HP SERIES STEELCRAFT	N	1/4" B/G	STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	76"	84"	72"	82"	GA. #16	HP SERIES STEELCRAFT	NG	1/4" WIRE GLASS	STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	72"	84"	72"	82"		STAINLESS STEEL	STANDLEY	V	1/4" WIRE GLASS	STAINLESS STEEL				SEE SPECS					
	40"	84"	36"	82"	GA. #16	HP SERIES STEELCRAFT	V	1/4" WIRE GLASS	STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	40"	84"	36"	82"	GA. #16	HP SERIES STEELCRAFT	F		STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	76"	84"	72"	82"	GA. #16	HP SERIES STEELCRAFT	NG	1/4" WIRE GLASS	STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	36"	84"	36"	82"	GA. #16	HP SERIES STEELCRAFT	V	1/4" WIRE GLASS	STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	40"	84"	36"	82"	GA. #16	HP SERIES STEELCRAFT	L	1/4" WIRE GLASS	STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	40"	84"	36"	82"	GA. #16	HP SERIES STEELCRAFT	FG	1/4" WIRE GLASS	STEEL Ga. 14	F(a/b)	1	2	5	SEE SPECS					
	40"	84"	36"	82"	GA. #16 STEEL	HP SERIES STEELCRAFT	V	1/4" B/G	STEEL Ga. 14 STEEL	F(a/b)	1	2	5	SEE SPECS					
DOOR NOTES:									FRAME TYPE			STEEL GA. 14 F SERIES STEELCRAFT			FRAME NOTE:				
1. SUBMIT SHOP DRAWINGS FOR DESIGNER APPROVAL OF ALL DOOR AND RELATED ITEMS. 2. ALL OPENINGS WILL BE VERIFIED ON THE FIELD. ANY DISCREPANCIES WILL BE NOTIFIED TO THE DESIGNER. 3. DOOR MANUFACTURER WILL MAKE ALL NECESSARY PROVISIONS FOR PROPER INSTALLATION OF SPECIFIED HARDWARE. 4. WHEN NECESSARY, CAULKING SHALL BE DONE IN STRICT ACCORDANCE WITH MFR'S RECOMMENDATIONS TO OBTAIN A WATERIGHT OR SOUND BARRIER (SEE SPECS). ALL OPENINGS WILL BE CAULKED AND SEALED ON INTERIOR AND EXTERIOR SIDES. COLOR OF CAULKING TO BE SELECTED BY THE DESIGNER. 5. ALL KEYS STAMPED "DO NOT DUPLICATED" FINAL KEY LAYOUT AS PER DESIGNER AND/OR OWNER INSTRUCTIONS. 6. ANCHORS SHALL BE 4" PHILLIPS HEAD SCREWS W/EXPANSION SHIELDS, TWO PER HEAD AND THREE PER JAMB OR HLT-KWK BOLTS W/2" EMBEDMENT. 7. ALL WOOD AND METAL DOORS WILL BE PROVIDED WITH A MAXIMUM OF 1/8" UNDER CUT. 8. INSTALLATION SHALL BE DONE TO FINISH OPENINGS FOLLOWING MFR'S RECOMMENDATION. 9. ALL DOORS SHALL BE UNDERCUT 1/2" CLEAR TO FINISH MATERIAL EXCEPT FOR DOORS INDICATED FIRE RATED DOORS SHALL NOT BE UNDERCUT MORE 3/4" FROM DOOR TO SADDLE. STEELCRAFT DOORS ARE DISTRIBUTED IN PUERTO RICO BY INTERNATIONAL HARDWARE. sales@ih-pr.com												TYPE F(a)				TYPE F(b)			It will be the responsibility of the contractor to verify the thickness of the walls, before ordering the door frames.

WINDOWS SCHEDULE											
SYMBOL	OPENING		WINDOW						FRAME		REMARKS
	SIZE	WIDTH	HEIGHT	THICKNESS	UNITS PER OPENING	MODEL OR STYLE	MATERIAL	TYPE	GLASS	MATERIAL	TYPE
	64"	60"	64"	60"	2	SERIE 205	GLASS	1/4" 8/G	TEMPERED GLASS	ALUMINUM	
	40"	84"	40"	84"	1	STEELCRAFTS	FIXED GLASS	1/4" 8/G	TEMPERED GLASS	ALUMINUM	
	24"	84"	24"	84"	1	STEELCRAFTS	FIXED GLASS	1/4" 8/G	TEMPERED GLASS	ALUMINUM	
	23"	60"	24"	60"	1	STEELCRAFTS	FIXED GLASS	1/4" 8/G	TEMPERED GLASS	ALUMINUM	
WINDOWS NOTES:									IMPORTANT NOTE:		
1- THE CONTRACTOR SHALL VERIFY ALL MEASURES OF FINISHED OPENING WINDOWS BEFORE ORDERING. 2- EXCEPT WHERE OTHERWISE INDICATED, ALL MATERIAL USED IN WINDOWS AND FRAMES BE AS INDICATED IN THE WINDOWS SCHEDULE OR SELECTED BY DESIGNER OR OWNER. 3- HARDWARE TO BE USED IN WINDOWS TO THE APPLICABLE STYLE WINDOW, BY THE MANUFACTURER AND THE DATA TYPES OF HARDWARE SCHEDULE OR SELECTED BY DESIGNER OR OWNER. 4- COORDINATE ALL WINDOWS, WINDOWS OPENING AND FRAMES WITH MANUFACTURER. 5- ALL OPENING SIZE MEASUREMENTS ARE ACCORDING TO EXISTING CONDITIONS, NOT INCLUDING OR APPLYING THE INCRUSTATION DISTANCE IF ANY OF THE WINDOWS.									It is the contractor's responsibility to visit the project and verify the existing conditions, before estimating costs and performing any work.		
WINDOWS TYPE:											
1. MODEL: FULL GLASS, TYPE: TEMPERED GLASS, COLOR BLUE GREEN AND STEEL FRAME 14 GA. BY: STEELCRAFT, / INTERNATIONAL HARDWARE, sales@ih-pr.com 2. MODEL: SERIE 205, TYPE TEMPERED GLASS, COLOR BLUE GREEN AND FRAME ACCORDING TO THE SPECIFICATIONS BY: ANSA INDUSTRIAL, www.ansa.com.do 3. MODEL: FULL GLASS, TYPE LAMINATED GLASS, COLOR BLUE GREEN AND FRAME CLOSE ALUMINUM TUBE.											



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DEPARTAMENTO DE
SALUD



CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

DOOR'S IDENTIFICATIONS
DOOR SCHEDULE

ISSUE FOR:

PRELIMINARY DRAWINGS

TAG	REVISION	NAME	DATE
	REVISION		MM/DD/YY

A2.0

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PROJECT OWNER



PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

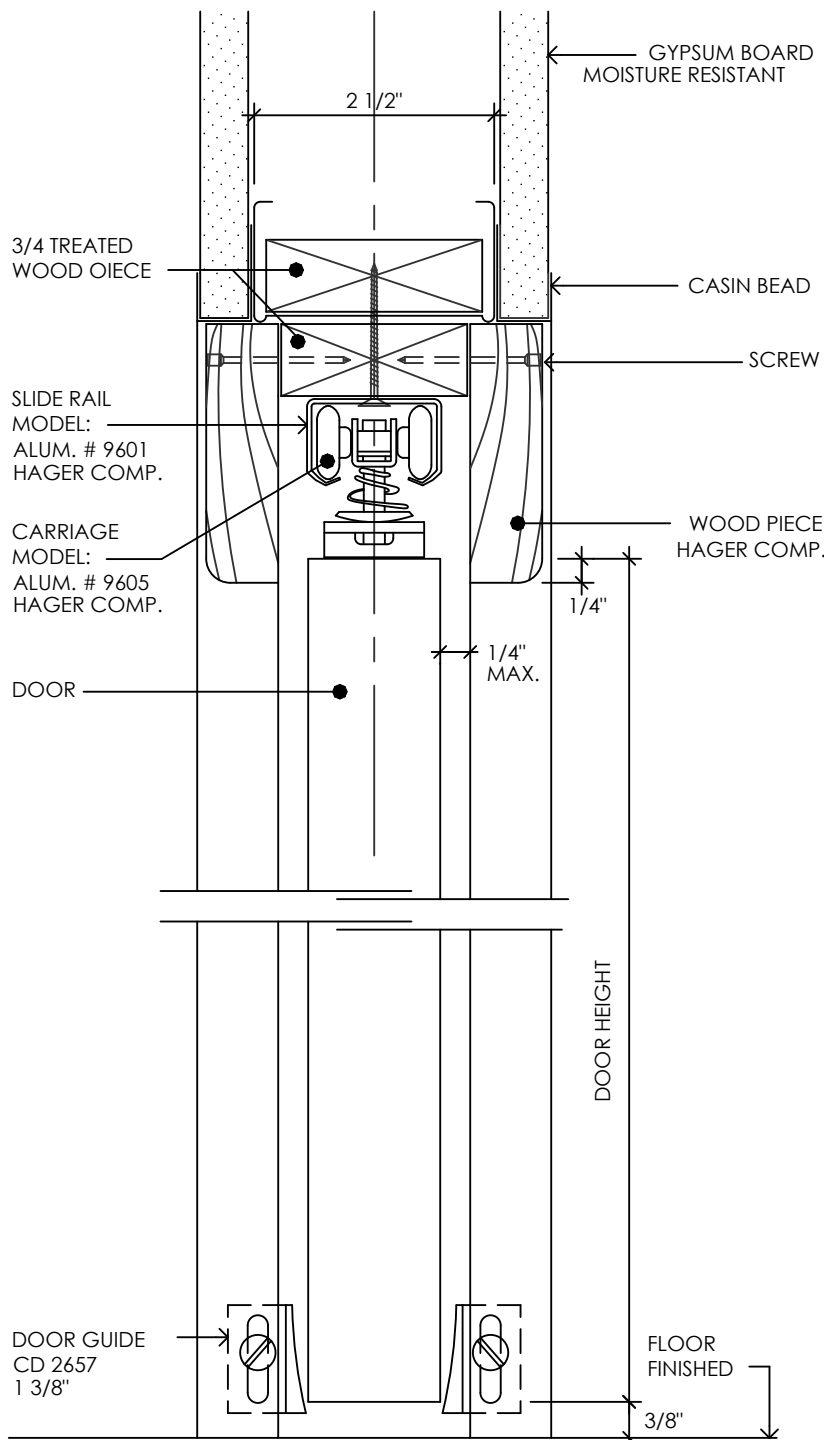
DOORS AND WINNDOWS

DETAILS

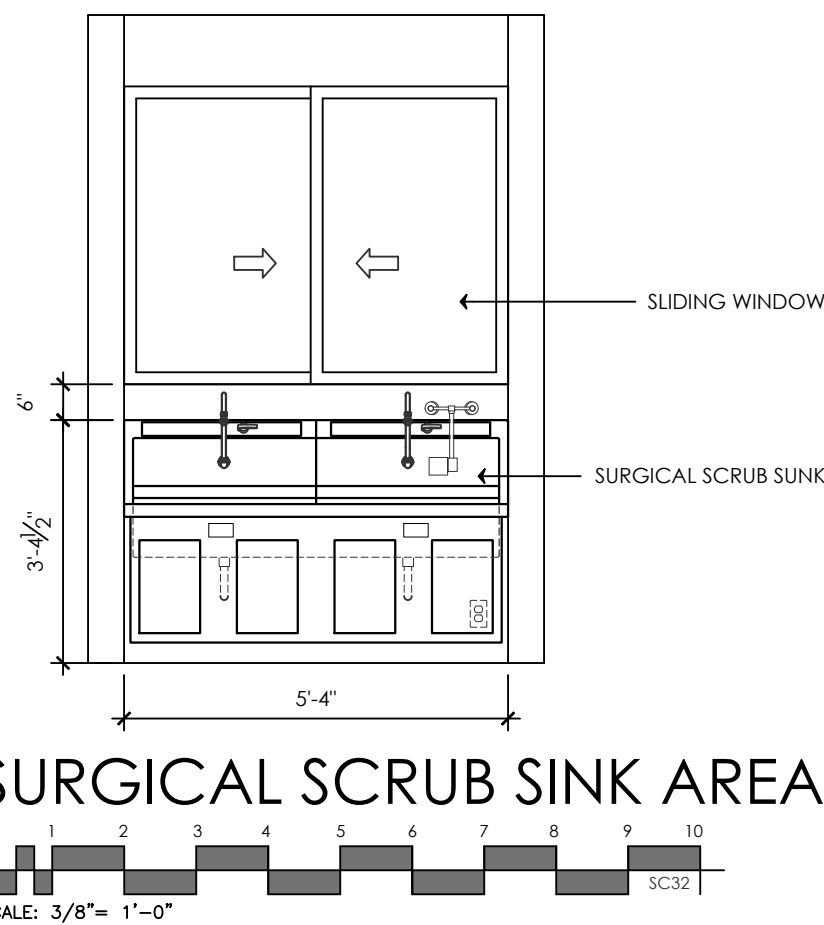
PRELIMINARY DRAWINGS

TAG	REVISION NAME	DATE
1	REVISION	MM/DD/YY

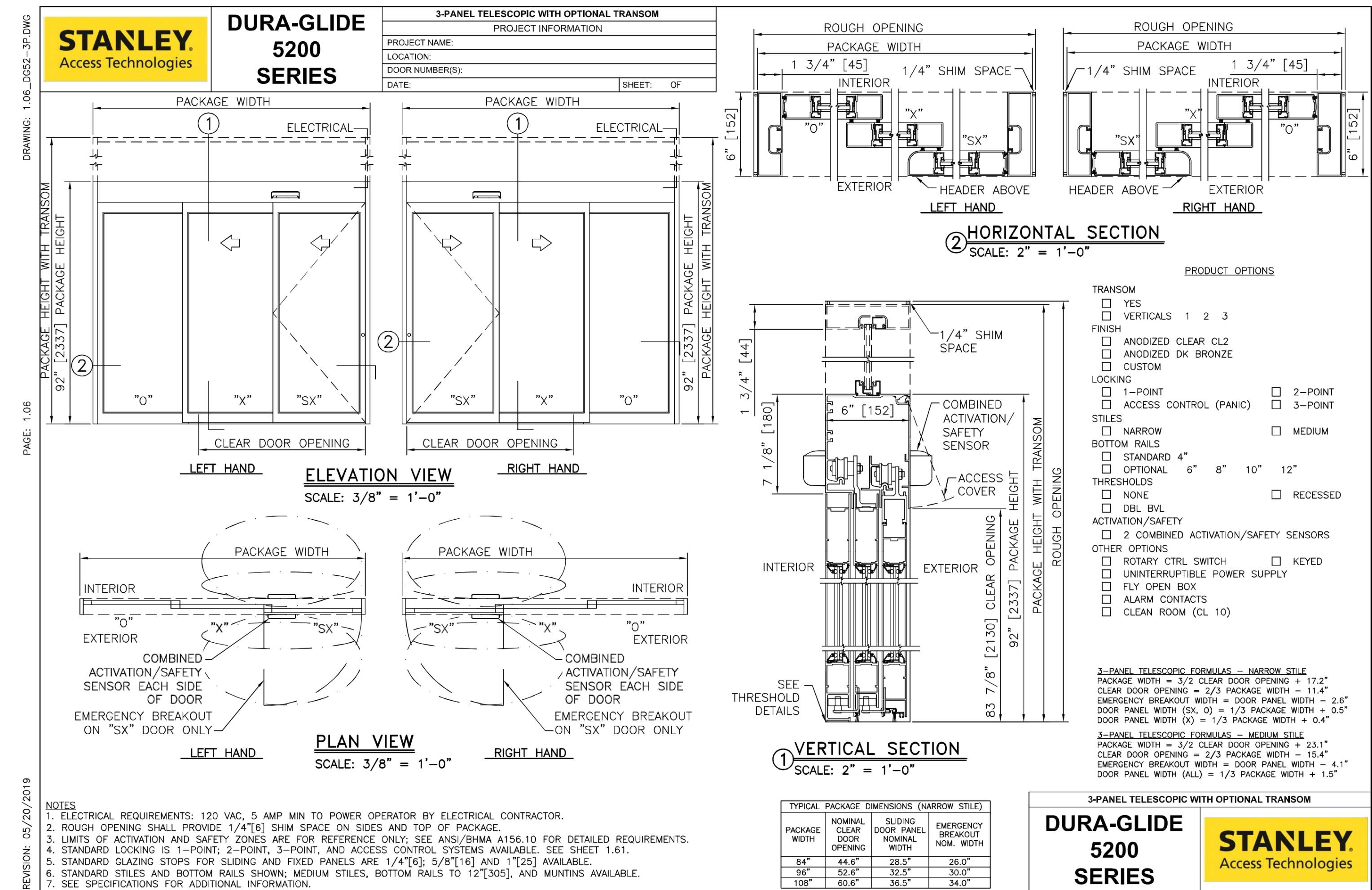
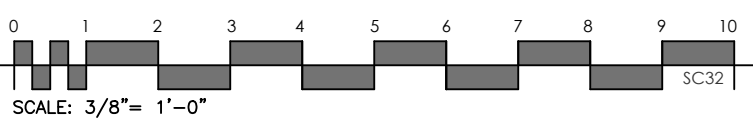
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9 POKET DOOR DETAIL
A2.1 SCALE: 6" = 1'-0"



SURGICAL SCRUB SINK AREA



AUTOMATIC DOOR

STANLEY
Access Technologies

**DURA-GLIDE
5200
SERIES**

3-PANEL TELESCOPIC RIGHT HAND	
PROJECT INFORMATION	
PROJECT NAME:	
LOCATION:	
DOOR NUMBER(S):	
DATE:	SHEET: OF

① VERTICAL SECTION

ELEVATION

PLAN

NOTES
ELECTRICAL REQUIREMENTS: 120 VAC, 5 AMP MIN TO POWER OPERATOR BY ELECTRICAL CONTRACTOR.
ROUGH OPENING SHALL PROVIDE 1/4\"/>

② HORIZONTAL SECTION

TYPICAL PACKAGE DIMENSIONS (NARROW STYLE)			
PACKAGE WIDTH	NOMINAL CLEAR DOOR OPENING	SLIDING DOOR PANEL NOM. WIDTH	EMERGENCY BREAKOUT NOM. WIDTH
54"	44.6"	28.5"	26.0"
66"	52.6"	32.5"	30.0"
108"	60.6"	36.5"	34.0"

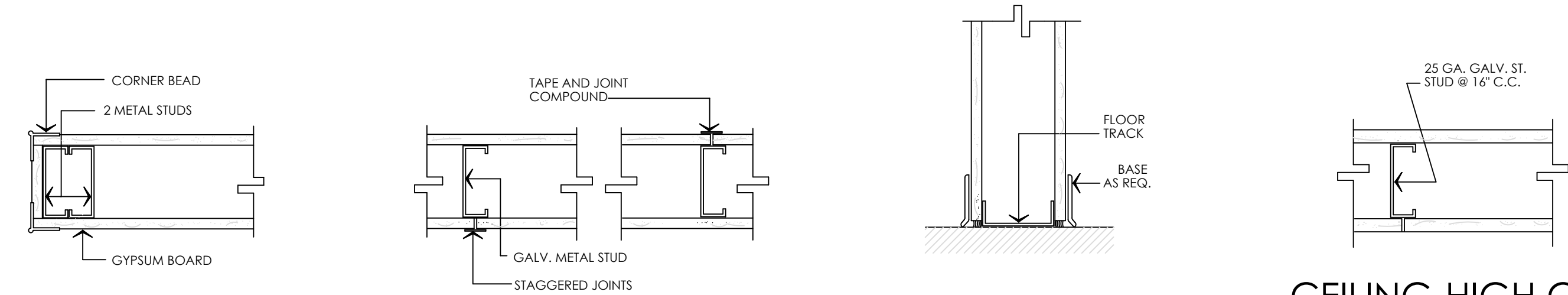
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REVISION: 05/20/2019

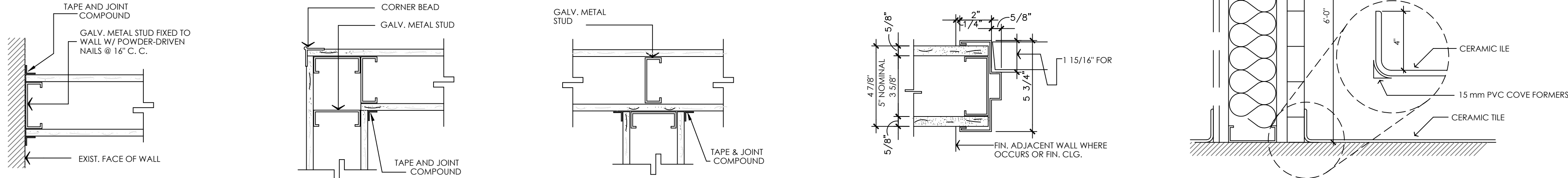
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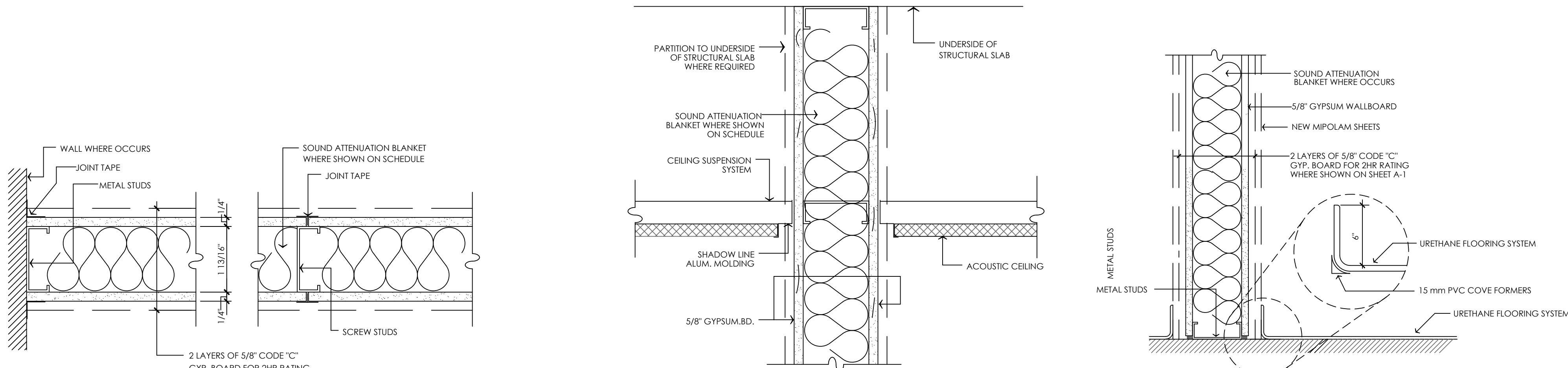
END WALL CONDITION BUTT JOINT CONDITION FLOOR CONDITION CEILING-HIGH GYPSUM BOARD PARTITIONS

4



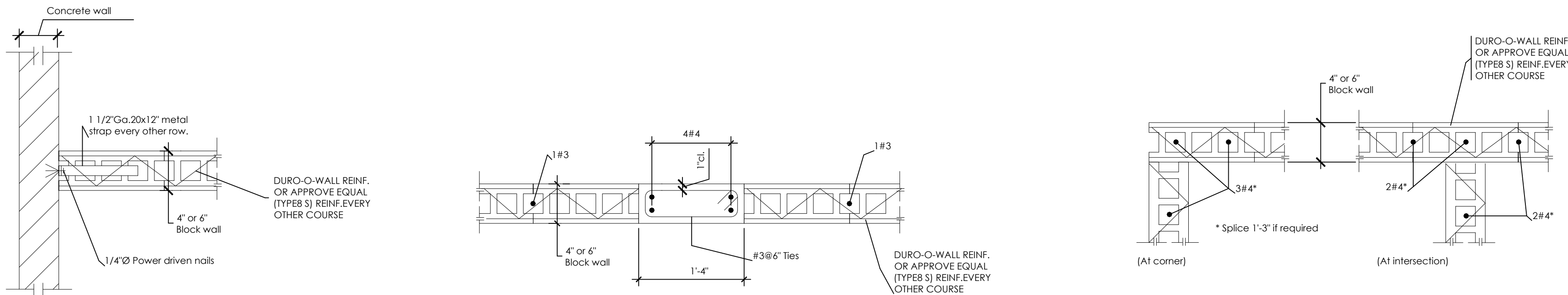
ANCHORAGE CONDITION CORNER CONDITION INTERSECTION CONDITION TYPICAL METAL DOOR FRAME IN GYPSUM BOARD WALL TYPICAL PARTITION VERTICAL SECTION ON BATHROOM

3



TYPICAL INSULATED PARTITION HORIZONTAL SECTION TYPICAL INSULATED DRYWALL PARTITION VERTICAL SECTION TYPICAL INSULATED PARTITION VERTICAL SECTION

2

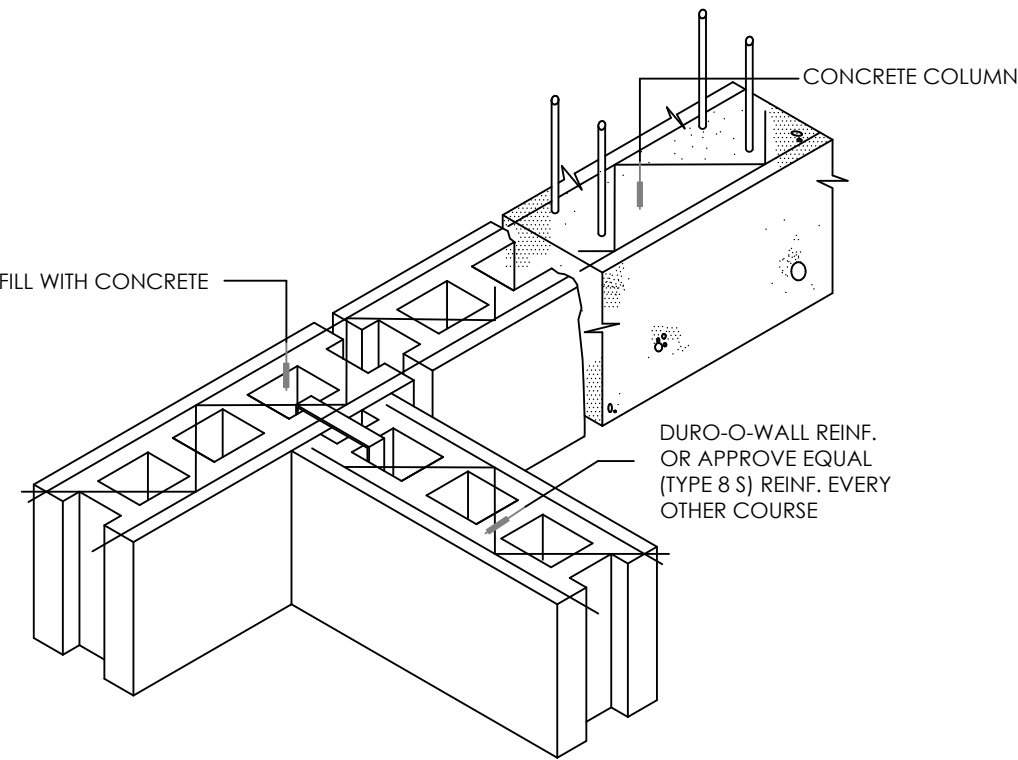


ANCHORAGE OF BLOCK WALL CONCRETE COLUMN DETAIL BLOCKS WALLS DETAILS

1

GENERAL NOTES:

- Field Verification: Contractor shall be responsible for verifying all dimensions, conditions, and information shown or otherwise described in the drawings and on the field before ordering material or performing work of any kind. All discrepancies shall be immediately reported in writing to owner.
- All interior partitions within the premises shall be metal stud construction and shall have one layer of 5/8" gypsum board finished on both sides with taped and floated and sanded joints. Metal studs shall extend up to the structure above, but gypsum board need not to extend more than three inches (3") above the finished ceiling line, except where required for fire resistance.
 - All Partition shall be seismically braced in accordance with requirements of USB Chapter 14.
 - Moisture resistance gypsum board ("green board") shall be used on interior surfaces of toilet rooms partitions. Where toilet room walls are required to be smooth, hard and nonabsorbent by code (within two feet of the front and sides of the urinals and water closets, to a minimum height of four feet, except where there is only one water closet), and at toilet room wall bases, provide cementitious backing panels.
- All materials within ceiling plenums shall have a Class I flame spread rating. Plastic materials, such as piping and flexible duct connections are not allowed.
- All construction shall be noncombustible including any materials used above the ceiling or concealed in the walls of the Leased Premises. Wood framing and blocking is not allowed, unless specifically excepted by Code, and detailed on the construction drawings.
- Through-Penetration Fire stopping: Provide listed building fire stopping methods as published in UL's (Underwriter's Laboratories, Inc.) "Fire Resistance Directory, Vol. 2, 1994 or later edition, unless otherwise acceptable to the owner or jurisdictional authorities. In addition, provide through penetration firestop system with F ratings equaling or exceeding the fire-resistance rating of the constructions penetrated, as determined per ASTM E 814. Provide fire stopping systems in the following locations if applicable, that are produced and installed to resist spread of fire, according to requirements indicated and the passage of smoke and other gases:
 - Penetrations through fire-resistance-rated floor and roof construction including both empty openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.
 - Penetrations through fire-resistance-rated walls and partitions including both empty openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.
 - Penetrations through smoke barriers and construction enclosing compartmentalized areas involving both empty openings and openings containing penetrating items.
 - Sealant joints in fire-resistance-rated construction.
- Contractor shall provide and install all specified items and materials using the best commercial quality (available and in strict accordance with manufacturer's recommendations. All work shall be executed in the best practice of the trade. All elements shall be shop fabricated, when possible, to provide the best finished construction of the specified work. Contractor shall submit for approval all the material that will be used for finishes.
- All fasteners and anchorage shall be done only with screws and bolts (no nails shall be used). Screws and bolts shall be Federal Specification FF-S1111a, non-ferrous or galvanized steel. Screws and bolts fastening hardware shall match finish of materials thereof.
- All surfaces (including walls doors, columns, ceiling, etc.) within the contract limit shall be painted with Glidden or Mobile paints. Using two coats of primer and two coats of high quality paint (semi-gloss finish). Colors to be selected during construction.
- Contractor shall furnish and install all gypsum board related work as shown and specified in the drawings. All work shall be installed complete with such accessories as moldings, corner beads, spacers, etc. All work shall be done as required for proper installation in accordance to manufacturer's specification. When installing any type of ceiling, proper provision must be made for installation and support of light fixtures and for a structurally sound construction adapted to the existing conditions. All gypsum work shall be 5/8" fire rated with smooth plaster finish.
- All electrical work and materials as laid out in the drawings shall be provided and installed by the contractor using the best materials and methods available and following applicable codes.
- Before starting construction, the contractor shall coordinate working hours under the authorization of the building administrator and in coordination with the owner.
- Contractor shall guarantee all work against defects in workmanship, materials and equipment for one full year. The contractor shall repair or replace any portion of the work or equipment not working properly or not meeting the requirements of the drawings or specifications herein.
- Contractor shall follow all necessary procedures to ensure a finished product that complies with all the safety considerations required to protect both employees and the public.
- Contractor shall execute all demolition required to fulfill the work as shown and specified in the drawings.
- Areas specified to have a carpet finish or vinyl flooring shall be leveled where required to provide a leveled installation surface.
- Demolition of existing walls shall be executed with special care to ensure that the remaining structure is structurally sound and safe.
- Contractor shall dispose of all demolition and construction debris in an orderly and safe manner following all local applicable codes.
- Existing electrical, sanitary and water facilities shall be protected during construction and adapted as required to service the design laid out in the drawings.
- Existing structure shall be demolished with all required temporary support of existing walls.
- Project demolition shall be encapsulated with a protective wall from other sections of facility by means of temporary walls as required by the owner.
- Existing finishes shall be maintained up to contract limit and adapted as required to match the limit of new construction.
- All work required by the contract scope to be executed off-contract limits shall be done after working hours and in coordination with the owner.



BLOCKS WALLS DETAILS



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PROJECT OWNER



CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

GENERAL DETAILS

ISSUE FOR:

PRELIMINARY DRAWINGS

TAG	REVISION	NAME	DATE
△	REVISION		MM/DD/YY

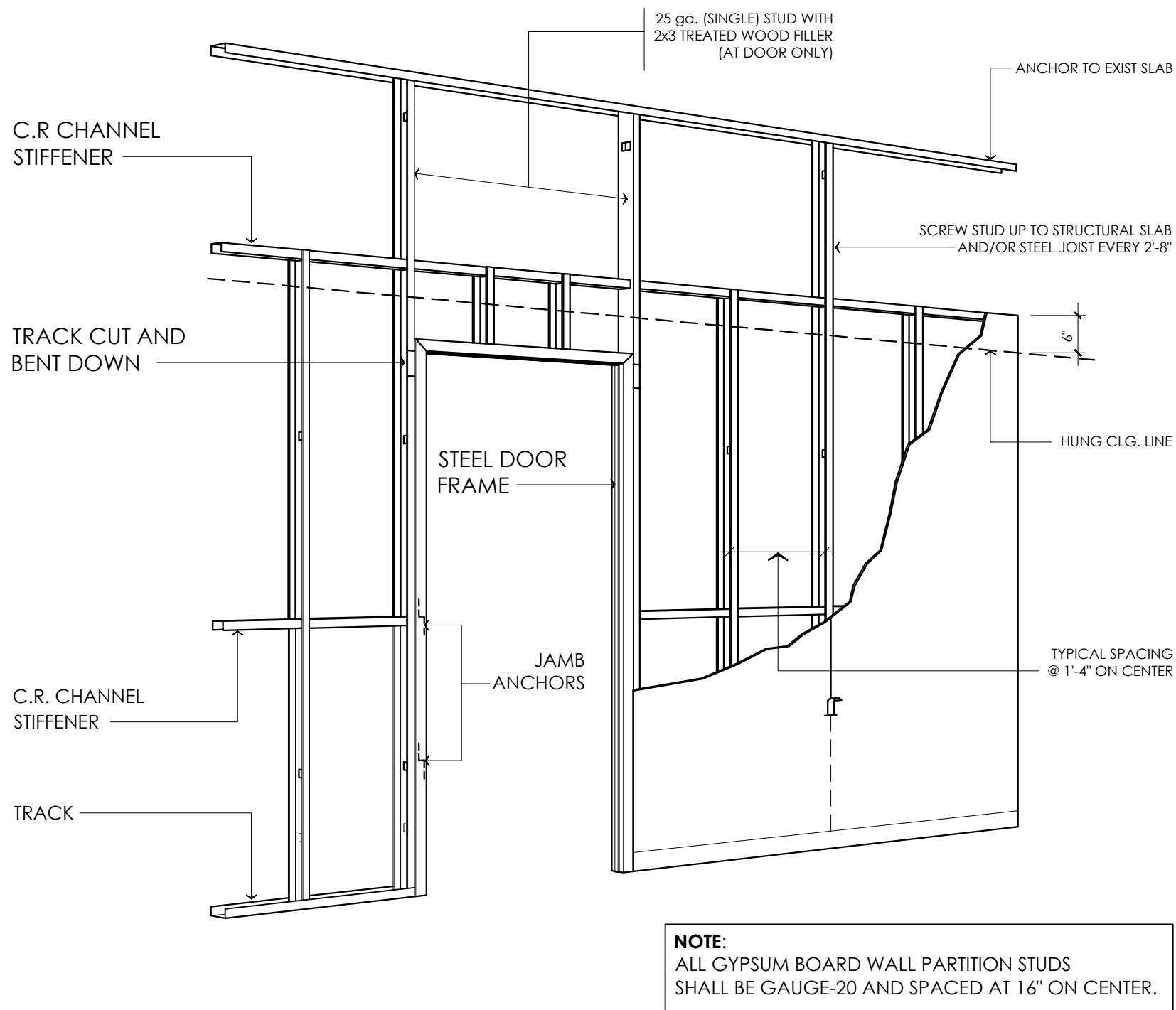
A3.0

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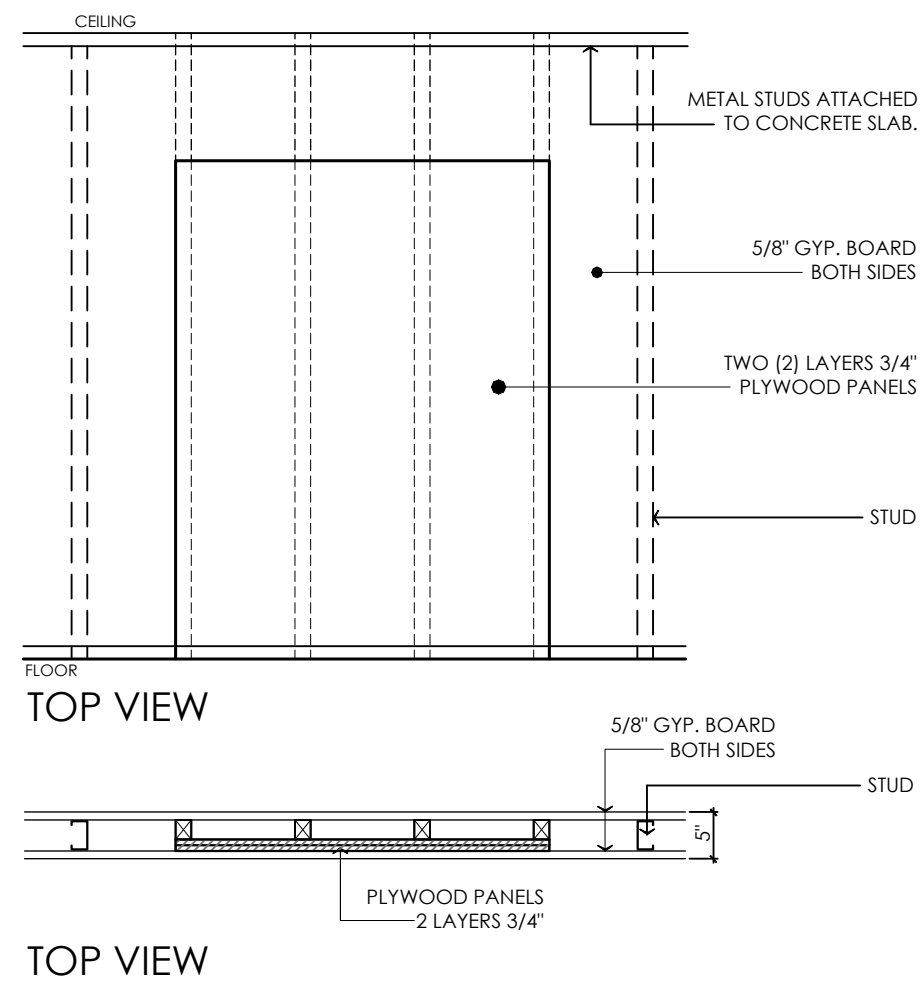
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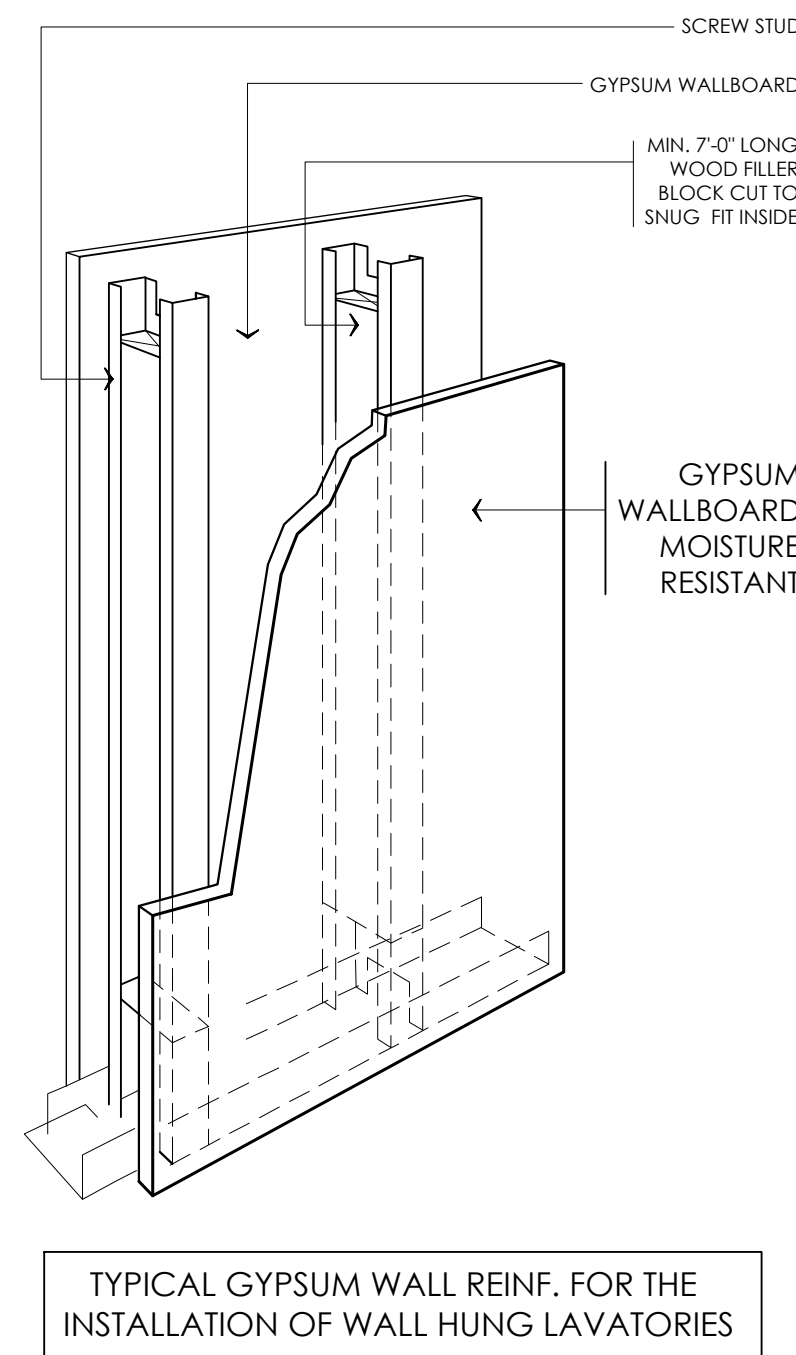
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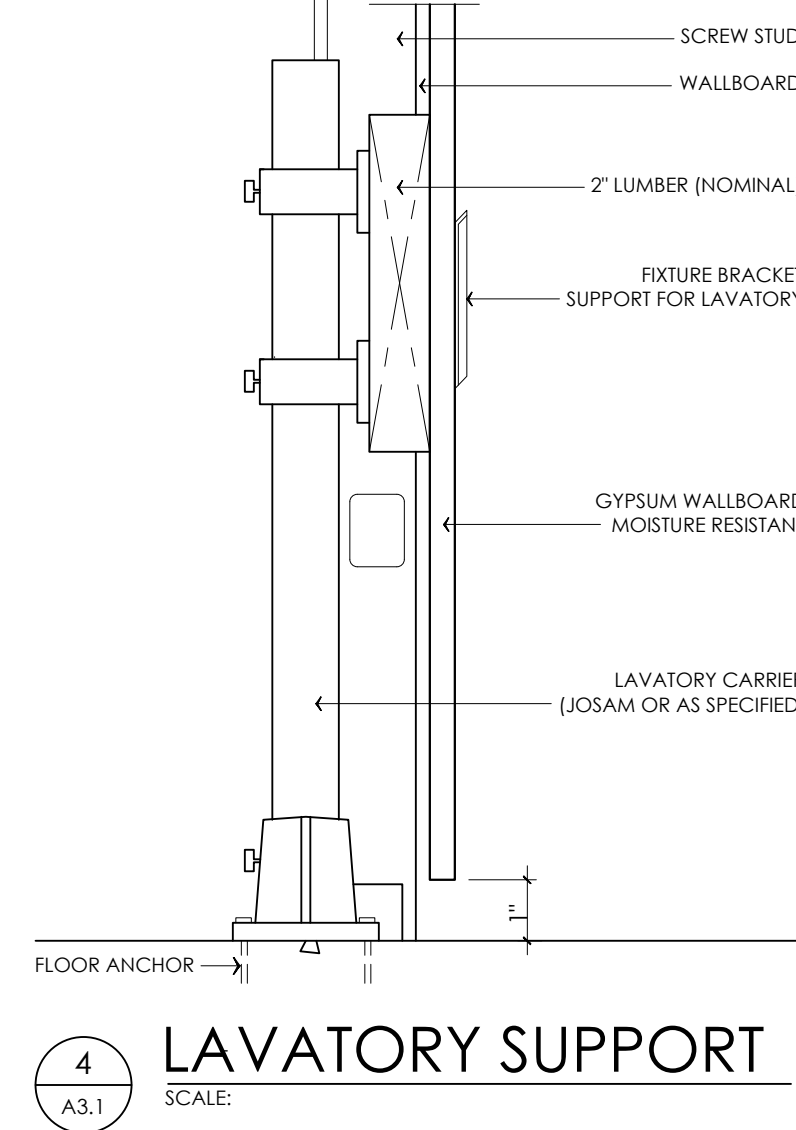
1 SINGLE LAYER CONSTRUCTION
A3.1 SCALE: N.T.S.



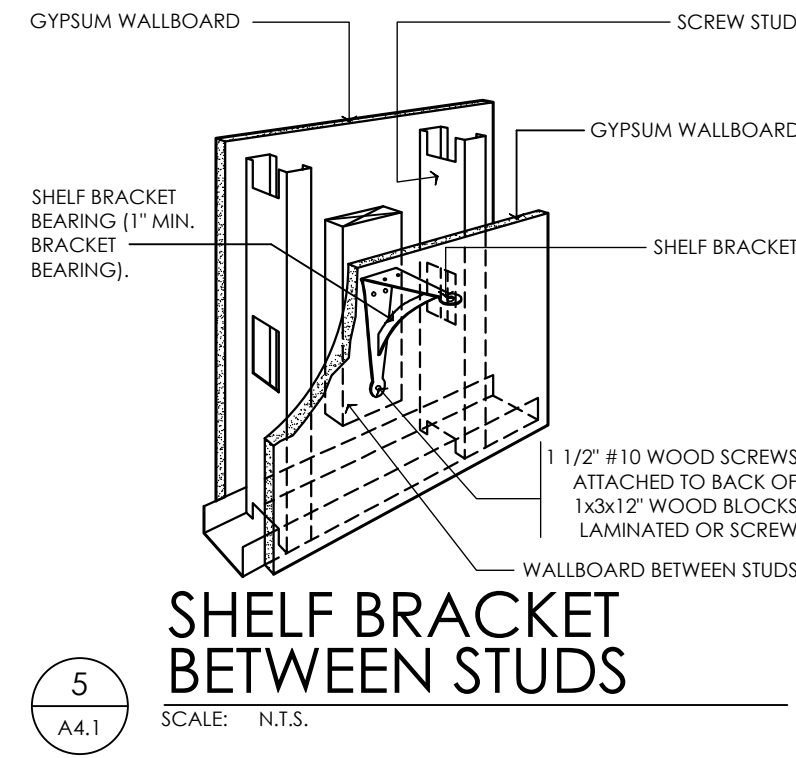
2 BACKING SUPPORT
A3.1 SCALE: N.T.S.



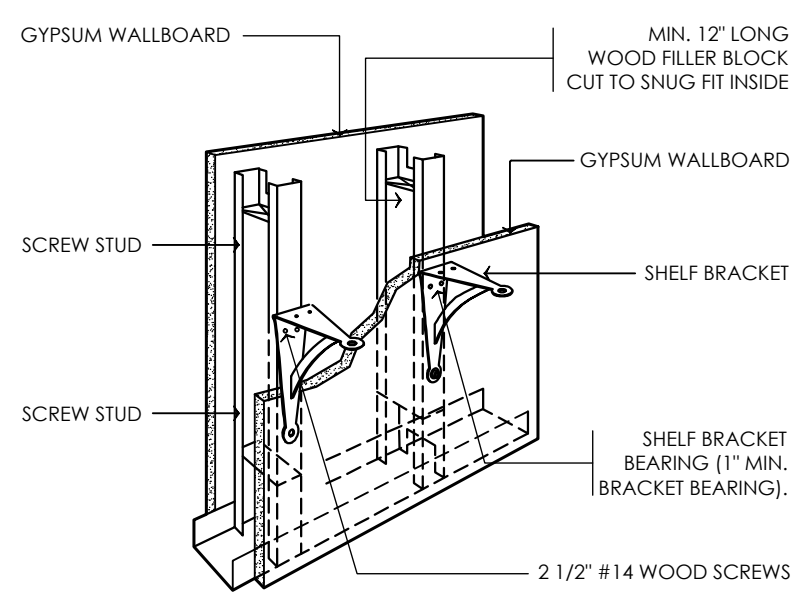
3 WALL REINFORCED
A3.1 SCALE: N.T.S.



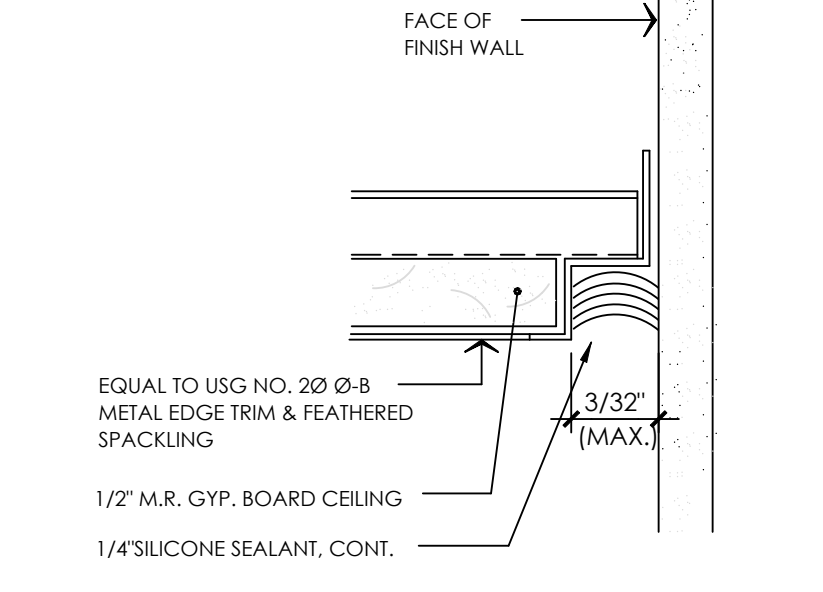
4 LAVATORY SUPPORT
A3.1 SCALE: N.T.S.



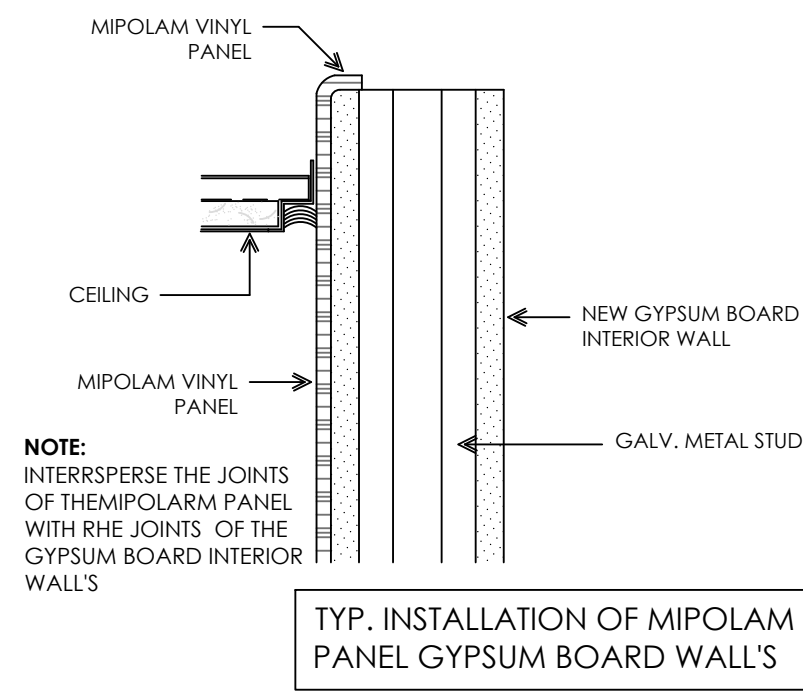
5 SHELF BRACKET BETWEEN STUDS
A4.1 SCALE: N.T.S.



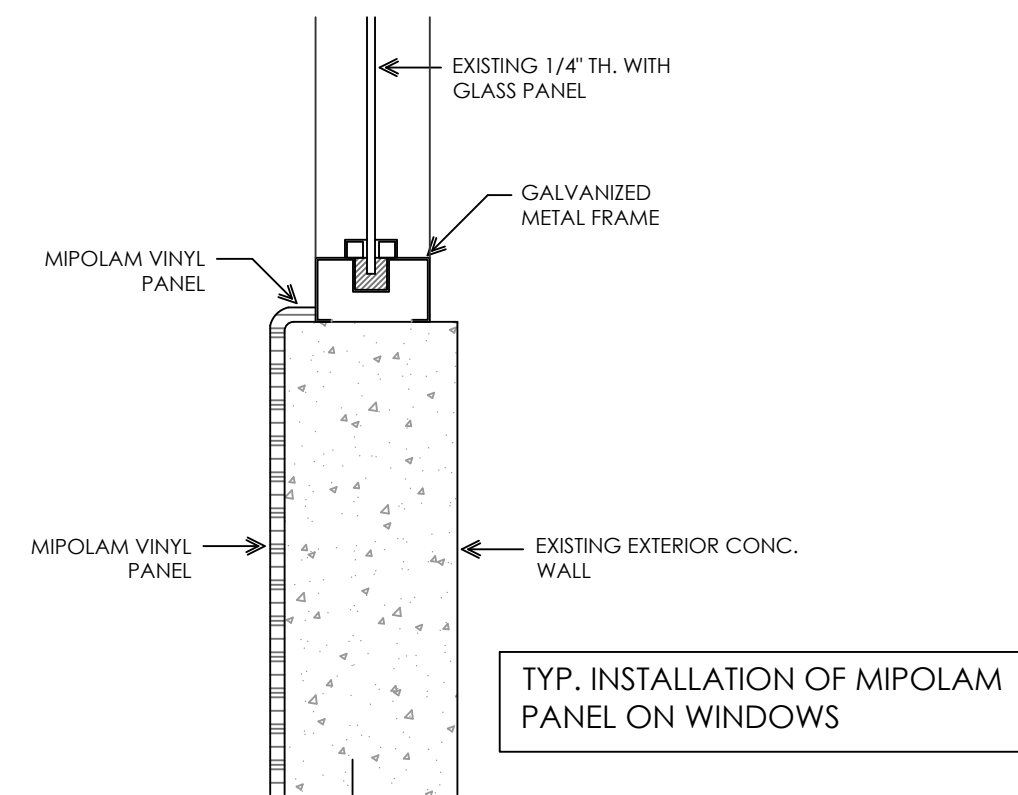
6 SHELF BRACKET
A3.1 SCALE: N.T.S.



7 GYPSUM BOARD JOINT
A3.1 SCALE: N.T.S.



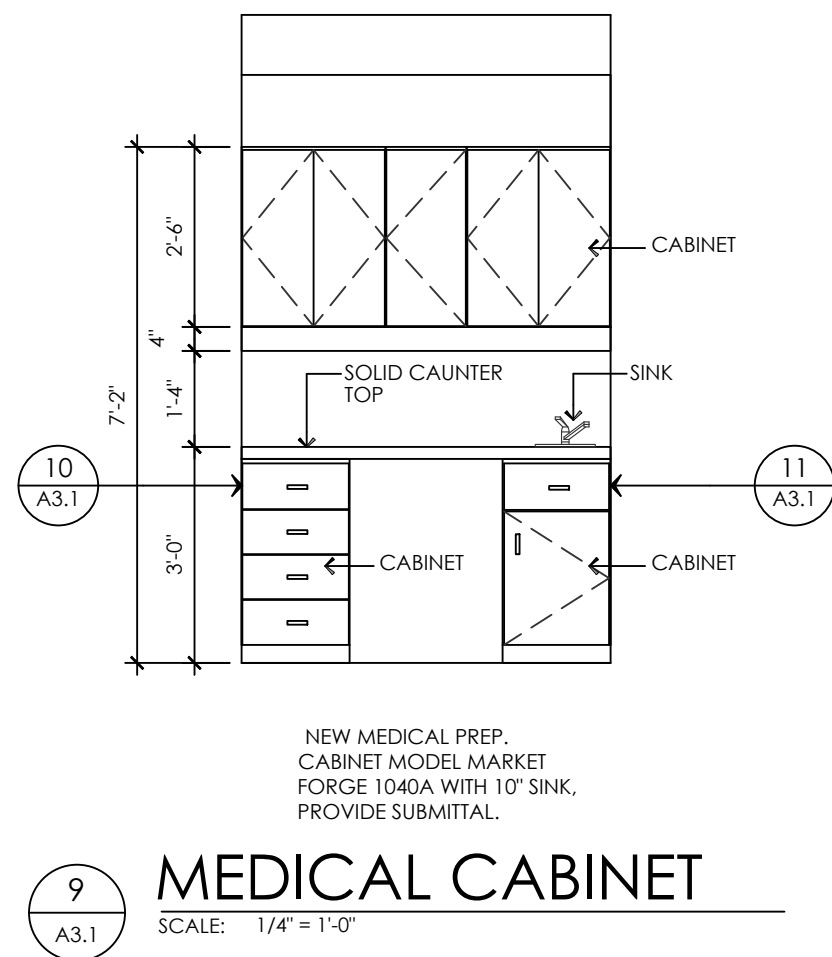
8 MIPOLARM INSTALLATION
A3.1 SCALE: N.T.S.



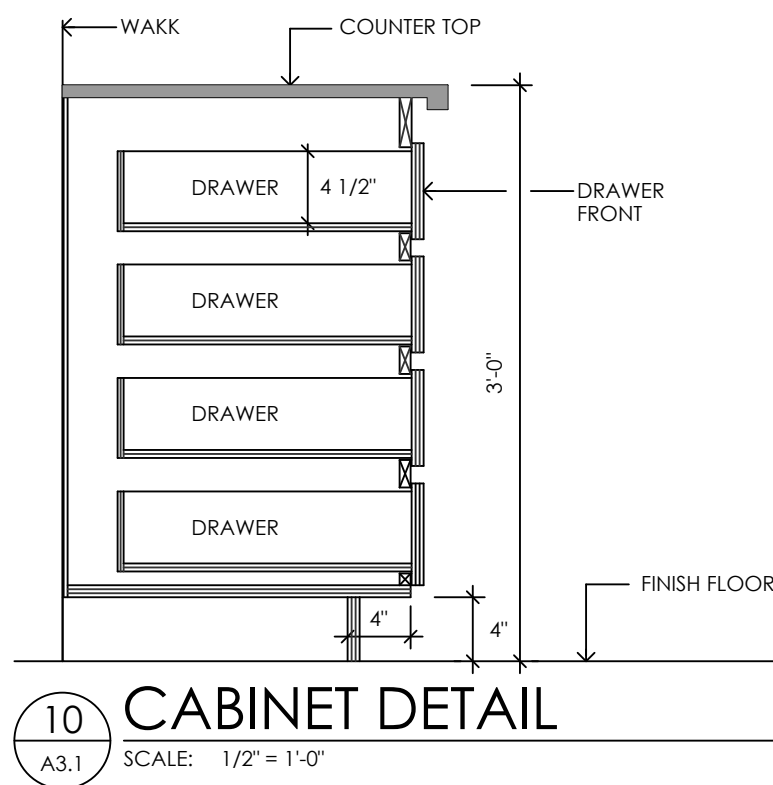
8 MIPOLARM INSTALLATION
A3.1 SCALE: N.T.S.

TYPICAL GYPSUM WALL TYPES AND RATING		
FIRE RATING	STC	DESCRIPTION
2 HRS.	45	TWO LAYERS 5/8" FIRE SHIELD GYPSUM WALLBOARD BOTH SIDES ATTACHED VERTICALLY TO 2 1/2" SCREW STUD SPACED 16" O.C. VERTICAL JOINTS STAGGERED.
1 HR.	40	5/8" FIRE SHIELD GYPSUM WALLBOARD BOTH SIDES SCREW ATTACHED VERTICALLY TO 2 1/2" SCREW STUDS, 16" O.C.
1 HR.	45	5/8" FIRE SHIELD GYPSUM WALLBOARD BOTH SIDES SCREW ATTACHED VERTICALLY AT 3 3/8" SCREW STUDS, 16" O.C. WITH 5.8" MINERAL WOOL IN CAVITY.
1 1/2 HR.	50	5/8" FIRE SHIELD GYPSUM WALLBOARD BOTH SIDES SCREW ATTACHED VERTICALLY TO ONE SIDE ONLY AND THERMAFIBER BLANKET IN CAVITY.

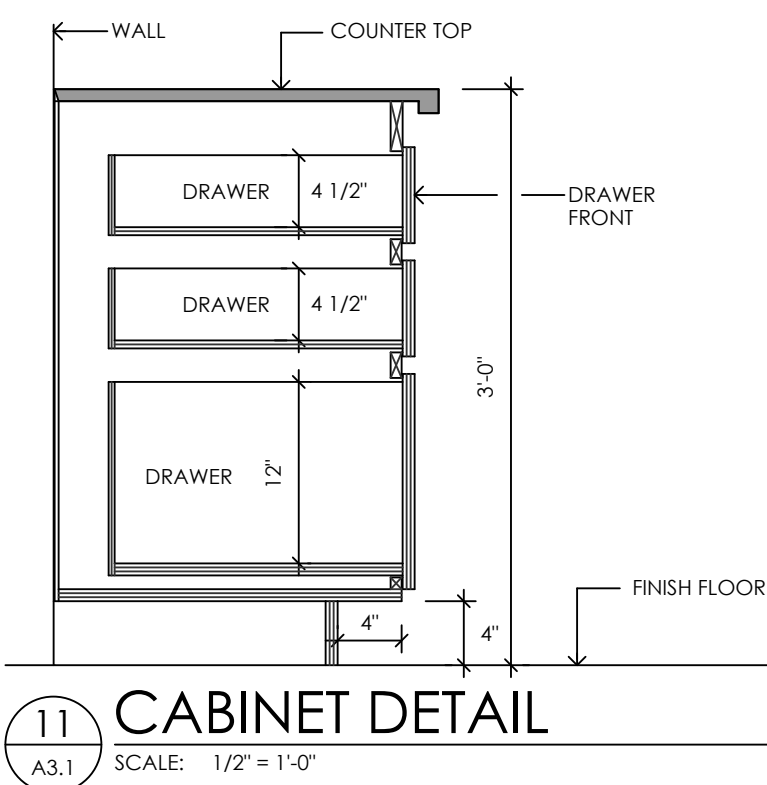
Paint Schedule	
INTERIOR SURFACE SUBSTRATE AND SYSTEMS	REMARKS:
A. CONCRETE MASONRY AND STUCCO 1 ST.+3 ND. COAT-SPRED SATIN LATEX WALL PAINT #3400 SERIES	1. PAINT COLORS TO BE SELECTED BY THE OWNER.
B. GYPSUM DRYWALL 1 ST. COAT-SPRED PRIMER SEALER #3416 2 ND. + 3 RD. COAT-SPRED SATIN LATEX WALL PAINT #3400 SERIES	2. ALL TILES COLORS TO BE SELECTED BY THE OWNER.
C. CONCRETE BLOCK ABOVE GRADE EXPOSED 1 ST. COAT-ULTRA HIDE LATEX BLOCK FILLER #5313 2 ND.+3 RD. COAT-SPRED SATIN LATEX WALL PAINT #3400 SERIES	3. CONTRACTOR SUBMIT SAMPLES OF MATERIALS FOR DESIGNER APPROVAL.
D. FERROUS METALS 1 ST. COAT-GLID GUARD ALKYD METAL PRIMER #4570 2 ND.+3 RD. COAT-SPRED LUSTRE SEMI GLOSS ENAMEL #4600	
E. GALVANIZED METALS 1 ST. COAT-GLID GUARD ALL PURPOSE METAL PRIMER # 5229 2 ND.+3 RD. COAT-SPRED LUSTRE SEMI GLOSS ENAMEL #4600	



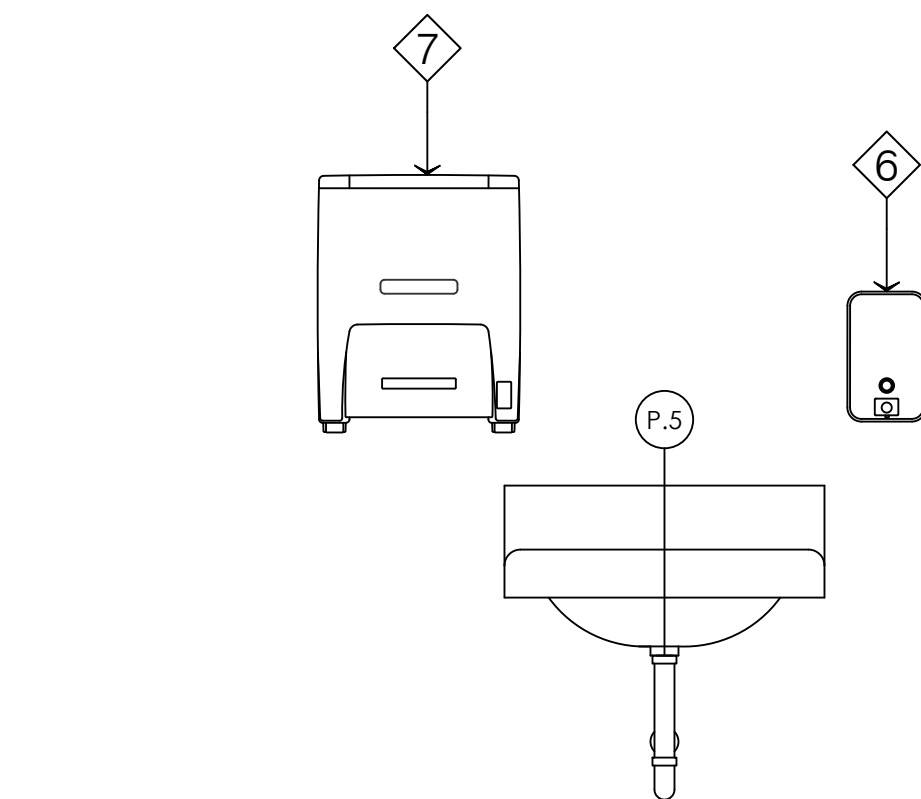
9 MEDICAL CABINET
A3.1 SCALE: 1/4" = 1'-0"



10 CABINET DETAIL
A3.1 SCALE: 1/2" = 1'-0"



11 CABINET DETAIL
A3.1 SCALE: 1/2" = 1'-0"



12 NURSES CLEAN UTILITY HAND SINK
A3.1 SCALE: 1/2" = 1'-0"



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PROJECT OWNER

DEPARTAMENTO DE
SALUD



CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

GENERAL DETAILS

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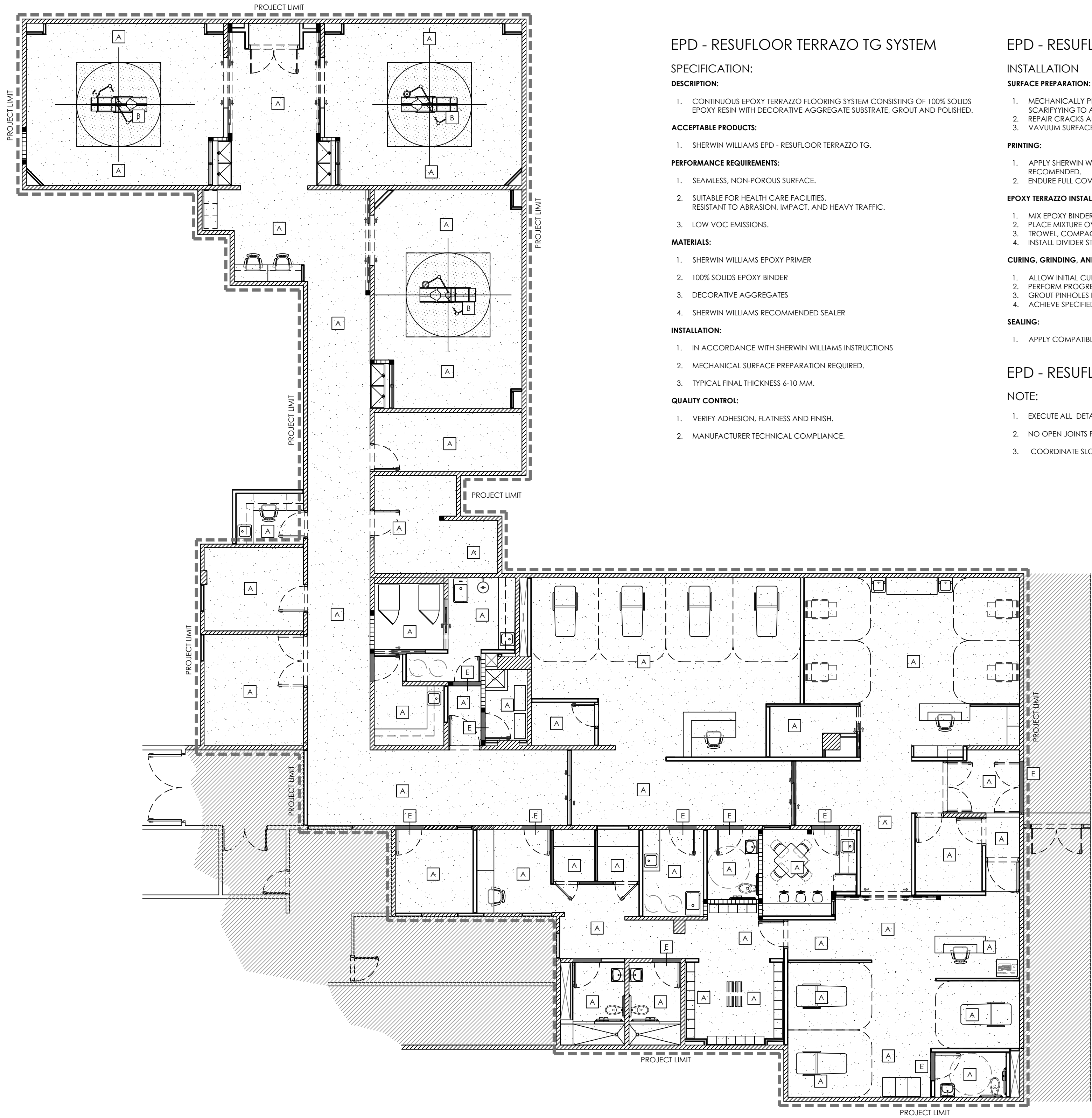
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PROPOSED FLOOR PATERN
SCALE: 1/8"= 1'-0"

EPD - RESUFLOOR TERRAZO TG SYSTEM

SPECIFICATION:

DESCRIPTION:

1. CONTINUOUS EPOXY TERRAZZO FLOORING SYSTEM CONSISTING OF 100% SOLIDS EPOXY RESIN WITH DECORATIVE AGGREGATE SUBSTRATE, GROUT AND POLISHED.

ACCEPTABLE PRODUCTS:

1. SHERWIN WILLIAMS EPD - RESUFLOOR TERRAZZO TG.

PERFORMANCE REQUIREMENTS:

1. SEAMLESS, NON-POROUS SURFACE.
2. SUITABLE FOR HEALTH CARE FACILITIES. RESISTANT TO ABRASION, IMPACT, AND HEAVY TRAFFIC.
3. LOW VOC EMISSIONS.

MATERIALS:

1. SHERWIN WILLIAMS EPOXY PRIMER
2. 100% SOLIDS EPOXY BINDER
3. DECORATIVE AGGREGATES
4. SHERWIN WILLIAMS RECOMMENDED SEALER

INSTALLATION:

1. IN ACCORDANCE WITH SHERWIN WILLIAMS INSTRUCTIONS
2. MECHANICAL SURFACE PREPARATION REQUIRED.
3. TYPICAL FINAL THICKNESS 6-10 MM.

QUALITY CONTROL:

1. VERIFY ADHESION, FLATNESS AND FINISH.
2. MANUFACTURER TECHNICAL COMPLIANCE.

EPD - RESUFLOOR TERRAZO TG SYSTEM

INSTALLATION

SURFACE PREPARATION:

1. MECHANICALLY PREPARE SUBSTRATE BY SLOT BLASTING, GRINDING, OR SCABBRING TO ACHIEVE ICR CSP-3 TO CSP-5
2. REPAIR CRACKS AND DEFECTS WITH COMPATIBLE EPOXY PATCHING MATERIAL.
3. VACUUM SURFACE THOROUGHLY PRIOR TO PRIMING.

PRINTING:

1. APPLY SHERWIN WILLIAMS RESUFLOOR 100 SOLID EPOXY PRIMER AS RECOMMENDED.
2. ENDURE FULL COVERAGE ALD PENETRATION .

EPOXY TERRAZZO INSTALLATION:

1. MIX EPOXY BINDER WITH SPECIFIED DECORATIVE AGGREGATES.
2. PLACE MIXTURE OVER PRINTED SUBSTRATE AT 4-10 MM THICKNESS.
3. TROWEL COMPACT, AND LEVEL TO ELIMINATE VOIDS.
4. INSTALL DIVIDER STRIPS WHERE REQUIRED BY DESIGN.

CURING, GRINDING, AND POLISHING:

1. ALLOW INITIAL CURE AS SPECIFIED.
2. PERFORM PROGRESSIVE DIAMOND GRINDING TO EXPOSE AGGREGATES.
3. GROUT PINHOLES IF REQUIRED AND CONTINUE POLISHING.
4. ACHIEVE SPECIFIED SATIN OR POLISHED FINISH.

SEALING:

1. APPLY COMPATIBLE SEALER RECOMMENDED BY SHERWIN WILLIAMS.

EPD - RESUFLOOR TERRAZO TG SYSTEM

NOTE:

1. EXECUTE ALL DETAILS PER EPOXY TERRAZZO MANUFACTURER REQUIREMENTS.
2. NO OPEN JOINTS PR DISCONTINUITIES ALLOWED.
3. COORDINATE SLOPES, DRAINS, AND TRANSITIONS PRIOR TO PLACEMENT.

LEGEND:

EPD - RESUFLOOR TERRAZO TG SYSTEM

[A] EPD - RESUFLOOR TERRAZO TG SYSTEM

FLOOR:

EPD - RESUFLOOR TERRAZO TG SYSTEM
BY: SHERWIN WILLIAMS

TERRAZZO COLOR: SW20 1037 TG OR SW20 1050 TG

EPD - RESUFLOOR TERRAZO TG SYSTEM

[B] EPD - RESUFLOOR TERRAZO TG SYSTEM

FLOOR: SURGERY ROOM AREA

1. ONE PRIMER COAT WITH DURALTEX (CLEAR).
2. ONE DURALTEX MIDCOAT (TINTED), WITH A SYNTHETIC SAND AGGREGATE DISPERSION
3. ONE DURALTEX TOPCOAT (TINTED).

SADDLE

SADDLE: MARBLE SADDLE
COLOR: WHITE AND GRAY
SIZE: 6" W.

VIEW DETAIL NO. 2 SHEET A4.1

IMPORTANT NOTE

1. BEFORE APPLYING OR INSTALLING ANY PRODUCT OR MATERIAL ON THE EXISTING FLOOR, A SELF LEVELING MUST BE APPLIED. SUBMIT BY APPROVAL.
2. BEFORE APPLYING OR INSTALLING ANY PRODUCT OR MATERIAL ON THE FLOOR WHERE THE SHOWERS WILL GO, A SEALANT MUST BE APPLIED TO PREVENT LEAKAGE. SUBMIT FOR APPROVAL.

LEGEND:

WALL:

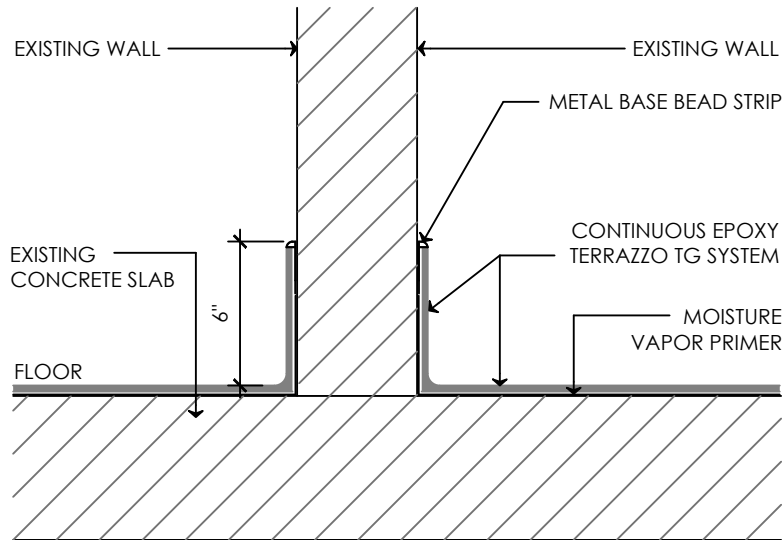
CERAMIC TILE

TOILET

MODEL: GLOCAL GC01
COLOR: CLEAR
FINISH: NATURAL
SIZE: 12cm x 40cm (12"x24")
BY: MIRAGE CERAMIC

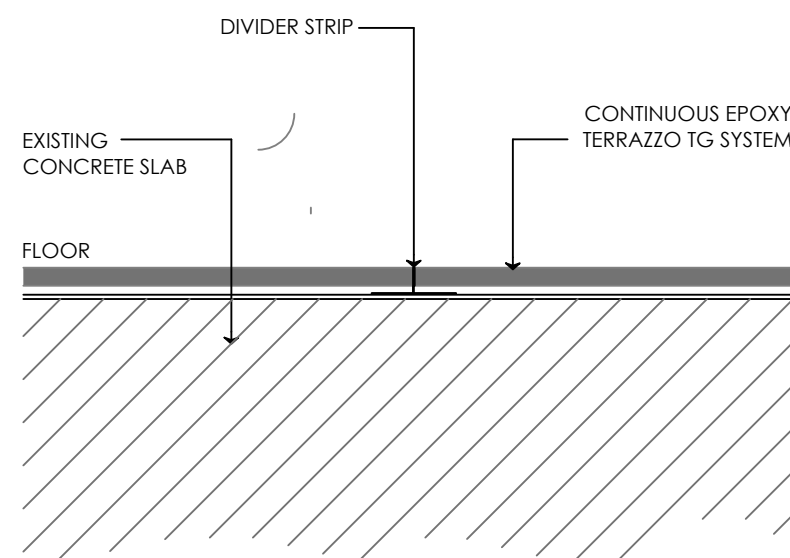
ACCENT

MODEL: GLOCAL GC16
COLOR: HARMONY
FINISH: NATURAL
SIZE: 30cm x 30cm (12"x12")
BY: MIRAGE CERAMIC



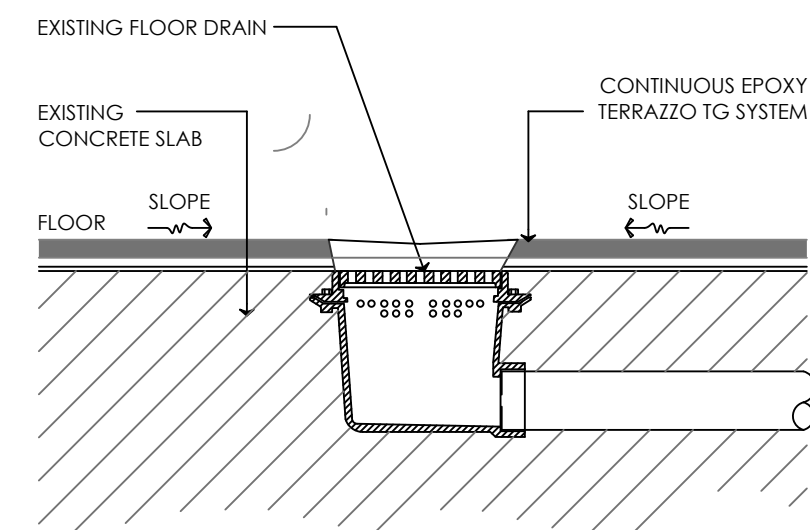
1 TERRAZZO FLORING SYSTEM

SCALE: 1"=1'-0"



2 DEVIDER STRIP

SCALE: 2"=1'-0"



3 ENCOUNTER WITH FLOOR DRAIN

SCALE: 2"=1'-0"



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PROJECT OWNER

DEPARTAMENTO DE
SALUD



CONSULTANT

PROJECT NAME

HURRA PROPOSED TEMPORARY OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

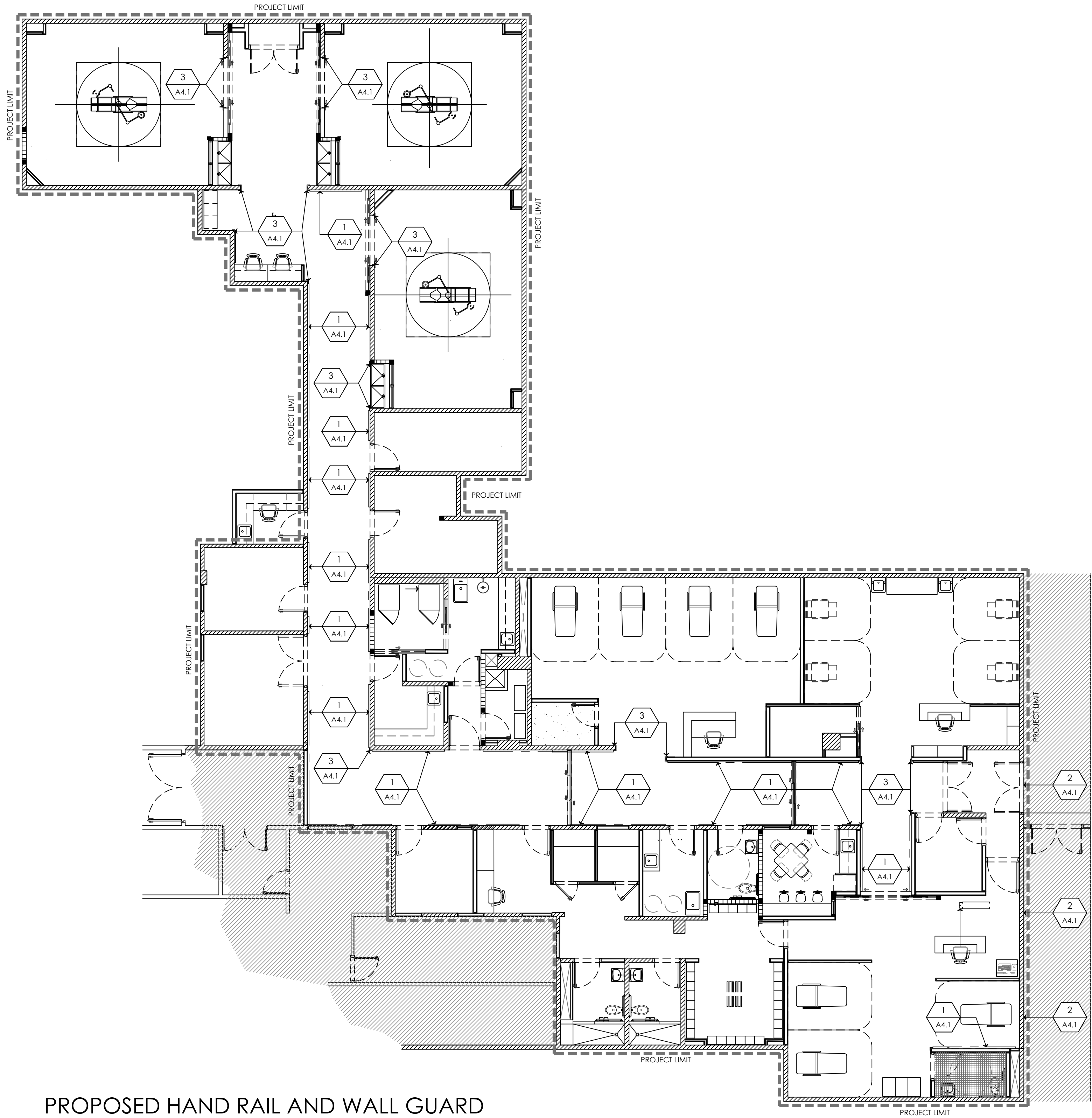
FLOOR PATTERN

ISSUE FOR:

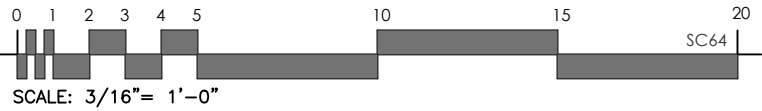
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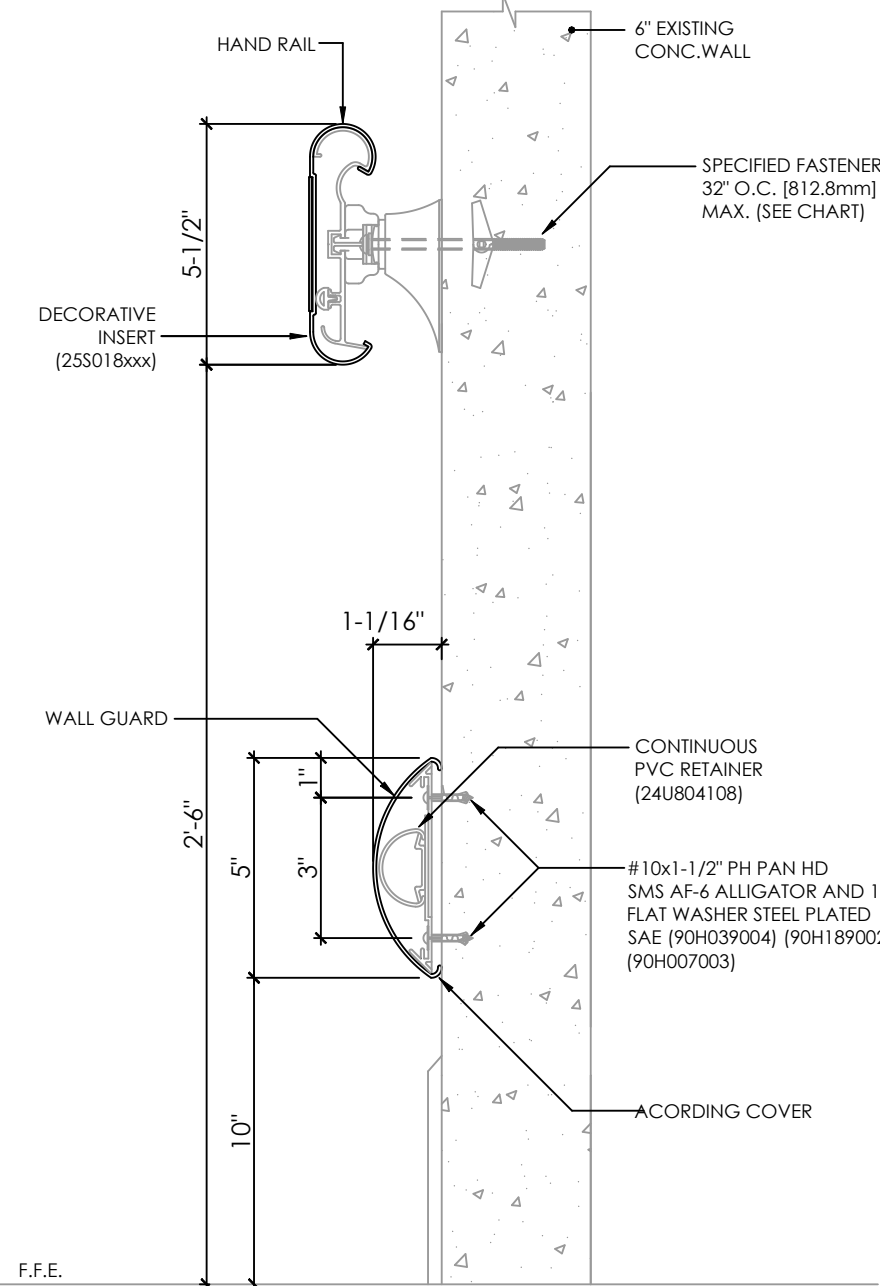


PROPOSED HAND RAIL AND WALL GUARD



LEGEND:

- # — BE NOTES DETAIL NUM.
- A-# — BE NOTES DETAIL SHEET LOCATION



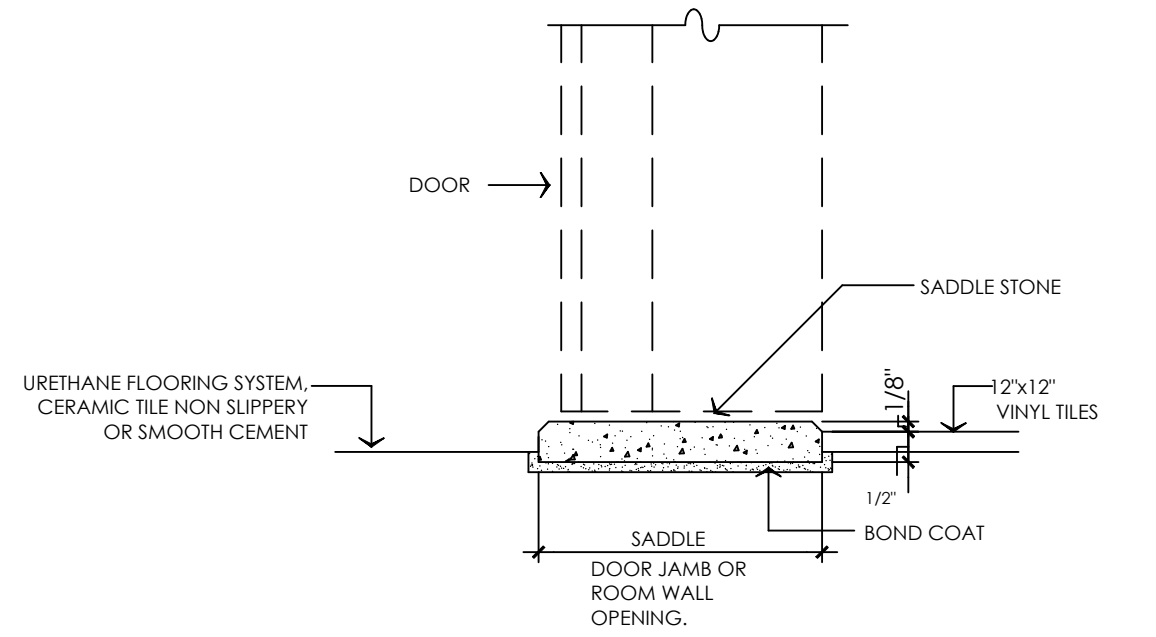
HAND RAIL & WALL GUARD DETAIL

HAND RAIL SCHEDULE

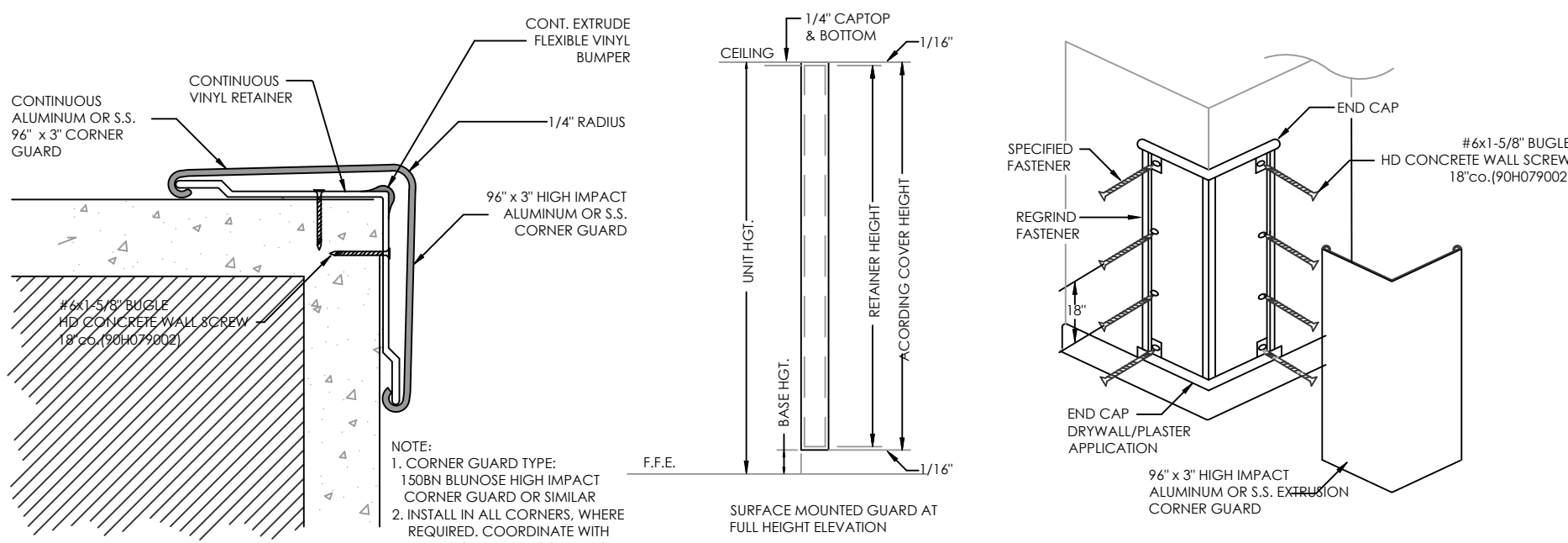
WALL CONDITION	SPECIFIED FASTENER	DRILL DIAMETERS		C/S PART NUMBER	MODEL SELECTED
		WALLS	RETAINERS		
CONCRETE BLOCK	#14 X 5" PH. RD. AP SCREW	7/32"	N/A	90H287002	HRB-3C MANUFACTURED BY C/S GROUP

WALL GUARD SCHEDULE

WALL CONDITION	SPECIFIED FASTENER	DRILL DIAMETERS		C/S PART NUMBER	MODEL SELECTED
		WALLS	RETAINERS		
CONCRETE BLOCK	AF-4 ALLIGATOR ANCHORS #10x1-1/2 PHILLIPS PAN HEAD SMS 1/4" FLAT WASHER STEEL PLATES SAE	1/4"	5/16"	150 BN	150 BN BLUNOSE HIGH IMPACT CORNER GUARD BY INPROCORP



TYPICAL SADDLE DETAIL



HIGH IMPACT CORNER WALL GUARD DETAIL



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PROJECT OWNER



CONSULTANT

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LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

HAND RAIL AND
WALL GUARD

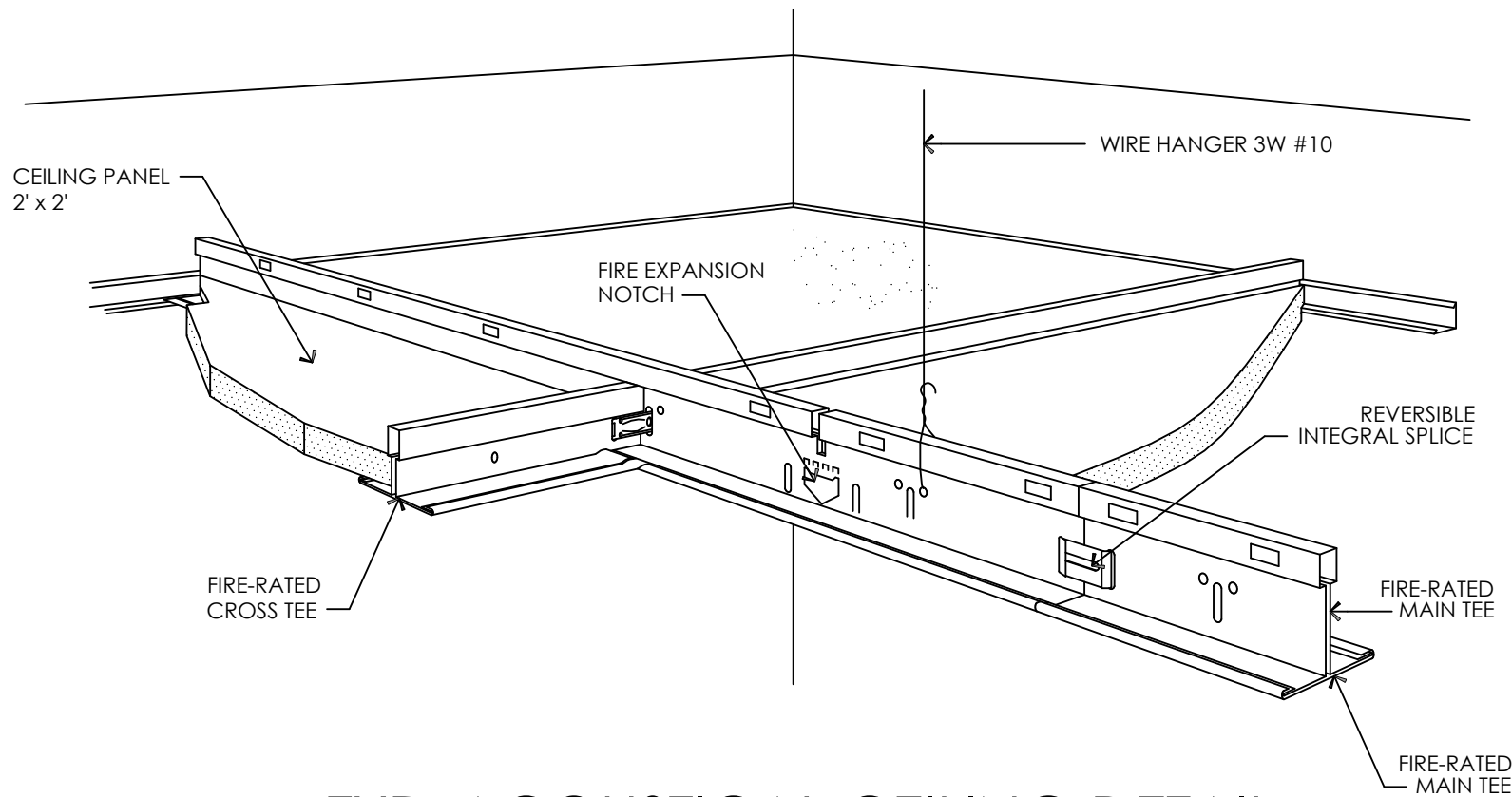
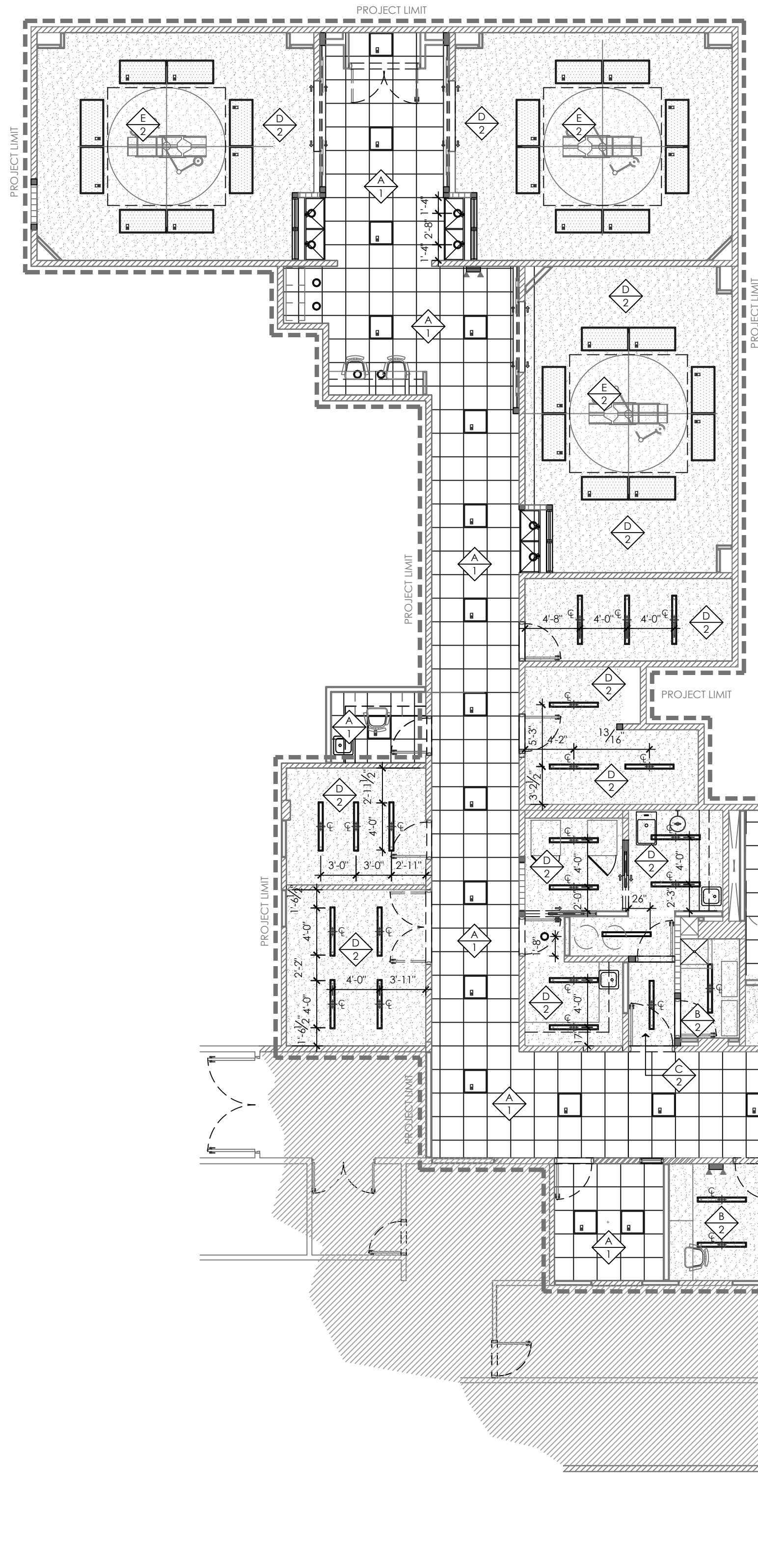
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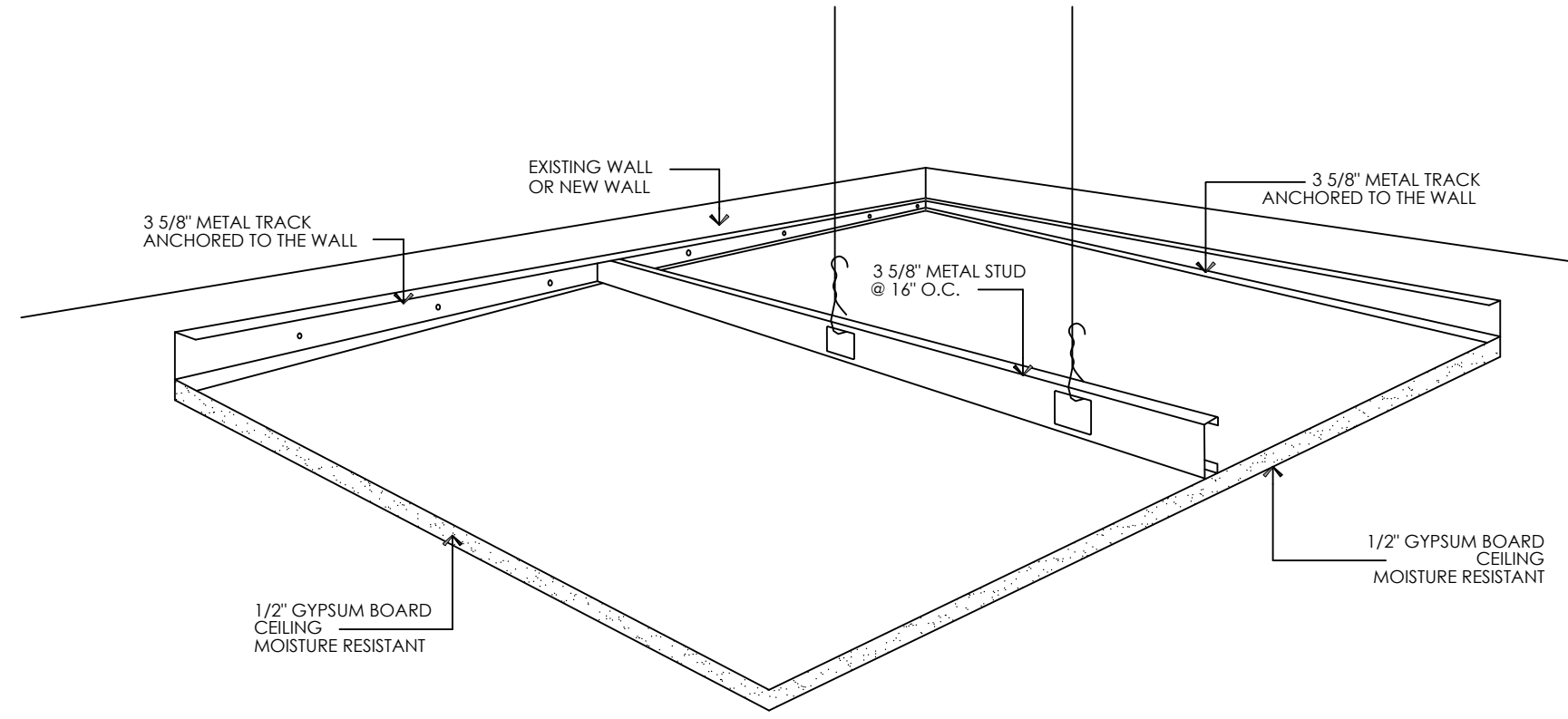
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1-10-2024 HURRA Proposed Operating Room V6 final.dwg



1 TYP. ACOUSTICAL CEILING DETAIL
SCALE: 1 1/2"=1'-0"



2 GYPSUM BOARD CEILING DETAIL
SCALE: 1 1/2"=1'-0"

HUNG CEILING FINISH

- 1. METAL ACOUSTICAL WHITE FOR GENERAL AREA
- 2. SMOOTH GYPSUM BOARD FOR RESTRICTED CLEANING AREA
- 3. SMOOTH SAHARA 271 ACOUSTICAL TILE FOR CLEANING AREA

LEGEND:

- 2' x 2' CEILING SUSPENSION SYSTEM GRID
- GYPSUM BOARD CEILING MOISTURE RESISTANT
- EXPOSED STRUCTURAL CEILING TO BE PAINTED
- EXISTING CEILING
- 2' x 4' LED LIGHT FIXTURE
- 1' x 2' LED LIGHT FIXTURE
- 2' x 2' LED LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- RECESSED SPOT LIGHT FIXTURE
- PENDANT LED LIGHT FIXTURE
- LED STRIP LIGHT FIXTURE
- EMERGENCY LIGHTS
- EXIT SIGN
- AIR CONDITIONER SUPPLY GRILL
- AIR CONDITIONER RETURN GRILL
- SMOKE DETECTOR
- SOUND SYSTEM OR SPEAKER
- EXHAUST FAN
- CEILING ACCESS DOOR
- CEILING HEIGHT AND FINISH
DENOTES CEILING ELEVATION
DENOTES CEILING FINISH OR SPEC.

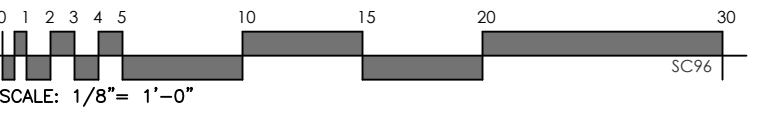
SUSPENDED CEILING SCHEDULE

TYPE	MATERIAL	COLOR	DIMENSION	DESIGN	N.R.C.
MICROPERF METAL BY: ARMSTRONG	MICROPERF METAL ACOUSTICAL TILE	WHITE	24" x 24" x 1/2"	REGULAR CEILING TILE	0.80
SAHARA 273 BY: ARMSTRONG	SMOOTH MINERAL FIBER ACOUSTICAL TILE	WHITE	24" x 24" x 5/8"	REGULAR CEILING TILE	0.50
GYPSUM BOARD	MOISTURE RESISTANT	WHITE			

CEILING SUSPENSION SYSTEM DATA

NAME	MATERIAL	FINISH	REMARK
MAIN RUNNER	GALVANIZED STEEL	WHITE ENAMEL	EXPOSED @ 24"C.C
CROSS TEE	GALVANIZED STEEL	WHITE ENAMEL	EXPOSED @ 24"O.C.
ANGLE MOLD	GALVANIZED STEEL	WHITE ENAMEL	IN ALL PERIMETER
SUSPENSION WIRE	# 10 GALVANIZED	WHITE ENAMEL	EXPOSED @ 24"C.C

PROPOSED REFLECTED CEILING



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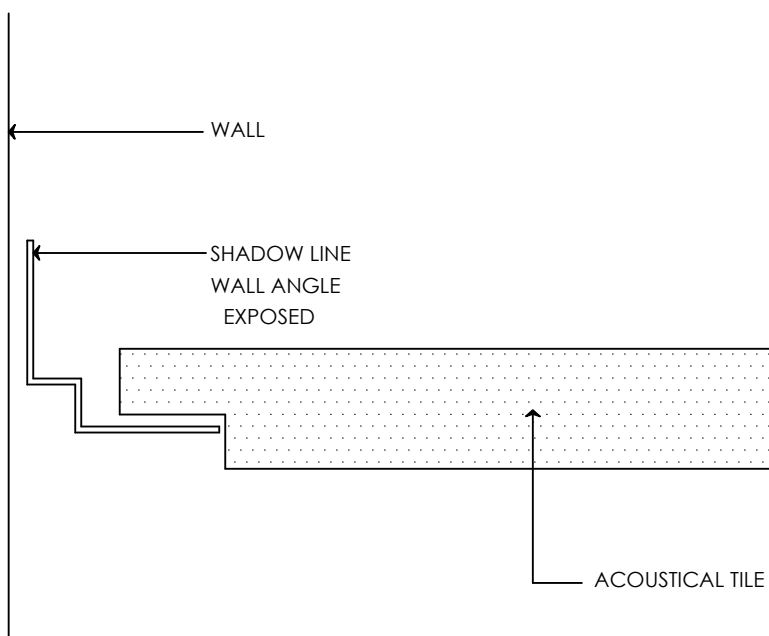
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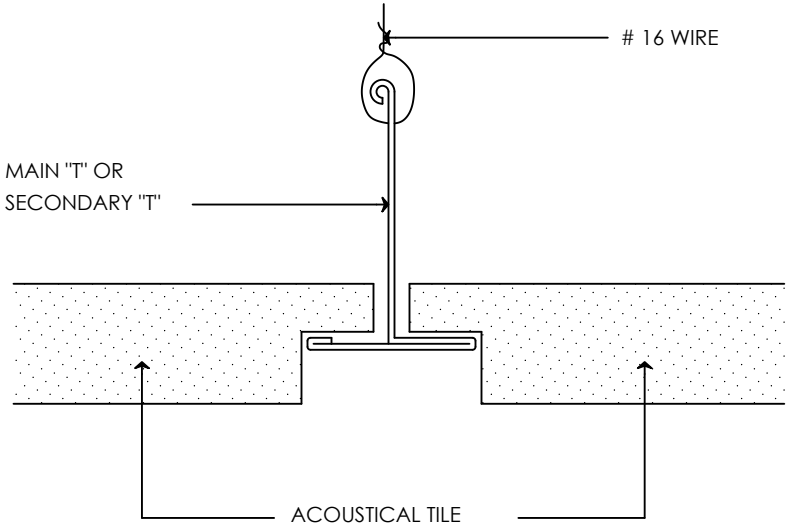
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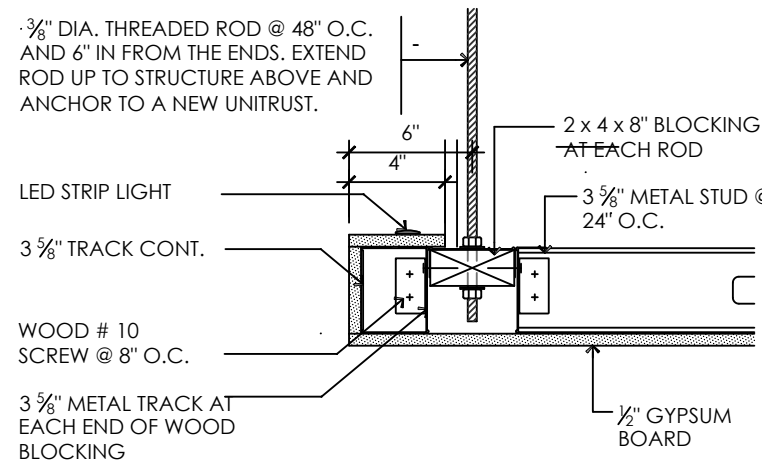
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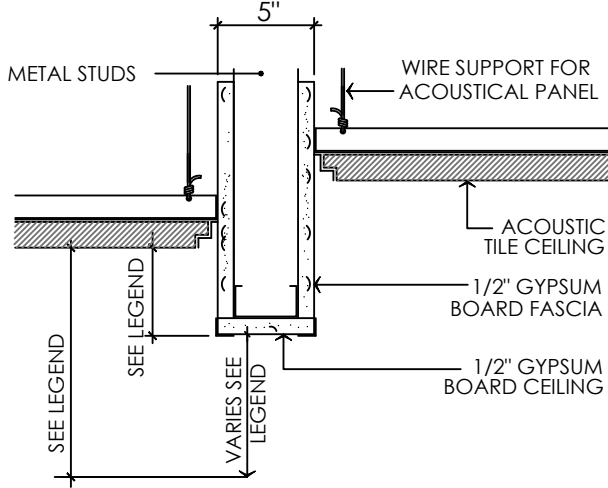
1 ACOUSTICAL TILE
A5.1



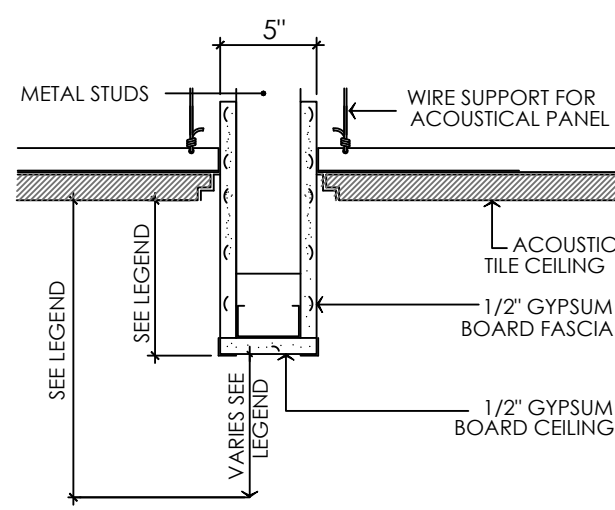
2 ACOUSTICAL TILE
A5.1



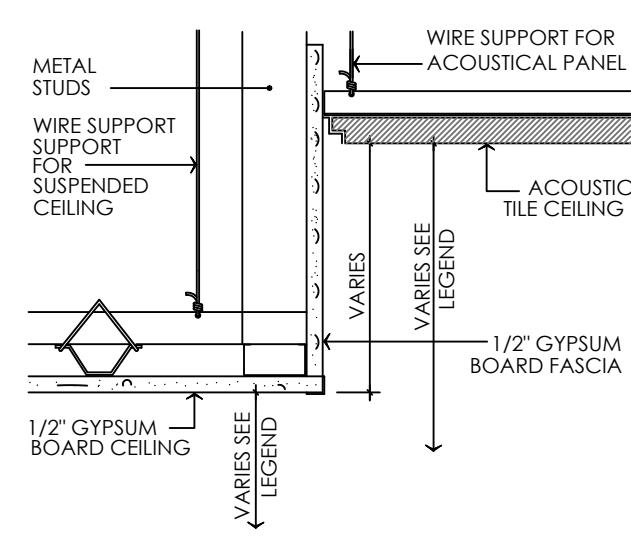
3 DETAIL AT CLOUD
A5.1 SCALE: 1 1/2"=1'-0"



4 CEILING DETAIL
A5.1 SCALE: 1 1/2"=1'-0"

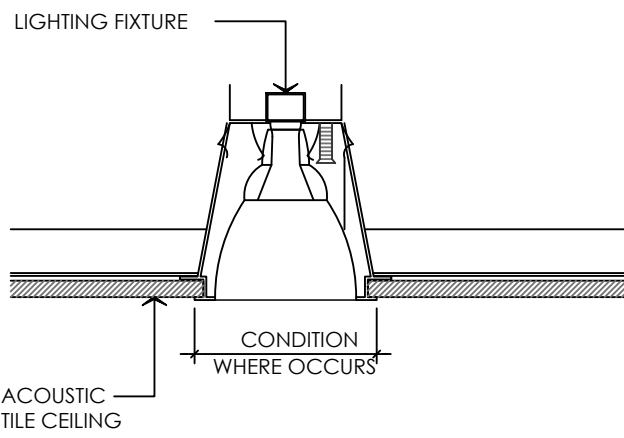


5 CEILING DETAIL
A5.1 SCALE: 1 1/2"=1'-0"

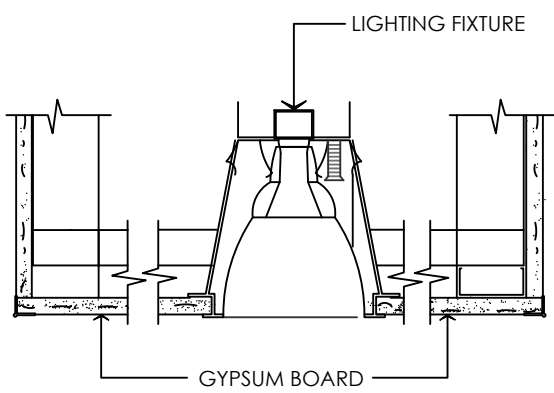


6 CEILING DETAIL
A5.1 SCALE: 1 1/2"=1'-0"

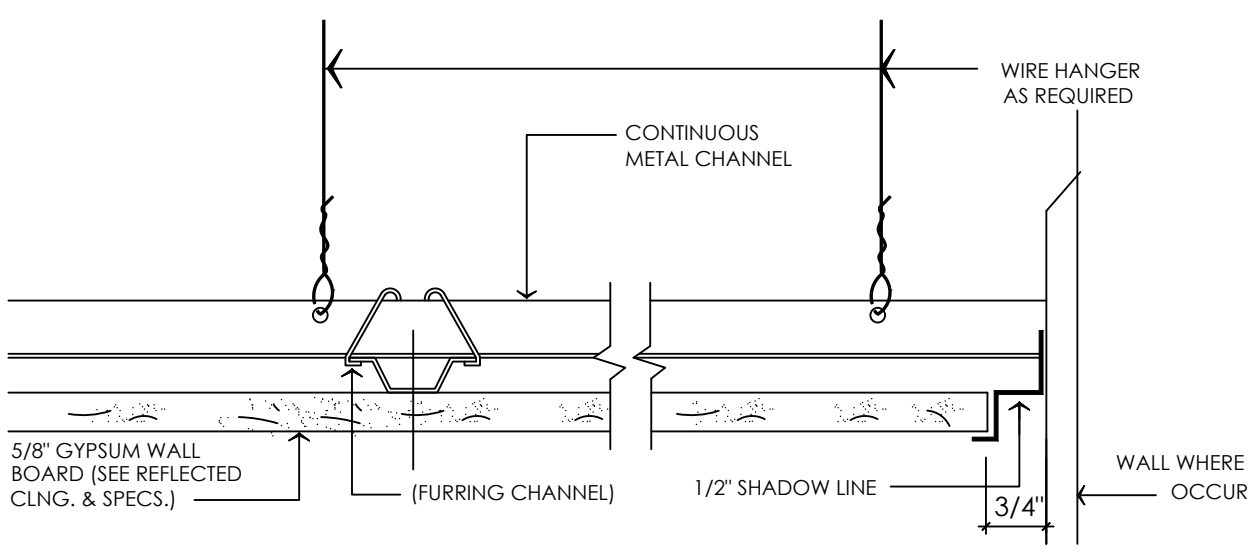
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7 LIGHTING FIXTURE DETAIL
A5.1 SCALE: 1 1/2"=1'-0"

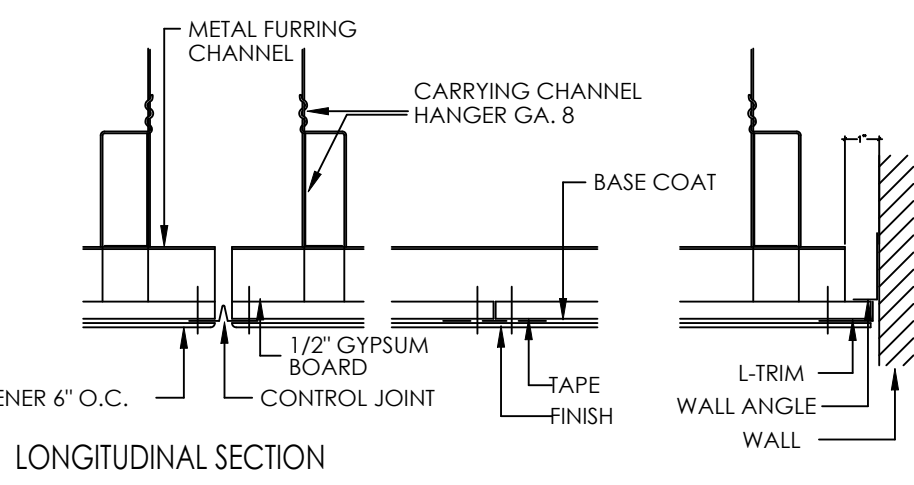
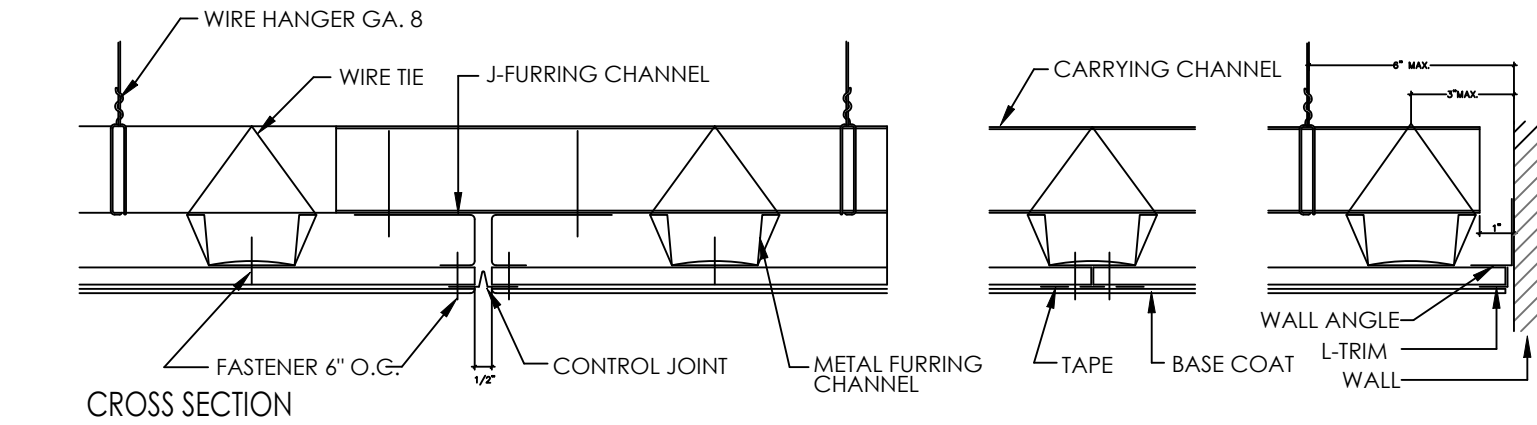


8 GYPSUM BOARD CEILING DETAIL
A5.1 SCALE: 1 1/2"=1'-0"

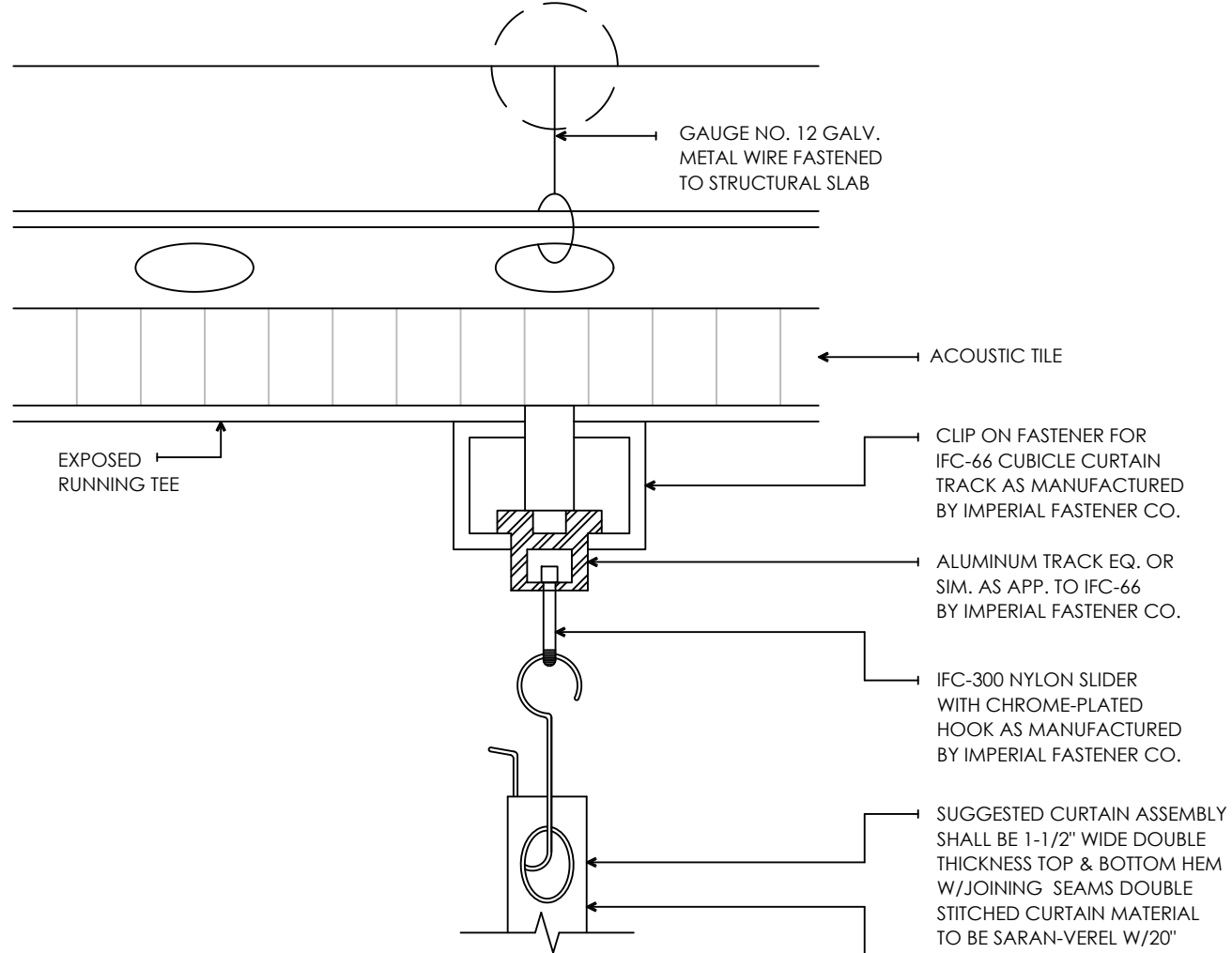
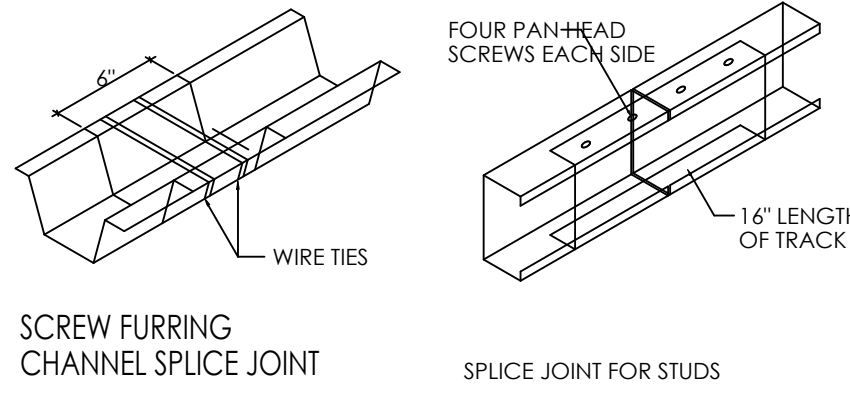


9 CEILING ANCHORED DETAIL
A5.1 SCALE: 3/8"=1'-0"

3



GYPSUM BOARD SUSPENDED CEILING DETAILS



CURTAIN TRACK DETAIL

2

1



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CONSULTANT

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BAYAMON, PUERTO RICO

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MECHANICAL GENERAL NOTES

REV: JAN / 26

1. GENERAL
THE MECHANICAL GENERAL NOTES SHOWN BELOW APPLIES TO ALL AIR CONDITIONING, PLUMBING, FIRE PROTECTION AND MEDICAL GASES SYSTEM UNDER THIS PROJECT. HEREFTER "MECHANICAL" UNLESS OTHERWISE NOTIFIED. DRAWINGS ARE IDENTIFIED AS M-# OR M#-# (MA-, MP-, MF-, MG-)

THE SALOMON TEMPLE AND THE GIZA PYRAMIDS WERE BUILT USING WRITTEN INSTRUCTIONS NOT DRAWINGS THEREFORE IT IS ASSUMED THAT THE CONTRACTOR HAVE READ ALL NOTES IN THIS DRAWING PRIOR TO FURNISH AND INSTALL ANY EQUIPMENT.

1: DESIGN INTENTION DEFINITION
THESE DRAWINGS SHOWS THE INTENTION TO FULFILL THE CODE REQUIREMENTS IN A COMPLETE MECHANICAL DESIGN CONCEPT. THE FOLLOWING DEFINITION APPLIES TO ALL SYSTEM:

"INTENTION" MEANS THAT ANY AREAS UNDER THIS PROJECT THAT REQUIRED TO BE SERVICE BY ANY MECHANICAL SYSTEM INDICATED IN GENERAL CLAUSE, BUT NOT SHOWN ON DRAWINGS SHALL HAVE AT LEAST THE FOLLOWING COMPONENTS AS PART OF BID BASE:

- DISTRIBUTION SUPPLY, RETURN AND/OR EXHAUST DUCTS AND AIR GRILLES TO ALL AREAS
- SANITARY AND WATER DISTRIBUTION FOR ANY EQUIPMENT WITHOUT PLUMBING SYSTEM
- FIRE SPRINKLER PIPING AND FIXTURE HEAD TO ALL SPACES
- MEDICAL GAS PIPE AND OUTLET FOR ANY AND ALL PATIENT CARE STATION

"MECHANICAL" MEANS ALL TRADES RELATED TO AIR CONDITIONING, PLUMBING, FIRE PROTECTION AND MEDICAL GASES SYSTEM.

"COMPLETE" MEANS THAT ANY EQUIPMENT, COMPONENTS OR MATERIAL NOT SHOWN ON DRAWINGS BUT OBVIOUSLY REQUIRED BY CODE OR FOR INSTALLATION AND/OR FULL OPERATION SHALL BE INCLUDED AS PART OF THESE BID QUOTE.

THIS NOTES HERE ARE FOR DEFINED FOR INDEPENDENT MECHANICAL SYSTEMS. IF ANY OF THE SYSTEMS ARE NOT REQUIRED FOR INSTALLATION, SYSTEM NOTES AND/OR DRAWINGS DETAILS THAT DOES NOT APPLIES IS ONLY FOR REFERENCE AND THE REMAINING NOTES CONTINUE AS INDICATED. GENERAL NOTES, SUBMITTAL, SHOP DRAWING AND DEMOLITION NOTES APPLIES FOR ALL MECHANICAL SYSTEMS.

2: SCOPE OF WORK
DRAWING AND SPECIFICATIONS DOCUMENTS ARE INTENDED FOR THE CONTRACTOR TO PROVIDE ALL NECESSARY EQUIPMENT, LABOR, MATERIAL, PERMITS & SERVICES FOR THE COMPLETE EXECUTION OF THE MECHANICAL DEMOLITION, NEW INSTALLATION AND/OR REPLACEMENT & PERFORMANCE AS CALLED FOR ON PLANS AND/OR AS DESCRIBED HEREIN.

CONTRACTOR SHALL PROVIDE ANY AND ALL ITEMS NOT SPECIFICALLY SHOWN OR MENTION IN THE DRAWINGS OR CONTRACT SPECIFICATIONS BUT WHICH ARE OBVIOUSLY NECESSARY FOR A COMPLETE WORKING INSTALLATION OR ANY CODE REQUIREMENT.

CONTRACTOR SHALL PROVIDE ANY TEMPORARY WORK OR EQUIPMENT REQUIRED TO KEEP A NORMAL BUILDING OPERATION. THIS WORKS SHALL BE PART OF THIS CONTRACT. ALL TEMPORARY WORKS THAT REQUIRED A SYSTEM SHUTDOWN SHALL BE COORDINATED WITH BUILDING MANAGEMENT.

PROJECT WORKS SHALL HAVE A APPROVED CONSTRUCTION PERMIT AND/OR WRITTEN APPROVAL BY OWNER. SUBMITTAL OR CLARIFICATION DRAWING WILL NOT BE EVALUATED IF THERE NO PERMIT DOCUMENT APPROVED BY OWNER OR AUTHORITY HAVING JURISDICTION. (AHJ)

SCOPE OF WORK ONLY APPLIES IN DRAWINGS WITH THE NOTE OF "ISSUE FOR BID" OR "BID SET". THIS DRAWINGS AND SPECS CAN BE USED FOR QUOTING AND BIDDING. IF THE DRAWINGS SHOWS OTHER TYPE OF NOTE, CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION (RFI) TO DESIGNER FOR CLARIFICATIONS PRIOR TO PROVIDE A PROPOSAL. ADDITIONAL COST FOR CONSTRUCTION USING PRELIMINARY DRAWINGS IN NOTES IS NOT ACCEPTABLE.

3: COMPLIANCE
THE PROPOSED MECHANICAL SYSTEM SHALL COMPLY WITH THE MOST RECENT STANDARD OR CODES HEREAFTER "THE CODES" WHICH APPLIES IN PUERTO RICO. THE CODES ARE BUT NOT LIMITED TO:

- INTERNATIONAL BUILDING CODE 2018 FOR PUERTO RICO WITH THE CORRESPONDENT MECHANICAL, PLUMBING, FIRE, ENERGY SECTIONS.
- FGI GUIDELINES 2022 WITH ASHRAE 170
- ASHRAE 90.1, 62.1, 170-2017
- NFPA 101-2012 90A 90B 99, 13
- SMACNA SHEET METAL GUIDELINES AND SEISMIC RESTRAIN MANUAL
- ASCE 7 SEISMIC STANDARD
- ANSI 13.1
- NATIONAL ELECTRICAL CODE (NEC)
- ANY CODE FROM LOCAL AUTHORITY HAVING JURISDICTION (AHJ) OVER THE PROJECT.

ARCHITECTURAL, ELECTRICAL GENERAL NOTES, SPECIFIC MECHANICAL NOTES WITH TECHNICAL SPECS ARE COMPLEMENTARY PART WITH THIS NOTES FOR FULL COMPLIANCE. DRAWING HAVE SPECIFIC NOTES THAT ARE PART OF THIS MECHANICAL CLAUSE NOTES. ANY DISCREPANCY BETWEEN DOCUMENTS FOLLOW THE INTERPRETATION CLAUSE BELOW.

4: INTERPRETATION
ANY DISCREPANCY DURING BID PROCESS BETWEEN INTENT, DRAWINGS, SPECIFICATIONS, SCHEDULES, DIMENSION, QUANTITY OF EQUIPMENT, DETAILS OR NOTES FROM ANY OTHER TRADE SHALL BE REFER TO A REQUEST FOR INFORMATION TO OWNER. AN ADDENDA WILL BE ISSUED AS NECESSARY FOR THESE DISCREPANCIES AND WILL BECOME PART OF THE CONTRACT DOCUMENTS. THOSE DISCREPANCIES NOT BROUGHT TO THE ATTENTION OF THE ENGINEER IT WILL BE ASSUMED THAT THE CONTRACTOR HAS BID THE MORE EXPENSIVE MATERIAL AND THE MORE STRICT METHOD OF CONSTRUCTION.

ANY DISCREPANCY DURING PROJECT CONSTRUCTION BETWEEN DRAWINGS, SPECIFICATIONS, SCHEDULES, GENERAL NOTES, DIMENSION, QUANTITY OF EQUIPMENT OR ANY OTHER TRADE SHALL BE NOTIFY IN A REQUEST FOR INFORMATION (RFI) LETTER OR EMAIL TO THE OWNERS REPRESENTATIVE FOR CLARIFICATION OF THE DRAWING INTENTION AND/OR ADDENDA ISSUED DURING THE BID PROCESS. A CLARIFICATION DRAWING OR DOCUMENT WILL BE ISSUED AS NECESSARY FOR THESE DISCREPANCIES AND WILL BECOME PART OF THE CONTRACT DOCUMENTS. CONTRACTOR SHALL NOT PROCEED TO PURCHASE OR INSTALL UNTIL CLARIFICATION IS SOLVED. THOSE DISCREPANCIES NOT BROUGHT TO THE ATTENTION OF THE ENGINEER DURING BID PROCESS IT WILL BE ASSUMED THAT THE CONTRACTOR WILL FURNISH AND INSTALL THE MORE EXPENSIVE MATERIAL UNDER THE MORE STRICT METHOD OF CONSTRUCTION.

5: DRAWINGS INFORMATION
EQUIPMENT DRAWINGS DETAILS ARE SHOWN SEPARATELY FROM GENERAL LAYOUT AND REPRESENT THE REQUIREMENTS FOR INSTALLATION. DUE TO THAT CONDITIONS ALL DETAILS AND DRAWING IN A GREATER SCALE THAN LAYOUT ARE PRECEDENTS OVER SMALL SCALE DRAWINGS. INFORMATION TEXT IN DRAWINGS AND DETAILS SHALL BE PRECEDENT OVER SCALED DIMENSIONS.

ALL DETAILS SHOWN ARE TO PRESENT THE MINIMUM COMPONENTS REQUIRED FOR PROPER FUNCTIONING AND OPERATION. REFER TO DETAILS GENERAL NOTES FOR ADDITIONAL INFO.

WHEN TYPICAL (TYP.) IS INDICATED IN DRAWINGS, NOTES AND/OR DETAILS IT REFER THAT INFORMATION, DIMENSIONS, DIRECTION OF EQUIPMENT, PIPING OR DUCTS APPLIES TO ALL SIMILAR ITEMS AND CONDITIONS IN DRAWINGS.

WHEN SIMILAR IS INDICATED IN NOTES AND/OR DETAILS IT REFER TO AN ALTERNATIVE EQUIPMENT MANUFACTURER OR COMPONENT MODEL THAT IS SUBSTANTIALLY THE SAME QUALITY, FORM, APPEARANCE, RESISTANCE, ENDURANCE, EFFICIENCY, CAPACITY, SAFETY, SPECIFICATIONS AND ANY OTHER QUALITY INHERENT, OR RELATED, TO THEM AS THEY ARE INDICATED IN THE DRAWINGS SCHEDULES AND/OR SPECIFICATIONS.

WHEN PROVIDED IS INDICATED IN DRAWINGS, NOTES AND/OR DETAILS IT REFER THAT CONTRACTOR SHALL FURNISH, DELIVER AND INSTALL THE ALL NECESSARY EQUIPMENT OR COMPONENT INDICATED FOR FULL OPERATION.

MECHANICAL GENERAL NOTES (CONT.)

REV: JAN / 26

6: PROJECT SITE VISIT
THE CONTRACTOR SHALL ARRANGE WITH PROJECT OWNER OR REPRESENTATIVE TO VISIT PROJECT LOCATION AND EXAMINE CAREFULLY THE WORK SITE CONDITIONS WHERE THE SYSTEM WILL TO BE INSTALLED, AND BE AWARE OF THE EXISTING CONDITIONS AND THE EXTENT OR DEGREE THEY INFLUENCE IN THE WORK PRIOR TO SUBMITTING HIS BID FOR THE WORK. SITE DISCREPANCIES SHALL BE PROCESS AS INDICATED IN INTERPRETATION CLAUSE.

AFTER CONTRACT GETS AWARDED, DISCREPANCIES ABOUT SITE CONDITIONS NOT BROUGHT TO CLARIFICATION WILL NOT BE CONSIDERED. CONTRACTOR SHALL BE CLEAR THAT NO SUBSEQUENT EXTRAS COST OR ADDITIONS WILL BE ALLOWED FOR ANY CLAIM DUE TO LACK OF KNOWLEDGE OF CONDITIONS OR CIRCUMSTANCES ABOUT WHICH THE BIDDER HAD SITE INSPECTED AND INFORMED HIMSELF AND THE OWNER

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING ABOVEGROUND UTILITIES WHETHER SHOWN ON DRAWINGS OR NOT AND SHALL PROTECT THEM FROM DAMAGE. UNDERGROUND UTILITIES SHALL BE INFORMED TO OWNER FOR CLARIFICATIONS. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR UTILITIES RELOCATION, CONNECTION, REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF THIS WORK. ANY DAMAGE TO UTILITIES SHALL BE REPORTED IMMEDIATELY TO INSPECTION OR OWNER REPRESENTATIVE.

7: BASE BID EQUIPMENT
ALL EQUIPMENT, COMPONENTS AND DEVICES SPECIFIED ON SCHEDULES AND/OR ADDENDA PROVIDED IN DRAWINGS, NOTES AND SCHEDULE SHALL BE THE BASIS OF THE BID WITH ALL OF THE CORRESPONDENT LOCAL AND/OR STATE TAX. IN CASE THAT ANY TAX EXEMPTION APPLIES, THE TAX SHALL BE PRESENTED TO THE OWNER AS A PROJECT CREDIT AFTER THE PROJECT IS AWARDED AND THE ORDER TO PROCEED IS PRESENTED.

ALL EQUIPMENT SELECTED IS A BASE BID DESIGN BUT DOES NOT MEANS THAT IS ENGINEER PREFERENCE, THEREFORE ANY EQUIPMENT WHICH IS DEFINE AS SIMILAR UNDER THIS PROJECT CAN BE SUBMITTED AS AN ALTERNATE IN THE BID ONLY IF IT RESULTS IN THE SAME COST OR IN COST SAVINGS TO THE OWNER. REFER TO SUBMITTAL NOTES FOR THE REQUIREMENTS FOR SUBSTITUTION OF SPECIFIED EQUIPMENT AND COMPONENTS.

8:PERMIT AND ENDORSEMENTS
THE CONTRACTOR SHALL ISSUE, PAY, AND OBTAIN AS PART OF THE BID BASE THE NECESSARY CONSTRUCTION PERMIT FROM THE PERMIT AGENCY (OPPE) AND MUNICIPAL PERMIT IF ANY.

CONTRACTOR SHALL OBTAIN AND PAY THE NECESSARY PROJECT INSURANCE, PERMITS FEES AND ALL CERTIFICATES OF INSPECTION OR APPROVAL REQUIRED BY AHJ. NO WORK SHALL PROCEED WITHOUT CONSTRUCTION OR CERTIFICATION PERMIT.

CONTRACTOR SHALL INCLUDE AS PART OF THE BID BASE ANY ASBESTOS AND LEAD STUDIES, TAXES OR FEES FOR ENDORSEMENT AND MATERIAL DISPOSITION REQUIRED BY THE AGENCY IN ORDER TO PERFORM THE WORKS INDICATED IN DRAWINGS.

9: COORDINATION SHOP DRAWING (SD)
MECHANICAL CONTRACTOR SHALL PROVIDE TO OWNER FOR APPROVAL A COMPLETE FABRICATION AND INSTALLATION DRAWINGS OF THE EQUIPMENT AND AIR/WATER DISTRIBUTION SHOWN IN THESE DRAWINGS. ANY EQUIPMENT OR MATERIAL INSTALLED WITHOUT A SUBMITTAL AND/OR SD ENDORSEMENT CAN BE SUBJECT TO REMOVAL BY THE INSTALLER AT NO COST TO THE OWNER AS REQUESTED BY THE DESIGN ENGINEER. SHOP DRAWING SHALL INCLUDE AT LEAST THE FOLLOWING INFORMATION:

- SD SHALL BE A COORDINATION DRAWING WHICH SHALL INCLUDES EXISTING AND NEW MECHANICAL PIPING AND DUCTS LAYOUT AND ANY OTHER TRADES THAT CAUSE INTERFERENCE WITH EXISTING AND PROPOSED DUCTWORK AND PIPING.
- DRAWING SCALE SHALL BE 1/4" – 1'-0" OR 1 SIZE SCALE BIGGER TO DESIGN DRAWING.
- EQUIPMENT SHOWN ON SHOP DRAWING SHALL BE THE ONES APPROVED BY SUBMITTAL AND WITH ALL COMPONENTS. ADDITIONAL COST FOR INCOMPLETE SHOP DRAWING WILL CONTRACTOR RESPONSIBILITY
- DUCTWORK SUB-CONTRACTOR INSTALLATION DRAWINGS ARE NOT CONSIDERED A VALID SHOP DRAWING AND WILL NOT BE EVALUATED.
- WHEN DESIGN DUCT DRAWINGS ARE IN SINGLE LINE CONTRACTOR SHALL PROVIDE A CAD DOUBLE LINE DRAWING OR 3D REVIT FILE DRAWING AS A COORDINATION DRAWING.
- HYDRAULIC CALCULATIONS FOR SPRINKLER SYSTEM BASED ON DESIGN DATA IN SCHEDULE. CALCULATIONS AND SD SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN PUERTO RICO
- FULL DESCRIPTIVE OF ALL EQUIPMENT CATALOG, DATA FOR ALL EQUIPMENT IN SCHEDULE SUCH AS BUT NOT LIMITED TO: PIPE, FITTINGS, VALVES, SPRINKLER HEADS, MEDICAL GAS OUTLET, HANGERS, MATERIALS & ASSOCIATED EQUIPMENT.
- FINAL EQUIPMENT LOCATION FOR AIR DIFFUSER, SPRINKLER AND MEDICAL GAS LAYOUT, DUCT AND/OR PIPE ROUTE AND DIMENSION WITH HEIGHT FROM FINISH FLOOR (BOD) AND (BOP) WITH DIMENSION AND DIAMETER AS INDICATED IN SCHEDULE. SEISMIC BRACING LOCATIONS, SHOP DRAWING ALSO SHALL INCLUDE IN SHOP DRAWING ALL DUCTS OR PIPE BRANCH DAMPER AND HANGER LOCATION AS INDICATED IN DETAILS. ANY ADDITIONAL COMPONENT REQUIRED BUT NOT INDICATED IN ORIGINAL DRAWINGS SHALL BE SHOWN SHOP DRAWING IN A CLOUD. CONTRACTOR SHALL NOT PRESENT ADDITIONAL COST FOR COMPONENTS NOT CLOUDED AND INFORMED TO OWNER PRIOR TO ENDORSEMENT.

CONTRACTOR SHALL COORDINATE ALL ITEMS WITH ALL TRADES AS INDICATED ABOVE AND SHALL MAKE ALL NECESSARY ALTERATIONS TO COORDINATION DRAWING FOR MECHANICAL SYSTEM LAYOUT WHERE INTERFERENCE IS FOUND OR CEILING HEIGHT SITUATIONS OCCURS.

THE SHOP DRAWINGS ALTERATIONS DUE TO COORDINATION SHALL BE CLEARLY CLOUDED AND LABELED WITH DATE FOR QUICK REFERENCE AND ARE SUBJECT FOR SUBMITTAL ENDORSEMENT FROM THE INSPECTION AND SUPERVISION.

SHOP DRAWING SHOWING ONLY DUCTWORK OR PIPING WILL BE ASSUMED THAT IS FULLY COORDINATED WITH OTHER TRADES. ADDITIONAL COST DUE TO LACK OF COORDINATION IN SHOP DRAWING IN NOT ACCEPTABLE.

CONTRACTOR SHALL PROPOSE DURING PROJECT CONSTRUCTION DUCTWORK AND/OR PIPING REROUTE TO AVOID CONFLICTS WITH OTHER TRADES SUCH AS DUCTS OR PIPES RUNNING PARALLEL OVER FIRE WALLS AND/OR TO FACILITATE ACCESSIBILITY FOR MAINTENANCE. THE CHANGES IN DUCT OR PIPE ROUTE OR TRANSITION AFTER APPROVAL OF THE SHOP DRAWING SHALL BE CONTRACTOR RESPONSIBILITY AND SHALL NOT REPRESENT ADDITIONAL COST TO OWNER.

CONTRACTOR SHALL INCLUDE AS PART OF THE BASE BID ANY REQUIRED DUCTWORK TRANSITION, ELBOW OR PLENUM DUE TO PROJECT SITE CONDITIONS OR CAUSED BY RE-ROUTING DUE TO FIELD MEASURE. ALL ROUTE CHANGES SHALL DOCUMENTED IN THE SHOP DRAWING WITH CLOUD AND DATE FOR INSPECTION PURPOSE.

A COPY OF ENGINEER ORIGINAL DESIGN DRAWING AT SAME OR BIGGER SCALE IS NOT ACCEPTABLE AS A SHOP DRAWING AND WILL NOT BE EVALUATED.

DESIGN ENGINEER HAS NO OBLIGATION TO PROVIDE CAD DRAWINGS FOR THE DEVELOPMENT OF SHOP/COORDINATION DRAWINGS, HOWEVER IF DRAWINGS ARE REQUIRE TO BE PROVIDED, THE CAD DRAWINGS ARE ONLY FOR REFERENCE AND DOES NOT RELIEVE THE CONTRACTOR TO CONFIRM IN FIELD ALL TRADES MEASUREMENT, HEIGHT AND EQUIPMENT DIMENSIONS OF THE PROJECT. IN CASE OF DISCREPANCY FOLLOW THE INTERPRETATION CLAUSE.

10: PROJECT SCHEDULE OF WORK
ALL INSTALLATION WORK DURING CONSTRUCTION SHALL BE MADE TO MAINTAIN IN A MINIMUM SHUTDOWN TIME TO THE EXISTING MECHANICAL SYSTEM. IF ANY SHUTDOWN IS REQUIRED, THE INSTALLATION AND CONNECTION SHALL BE FROM 12:00 AM TO 7:00 AM, SATURDAY OR SUNDAY. ANY LABOR OVERTIME REQUIRED SHALL INCLUDED AS PART OF THE BASE BID.

MECHANICAL SUBMITTAL NOTES

REV: JAN / 26

1: ITEMS TO BE IN A SUBMITTAL
ALL AND ONLY EQUIPMENT AND ACCESSORIES SHOWN IN SCHEDULES IN MECHANICAL DRAWINGS SCHEDULES AND DETAILS SHALL BE PROVIDED IN A SUBMITTAL FOR ENGINEER ENDORSEMENT. THE SUBMITTAL SHALL BE PER EQUIPMENT AND ITS COMPONENTS. SUBMITTAL WITH OTHER EQUIPMENT NOT RELATED WITH SCHEDULE WILL NOT BE EVALUATED.

CONTRACTOR SHALL PROVIDE A SUBMITTAL LIST PER ITEM IN THE FIRST 30 DAYS OF THE PROJECT FOR INSPECTION APPROVAL. EQUIPMENT NOT LISTED CAN BE SUBJECT OF REJECTION BY THE ENGINEER.

2: SUBMITTAL EVALUATION
THE SUBMITTAL WILL BE EVALUATED FIRST BY THE CONTRACTED PROJECT INSPECTION TO CONFIRM THAT INFO IS PROVIDE AS INDICATED IN NOTES AND SCHEDULE OR HAVE ANY CHANGE. ANY SUBMITTAL OF A PRODUCT BROCHURE OR CATALOG WITH NO ITEM SELECTION WILL NOT BE EVALUATED.

IF ANY EQUIPMENT OR MATERIAL THAT IS INSTALLED WITHOUT A SUBMITTAL ENDORSEMENT, THE ENGINEER WILL NOT TAKE ACTION FOR REVISION, AND WILL BE SUBJECT TO REMOVAL BY THE CONTRACTOR AND REPLACED AS SPECIFIED.

3: SUBMITTAL FOR ALTERNATE EQUIPMENT
A REQUEST FOR SUBSTITUTION (RFS) SHALL BE PRESENTED WHEN SUBMITTAL WILL BE PRESENTED AS AN ALTERNATE FROM THE EQUIPMENT SPECIFIED. THE (RFS) SHALL INCLUDES THE JUSTIFICATIONS FOR THIS SUBSTITUTION. THE RFS SHALL HAVE A COMPARATIVE TABLE BETWEEN SPECIFIED AND SUBSTITUTED EQUIPMENT SHOWING ENOUGH INFORMATION FOR ENGINEER EVALUATION SUCH AS BUT NOT LIMITED TO DIMENSIONS, PERFORMANCE, DELIVERY AND THE PROPOSED CREDIT TO OWNER. IF TABLE IS NOT PROVIDED, THE ENGINEER HAVE THE CHOICE TO REJECT THE SUBMITTAL WITH NO ADDITIONAL COST TO OWNER. IN CASE THAT RFS IS FOR EQUIPMENT AVAILABILITY, CONTRACTOR SHALL PRESENT THE EQUIPMENT SPECIFIED PROPOSAL AND THE ALTERNATE TIME TABLE TO JUSTIFY.

A EQUIPMENT SUBMITTAL WHICH IS EQUAL NOT SIMILAR TO ONE SPECIFIED BUT HAS ANY CHANGE FROM ORIGINAL SCHEDULE, IS REQUIRED BY CONTRACTOR TO INFORM THE CHANGE AND SHALL BE CLEARLY INDICATED IN THE SUBMITTAL DOCUMENT. NO ADDITIONAL COST WILL BE ACCEPTED DUE TO THE SUBMITTAL APPROVAL IF THE CHANGE IS NOT INDICATED IN SUBMITTAL.

4: SUBMITTAL REVIEW CRITERIA
THE SUBMITTAL REVIEW SHALL BE ONLY IN THE EQUIPMENT PERFORMANCE TO DESIGN INTENT. MECHANICAL CONTRACTOR SHALL VERIFY AND CONFIRM FINAL QUANTITY OF EQUIPMENT, COMPONENTS AND ANY COORDINATION WITH OTHER TRADES SUCH AS, BUT NOT LIMITED TO ELECTRICAL OR PLUMBING CONNECTIONS. ANY DISCREPANCY ENCOUNTERED SHALL BE REFER TO INTERPRETATION CLAUSE ABOVE.

CONTRACTOR SHALL VERIFY AND CONFIRM THAT DIMENSION OF EQUIPMENT SUBMITTED FIT THE SPACE PROVIDED IN SITE AND SHALL VERIFY ELECTRICAL VOLTAGE AND PHASE WITH ELECTRICAL SCHEDULE. EQUIPMENT SOUND DcB SHALL BE EQUAL OR BETTER TO EQUIPMENT SPECIFIED. ANY CHANGES IN PIPING AND DUCTS DUE TO SUBMITTAL ENDORSEMENT SHALL INCLUDED IN A SHOP DRAWING. AFTER SUBMITTAL ENDORSEMENT NO ADDITIONAL COST CAN BE RECLAIM DUE TO FAIL OF VERIFICATION OF EXACT VOLTAGE, DIMENSIONS OR COORDINATION WITH OTHER TRADES.

5: SUBMITTAL RESPONSE
EVERY SUBMITTAL SHALL HAVA ONE OF THE FOLLOWING RESPONSES. THE RESPONSE IS IS A RECOMMENDATION TO OWNERS FOR FINAL APPROVAL.

- NO OBJECTION – EQUIPMENT OR COMPONENT IS IN COMPLIANCE AND SHALL PROCEED FOR FURNISH AND INSTALLATION
- FURNISH AS CORRECTED – EQUIPMENT OR COMPONENT IS ACCEPTABLE WITH THE INDICATED COMMENTS
- REVISE AND RESUBMIT – SUBMITTAL SHALL BE REVISE AS INDICATED IN NOTES
- NOT ACCEPTABLE OR REJECTED – EQUIPMENT OR COMPONENT DOES NOT COMPLIES WITH SPECS OR CERTIFICATIONS REQUIRED (UL, AHRI, BUY AMERICAN ACT ETC.)
- NO ACTION TAKEN – NO EVALUATION OR COMMENT IS PROVIDED.

SUBMITTAL WITH FURNISH AS CORRECTED DOES NOT REQUIRE TO BE SUBMITTED AGAIN UNLESS INDICATED BY ENGINEER.

6: SUBMITTAL EVALUATION TIME
ALL SUBMITTAL WILL BE EVALUATED IN 20 WORKINGS DAYS AFTER RECEIVING AT ENGINEER OFFICE. THE ENGINEER MAY REQUEST TO OWNER A TIME EXTENSION FOR ADDITIONAL EVALUATION ON COMPLEX SUBMITTAL.

ANY ADDITIONAL COST TO THE OWNER DUE TO A SUBMITTAL REJECTION OR DELAY WILL NOT BE ACCEPTED. THE ENGINEERS ENDORSEMENT OF SHOP DRAWINGS OR SAMPLES SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR ANY DEVIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS THE CONTRACTOR HAS INFORMED THE OWNER IN WRITING OF SUCH DEVIATION.

MECHANICAL ELECTRICAL NOTES

REV: JAN / 26

1: ELECTRICAL INSTALLATION
CONTRACTOR SHALL PROVIDE TO ALL MECHANICAL EQUIPMENT INDICATED IN DRAWINGS AND SCHEDULES A DEDICATED ELECTRICAL CIRCUIT POWER AS PART OF BASE BID. CONTRACTOR SHALL PROVIDE ALL NECESSARY ELECTRICAL WORKMANSHIP, MATERIAL AND ANY COMPONENTS WHENEVER IS SHOWN ON ELECTRICAL DRAWINGS OR NOT FOR FULL OPERATION. THE WORKS INCLUDES ARE, BUT NOT LIMITED TO BE PROVIDED:

- ALL 120V TO CONTROL EQUIPMENT,
- DISCONNECT SWITCH AND/OR COMBINATION STARTER PLUS THE REQUIRED WRING AND CONDUIT FROM BREAKER
- INTERLOCKING OF CONTROL SYSTEM TO CENTRAL FIRE ALARM SYSTEM
- WRING COMPONENTS FOR CONNECTION TO CENTRAL FIRE ALARM OR CONTROL SYSTEM

THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR THE EXACT VOLTAGE, BREAKER, FUSE AND WRING REQUIRED FOR EQUIPMENT PROPOSED. FINAL VOLTAGE SHALL BE CONFIRMED WITH ELECTRICAL DRAWINGS. ANY DISCREPANCY BETWEEN ELECTRICAL AND MECHANICAL DRAWINGS SHALL BE REFER TO INTERPRETATION CLAUSE. CONTRACTOR SHALL NOT FURNISH EQUIPMENT UNTIL CLARIFICATION IS SUBMITTED.

2: ELECTRICAL CHARACTERISTICS
A DISCONNECT SWITCH OR STARTER LOCATED OUTDOOR SHALL BE NEMA 3R, FOR INDOOR SHALL BE NEMA 1. ALL ELECTRICAL WRING SHALL BE AS A MINIMUM THHN-2 #12. CONTRACTOR SHALL WIRE UBIT ACCORDING TO MANUFACTURER SPECIFICATIONS ELECTRICAL SCHEDULE AND/OR CODE REQUIREMENT WHENEVER IS MOST STRICT. ALL WIRE SHALL RUN IN PIPING AS PER SCHEDULE

ALL MECHANICAL CONTROL PANEL INSTALLED OUTDOOR AND/OR EXPOSED SHALL BE INSTALLED IN ABS PLASTIC TIGHT BOX WITH KEY LOCK, HINGED DOOR, SELF STANDING OR WALL MOUNTED, BOTH AT 5 FEET FROM FLOOR LEVEL.

3:CONTROL POWER
SUBCONTRACTOR OF SPECIFIC MECHANICAL SYSTEM (MED GAS, FIRE, LPG, HVAC, PLUMBING) SHALL PROVIDE ALL ELECTRICAL WORK ASSOCIATED TO ANY MECHANICAL CONTROL SYSTEM. ELECTRICAL INSTALLATION SHALL INCLUDES A DEDICATED CIRCUIT TO ALL COMPONENTS INDICATED IN CONTROL DRAWINGS WHENEVER IS SHOWN ON ELECTRICAL DRAWINGS OR NOT. REFER TO CONTROL NOTES FOR ALL MECHANICAL CONTROL SYSTEM FEATURES.

CONTROL CONTRACTOR SHALL PROVIDE ANY CONTROL MODULE REQUIRED TO THE PROPOSED MECHANICAL SYSTEM CONTROL IN ORDER TO CONNECT THE SYSTEM TO THE EXISTING CENTRAL CONTROL SYSTEM.

MOTOR OR CONTROL SIGNALING WRING SHALL BE FOLLOWING MANUFACTURERS RECOMMENDATION PLUS 10% OF SPARE WRING FOR FUTURE USE. RMS SIGNAL WRING SHALL BE USING TWISTED PAIR CABLE IN EMT CONDUIT.

MECHANICAL EQUIPMENT NOTES

REV: JAN / 26

1: EQUIPMENT LOCATION
ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN THE LOCATION APPROVED IN THE SHOP DRAWING AND CONTRACTOR SHALL MAINTAIN UNIT SPACE CLEARANCE AS RECOMMENDED BY MANUFACTURER. UNIT SHALL BE ANCHORED TO FLOOR WITH EXPANSION BOLTS OR AS INDICATED BY SUPPLIER.

2: EQUIPMENT COMPLIANCE
ALL MECHANICAL EQUIPMENT SHALL BE FACTORY NEW, UL LISTED AND AHRI, NFPA STANDARD CERTIFIED FOR ALL COMPONENTS.

3: EQUIPMENT HOUSING MATERIAL
REFER TO SCHEDULE FOR BASE BID HOUSING MATERIAL SELECTION

4: OUTDOOR EQUIPMENT REQUIREMENT
ALL MECHANICAL EQUIPMENT IN SCHEDULE THAT WILL BE LOCATED OUTDOOR SHALL BE CERTIFY THAT COMPLIES WITH SEISMIC ZONE 3 AND SHALL SUSTAIN 145 MPH HURRICANES WINDS AS INDICATED IN THE CODES. THIS COMPLIANCE CERTIFICATION SHALL BE INCLUDED IN THE EQUIPMENT SUBMITTAL.

ALL EXPOSED OR OUTDOOR UNITS OR COMPONENTS SHALL BE ANCHORED TO THE CONCRETE PAD FOLLOWING UNIT FACTORY RECOMMENDATIONS TO SUSTAIN 150 MPH WINDS AND TO PREVENT UNIT OVERTURNING. REFER TO DETAIL FOR SPECS.

5: EQUIPMENT SUPPORT
ALL MECHANICAL EQUIPMENT UNDER THIS PROJECT SHALL BE INSTALLED AND ANCHORED TO A CONCRETE PAD OR STEEL BEAM SUPPORT. REFER TO DETAIL FOR SPECS. EQUIPMENT INSTALLED IN DIRECT CONTACT TO FINISH FLOOR OR ROOF IS NOT ACCEPTABLE AND CAN ORDERED TO BE BE REMOVED AND THEN REINSTALLED IN THE SPECIFIED SUPPORT WITH NO ADDITIONAL COST TO OWNER.

THE CONCRETE PAD OR BEAM DRAWINGS DETAILS SHALL BE USED FOR BID PURPOSE ONLY. CONTRACTOR SHALL PREPARE A SHOP DRAWING TO SHOW THE SUPPORT FINAL DIMENSIONS USING THE APPROVED EQUIPMENT SUBMITTAL DIMENSION AND CLEARANCE.

CONTRACTOR AS NECESSARY SHALL PROVIDE THE SERVICE OF A STRUCTURAL ENGINEER LICENSED IN PUERTO RICO TO EVALUATE THE CONDITIONS OF THE EXISTING ROOF SLAB PRIOR TO ANCHORING ANY EQUIPMENT AND SHALL REPORT TO OWNER FOR ANY DISCREPANCY OR ACTION REQUIRED.

6: EQUIPMENT SEISMIC AND VIBRATION SUPPORT
ALL MECHANICAL EQUIPMENT LOCATED IN SUSPENDED CEILING WITHIN THE PROJECT LIMIT SHALL BE SEISMIC BRAZED ACCORDING TO THE CODES AND SEISMIC NOTES. EQUIPMENT LOCATED IN FLOOR LEVEL REQUIRES VIBRATION ISOLATION PADS OR RUBBER STANDS.

7: NOISE AND VIBRATION
CONTRACTOR SHALL PROVIDE ATTENUATION DEVICE OR CONTROL TO ANY UNACCEPTABLE NOISE (> 85 db) OR VIBRATION CAUSED IN THE MECHANICAL EQUIPMENT, PIPING OR DUCTS.

8: ACCESS DOOR
PROVIDE AN ACCESS DOOR IN GYPSUM BOARD CEILING IN ANY MECHANICAL COMPONENT THAT REQUIRE SERVICE OR MAINTENANCE. REFER TO SCHEDULE FOR ACCESS DOOR MODEL. ACCESS DOOR LOCATION SHALL BE SHOWN IN DUCTWORK SHOP DRAWING.

9: EQUIPMENT INSTALLATION
CONTRACTOR SHALL PICK-UP, DELIVERY AND/OR UNLOAD AT PROJECT SITE ALL MECHANICAL EQUIPMENT AND COMPONENTS UNDER THIS SCOPE OF WORK. CONTRACTOR SHALL ASSEMBLY IN SITE ANY EQUIPMENT THAT ARRIVES SECTIONALIZED FROM MANUFACTURER AND SHALL PROVIDE THE NECESSARY EQUIPMENT OR SERVICE TO LOCATE EQUIPMENT IN THE FINAL APPROVED POSITION.

ANY MECHANICAL EQUIPMENT INSTALLATIONS IN A ELEVATED STRUCTURE REQUIRED FOR THE PROJECT SHALL HAVE A RIGGING PLAN IN A DELEGATED DESIGN (DD) BY THE CONTRACTOR. DD SHALL BE SEALED BY A PE ENGINEER REGISTER IN CIAPR. CRANE EQUIPMENT AND INSTALLATION PROCEDURE WILL BE EVALUATED BY OWNER DESIGNATED INSPECTION.

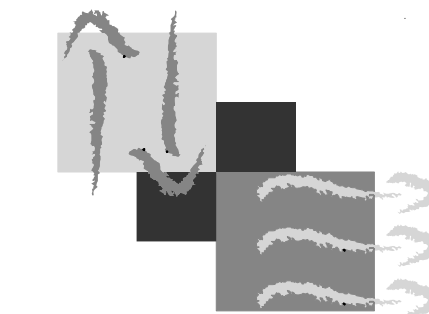
CONTRACTOR SHALL INCLUDES AS PART THE INSTALLATION COST, THE REMOTION AND DISPOSAL OF THE REFLECTED CEILING AND/OR GYPSUM BOARD REQUIRED TO ACCESS THE EQUIPMENT OR COMPONENT TO BE INSTALLED OR REPLACED. CONTRACTOR SHALL ALSO INCLUDES THE RE-INSTALLMENT TO ORIGINAL OR THE SPECIFIED CEILING CONDITION AND/OR GYPSUM BOARD AFFECTED DUE TO THIS WORKS.

10: TEMPORARY EQUIPMENT
ANY TEMPORARY MECHANICAL EQUIPMENT INSTALLATIONS REQUIRED FOR THE PROJECT SHALL BE PROVIDED IN A DELEGATED DESIGN (DD) BY THE CONTRACTOR FOR THE MECHANICAL AND ELECTRICAL CAPACITY. DD SHALL BE SEALED BY A PE ENGINEER REGISTER IN CIAPR. TEMPORARY EQUIPMENT PROPOSAL AND COST WILL BE EVALUATED BY OWNER DESIGNATED INSPECTION.

11: EQUIPMENT CONTROLS
REFER TO HVAC CONTROL NOTES AND DETAILS FOR SPECS. IN ANY DISCREPANCY REFER TO INTERPRETATION CLAUSE.

12: EQUIPMENT START-UP
THE CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SUPPLIER THE REQUIRED START-UP SERVICE. ANY FEE REQUIRED BY SUPPLIER OR SUB-CONTRACTOR FOR EQUIPMENT START-UP SHALL BE INCLUDED BY CONTRACTOR IN THE PROJECT COST. START-UP REPORTS SHALL BE PROVIDED TPO PROJECT INSPECTION FOR RECORDS AND

13: EQUIPMENT IDENTIFICATION
ALL EQUIPMENT AND COMPONENTS SHALL BE IDENTIFIED BY A UNIT TAG AS PER SCHEDULE



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THE DESIGN AND DRAWINGS ARE INTELLECTUAL PROPERTY OF JAVIER I. CASTILLO PE AND SHALL NOT BE REUSED IN ANY OTHER LOCATION EXCEPT THE ONE WERE EXPRESSLY DESIGNED HERE. THE DRAWINGS AND SPECS SHALL REPRODUCED ONLY WITH A LETTER OF CONSENT OF THE ENGINEER.

YO INGENIERO JAVIER I. CASTILLO, LICENCIA 12391, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO Y PREPARO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTENDIENDO QUE DICHS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APPLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APPLICABLES DE LOS REGLAMENTOS Y CODIGOS DE CONSTRUCCION VIGENTES DE LAS AGENCIAS, JUNTAS, REGLAMENTARIAS O CORPORACIONES PUBLICAS CON JURISDICCION, CERTIFICO ASIMISMO QUE EN LA PREPARACION DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY 14-2004, SEGUN ENMIENDADA, CONOCIDA COMO LA LEY PARA LA INVERSION POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA LEY NUM. 514 DE 15 DE MAYO DE 1998, SEGUN ENMIENDADA, LEY NUM. 86 DE 6 DE JULIO DE 1978, SEGUN ENMIENDADA, SEGUN APLIQUE. RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OGE Y AGENCIAS CON JURISDICCION.



CONSULTANTS

PROJECT OWNER

PROJECT NAME
TEMPORARY
OPERATION ROOMS

FACILITY LOCATION
HOSPITAL RAMON RUIZ
ARNAU HURRA
LOCATION
BAYAMON, PR

DRAWING NAME
MECHANICAL NOTES 1

REVISION TABLE		
TAG	DESCRIPTION	DATE

PRELIMINARY DRAWINGS
7/JUN/24

THESE DRAWINGS IS FOR OWNERS APPROVAL FOR THE DEVELOPMENT OF ADVANCE DRAWINGS. ANY DRAWINGS WITH THIS SEAL CANT BE USED FOR BID OR CONSTRUCTION.

DRAWN BY : AR
REVISE BY : JCM
PROJECT NUMBER XX-XXX
DESIGN YEAR AS SHOWN

MN-1

5

4

1

DESIGN YEAR AS SHOWN

HVAC AIR DISTRIBUTION NOTES

REV: JAN / 26

1: COMPLIANCE
ALL AIR CONDITIONING AND VENTILATION DUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE CODES. REFER TO MECHANICAL NOTES FOR CODES.

DUCTWORK SHOP DRAWING SHALL FOLLOW SHOP DRAWINGS CLAUSE IN MECHANICAL NOTES. DUCTWORK SUB-CONTRACTOR INSTALLATION DRAWINGS ARE NOT CONSIDERED A VALID SHOP DRAWING AND WILL NOT BE EVALUATED.

2: AIR DISTRIBUTION ROUTE AND LOCATION
THE DIMENSIONS ON THE DRAWINGS ARE REASONABLE AND ACCURATE FOR THE PURPOSE OF DESIGN INTENT AND BID PURPOSE. HVAC DRAWINGS SHOWS THE APPROXIMATE CEILING LOCATION AND FLOW DIRECTION OF THE DIFFUSER, FOR THE FINAL LOCATION OF AIR DIFFUSERS REFER TO ARCHITECTURAL CEILING PLAN.

DUCTWORK ROUTE IN DRAWINGS IS SCHEMATICS TO SHOW THE DESIGNER ROUTE INTENTION THEREFORE FINAL AIR DIFFUSER LOCATION AND DUCTWORK ROUTE SHALL BE ILLUSTRATED IN THE SHOP DRAWINGS ON APPROVED ARCHITECTURAL REFLECTED CEILING DRAWING. REFER TO SHOP DRAWING CLAUSE FOR ADDITIONAL INFORMATION.

CONTRACTOR SHALL CONSIDER AS PART OF BID PROPOSAL ANY DUCTWORK TRANSITION, ELBOWS OR ANY DUCT MATERIAL DUE TO CHANGES IN SHOP DRAWINGS AND FIELD CONDITIONS.

3: DUCT MATERIAL AND GAGE
ALL DUCTWORK MATERIAL SHALL BE FACTORY NEW AS INDICATED IN SCHEDULE. DUCTWORK THAT ARE INTERIOR AND EXPOSED SHALL BE DOUBLE WALL ROUND OR FLAT OVAL INSULATED UNLESS INDICATED OTHERWISE. THE MINIMUM DUCT GAGE ACCEPTABLE UNDER THIS PROJECT IS 24. DUCTWORK WITH GAGE NOT ACCEPTABLE WILL BE SUBJECT TO REMOVAL AND REPLACE AT NO COST BY CONTRACTOR.

FLEXIBLE DUCT IS NOT ACCEPTABLE FOR RETURN OR EXHAUST DUCT CONNECTION UNLESS IS APPROVED BY HVAC DESIGN ENGINEER.

4: DIMENSIONS
ALL DUCT DIMENSION SHOWN ON DRAWINGS ARE INSIDE CLEAR DUCT DIMENSIONS AND GOES OVER SCALE DRAWINGS. DUCT DIMENSIONS DOES NOT INCLUDED THE INSULATION THICKNESS AROUND DUCT. CONTRACTOR SHALL BE CONSIDER THIS ITEM IN THE SHOP DRAWINGS TO AVOID INTERFERENCE WITH OTHER TRADES. ANY DISCREPANCY SHALL PROCEED AS INDICATED IN THE INTERPRETATION CLAUSE.

EXTRA CHARGE OR ADDITIONAL COMPENSATION WILL NOT BE CONSIDERED DUE TO MINOR DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND THE MEASUREMENTS INDICATED ON THE DRAWINGS. AND FIELD CONDITIONS AND DIFFERENCES WHICH MAY BE FOUND SHALL BE SUBMITTED IN THE SHOP DRAWING. REFER TO SHOP DRAWING CLAUSE AT MECHANICAL NOTES FOR SPECS.

5: DUCT INSULATIONS
ALL AIR DUCTS IN THIS PROJECT SHALL BE INSULATED ACCORDING TO INSULATION SCHEDULE. CONTRACTOR SHALL INSTALL INSULATION WITH STAPLES AND SEAL WITH PRESSURE TAPE. ALL INSULATION JOINT AND SEAMS SHALL HAVE MASTIC AROUND.

6: NOISE AND VIBRATION
THE CONTRACTOR SHALL INSTALL DUCTWORK FREE FROM OBJECTIONABLE NOISE AND VIBRATION. ANY NOISE OR VIBRATION CONDITION A SHALL BE ATTENUATED TO THE LEVEL AS PER THE CODES.

7: DUCTWORK COMPONENTS
HVAC DRAWINGS SCALE CANNOT SHOW ALL DUCTWORK COMPONENTS SUCH AS BUT NOT LIMITED TO SPLITTER DAMPER, SPRIN-IN FITTINGS TURNING VANES OR VOLUME DAMPER. THEREFORE ALL DUCTWORK INSTALLATION SHALL HAVE ALL COMPONENTS AS INDICATED IN SCHEDULE AND DETAILS WHENEVER IS SHOWN OR NOT IN DRAWINGS. DUCTWORK THAT DOES NOT COMPLIES WITH THE SCHEDULE AND DETAILS CAN BE SUBJECT TO REMOVAL AND REPLACED AT NO COST TO OWNER.

CONTRACTOR SHALL PROVIDE TO ALL SUPPLY, RETURN AND EXHAUST GRILLES AN OBD OR DAMPER IN THE DUCT TO THE GRILLE (AS SHOWN IN DETAIL) TO FACILITATE THE ADJUSTING AIR. THE OBD FACTORY SUPPLIED IN GRILLE IS NOT FOR ADJUSTING OR TESTING. IN CASE OF LIMITED SPACE FOR OBD INSTALLATION PROVIDE A RFI FOR CLARIFICATION.

8: DUCT HANGER
REFER TO DETAIL, SCHEDULE AND SMACNA TABLES FOR DUCT HANGER. STEEL ROD OR METAL STRAP CONNECTED TO OTHER HANGER OR EQUIPMENT IS NOT ACCEPTABLE AND ENGINEER OR INSPECTION CAN ORDER TO BE REMOVED AND REINSTALLED CORRECTLY AT NO COST TO THE OWNER. CONTRACTOR SHALL PROVIDE A DUCT SUPPORT WITH 6FT OF SPAN FOR EVERY EXTERIOR DUCT OVER ROOF. SEE DETAIL FOR DUCT ROOF SUPPORT SPECS.

9: DUCT FINISH
EXPOSED DUCTWORK SHALL FOLLOW INSULATION SCHEDULE."

10: AIR DIFFUSER LOCATION
AIR DIFFUSER LOCATION IN MECHANICAL DRAWINGS IS APPROXIMATE. FOR EXACT LOCATION REFER TO REFLECTED CEILING PLAN IN THE ARCHITECTURAL DRAWINGS. AIR DIFFUSER FINAL LOCATION SHALL BE PRESENTED IN SHOP DRAWING. CONTRACTOR SHALL COORDINATE AIR DIFFUSERS LOCATION WITH FIRE SPRINKLER, LIGHT FIXTURE, SMOKE DETECTOR AND ANY OTHER TRADES IN REFLECTED CEILING. CONTRACTOR SHALL INCLUDE AS PART OF THE BASE BID ANY DUCT EXTENSION OR ADDITIONAL FLEXIBLE DUCT TO CONNECT DIFFUSER IN FINAL LOCATION.

ALL SUPPLY DIFFUSERS LOCATED IN A HALLWAY SHALL BE TWO WAY DISTRIBUTION. ALL DIFFUSERS LOCATED IN A DESIGNATED SECLUSION ROOM SHALL BE TAMPER RESISTANT.

CONTRACTOR SHALL COORDINATE WITH FIRE ALARM CONTRACTOR SO THE DISTANCE BETWEEN AN AIR DIFFUSER AND ANY SMOKE DETECTOR SHALL BE AT LEAST 3'-6".

11: DOOR GRILLES
THE DUCTWORK CONTRACTOR MUST FURNISH ALL DOOR GRILLES SHOWN ON ARCHITECTURAL DRAWINGS. THE GENERAL CONTRACTOR WILL INSTALL THEM IN THE RESPECTIVE DOORS.

CONTRACTOR SHALL PROVIDE 3/4" UNDERCUT TO ALL DOOR IN NEGATIVE PRESSURE NOT EXCEEDING 150 CFM.

12: LOUVERS
THE GENERAL CONTRACTOR MUST FURNISH AND INSTALL LOUVERS AS PER AIR DISTRIBUTION SCHEDULE SPECS. LOUVER SHALL HAVE COME FROM FACTORY WITH A SILICONE BAKED ENAMEL FINISH EQUAL TO CERAM-A-STAR BY RUSKIN OR SIMILAR. REFER TO ARCHITECTURAL NOTES FOR FINAL LOUVER COLOR.

13: SEISMIC PROTECTION
REFER TO MECHANICAL NOTES FOR SEISMIC PROTECTION NOTES.

14: CHASES
THE CONTRACTOR SHALL FIELD VERIFY THE CHASES DIMENSIONS PRIOR TO PROVIDE ON SITE THE DUCTWORK. ANY MINOR CHASE OR DUCT ADJUSTMENT SHALL BE PART OF THE BID BASE.

15: ROOF AND CEILING OPENING
THE CONTRACTOR SHALL COORDINATE WITH OWNER AND/OR STRUCTURAL ENGINEER THAT THE PROPOSED ROOF PENETRATION SLAB IS FREE FROM ANY OBSTRUCTION PRIOR TO PROVIDE THE AIR DUCTS. A GPR SCAN SHALL BE PERFORMED TO SLAB OPENING PRIOR TO BORING TO PREVENT DAMAGE TO ANY ELECTRICAL, FIRE ALARM AND REINFORCEMENT MEMBERS.

CONTRACTOR SHALL COORDINATE WITH OWNER'S ROOF WATER PROOFING MEMBRANE CONTRACTOR TO INSTALL OR REPAIR MEMBRANE IN ORDER TO MAINTAIN ROOF WATERPROOFING WARRANTY AFTER ROOF OPENING OR EQUIPMENT AND/OR SUPPORT INSTALLATION. COST OF MEMBRANE REPAIR OR INSTALLATION SHALL BE PART OF THE MECHANICAL CONTRACTOR COST.

16: FIRE AND SMOKE DAMPER
THE CONTRACTOR SHALL PROVIDE A FIRE (FD) OR FIRE AND SMOKE DAMPER (FSD) IN ANY DUCT THAT PASS A DESIGNATED FIRE RATED WALL, CHASE OR FLOOR WHENEVER IS SHOWN ON DRAWINGS OR NOT. CONTRACTOR SHALL FOLLOW FIRE RATING SCHEDULE AND UL FIRE SYSTEM CLASSIFICATION AND SHALL PROVIDE A SUBMITTAL OF FD OR FSD WITH FIRE STOP MATERIAL IN COMPLIANCE WITH SCHEDULE.

CONTRACTOR SHALL INCLUDE AS PART OF BID THE ELECTRICAL CONNECTION FOR THE FSD. REFER TO DETAIL AND SCHEDULE FOR FIRE DAMPER SPECS.

HVAC EQUIPMENT NOTES

REV: JAN / 26

1: EQUIPMENT LOCATION
ALL EQUIPMENT SHALL BE INSTALLED IN THE LOCATION APPROVED IN THE SHOP DRAWING AND CONTRACTOR SHALL MAINTAIN UNIT SPACE CLEARANCE AS RECOMMENDED BY MANUFACTURER.

2: EQUIPMENT COMPLIANCE
REFER TO MECHANICAL GENERAL NOTES FOR CODES COMPLIANCE. HVAC EQUIPMENT ENERGY EFFICIENCY SHALL COMPLIES WITH TABLES INDICATED IN IECC CODE CHAPTER 4. FOR HVAC CONTROLS REFER TO CONTROL NOTES

3: EQUIPMENT HOUSING MATERIAL
REFER TO SCHEDULE FOR BASE BID HOUSING MATERIAL SELECTION. ALL EXHAUST AND SUPPLY FAN MOTOR SHALL HAVE AN ENCLOSURE TO PROTECT FROM RAIN AND WIND. EXPOSED MOTOR IS NOT ACCEPTABLE

5: EQUIPMENT SUPPORT
ALL MECHANICAL EQUIPMENT UNDER THIS PROJECT SHALL BE INSTALLED AND ANCHORED TO A CONCRETE OR STEEL SUPPORT AS INDICATED IN MECHANICAL NOTES AND DETAILS

6: EQUIPMENT SEISMIC AND VIBRATION SUPPORT
ALL HVAC EQUIPMENT LOCATED IN SUSPENDED CEILING SHALL BE INSTALLED AS PER MECHANICAL NOTES AND DETAILS.

ALL AHU, FAN OR PUMP LOCATED IN FLOOR LEVEL REQUIRES PIER SUPPORT SYSTEM. CONTRACTOR SHALL PROVIDE A PIER SUPPORT AS PER DETAIL AND EQUALLY AROUND THE ENTIRE UNIT. VIBRATION ISOLATION PADS OR MOUNTS SHALL BE PROVIDE BY UNIT MANUFACTURER.

7: UNIT DRAIN PAN AND PIPE.
ALL AHU AND FC COIL SHOWN IN SCHEDULE SHALL HAVE FACTORY INSTALLED CONDENSATE DRAIN PAN IN STAINLESS STEEL. CONTRACTOR SHALL PROVIDE TO EACH AHU OR FC AN INDEPENDENT INSULATED DRAIN PIPE CONNECTED TO NEAREST FLOOR OR ROOF DRAIN OR RUN PIPE FREE DISCHARGE TO OUTSIDE. REFER TO DRAIN DETAIL FOR ADDITIONAL INFORMATION.

CONTRACTOR SHALL PROVIDE TO ALL MECHANICAL ROOM A FLOOR DRAIN CONNECTED TO NEAREST RAIN OR SANITARY DRAIN WHENEVER IS SHOWN ON DRAWINGS OR NOT. IN CASE OF DISCREPANCY WITH ANY OTHER TRADE REFER TO INTERPRETATION CLAUSE

8: UNIT FILTERS
CONTRACTOR SHALL PROVIDE A TEMPORARY MERV 8 DUST FILTER TO ALL EQUIPMENT AND CONTRACTOR RETURN AIR GRILLE DURING HVAC SYSTEM INSTALLATION. WHEN WORK IS IN SUBSTANTIAL COMPLETION PHASE CONTRACTOR SHALL REMOVE ALL TEMPORARY FILTERS AND REPLACE FOR NEW ONES AS INDICATED IN AHU SCHEDULES. CONTRACTOR SHALL PROPERLY DISPOSE THE CONSTRUCTION AIR FILTERS.

8: UNIT SMOKE DETECTOR
CONTRACTOR SHALL PROVIDE AHU SMOKE DETECTOR (SD) FOR UNITS THAT ARE OVER 2000 CFM. ALL SMOKE DETECTOR SHALL BE WIRED TO FIRE ALARM SYSTEM AND THE CONTROL BMS BY ELECTRICAL CONTRACTOR. ELECTRICAL WIRING FOR SD SHALL COME FROM UNIT STARTER.

ALL AHU INDICATED IN SCHEDULE AND THOSE SHOWN ON DRAWINGS THAT ARE OVER 2000 CFM SHALL HAVE ONE SMOKE DETECTOR INSTALLED IN SUPPLY DUCT. AHU UNITS OVER 15,000 CFM SHALL HAVE ADDITIONAL DETECTOR AT RETURN DUCT. REFER TO CONTROL DRAWINGS AND SCHEDULE FOR SMOKE DETECTOR SPECS.

9: UNIT CONNECTIONS
ALL AHU AND FC ON SCHEDULE SHALL HAVE A PREFABRICATED FLEXIBLE CONNECTION "CANVAS" INSERTED BETWEEN THE EQUIPMENT AND THE DUCTWORK. REFER TO SCHEDULE FOR SPECS.

ALL FAN COILS SHAVE HAVE THE FOLLOWING

- VIBRATION ISOLATORS AS INDICATED IN DETAIL.
- FACTORY PLENUM BOX WITH FILTER SLOT AND VOLUME DAMPERS AS PER SCHEDULE.
- VALVES TO ISOLATE CHILLED WATER LINES FROM UNIT

DUCT CONNECTION FOR REHEAT COIL SHALL HAVE A DUCT TRANSITION WITH THE DISTANCE AS INDICATED IN DETAIL

10: NOISE AND VIBRATION
REFER TO MECHANICAL NOTES FOR SPECS OF NOISE OR VIBRATION CONTROL.

11: ACCESS DOOR
CONTRACTOR SHALL PROVIDE AN ACCESS DOOR IN GYPSUM BOARD CEILING IN ANY EQUIPMENT OR DUCTWORK COMPONENT THAT REQUIRE SERVICE OR MAINTENANCE. REFER TO SCHEDULE FOR ACCESS DOOR MODEL. ACCESS DOOR LOCATION SHALL BE SHOWN IN DUCTWORK SHOP DRAWING.

12. TEMPORARY EQUIPMENT
THE CONTRACTOR SHALL PROVIDED IN A DELEGATED DESIGN (DD) FOR THE HVAC AND ELECTRICAL EVALUATION CAPACITY FOR ANY TEMPORARY HVAC EQUIPMENT INSTALLATIONS REQUIRED FOR THE CONTINUATION OF THE PROJECT OPERATIONS. DD SHALL BE SEALED BY A PE ENGINEER REGISTER IN CIAPR. TEMPORARY EQUIPMENT PROPOSAL AND COST WILL BE EVALUATED BY OWNER DESIGNATED INSPECTION.

13: EQUIPMENT EXHAUST
ALL BATHROOM, CLOSET, PANTRY AND JANITOR ROOM REQUIRE AN EXHAUST VENTILATION AS PART OF BASE BID WHENEVER IS SHOWN ON DRAWINGS OR NOT. CONTRACTOR SHALL INCLUDE ANY EQUIPMENT OR DUCT REQUIRES TO COMPLY FOR A DEDICATED EXHAUST TO EACH ROOM. IN CASE OF DISCREPANCY REFER TO INTERPRETATION CLAUSE.

14: UV LIGHT
ANY AIR HANDLER THAT SERVES A CLINICAL AREA REQUIRES A UV LIGHT IN THE COOLING COIL. REFER TO SCHEDULE FOR UV LIGHT SPECS

15. OUTDOOR EQUIPMENT COATING
ALL OUTDOOR CONDENSER COIL SURFACE SHALL HAVE FACTORY APPLIED COATING AS PER SCHEDULE. PHENOLIC COATING AND SPRAY COATING APPLIED IN PROJECT SITE FOR BID BASE IS NOT ACCEPTABLE, UNLESS OTHERWISE INDICATED. IF OWNER APPROVE THE USE OF SPRAY ON SITE COATING SHALL BE AS PER SCHEDULE.

CHILLED + COND. WATER PIPE NOTES

REV: JAN / 26

1: COMPLIANCE
ALL CHILLED WATER PIPING SHALL BE INSTALLED IN ACCORDANCE THE CODES. REFER TO HVAC NOTES FOR CODES LIST.

2: PIPING ROUTE
THE PIPING ROUTE IN DRAWING SHOWS THE DESIGN INTENTION AND ROUTE LOCATION IS APPROXIMATE ONLY. FINAL AND EXACT ROUTE SHALL BE ILLUSTRATED IN THE CONTRACTOR SHOP DRAWINGS AND SUBMITTED FOR OWNERS APPROVAL. PIPING ROUTE SHALL BE AS SHORT AND LINEAR POSSIBLE. PIPING BURIED IN CONCRETE IS NOT ACCEPTABLE.

CHILLED WATER SINGLE LINE DRAWINGS REPRESENT ROUTE INTENTION FOR BOTH, CHILLED WATER SUPPLY AND RETURN PIPING.

3: PIPING MATERIAL
ALL PIPING AND FITTINGS MATERIAL AND COATING PAINT SHALL BE FACTORY NEW AND UL CERTIFIED AS INDICATE IN PIPING SCHEDULE. THREADED PIPE IS NOT ACCEPTABLE.

4: PIPING INSULATIONS
PIPING INSULATION SHALL BE IN COMPLIANCE WITH ASTM C591 FOR ALL INTERIOR AND EXTERIOR CHILLED WATER SUPPLY AND RETURN PIPING, FITTINGS, ALL VALVES AND COMPONENTS LIKE ELBOWS OR TRANSITIONS SHALL BE INSULATED AS INDICATED IN SCHEDULE. PIPING SHALL BE CLEAN AND COATED AS PER SCHEDULE PRIOR TO BE INSULATED.

NO INSULATION IS REQUIRED FOR CONDENSER PIPING. FLEXIBLE INSULATION CAN BE USED ONLY IN PIPING THAT IS BURIED IN WALL OR FLOOR OTHERWISE FOLLOW INSULATION SCHEDULE.

5: PIPING SERVICE VALVES
ALL MAIN AND SUB MAIN CHILLED WATER SUPPLY AND RETURN LINES SHALL HAVE A SERVICE VALVE IN THE INITIAL PART OF THE PIPE AND EVERY MAIN BRANCH. FINAL LOCATION SHALL BE SHOWN IN THE SHOP DRAWING. REFER TO SCHEDULE FOR VALVE SPECIFICATIONS.

6: PIPE HANGER
ALL PIPE SHALL BE HANGED USING MSS SP-69 TABLE 3 OR PIPE HANGER DETAIL AND SCHEDULE SHOWN ON THIS DRAWING WHEREVER IS MOST STRICT. PIPE HANGER ROD OR STRAP SHALL BE CONNECTED DIRECT TO ROOF SLAB OR STEEL JOIST. ROD OR STRAP CONNECTED TO OTHER HANGER OR EQUIPMENT COMPONENT IS NOT ACCEPTABLE. COPPER PIPE OR STAINLESS STEEL PIPE SHALL HAVE A RUBBERS SADDLE WHEN INSTALLED TO BLACK STEEL HANGER.

7: PIPE SUPPORT DETAIL
DRAWINGS SCALE CANNOT SHOW ALL PIPE SUPPORT REQUIRED. REFER TO SCHEDULE FOR INTERIOR PIPE SUPPORTS COMPONENTS SPECS AND SUPPORTS SPAN DISTANCE. CONTRACTOR SHALL PROVIDE SHOP DRAWING SHOWING WELDING DETAILS AND STRUCTURAL CONNECTION TO ROOF OR WALL.

CONTRACTOR SHALL INCLUDE FOR BASE BID A PIPING SUPPORT AT ROOF OR FLOOR AT LEAST EVERY 8 FT. AND IN EVERY VERTICAL ELBOW UNLESS OTHERWISE INDICATED BY NOTE. REFER TO DETAIL FOR PIPING SUPPORT SPECS.

8: PIPE TEST
CONTRACTOR SHALL PERFORM AN HYDROSTATIC PIPING TEST AT 1.5 OF WORKING PRESSURE (MAWP) for AT LEAST FOR TWENTY FOUR (24) HOURS OR AS INDICATED IN THE CODES WHEREVER IS MOST STRICT. A TEST REPORT SHALL BE SUBMITTED TO OWNER INSPECTOR. INSULATION CAN BE INSTALLED AFTER THIS TEST IS PERFORMED AND APPROVED BY INSPECTOR.

9: PIPING WATER MAKEUP CONNECTION
ALL CHILLED AND CONDENSER EQUIPMENT SYSTEM SHALL HAVE A FILL WATER MAKE-UP CONNECTION WITH AIR SEPARATOR AND EXPANSION TANK AND CHEMICAL FEED AS PART OF BASE BID.

CONTRACTOR SHALL INCLUDE THE INITIAL CORROSION INHIBITOR CHEMICAL REQUIRED FOR CHILLED WATER SYSTEM. PRIOR TO INSTALL THE CHEMICAL CONTRACTOR SHALL FLUSH THE SYSTEM AND REFILL WITH TREATED WATER.

10: PIPE PENETRATION THRU WALL, ROOF OR SLAB
ALL CORE DRILLING MUST BE PRECEDED BY A GPR SCAN OF THE SLAB TO PREVENT DAMAGE TO ANY ELECTRICAL, FIRE ALARM, REINFORCEMENT MEMBERS, ETC.

ALL PIPING PENETRATION SHALL BE BORE CORED, GROUTED, SLEEVED AND SEALED AS INDICATING IN DETAIL. PIPING THAT PASS ANY DESIGNATED FIRE WALL SHALL PROVIDE FIRE STOP AS INDICATED FIRE STOP NOTES. PIPING IN DIRECT CONTACT WITH CONCRETE WALL OR ROOF IS NOT ACCEPTABLE. REFER TO ARCHITECTURAL DRAWING FOR WALL RATING AND LOCATION.

11: PIPING IDENTIFICATION
REFER TO MECHANICAL PROJECT CLOSE OUT NOTES FOR INFO.

12: PIPE CONNECTION TO EXISTING SYSTEM
CONTRACTOR SHALL PROVIDE A TAB REPORT OF AVAILABLE WATER FLOW AND TEMPERATURE OF THE EXISTING LINE WHERE THE PROPOSED PIPE BREACHING WILL BE DONE (NEW POINT OF CONNECTION) AS INDICATED IN DRAWINGS. THE REPORTS SHALL BE DONE PRIOR TO INSTALL ANY PIPING. FINDINGS IN THE REPORT SHALL BE SUBMITTED TO OWNER FOR FURTHER ACTION.

HVAC DISTRIBUTION START-UP TESTING AND ADJUSTING

REV: JAN / 26

1: AIR DISTRIBUTION TESTING AND BALANCE

THE CONTRACTOR MUST ENGAGE THE THIRD PARTY SERVICES OF A CERTIFIED NEBB INDEPENDENT BALANCING CONTRACTOR TO PERFORM A WATER AND AIR SYSTEM ADJUSTING AND BALANCING(TAB). SYSTEMS SHALL BE INSTALLED AND TESTED BY THE CONTRACTOR PRIOR TO PERFORM THE TAB SHALL BE DONE WITH CLEAN FILTERS WITH A ±10% FROM DESIGN SCHEDULE UNLESS INDICATED BY ENGINEER. THE REPORT IS PART OF THE CLOSING PROJECTS AND SHALL BE FOR RECORDS ONLY.

CONTRACTOR SHALL BE AIR BALANCE TO REDUCE THROTTLING LOSSES FIRST AND THEN FANS SHALL BE ADJUSTED IN SPEED TO ACHIEVE DESIGN AIR FLOW DESIGN PARAMETERS. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL ANY AIR DAMPER AND/OR PULLEY REQUIRED BY TAB CONTRACTOR FOR ADJUSTING AIR PERFORMANCE. THE COST FOR PROVIDE THE ADJUSTING COMPONENTS TO TAB CONTRACTOR SHALL BE INCLUDE IN THE BID BASE.

2: AIR DUCT LEAK TEST

ANY A/C SYSTEM WHICH TOTAL STATIC PRESSURE EXCEED 4 INCHES AND 4000 CFM SHALL PERFORM A DUCT LEAK TEST ACCORDING TO SMACNA GUIDELINES. TEST SHALL BE PERFORM BY A TAB CONTRACTOR. ANY DUCTWORK LEAK FOUNDED IN TEST SHALL BE REPAIR OR DUCT REPLACE IN ORDER TO COMPLY WITH A MAXIMUM OF 5% OF LEAK OF THE TOTAL AIR FLOW IN THE SYSTEM.

3: EQUIPMENT START-UP

THE CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SUPPLIER THE REQUIRED START-UP SERVICE. ANY FEE REQUIRED BY SUPPLIER OR SUB-CONTRACTOR FOR EQUIPMENT START-UP SHALL BE INCLUDED BY CONTRACTOR IN THE PROJECT COST.

4: HVAC EQUIPMENT WARRANTY

THE CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK, EQUIPMENT AND COMPONENTS TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE THE DAY OF EQUIPMENT FINAL START-UP DAY. START UP DAY SHALL SUBMITTED TO INSPECTOR FOR RECORD

THE CONTRACTOR ALSO SHALL REPLACE OR REPAIR TO THE SATISFACTION OF THE OWNER ALL DAMAGE DONE TO THE BUILDING OR ITS CONTENTS IN CONSEQUENCE OF THE WORK PERFORMED IN FULFILLING ANY WARRANT.

REFRIGERANT SYSTEMS NOTES

REV: JAN / 26

1: COMPLIANCE
ALL REFRIGERANT PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE CODES AND MANUFACTURER RECOMMENDATION.

2: PIPING MATERIAL AND INSULATION
FINAL PIPING MATERIAL SHALL FACTORY NEW AS INDICATED IN SCHEDULE AND FOLLOW MANUFACTURER RECOMMENDATION TO MAINTAIN ANY FACTORY WARRANTY.

3: PIPING SUBMITTAL
CONTRACTOR SHALL PROVIDE FINAL PIPING ROUTE IN A SHOP DRAWING WITH FINAL LIQUID AND SUCTION DIAMETER. MULTIPLE EVAPORATOR SYSTEM REQUIRES A REFRIGERANT FLOW ANALYSIS FROM THE UNIT SUPPLIER THAT SHOWS THE REF. LINES DIAMETER AND CONNECTIONS.

4: PIPING ROUTE
THE REFRIGERANT PIPING IN PLANS PRESENT THE DESIGN INTENTION AND APPROXIMATE PROPOSED ROUTE. PIPING ROUTE SHALL BE AS SHORT AND LINEAR POSSIBLE. ALL REFRIGERANT PIPING RUNNING IN WALL SHALL RUN INSIDE 4" SCH. 40 PVC. PIPING BURIED IN CONCRETE IS NOT ACCEPTABLE.

5: PIPING DIAMETER
FINAL PIPING DIAMETER SHALL FOLLOW MANUFACTURER RECOMMENDATION BASED ON DISTANCE AND CAPACITY. VALVE AND COMPONENTS SHALL BE SAME AS LINE SIZE.

6: PIPING HANGER AND ROOF SUPPORT
ALL PIPE SHALL BE HANGED USING MSS SP-69 TABLE 3 OR PIPE HANGER DETAIL AND SCHEDULE SHOWN ON THIS DRAWING WHEREVER IS MOST STRICT. PIPE HANGER ROD OR STRAP SHALL BE CONNECTED DIRECT TO ROOF SLAB OR STEEL JOIST. ROD OR STRAP CONNECTED TO OTHER HANGER OR EQUIPMENT COMPONENT IS NOT ACCEPTABLE.COPPER PIPE OR STAINLESS STEEL PIPE SHALL HAVE A RUBBERS SADDLE WHEN INSTALLED IN BLACK STEEL HANGER.

CONTRACTOR SHALL PROVIDE PIPING ROOF SUPPORT EVERY 6FT. SEE DETAIL FOR ROOF SUPPORT SPECS.

7: PIPE TEST
CONTRACTOR SHALL TEST PIPING SYSTEM USING HALIDE TORCH OR ELECTRONIC LEAK DETECTOR. ANY LEAK SHALL BE REPAIRED AND PIPING SHALL BE RETESTED.

8: PIPE PENETRATION
CONTRACTOR SHALL SLEEVE THE REFRIGERANT LINE THAT PASS THRU A WALL AND SHALL CAULK WITH FIRESTOP THE OPENING OF ANY FIRE WALL OF ROOF PENETRATION. REFER TO DETAIL FOR SPECS.

9: REFRIGERANT LEAK SENSOR AND ALARM
CONTRACTOR SHALL PROVIDE FOR ALL REFRIGERANT SYSTEMS AN REFRIGERANT LEAK ALARM WITH SHUTOFF VALVE IN THE CEILING AND IN THE MECHANICAL ROOM AS RECOMMENDED BY UNIT SUPPLIER. THE ALARMS WILL SHUTDOWN THE THE AFFECTED SYSTEMS AND WILL MAKE AN ALARM TO BMS CONTROL SYSTEM.

HVAC EQUIPMENT INSTALLATION NOTES

1: EQUIPMENT DELIVERY
CONTRACTOR SHALL PICK-UP, DELIVERY AND/OR UNLOAD AT PROJECT SITE ALL EQUIPMENT AND COMPONENTS UNDER THIS SCOPE OF WORK FROM EQUIPMENT SUPPLIER. CONTRACTOR SHALL ASSEMBLY IN SITE ANY EQUIPMENT THAT ARRIVES SECTIONALIZED FROM MANUFACTURER AND SHALL PROVIDE THE NECESSARY EQUIPMENT OR SERVICE TO LOCATE EQUIPMENT IN THE FINAL APPROVED POSITION.

2: EQUIPMENT RIGGING PLAN
CONTRACTOR SHALL PROVIDE A RIGGING PLAN TO ANY HVAC EQUIPMENT INSTALLED IN A ELEVATED STRUCTURE. THE PLAN SHALL BE PREPARED IN A DELEGATED DESIGN (DD) BY THE CONTRACTOR DD SHALL BE SEALED BY A PE ENGINEER REGISTER IN CIAPR. CRANE EQUIPMENT AND INSTALLATION PROCEDURE WILL BE EVALUATED BY OWNER DESIGNATED INSPECTION.

3: ELECTRICAL INSTALLATION
CONTRACTOR SHALL PROVIDE FOR ALL HVAC AN DEDICATED ELECTRICAL POWER AND CONTROL. REFER TO ELECTRICAL CLAUSE IN MECHANICAL NOTES.

4: EQUIPMENT RELIEF VENT INSTALLATION
CONTRACTOR SHALL PROVIDE FOR ALL WATER OR AIR CHILLER UNDER THIS PROJECT THE REFRIGERANT RELIEF PIPING FROM THE RUPTURE DISK TO THE OUTSIDE OF THE BUILDING. PIPING DIAMETER AS PER MANUFACTURER RECOMMENDATIONS.

5: EQUIPMENT IN CEILING LOCATIONS
CONTRACTOR INCLUDES AS PART THE INSTALLATION COST, THE REMOTION AND DISPOSAL OF THE REFLECTED CEILING AND/OR GYPSUM BOARD REQUIRED TO ACCESS THE EQUIPMENT OR COMPONENT TO BE INSTALLED OR REPLACED. CONTRACTOR SHALL ALSO INCLUDES THE RE-INSTALLMENT TO ORIGINAL OR THE SPECIFIED CEILING CONDITION AND/OR GYPSUM BOARD AFFECTED DUE TO THIS WORKS.

REV: JAN / 26

1: IMPORTANT NOTES

MECHANICAL NOTES ARE INTEGRAL PART OF THE HVAC NOTES. REFER TO THOSE NOTES FOR IMPORTANT INFORMATION ABOUT EQUIPMENT, DOCUMENTS INTERPRETATION AND GENERAL CONDITIONS OF THE PROJECTS.



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YO INGENIERO JAVIER I. CASTILLO, LICENCIA 12391, CERTIFICADO QUE SOY EL PROFESIONAL QUE DISEÑO Y PREPARO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTENDIENDO QUE DICHS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APPLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APPLICABLES DE LOS REGLAMENTOS Y CODIGOS DE CONSTRUCCION VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTARIAS O CORPORACIONES PUBLICAS CON JURISDICCION, CERTIFICO ASIMISMO QUE EN LA PREPARACION DE ESTOS PLANOS Y ESPECIFICACIONES HE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY 14-2004, SEGUN ENMIENDADA, CONCORDA COMO LA LEY PARA LA INVERSION POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA LEY NUM. 314 DE 15 DE MAYO DE 1998, SEGUN ENMIENDADA, LEY NUM. 86 DE 6 DE JULIO DE 1978, SEGUN ENMIENDADA, SEGUN AFUJQUE, RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA DGPE Y AGENCIAS CON JURISDICCION.

SEAL



CONSULTANTS

PROJECT OWNER

FACILITY LOCATION

HOSPITAL RAMON RUIZ

ARNAU HURRA

LOCATION

BAYAMON, PR

DRAWING NAME

HVAC NOTES

REVISION TABLE

TAG	DESCRIPTION	DATE

PRELIMINARY DRAWINGS

7/JUN/24

THESE DRAWINGS IS FOR OWNERS APPROVAL FOR THE DEVELOPMENT OF ADVANCE DRAWINGS. ANY DRAWINGS WITH THIS SEAL CAN BE USED FOR BID OR CONSTRUCTION.

DRAWN BY : AR
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DESIGN YEAR : AS SHOWN

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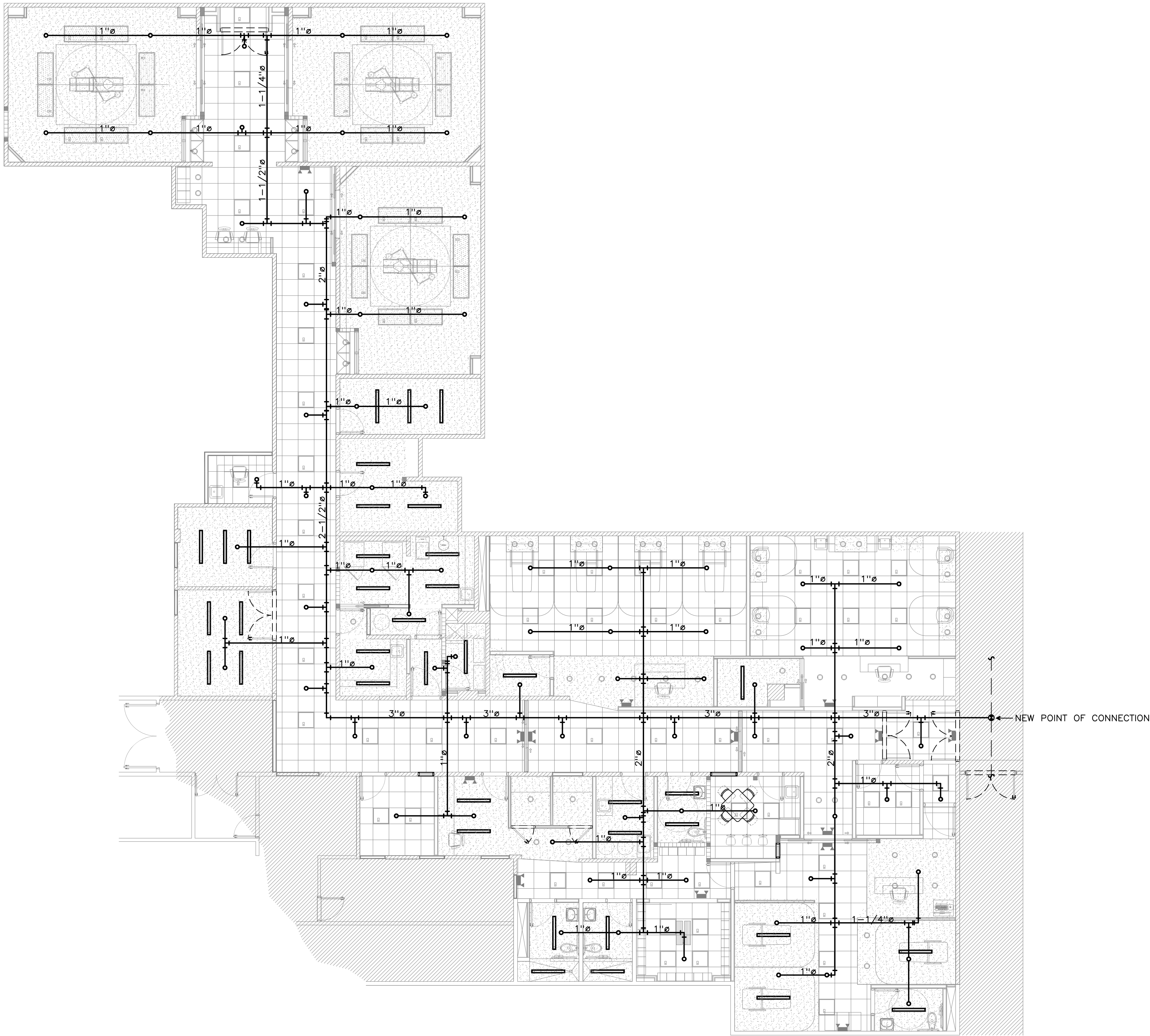
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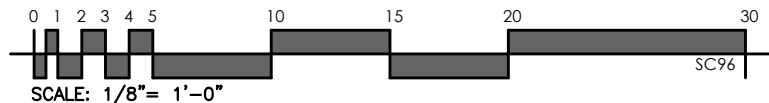
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FIRE PROTECTION LAYOUT PLAN



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YO, INGENIERO JAVIER I. CASTILLO, LICENCIA 12391, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO Y PREPARO ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTENDIENDO QUE DICHS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CODIGOS DE CONSTRUCCION VIGENTES DE LAS AGENCIAS, JUNTAS REGLAMENTADORAS O CORPORACIONES PUBLICAS CON JURISDICCION CERTIFICO ADEMAS QUE EN LA PREPARACION DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY 14-2004, SEGUN ENMENDADA, CONOCIDA COMO LA LEY PARA LA INVERSION POR LA INDUSTRIA PUERTORRIQUEÑA Y CON LA LEY NUM. 319 DE 15 DE MAYO DE 1938, SEGUN ENMENDADA, LEY NUM. 95 DE 6 DE JULIO DE 1978, SEGUN ENMENDADA, SEGUN APLIQUE. RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OSPE.

PROJECT OWNER

CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

FIRE PROTECTION
LAYOUT PLAN

ISSUE FOR:

PRELIMINARY DRAWINGS

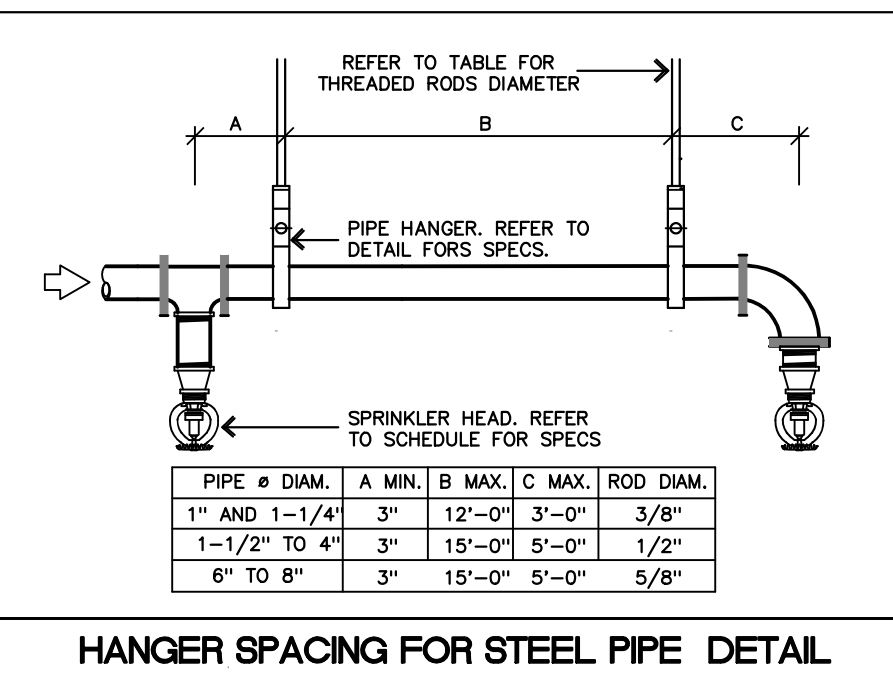
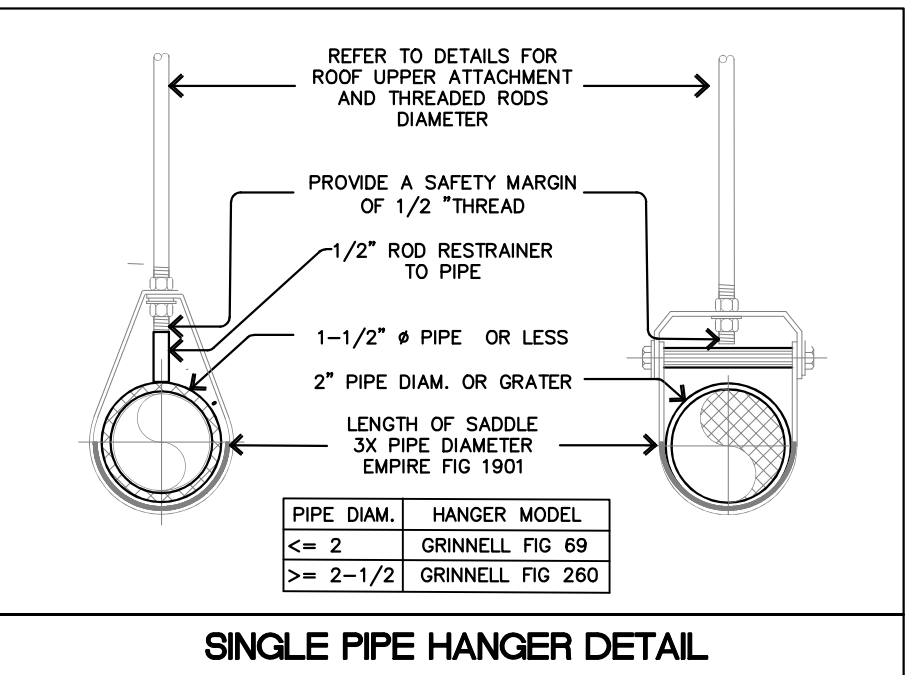
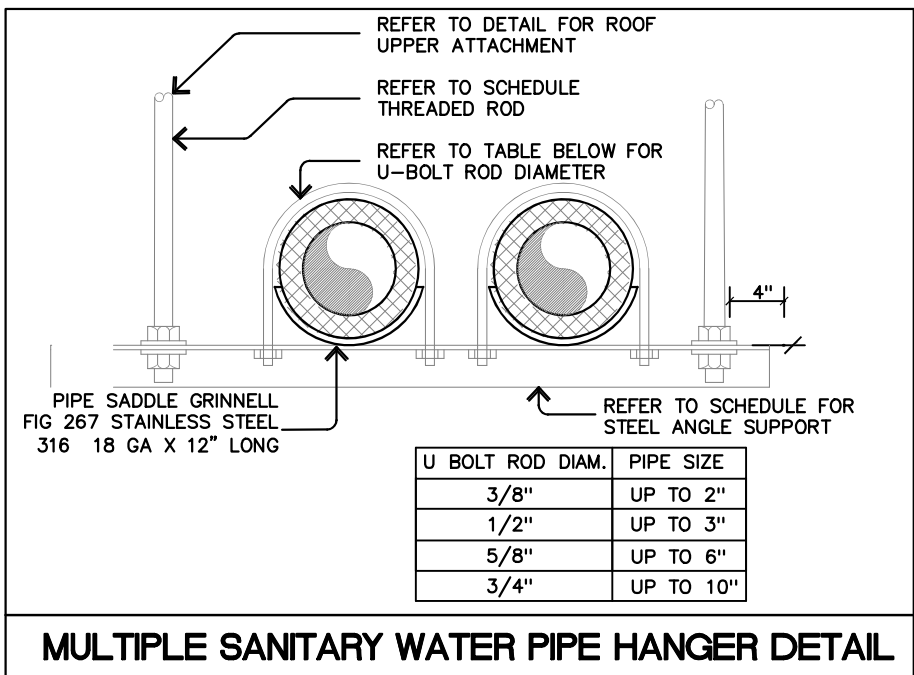
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THE DESIGN AND DRAWINGS ARE INTELLECTUAL PROPERTY OF JAVIER CASTILLO PE AND SHALL NOT BE REUSED ON ANY OTHER LOCATION EXCEPT THE ONE OR WHICH THEY WERE EXPRESSLY DESIGNED. DRAWINGS SHALL BE COPIED OR REPRODUCED UNDER THE WRITTEN CONSENT OF THE ENGINEER

TAG	MINIMUM RESTRAINS REQUIREMENT	BRACE STEEL	SPACING DIST PVC	DISP PIP
STRAIGHT RUN	TWO TRAVERSE BRACING PERPENDICULAR TO PIPE AND ONE LONGITUDINAL BRACE PARALLEL TO PIPE	40 FT	20 FT	
TRAVERSE BRACE	TRAVERSE BRACING PERPENDICULAR TO PIPE AT THE END OF EACH RUN	40 FT	20 FT	
LONGITUDINAL BRACE	LONGITUDINAL BRACING PARALLEL TO PIPE AT EACH STRAIGHT PIPE.	80 FT	40 FT	

TAG	DESCRIPTION	TAG	DESCRIPTION
FHC	FIRE HOSE CABINET	Ø"	DIAMETER IN INCHES
ITS	INSPECTOR TEST AND DRAIN	SPRK	FIRE SUPPRESSION SPRINKLER
ST	STAINLESS STEEL	FD	FIRE DAMPER
FCV	FLOW CONTROL VALVE	FFE	FINISH FLOOR ELEVATION
UP	PIPING UP TO	DN	PIPING DOWN FROM



THESE DRAWINGS, DETAILS INTENT IS TO FOCUS IN THE EQUIPMENT ASSEMBLY AND COMPONENT ARRANGEMENT TO FULFILL THE CODE REQUIREMENTS. THEREFORE, FOR "INTENT" MEANS THAT EQUIPMENT, COMPONENTS OR MATERIALS NOT SHOWN ON DETAILS BUT REQUIRED FOR INSTALLATION AND/OR OPERATION SHALL BE INCLUDED FOR BID QUOTATION. REFER TO THE FACTORY MANUAL FOR ANY EQUIPMENT OR COMPONENT INSTALLATION DETAILS AND INSTRUCTIONS FOR OPERATION.

ALL EQUIPMENT OR COMPONENTS SELECTION SHOWN ON DETAILS ARE BASE BID, SIMILAR ITEM CAN BE SUBMITTED, REFER TO BASE BID CLAUSE FOR ADDITIONAL INFORMATION FOR ALTERNATE COMPONENTS OR EQUIPMENT

ALL COMPONENTS SHOWN ON DETAILS SHALL BE NEW AND UL CERTIFIED AND INCLUDED IN THE SUBMITTAL FOR ENDORSEMENT. DETAILS ARE NOT TO SCALE AND DIMENSIONS SHOWN IN DIMENSIONS UNLESS OTHERWISE NOTED.

ANY EQUIPMENT NOT REQUIRED FOR INSTALLATION, DETAILS THAT APPLIES IS FOR REFERENCE ONLY. IN CASE OF DISCREPANCY BETWEEN DETAILS, NOTES AND DRAWINGS REFER TO INTERPRETATION CLAUSE IN MECHANICAL NOTES FOR FURTHER ACTION.

REFER TO MECHANICAL GENERAL NOTES AND SCHEDULES FOR EQUIPMENT SPECS AND ADDITIONAL INFORMATION.

GENERAL NOTES FOR ALL DETAILS

PIPE Ø DIAM.	A MIN.	B MAX.	C MAX.	ROD DIAM.
1" AND 1-1/4"	3"	12'-0"	3'-0"	3/8"
1-1/2" TO 4"	3"	15'-0"	5'-0"	1/2"
6" TO 8"	3"	15'-0"	5'-0"	5/8"

GENERAL NOTES FOR ALL DETAILS

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FIRE SUPPRESSION GENERAL NOTES
REV: JAN / 25

1: DESIGN INTENTION
THESE DRAWINGS SHOWS THE COMPLETE DESIGN CONCEPT, INTENT AND PIPING GENERAL ARRANGEMENT TO FULFILL THE CODE REQUIREMENTS. THEREFORE FOR "COMPLETE" MEANS THAT EQUIPMENT, COMPONENTS OR MATERIAL NOT SHOWN ON DRAWINGS BUT REQUIRED FOR INSTALLATION AND/OR OPERATION SHALL BE INCLUDED AS PART OF THESE DRAWINGS. INTENTION ALSO MEAN THAT AREAS THAT SHALL NEED TO HAVE SPRINKLERS SHALL HAVE DISTRIBUTION LINES AND SPRINKLER HEAD WHENEVER IS NOT SHOWN ON DRAWINGS.

FIRE SUPPRESSION NOTES SHOWN ARE FOR SPRINKLER AND STANDPIPE SYSTEMS. IF ANY OF SYSTEM IS NOT REQUIRED FOR INSTALLATION, DETAILS AND SYSTEM NOTES THAT DOES NOT APPLIES IS FOR REFERENCE ONLY AND THE REMAINING NOTES CONTINUE AS INDICATED. GENERAL NOTES, EQUIPMENT, DEMOLITION AND AIR DISTRIBUTION APPLIES FOR BOTH SYSTEMS.

2: SCOPE OF WORK
DESIGN DOCUMENTS ARE FOR CONTRACTOR TO PROVIDE ALL EQUIPMENT, LABOR, MATERIAL & SERVICES FOR THE COMPLETE EXECUTION OF THE FIRE SUPPRESSION SYSTEM INSTALLATION & PERFORMANCE AS CALLED FOR ON PLANS AND/OR AS DESCRIBED HEREIN.

THE INSTALLING CONTRACTOR MUST BE FULLY RESPONSIBLE FOR FINAL HYDRAULIC DESIGN, PIPING LAYOUT IN COORDINATION WITH STRUCTURAL ELEMENTS AND SHOP DRAWINGS. COMPLETE CONSIDERATION OF ELEVATIONS, WALL CROSSINGS AND COMPLIANCE WITH NFPA REQUIREMENTS FOR SHOP DRAWINGS AND DESIGN DATA SCHEDULE.

ONLY DRAWINGS WITH THE NOTE OF "ISSUE FOR BID" CAN BE USED FOR QUOTING AND BIDDING. IF THE DRAWINGS SHOWS OTHER TYPE OF NOTE, CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION (RFI) TO DESIGNER FOR CLARIFICATIONS PRIOR TO PROVIDE A PROPOSAL.

3: CODE COMPLIANCE
THE PROPOSED FIRE SUPPRESSION SYSTEM SHALL COMPLY WITH MOST RECENT STANDARD OR CODES HEREAFTER "THE CODES" WHICH APPLIES IN PUERTO RICO. THE CODES ARE BUT NOT LIMITED TO:

- INTERNATIONAL BUILDING CODE (IBC)2018
- INTERNATIONAL MECHANICAL CODE 2018
- INTERNATIONAL PLUMBING CODE 2018
- INTERNATIONAL FIRE CODE 2018
- ASHRAE 90.1, 62.1, 170-2017
- NFPA 13, 14 20, 24, 25, 70, 101 101-2012 90A 90B
- ASCE 7 SEISMIC STANDARD
- NATIONAL ELECTRICAL CODE (NEC)
- IBC SEISMIC RESTRAIN CHAPTER 16
- ANY CODE FROM LOCAL AUTHORITY HAVING JURISDICTION OVER THE PROJECT.

INTERPRETATION
ANY DISCREPANCY DURING BID PROCESS BETWEEN DRAWINGS, SPECIFICATIONS, SCHEDULES, DIMENSION, QUANTITY OF EQUIPMENT OR IN ANY OTHER TRADE SHALL BE REFER TO A REQUEST FOR INFORMATION TO OWNER. AN ADDENDA WILL BE ISSUED AS NECESSARY FOR THESE DISCREPANCIES AND WILL BECOME PART OF THE CONTRACT DOCUMENTS. THOSE DISCREPANCIES NOT BROUGHT TO THE ATTENTION OF THE ENGINEER IT WILL BE ASSUMED THAT THE CONTRACTOR HAS BID THE MORE EXPENSIVE MATERIAL OR MORE STRICT METHOD OF CONSTRUCTION.

ANY DISCREPANCY DURING PROJECT CONSTRUCTION BETWEEN DRAWINGS, SPECIFICATIONS, SCHEDULES, DIMENSION, QUANTITY OF EQUIPMENT OR ANY OTHER TRADE SHALL BE NOTIFY INA REQUEST FOR INFORMATION (RFI) LETTER OR EMAIL TO THE OWNERS REPRESENTATIVE FOR CLARIFICATION OF THE DRAWING INTENTION AND/OR ADDENDUM ISSUED DURING THE BID PROCESS. A CLARIFICATION DRAWING OR DOCUMENT WILL BE ISSUED AS NECESSARY FOR THESE DISCREPANCIES AND WILL BECOME PART OF THE CONTRACT DOCUMENTS. CONTRACTOR SHALL NOT PROCEED TO PURCHASE OR INSTALL UNTIL CLARIFICATION IS SOLVED. THOSE DISCREPANCIES NOT BROUGHT TO THE ATTENTION OF THE ENGINEER IT WILL BE ASSUMED THAT THE CONTRACTOR WILL FURNISH AND INSTALL THE MORE EXPENSIVE MATERIAL UNDER THE MORE STRICT METHOD OF CONSTRUCTION.

DETAILS AND LARGE SCALE DRAWING ARE PRECEDENTS OVER SMALL SCALE DRAWINGS. ALL DETAILS SHOWN ARE APPROXIMATE, NOT TO SCALE AND PRESENTS THE MINIMUM COMPONENTS REQUIRED FOR PROPER FUNCTIONING AND OPERATION. REFER TO EQUIPMENT SUBMITTAL OR MANUFACTURER RECOMMENDATIONS GUIDE FOR ASSEMBLY, CLEARANCE SPACE AND INSTALLATION.

WHEN SIMILAR IS INDICATED IN NOTES AND/OR DETAILS IT REFER TO AN ALTERNATIVE EQUIPMENT MANUFACTURER OR COMPONENT MODEL WHICH PERFORMANCE, DIMENSIONS AND COMPLIANCE ARE EQUIVALENT TO THE ONES THAT IS SPECIFIED OR IN SCHEDULE.

WHEN TYPICAL (TYP.) IS INDICATED IN DRAWINGS, NOTES AND/OR DETAILS IT REFER THAT INFORMATION, DIMENSIONS, DIRECTION OF EQUIPMENT, PIPING OR DUCTS APPLIES TO ALL SIMILAR CONDITIONS IN DRAWINGS.

4: PROJECT SITE VISIT
THE CONTRACTOR SHALL ARRANGE WITH PROJECT OWNER OR REPRESENTATIVE TO VISIT PROJECT LOCATION AND EXAMINE CAREFULLY THE WORK SITE CONDITIONS WHERE THE SYSTEM WILL TO BE INSTALLED, AND BE AWARE OF THE EXISTING CONDITIONS AND THE EXTENT OR DEGREE THEY INFLUENCE IN THE WORK PRIOR TO SUBMITTING HIS BID FOR THE WORK. DISCREPANCIES OF SITE SHALL BE PROCESS AS INDICATED IN INTERPRETATION CLAUSE AFTER CONTRACT GETS AWARDED. DISCREPANCIES ABOUT SITE NOT BROUGHT TO CLARIFICATION WILL NOT BE CONSIDERED CONTRACTOR SHALL BE CLEAR THAT NO SUBSEQUENT EXTRAS COST OR ADDITIONS WILL BE ALLOWED FOR ANY CLAIM DUE TO LACK OF KNOWLEDGE OF CONDITIONS OR CIRCUMSTANCES ABOUT WHICH THE BIDDER HAD SITE INSPECTED AND INFORMED HIMSELF AND THE OWNER

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN ON DRAWINGS OR NOT AND SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR UTILITIES CONNECTION REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF THIS WORK. ANY DAMAGE TO UTILITIES SHALL BE REPORTED IMMEDIATELY.

5: BASE BID EQUIPMENT AND MATERIAL
ALL EQUIPMENT AND DEVICES SPECIFIED AND ON SCHEDULE IN THESE DRAWINGS SHALL BE INCLUDED AS PART OF THE BASE BID.

ALL EQUIPMENT SELECTED IS A BASE DESIGN THEREFORE DOES NOT MEANS THAT IS ENGINEER PREFERENCE, SO ANY EQUIPMENT WHICH IS DEFINE AS SIMILAR CAN BE SUBMITTED IN THE BID AS AN ALTERNATE ITEM ONLY IF IT RESULTS IN THE SAME COST OR IN COST SAVINGS TO THE OWNER. THE ALTERNATE SUBMITTAL SHALL HAVE COMPARATIVE TABLE BETWEEN SPECIFIED THE ALTERNATE EQUIPMENT WITH THE PROPOSED SAVINGS FOR ENGINEER EVALUATION AND OWNERS ACCEPTANCE PRIOR TO PROCEEDING WITH THE RELATED WORK.

BID PRICE IS USING ONLY EQUIPMENT SPECIFIED ON SCHEDULES AND/OR ADDENDA PROVIDED, THE ALTERNATIVE SIMILAR ITEM SHALL BE SUBMITTED IN THE BID IN A SEPARATED ITEM FOR OWNERS EVALUATION.

9: PROJECT WARRANTY
THE CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK, EQUIPMENT AND COMPONENTS TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DAY OF ACCEPTANCE BY OWNER. THE CONTRACTOR ALSO SHALL REPLACE OR REPAIR TO THE SATISFACTION OF THE OWNER ALL DAMAGE DONE TO THE BUILDING OR ITS CONTENTS IN CONSEQUENCE OF THE WORK PERFORMED IN FULFILLING ANY WARRANT.

10: PROJECT CLOSING
THE CONTRACTOR SHALL PROVIDE WITHIN 60 DAYS AFTER SUBSTANTIAL COMPLETION THE RECORD DRAWINGS WHICH INCLUDES ALL SITE CHANGES AND EQUIPMENT MANUAL WHICH INCLUDES SUBMITTAL PACKAGE, OPERATION MANUALS AND WARRANTS, CONTROLS WIRING AND SCHEMATIC DIAGRAM, SEQUENCE OF OPERATION, SYSTEM START-UP REPORT AND CERTIFICATION FOR USE

FIRE SUPPRESSION GENERAL NOTES (CONT.)
REV: JAN / 25

6: SUBMITTAL
ALL EQUIPMENT AND ACCESSORIES SHOWN IN SCHEDULES AND DETAILS SHALL BE PROVIDED IN A SUBMITTAL FOR ENGINEER ENDORSEMENT. THE SUBMITTAL SHALL INCLUDE THE EQUIPMENT PERFORMANCE FOR REVIEW TO DESIGN INTENT. PRODUCT BROCHURE OR CATALOG WITH NO ITEM SELECTION WILL NOT BE EVALUATED. QUANTITY OF EQUIPMENT OR ANY COORDINATION WITH OTHER TRADES SUCH AS ELECTRICAL OR PLUMBING SHALL DONE BY THE MECHANICAL CONTRACTOR. ANY DISCREPANCY ENCOUNTERED SHALL BE REFER TO INTERPRETATION NOTE HERE ABOVE.

ALL SUBMITTAL WILL BE EVALUATED IN 15 WORKINGS DAYS AFTER RECEIVING AT ENGINEER OFFICE. THE ENGINEER CAN REQUEST TO OWNER A TIME EXTENSION FOR ADDITIONAL EVALUATION ON COMPLEX SUBMITTAL. ADDITIONAL COST TO OWNER DUE TO SUBMITTAL REJECTION, TIME EXTENSION OR DELAY WILL NOT BE ACCEPTED.

SUBMITTAL THAT WILL BE PRESENTED AS AN ALTERNATE OF THE EQUIPMENT SPECIFIED SHALL BE PRESENTED IN A REQUEST FOR SUBSTITUTION (RFS) WITH REASONS FOR THIS ACTION. THE SUBMITTAL SHALL HAVE COMPARATIVE TABLE BETWEEN SPECIFIED AND ALTERNATE EQUIPMENT SHOWING ENOUGH INFORMATION FOR EVALUATION SUCH AS BUT NOT LIMITED TO DIMENSIONS, PERFORMANCE, DELIVERY AND THE PROPOSED CREDIT TO OWNER. IF TABLE IS NOT PROVIDED, THE ENGINEER HAVE THE CHOICE TO REJECT THE SUBMITTAL WITH NO ADDITIONAL COST TO OWNER.

THE ENGINEERS ENDORSEMENT OF SHOP DRAWINGS OR SAMPLES SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR ANY DEVIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS THE CONTRACTOR HAS INFORMED THE OWNER IN WRITING OF SUCH DEVIATION.

7: SHOP DRAWING
MECHANICAL CONTRACTOR SHALL PROVIDE TO OWNER FOR APPROVAL A COMPLETE FABRICATION AND INSTALLATION DRAWINGS OF THE EQUIPMENT AND AIR/WATER DISTRIBUTION SHOWN IN THESE DRAWINGS PRIOR TO FURNISH AND INSTALL ANY ITEM. ANY EQUIPMENT OR MATERIAL INSTALLED WITHOUT A SUBMITTAL AND/OR SHOP DRAWING ENDORSEMENT CAN BE SUBJECT TO REMOVAL BY THE INSTALLER AT NO COST TO THE OWNER AS REQUESTED BY THE DESIGN ENGINEER. SHOP DRAWING SHALL INCLUDE AT LEAST THE FOLLOWING INFORMATION:

- SHOP DRAWING SCALE IN A 1/4" – 1'-0" OR LARGER SHOWING SPRINKLER LOCATION PIPING DISTRIBUTION LAYOUT, DIAMETER, SPACING, HANGER, SEISMIC BRAZING LOCATIONS, DETAILS.
- HYDRAULIC CALCULATIONS BASED ON FIRE SPRINKLER DESIGN SCHEDULE, SIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER IN PUERTO RICO SHOWING THE BASIS OF DESIGN IN GRAPHS OR TABLES SHOWING THE PRESSURE DISCHARGE RELATIONSHIP FOR THE SPRINKLER HEADS AND FULL DESCRIPTIVE DATA FOR PIPE, FITTINGS, VALVES, SPRINKLER HEADS, HANGERS, MATERIALS & ASSOCIATED EQUIPMENT FOR APPROVAL.
- FULL DESCRIPTIVE EQUIPMENT CATALOG, DATA FOR PIPE, FITTINGS, VALVES, SPRINKLER HEADS, HANGERS, MATERIALS & ASSOCIATED EQUIPMENT FOR APPROVAL.
- SHOP DRAWING SHALL BE A COORDINATION DRAWING THAT INCLUDES EXISTING AND NEW PLUMBING PIPING AND DUCTWORK LAYOUT AND ANY OTHER TRADES THAT CAUSE INTERFERENCE WITH EXISTING AND PROPOSED PIPING.

CONTRACTOR SHALL COORDINATE ALL TRADES AS INDICATED ABOVE AND SHALL MAKE ALL NECESSARY ALTERATIONS TO SPRINKLER SYSTEM LAYOUT DURING THE SHOP DRAWING PHASE. WHERE INTERFERENCE OR CEILING HEIGHT SITUATIONS OCCURS.

CONTRACTOR DURING CONSTRUCTION SHALL PROPOSE TO RE-ROUTE PIPING AS REQUIRED TO AVOID CONFLICTS WITH OTHER TRADES, AVOID RUN PIPES IN PARALLEL OVER FIRE WALLS AND/OR FACILITATE ACCESSIBILITY FOR MAINTENANCE.

SHOP DRAWINGS ALTERATIONS DUE TO RE-ROUTING OR TRADE COORDINATION SHALL BE CLEARLY CLOUDED AND LABELED WITH DATE FOR QUICK REFERENCE AND ARE SUBJECT FOR SUBMITTAL ENDORSEMENT FROM THE INSPECTION AND SUPERVISION.

SHOP DRAWING SHOWING ONLY PIPING WITH NO OTHER TRADES SHOWN IS ASSUMED THAT IS FULLY COORDINATED WITH NO INTERFERENCES. ADDITIONAL COST DUE TO LACK OF COORDINATION IN SHOP DRAWING IN NOT ACCEPTABLE.

A COPY OF ORIGINAL DESIGN DRAWING AT SAME OR BIGGER SCALE IS NOT ACCEPTABLE AS SHOP DRAWING AND WILL NOT BE EVALUATED. DESIGN ENGINEER HAS NO OBLIGATION TO PROVIDE CAD DRAWINGS FOR THE DEVELOPMENT OF SHOP/COORDINATION DRAWINGS. HOWEVER IF DRAWINGS IS PROVIDED, THE DRAWINGS ARE FOR REFERENCE ONLY AND DOES NOT RELIEVE THE CONTRACTOR TO CONFIRM IN FIELD ALL MEASURE, DISTANCE AND EQUIPMENT DIMENSIONS OF THE PROJECT. IN CASE OF DISCREPANCY FOLLOW THE INTERPRETATION CLAUSE.

7: PROJECT TIME
ALL INSTALLATION WORK DURING CONSTRUCTION SHALL BE MADE TO MAINTAIN IN A MINIMUM SHUTDOWN TIME THE EXISTING AIR CONDITIONING SYSTEM. IF ANY SHUTDOWN IS REQUIRED, THE INSTALLATION AND CONNECTION SHALL BE FROM 12:00 AM TO 7:00 AM, SATURDAY AND/OR SUNDAY.

10: PROJECT CLOSING
THE CONTRACTOR SHALL PROVIDE WITHIN 60 DAYS AFTER SUBSTANTIAL COMPLETION THE RECORD DRAWINGS WHICH INCLUDES ALL SITE CHANGES AND EQUIPMENT MANUAL WHICH INCLUDES SUBMITTAL PACKAGE, OPERATION MANUALS AND WARRANTS, CONTROLS WIRING AND SCHEMATIC DIAGRAM, SEQUENCE OF OPERATION, SYSTEM START-UP REPORT AND CERTIFICATION FOR USE

FIRE SUPPRESSION SYSTEM SEISMIC NOTES
REV: JAN / 25

1: COMPLIANCE
ALL PIPING SHOWN IN THIS DRAWING SET SHALL BE SEISMIC BRAZED ACCORDING TO THE CODES. EQUIPMENT LOCATED IN FLOOR LEVEL REQUIRES VIBRATION ISOLATION PADS OR RUBBER STANDS.

2: INTENTION
THE FIRE SUPPRESSION PIPING SHALL BE BRACED BY FIRE SUPPRESSION CONTRACTOR IN ORDER TO RESIST LATERAL AND LONGITUDINAL HORIZONTAL SEISMIC LOADS AND TO PREVENT VERTICAL MOTION RESULTING FROM SEISMIC LOADS ACCORDING TO THE CODES. REFER TO SCHEDULE FOR

3: SUBMITTAL
ALL SEISMIC BRAZING SHALL BE PROVIDED IN A SUBMITTAL FOR ENGINEER ENDORSEMENT. THE SUBMITTAL SHALL INCLUDE MANUFACTURER TABLES AND DETAILS TO REFLECT THE ACTUAL PROJECT CONDITIONS.

SUBMITTAL AND SEISMIC CALCULATION SHALL INCLUDE COMPLIANCE WITH WORST CASE LOAD SCENARIO AND SHALL BE STAMPED BY A LICENSE STRUCTURAL ENGINEER REGISTERED IN PUERTO RICO.

THE SUBMITTAL SHALL INCLUDE BUT NOT LIMITED TO :

- SEISMIC BRACE LOCATION IN SHOP DRAWING
- ANCHORAGE CONNECTION TO STRUCTURE
- BRACE REACTIONS CALCULATIONS
- THREADED ROD SIZE
- QTY, SIZE AND TYPE OF EACH MEMBER
- UTILITY MAX WEIGHT PER LINEAL FOOT
- MAX PIPE SIZE AT SEISMIC LOCATION

4: EQUIPMENT SELECTION
ALL EQUIPMENT SHALL NEW AND UL LISTED FOR THE USE PROPOSED. MANUFACTURER SELECTION SHALL BE ISAT OR MASON INDUSTRIES.

5R: INSTALLATION
REFER TO EQUIPMENT INSTALLATION GUIDE AND RESTRAIN SCHEDULES FOR MINIMUM PROPER INSTALLATION. THE BASE BID SHALL INCLUDE AS A MINIMUM SEISMIC BRACING FOR ALL FEED AND CROSS MAINS REGARDLESS THE SIZE AND BRANCH LINES 2-1/2" IN DIAMETER AND LARGER.

6: QUALITY ASSURANCE
REPRESENTATIVE OF THE SEISMIC MANUFACTURER SHALL VISIT THE PROJECT AND PROVIDE DOCUMENTATION THAT CERTIFY THE INSTALLATION IS IN CONFORMANCE OF SHOP DRAWING AND FACTORY RECOMMENDATIONS.

FIRE SUPPRESSION DEMOLITION NOTES
REV: JAN / 25

1: GENERAL
CONTRACTOR SHALL REMOVE AND DISPOSE ALL EXISTING PIPING,AND MECHANICAL EQUIPMENT PRESENTLY SERVING THE AREAS TO BE REMODELED AS INDICATED ON DEMOLITIONS DRAWINGS.

2: PERMITS AND ENDORSEMENT
CONTRACTOR SHALL ISSUE AS PART OF THE BID BASE THE NECESSARY DEMOLITION PERMIT, CEST AND/OR PUI PLAN. ANY ASBESTOS AND LEAD STUDIES AND TAXES OR FEES OR ENDORSEMENT REQUIRED BY THE AGENCY SHALL BE INCLUDED BY CONTRACTOR IN ORDER TO PERFORM THE WORKS INDICATED IN DRAWINGS.

3: DEMOLITION SUBMITTAL
CONTRACTOR SHALL SUBMIT PRIOR TO BID PROPOSAL, THE METHODOLOGY AND PROCEDURE TO THE DEMOLITION ACTIVITY. SUBMITTAL SHALL INCLUDE THE DAYS, HOURS, SAFETY MEASURE, AND COORDINATION WITH OWNER TO PROTECT THE AREAS NOT INCLUDED IN THE SCOPE OF THE PROJECT. ANY CAP OR VALVE REQUIRED FOR PROPER OPERATION OF EXISTING LINES SHALL BE INCLUDED IN SUBMITTAL

4: ENVIRONMENTAL AWARENESS
THE CONTRACTOR SHALL INSPECT THE PROJECT AREA CONTINUOUSLY IN ORDER TO SEE IF ANY MATERIAL OR EQUIPMENT CAN BE CONSIDERED AS ENVIRONMENTAL OR A SAFETY HAZARD IS FOUND CONTRACTOR SHALL STOP THE DEMOLITION AND REPORT IMMEDIATE TO THE OWNER REPRESENTATIVE TO RECEIVE INSTRUCTIONS.

5: COORDINATION
SPECIAL COORDINATION WITH THE OWNER OR ITS REPRESENTATIVE. MUST BE TAKEN IN ORDER NOT TO DISRUPT THE OPERATION OF THE AREAS PRESENTLY USED.

CONTRACTOR SHALL COORDINATE WITH OWNER FOR ELECTRICAL AND MECHANICAL SHUTDOWN AFTER OPERATION HOURS. CONTRACTOR SHALL CONSIDER ANY REQUIRED OVERTIME IN HIS BID TO ACCOMPLISH THE JOB. NO OTHER EXTENSION TIME OR OVERHEAD FEES IS CONSIDERED AFTER PROJECT START.

6: DISPOSITION
ANY EXISTING PIPES TO BE REMOVED OR ABANDONED IN PLACES SHALL BE PROPERLY VALVED AND/OR CAPPED AT A POINT WHERE THEY WILL NOT DISTURB THE NEW CONSTRUCTION, THE FUTURE OPERATION OF THE AREAS OR AS REQUESTED BY OWNER.

EQUIPMENT REMOVED SHALL BE DISPOSED OFF-SITE AT NO COST TO THE OWNER. THE CONTRACTOR SHALL PAY ANY FEE OR OBTAIN ANY PERMIT REQUIRED FOR DISPOSITION.

EQUIPMENT TO BE SAVED AS REQUIRED BY OWNER MUST BE PROPERLY PROTECTED AND STORED ADEQUATELY IN THE SPACE DESIGNATED BY THE OWNER.

7: CLEANING
THE CONTRACTOR SHALL REMOVE HIS CONSTRUCTION DEBRIS FROM THE PROJECT SITE WEEKLY AND DISPOSE OF IT PROPERLY ACCORDING TO CODES AND RULES OF THE SOLID WASTE AUTHORITY, THE PUBLIC SERVICE COMMISSION, ENVIRONMENTAL QUALITY BOARD AND OTHER GOVERNMENT AGENCIES RELATED IN ORDER TO REDUCE FIRE HAZARDS OR STRUCTURAL LOADING TO A MINIMUM.

ALL DIRT, RUBBISH, GREASE AND STAIN CAUSED BY THE INSTALLATION OF THE AIR CONDITIONING SYSTEM SHALL BE REMOVED AND THE PREMISES SHALL BE LEFT CLEAN AND FREE OF ANY OBSTRUCTION OF MECHANICAL EQUIPMENT.

8: ENVIRONMENTAL PROTECTION
UNDER ANY CIRCUMSTANCES, THE CONTRACTOR, DURING THE CONSTRUCTION ACTIVITY, SHOULD INCURRED IN ANY ENVIRONMENTAL VIOLATION.

IF SITUATION OCCURS, THE CONTRACTOR SHALL PAY AND RESTORE ANY DAMAGE AREAS, THE COST OF THIS CIRCUMSTANCES SHALL BE COVERED BY THE CONTRACTOR WITHOUT ANY CHANGE ORDER TO OWNER OR TIME EXTENSION TO CONTRACT FOR THIS PROJECT.

9: EQUIPMENT PROTECTION
THIS CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING EQUIPMENT, ROOFING SYSTEM AND WALLS IN THE AREAS WHERE THE DEMOLITION IS TO BE DONE. IF ANY EQUIPMENT OR MATERIAL IS DAMAGED DURING THE DEMOLITION ACTIVITY.

THE GENERAL CONTRACTOR SHALL REPLACE THE EQUIPMENT OR MATERIAL EQUAL TO THE DAMAGED ONES. THE COST OF THIS REPLACEMENT SHALL BE COVER BY THE GENERAL CONTRACTOR.

FIRE SUPPRESSION SPRINKLER HEAD NOTES
REV: JAN / 24

1: COMPLIANCE
ALL SPRINKLER HEAD SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE CODES.

ALL FIRE SUPPRESSION SPRINKLER PENDANT SHALL BE UL LISTED AND FM APPROVED. NO EXCEPTIONS ALLOW. REFER TO SCHEDULE FOR SPECS.

SPRINKLER HEAD SHALL INSTALLED IN ELEVATOR SHAFT AND ELECTRICAL ROOM WHEN THE ELECTRICAL ROOM AND/OR HOISTWAY WALLS ARE NOT 1 HR FIRE RATED. REFER TO ARCHITECTURAL DRAWING FOR WALL RATING.

2: COVERAGE
SPRINKLER SHALL BE INSTALLED IN ALL AREAS IN COMPLIANCE WITH THE COVERAGE INDICATED DESIGN SCHEDULE UNLESS OTHERWISE INDICATED. CLOSETS LESS THAN 5 SQUARE FEET DOES NOT REQUIRE SPRINKLER.

3: LOCATION
ALL FIRE SUPPRESSION SPRINKLER HEAD SHALL INSTALLED IN THE CENTER OF THE CEILING TILE AND/OR EQUAL DISTANCE BETWEEN LAMPS. LOCATION SHALL BE PRESENTED IN THE APPROVED SHOP DRAWING.

4: MATERIAL
REFER TO SCHEDULE FOR SPRINKLER MATERIAL AND SPECS. ALL SPRINKLER HEADS EXPOSED TO CORROSIVE ENVIRONMENT (EXTERIOR) SHALL BE LISTED CORROSION RESISTANT TYPE (I.E. STAINLESS STEEL, ELECTRO-LESS NICKEL COATED OR WAX COATED).

5: SPRINKLER HEAD PROTECTION
FURNISH AND INSTALL A METAL GUARD TO ANY SPRINKLER HEAD LOCATED NEAR BOILER, IN STAIR ENCLOSURE, UNDER AIR CONDITIONING DUCTS OR IF LOCATED BELLOW THE 8'-0" FROM FINISH FLOOR.

UPRIGHT SPRINKLER SHALL BE INSTALLED IN PARALLEL TO BRANCH PIPING.

6: SPARE SPRINKLER
CONTRACTOR SHALL PROVIDE A STOCK OF SPARE SPRINKLER OF SAME SPECIFICATION AS INSTALLED. THE PACKAGE SHALL BE RECEIVE AS PART OF PROJECT CLOSING DOCUMENTS. THE AMOUNT OF SPRINKLER IS 10% OF TOTAL INSTALLED SPRINKLER OR SHALL BE AS INDICATED IN NFPA 13.

CONTRACTOR SHALL INCLUDE WITH THE SPARE SPRINKLER, A SPRINKLER CABINET WITH WRENCH AND LOCK.

FIRE SUPPRESSION EQUIPMENT NOTES
REV: JAN / 25

1: EQUIPMENT LOCATION
ALL EQUIPMENT SHALL BE INSTALLED IN THE LOCATION APPROVED BY SHOP DRAWING AND INSTALLER SHALL MAINTAIN UNIT SPACE CLEARANCE RECOMMENDED BY MANUFACTURER.

2: DRAWINGS DETAILS
EQUIPMENT DETAILS SHOWN IN THESE DRAWINGS PROVIDE ADDITIONAL INFORMATION OF COMPONENTS AND DESIGN REQUIREMENTS. INSTALLATION DETAILS ARE PROVIDED BY UNIT OR COMPONENTS MANUFACTURER.

3: EQUIPMENT SERVICE PAD
EQUIPMENT UNDER THIS PROJECT INSTALLED IN DIRECT CONTACT TO FINISH FLOOR IS NOT ACCEPTABLE AND CAN BE REMOVED AT NO COST TO OWNER. THE CONCRETE PAD DRAWINGS DIMENSIONS ARE APPROXIMATE AND SHALL BE FOR BID PURPOSE. CONTRACTOR SHALL PREPARE A SHOP DRAWING TO SHOW THE PAD FINAL DIMENSIONS WITH THE APPROVED EQUIPMENT SUBMITTAL DIMENSION AND CLEARANCE. THE PROPOSED EQUIPMENT IN SCHEDULE SHALL BE INSTALLED AS FOLLOW:

- A. FOR INTERIOR EQUIPMENT AND ON LARGE CONCRETE SLAB – 4" CONCRETE PAD. REFER TO DETAIL FOR SPECS.
- B. FOR EXTERIOR EQUIPMENT – 6" CONCRETE PAD OR A PREFABRICATED ROOF CURB. REFER TO DETAIL FOR SPECS.
- C. ALL EXPOSED OR OUTDOOR UNITS OR COMPONENTS SHALL BE ANCHORED TO CONCRETE PAD WITH EXPANSION BOLTS FOLLOWING UNIT FACTORY RECOMMENDATIONS. REFER TO DETAILS FOR ANCHOR SELECTION.
- D. OUTDOOR UNITS SHALL BE ANCHORED WITH 1/4" STEEL CABLE TO PREVENT OVERTURNING BY WIND.

CONTRACTOR SHALL EVALUATE BY AN STRUCTURAL ENGINEER LICENSED IN PUERTO RICO THE CONDITIONS OF THE EXISTING ROOF SLAB PREVIOUS TO ANCHORING AND REPORT TO OWNER FOR ANY ACTION REQUIRED.

4: EQUIPMENT SEISMIC BRAZING
REFER TO FIRE SUPPRESSION SEISMIC NOTES.

5: NOISE AND VIBRATION
EQUIPMENT LOCATED IN FLOOR LEVEL REQUIRES VIBRATION ISOLATION PADS OR RUBBER STANDS.

CONTRACTOR SHALL PROVIDE ATTENUATION DEVICE OR CONTROL TO ANY UNACCEPTABLE NOISE (< 85db) OR VIBRATION CAUSED IN THE EQUIPMENT OR PIPING.

6: ACCESS DOOR
PROVIDE AN ACCESS DOOR IN GYPSUM BOARD CEILING NEAR ANY FIRE SYSTEM VALVE FOR INSPECTION AND MAINTENANCE PURPOSE. ACCESS DOOR SHALL BE SHOWN IN SHOP DRAWING. ACCESS DOOR MODEL IS ACUDOR SW-9000 OR SIMILAR. ACCESS SIZE SHALL 12"x12" OR ENOUGH TO PROVIDE MAINTENANCE TO EQUIPMENT OR COMPONENTS.

7: FIRE HOSE CABINET
FIRE HOSE CABINET (FHC) INDICATED IN A NEW WALLS SHALL BE RECESS MOUNTED, FOR EXISTING WALL FHC SHALL BE SURFACE MOUNTED. REFER TO SCHEDULE FOR SPECS.

8: EQUIPMENT INSTALLATION
CONTRACTOR SHALL ASSEMBLY IN SITE ANY EQUIPMENT THAT ARRIVES SECTIONALIZED FROM MANUFACTURER AND SHALL PROVIDE CRANE SERVICE TO LOCATE EQUIPMENT IN THE FINAL POSITION.

CONTRACTOR SHALL INCLUDES AS PART THE INSTALLATION COST, THE REMOTION AND DISPOSAL OF THE REFLECTED CEILING AND/OR GYPSUM BOARD REQUIRED TO ACCESS THE EQUIPMENT OR COMPONENT TO BE INSTALLED OR REPLACED. CONTRACTOR SHALL ALSO INCLUDE THE RE-INSTALLMENT TO ORIGINAL OR THE SPECIFIED CEILING CONDITION AND/OR GYPSUM BOARD AFFECTED DUE TO THIS WORKS.

9: ELECTRICAL INSTALLATION
THE FIRE SUPPRESSION CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR THE EXACT WIRING BREAKER, FUSE, WIRING REQUIRED FOR EQUIPMENT PROPOSED. FINAL VOLTAGE SHALL BE CONFIRMED WITH ELECTRICAL DRAWINGS. ANY DISCREPANCY BETWEEN ELECTRICAL AND MECHANICAL DRAWINGS SHALL BE NOTIFY TO ENGINEER FOR CLARIFICATION. CONTRACTOR SHALL NOT FURNISH EQUIPMENT UNTIL CLARIFICATION IS SUBMITTED.

ALL ELECTRICAL WORK ASSOCIATED TO FIRE SUPPRESSION CONTROL SYSTEM SHALL FURNISH AND INSTALLED BY FIRE SUPPRESSION CONTRACTOR.

THE WORKS INCLUDES ARE BUT NOT LIMITED TO FURNISH AND INSTALL

- ALL 120V TO CONTROL EQUIPMENT,
- INTERLOCKING OF CONTROL SYSTEM TO CENTRAL FIRE ALARM SYSTEM
- WIRING COMPONENTS FOR CONNECTION TO CENTRAL FIRE ALARM SYSTEM

ALL CONTROL PANEL INSTALLED INTERIOR SHALL BE INSTALLED IN ABS PLASTIC TIGHT BOX WITH KEY LOCK, HINGED DOOR, SELF STANDING OR WALL MOUNTED, BOTH AT 5 FEET FROM FLOOR LEVEL.

ALL CONTROL PANEL INSTALLED EXTERIOR SHALL BE INSTALLED IN NEMA 4 TIGHT BOX WITH KEY LOCK, HINGED DOOR, SELF STANDING OR WALL MOUNTED, BOTH AT 5 FEET FROM FLOOR LEVEL.

ALL FIRE SUPPRESSION CONTROL WIRING SHALL RUN IN EMT CONDUIT FOR INTERIOR AND RIGID GALVANIZED CONDUIT FOR EXTERIOR. CONNECTION FROM CONDUIT TO EQUIPMENT SHALL BE FLEXIBLE CONDUIT TYPE SEALTITE NOT TO EXCEED 5 FEET LONG. WIRING SHALL BE AS AS A MINIMUM THHN #12 OR AS PER NEC CODE REQUIREMENT.

FIRE SUPPRESSION CONTROL CONTRACTOR SHALL PROVIDE ANY MODULE REQUIRED TO THE PROPOSED CONTROL SYSTEM IN ORDER TO CONNECT THE SYSTEM TO THNE EXISTING CENTRAL FIRE ALARM SYSTEM.

10: EQUIPMENT START-UP
THE CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SUPPLIER THE REQUIRED START-UP SERVICE. ANY SUPPLIER FEE REQUIRED FOR START-UP SHALL BE INCLUDED BY CONTRACTOR IN THE BID.

11: EQUIPMENT IDENTIFICATION
ALL EQUIPMENT AND COMPONENTS SHALL BE IDENTIFIED BY A UNIT TAG OR WALL SIGN AS PER THE CODES BY THE FOLLOWING:

- EQUIPMENT – 3" BLACK PAINTED TAG
- VALVES – 2" ROUND BRONZE TAG SHOWING NAME AND SHALL IDENTIFY THE PORTION OF THE BUILDING SERVED. L
- RISER - HYDRAULICALLY CALCULATED SYSTEM SHALL BE IDENTIFIED BY A PERMANENT PLACARD ATTACHED TO THE BASE OF THE RISER OR FIRE DEPT VALVE .INDICATING THE DESIGN CHARACTERISTICS OF THE SYSTEM

12: SYSTEM TESTING
THE CONTRACTOR SHALL TEST THE WHOLE SYSTEM AS PART OF BASE BID. THE TEST INCLUDES THE FOLLOWING:

- PIPING – THE SYSTEM SHALL BE FLUSHED AND HYDROSTATIC TESTED AT 200 PSI OR 50 PS IN EXCESS OF THE SYSTEM WORKING PRESSURE, WHICHEVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE ±5PSI FOR 2 HOURS CONFORMING TO N.F.P.A.13(16)-10.10.2.2.1
- FIRE PUMP – REFER TO FIRE PUMP NOTES FOR TESTING SPECS.



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PROJECT OWNER

CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME
FIRE PROTECTION
LAYOUT PLAN

ISSUE FOR:

PRELIMINARY DRAWINGS

TAG	REVISION NAME	DATE
△	REVISION	MM/DD/YY

FP-3

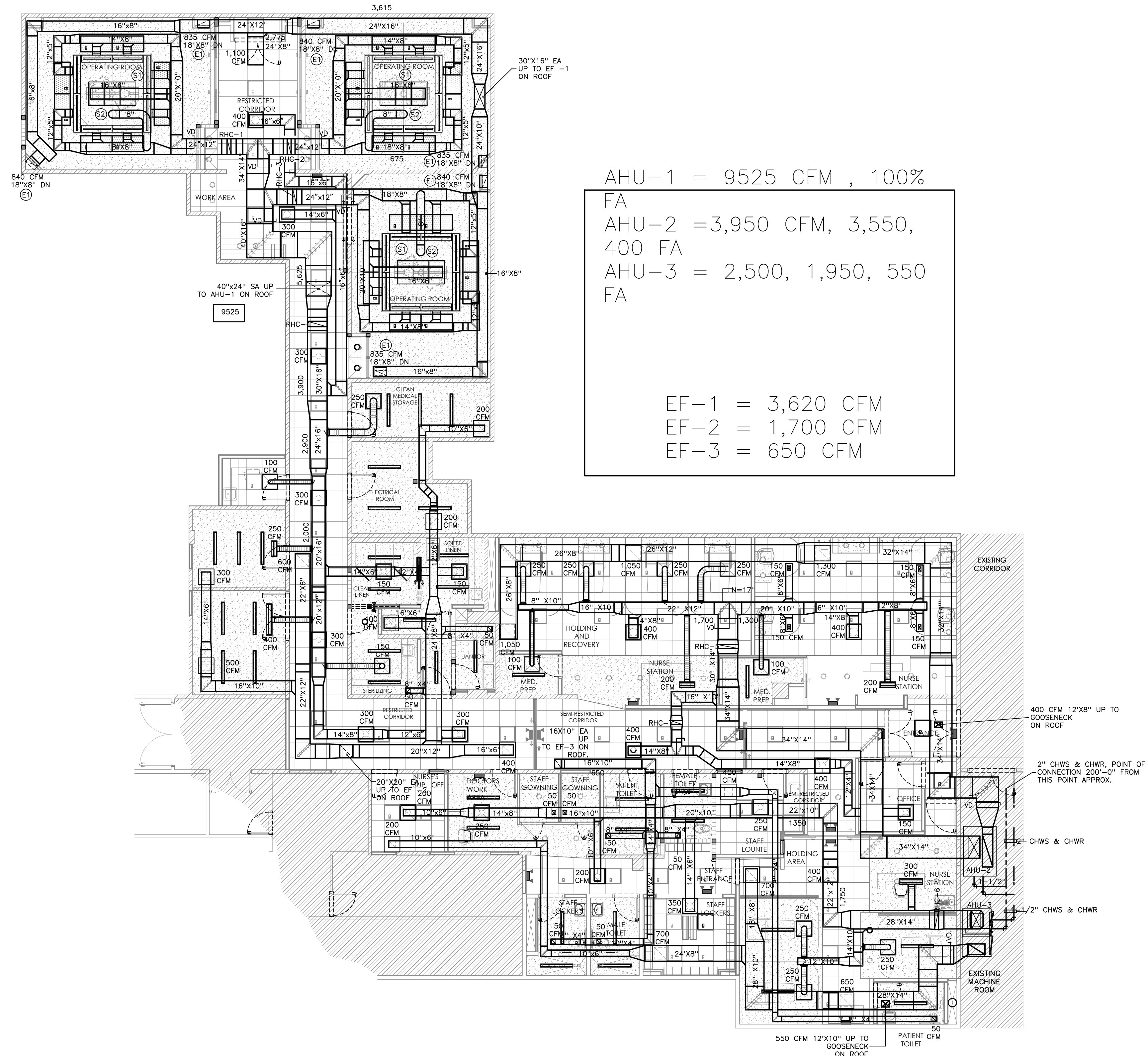
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PROPOSED HVAC LAYOUT PLAN
SCALE 1/8"=1'-0"

PROJECT OWNER

PROJECT NAME

HURRA
TEMPORARY
OPERATION ROOMS

FACILITY LOCATION
BAYAMON

LOCATION
BAYAMON, PR

DRAWING NAME
HVAC LAYOUT

THESE DRAWINGS IS FOR OWNERS
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OF ADVANCE DRAWINGS. ANY
DRAWINGS WITH THIS SEAL CANT BE
USED FOR BID OR CONSTRUCTION.

M-1

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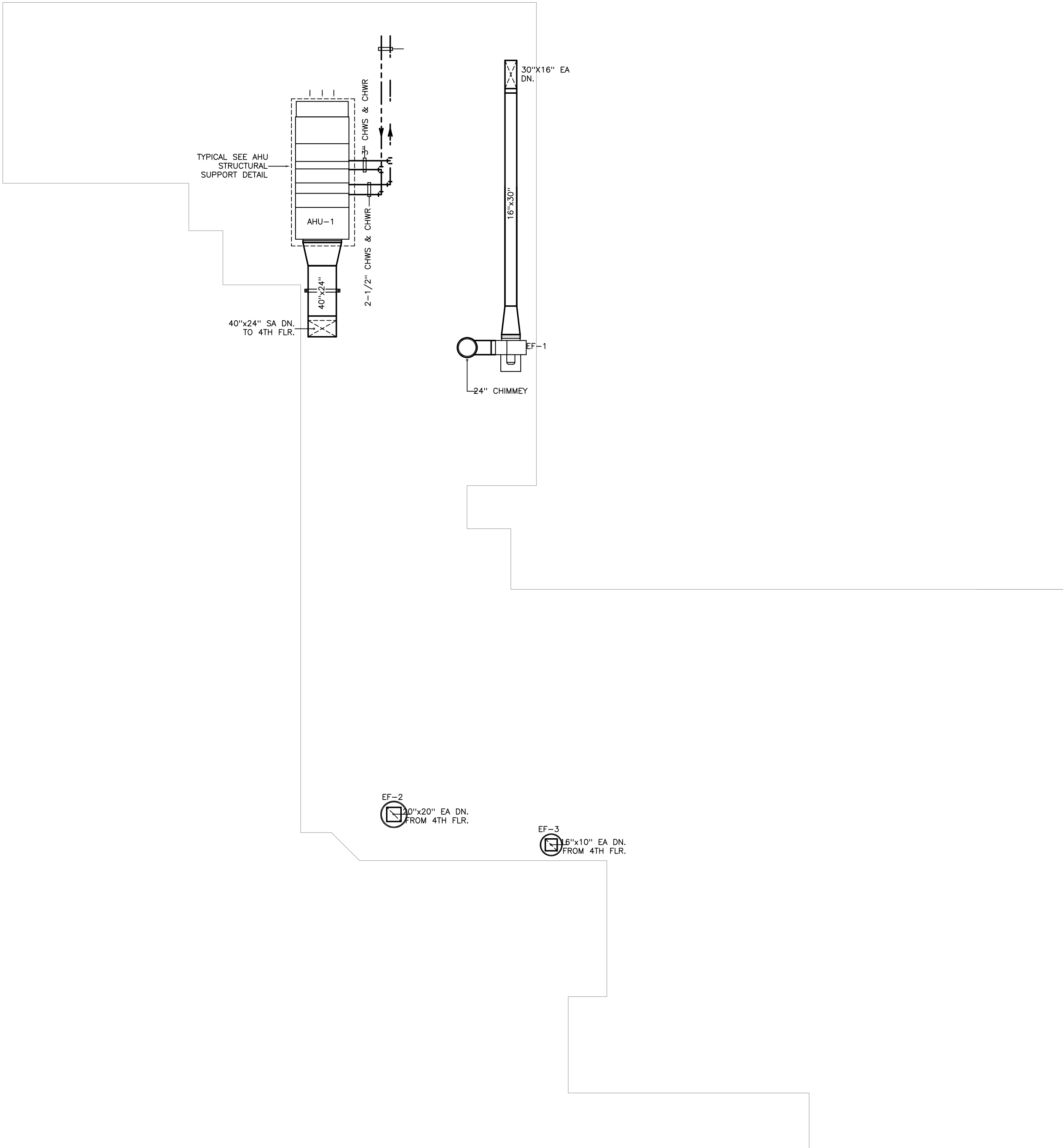
A

B

C

D

E



PROPOSED MECHANICAL ROOF PLAN
SCALE 1/8=1'-0"



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PROJECT OWNER

PROJECT NAME
HURRA
TEMPORARY
OPERATION ROOMS

FACILITY LOCATION
BAYAMON

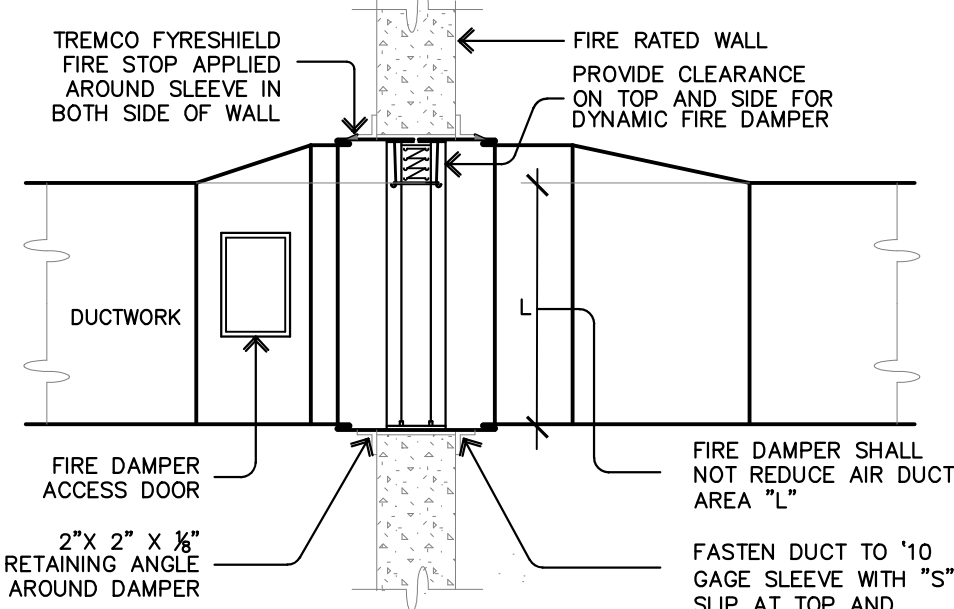
LOCATION
BAYAMON, PR

DRAWING NAME
MECHANICAL ROOF
PLAN

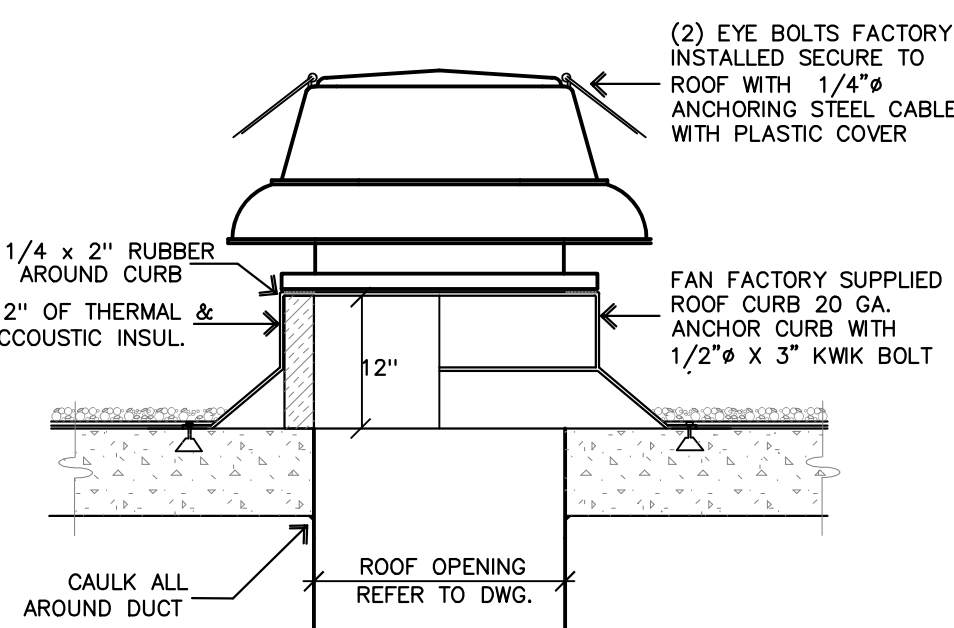
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M-2

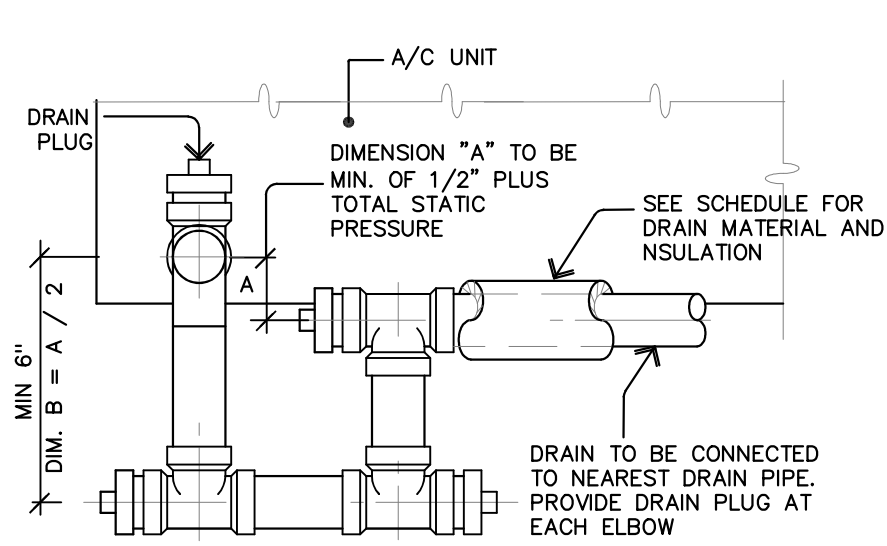
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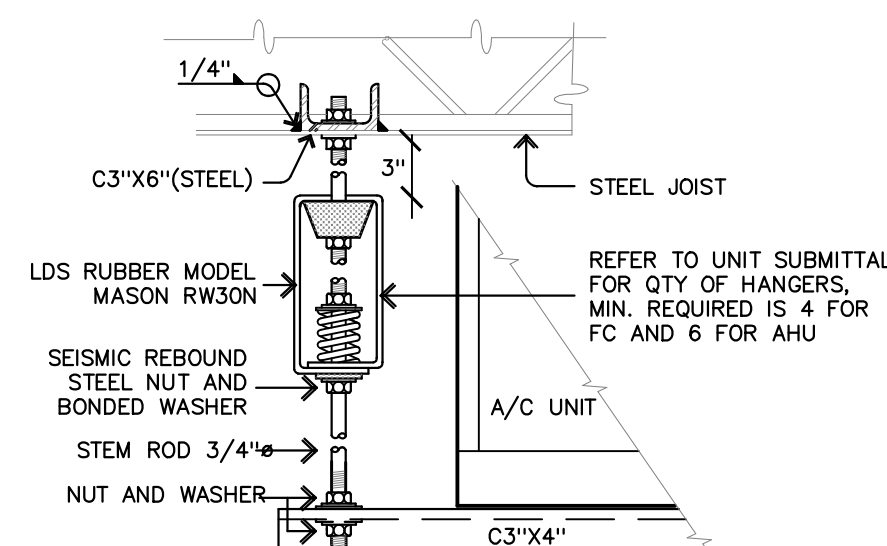
TYPICAL FIRE DAMPER DETAIL



EXHAUST FAN WITH ROOF CURB DETAIL



A/C UNIT DRAIN PIPE DETAIL



A/C UNIT SUPPORT DETAIL

THESE DRAWINGS DETAILS INTENT IS TO FOCUS IN THE EQUIPMENT ASSEMBLY AND COMPONENT ARRANGEMENT TO FULFILL THE CODE REQUIREMENTS. THEREFORE FOR "INTENT" MEANS THAT EQUIPMENT, COMPONENTS OR MATERIAL NOT SHOWN ON DETAILS BUT REQUIRED FOR INSTALLATION AND/OR OPERATION SHALL BE INCLUDED FOR BID QUOTATION. REFER TO THE FACTORY MANUAL FOR ANY EQUIPMENT OR COMPONENT INSTALLATION DETAILS AND INSTRUCTIONS FOR OPERATION.

ALL EQUIPMENT OR COMPONENTS SELECTION SHOWN ON DETAILS ARE BASE BID. SIMILAR ITEM CAN BE SUBMITTED. REFER TO BASE BID CLAUSE FOR ALTERNATE COMPONENTS OR EQUIPMENT.

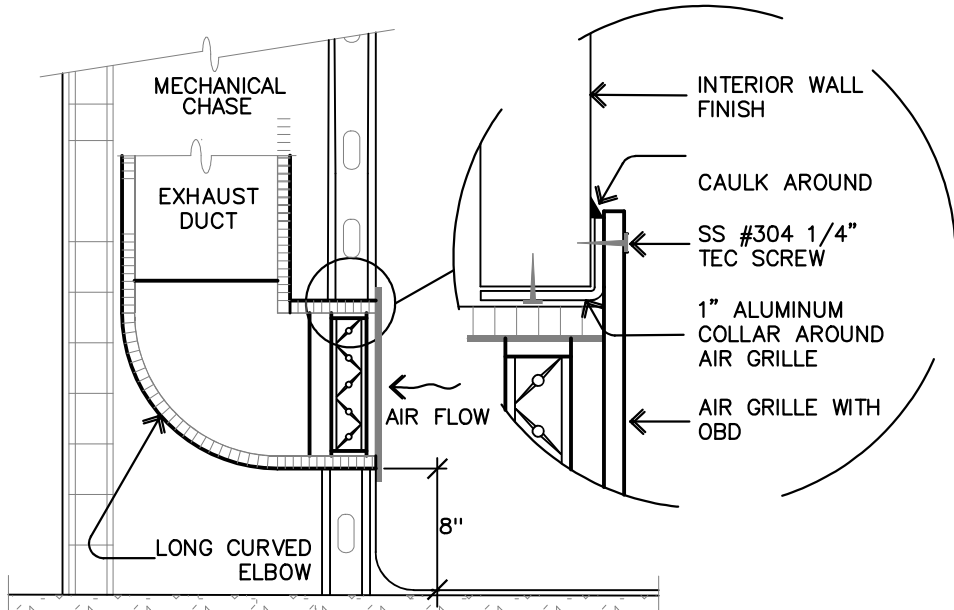
ALL COMPONENTS SHOWN ON DETAILS SHALL BE NEW AND UL CERTIFIED AND INCLUDED IN THE SUBMITTAL FOR ENDORSEMENT. DETAILS ARE NOT TO SCALE AND DIMENSION SHOWN ARE IN FEET AND INCHES UNLESS OTHERWISE NOTIFY.

ANY EQUIPMENT NOT REQUIRED FOR INSTALLATION, DETAILS THAT APPLIES IS FOR REFERENCE ONLY. IN CASE OF DISCREPANCY BETWEEN DETAILS, NOTES AND DRAWINGS REFER TO INTERPRETATION CLAUSE IN MECHANICAL NOTES FOR FURTHER ACTION.

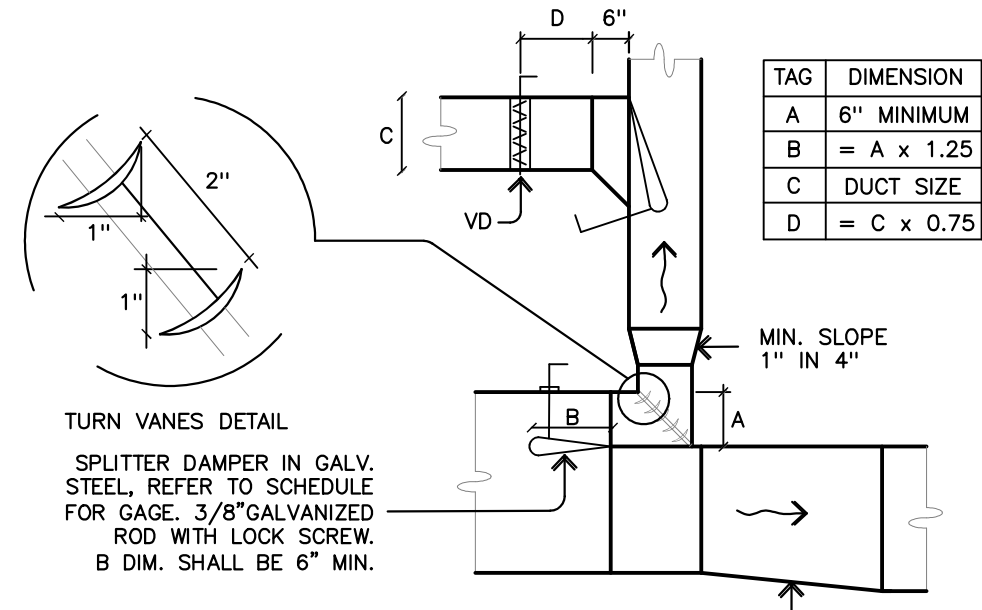
REFER TO MECHANICAL GENERAL NOTES AND SCHEDULES FOR EQUIPMENT SPECS AND ADDITIONAL INFORMATION.

GENERAL NOTES FOR ALL DETAILS

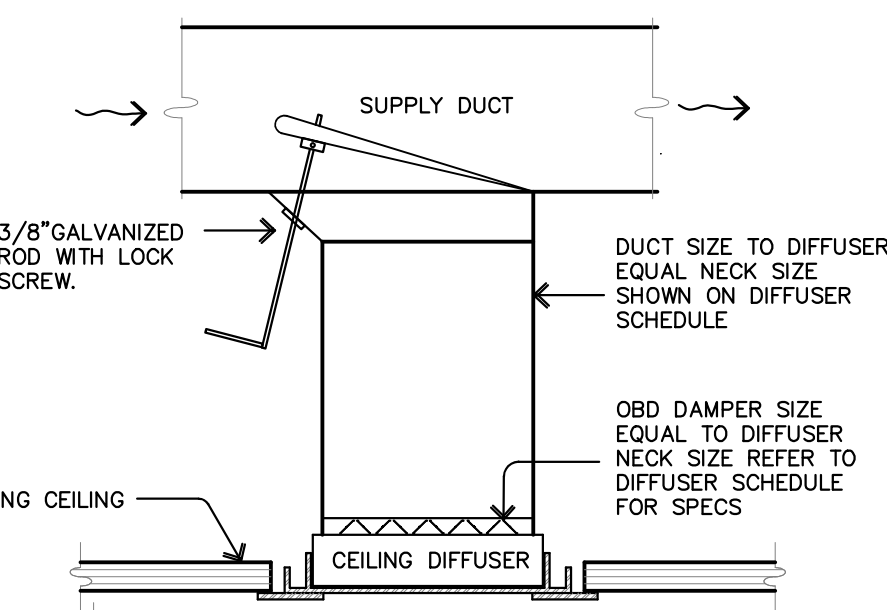
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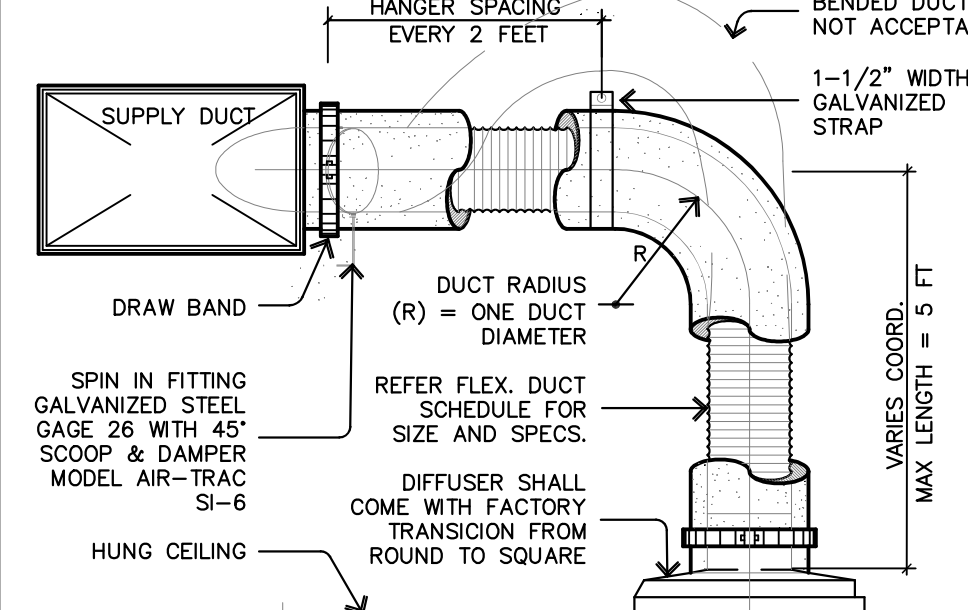
LOW EXHAUST GRILLE DETAIL



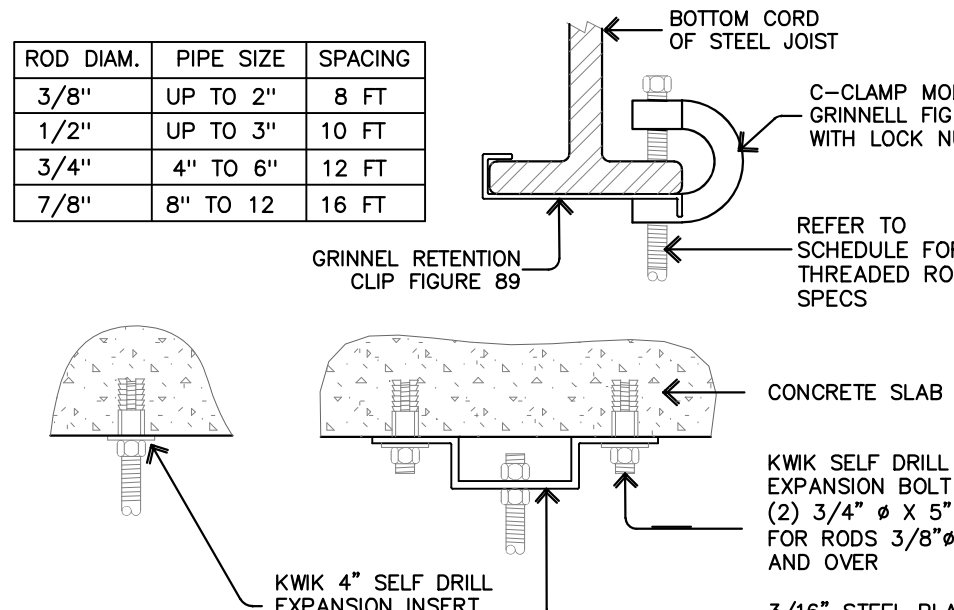
DUCTWORK DETAILS



SUPPLY AIR DUCT TERMINAL DETAIL

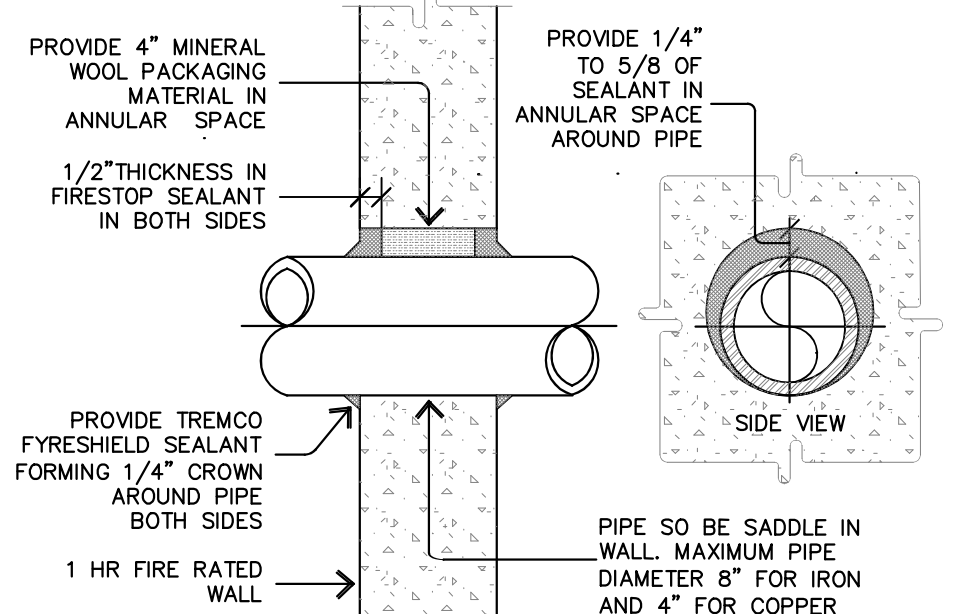


SUPPLY AIR FLEXIBLE DUCT DETAIL

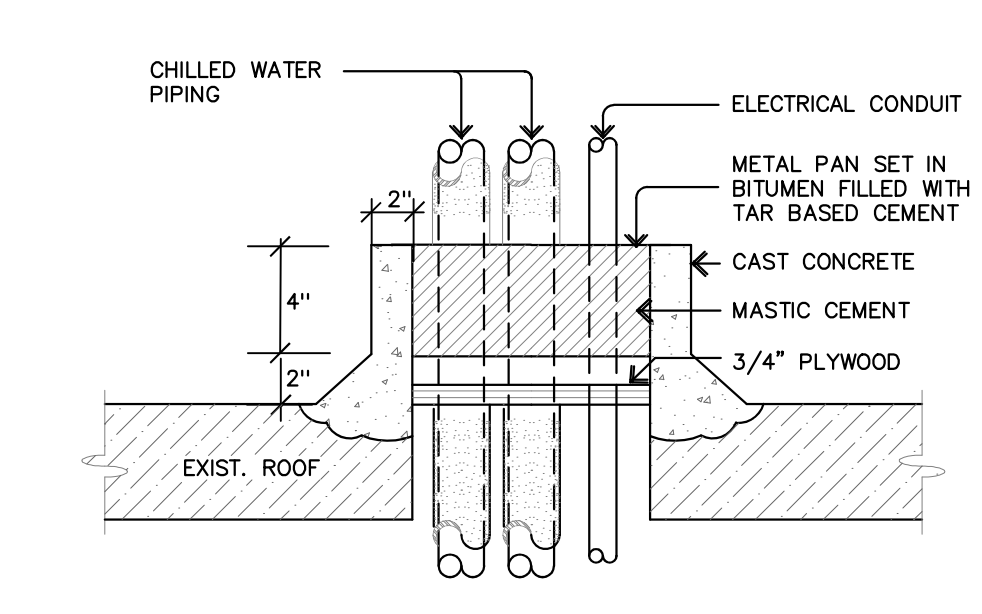


PIPE RODS UPPER ATTACH DETAIL

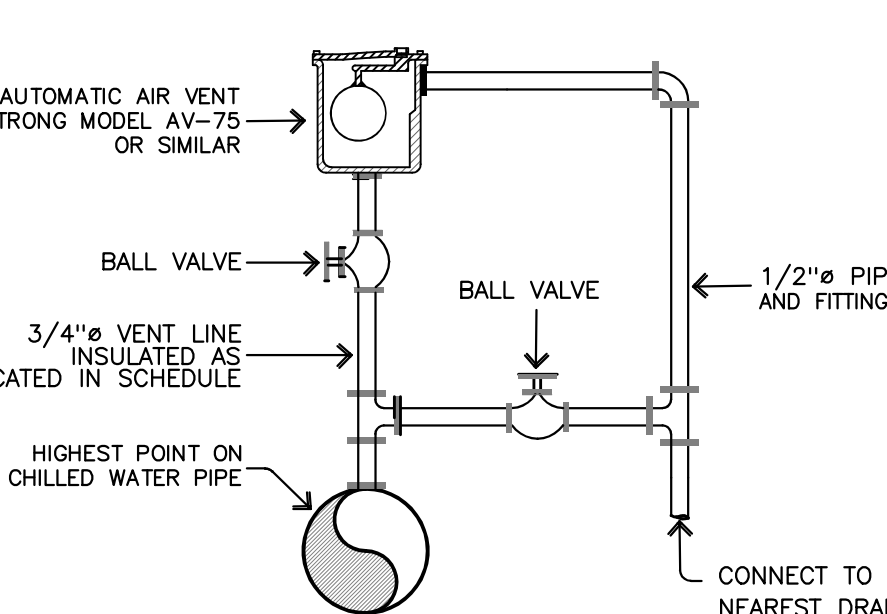
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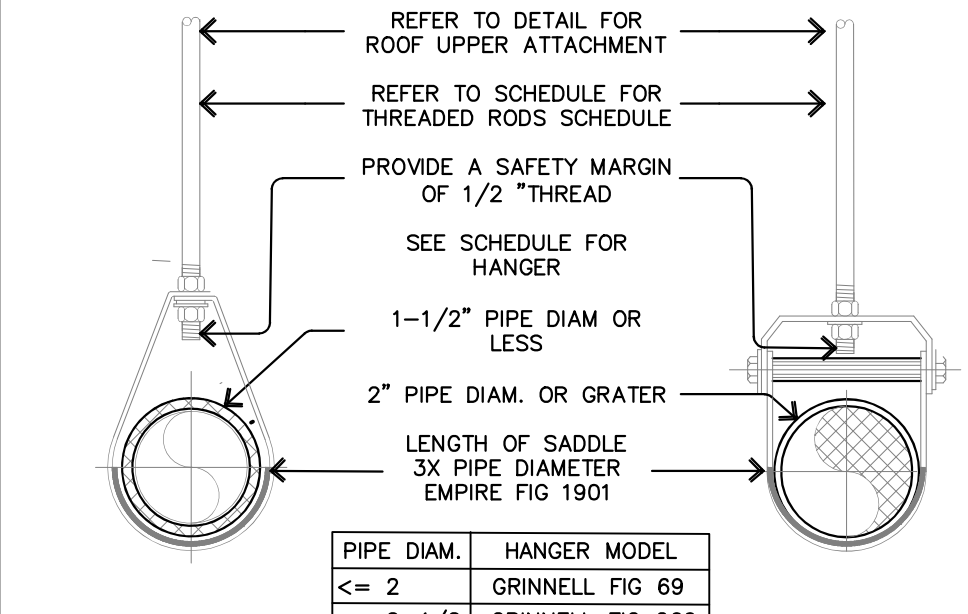
PIPE THRU FIRE RATED WALL DETAIL



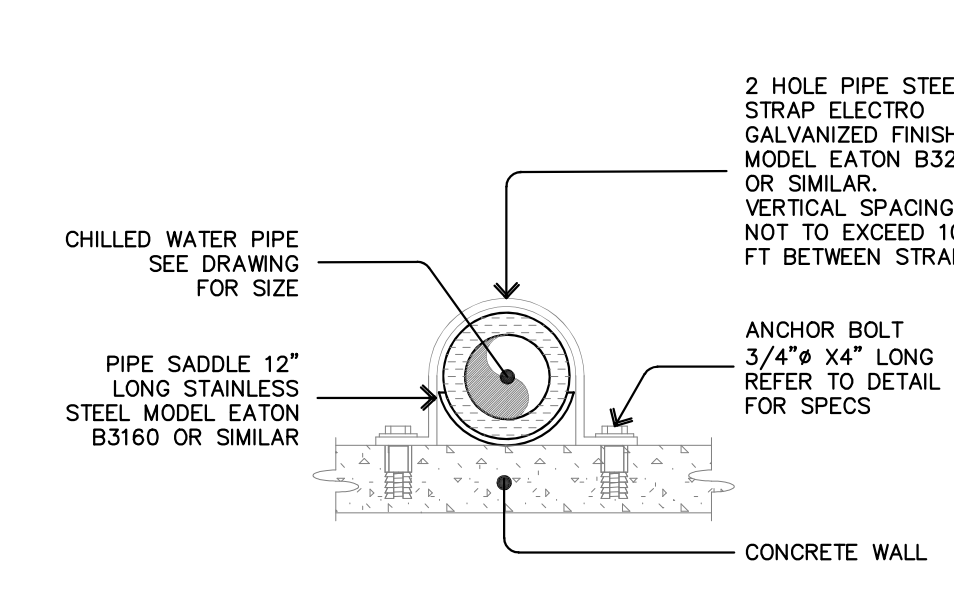
CHILLED WATER PIPING PITCH POCKET DETAIL



CHILLED WATER AIR VENT DETAIL

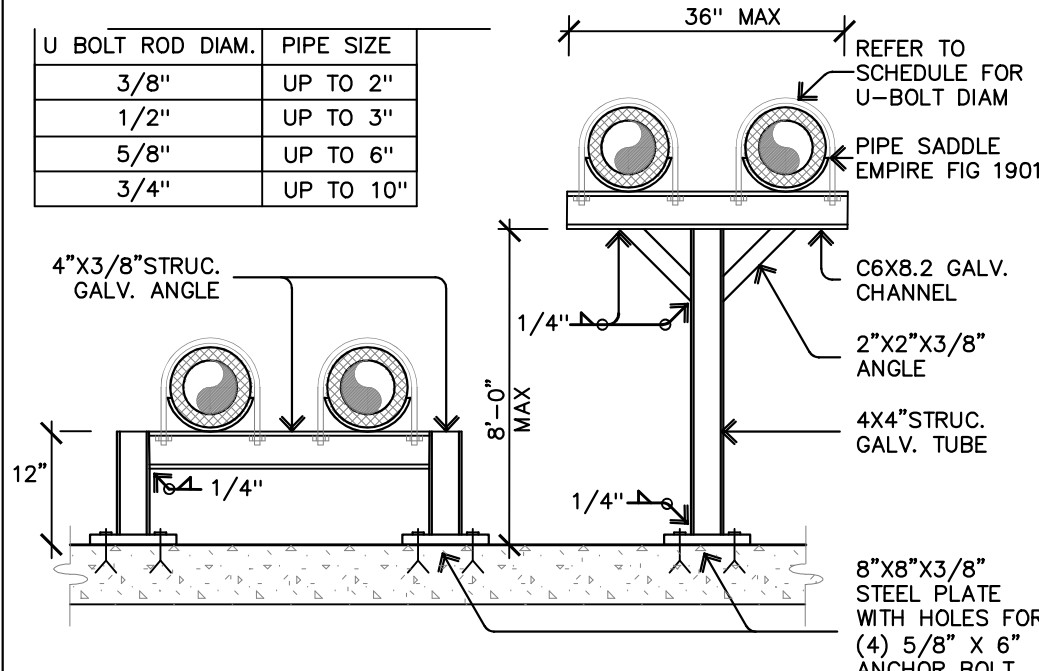


SINGLE PIPE HANGER DETAIL

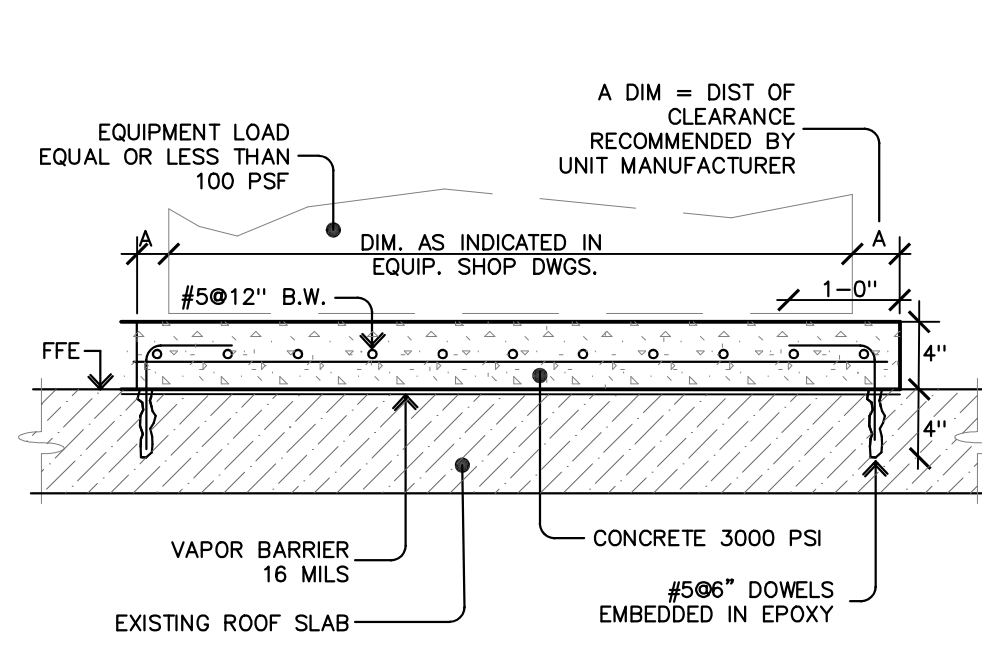


PIPING VERTICAL ANCHOR DETAIL

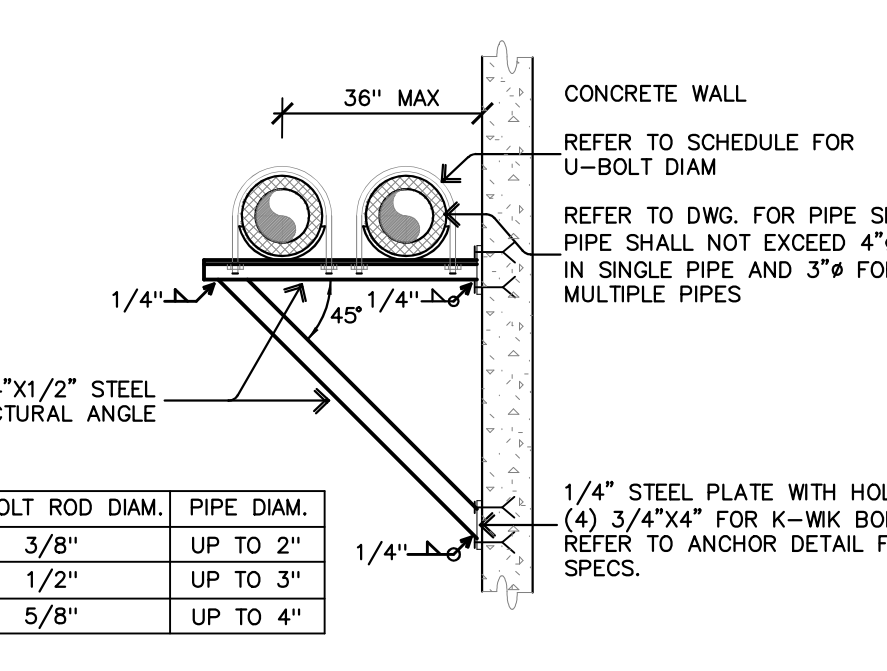
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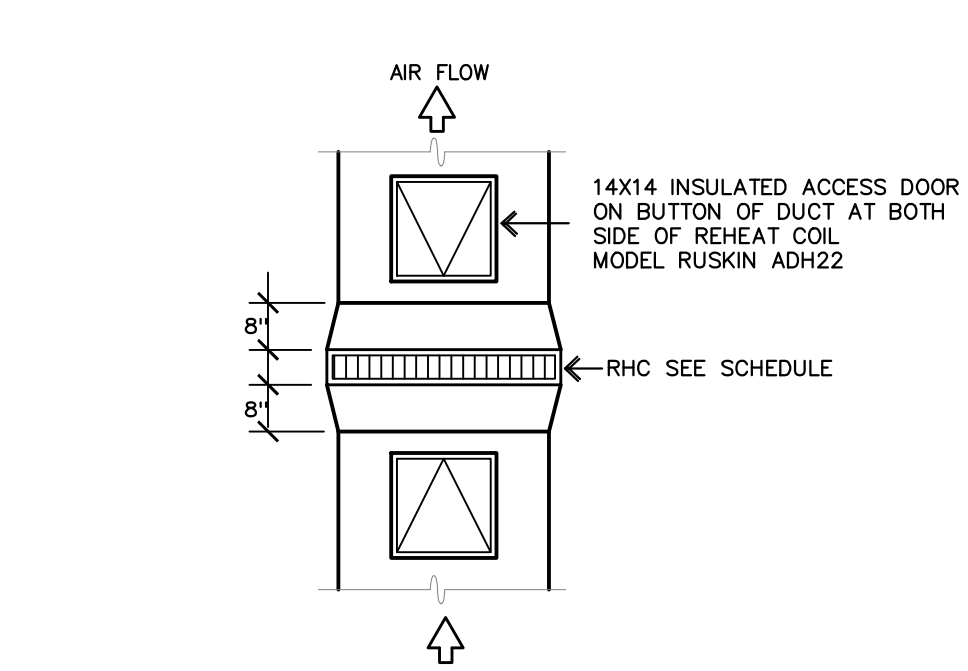
PIPE SUPPORT ON ROOF DETAIL



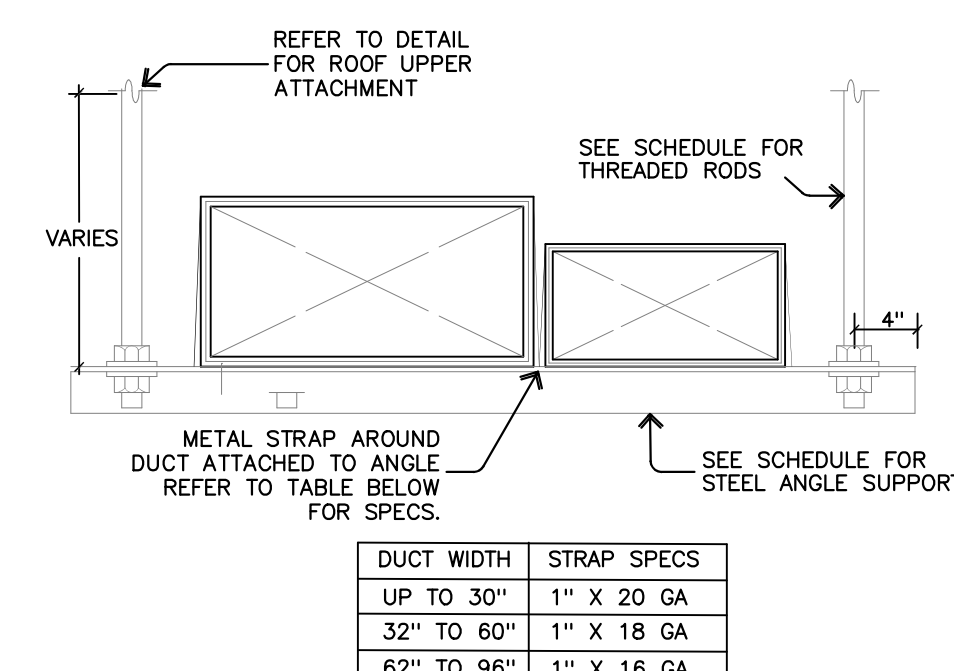
CONCRETE PAD OVER EXIST. SLAB DETAIL



PIPING UP TO 4' WALL SUPPORT DETAIL



REHEAT COIL DUCT DETAIL



AIR DUCTS HANGER DETAIL

1



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PROJECT OWNER

PROJECT NAME

HURRA
TEMPORARY
OPERATION ROOMS

FACILITY LOCATION

BAYAMON

LOCATION

BAYAMON, PR

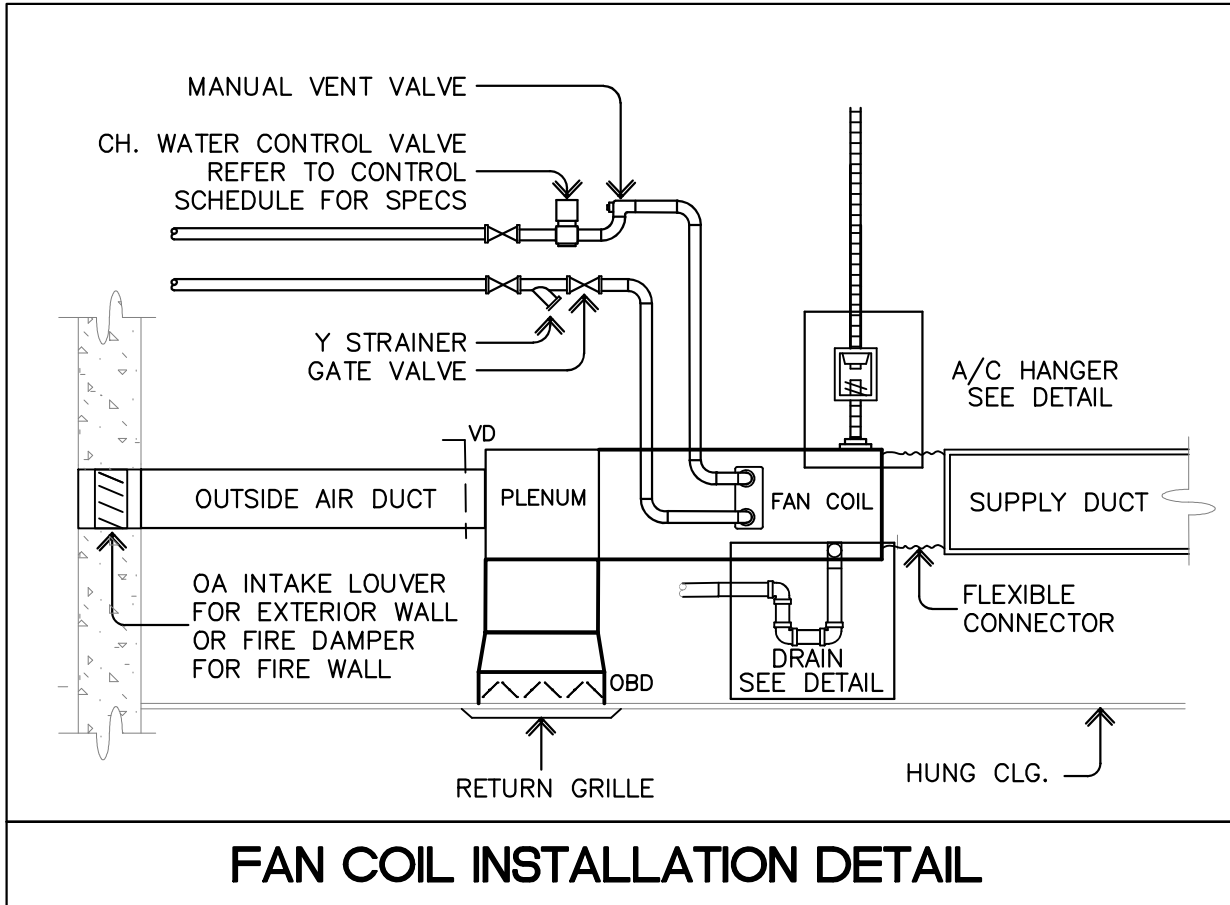
DRAWING NAME

HVAC DETAILS

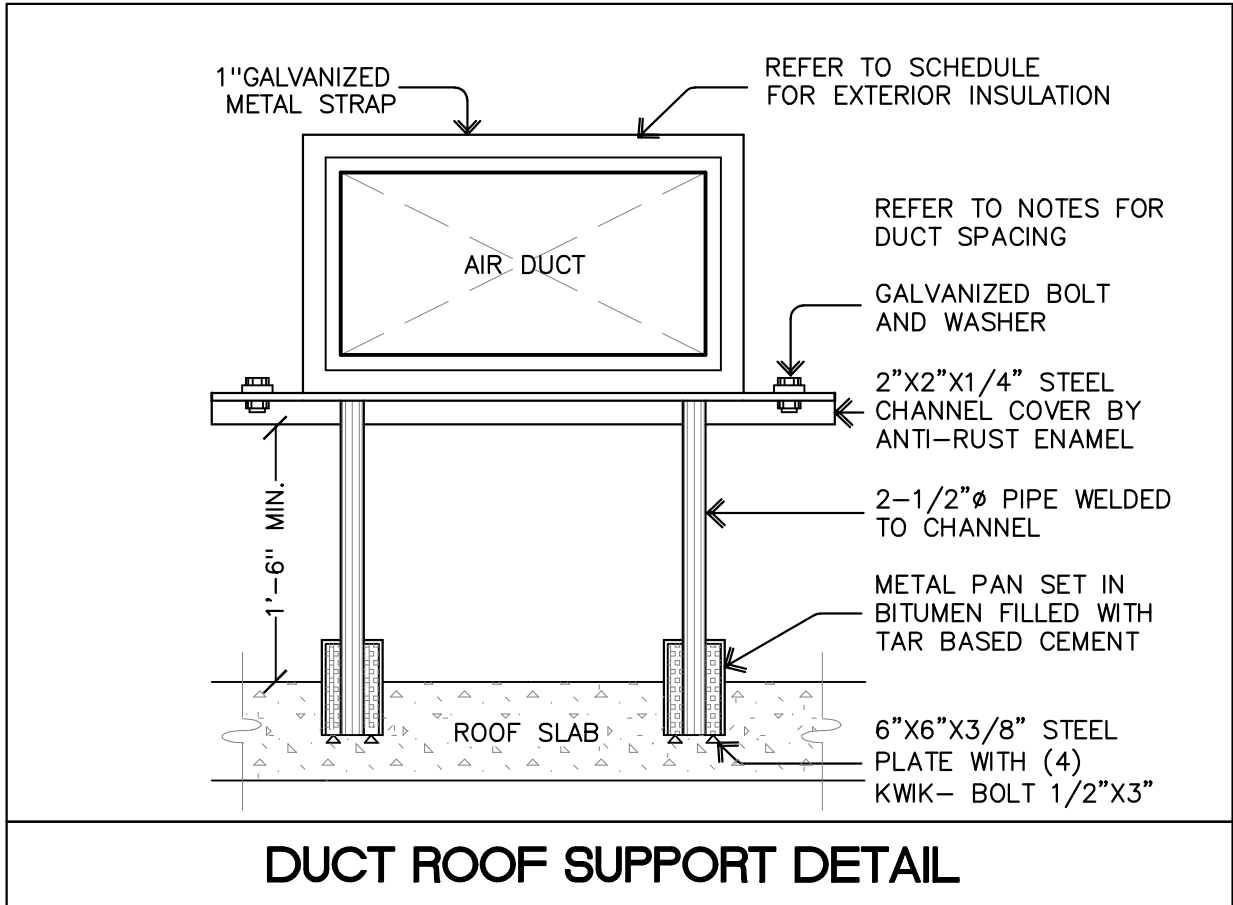
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M-3

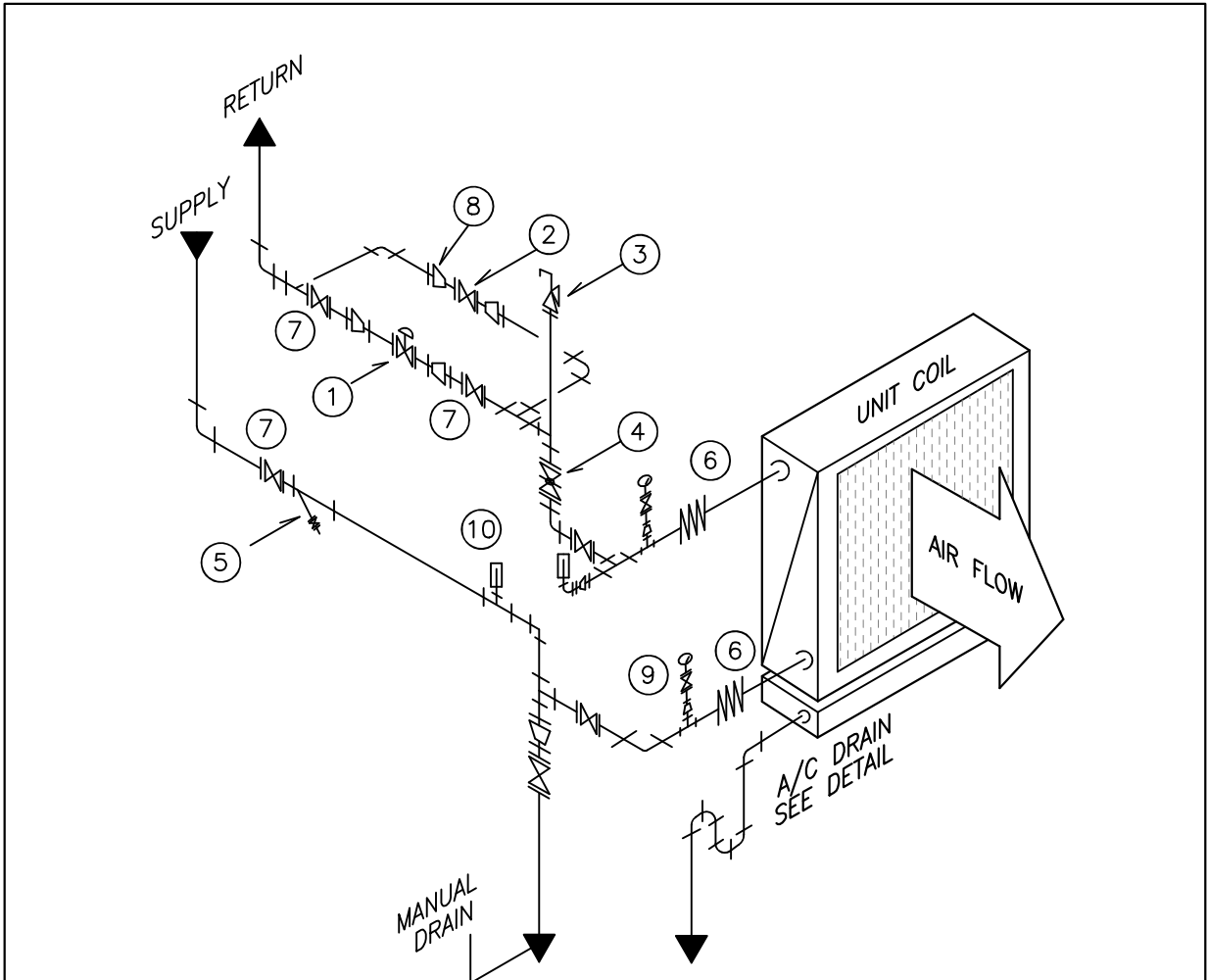
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FAN COIL INSTALLATION DETAIL



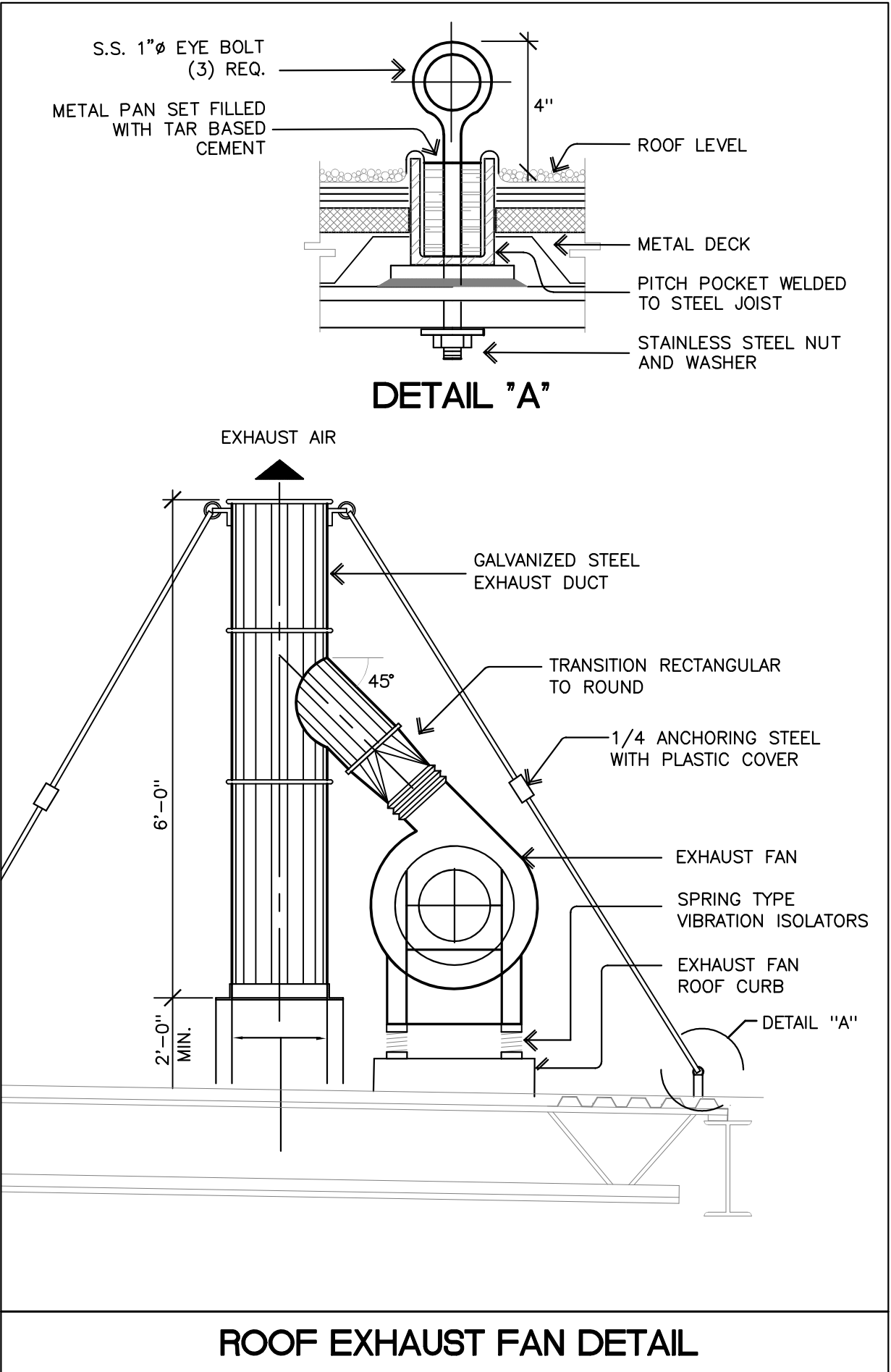
DUCT ROOF SUPPORT DETAIL



COMPONENTS DEVICE SCHEDULE

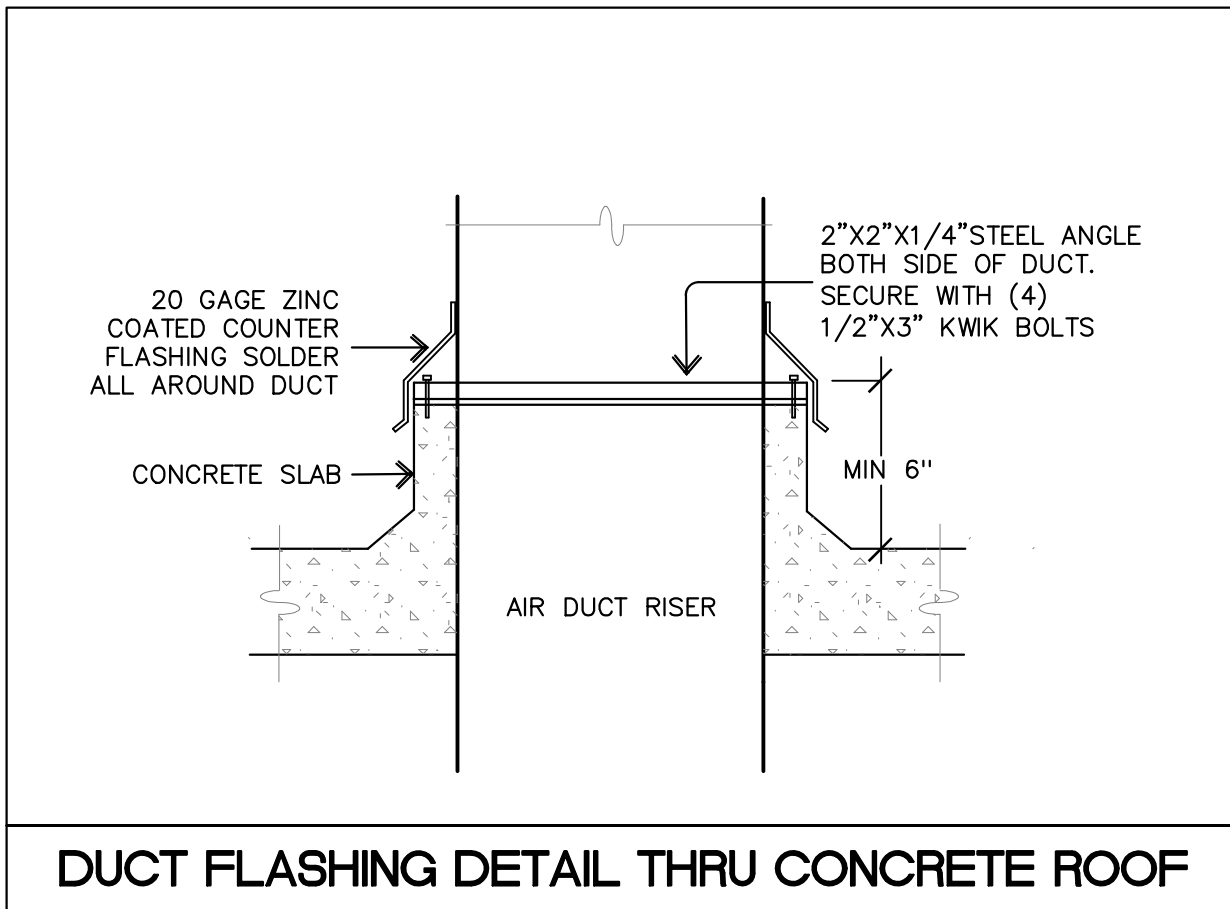
ID	DESCRIPTION	MANUFACTURER	NOTES
1	CONTROL VALVE	BELLIMO	2 WAY ELEC. VALVE
2	BALANCING VALVE	TACO ACCUFLOW	
3	AIR VENT	SARCO AV45	AUTOMATIC
4	CIRCUIT SETTER	TACO ACCUFLOW	
5	STRAINER	AMERICAN WHEATLEY	ST. STEEL 304 SCREEN 1/8 HOLE
6	FLEXIBLE CONNECTOR	AMERICAN WHEATLEY	ST. STEEL BRAID
7	GATE VALVE	AMERICAN WHEATLEY	FULL PORT TWO PIECE BODY
8	CONCENTRIC REDUCER	ANVIL	GALVANIZED STEEL
9	PRESSURE GAGE	TRERICE SERIE 700	ST. STEEL CASE, LIQ. FILLED 4" DIAL 0-100 PSI 1% ACC., VALVED
10	THERMOMETER	TRERICE SERIE BX	ST. STEEL CASE, THERMOWELL ±1% SCALE, 9" ADJUSTABLE, VALVED
ALL COMPONENTS SHALL BE FLANGE, CAST IRON ASTM A126, CLASS 150, LINE SIZE			

AIR HANDLING UNIT PIPING HOOK-UP

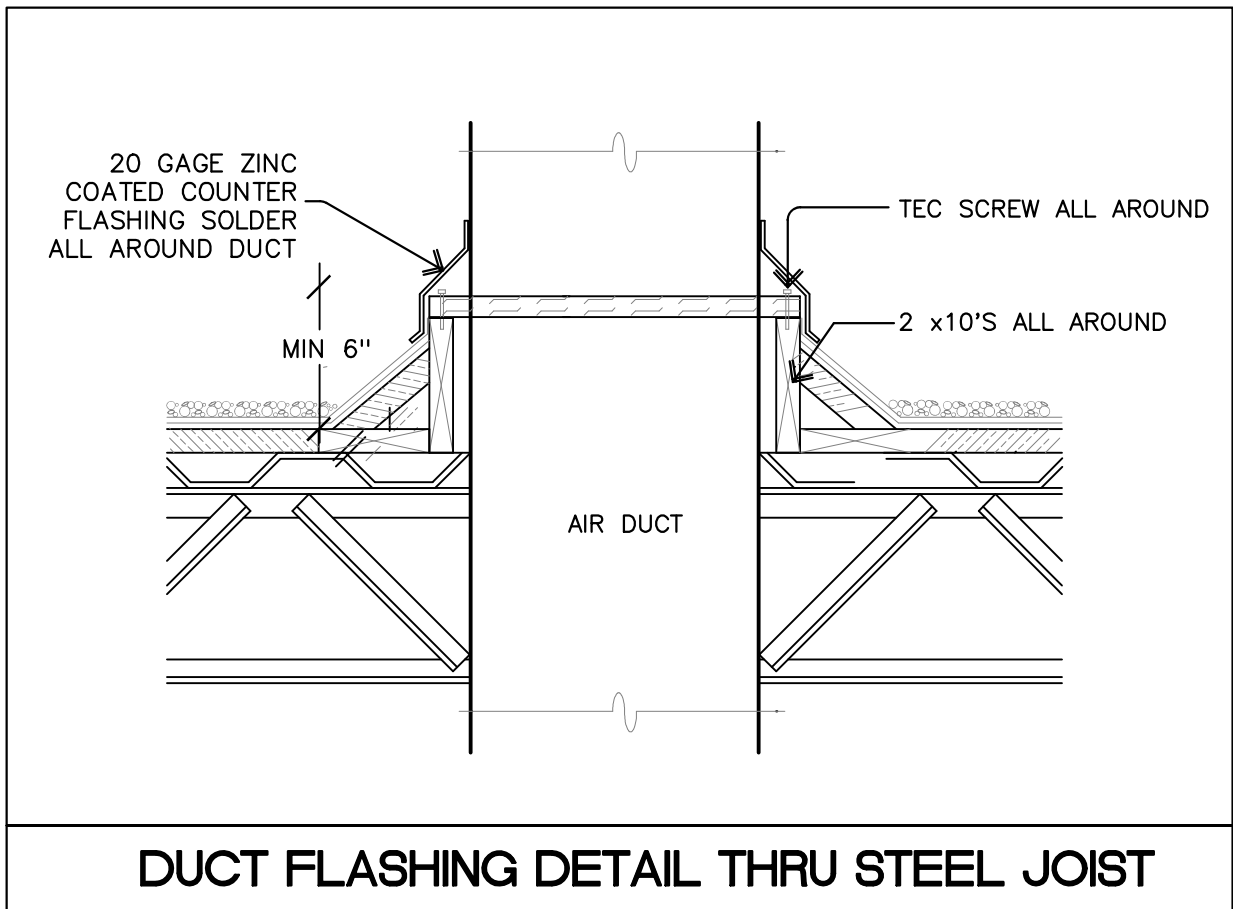


ROOF EXHAUST FAN DETAIL

4

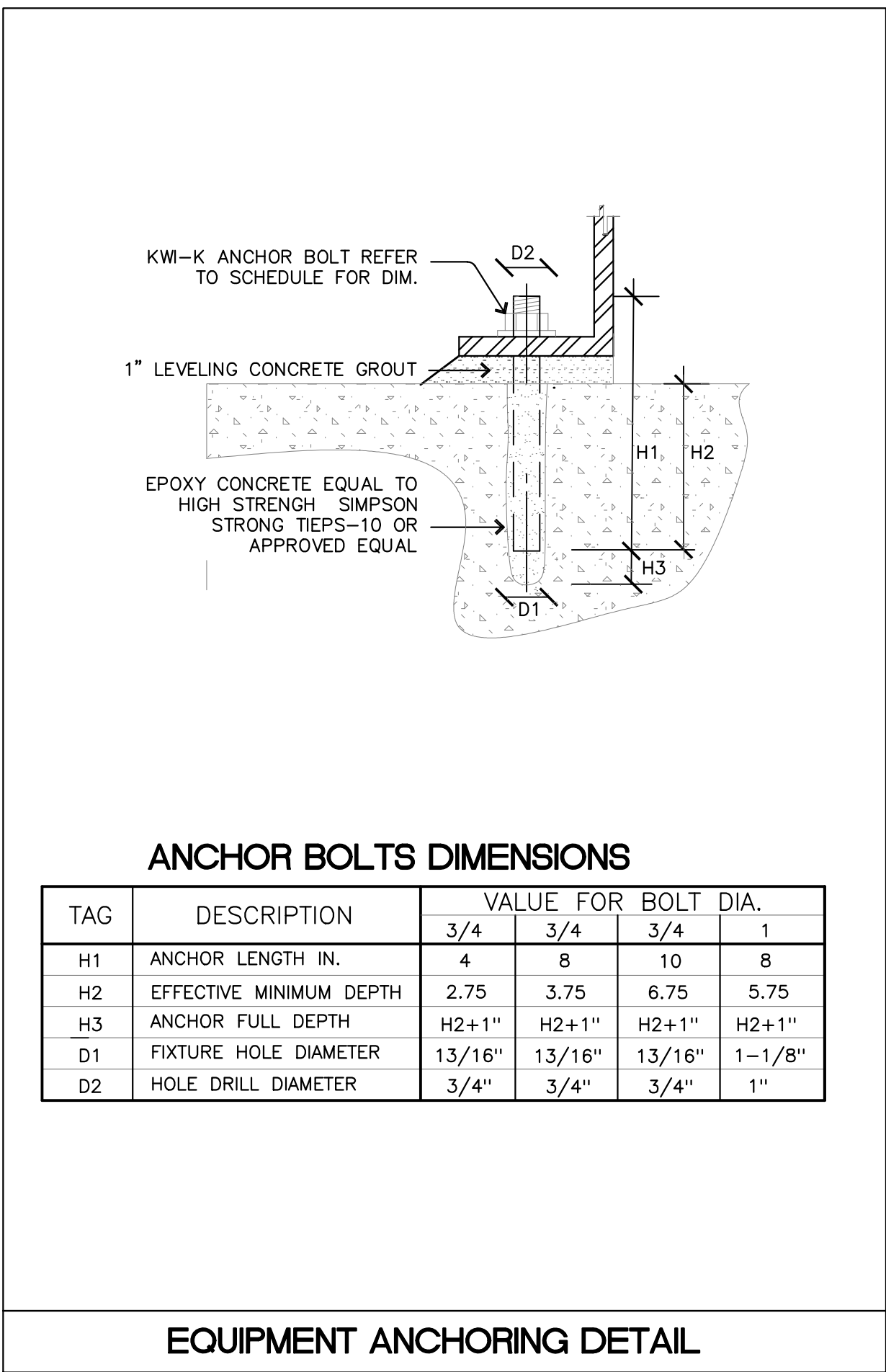


DUCT FLASHING DETAIL THRU CONCRETE ROOF



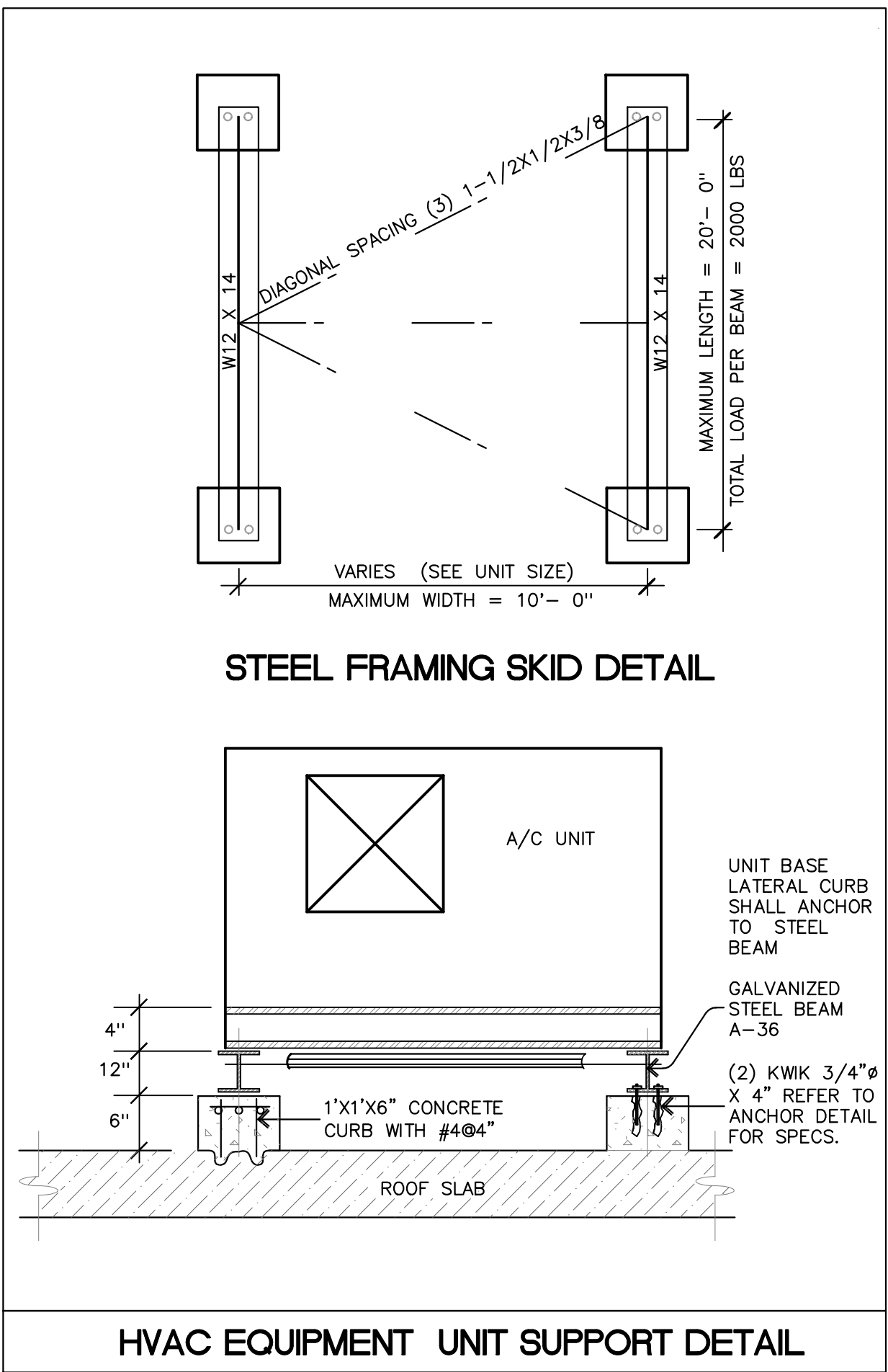
DUCT FLASHING DETAIL THRU STEEL JOIST

3



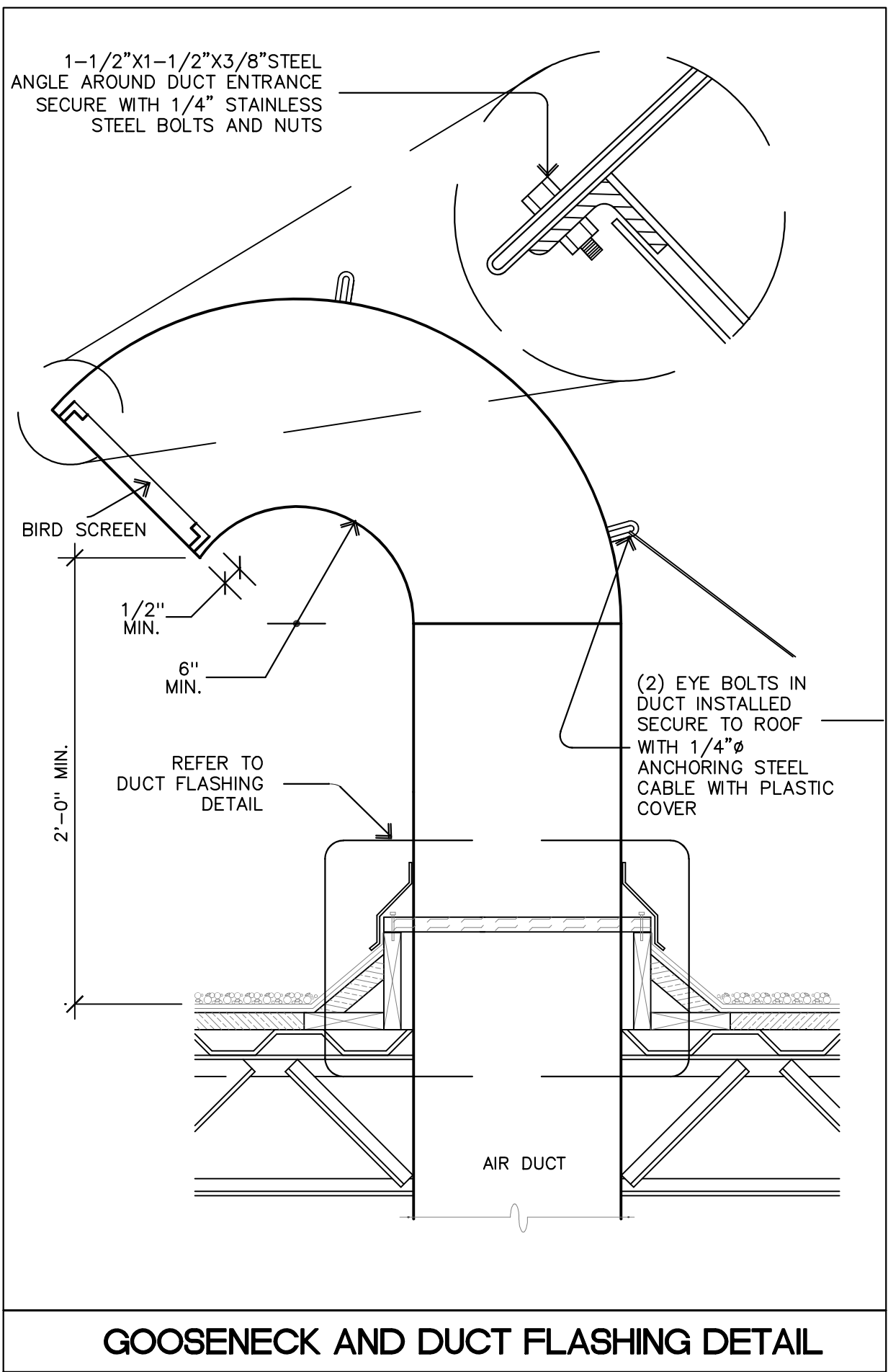
EQUIPMENT ANCHORING DETAIL

2



HVAC EQUIPMENT UNIT SUPPORT DETAIL

1



GOOSENECK AND DUCT FLASHING DETAIL

A

B

C

D

E



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YO, INGENIERO JAVIER I. CASTILLO, LICENCIA 12391, CERTIFICADO QUE SOY EL PROFESIONAL QUE DISEÑO Y PREPARE ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTENDIENDO DICHA PLANOS Y ESPECIFICACIONES, CUMPLEN CON LAS DISPOSICIONES APPLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APPLICABLES DE LOS REGLAMENTOS Y CODIGOS DE CONSTRUCCION VIGENTES DE LAS AGENCIAS, JUNTAS REGULADORAS O CORPORACIONES PUBLICAS CON JURISDICCION. CERTIFICO ADICIONALMENTE QUE EN LA PREPARACION DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY 14-2004, SEGUN ENMIENDADA, CONOCIDA COMO LA LEY PARA LA INVERSION POR LA INDUSTRIA PUERTORRIQUENA Y CON LA LEY NUM. 319 DE 15 DE MAYO DE 1938, SEGUN ENMIENDADA, LEY NUM. 96 DE 6 DE JULIO DE 1978, SEGUN ENMIENDADA, SEGUN APLIQUE. RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL, DISCIPLINARIA POR LA GDFE Y AGENCIAS CON JURISDICCION.

PROJECT OWNER

PROJECT NAME
HURRA
TEMPORARY
OPERATION ROOMS

FACILITY LOCATION
BAYAMON

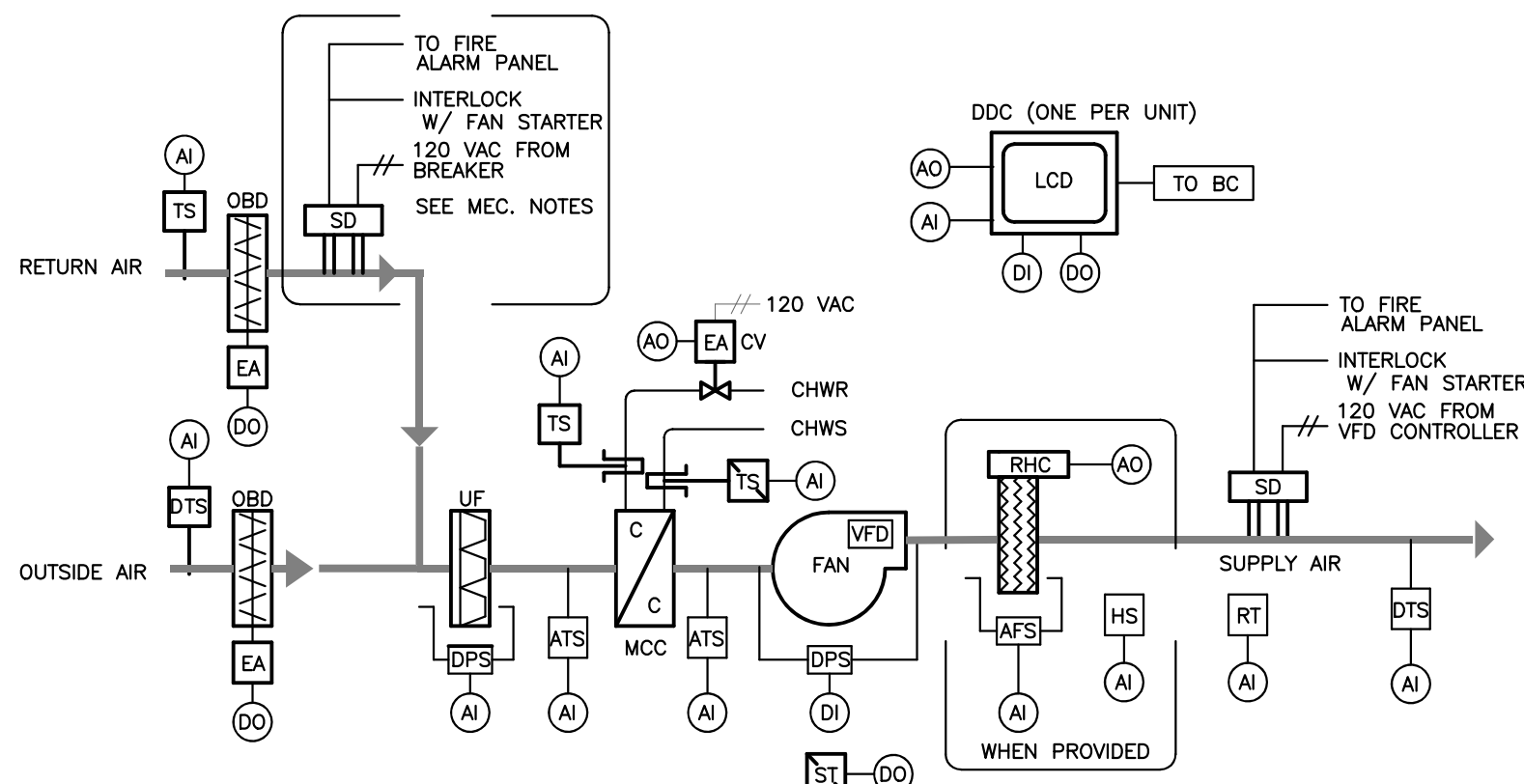
LOCATION
BAYAMON, PR

DRAWING NAME
HVAC DETAILS II

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APPROVAL FOR THE DEVELOPMENT
OF ADVANCE DRAWINGS. ANY
DRAWINGS WITH THIS SEAL CANT BE
USED FOR BID OR CONSTRUCTION.

M-4

5



AIR HANDLING UNIT (AHU) CHW CONTROL DIAGRAM

CONTROL SEQUENCE OPERATION

GENERAL
UNIT SHALL BE ACTIVATED AUTOMATICALLY BY A TIME SCHEDULE IN THE BUILDING MANAGEMENT SYSTEM (BMS) ACCORDING TO OWNER PREFERENCES.

THE BMS SHALL RECEIVE A SIGNAL FROM THE RETURN AIR SENSOR POINT. IF COMMUNICATION IS LOST WITH THE BMS, AHU WILL USE THE DEFAULT SET POINT AT THE AHU LOCAL CONTROL PANEL.

FAN OPERATION
WHEN THE UNIT IS ON, THE SUPPLY FAN WILL OPERATE CONTINUOUSLY.

COIL OPERATION
THE UNIT COOLING VALVE AT MAIN COOLING COIL (MCC) WILL MODULATE WATER FLOW TO MAINTAIN A CONSTANT AIR TEMPERATURE OF 72 F IN THE RETURN AIR AND SHALL BE ADJUSTABLE AT ROOM THERMOSTAT.

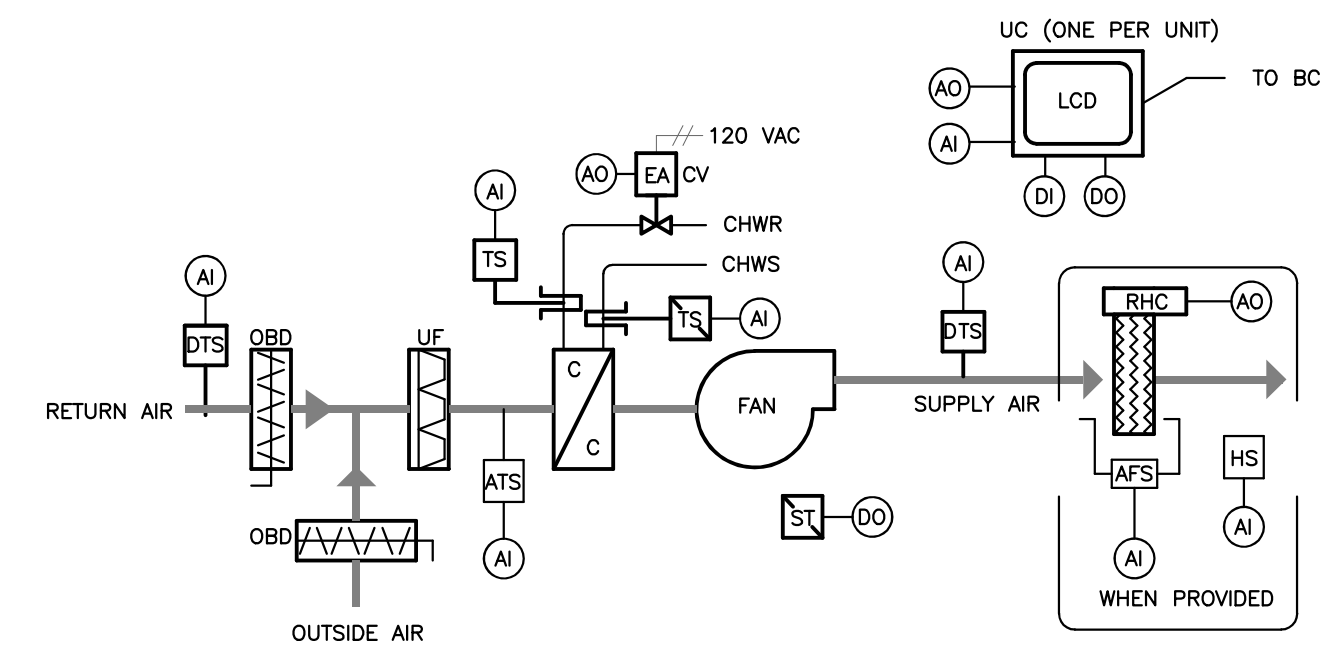
REHEAT COIL OPERATION
THE REHEAT COIL WILL MODULATE AIR SUPPLY TEMPERATURE USING SCR COIL TO MAINTAIN A RELATIVE HUMIDITY BETWEEN 55 TO 60%. REHEAT SHALL BE CAPABLE TO INCREASE AIR TEMPERATURE BY 10 DEGREES.

SMOKE OPERATION
UNIT SHALL SHUT DOWN WHEN SMOKE IS DETECTED AT SMOKE DUCT SENSOR. ALL CONTROL VALVES AND DAMPERS SHALL CLOSE WHEN UNIT IS DEACTIVATED.

CONTROL OPERATION
UNIT SHALL HAVE A LOCAL CONTROL PANEL THAT WILL REPORT AS A MINIMUM THE FOLLOWING PARAMETERS:

- A. RETURN AIR TEMPERATURE
- B. COIL ENTERING TEMPERATURE
- C. COIL LEAVING TEMPERATURE
- D. FILTER DIRTY CONDITIONS
- E. UNIT STATUS
- F. SMOKE ALARM STATUS
- G. CHILLED WATER ENTERING AND LEAVING TEMPERATURE
- H. ALARM OF ANY FAILURE STAMP WITH DATE AND TIME

AIR HANDLING UNIT (AHU) CHW CONTROL DIAGRAM



CONTROL SEQUENCE OPERATION

GENERAL
UNIT SHALL BE ACTIVATED AUTOMATICALLY BY A TIME SCHEDULE IN THE BUILDING MANAGEMENT SYSTEM (BMS) ACCORDING TO OWNER PREFERENCES.

THE BMS SHALL RECEIVE A SIGNAL FROM THE RETURN AIR SENSOR POINT. IF COMMUNICATION IS LOST WITH THE BMS, AHU WILL USE THE DEFAULT SET POINT AT THE AHU LOCAL CONTROL PANEL.

FAN OPERATION
WHEN THE UNIT IS ON, THE SUPPLY FAN WILL OPERATE CONTINUOUSLY.

COIL OPERATION
THE COOLING VALVE WILL MODULATE TO MAINTAIN A CONSTANT AIR TEMPERATURE OF 72 F AT THE RETURN AIR SETPOINT ADJUSTABLE AT THE ROOM THERMOSTAT.

SMOKE OPERATION
UNIT SHALL SHUT DOWN WHEN SMOKE IS DETECTED AT SMOKE DUCT SENSOR. ALL CONTROL VALVES AND DAMPERS SHALL CLOSE WHEN UNIT IS DEACTIVATED.

UNIT SHALL HAVE A LOCAL CONTROL PANEL THAT WILL REPORT AS A MINIMUM THE FOLLOWING PARAMETERS:

- A. ROOM TEMPERATURE
- B. COIL ENTERING TEMPERATURE
- C. COIL LEAVING TEMPERATURE
- D. UNIT STATUS
- E. COIL CHILLED WATER ENTERING AND LEAVING TEMPERATURE
- F. ALARM OF ANY FAILURE STAMP WITH DATE AND TIME

FAN COIL (FC) UNIT CHW CONTROL DIAGRAM

CONTROL GENERAL NOTES

THESE DRAWINGS DETAILS INTENT IS TO FOCUS IN THE EQUIPMENT ASSEMBLY AND COMPONENT ARRANGEMENT TO FULFILL THE CODE REQUIREMENTS. THEREFORE FOR "INTENT" MEANS THAT EQUIPMENT COMPONENTS OR MATERIAL NOT SHOWN ON DETAILS BUT REQUIRED FOR INSTALLATION AND/OR OPERATION SHALL BE INCLUDED FOR BID QUOTATION. REFER TO THE FACTORY MANUAL FOR ANY EQUIPMENT OR COMPONENT INSTALLATION DETAILS AND INSTRUCTIONS FOR OPERATION.

ALL EQUIPMENT OR COMPONENTS SELECTION SHOWN ON DETAILS ARE BASE BID, SIMILAR ITEM CAN BE SUBMITTED, REFER TO BASE BID CLAUSE FOR ADDITIONAL INFORMATION FOR ALTERNATE COMPONENTS OR EQUIPMENT. ALTERNATE ON SEQUENCE OF OPERATION IS NOT ACCEPTABLE.

ALL COMPONENTS SHOWN ON DETAILS SHALL BE NEW AND UL CERTIFIED AND INCLUDED IN THE SUBMITTAL FOR ENDORSEMENT. DETAILS ARE NOT TO SCALE AND DIMENSION SHOWN ARE IN INCHES UNLESS OTHERWISE NOTIFY.

ANY EQUIPMENT NOT REQUIRED FOR INSTALLATION, DETAILS THAT APPLIES IS FOR REFERENCE ONLY. IN CASE OF DISCREPANCY BETWEEN DETAILS, NOTES AND DRAWINGS REFER TO INTERPRETATION CLAUSE IN MECHANICAL NOTES FOR FURTHER ACTION.

REFER TO MECHANICAL GENERAL NOTES FOR ADDITIONAL INFORMATION IN CONTROL SYSTEM.

ALL ELECTRICAL WORK ASSOCIATED TO CONTROL SYSTEM SHALL FURNISH AND INSTALLED BY CONTROL CONTRACTOR. THE WORKS INCLUDES ARE BUT NOT LIMITED TO FURNISH AND INSTALL ALL 120V TO CONTROL EQUIPMENT, INTERLOCKING OF CONTROL SYSTEM TO CORRESPONDING UNIT, WIRING COMPONENTS FOR CONNECTION TO FIRE ALARM SYSTEM, CONNECTION OF DDC SYSTEM AND SMOKE SENSOR TO AUXILIARY SWITCHES AT MOTOR STARTER.

CONTROL CONTRACTOR SHALL FURNISH AND PROVIDE THE NECESSARY COMPONENTS, MODULE, WIRING AND/OR SOFTWARE TO CONNECT VIA BACNET THE PROPOSED EQUIPMENT CONTROLS TO EXISTING MAIN CONTROL SYSTEM(BMS).

ALL CONTROL PANEL INSTALLED INTERIOR SHALL BE INSTALLED IN ABS PLASTIC TIGHT BOX WITH KEY LOCK, HINGED DOOR, SELF STANDING OR WALL MOUNTED, BOTH AT 5 FEET FROM FLOOR LEVEL.

ALL CONTROL PANEL INSTALLED EXTERIOR SHALL BE INSTALLED IN NEMA 4 TIGHT BOX WITH KEY LOCK, HINGED DOOR, SELF STANDING OR WALL MOUNTED, BOTH AT 5 FEET FROM FLOOR LEVEL.

ANY CONTROL PANEL INSTALLED DIRECTLY ON A/C UNIT IS NOT ACCEPTABLE. REFER TO ELECTRICAL INSTALLATION DETAIL.

ALL CONTROL WIRING SHALL RUN IN EMT CONDUIT FOR INTERIOR AND RIGID GALVANIZED CONDUIT FOR EXTERIOR. CONNECTION FROM CONDUIT TO EQUIPMENT SHALL BE FLEXIBLE CONDUIT TYPE. SIZE/TYPE NOT TO EXCEED 5 FEET LONG. WIRING SHALL BE AS A MINIMUM THHN #12 OR AS PER NEC CODE REQUIREMENT.

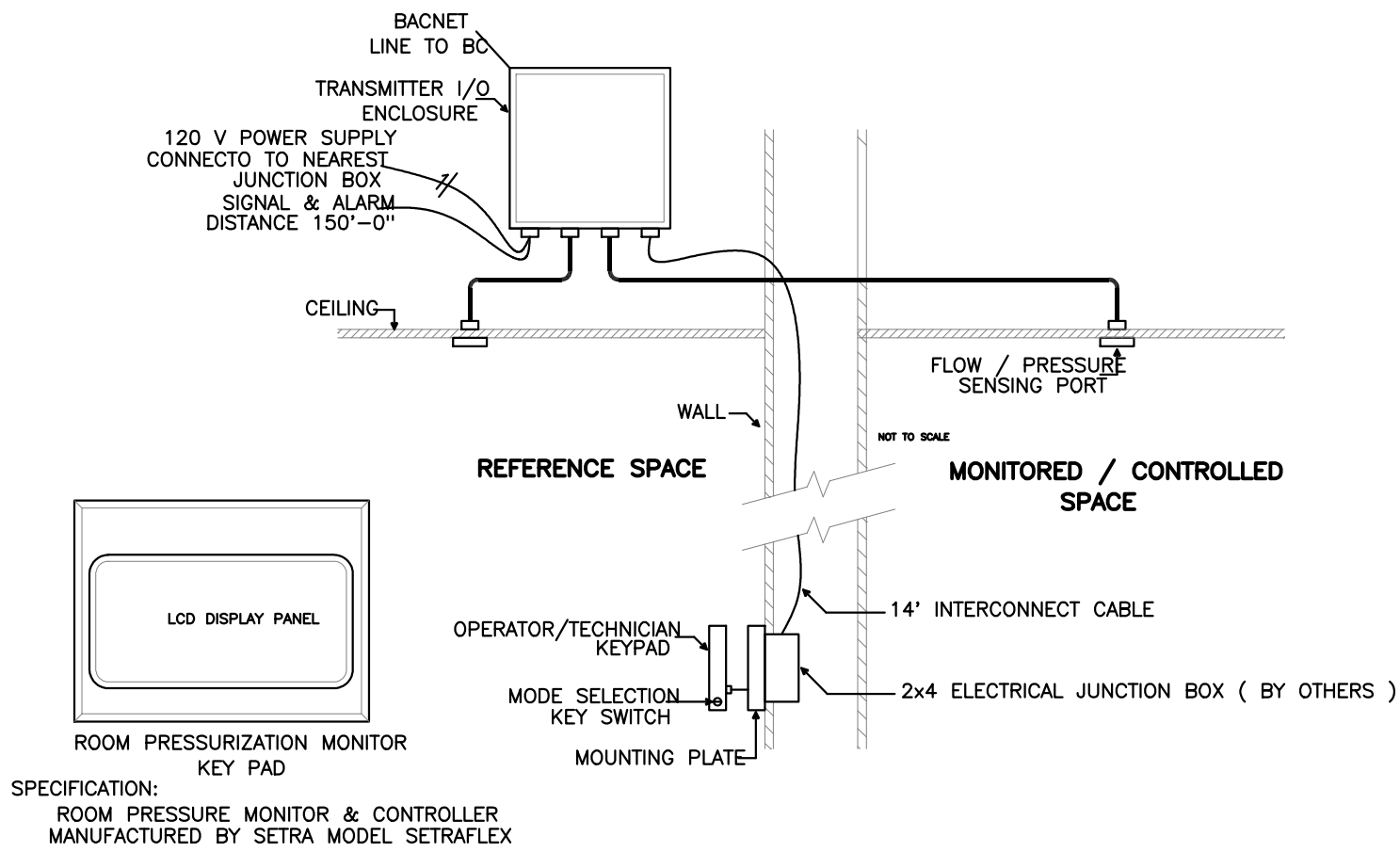
CONTROL DEVICE SCHEDULE

	DESCRIPTION	MANUF & MODEL	NOTES
DTS	DUCT TEMPERATURE SENSOR AND TRANSMITTER	TRANE 41901132	4" UP TO 36" DUCT WIDTH/6"FOR DUCT OVER 36"
ATS	AVERAGING TEMPERATURE SENSOR AND TRANSMITTER	TRANE 41901122	20 FT SENSOR LENGTH
DPS	DIFFERENTIAL PRESSURE SWITCH	TRANE 41906006	NORMALLY OPEN
AFS	AIR FLOW SWITCH	TRANE 41906006	OR PROVIDED BY REHEAT MANUFACTURER
SD	IONIZATION SMOKE DETECTOR	SYSTEM SENSORS D4120	
CV	CONTROL VALVE	BEIMO EV	ENERGY VALVE PROVIDED BY AHU MANUFACTURER
EA	ELECTRONIC ACTUATOR	BEIMO	PROVIDED WITH CONTROL VALVE
DDC	DIRECT DIGITAL CONTROLLER	TRANE UC 600	CONTROL SHALL HAVE LOCAL DISPLAY
RT	ROOM THERMOSTAT	VASSALA HMW92	LOCAL LCD DISPLAY WITH TEMP AND RH READINGS
TS	TEMPERATURE SENSOR IN THERMOWELL	TRANE 41901132	
UV	UV-C LIGHT EMITTER	STERILEAIR	AHU FACTORY INSTALLED
VFD	VARIABLE FREQUENCY DRIVE	TRANE UC 200	AHU FACTORY SUPPLIED. SEE SCHEDULE
UC	UNIT CONTROLLER	TRANE UC 400	FC FACTORY SUPPLIED PROVIDE ZS FOR EACH UNIT
ZS	ZONE SENSOR	VASSALA HMW92D	ROOM TEMPERATURE SENSOR WITH DISPLAY
ALL DEVICES LOCATED OUTDOOR SHALL HAVE NEMA 4 ENCLOSURE			

CONTROL DEVICE LEGEND

	DESCRIPTION	TAG	DESCRIPTION	TAG	
AI	ANALOG INPUT	RHC	REFER TO SCHEDULE FOR ELEC. REHEAT COIL	STR	MOTOR STARTER
AO	ANALOG OUTPUT	ST	FAN STARTER SEE ELEC. DWG FPR SIZE	UF	UPSTREAM FILTER
CC	CHILLED WATER COOLING COIL	DCV	LEV KIT WITH PAC-AHU (AHU FACTORY SUPPLY)	BC	BUILDING CONTROL
UC	A/C UNIT CONTROLLER	BMS	BUILDING MANAGER CONTROL		
DI	DIGITAL INPUT	DO	DIGITAL OUTPUT		

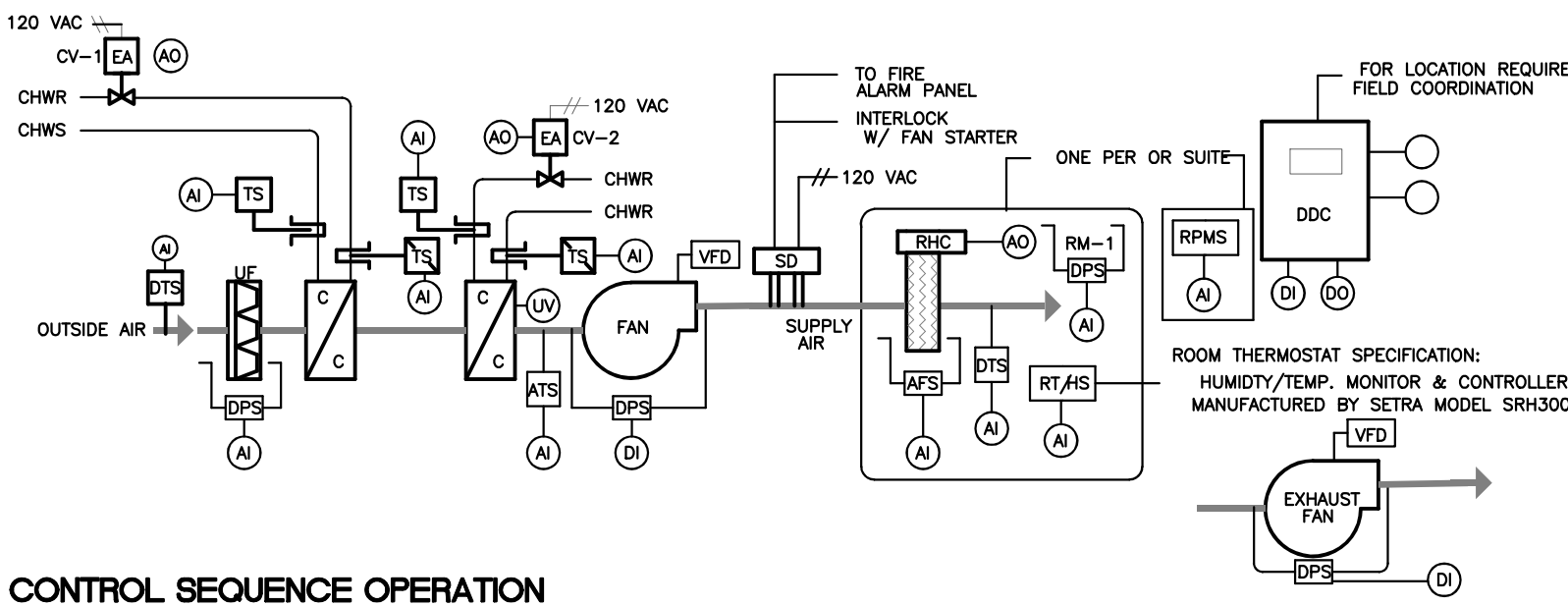
HVAC CONTROL SCHEDULE AND LEGEND



THE SETRA KEYPAD DISPLAY HAS THE CAPABILITY TO SHOW THE FOLLOWING PARAMETERS TOGETHER ON A SINGLE SCREEN:

- A. ROOM NAME
- B. UP TO 4 USER-DEFINED ROOM PROFILES (OR MODES), WITH AN ADDITION TO STANDBY
- C. FULL-SCREEN MODE SELECTION, WHICH CAUSES THE DISPLAY TO SHOW ALL ROOMS SIMULTANEOUSLY ON ONE SCREEN
- D. CONFIGURATION MODE SELECTION, TO DEFINE THE OPERATION OF THE DEVICE
- E. A BANNER INDICATING NORMAL, WARNING, ALARM, AND STANDBY MODES. DURING ALARM MODE, THE ENTIRE DISPLAY BACKGROUND TURNS RED.
- F. ALARM DELAY PERIOD, SELECTABLE FROM 0-9999 SECONDS
- G. ALARM SILENCE PERIOD, SELECTABLE FROM 0 TO INFINITE
- H. ONE-TOUCH DISABLE OF ALL ALARM FUNCTIONS
- I. ROOM ICON, INTENDED TO PROVIDE A VISUAL DEPICTION OF THE ROOM'S USE
- J. TWO LINES OF USER-DEFINED TEXT, INTENDED TO INFORM STAFF OF THE ROOM'S USE
- K. ICONS WHICH APPEAR TO INDICATE ALARM, SILENCE, DOOR, OR RESET FUNCTIONS
- L. A CHOICE OF 3 SCREEN BACKGROUND COLORS; GREEN, BLUE, AND PURPLE
- M. UP TO 6 ENVIRONMENTAL PARAMETERS PER ROOM, TOTAL OF 18, NOTED ABOVE

ROOM PRESSURE MONITOR SENSOR (RPMS) DETAIL



CONTROL SEQUENCE OPERATION

GENERAL
UNIT CONTROLS SHALL BE OPEN ARCHITECTURE DDC TYPE CAPABLE TO COMMUNICATE WITH EXISTING CONTROLS SYSTEM. THE BUILDING MANAGEMENT SYSTEM (BMS) SHALL BE CAPABLE TO PROVIDE WEB BASED OR INTRANET CONNECTION OF AHU SYSTEM. BASE BID CONTROL SPECIFIED IS TRANE CONTROL SOLUTIONS. OWNERS ACTUAL CONTROLS SYSTEM CONTRACT IS TRANE SO SUBSTITUTION OF CONTROL SHALL BE SUBMITTED TO OWNERS APPROVAL WITH BID.

BUILDING AUTOMATION SYSTEM INTERFACE:
THE BUILDING AUTOMATION SYSTEM (BAS) WILL SEND THE CONTROLLER OCCUPIED/UNOCCUPIED MODES. THE SHALL ALSO SEND THE ZONE & DISCHARGE AIR TEMPERATURE SETPOINTS. IF A BAS IS NOT PRESENT, OR COMMUNICATION IS LOST WITH THE BAS, THE CONTROLLER WILL OPERATE IN THE OCCUPIED MODE USING DEFAULT MODES AND SETPOINTS.

OCCUPIED/UNOCCUPIED:
OCCUPIED/UNOCCUPIED MODE WILL BE DETERMINED EITHER BY TIME-OF-DAY SCHEDULE OR BY USER REQUEST.

TEMPERATURE CONTROL AHU COOLING COIL VALVES
DURING OCCUPIED MODE:
THE CHILLED WATER VALVE (CV-1) WILL MODULATE TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT OF 70 DEG F (ADJUSTABLE). IF THE DISCHARGE AIR TEMPERATURE SENSOR (TS-1) FAILS, THE CHILLED WATER VALVE WILL OPEN AND AN ALARM WILL BE ANNUNCIATED AT THE BAS. WHEN ENABLED, THE UNIT WILL CONTROL TO THE COMMUNICATED BUILDING AUTOMATION SYSTEM DISCHARGE AIR TEMPERATURE SETPOINT AND IF COMMUNICATION IS LOST THE LOCAL DISCHARGE AIR TEMPERATURE SETPOINT WILL BE USED. THE CHILLED WATER VALVE (CV-2) WILL MODULATE TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT OF 52 DEG F (ADJUSTABLE). IF THE DISCHARGE AIR TEMPERATURE SENSOR (TS-2) FAILS, THE CHILLED WATER VALVE WILL OPEN AND AN ALARM WILL BE ANNUNCIATED AT THE BAS. WHEN ENABLED, THE UNIT WILL CONTROL TO THE COMMUNICATED BUILDING AUTOMATION SYSTEM DISCHARGE AIR TEMPERATURE SETPOINT AND IF COMMUNICATION IS LOST THE LOCAL DISCHARGE AIR TEMPERATURE SETPOINT WILL BE USED.

DURING UNOCCUPIED MODE
THE SUPPLY FAN WILL BE ON AT LOW SPEED. CV-1 VALVE WILL BE MODULATE TO MAINTAIN AIR ROOM AT 75 F CV-2 WILL BE CLOSED. REHEAT COIL WILL CONTROL TO MAINTAIN 60% RH. EXHAUST FAN WILL MODULATE TO MAINTAIN POSITIVE PRESSURE AT SURGICAL SUITE.

SUPPLY FAN AIRFLOW CONTROL:
A VARIABLE FREQUENCY DRIVE IS CONNECTED TO THE SUPPLY FAN. DURING OCCUPIED MODE THE FAN VFD MODULATES TO MAINTAIN THE ROOM HUMIDITY SETPOINT OF 55 % (ADJUSTABLE). THE VFD SHALL MODULATE THE FAN SPEED UNTIL REACH THE MINIMUM SPEED OF 80% (ADJUSTABLE) IF IN MINIMUM SPEED AND THE HUMIDITY IS OUT OF PARAMETER > 60% (ADJUSTABLE). THE CONTROL SYSTEM WILL BE RESET THE COOLING VALVE (CV-1) SETPOINT TO MAINTAIN THE RH SETPOINT. VFD MINIMUM RPM SETPOINT SHALL MAINTAIN A POSITIVE PRESSURE IN ROOM SENSOR RM-1 (ADJUSTABLE). RM-1 SETPOINT AS PER FGI AND NPSA GUIDELINES.

ROOM TEMPERATURE CONTROL:
DURING OCCUPIED MODE, THE ELECTRIC REHEAT COIL (EC-1) WILL MODULATE TO MAINTAIN THE ROOM TEMPERATURE SETPOINT OF 65 DEG F (ADJUSTABLE).

SMOKE DETECTOR SHUTDOWN:
THE UNIT WILL SHUT DOWN IN RESPONSE TO A SIGNAL FROM EITHER SMOKE DETECTOR INDICATING THE PRESENCE OF SMOKE. THE SMOKE DETECTORS WILL BE INTERLOCKED TO THE UNIT THROUGH THE DRY CONTACTS OF THE SMOKE DETECTORS. A MANUAL RESET OF THE SMOKE DETECTORS WILL BE REQUIRED TO RESTART THE UNIT.

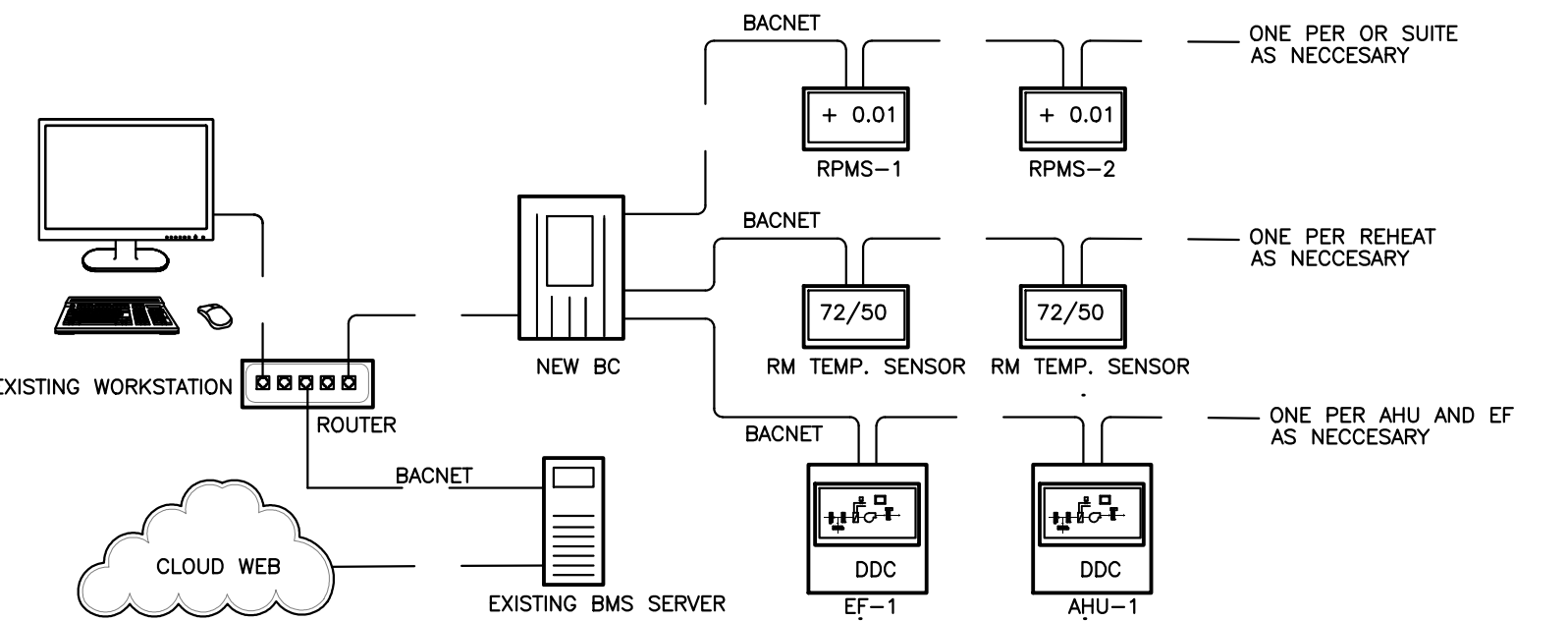
FILTER STATUS:
A DIFFERENTIAL PRESSURE SENSOR WILL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER WHEN THE FAN IS RUNNING. IF THE DIFFERENTIAL PRESSURE INCREASES ABOVE THE SETPOINT (ADJ.) DURING NORMAL OPERATION A DIRTY FILTER ALARM WILL BE ANNUNCIATED AT THE BAS.

ALARM OPERATION
UNIT SHALL SHUT DOWN AND GENERATE AN ALARM TO FIRE SYSTEM WHEN SMOKE IS DETECTED AT SMOKE DUCT SENSOR. ALL CONTROL VALVES AND DAMPERS SHALL CLOSE WHEN UNIT IS DEACTIVATED. UNIT ALSO OPERATE AT NORMAL CONDITIONS UNDER EMERGENCY GENERATOR OPERATIONS.

CONTROL UNIT SHALL HAVE A LOCAL DISPLAY AND CONTROL PANEL THAT WILL REPORT AS A MINIMUM THE FOLLOWING PARAMETERS:

- A. SUPPLY AIR TEMPERATURE
- B. EACH COIL ENTERING TEMPERATURE
- C. EACH COIL LEAVING TEMPERATURE
- D. FILTER DIRTY CONDITIONS
- E. UNIT STATUS
- F. SMOKE ALARM STATUS
- G. CHILLED WATER ENTERING AND LEAVING TEMPERATURE
- H. ROOM TEMPERATURE AND HUMIDITY

AHU CHW DOUBLE COIL FOR SURGICAL SUITE CONTROL DIAGRAM



CONTROL SYSTEM GENERAL
UNIT CONTROLS SHALL BE OPEN ARCHITECTURE DDC TYPE CAPABLE TO COMMUNICATE WITH EXISTING CONTROLS SYSTEM. THE BUILDING MANAGEMENT SYSTEM (BMS) SHALL BE CAPABLE TO PROVIDE WEB BASED OR INTRANET CONNECTION OF ALL SYSTEM.

BASE BID CONTROL SPECIFIED IS TRANE CONTROL SOLUTIONS. FOR ALTERNATE CONTROL SYSTEM REFER TO BID BASE CLAUSE IN GENERAL MECHANICAL NOTES. CONTRACTOR SHALL FURNISH ANY COMPONENTS MODULE OR ADDITIONAL PROGRAMMING REQUIRED TO CONNECT WITH EXISTING CONTROLS SYSTEM TO NEW BC.

DIAGRAM SHOWS THE GENERAL COMPONENTS OF THE CONTROL SYSTEM. UNITS REQUIRED TO BE IN CONTROL SYSTEM ARE INDICATED IN DRAWINGS AND SCHEDULE. CONTROL CONTRACTOR SHALL VERIFY QTY OF UNITS FOR FINAL CONTROL SUBMITTAL.

CONTROL SYSTEM SHALL HAVE A LOCAL PC STATION LATEST TECHNOLOGY AND 17" MONITOR AND WIFI/NETWORK OUTPUT AND SHALL CONNECT TO EXISTING BC SERVER SYSTEM.

HVAC CONTROL ARCHITECTURE DISTRIBUTION



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PROJECT OWNER

PROJECT NAME

HURRA
TEMPORARY
OPERATION ROOMS

FACILITY LOCATION

BAYAMON

LOCATION

BAYAMON, PR

DRAWING NAME

HVAC CONTROLS

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M-5

MECHANICAL GENERAL NOTES

REV: JAN / 24

1: DESIGN INTENTION

THESE MECHANICAL DRAWINGS SHOWS THE COMPLETE DESIGN CONCEPT, INTENT AND PIPING GENERAL ARRANGEMENT TO FULFILL THE CODE REQUIREMENTS, THEREFORE FOR "COMPLETE" MEANS THAT EQUIPMENT, COMPONENTS OR MATERIAL NOT SHOWN ON DRAWINGS BUT REQUIRED FOR INSTALLATION AND/OR OPERATION SHALL BE INCLUDED AS PART OF THESE BID QUOTE. FOR "INTENT" MEANS THAT AREAS THAT SHALL NEED TO BE AIR CONDITIONED SHALL HAVE DISTRIBUTION DUCTS AND AIR GRILLES QUOTED BID BASE WHENEVER IS NOT SHOWN ON DRAWINGS.

MECHANICAL NOTES SHOWN ARE FOR CHILLED WATER AND REFRIGERANT SYSTEMS. IF ANY OF SYSTEM IS NOT REQUIRED FOR INSTALLATION, SYSTEM NOTES THAT DOES NOT APPLIES IS FOR REFERENCE ONLY AND THE REMAINING NOTES CONTINUE AS INDICATED. GENERAL NOTES, EQUIPMENT, DEMOLITION AND AIR DISTRIBUTION APPLIES FOR BOTH SYSTEMS.

2: SCOPE OF WORK

DESIGN DOCUMENTS ARE INTENDED FOR CONTRACTOR TO PROVIDE ALL EQUIPMENT, LABOR, MATERIAL, & SERVICES FOR THE COMPLETE EXECUTION OF THE AIR CONDITIONING SYSTEM INSTALLATION & PERFORMANCE AS CALLED FOR ON PLANS AND/OR AS DESCRIBED HEREIN.

DRAWINGS WITH THE NOTE OF "ADVANCE OR PRELIMINARY DRAWING" ARE ONLY FOR OWNERS REVISION AND CANNOT BE USED FOR CONSTRUCTION. IF BID DRAWINGS SHOWS THE NOTE PROVIDE A REQUEST FOR INFORMATION (RFI) FOR CLARIFICATIONS.

3: CODE COMPLIANCE

THE PROPOSED MECHANICAL SYSTEM SHALL COMPLY WITH MOST RECENT STANDARD OR CODES HEREAFTER "THE CODES" WHICH APPLIES IN PUERTO RICO. THE CODES ARE BUT NOT LIMITED TO:

- INTERNATIONAL BUILDING CODE 2018 WITH THE CORRESPONDENT MECHANICAL, PLUMBING, FIRE, ENERGY SECTIONS;
- FGI GUIDELINES 2022 WITH ASHRAE 170
- ASHRAE 90.1, 62.1, 170-2017
- NFPA 101-2012 90A 90B,
- SMACNA SHEET METAL GUIDELINES AND SEISMIC RESTRAIN MANUAL
- ASCE 7 SEISMIC STANDARD
- ANSI 13.1
- NATIONAL ELECTRICAL CODE (NEC)
- ANY CODE FROM LOCAL AUTHORITY HAVING JURISDICTION OVER THE PROJECT.

4: INTERPRETATION

ANY DISCREPANCY DURING BID PROCESS BETWEEN INTENT, DRAWINGS, SPECIFICATIONS, SCHEDULES, DIMENSION, QUANTITY OF EQUIPMENT OR NOTES FROM ANY OTHER TRADE SHALL BE REFER TO A REQUEST FOR INFORMATION TO OWNER. AN ADDENDA WILL BE ISSUED AS NECESSARY FOR THESE DISCREPANCIES AND WILL BECOME PART OF THE CONTRACT DOCUMENTS. THOSE DISCREPANCIES NOT BROUGHT TO THE ATTENTION OF THE ENGINEER IT WILL BE ASSUMED THAT THE CONTRACTOR HAS BID THE MORE EXPENSIVE MATERIAL OR MORE STRICT METHOD OF CONSTRUCTION.

ANY DISCREPANCY DURING PROJECT CONSTRUCTION BETWEEN DRAWINGS, SPECIFICATIONS, SCHEDULES, DIMENSION, QUANTITY OF EQUIPMENT OR ANY OTHER TRADE SHALL BE NOTIFY IN A REQUEST FOR INFORMATION (RFI) LETTER OR EMAIL TO THE OWNERS REPRESENTATIVE FOR CLARIFICATION OF THE DRAWING INTENTION AND/OR ADDENDA ISSUED DURING THE BID PROCESS. A CLARIFICATION DRAWING OR DOCUMENT WILL BE ISSUED AS NECESSARY FOR THESE DISCREPANCIES AND WILL BECOME PART OF THE CONTRACT DOCUMENTS. CONTRACTOR SHALL NOT PROCEED TO PURCHASE OR INSTALL UNTIL CLARIFICATION IS SOLVED. THOSE DISCREPANCIES NOT BROUGHT TO THE ATTENTION OF THE ENGINEER IT WILL BE ASSUMED THAT THE CONTRACTOR WILL FURNISH AND INSTALL THE MORE EXPENSIVE MATERIAL UNDER THE MORE STRICT METHOD OF CONSTRUCTION.

DETAILS AND LARGE SCALE DRAWING ARE PRECEDENTS OVER SMALL SCALE DRAWINGS. ALL DETAILS SHOWN ARE APPROXIMATE, NOT TO SCALE AND PRESENTS THE MINIMUM COMPONENTS REQUIRED FOR PROPER FUNCTIONING AND OPERATION. REFER TO EQUIPMENT SUBMITTAL OR MANUFACTURER RECOMMENDATIONS GUIDE FOR ASSEMBLY, CLEARANCE SPACE AND INSTALLATION.

WHEN SIMILAR IS INDICATED IN NOTES AND/OR DETAILS IT REFER TO AN ALTERNATIVE EQUIPMENT MANUFACTURER OR COMPONENT MODEL WHICH PERFORMANCE, DIMENSIONS AND COMPLIANCE ARE EQUIVALENT TO THE ONES THAT IS SPECIFIED OR IN SCHEDULE.

5: PROJECT SITE VISIT

THE CONTRACTOR SHALL ARRANGE WITH PROJECT OWNER OR REPRESENTATIVE TO VISIT PROJECT LOCATION AND EXAMINE CAREFULLY THE WORK SITE CONDITIONS WHERE THE SYSTEM WILL TO BE INSTALLED, TO FAMILIARIZE HIM WITH THE SITUATION THAT WILL BE ENCOUNTERED WITH OTHER TRADES AND WITH THE SCOPE, CHARACTER, EXTENT, QUALITY AND QUANTITY OF WORK TO BE PERFORMED AND MATERIAL TO BE FURNISHED. DISCREPANCIES OF SITE SHALL BE PROCESS AS INDICATED IN INTERPRETATION CLAUSE. AFTER CONTRACT GETS AWARDED, DISCREPANCIES NOT BROUGHT TO CLARIFICATION ABOUT SITE WILL NOT BE CONSIDERED AND NO EXTRAS COST WILL BE ALLOWED FOR COORDINATION CAUSED BY PROJECT SITE CONDITIONS.

6: BASE BID EQUIPMENT

ALL EQUIPMENT, COMPONENTS AND DEVICES SPECIFIED AND ON SCHEDULE IN THESE DRAWINGS SHALL BE INCLUDED AS PART OF THE BASE BID WITH THE CORRESPONDENT LOCAL OR STATE TAX THAT APPLIES. IN CASE THAT TAX EXEMPTION APPLIES, A CREDIT TO THE OWNER SHALL BE SUBMITTED AFTER THE PROJECT IS AWARDED.

ALL EQUIPMENT SELECTED IS A BASE DESIGN THEREFORE DOES NOT MEANS THAT IS ENGINEER PREFERENCE, SO ANY EQUIPMENT WHICH IS DEFINE AS SIMILAR CAN BE SUBMITTED IN THE BID AS AN ALTERNATE ITEM ONLY IF IT RESULTS IN THE SAME COST OR IN COST SAVINGS TO THE OWNER. THE ALTERNATE SUBMITTAL SHALL HAVE COMPARATIVE TABLE BETWEEN SPECIFIED AND ALTERNATE EQUIPMENT SHOWING DIMENSIONS, PERFORMANCE AND THE PROPOSED SAVINGS FOR ENGINEER EVALUATION AND OWNERS ACCEPTANCE.

BID PRICE IS USING ONLY EQUIPMENT SPECIFIED ON SCHEDULES AND/OR ADDENDA PROVIDED. THE ALTERNATIVE SIMILAR ITEM SHALL BE SUBMITTED IN THE BID IN A SEPARATED ITEM FOR OWNERS EVALUATION.

7: SUBMITTAL

ALL EQUIPMENT AND ACCESSORIES SHOWN IN SCHEDULES AND DETAILS SHALL BE PROVIDED IN A SUBMITTAL FOR ENGINEER ENDORSEMENT. THE SUBMITTAL SHALL BE PER EQUIPMENT AND ITS COMPONENTS AND SHALL NOT CONSOLIDATED WITH OTHER EQUIPMENT. PRODUCT BROCHURE OR CATALOG WITH NO ITEM SELECTION WILL NOT BE EVALUATED.

ANY SUBMITTAL THAT WILL NOT BE EQUIPMENT SPECIFIED SHALL INCLUDE A REQUEST FOR SUBSTITUTION (RFS) WITH REASONS FOR THIS ACTION. THE SUBSTITUTE SUBMITTAL SHALL HAVE COMPARATIVE TABLE BETWEEN SPECIFIED AND ALTERNATE EQUIPMENT SHOWING DIMENSIONS, PERFORMANCE AND PROPOSED CREDIT TO OWNER.

THE SUBMITTAL REVIEW SHALL BE ONLY IN THE EQUIPMENT PERFORMANCE TO DESIGN INTENT. MECHANICAL CONTRACTOR SHALL VERIFY AND CONFIRM FINAL QUANTITY OF EQUIPMENT OR ANY COORDINATION WITH OTHER TRADES SUCH AS, BUT NOT LIMITED TO ELECTRICAL VOLTAGE OR PLUMBING CONNECTIONS. ANY DISCREPANCY ENCOUNTERED SHALL BE REFER TO INTERPRETATION CLAUSE ABOVE.

ALL SUBMITTAL WILL BE EVALUATED IN 15 WORKINGS DAYS AFTER RECEIVING AT ENGINEER OFFICE. THE ENGINEER CAN REQUEST TO OWNER A TIME EXTENSION FOR ADDITIONAL EVALUATION ON COMPLEX SUBMITTAL. ADDITIONAL COST TO OWNER DUE TO SUBMITTAL REJECTION, TIME EXTENSION OR DELAY WILL NOT BE ACCEPTED. THE ENGINEERS ENDORSEMENT OF SHOP DRAWINGS OR SAMPLES SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR ANY DEVIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS THE CONTRACTOR HAS INFORMED THE OWNER IN WRITING OF SUCH DEVIATION.

8: PROJECT TIME

ALL INSTALLATION WORK DURING CONSTRUCTION SHALL BE MADE TO MAINTAIN IN A

MECHANICAL GENERAL NOTES (CONT.)

REV: JAN / 24

9: SHOP DRAWING

MECHANICAL CONTRACTOR SHALL PROVIDE TO OWNER FOR APPROVAL A COMPLETE FABRICATION AND INSTALLATION DRAWINGS OF THE EQUIPMENT AND AIR/WATER DISTRIBUTION SHOWN IN THESE DRAWINGS. ANY EQUIPMENT OR MATERIAL INSTALLED WITHOUT A SUBMITTAL AND/OR SHOP DRAWING ENDORSEMENT CAN BE SUBJECT TO REMOVAL BY THE INSTALLER AT NO COST TO THE OWNER AS REQUESTED BY THE DESIGN ENGINEER. SHOP DRAWING SHALL INCLUDE AT LEAST THE FOLLOWING INFORMATION:

- SHOP DRAWING SCALE SHALL BE 1/4" – 1'-0" OR 1 SIZE SCALE BIGGER TO DESIGN DRAWING
- FINAL EQUIPMENT LOCATION, AIR DISTRIBUTION LAYOUT, DUCT DIMENSION HEIGHT FROM FINISH FLOOR, PIPING DIAMETER AND ROUTE, HANGER SPACING, SEISMIC BRAZING LOCATIONS, DETAILS.
- SHOP DRAWING SHALL BE A COORDINATION DRAWING THAT INCLUDES EXISTING AND NEW PLUMBING PIPING AND SPRINKLER LAYOUT AND ANY OTHER TRADES THAT CAUSE INTERFERENCE WITH EXISTING AND PROPOSED DUCTWORK AND PIPING.

CONTRACTOR SHALL COORDINATE ALL TRADES AS INDICATED ABOVE AND SHALL MAKE ALL NECESSARY ALTERATIONS TO AIR CONDITIONING SYSTEM LAYOUT DURING THE SHOP DRAWING PHASE. WHERE INTERFERENCE OR CEILING HEIGHT SITUATIONS OCCURS, CONTRACTOR SHALL RE-ROUTE DUCTWORK AND/OR PIPING AS REQUIRED TO AVOID CONFLICTS DURING CONSTRUCTION AND FACILITATE ACCESSIBILITY FOR MAINTENANCE.

SHOP DRAWINGS ALTERATIONS DUE TO COORDINATION SHALL BE CLEARLY CLOUDED AND LABELED WITH DATE FOR QUICK REFERENCE AND ARE SUBJECT FOR SUBMITTAL ENDORSEMENT FROM THE INSPECTION AND SUPERVISION. SHOP DRAWING SHOWING ONLY DUCTWORK OR PIPING WITH NO OTHER TRADES WILL BE ASSUMED THAT IS FULLY COORDINATED WITH NO INTERFERENCES. ADDITIONAL COST DUE TO LACK OF COORDINATION IN SHOP DRAWING IN NOT ACCEPTABLE.

A COPY OF ORIGINAL DESIGN DRAWING AT SAME OR BIGGER SCALE IS NOT ACCEPTABLE. A SHOP DRAWING AND WILL NOT BE EVALUATED. DESIGN ENGINEER HAS NO OBLIGATION TO PROVIDE CAD DRAWINGS FOR THE DEVELOPMENT OF SHOP/COORDINATION DRAWINGS, HOWEVER IF DRAWINGS ARE PROVIDED, THE DRAWINGS ARE FOR REFERENCE ONLY AND DOES NOT RELIEVE THE CONTRACTOR TO CONFIRM IN FIELD ALL TRADES MEASUREMENT, HEIGHT AND EQUIPMENT DIMENSIONS OF THE PROJECT. IN CASE OF DISCREPANCY FOLLOW THE INTERPRETATION CLAUSE.

10: PROJECT WARRANTY

THE CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK, EQUIPMENT AND COMPONENTS TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DAY OF ACCEPTANCE BY OWNER. THE CONTRACTOR ALSO SHALL REPLACE OR REPAIR TO THE SATISFACTION OF THE OWNER ALL DAMAGE DONE TO THE BUILDING OR ITS CONTENTS IN CONSEQUENCE OF THE WORK PERFORMED IN FULFILLING ANY WARRANT.

11: PROJECT CLOSING

THE CONTRACTOR SHALL PROVIDE WITHIN 60 DAYS AFTER SUBSTANTIAL COMPLETION THE RECORD "AS-BUILT" DRAWINGS WHICH INCLUDES ALL PROJECT CHANGES AND EQUIPMENT MANUAL WHICH INCLUDES SUBMITTAL, OPERATION MANUALS AND WARRANTS, CONTROLS WIRING AND SCHEMATIC DIAGRAM, SEQUENCE OF OPERATION, TAB REPORT AND CERTIFICATION FOR USE.

MECHANICAL DEMOLITION NOTES

REV: JAN / 24

1: GENERAL

CONTRACTOR SHALL REMOVE AND DISPOSE ALL EXISTING PIPING, DUCTWORK, AIR DISTRIBUTION, AIR HANDLING UNITS, FANS AND MECHANICAL EQUIPMENT PRESENTLY SERVING THE AREAS TO BE REMODELED AS INDICATED ON DEMOLITIONS DRAWINGS.

2: PERMITS AND ENDORSEMENT

CONTRACTOR SHALL ISSUE AS PART OF THE BID BASE THE NECESSARY DEMOLITION PERMIT, CEST AND/OR PUI PLAN OR AS LOCAL PERMIT AGENCY (OGPe). ANY ASBESTOS AND LEAD STUDIES AND TAXES OR FEES OR ENDORSEMENT REQUIRED BY THE AGENCY SHALL BE INCLUDED BY CONTRACTOR IN ORDER TO PERFORM THE WORKS INDICATED IN DRAWINGS.

3: DEMOLITION SUBMITTAL

CONTRACTOR SHALL SUBMIT PRIOR TO BID PROPOSAL, THE METHODOLOGY AND PROCEDURE TO THE DEMOLITION ACTIVITY. SUBMITTAL SHALL INCLUDE THE DAYS, HOURS, SAFETY MEASURE, AND COORDINATION WITH OWNER TO PROTECT THE AREAS NOT INCLUDED IN THE SCOPE OF THE PROJECT. ANY CAP OR VALVE REQUIRED FOR PROPER OPERATION OF EXISTING LINES SHALL BE INCLUDED IN SUBMITTAL.

4: ENVIRONMENTAL AWARENESS

THE CONTRACTOR SHALL INSPECT THE PROJECT AREA CONTINUOUSLY IN ORDER TO SEE IF ANY MATERIAL OR EQUIPMENT CAN BE CONSIDERED AS ENVIRONMENTAL OR AS A SAFETY HAZARD. IF FOUND CONTRACTOR SHALL STOP THE DEMOLITION AND REPORT IMMEDIATE TO THE OWNER REPRESENTATIVE TO RECEIVE INSTRUCTIONS.

5: COORDINATION

SPECIAL COORDINATION WITH THE OWNER OR ITS REPRESENTATIVE MUST BE TAKEN IN ORDER NOT TO DISRUPT THE OPERATION OF THE AREAS PRESENTLY USED. CONTRACTOR SHALL COORDINATE WITH OWNER FOR ELECTRICAL AND MECHANICAL SHUTDOWN AFTER OPERATION HOURS. CONTRACTOR SHALL CONSIDER ANY REQUIRED OVERTIME IN HIS BID TO ACCOMPLISH THE JOB. NO OTHER EXTENSION TIME OR OVERHEAD FEES IS CONSIDERED AFTER PROJECT START.

6: SITE PROTECTION

CONTRACTOR SHALL BUILT A BARRICADE PRIOR TO START DEMOLITION IN ORDER PROTECT AND AVOID INJURIES TO THE PEDESTRIAN AND PRIVATE PROPERTIES. THE BARRICADE MATERIAL AND LOCATION SHALL BE INDICATED IN THE SHOP DRAWINGS.

7: DISPOSITION

ANY EXISTING PIPES AND DUCTS TO BE REMOVED OR ABANDONED IN PLACES SHALL BE PROPERLY VALVED AND/OR CAPPED AT A POINT WHERE THEY WILL NOT DISTURB THE NEW CONSTRUCTION, THE FUTURE OPERATION OF THE AREAS OR AS REQUESTED BY OWNER. PIPES AND DUCT ABANDON IN PLACE SHALL BE LABEL "NOT IN USE". REFER TO LABEL SCHEDULE FOR INFO.

EQUIPMENT REMOVED SHALL BE DISPOSED OFF-SITE AT NO COST TO THE OWNER. THE CONTRACTOR SHALL PAY ANY FEE OR OBTAIN ANY PERMIT REQUIRED FOR DISPOSITION. EQUIPMENT TO BE SAVED AS REQUIRED BY OWNER MUST BE PROPERLY PROTECTED AND STORED ADEQUATELY IN THE SPACE DESIGNATED BY THE OWNER.

8: CLEANING

THE CONTRACTOR SHALL REMOVE HIS CONSTRUCTION DEBRIS FROM THE PROJECT SITE WEEKLY AND DISPOSE OF IT PROPERLY IN ORDER TO REDUCE FIRE HAZARDS OR STRUCTURAL LOADING TO A MINIMUM. DISPOSAL SHALL BE ACCORDING TO CODES AND RULES OF THE SOLID WASTE AUTHORITY. THE PUBLIC SERVICE COMMISSION, ENVIRONMENTAL QUALITY BOARD AND OTHER GOVERNMENT AGENCIES RELATED.

9: ENVIRONMENTAL PROTECTION

UNDER ANY CIRCUMSTANCES, THE CONTRACTOR, DURING THE CONSTRUCTION ACTIVITY, SHOULD NOT INCURRED IN ANY ENVIRONMENTAL VIOLATION. IF A SITUATION OCCURS, THE CONTRACTOR SHALL PAY AND RESTORE ANY DAMAGE AREAS. THE COST OF THIS CIRCUMSTANCES SHALL BE COVERED BY THE CONTRACTOR WITHOUT ANY CHANGE ORDER TO OWNER OR TIME EXTENSION TO CONTRACT FOR THIS PROJECT.

10: EQUIPMENT PROTECTION

THIS CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING EQUIPMENT, ROOFING SYSTEM AND WALLS IN THE AREAS WHERE THE DEMOLITION IS

AIR DISTRIBUTION NOTES

REV: JAN / 24

1: COMPLIANCE

ALL AIR CONDITIONING AND VENTILATION DUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE CODES.

2: AIR DISTRIBUTION LOCATION

THE DIMENSIONS ON THE DRAWINGS ARE REASONABLE AND ACCURATE FOR THE PURPOSE OF DESIGN INTENT AND SHOWS A DUCTWORK ROUTE FOR BID PURPOSE. THE FINAL LOCATION OF AIR DIFFUSERS SHALL BE AS INDICATED IN ARCHITECTURAL CEILING PLAN. CONTRACTOR SHALL ADJUST FLEXIBLE DUCT AND DUCTWORK FOR EXACT LOCATION OF AIR DIFFUSERS.

CONTRACTOR SHALL COORDINATE AIR DIFFUSER FINAL LOCATION THAT SHALL BE AT 3 FEET AWAY FROM ANY SMOKE DETECTOR. DUCTWORK ROUTE WITH FINAL AIR DIFFUSER LOCATION SHALL BE ILLUSTRATED IN THE SHOP DRAWINGS ON ARCHITECTURAL CEILING SUBMITTED FOR OWNERS APPROVAL.

3: DUCT MATERIAL

ALL DUCTWORK MATERIAL INSTALLATION SHALL BE FACTORY NEW GALVANIZED STEEL WITH PITTSBURGH LOCK IN LONGITUDINAL JOINT AND TDC WITH GASKET IN TRANSVERSE JOINT SUITABLE TO 2" WG WITH JOINT TIE ROD AFTER 48". REFER TO SCHEDULE FOR ADDITIONAL INFO.

DUCTWORK THAT ARE INTERIOR AND EXPOSED SHALL BE ROUND OR FLAT OVAL INSULATED DOUBLE WALL UNLESS NOTES OTHERWISE. INSULATION SHALL AS INDICATING IN SCHEDULE.

FLEXIBLE DUCT IS NOT ACCEPTABLE FOR RETURN OR EXHAUST DUCT CONNECTION UNLESS IS APPROVED BY HVAC DESIGN ENGINEER.

4: DIMENSIONS

ALL DUCT DIMENSION SHOWN ON DRAWINGS ARE INSIDE CLEAR DUCT DIMENSIONS AND GOES OVER SCALE DRAWINGS. DUCT INSULATION IS NOT INCLUDED IN THE DUCT DIMENSION AND SHALL BE CONSIDERED IN THE SHOP DRAWINGS TO AVOID INTERFERENCE WITH OTHER TRADES. ANY DISCREPANCY SHALL PROCEED AS INDICATED IN INTERPRETATION CLAUSE NOTES.

NO EXTRA CHARGE OR COMPENSATION WILL BE ALLOWED ON ACCOUNT OF MINOR DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND THE MEASUREMENTS INDICATED ON THE DRAWINGS. ANY DIFFERENCES WHICH MAY BE FOUND SHALL BE SUBMITTED IN THE SHOP DRAWING. REFER TO SHOP DRAWING CLAUSE FOR SPECS.

WHEN TYPICAL (TYP.) IS INDICATED IN DRAWINGS, NOTES AND/OR DETAILS IT REFER THAT INFORMATION, DIMENSIONS, DIRECTION OF EQUIPMENT, PIPING OR DUCTS APPLIES TO ALL SIMILAR CONDITIONS IN DRAWINGS.

5: DUCT INSULATIONS

ALL SUPPLY, RETURN AND EXHAUST DUCTS SHALL BE INSULATED ACCORDING TO INSULATION SCHEDULE.

6: NOISE AND VIBRATION

THE CONTRACTOR SHALL INSTALL DUCTWORK FREE FROM OBJECTIONABLE NOISE AND VIBRATION. ANY ABNORMAL CONDITION A SHALL BE ATTENUATED AS PER THE CODES.

7: DUCTWORK CONNECTIONS

ALL DUCT CONNECTIONS SUCH AS ELBOWS, SPLITTER AND/OR DAMPERS SHALL BE AS INDICATED ON HVAC DETAILS AND THE CODES. DUCTWORK THAT DOES NOT COMPLIES WITH THE DETAIL CAN BE SUBJECT TO REMOVAL AND REPLACE AT NO COST TO OWNER. CONTRACTOR SHALL COORDINATE DUCTWORK TO AVOID FLEXIBLE DUCT LONGER THAN 6 FEET. REFER TO DETAIL FOR CONNECTION AND UNIT TO DUCT CONNECTION NOTES FOR DUCTWORK CONNECTED TO EQUIPMENT.

8: DUCT HANGER

REFER TO DETAIL AND SCHEDULE AND SMACNA TABLES FOR DUCT HANGER. DUCT HANGER ROD OR METAL STRAP CONNECTED TO OTHER HANGER OR EQUIPMENT IS NOT ACCEPTABLE AND ENGINEER OR INSPECTION CAN ORDER TO BE REMOVED AND REINSTALLED CORRECTLY AT NO COST TO THE OWNER.

9: DUCT FINISH

EXPOSED DUCTWORK SHALL BE PAINTED WITH TWO COATS OF WHITE EPOXY PAINT OR AS PER ARCHITECTURAL PAINT SCHEDULE.

10: AIR DIFFUSER

REFER TO SCHEDULE FOR AIR DIFFUSERS SPECS. CONTRACTOR SHALL COORDINATE AIR DIFFUSERS LOCATION WITH FIRE SPRINKLER, LIGHT FIXTURE AND OTHER TRADES IN REFLECTED CEILING. ALL SUPPLY DIFFUSERS LOCATED IN A HALLWAY SHALL BE TWO WAY DISTRIBUTION. ALL DIFFUSERS LOCATED IN A DESIGNATED SECLUSION ROOM SHALL BE TAMPER RESISTANT.

11: DOOR GRILLES

THE DUCTWORK CONTRACTOR MUST FURNISH ALL DOOR GRILLES SHOWN ON ARCHITECTURAL DRAWINGS. THE GENERAL CONTRACTOR WILL INSTALL THEM IN THE RESPECTIVE DOORS.

ALL DOOR IN NEGATIVE PRESSURE AND NOT TO EXCEEDED 150 CFM REQUIRES A 3/4" UNDERCUT IN DOOR.

12: LOUVERS

THE GENERAL CONTRACTOR MUST FURNISH AND INSTALL ALL EXTERIOR INTAKE LOUVER WITH INSECT SCREEN AND EXHAUST WEATHER PROOF LOUVERS WITH BIRD SCREEN. REFER TO AIR DISTRIBUTION SCHEDULE FOR SPECS.

13: SEISMIC PROTECTION

ANY DUCTWORK THAT IS SEPARATED FROM ROOF AT LEAST 12 INCHES OR HAVE MORE THAN 6 SOFT OF GROSS AREA REQUIRES SEISMIC BRAZING ACCORDING TO THE CODES. SEISMIC BRACES LOCATION SHALL BE INDICATED IN A DUCT SHOP DRAWING. SUBMITTAL WITH SEISMIC SPECS AND CALCULATIONS WILL BE STAMP AND SEALED BY LICENSE ENGINEER IN PUERTO RICO.

14: CHASES

THE CONTRACTOR SHALL FIELD VERIFY THE CHASES DIMENSION PRIOR TO FURNISH AND INSTALL THE DUCTWORK. ANY MINOR ADJUSTMENT OF CHASE OR DUCT SHALL BE PART OF THE INSTALLATION BID BASE.

15: ROOF OPENING

THE CONTRACTOR SHALL COORDINATE WITH OWNER AND/OR STRUCTURAL ENGINEER THAT THE PROPOSED ROOF PENETRATION SLAB IS FREE FROM ANY OBSTRUCTION PRIOR TO FURNISH AND INSTALL THE DUCT WORKS. SLAB OPENING MUST BE PRECEDED BY A GPR SCAN OF THE SLAB TO PREVENT DAMAGE TO ANY ELECTRICAL, FIRE ALARM, REINFORCEMENT MEMBERS, ETC.

CONTRACTOR SHALL COORDINATE WITH OWNER'S ROOF INSULATION CONTRACTOR TO INSTALL OR REPAIR INSULATION IN ORDER TO MAINTAIN ROOF INSULATION WARRANTY AFTER ROOF OPENING OR EQUIPMENT AND/OR SUPPORT INSTALLATION. COST OF INSULATION REPAIR SHALL BE PART OF THE MECHANICAL CONTRACTOR COST.

16: FIRE RATED WALL OR ROOF OPENINGS

THE CONTRACTOR SHALL INSTALL A FIRE DAMPER IN ANY DUCT THAT PASS A DESIGNATED FIRE RATED WALL, CHASE OR FLOOR. REFER TO DETAIL AND SCHEDULE FOR FIRE DAMPER SPECS.

17: AIR DISTRIBUTION TESTING AND BALANCE

THE CONTRACTOR MUST ENGAGE THE THIRD PARTY SERVICES OF A CERTIFIED NEBB INDEPENDENT BALANCING CONTRACTOR (TAB) TO PERFORM WATER AND AIR ADJUSTING AND BALANCING OF ALL SYSTEMS. ALL SYSTEMS SHALL BE INSTALLED AND TESTED PRIOR TO PERFORM THE AIR BALANCING. ALL AIR FLOW QUANTITIES SHALL BE SET WITH A ±10% FROM DESIGN SCHEDULE UNLESS INDICATED BY ENGINEER. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL ANY AIR DAMPER AND/OR PULLEY REQUIRED BY TAB CONTRACTOR FOR ADJUSTING AIR PERFORMANCE. NO ADDITIONAL COST IS ALLOW FOR TAB ADJUSTING COMPONENTS.

18: AIR DUCT LEAK TEST

ANY A/C SYSTEM WHICH TOTAL STATIC PRESSURE EXCEED 4 INCHES AND 4000 CFM SHALL PERFORM A DUCT LEAK TEST ACCORDING TO SMACNA GUIDELINES. TEST SHALL BE PERFORM BY A TAB CONTRACTOR. ANY DUCTWORK LEAK FOUNDED IN TEST SHALL

MECHANICAL EQUIPMENT NOTES

REV: JAN / 24

1: EQUIPMENT LOCATION

ALL EQUIPMENT SHALL BE INSTALLED IN THE LOCATION APPROVED IN THE SHOP DRAWING AND INSTALLER SHALL MAINTAIN UNIT SPACE CLEARANCE RECOMMENDED BY MANUFACTURER.

2: EQUIPMENT COMPLIANCE

ALL HVAC EQUIPMENT SHALL BE FACTORY NEW, UL LISTED AND AND ALL COMPONENTS SHALL BE AHRI CERTIFIED. HVAC EQUIPMENT ENERGY EFFICIENCY SHALL COMPLIES WITH TABLES INDICATED IN IECC CODE CHAPTER 4.

3: OUTDOOR EQUIPMENT REQUIREMENT

ALL HVAC EQUIPMENT IN SCHEDULE THAT WILL BE LOCATED OUTDOOR SHALL COMPLIES WITH SEISMIC ZONE 3 AND SHALL SUSTAIN 145 MPH HURRICANES WINDS AS INDICATED IN PUERTO RICO BUILDING CODES. THIS COMPLIANCE CERTIFICATION SHALL BE INCLUDED IN THE EQUIPMENT SUBMITTAL. REFER TO DETAILS FOR ANCHORING HVAC UNITS AND COMPONENTS.

4: EQUIPMENT CONCRETE PADS

ALL EQUIPMENT UNDER THIS PROJECT INSTALLED IN DIRECT CONTACT TO FINISH FLOOR IS NOT ACCEPTABLE. THE CONCRETE PAD DIMENSIONS ON DRAWINGS ARE APPROXIMATE AND IS FOR BID PURPOSE. CONTRACTOR SHALL PREPARE A SHOP DRAWING TO SHOW THE PAD FINAL DIMENSIONS WITH THE APPROVED EQUIPMENT SUBMITTAL DIMENSION AND CLEARANCE. THE PROPOSED EQUIPMENT IN SCHEDULE SHALL BE INSTALLED OVER FINISH FLOOR AS FOLLOW:

A. FOR INTERIOR EQUIPMENT – 4" CONCRETE PAD. REFER TO DETAIL FOR SPECS.

B. FOR EXTERIOR EQUIPMENT – 6" CONCRETE PAD OR A PREFABRICATED ROOF CURB. REFER TO DETAIL FOR SPECS.

C. ALL EXPOSED OR OUTDOOR UNITS OR COMPONENTS SHALL BE ANCHORED TO CONCRETE PAD WITH EXPANSION BOLTS FOLLOWING UNIT FACTORY RECOMMENDATIONS. REFER TO DETAILS FOR ANCHOR SELECTION.

D. OUTDOOR UNITS SHALL BE ANCHORED WITH 1/4" STEEL CABLE TO PREVENT OVERTURNING BY WIND.

CONTRACTOR SHALL EVALUATE BY AN STRUCTURAL ENGINEER LICENSED IN PUERTO RICO THE CONDITIONS OF THE EXISTING ROOF SLAB PREVIOUS TO ANCHORING AND REPORT TO OWNER FOR ANY ACTION REQUIRED.

5: SEISMIC BRAZING

ALL HVAC EQUIPMENT LOCATED IN SUSPENDED CEILING IN THE PROJECT LIMIT SHALL BE SEISMIC BRAZED ACCORDING TO THE CODES. EQUIPMENT LOCATED IN FLOOR LEVEL REQUIRES VIBRATION ISOLATION PADS OR RUBBER STANDS.

6: UNIT DRAIN PAN AND PIPE.

AIR COIL DRAIN PAN FOR NEW AHU AND FC IN SCHEDULE SHALL BE IN STAINLESS STEEL. CONTRACTOR SHALL PROVIDE TO EACH AHU OR FC AN INDEPENDENT INSULATED DRAIN PIPE. SEE DRAIN DETAIL FOR SPECIFICATIONS.

7: UNIT FILTERS

CONTRACTOR SHALL PROVIDE A TEMPORARY MERV 8 DUST FILTER TO ALL EQUIPMENT AND SUPPLY AND RETURN AIR GRILLE DURING HVAC SYSTEM INSTALLATION. WHEN WORK IS IN SUBSTANTIAL COMPLETION PHASE CONTRACTOR SHALL REMOVE ALL TEMPORARY FILTERS AND REPLACE FOR NEW ONES AS INDICATED IN AHU SCHEDULES. CONTRACTOR SHALL PROPERLY DISPOSE THE CONSTRUCTION AIR FILTERS.

8: UNIT SMOKE DETECTOR

AHU SMOKE DETECTOR SHALL BE FURNISH AND INSTALLED BY MECHANICAL CONTRACTOR. ALL SMOKE DETECTOR SHALL BE WIRED TO FIRE ALARM SYSTEM BY ELECTRICAL CONTRACTOR. ALL AHU INDICATED IN SCHEDULE AND THOSE SHOWN ON DRAWINGS THAT ARE OVER 2000 CFM SHALL HAVE ONE SMOKE DETECTOR INSTALLED IN SUPPLY DUCT. AHU UNITS OVER 15,000 CFM SHALL HAVE ADDITIONAL DETECTOR AT RETURN DUCT. REFER TO CONTROL DRAWINGS FOR SMOKE DETECTOR SPECS.

9: UNIT TO DUCT CONNECTION

ALL AHU AND FC SHALL HAVE A PREFABRICATED METAL TO FABRIC CONNECTION "CANVAS" INSERTED BETWEEN THE EQUIPMENT AND THE DUCTWORK. THE AIR – TIGHT FLEXIBLE JOINT SHALL BE MODEL EXCELEON FROM DURODYNE OR SIMILAR,

10: NOISE AND VIBRATION

CONTRACTOR SHALL PROVIDE ATTENUATION DEVICE OR CONTROL TO ANY UNACCEPTABLE NOISE (> 85db) OR VIBRATION CAUSED IN THE EQUIPMENT, PIPING OR DUCTS.

11: ACCESS DOOR

PROVIDE AN ACCESS DOOR IN GYPSUM BOARD CEILING IN ANY DUCTWORK COMPONENT THAT REQUIRE SERVICE OR MAINTENANCE. REFER TO SCHEDULE FOR ACCESS DOOR MODEL. ACCESS DOOR LOCATION SHALL BE SHOWN IN DUCTWORK SHOP DRAWING.

12: EQUIPMENT INSTALLATION

CONTRACTOR SHALL PICK-UP, DELIVERY AND/OR UNLOAD AT SITE ALL EQUIPMENT AND COMPONENTS UNDER THIS SCOPE OF WORK. CONTRACTOR SHALL ASSEMBLY IN SITE ANY EQUIPMENT THAT ARRIVES SECTIONALIZED FROM MANUFACTURER AND SHALL PROVIDE THE NECESSARY EQUIPMENT OR SERVICE TO LOCATE EQUIPMENT IN THE FINAL APPROVED POSITION.

13: EQUIPMENT EXHAUST

ALL BATHROOM, CLOSET AND JANITOR ROOM REQUIRE AN EXHAUST VENTILATION AS PART OF BASE BID WHENEVER IS SHOWN ON DRAWINGS OR NOT. CONTRACTOR SHALL INCLUDE ANY EQUIPMENT OR DUCT REQUIRES TO COMPLY FOR A DEDICATED EXHAUST TO EACH ROOM. IN CASE OF DISCREPANCY REFER TO INTERPRETATION CLAUSE.

14: ELECTRICAL INSTALLATION

ALL HVAC EQUIPMENT INDICATED IN SCHEDULE SHALL HAVE A DISCONNECT SWITCH AND/OR COMBINATION STARTER PLUS WIRING AND CONDUIT AS PART OF BID BASE WHENEVER IS SHOWN ON DRAWINGS OR NOT. ALL SWITCH OR STARTER LOCATED OUTDOOR SHALL BE NEMA 3R.

THE ELECTRICAL INSTALLATION SHALL BE COORDINATE WITH ELECTRICAL DRAWINGS FOR THE EXACT VOLTAGE, BREAKER, FUSE AND WIRING REQUIRED FOR THE PROPOSED EQUIPMENT.

MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL WIRING AND ELECTRICAL CONDUIT TO PROPOSED HVAC EQUIPMENT FROM DISCONNECT SWITCH INSTALLED BY ELECTRICAL CONTRACTOR.

ANY DISCREPANCY BETWEEN ELECTRICAL AND MECHANICAL DRAWINGS SHALL FOLLOW INTERPRETATION CLAUSE.

15: EQUIPMENT CONTROLS

ALL HVAC UNITS INDICATED IN SCHEDULE SHALL HAVE A TEMPERATURE CONTROL MODULE AND/OR THERMOSTAT AS PART OF BID BASE WHENEVER IS SHOWN ON DRAWINGS OR NOT. IN CASE OF DISCREPANCY REFER TO INTERPRETATION CLAUSE. REFER TO CONTROL DRAWING AND NOTES FOR SPECIFICATIONS.

16: EQUIPMENT START-UP

THE CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SUPPLIER THE REQUIRED START-UP SERVICE. ANY SUPPLIER FEE REQUIRED FOR EQUIPMENT START-UP SHALL BE INCLUDED BY CONTRACTOR IN THE BID.

17: EQUIPMENT IDENTIFICATION

ALL EQUIPMENT AND COMPONENTS SHALL BE IDENTIFIED BY A UNIT TAG AS PER SCHEDULE



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Performance Climate Changer Schedule Report																																								
Manufacturer	Unit Tags	Quantity	Model Number	Unit level options							Fan section										Coil section							Coil section							Filter section					
				Product group	Actual airflow	Unit size	Length	Width	Height	Installed weight	Fan application	Fan type	Fan size and type	Fan quantity	Total brake horsepower	Motor horsepower per fan	Overall ESP	Motor voltage	Motor interface options	Total static pressure	Fan quantity	Unit entering ESP	Entering dry bulb	Entering wet bulb	Leaving dry bulb	Leaving wet bulb	Total capacity	Rows	Air pressure drop	Entering dry bulb	Entering wet bulb	Leaving dry bulb	Leaving wet bulb	Total capacity	Rows	Air pressure drop	Filter type	Filter frame	Prefilter filter type	Primary filter type 1
				cfm	in	in	in	lb					hp		in H2O		in H2O	Each	in H2O	F	F	F	F	MBh		in H2O	F	F	F	F	MBh		in H2O							
Trane	AHU-1	1	CSAA017UA	OUTDOOR UNIT	8125 SA/100%OAI	17	156.829	72	49	2271.5	Supply fan	Plenum	22.25in. d plenum, 80% width, H press	1	11.055	15 hp	2.5	460/3	Field provided VFD	5.482	1	1.25	90	80	67.44	65.52	475	4	0.401	67.44	65.52	52	51.9	328	8	1.031	Flat filter	2in./4in. combo w/ space for dual sensor	2" Pleated media - MERV 8	4in. cartridge MERV 13 - standard

Performance Climate Changer Schedule Report																															
Unit Tags	Quantity	Model Number	Unit level options							Fan section							Coil section										Air mixing section				
			Product group	Actual airflow cfm	Unit size	Length in	Width in	Height in	Installed weight lb	Fan application	Fan type	Fan size and type	Fan quantity	Motor horsepower per fan	Overall ESP in H2O	Motor voltage	Motor interface options	Entering dry bulb F	Entering wet bulb F	Leaving dry bulb F	Leaving wet bulb F	Total capacity MBh	Standard fluid flow rate gpm	Rows	Entering fluid temperature F	Leaving fluid temperature F	Fluid pressure drop ft fluid	Coil section pressure drop in H2O	Filter frame	Filter type 1	Filter face velocity ft/min
AHU-2	1	CSAA010UA	Indoor unit	4150	10	75.563	61.5	75.5	1221.9	Supply fan	Motorized impeller fan	17.7 impeller fan full width	1	7.5	1	460/3	External junction box	73.7	62.2	51	50.83	133.37	17.72	6	42	57	6.77	0.541	2"	Pleated media - MERV 8	299
AHU-3	1	CSAA006UA	Indoor unit	2750	6	72.596	44	70.5	949.2	Supply fan	Motorized impeller fan	15.7 impeller fan redu width	1	3	1	460/3	External junction box	79.5	67	55	54.61	105.53	14.02	6	42	57	3.98	0.579	2"	Pleated media - MERV 8	309

SURGICAL AIR DIFFUSER AND GRILLE SCHEDULE

TAG	ROOM SERVED	MANUFACTURER	MODEL	SIZE	AIR VOLUME IN CFM			PERIMETER GRILLE				CENTER GRILLE				NOISE CRITERIA	NOTES
					TOTAL	PERIMETER	CENTER	QTY	SIZE	CFM EA	TYPE	QTY	SIZE	CFM EA	TYPE		
S1	OP. ROOM	NAILOR	92STSYS	8X8	1675	1300	375	4	12X5	175	LINEAR	3	36x24	125	HEPA	25	PROVIDE VOLUME DAMPER AT ENTRANCE OF AIR GRILLE. ALUMINUM CONSTRUCTION WITH DAMPER
S2	OP. ROOM	SEIHO	PK	8	200			-	-	-	-	1	8 DIAM	200	NOZZLE	29	

EXHAUST FAN SCHEDULE

UNIT TAG	AREA SERVED	UNIT SELECTION		UNIT CAPACITY		UNIT DIMENSIONS						FAN SECTION						OPTIONS		
		MANUFACTURER	MODEL	UNIT SIZE	AIRFLOW	TOTAL STATIC	UNIT TYPE	UNIT FLOW DIRECTION	LENGTH	WIDTH	HEIGHT	WEIGHT	DRIVE	RPM	BHP	MOTOR HP	MOTOR TYPE		VOLTAGE	dBa
EF-1	OP ROOMS	COOK	SWSI	225CA	6100	2.5	EXHAUST	TOP ANGULAR UP	42	24	55	687	BELT	1725	5.3	7.5	EC MOTOR	480/3	86	VFD
EF-2	RECOVERY	COOK	ACED	135	1,100	0.75	EXHAUST	DOWNBLAST		28 DIA.			DIRECT	1725	4.2	0.5	EC MOTOR	115/1	28	

ELECTRICAL REHEAT COIL SCHEDULE

TAG	AREA SERVED	CFM	COIL CAPACITY	AIR TEMP. IN/OUT	ELECTRIC COIL			COIL SIZE				DUCT SIZE		COIL FACE AREA	REHEAT COIL MODEL	INTERLOCK TO
					KW	VOLTAGE	AMPS	WIDTH	LENGTH	WIDTH	LENGTH	WIDTH	LENGTH			
RHC-1	OPERATION ROOM	1875	20419	10	5.9	480	7.15	24	12	24	14			938	WARREN	AHU-1
RHC-2	OPERATION ROOM	1875	20419	10	5.9	480	7.15	24	12	24	14			938	WARREN	AHU-1
RHC-3	OPERATION ROOM	1875	20419	10	5.9	480	7.15	24	12	24	14			938	WARREN	AHU-1
RHC-4	CORRIDOR RESTRICTED	2500	27225	10	7.9	480	9.53	24	14	24	14			1071	WARREN	AHU-1
RHC-5	RECOVERY	3000	32670	10	9.5	480	11.44	32	14	30	14			964	WARREN	AHU-2
RHC-6	GOWNING	2750	29945	10	8.7	480	10.49	32	12	30	14			1031	WARREN	AHU-2
RHC-7	CORR SEMI RESTRICTED	1150	12524	10	3.6	480	4.39	18	10	16	12			920	WARREN	AHU-2

3

2

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PROJECT OWNER

PROJECT NAME
HURRA
TEMPORARY
OPERATION ROOMS

FACILITY LOCATION
BAYAMON

LOCATION
BAYAMON, PR

DRAWING NAME
HVAC SCHEDULES

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PROJECT OWNER

CONSULTANT

PROJECT NAME
HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION
BAYAMON, PUERTO RICO

DRAWING NAME
MEDICAL GASES
LAYOUT PLAN

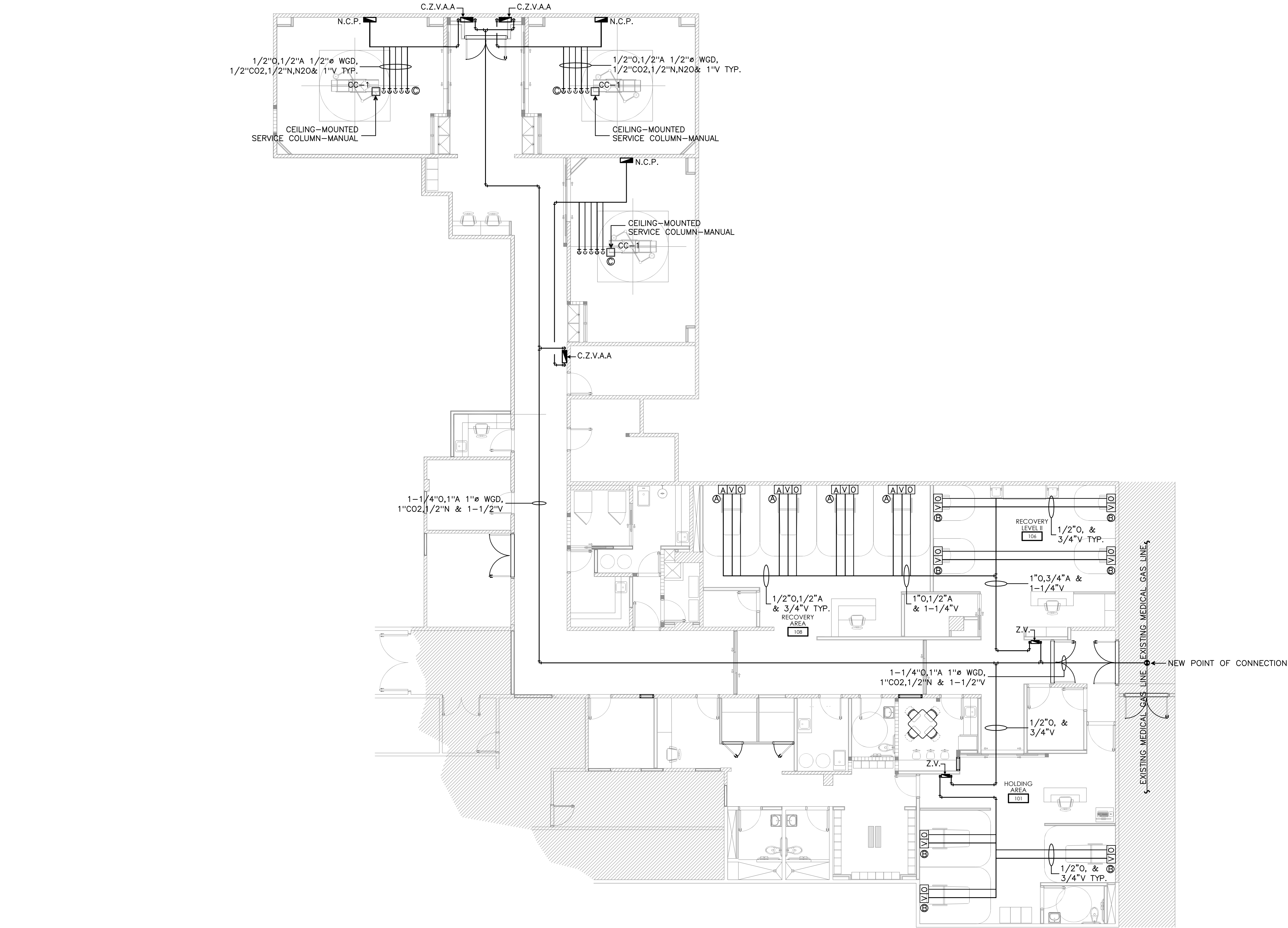
ISSUE FOR:
PRELIMINARY DRAWINGS

TAG	REVISION NAME	DATE
△	REVISION	MM/DD/YY

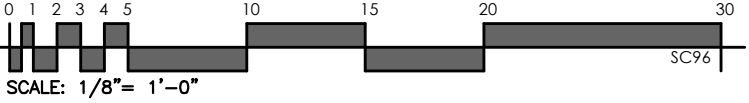
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MEDICAL GASES LAYOUT PLAN



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MEDICAL GAS MANIFOLD SCHEDULE

STATION TAG	QUANTITY OF CYLINDER PER HEADER						MANUFACTURER	MODEL
	OXY	MA	CO2	N2O	N	OTHER		
MGM	---	---	2	4	2	---	OHIO MEDICAL	2634 SERIES
MEDICAL GAS MANIFOLD SHALL UL LISTED, NFPA 99 COMPLIANCE AND HAVE AUTOMATIC CHANGEOVER WITH ALARM CONNECTED TO MASTER ALARM. MANIFOLD SHALL BE INSTALLED TO WALL AND PROVIDE 120 V ELECTRICAL FROM CRITICAL BRANCH. DELIVERY PRESSURE AS PER MEDICAL GAS DESIGN SCHEDULE. CABINET LOCATED OUTDOOR SHALL BE WEATHERPROOF								

MEDICAL VACUUM PUMP SCHEDULE

STATION TAG	SUPPLIER	TYPE	ELECTRICAL		TANK VOLUME GAL.	NOTES
			HP (QTY)	VOLT/PH		
VP-1	OHIO MEDICAL C1500-ST3	OIL-LESS ROTARY CLAW	15 (3)	208/3	240	UNIT SHALL COMPLY WITH NFPA 99. PROVIDE MEDVAC PRE FILTER AND BAGNET MODULE

MEDICAL AIR COMPRESSOR SCHEDULE

STATION TAG	SUPPLIER	TYPE	ELECTRICAL		TANK VOLUME GAL.	NOTES
			HP (QTY)	VOLT/PH		
VP-1	OHIO MEDICAL AS750B-12	OIL-LESS ROTARY SCROLL	15 (3)	208/3	240	UNIT SHALL COMPLY WITH NFPA 99 PROVIDE AIR DESICCANT UNIT WITH FILTER AND BAGNET MODULE

MEDICAL GAS CEILING COLUMN SCHEDULE

STATION TAG	QUANTITY OF OUTLET							MODEL AND NOTES
	OXY	VAC	MA	CO2	N2O	N	WAGD	
CC-1	2	5	1	1	1	1	1	OHIO MEDICAL COLUMN
	REFER TO SCHEDULE FOR GAS OUTLET MODEL SPECS AND TYPE							CC-1 SHALL BE NFPA 99 COMPLIANCE, UL LISTED, STAINLESS STEEL 304 PANEL.
	QUANTITY OF ELECTRICAL OUTLET							
	FROM NORMAL BRANCH			6 DUPLEX				FINAL LENGTH OF COLUMNS SHALL COORDINATED WITH FINAL CEILING HEIGHT AND MOUNTING HEIGHT SCHEDULE.
	FROM CRITICAL BRANCH			6 DUPLEX				PROVIDE NITROGEN OUTLET WITH REGULATOR PANEL IN ONE SIDE
CRITICAL ELEC. OUTLET SHALL BE RED								

MEDICAL GAS PATIENT HEADWALL SCHEDULE

STATION TAG	OUTLET QTY.			ELEC. RECEP. QTY		MODEL AND NOTES
	OXY	VC	MA	NORMAL	EMERG.	
(A)	2	3	1			HEADWALL SHALL BE NFPA 99 COMPLIANCE, UL LISTED, ALUMINUM CONSTRUCTION BOX AND PANEL. REFER TO GAS OUTLET SCHEDULE FOR MODEL AND TYPE OF OUTLET. MINIMUM QUANTITY OF MEDICAL GAS OUTLET AS PER FGI TABLE 2.1-3
(B)	0	3	3			
						FOR DATA AND NURSE CALL PROVIDE EMPTY GANG BOX. ALL HEADWALL ELECTRICAL RECEPTACLE SHALL BE DUPLEX.
						HEADWALL MODEL BY OHIO MEDICAL OR SIMILAR.

NITROGEN CONTROL PANEL

TAG	EQUIPMENT	CHARACTERISTICS	MODEL
NC	NITROGEN CONTROL PANEL	SHALL HAVE 0-300 PSI PUSH-PULL LOCK REGULATOR VALVE WITH ONE DISS OUTLET. COMPONENTS SHALL INCLUDE A SELF RELIEF 0-300 PSI HIGH FLOW CAPACITY AND EASY TO READ 0-300 PSI 2" DIAM. GAGES	OHIO MEDICAL 261760

MEDICAL GAS OUTLET/INLET SCHEDULE

TYPE OF CONNECTION	MODEL SELECTION	OUTLET CHARACTERISTICS
DISS	OHIO MEDICAL 261000	GAS INLET/OUTLET SHALL BE UL LISTED AND NFPA 99 COMPLIANCE FACE PLATE SHALL BE ANTI-SCRATCH PLASTIC FINISH PLATE WITH PERMANENT GAS NAME. MEDICAL GAS PIPING DROP TO OUTLET SHALL RUN INSIDE THE WALL. OUTLET SHALL HAVE REMOVABLE FRONT ASSEMBLY, DOUBLE O RING AND METAL BACK AND NAMEPLATE REFER TO MEDICAL HEADWALL SCHEDULES AND NOTES FOR GAS CONNECTOR QUANTITY PER STATION.

MEDICAL GAS PIPING SCHEDULE

TAG	PIPING MATERIAL	PIPING FITTING
PRESSURE MED GAS PIPING	HARD DRAWN SEAMLESS COPPER TYPE L ASTM B819 FACTORY CLEANED DELIVERED PLUG OR CAPPED WITH FACTORY MARKING "OXY / MED"	WROUGHT COPPER ASME 16.22 NO CAST COPPER ALLOW
NITROGEN PIPING	HARD DRAWN SEAMLESS COPPER TYPE K ASTM B819 FACTORY CLEANED DELIVERED PLUG OR CAPPED WITH FACTORY MARKING "OXY / MED"	FLEXIBLE COPPER PIPING IS NOT ACCEPTABLE. BENDING COPPER IS NOT ALLOW FOR ELBOW SUBSTITUTION
VACUUM PIPING	HARD DRAWN SEAMLESS COPPER TYPE K ASTM B88 OR B819 TYPE K. NO MARK REQUIRED	THE USE OF FLUX FOR PIPING JOINT IS NOT ACCEPTABLE
BRAZING	BRAZING SHALL COPPER-PHOSPHORUS-SILVER FILLER (BCUP SERIES)	

MEDICAL GAS PIPING IDENTIFICATION SCHEDULE

PIPE DIAMETER FROM	UP TO	LABEL		LABEL PLACEMENT	NOTES
		MARKER LENGTH	LEGEND HEIGHT		
1/2"	1-1/4"	8"	1/2"	LOCATE PIPE MARKERS AND COLORS BANDS WHEREVER PIPING IS EXPOSED TO VIEW IN OCCUPIED SPACES. MACHINE ROOMS, ACCESSIBLE MAINTENANCE SPACES (SHAFTS, TUNNELS, PLENUMS), REFER TO DETAIL FOR LABEL LOCATIONS.	STANDARD PERMANENT, BRIGHT COLORED CONTINUOUS-PRINTED POLYESTER 4 MILS PLASTIC TAPE THAT INDICATE THE TYPE OF GAS AND DIRECTION OF FLOW. LABEL MODEL SHALL BE SETON OPTI-CODE MARKER OR SIMILAR.
1-1/2"	2"	8"	3/4"		
2-1/2"	4"	12"	1-1/2"		
6"	8"	24"	2-1/2"		
10"	12"	32"	3-1/2"		
14"	18"	32"	3-1/2"		

MEDICAL GAS PIPING HANGER SCHEDULE

PIPE DIMENSION FROM	UP TO	ROD DIAM.	HANGER SPACING	ANGLE SUPPORT	MATERIAL
1/2"	3/4"	3/8	6 FT	1-1/2" x 1-1/2" x 1/8"	ROD TO BE GALVANIZED STEEL
	1"	5/8	8 FT	2" x 2" x 1/4"	
1-1/4"	1-1/2"	1/2	10 FT	2" x 2" x 1/4"	ANGLE IN BLACK STEEL WITH ONE COAT RUST ENAMEL PAINTING
2"	4"/RISER	3/4	15 FT	2-1/2" x 2-1/2" x 1/4"	

MEDICAL GAS IDENTIFICATION SCHEDULE

SERVICE	DIM	ACCESS DOOR SIZE	LABEL MODEL
EQUIPMENT	3"	LABEL SIMILAR TO SETONGUARD ASSET ID SHOWING GAS AND AREA TO SERVE.	
COMPONENTS	2"ø	ROUND STAINLESS STEEL 304 GAGE 20 TAG SHOWING NAME AND USE.	
VALVES	6"X6"	COLOR-CODED LABEL WITH BRASS GROMMET WITH THE INFO OF NAME FOR THE SPECIFIC MEDICAL GAS OR VACUUM SYSTEM AND ROOM OR AREAS SERVED	SETON LABELS

MEDICAL GAS ELECTRICAL CONNECTION SCHEDULE

TYPE OF SERVICE	ELECTRICAL BRANCH	NOTES
VACUUM PUMP OR MEDICAL AIR (MA) COMPRESSOR	EQUIPMENT	PROVIDE DEDICATED A DISCONNECT SWITCH TO EACH PUMP OR COMPRESSOR
LOCAL SIGNAL, DEW POINT OR CO SENSOR	EQUIPMENT	SENSORS SHALL BE CONNECTED TO SAME POWER USED FOR MA COMPRESSOR
AREA OR MASTER ALARM PANEL	LIFE SAFETY	PROVIDE DEDICATED A BREAKER FOR EACH PANEL
COMB. AREA ALARM WITH ZONE VALVE	LIFE SAFETY	PROVIDE DEDICATED A BREAKER FOR EACH PANEL

MEDICAL GAS ALARM SCHEDULE

STATION TAG	MANUFACTURER	MODEL	NOTES
AA	OHIO MEDICAL	263853	UNIT SHALL BE LISTED IN UL 1069, FLUSH MOUNT TO WALL WITH LCD LIGHT READOUT WITH BMS CONNECTION MODULE INCLUDED.
MAP	OHIO MEDICAL	261890	ALL ALARMS SHALL BE WIRED CONNECTED TO LIFE SAFETY BRANCH OF ESSENTIAL SYSTEM. MASTER ALARMS SIGNALS AS PER NFPA TABLE A.5.1.9.2. FOR CONNECTIONS REFER TO ALARM DETAIL AND FACTORY INSTRUCTIONS.

MEDICAL GAS ZONE VALVE SCHEDULE

STATION TAG	MANUFACTURER	MODEL	NOTES
ZV	OHIO MEDICAL	261903	UNIT SHALL COMPLY WITH UL AND MOST RECENT NFPA 99/ ALARM SHALL FLUSH MOUNT TO WALL WITH 1-1/2 DIAM. GAGE INCLUDED.
CZVAA	OHIO MEDICAL	261903	REFER TO MEDICAL GAS DRAWINGS FOR QUANTITY OF VALVES AND SIZE. CZVAA SHALL HAVE ETHERNET MODULE AND SHALL BE WIRED CONNECTED TO LIFE SAFETY BRANCH OF ESSENTIAL SYSTEM.

MEDICAL GAS OUTLET SCHEDULE

STATION TAG	OUTLET QTY. OXY	VC	MA	MODEL AND TYPE	NOTES
(A)	3	3	1		THIS SCHEDULE IS FOR WHEN NO HEADWALL WILL BE USED. MEDICAL GAS OUTLET SHALL BE FLUSH WITH WALL. MIN. QTY AS INDICATED IN FGI TABLE.
(B)	1	1	--	FOR MODEL REFER TO OUTLET SCHEDULE	
(C)	--	--	--		A VACUUM SLIDE SHALL BE PROVIDED AT SIDE OF ONE OF THE VACUUM INLET. REFER TO HEIGHT OF OUTLET AS PER SCHEDULE.
(D)	--	--	--		

MEDICAL GAS DESIGN DATA

TAG	OPERATING PRESSURE AND FLOW	MIN. PIPE DIAMETER (IN)		
		DROP	SUBMAIN	MAIN
OXYGEN MEDICAL AIR N2O CO2	ALL MEDICAL GAS EXCEPT NITROGEN PRESSURE SHALL BE 50 TO 55 PSIG AT 3.5 SCFM WITH A PRESSURE LOSS OF 5 PSI	1/2	3/4	1
NITROGEN GAS	NITROGEN PRESSURE SHALL BE 160 TO 185 PSIG AT 5 SCFM WITH A PRESSURE LOSS OF 5 PSI	1/2	3/4	1
VACUUM AND WAGD	MEDICAL VACUUM AND WAGD SHALL BE 3 SCFM WITHOUT REDUCING VACUUM TO 12 IN HgV OF NEAREST STATION.	3/4	1	1-1/2

MEDICAL GAS ABBREVIATION TABLE

TAG	DESCRIPTION	TAG	DESCRIPTION
ZV	ZONE VALVE	ø"	DIAMETER IN INCHES
CZVAA	COMBO ZONE VALVE WITH AREA ALARM	SV	SERVICE VALVE
AA	AREA ALARM	O/OXY	OXYGEN
CMAA	COMBO MASTER AND AREA ALARM	V/VC	VACUUM
MAP	MASTER ALARM PANEL	A/MA	MEDICAL AIR
VP	WALL OUTLET	N	NITROGEN
WAGD	WASTE ANESTHESIC GAS DISPOSAL	N2O	NITROUS OXIDE
CP	MEDICAL AIR COMPRESSOR	CO2	CARBON DIOXIDE
AD	ACCESS DOOR	FFE	FINISH FLOOR ELEVATION

MEDICAL GAS LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	NEW MEDICAL GAS WALL OUTLET REFER TO SCHEDULE FOR SPECS.		NITROGEN CONTROL PANEL REFER TO SCHEDULE FOR SPECS.
	NEW MEDICAL GAS SERVICE VALVE BALL TYPE FOR OXYGEN SERVICE		NEW POINT OF CONNECTION
	MEDICAL PIPING TO BE DEMOLISH AND DISPOSE. SEE MECHANICAL NOTES		MASTER ALARM REFE TO SCHEDULE FOR SPECS
	NEW MEDICAL GAS PIPING TO BE INSTALL WITH INDICATED DIAMETER		AREA ALARM PANEL REFER TO SCHEDULE FOR SPECS
	EXISTING MEDICAL GAS PIPING TO REMAIN SEE NOTES		ZONE VALVE REFER TO SCHEDULE FOR SPECS AND HEIGHT

MEDICAL GAS MOUNTING HEIGHT SCHEDULE

TAG	EQUIPMENT DESCRIPTION	HEIGHT	FROM FFE UP TO:
ZV	ZONE VALVE	5'-0"	CENTER OF ZONE VALVE
CZVAA	COMBO ZONE VALVE WITH AREA ALARM	5'-0"	CENTER OF ZONE VALVE
AA	AREA ALARM	5'-6"	TOP OF AREA ALARM
CMAA	COMBO MASTER AND AREA ALARM	5'-6"	TOP OF COMBO ALARM
MAP	MASTER ALARM PANEL	5'-6"	TOP OF MASTER ALARM
	WALL OUTLET	5'-0"	CENTER OF OUTLET
CC-1	SURGICAL FIXED CEILING COLUMN	6'-4"	BOTTOM OF COLUMN
CP	CEILING DROP HOSE	6'-4"	BOTTOM OF HOSE ASSEMBLY
NC	NITROGEN CONTROL PANEL	5'-2"	BOTTOM OF CONTROL PANEL
MGM	MEDICAL GAS MANIFOLD PANEL	5'-0"	BOTTOM OF CONTROL PANEL

PIPING SEISMIC RESTRAIN SCHEDULE

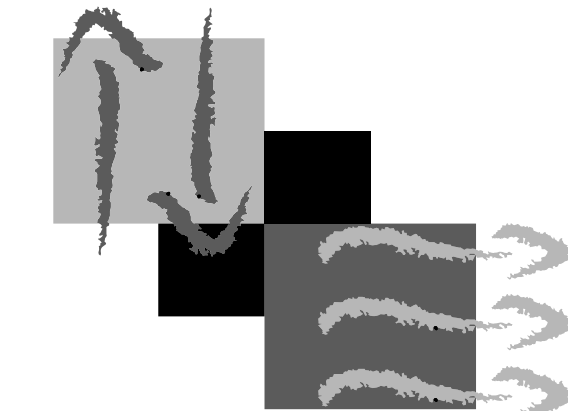
TAG	MINIMUM RESTRAINS REQUIREMENT	BRACE SPACING DIST. STEEL/COPPER PIPE
STRAIGHT RUN	TWO TRAVERSE BRACING PERPENDICULAR TO PIPE AND ONE LONGITUDINAL BRACE PARALLEL TO PIPE	40 FT
TRAVERSE BRACE	TRAVERSE BRACING PERPENDICULAR TO PIPE AT THE END OF EACH RUN	40 FT
LONGITUDINAL BRACE	LONGITUDINAL BRACING PARALLEL TO PIPE AT EACH STRAIGHT PIPE.	80 FT

MEDICAL GAS SERVICE VALVE SCHEDULE

TAG	VALVE CHARACTERISTICS	MODEL
SV	VALVE SHALL BE FORGED BRASS BODY, BRASS BALL TYPE WITH TEFLON (TFE) SEATS AND SEALS, 3 PIECE FULL PORT WITH DUAL 1/8 GAUGE PORTS AND ADJUSTABLE PACKING WITH BLOW-OUT PROOF STEM VALVE SHALL COME FACTORY CLEANED FOR OXYGEN SERVICE, TYPE K COPPER EXTENSIONS AND LOCKING HANDLES, REFER TO DWG FOR SIZE.	OHIO MEDICAL 261600

ACCESS DOOR SCHEDULE

SERVICE	SIZE MIN.	ACCESS DOOR SIZE	MODEL SELECTION
PIPE & VALVE	12"x12"	CUSTOM SIZE EQUAL TO 2 TIMES THE DIAMETER OF PIPING TO BE SERVED	ACUDOR DW-5058
MEDICAL GAS BOOM	18"x18"	AS INDICATED BY BOOM MANUFACTURER OR OWNER REQUEST	



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PROJECT OWNER

CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME
SCHEDULE MEDICAL
GASES

ISSUE FOR:

PRELIMINARY DRAWINGS

TAG	REVISION NAME	DATE
	REVISION	MM/DD/YY

MG-2

THE DESIGN AND DRAWINGS ARE INTELLECTUAL PROPERTY OF JAVIER CASTILLO PE AND SHALL NOT BE REUSED ON ANY OTHER LOCATION EXCEPT THE ONE ON WHICH THEY WERE EXPRESSLY DESIGNED. DRAWINGS SHALL BE COPIED OR REPRODUCED UNDER THE WRITTEN CONSENT OF THE ENGINEER

DRAWINGS DETAILS INTENT IS TO FOCUS IN THE EQUIPMENT ASSEMBLY AND COMPONENT ARRANGEMENT TO FULFILL THE CODE REQUIREMENTS, THEREFORE FOR "INTENT" MEANS THAT EQUIPMENT, COMPONENTS OR MATERIAL NOT SHOWN ON DETAILS BUT REQUIRED FOR INSTALLATION AND/OR OPERATION SHALL BE INCLUDED FOR BASE BID QUOTATION. REFER TO THE FACTORY MANUAL FOR ANY EQUIPMENT OR COMPONENT INSTALLATION DETAILS AND INSTRUCTIONS FOR OPERATION.

ALL COMPONENTS SHOWN ON DETAILS SHALL BE FACTORY NEW, UL CERTIFIED AND INCLUDED IN THE SUBMITTAL FOR ENDORSEMENT. DETAILS ARE NOT TO SCALE, AND DIMENSION SHOWN ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

ALL EQUIPMENT OR COMPONENTS SELECTION SHOWN ON DETAILS ARE BASE BID, SIMILAR ITEM CAN BE SUBMITTED, REFER TO BASE BID CLAUSE FOR ALTERNATE COMPONENTS OR EQUIPMENT.

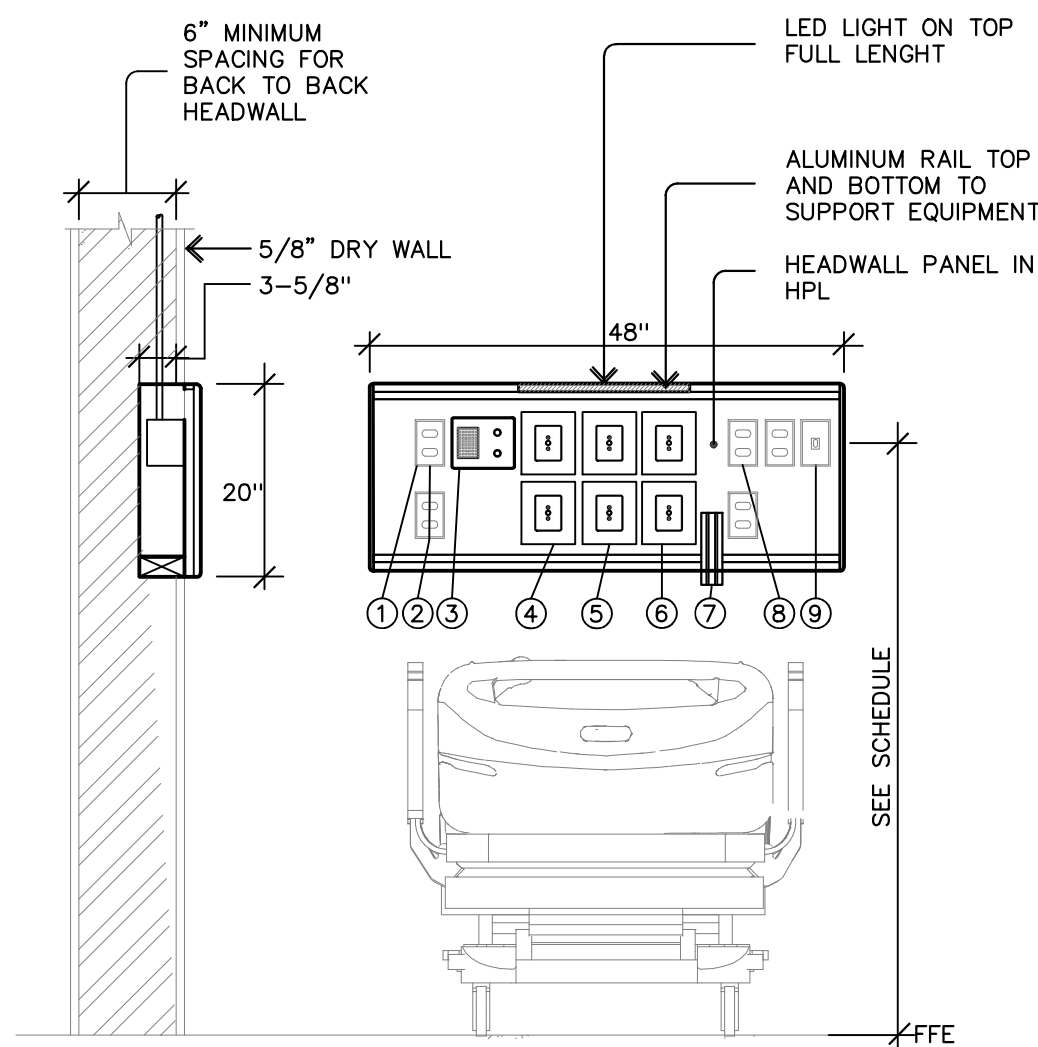
ANY EQUIPMENT NOT REQUIRED FOR INSTALLATION, DETAILS THAT APPLIES IS FOR REFERENCE ONLY, IN CASE OF DISCREPANCY BETWEEN DETAILS, NOTES FROM OTHER TRADES AND DRAWINGS REFER TO INTERPRETATION CLAUSE IN MECHANICAL NOTES FOR FURTHER ACTION.

REFER TO MECHANICAL GENERAL NOTES AND SCHEDULES FOR EQUIPMENT SPECS AND ADDITIONAL INFORMATION.

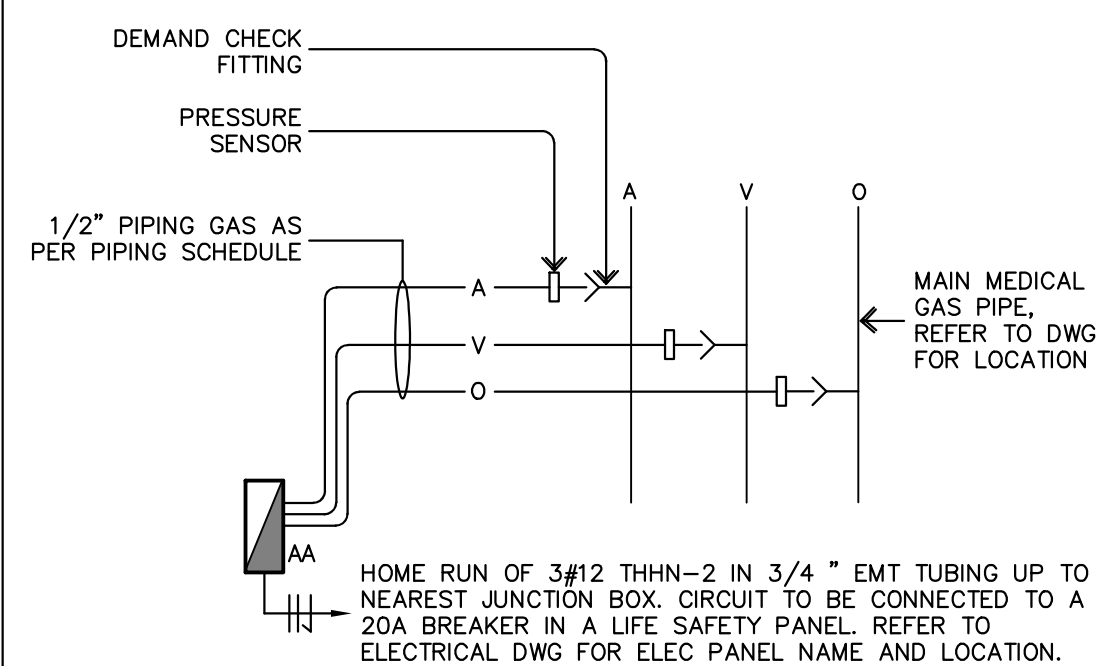
GENERAL NOTES FOR ALL DETAILS

TAG	DESCRIPTION AND QTY.
1	TV/DATA
2	DUPLEX NORMAL RECP.
3	NURSE CALL
4	OXYGEN OUTLET (2)
5	MEDICAL AIR OUTLET (1)
6	VACUUM INLET (3)
7	VACUUM SLIDE
8	DUPLEX EMERG. RECP.
9	LIGHT SWITCH

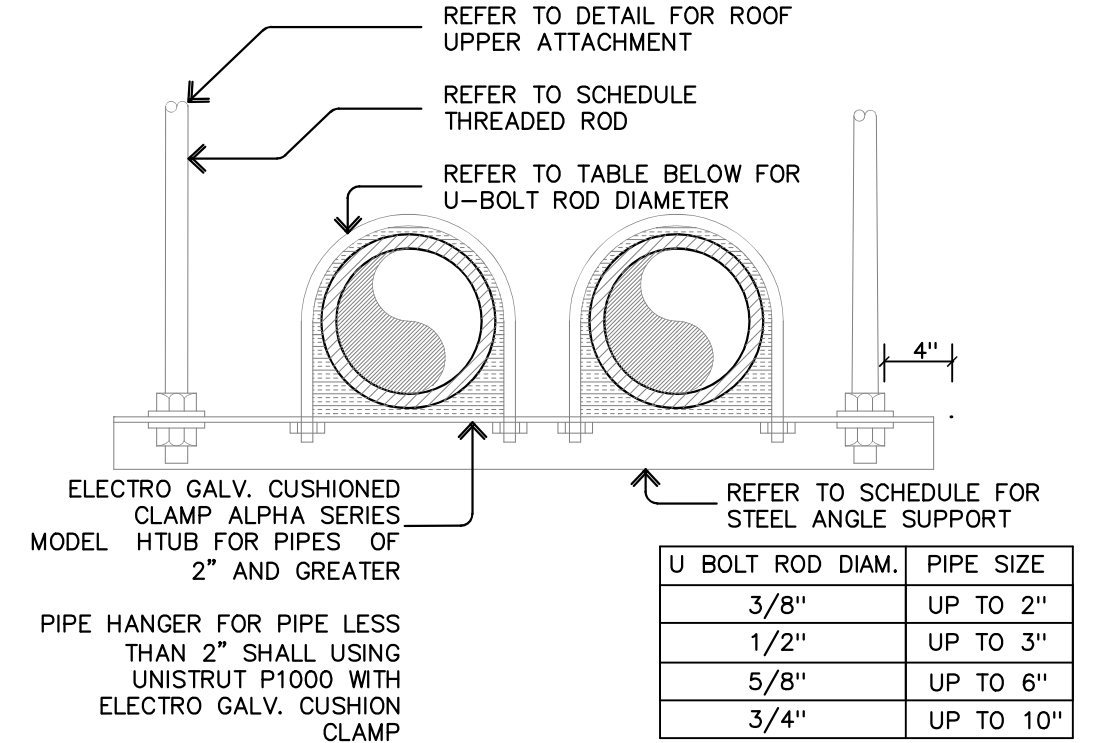
REFER TO SCHEDULE FOR QTY OF GAS AND ELECTRICAL OUTLET



MEDICAL GAS PACU PHASE-1 PATIENT HEADWALL



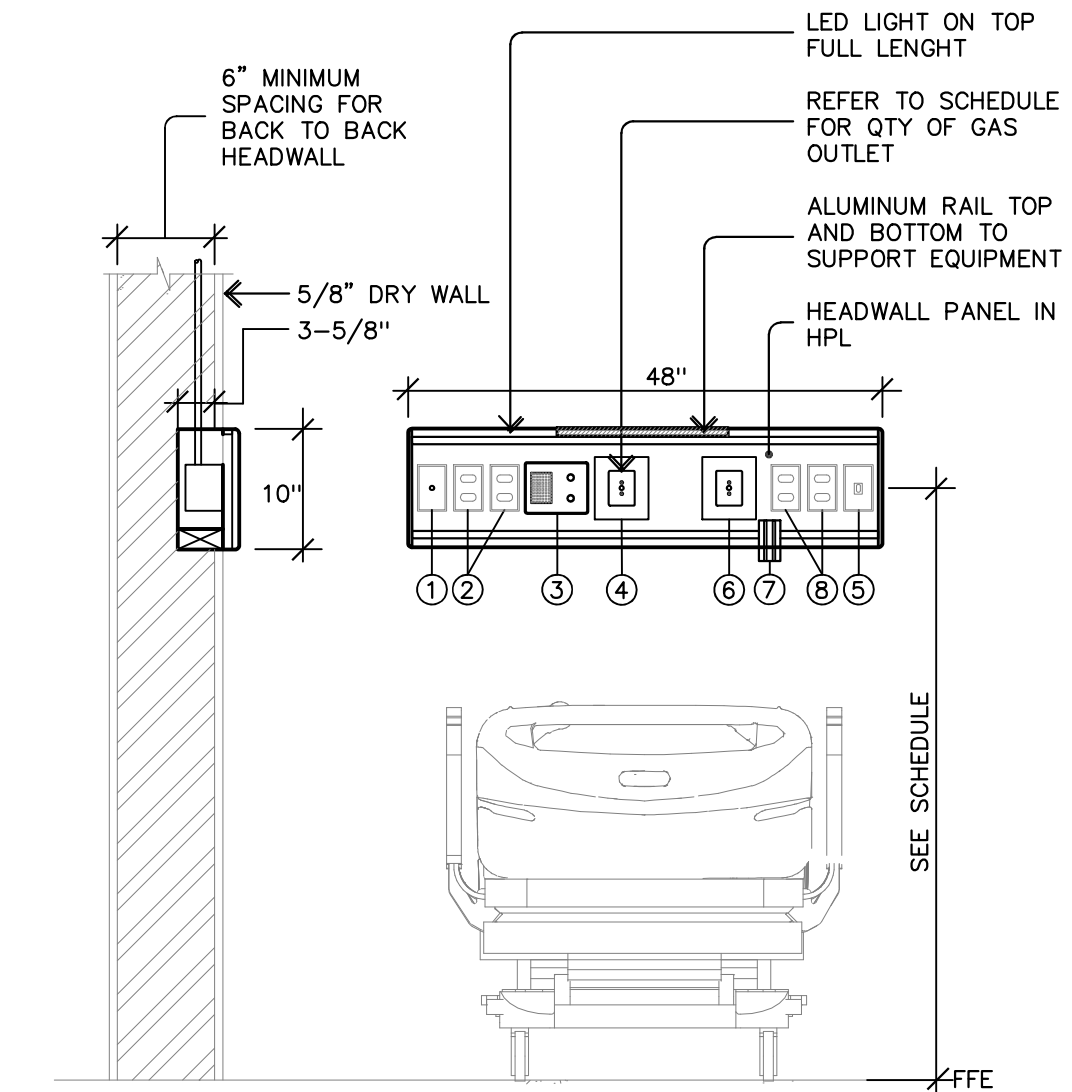
MEDICAL GAS ALARM CONNECTION DETAIL



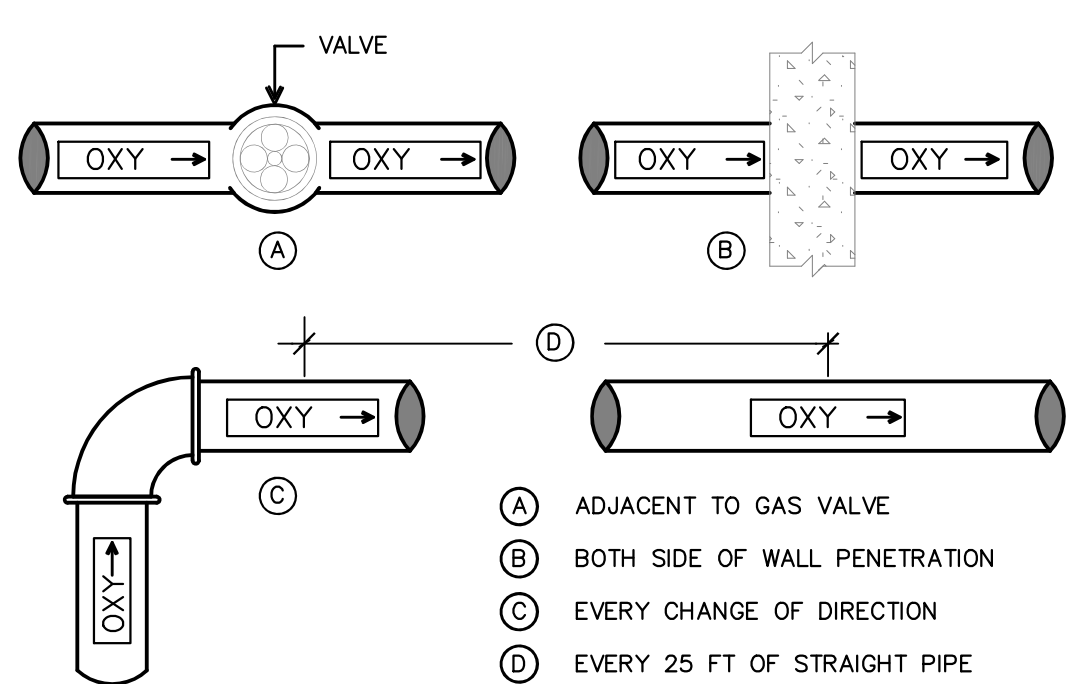
MULTIPLE MEDICAL GAS PIPE HANGER DETAIL

TAG	DESCRIPTION AND QTY.
1	TV/DATA
2	DUPLEX NORMAL RECP.
3	NURSE CALL
4	OXYGEN OUTLET (1)
5	LIGHT SWITCH
6	VACUUM INLET (1)
7	VACUUM SLIDE
8	DUPLEX EMERG. RECP.

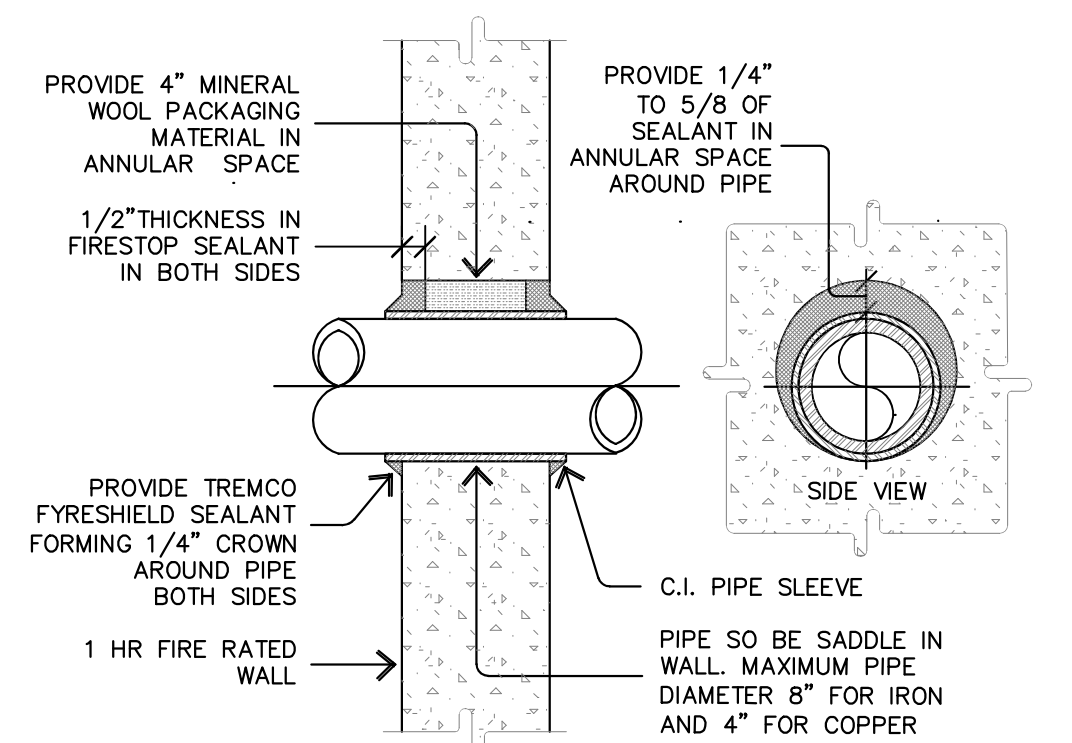
REFER TO SCHEDULE FOR QTY OF GAS AND ELECTRICAL OUTLET



MEDICAL GAS PACU PHASE-2 PATIENT HEADWALL



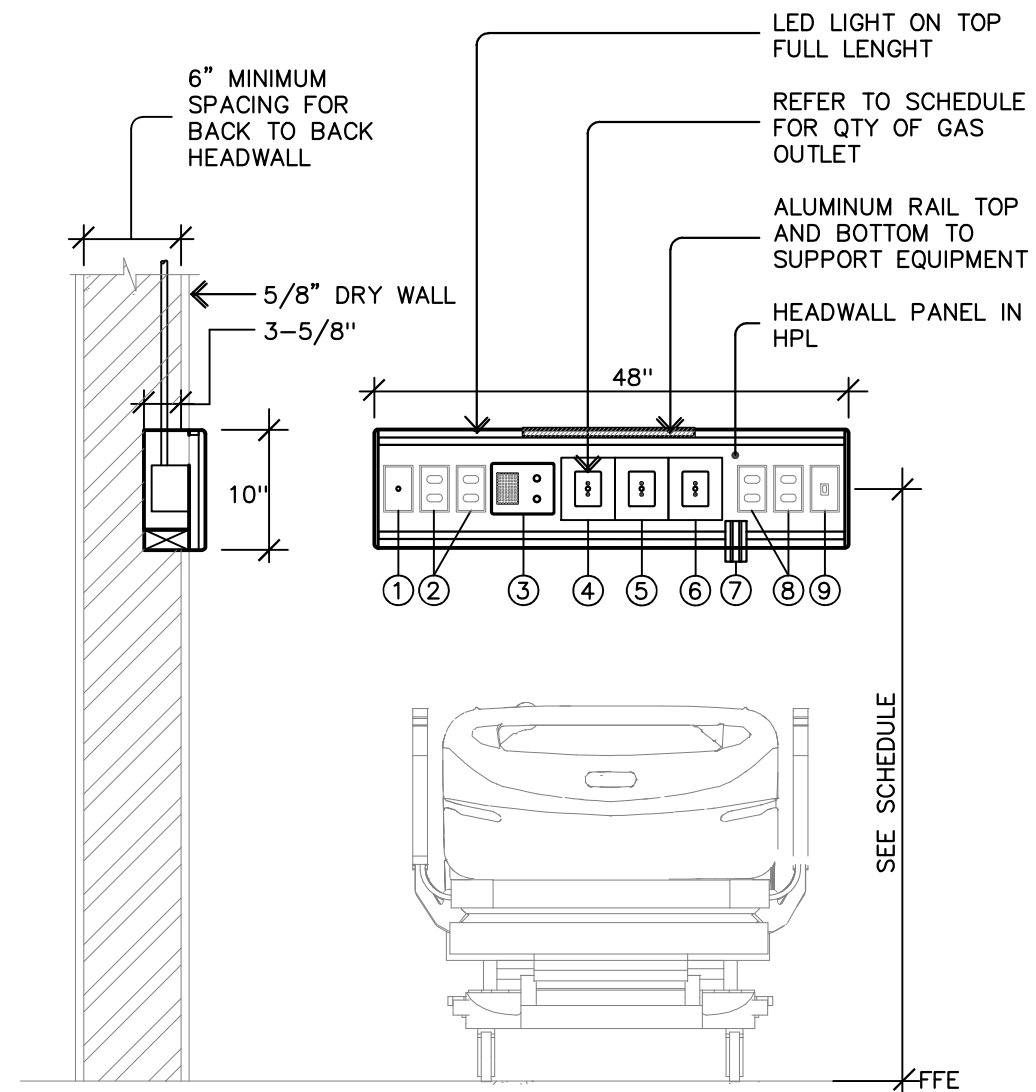
MEDICAL GAS LABELING DETAIL



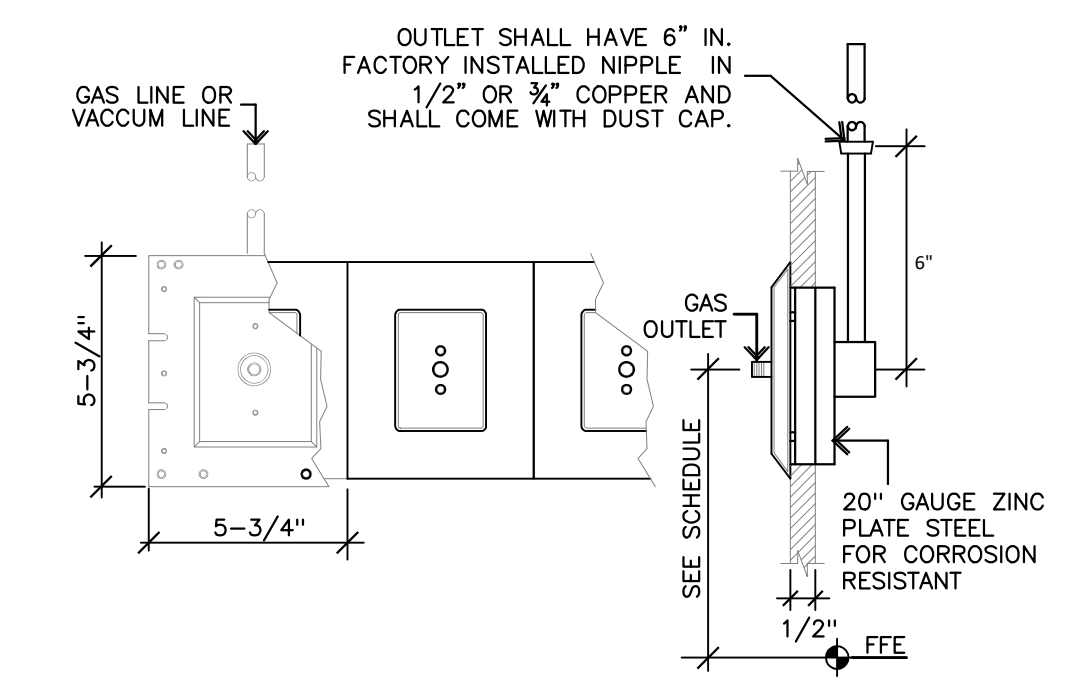
PIPE THRU FIRE RATED WALL DETAIL

TAG	DESCRIPTION AND QTY.
1	TV/DATA
2	DUPLEX NORMAL RECP.
3	NURSE CALL
4	OXYGEN OUTLET (1)
5	MEDICAL AIR OUTLET (1)
6	VACUUM INLET (1)
7	VACUUM SLIDE
8	DUPLEX EMERG. RECP.
9	LIGHT SWITCH

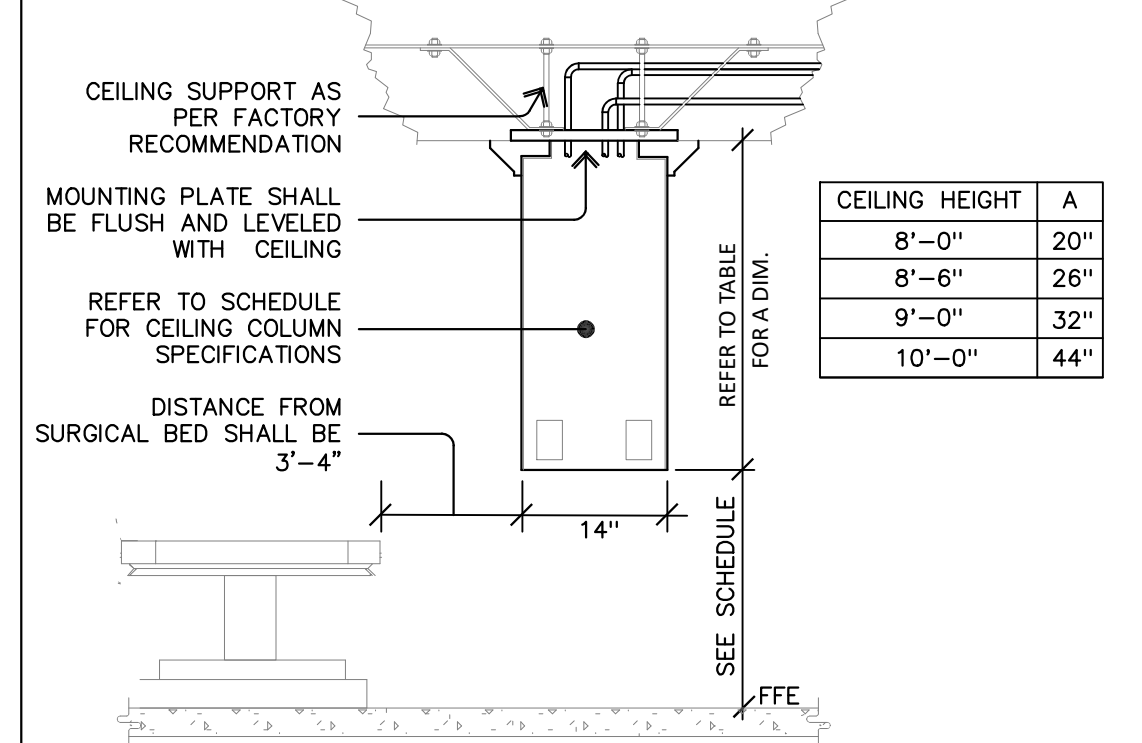
REFER TO SCHEDULE FOR QTY OF GAS AND ELECTRICAL OUTLET



MEDICAL GAS PRE-OP PATIENT HEADWALL

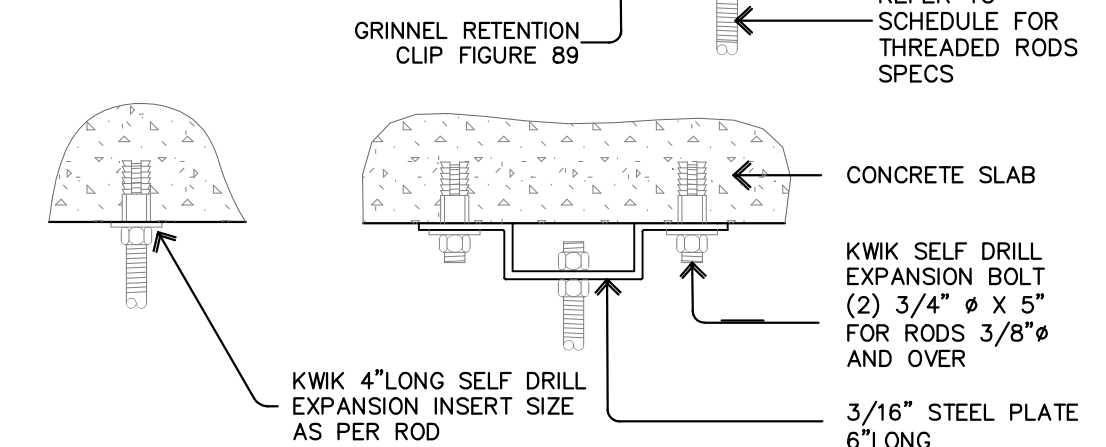


MEDICAL GAS WALL OUTLET DETAIL

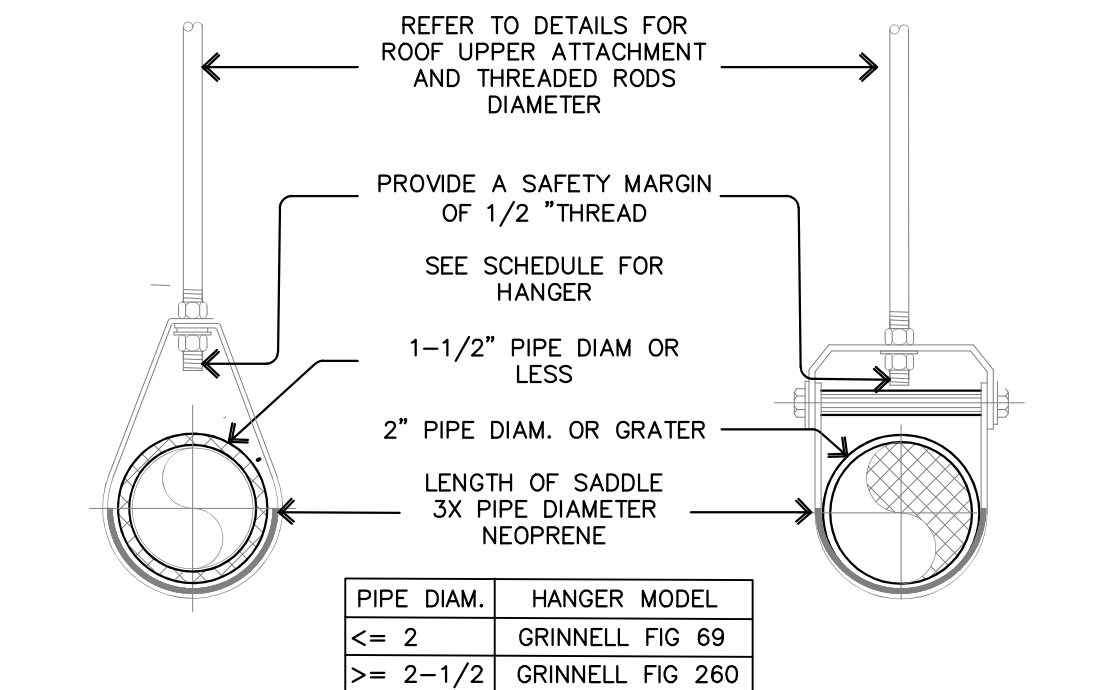


MEDICAL GAS CEILING COLUMN

ROD DIAM.	PIPE SIZE	SPACING
3/8"	UP TO 2"	8 FT
1/2"	UP TO 3"	10 FT
3/4"	4" TO 6"	12 FT
7/8"	8" TO 12"	16 FT



PIPE RODS UPPER ATTACH DETAIL



SINGLE PIPE HANGER DETAIL



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PROJECT OWNER

CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME
MEDICAL GASES
DETAILS

ISSUE FOR:
PRELIMINARY DRAWINGS

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△	REVISION	MM/DD/YY

MG-3

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MEDICAL GAS GENERAL NOTES:
REV: JAN / 25

1: DESIGN INTENTION
THESE DRAWINGS SHOWS THE COMPLETE DESIGN CONCEPT, INTENT AND PIPING GENERAL ARRANGEMENT TO FULFILL THE CODE REQUIREMENTS, THEREFORE, FOR "COMPLETE" MEANS THAT EQUIPMENT, COMPONENTS OR MATERIAL NOT SHOWN ON DRAWINGS BUT REQUIRED FOR INSTALLATION AND/OR OPERATION SHALL BE INCLUDED AS PART OF THESE DRAWINGS. FOR "INTENT" MEAN THAT AREAS OR STATIONS UNDER PROJECT LIMIT THAT THE CODES INDICATE THAT IS REQUIRED TO HAVE MEDICAL GAS, SHALL HAVE DISTRIBUTION OUTLET AND GAS LINES QUOTED WHENEVER IS NOT SHOWN ON DRAWINGS.

GENERAL NOTES SHOWN ARE FOR MEDICAL GAS AND VACUUM SYSTEMS. IF ANY OF SYSTEM IS NOT REQUIRED FOR INSTALLATION, SYSTEM NOTES THAT DOES NOT APPLIES IS FOR REFERENCE ONLY AND THE REMAINING NOTES CONTINUE AS INDICATED. GENERAL NOTES, EQUIPMENT, DEMOLITION AND AIR DISTRIBUTION APPLIES FOR BOTH SYSTEMS.

2: SCOPE OF WORK
DESIGN DOCUMENTS ARE FOR CONTRACTOR TO PROVIDE ALL EQUIPMENT, LABOR, MATERIAL & SERVICES FOR THE COMPLETE EXECUTION OF THE MEDICAL GAS SYSTEM INSTALLATION & PERFORMANCE AS CALLED FOR ON PLANS AND/OR AS DESCRIBED HEREIN.

DRAWINGS WITH THE NOTE OF "ADVANCE OR PRELIMINARY DRAWING" ARE ONLY FOR OWNERS REVISION AND CANNOT BE USED FOR CONSTRUCTION. IF BID DRAWINGS SHOWS THE NOTE PROVIDE A REQUEST FOR INFORMATION (RFI) FOR CLARIFICATIONS.

3: CODE COMPLIANCE
THE PROPOSED MECHANICAL SYSTEM SHALL COMPLY WITH MOST RECENT STANDARD OR CODES HEREAFTER "THE CODES" WHICH APPLIES IN PUERTO RICO. THE CODES ARE BUT NOT LIMITED TO:

- INTERNATIONAL BUILDING CODE (IBC)2018
- INTERNATIONAL MECHANICAL CODE 2018
- INTERNATIONAL FIRE CODE 2018
- FGI GUIDELINES 2022
- ASHRAE 170-2017
- NFPA 99 - 2018
- NFPA 70 (NEC) AND COMPRESSED GAS ASSOCIATION STANDARDS
- PRODH RULES AND GUIDES
- NATIONAL ELECTRICAL CODE (NEC)
- ANY CODE FROM LOCAL AUTHORITY HAVING JURISDICTION OVER THE PROJECT.

4: INTERPRETATION
ANY DISCREPANCY DURING BID PROCESS BETWEEN INTENT, DRAWINGS, SPECIFICATIONS, SCHEDULES, DIMENSION, QUANTITY OF EQUIPMENT OR NOTES FROM ANY OTHER TRADE SHALL BE REFER TO A REQUEST FOR INFORMATION TO OWNER. AN ADDENDA WILL BE ISSUED AS NECESSARY FOR THESE DISCREPANCIES AND WILL BECOME PART OF THE CONTRACT DOCUMENTS. THOSE DISCREPANCIES NOT BROUGHT TO THE ATTENTION OF THE ENGINEER IT WILL BE ASSUMED THAT THE CONTRACTOR HAS BID THE MORE EXPENSIVE MATERIAL OR MORE STRICT METHOD OF CONSTRUCTION.

ANY DISCREPANCY DURING PROJECT CONSTRUCTION BETWEEN DRAWINGS, SPECIFICATIONS, SCHEDULES, GENERAL NOTES, DIMENSION, QUANTITY OF EQUIPMENT OR ANY OTHER TRADE SHALL BE NOTIFY IN A REQUEST FOR INFORMATION (RFI) LETTER OR EMAIL TO THE OWNERS REPRESENTATIVE FOR CLARIFICATION OF THE DRAWING INTENTION AND/OR ADDENDA ISSUED DURING THE BID PROCESS. A CLARIFICATION DRAWING OR DOCUMENT WILL BE ISSUED AS NECESSARY FOR THESE DISCREPANCIES AND WILL BECOME PART OF THE CONTRACT DOCUMENTS. CONTRACTOR SHALL NOT PROCEED TO PURCHASE OR INSTALL UNTIL CLARIFICATION IS SOLVED. THOSE DISCREPANCIES NOT BROUGHT TO THE ATTENTION OF THE ENGINEER IT WILL BE ASSUMED THAT THE CONTRACTOR WILL FURNISH AND INSTALL THE MORE EXPENSIVE MATERIAL UNDER THE MORE STRICT METHOD OF CONSTRUCTION.

DETAILS AND LARGE SCALE DRAWING ARE PRECEDENTS OVER SMALL SCALE DRAWINGS. ALL DETAILS SHOWN ARE APPROXIMATE, NOT TO SCALE AND PRESENTS THE MINIMUM COMPONENTS REQUIRED FOR PROPER FUNCTIONING AND OPERATION. REFER TO EQUIPMENT SUBMITTAL OR MANUFACTURER RECOMMENDATIONS GUIDE FOR ASSEMBLY, CLEARANCE SPACE AND INSTALLATION.

WHEN SIMILAR IS INDICATED IN NOTES AND/OR DETAILS IT REFER TO AN ALTERNATIVE EQUIPMENT MANUFACTURER OR COMPONENT MODEL WHICH PERFORMS THE SAME FUNCTION AND COMPLIANCE ARE EQUIVALENT TO THE ONES THAT IS SPECIFIED OR IN SCHEDULE.

WHEN TYPICAL (TYP.) IS INDICATED IN DRAWINGS, NOTES AND/OR DETAILS IT REFER THAT INFORMATION, DIMENSIONS, DIRECTION OF EQUIPMENT, PIPING OR DUCTS APPLIES TO ALL SIMILAR CONDITIONS IN DRAWINGS.

5: PROJECT SITE VISIT
THE CONTRACTOR SHALL ARRANGE WITH PROJECT OWNER OR REPRESENTATIVE TO VISIT PROJECT LOCATION AND EXAMINE CAREFULLY THE WORK SITE CONDITIONS WHERE THE SYSTEM WILL TO BE INSTALLED AND BE AWARE OF THE EXISTING SITE CONDITIONS AND THE EXTENT OR DEGREE THEY INFLUENCE IN THE WORK PRIOR TO SUBMITTING HIS BID FOR THE WORK. DISCREPANCIES OF SITE SHALL BE PROCESS AS INDICATED IN INTERPRETATION CLAUSE. AFTER CONTRACT GETS AWARDED, DISCREPANCIES ABOUT SITE NOT BROUGHT TO CLARIFICATION WILL NOT BE CONSIDERED CONTRACTOR SHALL BE CLEAR THAT NO SUBSEQUENT EXTRAS COST OR ADDITIONS WILL BE ALLOWED FOR ANY CLAIM DUE TO LACK OF KNOWLEDGE OF CONDITIONS OR CIRCUMSTANCES ABOUT WHICH THE BIDDER HAD SITE INSPECTED AND INFORMED HIMSELF AND THE OWNER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING MEDICAL GAS CONNECTIONS WHETHER SHOWN ON DRAWINGS OR NOT AND SHALL PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR UTILITIES CONNECTION REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF THIS WORK. ANY DAMAGE TO UTILITIES SHALL BE REPORTED IMMEDIATELY.

6: BASE BID EQUIPMENT
ALL EQUIPMENT, COMPONENTS AND DEVICES SPECIFIED AND ON SCHEDULE IN THESE DRAWINGS SHALL BE INCLUDED AS PART OF THE BASE BID WITH THE CORRESPONDENT LOCAL OR STATE TAX THAT APPLIES. IN CASE THAT TAX EXEMPTION APPLIES, A CREDIT TO THE OWNER SHALL BE SUBMITTED AFTER THE PROJECT IS AWARDED

ALL EQUIPMENT SELECTED IS A BASE DESIGN THEREFORE DOES NOT MEANS THAT IS ENGINEER PREFERENCE. SO ANY EQUIPMENT WHICH IS DEFINE AS SIMILAR CAN BE SUBMITTED IN THE BID AS AN ALTERNATE ITEM ONLY IF IT RESULTS IN THE SAME COST OR IN COST SAVINGS TO THE OWNER. THE ALTERNATE SUBMITTAL SHALL HAVE A COMPARATIVE TABLE BETWEEN SPECIFIED AND ALTERNATE EQUIPMENT SHOWING DIMENSIONS, PERFORMANCE AND THE PROPOSED SAVINGS FOR ENGINEER EVALUATION AND OWNERS ACCEPTANCE.

BID PRICE IS USING ONLY EQUIPMENT SPECIFIED ON SCHEDULES AND/OR ADDENDA PROVIDED. THE ALTERNATIVE SIMILAR ITEM SHALL BE SUBMITTED IN THE BID IN A SEPARATED ITEM FOR OWNERS EVALUATION.

7: SUBMITTAL DOCUMENTS
ALL AND ONLY EQUIPMENT AND ACCESSORIES SHOWN IN SCHEDULES AND DETAILS SHALL BE PROVIDED IN A SUBMITTAL FOR ENGINEER ENDORSEMENT. THE SUBMITTAL SHALL BE PER EQUIPMENT AND ITS COMPONENTS AND SHALL NOT CONSOLIDATED WITH OTHER EQUIPMENT OR PRODUCT BROCHURE OR CATALOG WITH NO ITEM SELECTION WILL NOT BE EVALUATED.

ANY SUBMITTAL THAT WILL BE A ALTERNATE OF THE EQUIPMENT SPECIFIED SHALL BE PRESENTED BY REQUEST FOR INFORMATION (RFI) WITH REASONS FOR THE ALTERNATE ACTION. THE SUBMITTAL SHALL HAVE COMPARATIVE TABLE BETWEEN SPECIFIED AND ALTERNATE EQUIPMENT SHOWING ENOUGH INFORMATION FOR EVALUATION SUCH AS BUT NOT LIMITED TO DIMENSIONS, PERFORMANCE, DELIVERY AND THE PROPOSED CREDIT TO OWNER.

THE SUBMITTAL REVIEW SHALL BE ONLY IN THE EQUIPMENT PERFORMANCE TO DESIGN INTENT. MECHANICAL CONTRACTOR SHALL VERIFY AND CONFIRM FINAL QUANTITY OF EQUIPMENT AND ANY COORDINATION WITH OTHER TRADES SUCH AS, BUT NOT LIMITED TO ELECTRICAL VOLTAGE OR PLUMBING CONNECTIONS. ANY DISCREPANCY ENCOUNTERED SHALL BE REFER TO INTERPRETATION CLAUSE ABOVE.

ALL SUBMITTAL WILL BE EVALUATED IN 15 WORKINGS DAYS AFTER RECEIVING AT ENGINEER OFFICE. THE ENGINEER CAN REQUEST TO OWNER A TIME EXTENSION FOR ADDITIONAL EVALUATION ON COMPLEX SUBMITTAL. ANY COST TO OWNER DUE TO SUBMITTAL REJECTION OR DELAY WILL NOT BE ACCEPTED. THE ENGINEERS ENDORSEMENT OF SHOP DRAWINGS OR SAMPLES SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR ANY DEVIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS THE CONTRACTOR HAS INFORMED THE OWNER IN WRITING OF SUCH DEVIATION.

MEDICAL GAS GENERAL NOTES:
REV: JAN / 25

8: SHOP DRAWING
MECHANICAL CONTRACTOR SHALL PROVIDE TO OWNER FOR APPROVAL A COMPLETE GENERAL ARRANGEMENT AND PIPING DRAWING OF THE EQUIPMENT AND AIR/OUTLET DISTRIBUTION SHOWN IN THESE DRAWINGS. ANY EQUIPMENT OR MATERIAL INSTALLED WITHOUT A SUBMITTAL AND/OR SHOP DRAWING ENDORSEMENT CAN BE SUBJECT TO REMOVAL BY THE INSTALLER AT NO COST TO THE OWNER AS REQUESTED BY THE DESIGN ENGINEER. SHOP DRAWING SHALL INCLUDE AT LEAST THE FOLLOWING INFORMATION:

- SHOP DRAWING SCALE SHALL BE 1/4" - 1'-0" OR 1 SIZE SCALE BIGGER TO DESIGN DRAWING
- FINAL EQUIPMENT LOCATION, INLET/OUTLET DISTRIBUTION LAYOUT, HEADWALL DIMENSION HEIGHT FROM FINISH FLOOR, MED GAS PIPING DIAMETER AND ROUTE, HANGER SPACING, SEISMIC BRAZING LOCATIONS, DETAILS.
- SHOP DRAWING SHALL BE A COORDINATION DRAWING THAT INCLUDES EXISTING AND NEW DUCTWORK, PIPING AND SPRINKLER LAYOUT AND ANY OTHER TRADES THAT CAUSE INTERFERENCE WITH EXISTING AND PROPOSED DUCTWORK AND PIPING.

CONTRACTOR SHALL COORDINATE ALL TRADES AS INDICATED ABOVE AND SHALL MAKE ALL NECESSARY ALTERATIONS TO MEDICAL GAS SYSTEM LAYOUT DURING THE SHOP DRAWING PHASE. CONTRACTOR SHALL RE-ROUTE MEDICAL GAS PIPING AS REQUIRED TO AVOID CONFLICTS DURING CONSTRUCTION AND FACILITATE ACCESSIBILITY FOR MAINTENANCE. RE-ROUTING THE PIPE WHERE INTERFERENCE OR CEILING HEIGHT SITUATIONS OCCURS DOES NOT MEAN ADDITIONAL COST TO OWNER.

CONTRACTOR SHALL INCLUDE AS PART OF THE BASE BID ANY REQUIRED PING TRANSITION, ELBOW OR VALVE DUE TO PROJECT SITE CONDITIONS OR CAUSED BY RE-ROUTING DUE TO FIELD MEASUREMENT.

SHOP DRAWINGS ALTERATIONS DUE TO COORDINATION SHALL BE CLEARLY CLOUDED AND LABELED WITH DATE FOR QUICK REFERENCE AND ARE SUBJECT FOR SUBMITTAL ENDORSEMENT FROM THE INSPECTION AND SUPERVISION. SHOP DRAWING SHOWING ONLY MEDICAL GAS PIPING WILL BE ASSUMED THAT IS FULLY COORDINATED WITH NO INTERFERENCES WITH OTHER TRADES SUCH AS HVAC, PLUMBING AND LIGHTING. ADDITIONAL COST DUE TO LACK OF COORDINATION IN SHOP DRAWING WILL NOT BE ACCEPTABLE

A COPY OF ORIGINAL DESIGN DRAWING AT SAME OR BIGGER SCALE IS NOT ACCEPTABLE AS A SHOP DRAWING AND WILL NOT BE EVALUATED. DESIGN ENGINEER HAS NO OBLIGATION TO PROVIDE CAD DRAWINGS FOR THE DEVELOPMENT OF SHOP COORDINATION DRAWINGS. HOWEVER IF DRAWINGS ARE PROVIDED, THE DRAWINGS ARE FOR REFERENCE ONLY AND DOES NOT RELIEVE THE CONTRACTOR TO CONFIRM IN FIELD ALL TRADES MEASUREMENT, HEIGHT AND EQUIPMENT DIMENSIONS OF THE PROJECT. IN CASE OF DISCREPANCY FOLLOW THE INTERPRETATION CLAUSE.

9: DESIGN DATA
MEDICAL GAS AND VACUUM SYSTEMS SHALL DELIVER THE NOMINAL PRESSURES ACCORDING TO SCHEDULE. REFER TO NFPA 99 SECTION 5.1.12.4.10 FOR ADDITIONAL INFO.

10: PROJECT TIME SCHEDULE
ALL INSTALLATION WORK DURING CONSTRUCTION SHALL BE MADE TO MAINTAIN IN A MINIMUM SHUTDOWN TIME THE EXISTING MEDICAL GAS SYSTEM. IF ANY SHUTDOWN IS REQUIRED, THE INSTALLATION AND CONNECTION SHALL BE FROM 12:00 AM TO 7:00 AM, SATURDAY OR SUNDAY. ANY LABOR OVERTIME REQUIRED SHALL INCLUDED AS PART OF THE BASE BID.

11: PROJECT WARRANTY
THE CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK, EQUIPMENT AND COMPONENTS TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DAY OF ACCEPTANCE BY OWNER. THE CONTRACTOR ALSO SHALL REPLACE OR REPAIR TO THE SATISFACTION OF THE OWNER ALL DAMAGE DONE TO THE BUILDING OR ITS CONTENTS IN CONSEQUENCE OF THE WORK PERFORMED IN FULFILLING ANY WARRANT.

12: PROJECT CLOSING
THE CONTRACTOR SHALL PROVIDE WITHIN 60 DAYS AFTER SUBSTANTIAL COMPLETION THE FOLLOWING DOCUMENTS:

- RECORD DRAWINGS WHICH INCLUDES ALL SITE CHANGES.
- THIRD PARTY ASSE 6030 VERIFICATION REPORT
- EQUIPMENT MANUAL WHICH INCLUDES SUBMITTAL, OPERATION MANUALS, CONTROLS
- WIRING AND SCHEMATIC DIAGRAM AND/D SEQUENCE OF OPERATION

MEDICAL GAS EQUIPMENT NOTES:
REV: JAN / 25

1: EQUIPMENT LOCATION
ALL MEDICAL GAS EQUIPMENT SHALL BE INSTALLED IN THE LOCATION APPROVED BY SHOP DRAWING AND INSTALLER SHALL MAINTAIN UNIT SPACE CLEARANCE RECOMMENDED BY MANUFACTURER.

2: MEDICAL GAS DETAILS
THE EQUIPMENT DETAILS SHOWN IN THESE DRAWINGS PROVIDE ADDITIONAL INFORMATION OF COMPONENTS AND DESIGN REQUIREMENTS. INSTALLATION DETAILS ARE PROVIDED BY UNIT OR COMPONENTS MANUFACTURER.

3: ANCHORING AND SUPPORT
ALL MEDICAL GAS EQUIPMENT UNDER THIS PROJECT CANNOT BE INSTALLED IN DIRECT CONTACT TO FINISH FLOOR. THE PROPOSED MECHANICAL SYSTEM SHALL BE INSTALLED OVER FINISH FLOOR AS FOLLOW:

- A. FOR INTERIOR EQUIPMENT - 4" 3000 PSI CONCRETE PAD. REFER TO DETAIL FOR SPECS.
- B. FOR EXTERIOR EQUIPMENT - 6" CONCRETE PAD OR A PREFABRICATED ROOF CURB. REFER TO DETAIL FOR SPECS.
- C. ALL EXPOSED OR OUTDOOR UNITS OR COMPONENTS SHALL BE ANCHORED TO CONCRETE PAD WITH EXPANSION BOLTS FOLLOWING UNIT FACTORY RECOMMENDATIONS. REFER TO DETAILS FOR ANCHOR SELECTION.
- D. ALL UNITS SHALL BE BRAZED AND ANCHORED WITH 1/4" STEEL CABLE TO PREVENT OVERTURNING BY WIND.

CONTRACTOR SHALL EVALUATE WITH AN STRUCTURAL ENGINEER THE CONDITIONS OF THE EXISTING ROOF SLAB AND REPORT TO OWNER FOR ANY ACTION REQUIRED. CONCRETE PAD DIMENSIONS ARE APPROXIMATE AND IS FOR BID PURPOSE. CONTRACTOR SHALL PREPARE A SHOP DRAWING TO SHOW THE PAD FINAL DIMENSIONS WITH THE APPROVE EQUIPMENT SUBMITTAL DIMENSION.

4: SEISMIC BRAZING
ALL MEDICAL GAS EQUIPMENT LOCATED IN SUSPENDED CEILING UNDER THIS SHALL BE SEISMIC BRAZED ACCORDING TO ASCE 7. EQUIPMENT LOCATED IN FLOOR LEVEL REQUIRES VIBRATION ISOLATION PADS OR RUBBER STANDS.

5: NOISE AND VIBRATION
CONTRACTOR SHALL PROVIDE ATTENUATION DEVICE OR CONTROL TO ANY UNACCEPTABLE NOISE (< 85db) OR VIBRATION CAUSED IN THE EQUIPMENT, PIPING OR COMPONENTS.

6: EQUIPMENT INSTALLATION
ALL EQUIPMENT SHALL BE ASSEMBLED IN SITE ANY EQUIPMENT THAT ARRIVES SECTIONALIZED FROM MANUFACTURER AND SHALL PROVIDE CRANE SERVICE TO LOCATE EQUIPMENT IN THE FINAL POSITION.

7: PANELS MATERIAL
ALL PANELS EXPOSED TO OUTDOOR CONDITIONS SHALL BE ENCLOSED IN A STAINLESS STEEL 304 RAIN TIGHT PANEL, WITH KEY LOCK AND HINGED DOOR . PANEL SHALL SUBMITTED FOR ENGINEER APPROVAL

8:EQUIPMENT ELECTRICAL INSTALLATION
ALL MEDICAL GAS EQUIPMENT INDICATED IN SCHEDULE SHALL HAVE A DISCONNECT SWITCH AND/OR COMBINATION STARTER, WIRING AND CONDUIT AS PART OF BID BASE WHENEVER IS SHOWN ON DRAWINGS OR NOT. A DISCONNECT SWITCH OR STARTER LOCATED OUTDOOR SHALL BE NEMA 3R, FOR INDOOR SHALL BE NEMA 1.

THE MEDICAL GAS CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR THE EXACT VOLTAGE, BREAKER, FUSE AND WIRING REQUIRED FOR EQUIPMENT PROPOSED PRIOR TO SUBMITTAL. MEDICAL GAS CONTRACTOR SHALL FURNISH AND INSTALL WIRING AND ELECTRICAL PIPING TO PROPOSED MEDICAL GAS EQUIPMENT FROM DISCONNECT SWITCH INSTALLED BY ELECTRICAL CONTRACTOR.

IN CASE OF ANY DISCREPANCY BETWEEN ELECTRICAL AND MEDICAL GAS DRAWINGS OR SCHEDULE REFER TO INTERPRETATION CLAUSE.

MEDICAL GAS EQUIPMENT NOTES (CONT.):

9: EQUIPMENT ELECTRICAL WIRING
ALL ELECTRICAL WIRING SHALL BE AS A MINIMUM THHN-2 #12. WIRE SHALL BE INCREASED ACCORDING TO MANUFACTURER SPECIFICATIONS AND/OR CODE REQUIREMENT. SIGNALING WIRING SHALL BE FOLLOWING MANUFACTURERS RECOMMENDATION PLUS 10% OF SPARE WIRING FOR FUTURE USE.

ALL ALARMS SIGNAL WIRING SHALL BE USING TWISTED PAIR CABLE IN EMT CONDUIT. SIGNAL WIRE SHALL BE PROVIDED AT LEAST FOUR PAIRS OF TWISTED WIRE AS SPARE

10: EQUIPMENT EXHAUST
MEDICAL GAS CONTRACTOR SHALL INCLUDE AS PART OF BASE BID THE PIPING REQUIRES FOR EXHAUST, AIR INTAKE OR RELIEF VENT FROM ANY MG SOURCE EQUIPMENT. CONTRACTOR SHALL INCLUDE THE BRAZING REQUIRES TO COMPLY WITH HURRICANE OR SEISMIC INSTALLATION.

11: EQUIPMENT CONTROLS
ALL MEDICAL GAS EQUIPMENT SHALL HAVE A CONTROL MODULE TO MONITOR STATUS PROVIDE LOCAL ALARMS AND REPORT TO MASTER ALARM. THE CONTROL MODULE SHALL BE SUPPLIED FROM UNIT MANUFACTURER AS PART OF THE BASE BID.

ALL ELECTRICAL WORK ASSOCIATED TO CONTROL SYSTEM SHALL FURNISH AND INSTALLED BY CONTROL CONTRACTOR. THE WORKS INCLUDES ARE BUT NOT LIMITED TO FURNISH AND INSTALL ALL 120V OR 208V TO CONTROL EQUIPMENT, WIRING COMPONENTS FOR CONNECTION TO MASTER ALARM SYSTEM AND CONNECTION OF EXISTING A/C CONTROL SYSTEM BMS AND/OR ETHERNET SYSTEM TO WEB CONTROL SYSTEM.

12:COMBINATION ZONE VALVE.
COMBINATION ZONE VALVE SHALL BE FACTORY SUPPLIED VALVED ALREADY INSTALLED IN BOX. REFER TO SCHEDULE FOR SPECS.

13: EQUIPMENT START-UP
THE CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SUPPLIER THE REQUIRED START-UP SERVICE. ANY SUPPLIER FEE REQUIRED FOR START-UP SHALL BE INCLUDED BY CONTRACTOR IN THE BID.

14: EQUIPMENT IDENTIFICATION
ALL EQUIPMENT AND COMPONENTS SHALL BE IDENTIFIED BY AS INDICATED IN SCHEDULE.

15: MEDICAL GAS STATION INLET/OUTLET
ALL PATIENT STATION REQUIRES A MEDICAL GAS OUTLET AS PER BID BASE. WHEN A STATION REQUIRES MEDICAL GAS FOLLOW FGI GUIDELINES TABLE 2.1-3 FOR OUTLET/INLET QUANTITY.

MEDICAL GAS CONTRACTOR SHALL PROVIDE SHOP DRAWING FOR OWNERS APPROVAL SHOWING MEDICAL GAS STATION FINAL LOCATION AND HEIGHT AT WALL OR MODULE. SEE OUTLET SCHEDULE FOR QUANTITY.

MEDICAL GAS DEMOLITION NOTES:
REV: JAN / 25

1: SCOPE OF WORK
CONTRACTOR SHALL REMOVE AND DISPOSE ALL EXISTING HEADWALL, GAS DISTRIBUTION PIPING, VALVE AND EQUIPMENT PRESENTLY SERVING THE AREAS TO BE REMODELED AS INDICATED ON DEMOLITIONS DRAWINGS.

2: PERMITS AND ENDORSEMENT
CONTRACTOR SHALL ISSUE AS PART OF THE BID BASE THE NECESSARY DEMOLITION PERMIT, CEST AND/OR PUI PLAN. ANY ASBESTOS AND LEAD STUDIES AND TAXES OR FEES OR ENDORSEMENT REQUIRED BY THE AGENCY SHALL BE INCLUDED BY CONTRACTOR IN ORDER TO PERFORM THE WORKS INDICATED IN DRAWINGS.

3: DEMOLITION SUBMITTAL
CONTRACTOR SHALL SUBMIT PRIOR TO BID PROPOSAL, THE METHODOLOGY AND PROCEDURE TO THE DEMOLITION ACTIVITY. SUBMITTAL SHALL INCLUDE THE DAYS, HOURS, SAFETY MEASURE, AND COORDINATION WITH OWNER TO PROTECT THE AREAS NOT INCLUDED IN THE SCOPE OF THE PROJECT. ANY CAP OR VALVE REQUIRED FOR PROPER OPERATION OF EXISTING LINES SHALL BE INCLUDED IN SUBMITTAL

4: ENVIRONMENTAL AWARENESS
THE CONTRACTOR SHALL INSPECT THE PROJECT AREA CONTINUOUSLY IN ORDER TO SEE IF ANY MATERIAL OR EQUIPMENT CAN BE CONSIDERED AS ENVIRONMENTAL OR A SAFETY HAZARD IS FOUND CONTRACTOR SHALL STOP THE DEMOLITION AND REPORT IMMEDIATE TO THE OWNER REPRESENTATIVE TO RECEIVE INSTRUCTIONS.

5: COORDINATION
SPECIAL COORDINATION WITH THE OWNER OR ITS REPRESENTATIVE. MUST BE TAKEN IN ORDER NOT TO DISRUPT THE OPERATION OF THE AREAS PRESENTLY USED.

CONTRACTOR SHALL COORDINATE WITH OWNER FOR ELECTRICAL AND MECHANICAL SHUTDOWN AFTER OPERATION HOURS. CONTRACTOR SHALL CONSIDER ANY REQUIRED OVERTIME IN HIS BID TO ACCOMPLISH THE JOB. NO OTHER EXTENSION TIME OR OVERHEAD FEES IS CONSIDERED AFTER PROJECT START.

6: DISPOSITION
ANY EXISTING GAS DISTRIBUTION SYSTEM TO BE REMOVED OR ABANDONED IN PLACES SHALL BE PROPERLY VALVED AND/OR CAPPED AT A POINT WHERE THEY WILL NOT DISTURB THE NEW CONSTRUCTION AND THE FUTURE OPERATION OF THE AREAS OR AS REQUESTED BY OWNER.

EQUIPMENT REMOVED SHALL BE DISPOSED OFF-SITE AT NO COST TO THE OWNER. THE CONTRACTOR SHALL PAY ANY FEE OR OBTAIN ANY PERMIT REQUIRED FOR DISPOSITION.

EQUIPMENT TO BE SAVED AS REQUIRED BY OWNER MUST BE PROPERLY PROTECTED AND STORED ADEQUATELY IN THE SPACE DESIGNATED BY THE OWNER.

7: CLEANING
THE CONTRACTOR SHALL REMOVE HIS CONSTRUCTION DEBRIS FROM THE PROJECT SITE WEEKLY AND DISPOSE OF IT PROPERLY ACCORDING TO CODES AND RULES OF THE SOLID WASTE AUTHORITY, THE PUBLIC SERVICE COMMISSION, ENVIRONMENTAL QUALITY BOARD AND OTHER GOVERNMENT AGENCIES RELATED IN ORDER TO REDUCE FIRE HAZARDS OR STRUCTURAL LOADING TO A MINIMUM.

ALL DIRT, RUBBISH, GREASE AND STAIN CAUSED BY THE DEMOLITION AND INSTALLATION OF THE MEDICAL GAS SYSTEM SHALL BE REMOVED, DISPOSE AND THE PREMISES SHALL BE LEFT CLEAN AND FREE OF ANY OBSTRUCTION OF MEDICAL GAS EQUIPMENT.

8: ENVIRONMENTAL PROTECTION
UNDER ANY CIRCUMSTANCES, THE CONTRACTOR DURING THE CONSTRUCTION ACTIVITY, SHOULD NOT INCURRED IN ANY ENVIRONMENTAL VIOLATION.

IF A SITUATION OCCURS, THE CONTRACTOR SHALL PAY AND RESTORE ANY DAMAGE AREAS. THE COST OF THIS CIRCUMSTANCES SHALL BE COVERED BY THE CONTRACTOR WITHOUT ANY CHANGE ORDER TO OWNER OR TIME EXTENSION TO CONTRACT FOR THIS PROJECT.

9: EQUIPMENT PROTECTION
THIS CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING EQUIPMENT, ROOFING SYSTEM AND WALLS IN THE AREAS WHERE THE DEMOLITION IS TO BE DONE. IF ANY EQUIPMENT OR MATERIAL IS DAMAGED DURING THE DEMOLITION ACTIVITY.

THE GENERAL CONTRACTOR SHALL REPLACE THE EQUIPMENT OR MATERIAL EQUAL TO THE DAMAGED ONES. THE COST OF THIS REPLACEMENT SHALL BE COVER BY THE GENERAL CONTRACTOR.

MEDICAL GAS PIPING NOTES:

REV: JAN / 25

1: PIPING DRAWINGS INTENTION
ALL MEDICAL GAS PIPING SHOWN ON DRAWINGS ARE PRESENTED IN SINGLE LINE. THE LINE REPRESENTS ALL GAS LINES REQUIRED FOR SERVICE AS PER TAG IDENTIFICATION. IN CASE OF DISCREPANCY REFER TO INTERPRETATION NOTES IN THIS DRAWING. THE PIPING SHALL INSTALLED USING AN APPROVED SHOP DRAWING.

THE DRAWING INTENTION MEAN THAT PIPING SHOWN IN ENTRANCE TO A ROOM SHALL BE FINAL CONNECTED TO THE RESPECTIVE HEADWALL OR BOOM LOCATED IN THE ROOM.

MEDICAL GAS PIPING NOTES (CONT.):

2: FIELD QUALITY

ALL CONTRACTOR'S PIPING INSTALLER SHALL MEET THE REQUIREMENTS OF ASSE 6010 FOR MEDICAL GAS PIPING. INSTALLATION. CONTRACTOR ASSE CERTIFICATION SHALL BE PROVIDED IN A SUBMITTAL PRIOR TO INSTALLATION. OWNER SHALL DESIGNATE A MEDICAL GAS INSPECTOR WITH THE ASSE 6020 CERTIFICATION TO VERIFY INSTALLATION TO BE COMPLIANCE WITH CODE

3: PIPING MATERIAL
ALL MATERIAL, ACCESSORIES, AND EQUIPMENT USED IN THE MEDICAL SYSTEM SHALL BE ACCORDING TO PIPING SCHEDULE AND NFPA 99-2022 SECTION 5.1.10.2.

4: MEDICAL GAS PIPING DIAMETER
CONTRACTOR SHALL INCLUDE AS PART OF THE EQUIPMENT SHOP DRAWING THE FINAL MEDICAL LINES DIAMETER BETWEEN SOURCE AND FINAL OUTLET FOR ENGINEER APPROVAL. CONTRACTOR SHALL FOLLOW DESIGN RECOMMENDATION FOR LINES DIAMETER ACCORDING TO PIPING SCHEDULE UNLESS OTHERWISE NOTICE IN DRAWINGS

5: PIPING LOCATION
THE PIPING ROUTE IN DRAWINGS SHOWS THE DESIGN INTENTION AND IS APPROXIMATE ONLY. FINAL AND EXACT ROUTE SHALL BE ILLUSTRATED IN THE CONTRACTOR SHOP DRAWINGS AND SUBMITTED FOR OWNERS APPROVAL.

- CONTRACTOR SHALL MAINTAIN THE MEDICAL GAS PIPING AS SHORT AND DIRECT AS POSSIBLE.

- THE CONTRACTOR SHALL RUN ALL PIPING AS HIGH AS POSSIBLE AND/OR CLOSE TO THE ROOF AND SHALL INSTALL SEISMIC BRAZING ACCORDING MANUFACTURERS RECOMMENDATION AND THE CODES.

6: PIPING HANGER

ALL PIPING HANGER SHALL BE UL/FM APPROVED AND SEISMIC SUPPORT ASCE-7 DESIGN MANUAL. PIPING SHALL FOLLOW MSS SP-58 FOR INSTALLATION. REFER TO SCHEDULE FOR SIZING AND SPECS. MEDICAL GAS PIPING SHALL NOT BE IN DIRECT CONTACT WITH HANGER SUPPORT. PROVIDE COPPER CLAMP OR NITRILE COVERED CLAMP.

7: PIPING SERVICE VALVE

ALL MAIN AND SUB MAIN MEDICAL GAS LINES BRANCH OFF THE RISER SHALL HAVE A DEDICATED SERVICE VALVE ADDITIONAL OF ONES SHOWN ON DRAWINGS. FINAL LOCATION SHALL BE SHOWN ON SHOP DRAWING. REFER TO SCHEDULE FOR VALVE SPECIFICATIONS.

WHEN A SINGLE SERVICE VALVE (SV) IS SHOWN DRAWINGS REFERS A DEDICATED SERVICE VALVE TO EACH MEDICAL GASES IN THE INDICATED LOCATION,

8: COMBINATION ZONE VALVE.
COMBINATION ZONE VALVE SHALL BE FACTORY SUPPLIED VALVED ALREADY INSTALLED IN BOX. REFER TO SCHEDULE FOR SPECS.

9: PIPING LABELS
ALL MEDICAL GAS PIPING SHALL IDENTIFIED AS INDICATED IN SCHEDULE AND DETAILS.

10: PIPING PAINTING
UNDER NO CIRCUMSTANCE MEDICAL GAS SHALL NOT BE PAINTED.

MEDICAL GAS INSTALLATION NOTES:
REV: JAN / 25

1. ELECTRICAL INSTALLATION
ALL ELECTRICAL WORK FOR THE OPERATION OF ALARMS AND MED GAS EQUIPMENT SHALL BE INSTALLED BY THE MEDICAL GAS CONTRACTOR. THE ELECTRICAL WORK INCLUDES BUT IS NOT LIMITED TO COORDINATE AND PROVIDE 120V TO ALL ALARM COMPONENTS, INTERLOCKING OF CONTROL DEVICES, WIRING AND CONNECTION OF SIGNALING CIRCUITS FROM SOURCE EQUIPMENT TO MASTER ALARM PANEL. CONNECTION TO ELECTRICAL SYSTEM SHALL BE AS FOLLOW.

1. ALL MEDICAL GAS MASTER AND AREA ALARMS PANELS SHALL BE CONNECTED TO LIFE SAFETY ELECTRICAL BRANCH

2. ALL MEDICAL GAS EQUIPMENT SHALL BE CONNECTED TO A EQUIPMENT ELECTRICAL BRANCH

3. PATIENT MEDICAL GAS HEADWALL ELECTRICAL RECEPTACLE SHALL BE CONNECTED FROM TWO DIFFERENT SOURCES (NORMAL AND CRITICAL) CRITICAL RECEPTACLES SHALL BE COLOR RED

2: PANEL INSTALLATION
ALL ALARM PANEL, HEADWALL AND ZONE VALVES BOX SHALL BE FACTORY NEW. FLUSH LOCATED IN WALL WITH NO EXPOSED PIPING AND WIRING. CONTRACTOR SHALL CONNECT ALL MEDICAL GAS EQUIPMENT TO THE EXISTING OR NEW MASTER ALARM

3: PIPING INSTALLATION
THE MEDICAL GAS SHALL BE INSTALLED USING NITROGEN PURGE AND BRAZED ACCORDING TO NFPA 99 SECTION 5.1.10.5.2

PIPING RUNNING UNDERGROUND SHALL RUN INSIDE A PVC CONTINUOUS CONDUIT. REFER TO DETAIL FOR SPECS AND DIMENSIONS

ALL PIPING OVER 2-1/2" Ø BE SEISMIC BRAZED ACCORDING TO SCHEDULE.

4: PIPE PENETRATION THRU WALL, ROOF OS SLAB
ALL CORE DRILLING MUST BE PRECEDED BY A GPR SCAN OF THE SLAB TO PREVENT DAMAGE TO ANY ELECTRICAL, FIRE ALARM, REINFORCEMENT MEMBERS, ETC.

ALL PIPING PENETRATION SHALL BE BORE CORED, GROUDED, SLEEVED AND SEALED AS INDICATING IN DETAIL. FIRE RATED WALL SHALL HAVE FIRE STOP AS SHOWN IN DETAIL. PIPING IN DIRECT CONTACT WITH CONCRETE IS NOT ACCEPTABLE. REFER TO ARCHITECTURAL DRAWING FOR WALL RATING AND LOCATION.

CONTRACTOR SHALL INCLUDES AS PART THE INSTALLATION COST, THE REMOTION AND DISPOSAL OF THE REFLECTED CEILING AND/OR GYPSUM BOARD REQUIRED TO ACCESS THE EQUIPMENT OR COMPONENT TO BE INSTALLED OR REPLACED. CONTRACTOR SHALL ALSO INCLUDES THE RE-INSTALLMENT TO ORIGINAL OR THE SPECIFIED CEILING CONDITION AND/OR GYPSUM BOARD AFFECTED DUE TO THIS WORKS.

5: ACCESS DOOR
ALL MEDICAL GAS SERVICE VALVES LOCATED OVER A GYPSUM BOARD CEILING SHALL HAVE AN ACCESS DOOR UNDER OR NEAR THE VALVE FOR INSPECTION AND MAINTENANCE PURPOSE. ACCESS DOOR SHALL BE AS INDICATED IN SCHEDULE OR SIMILAR AND LOCATION SHOWN IN MEDICAL GAS SHOP DRAWING.

6: MEDICAL GAS MASTER ALARM PANEL
CONTRACTOR SHALL FURNISH, INSTALL AND COORDINATE THE WIRING CONNECTION OF ALL MEDICAL GAS EQUIPMENT FROM THE EQUIPMENT LOCAL ALARM PANEL TO THE EXISTING OR NEW MASTER ALARM PANEL AS PART OF BASE BID. IN CASE THAT FACILITIES DOES NOT HAVE MASTER ALARM PANEL IT WILL BE NOTIFIED TO HOSPITAL ENGINEER FOR FUTURE ACTIONS TO PROCEED. REFER TO NFPA 99 TABLE A-5.1.9.2. FOR ALARM NAMES TAG AND QTY OF CONNECTIONS PER MEDICAL GAS EQUIPMENT.

7: SYSTEM SHUTDOWN
CONTRACTOR SHALL PROVIDE ANY TEMPORARY PIPING CONNECTION AND/OR PROVIDE PORTABLE MEDICAL GAS SYSTEM OR CYLINDER TO MAINTAIN THE EXISTING MEDICAL GAS SYSTEM OPERATIONAL DURING THE SYSTEM SHUTDOWN AND BREACHING TO EXISTING SYSTEM.

CONTRACTOR SHALL PRESENT SHUTDOWN AND INTERCONNECTION PLAN WITH OWNERS DESIGNED INSPECTOR PRIOR TO ANY MEDICAL GAS SYSTEM SHUTDOWN.

8: PIPING AND VALVE IDENTIFICATIONS
ALL PIPING SHALL BE IDENTIFIED AND PLACE AS PER SCHEDULE AND DETAILS. PIPE LABELS SHALL BE COLOR CODED ACCORDING TO NFPA 99 TABLE 5.1.11.

ALL VALVES SHALL BE IDENTIFIED AS SHOWN IN SCHEDULE. PROVIDE SPECIAL NOTE IN LABEL INDICATING "CAUTION TO NOT CLOSE OR OPEN THE VALVE EXCEPT IN AN EMERGENCY". VALVES LOCATED OVER HUNG CEILING REQUIRES A LABEL ON THE NEAREST WALL INDICATING MEDICAL GAS SERVICE VALVE

9: MEDICAL GAS VERIFICATION TESTING
THE MEDICAL GAS CONTRACTOR SHALL ENGAGE THE SERVICES OF AN INDEPENDENT ASSE 6030 CERTIFIED THIRD PARTY CONTRACTOR TO PERFORM ALL VERIFICATION AND ACCEPTANCE TEST IN STRICT ACCORDANCE TO NFPA 99 SECTION 5.1.12.2. SYSTEM NOT VERIFIED SHALL NOT BE PUT IN SERVICE.

CONTRACTOR SHALL PERFORM TO ALL MEDICAL GAS INSTALLATION TEST PRIOR TO SYSTEM VERIFICATION. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL ANY VALVE OR EQUIPMENT REQUIRED BY VERIFIER CONTRACTOR FOR ACCEPTANCE TEST.



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PROJECT OWNER

CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME
MEDICAL GASES
NOTES

ISSUE FOR:

PRELIMINARY DRAWINGS

TAG	REVISION NAME	DATE
△	REVISION	MM/DD/YY



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PROJECT OWNER

CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

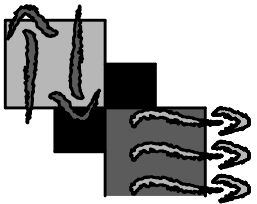
DRAWING NAME
DOMESTIC WATER &
SANITARY LAYOUT PLAN

ISSUE FOR:

PRELIMINARY DRAWINGS

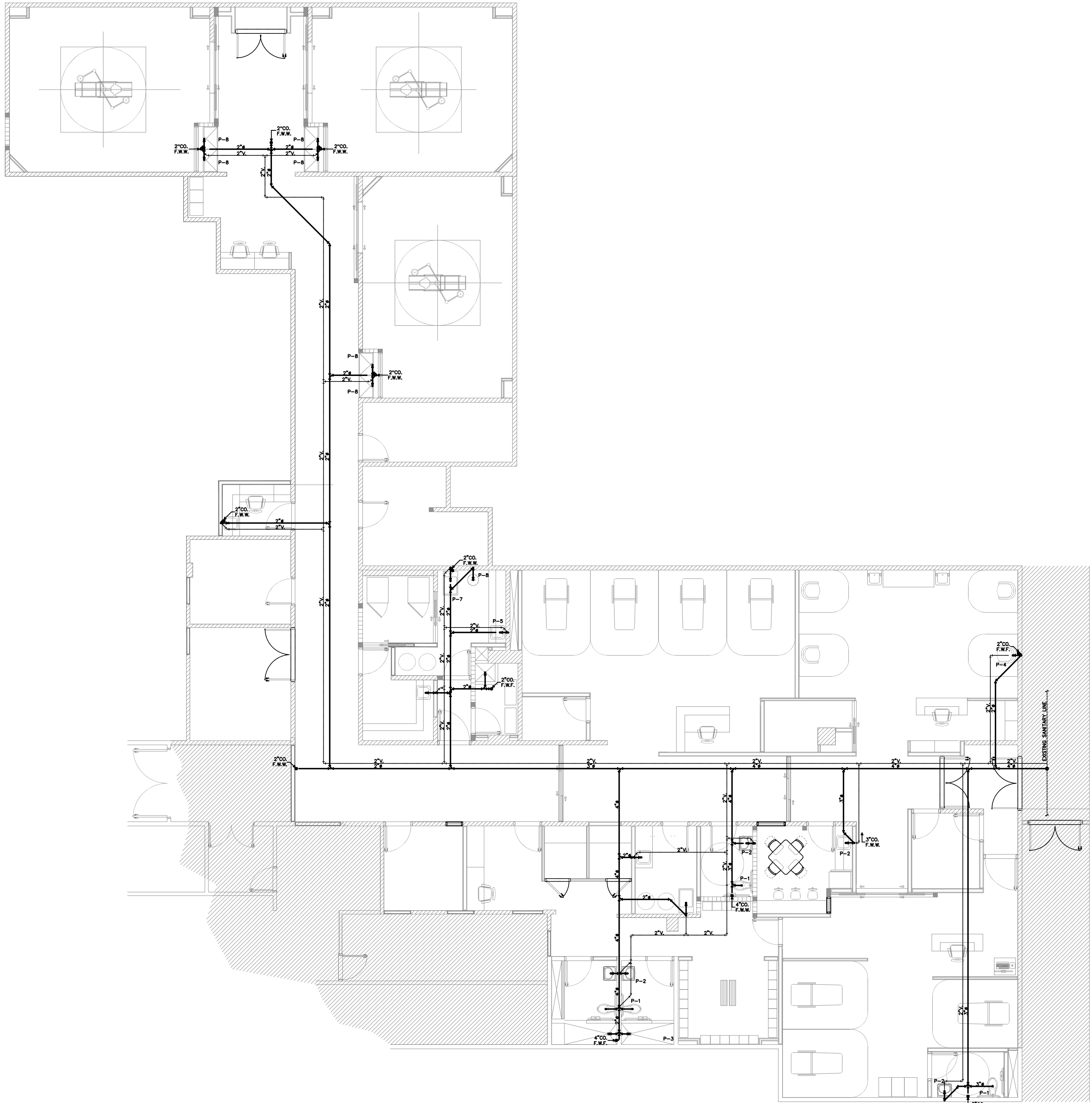
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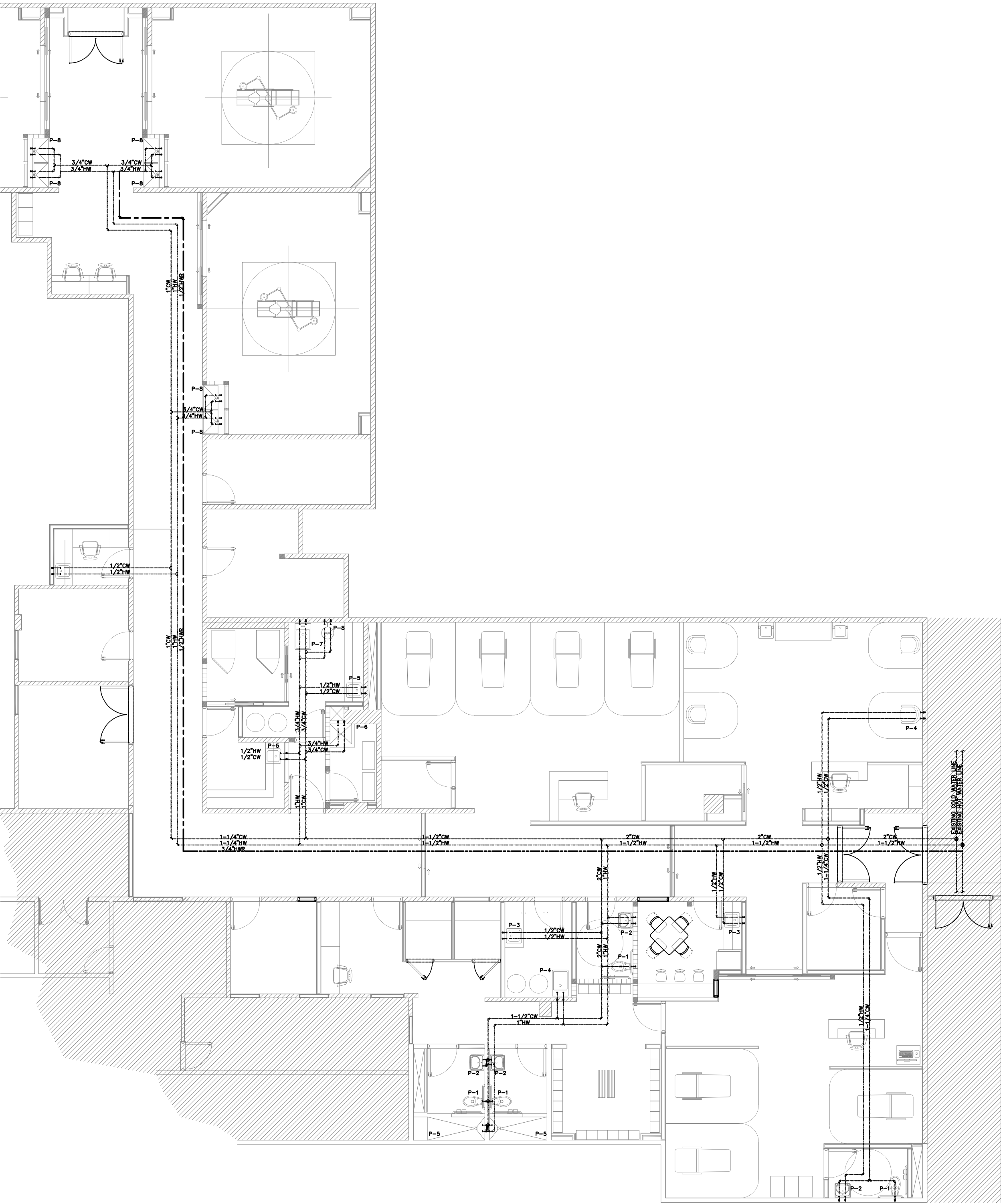
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SANITARY LAYOUT PLAN

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



DOMESTIC WATER LAYOUT PLAN

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

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4

3

2

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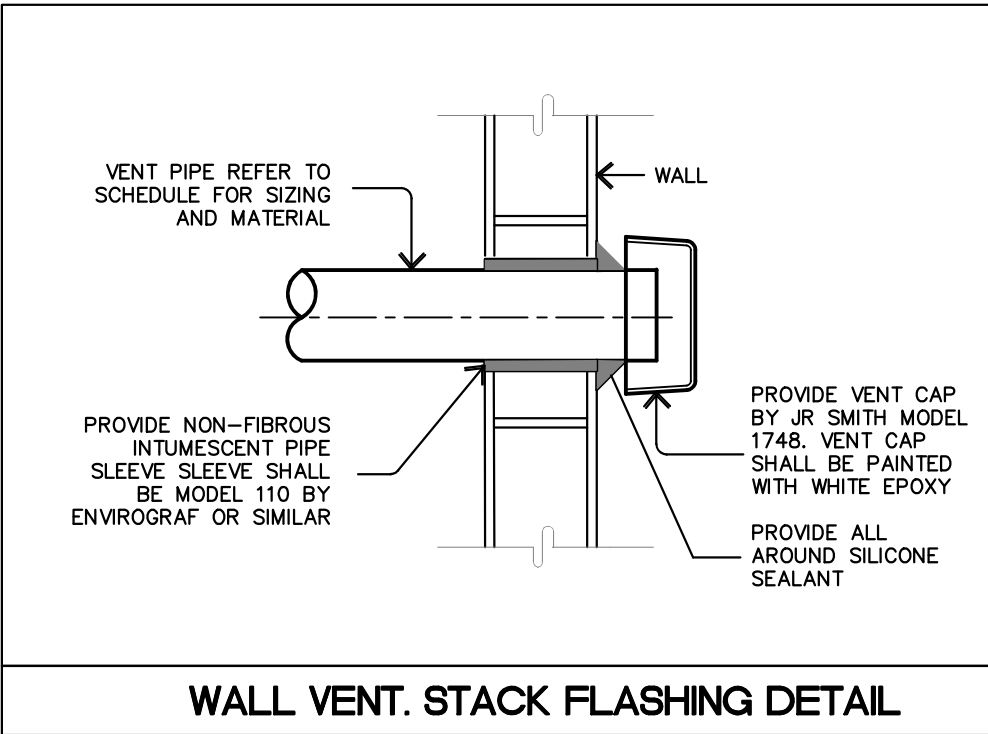
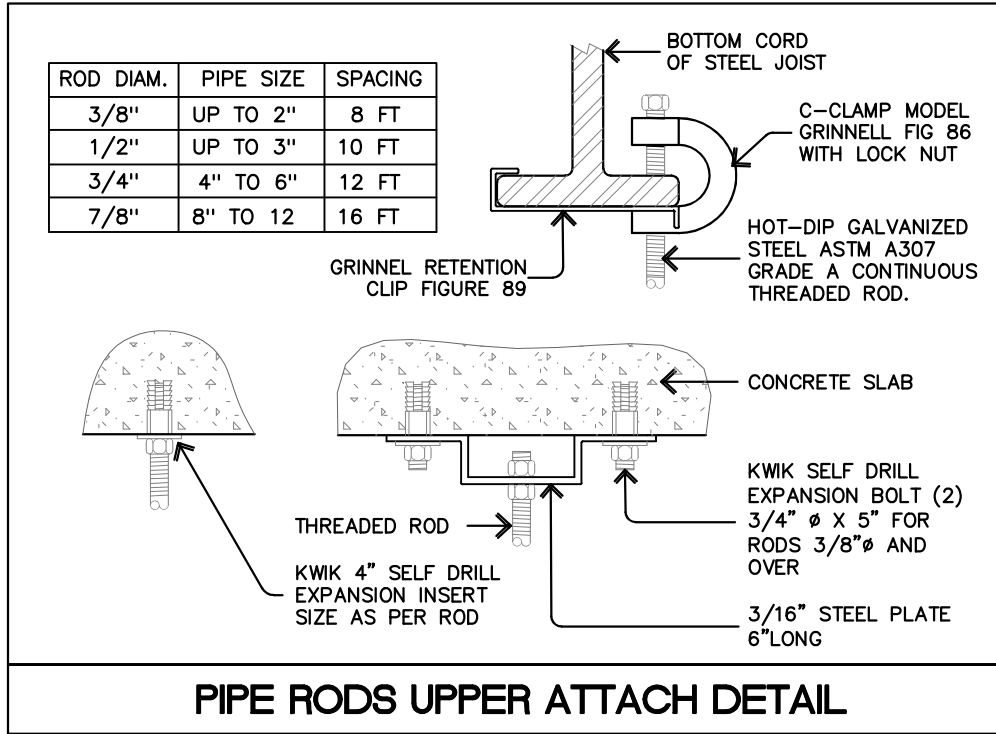
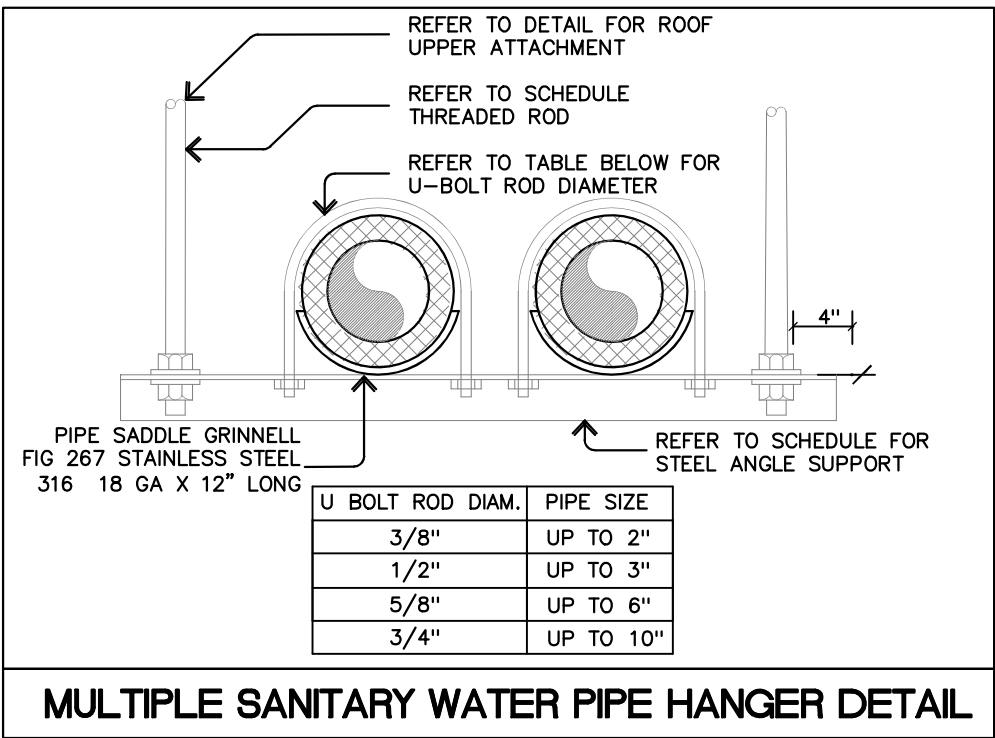
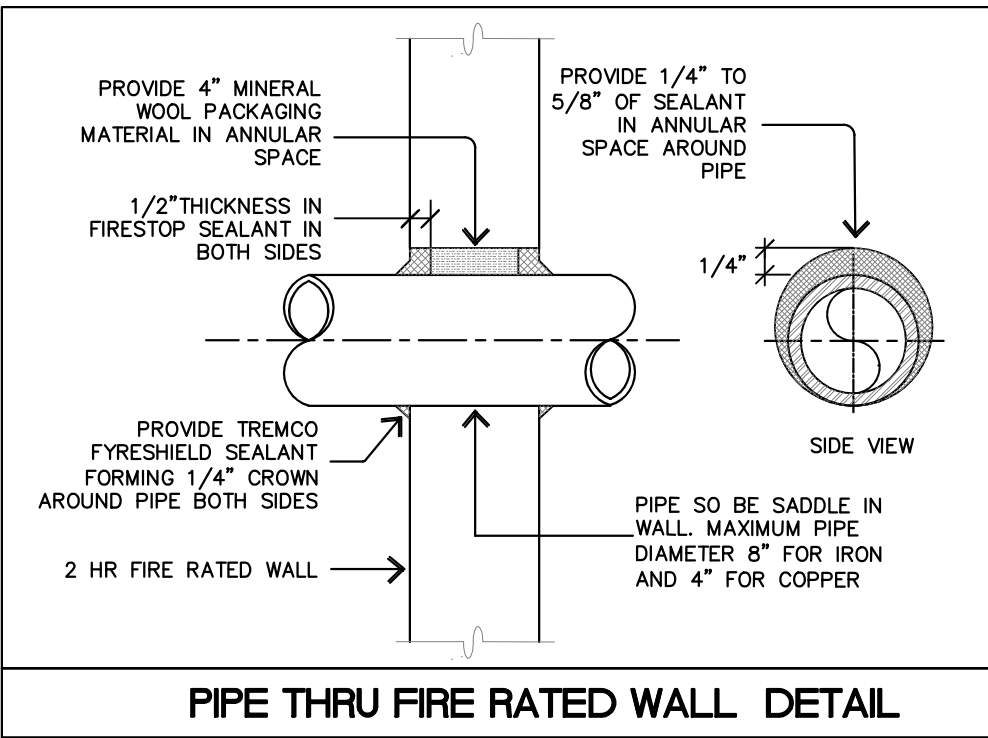
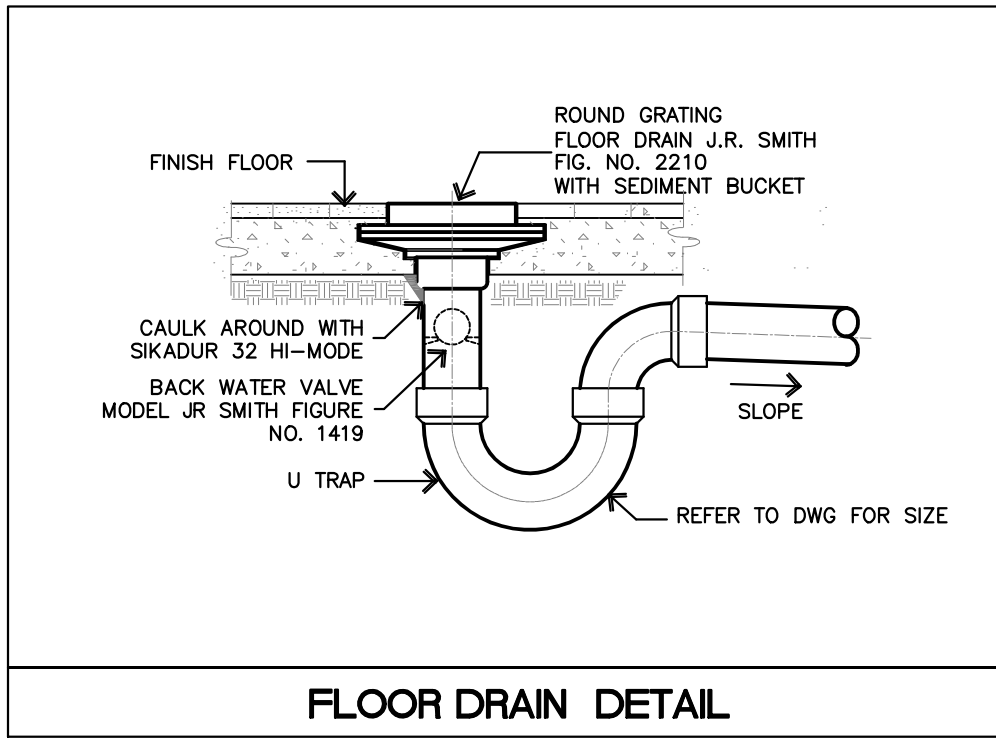
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THESE DRAWINGS DETAILS INTENT IS TO FOCUS IN THE EQUIPMENT ASSEMBLY AND COMPONENT ARRANGEMENT TO FULFILL THE CODE REQUIREMENTS. THEREFORE FOR "INTENT" MEANS THAT EQUIPMENT, COMPONENTS OR MATERIAL NOT SHOWN ON DETAILS BUT REQUIRED FOR INSTALLATION AND/OR OPERATION SHALL BE INCLUDED FOR BID QUOTATION. REFER TO THE FACTORY MANUAL FOR ANY EQUIPMENT OR COMPONENT INSTALLATION DETAILS AND INSTRUCTIONS FOR OPERATION.

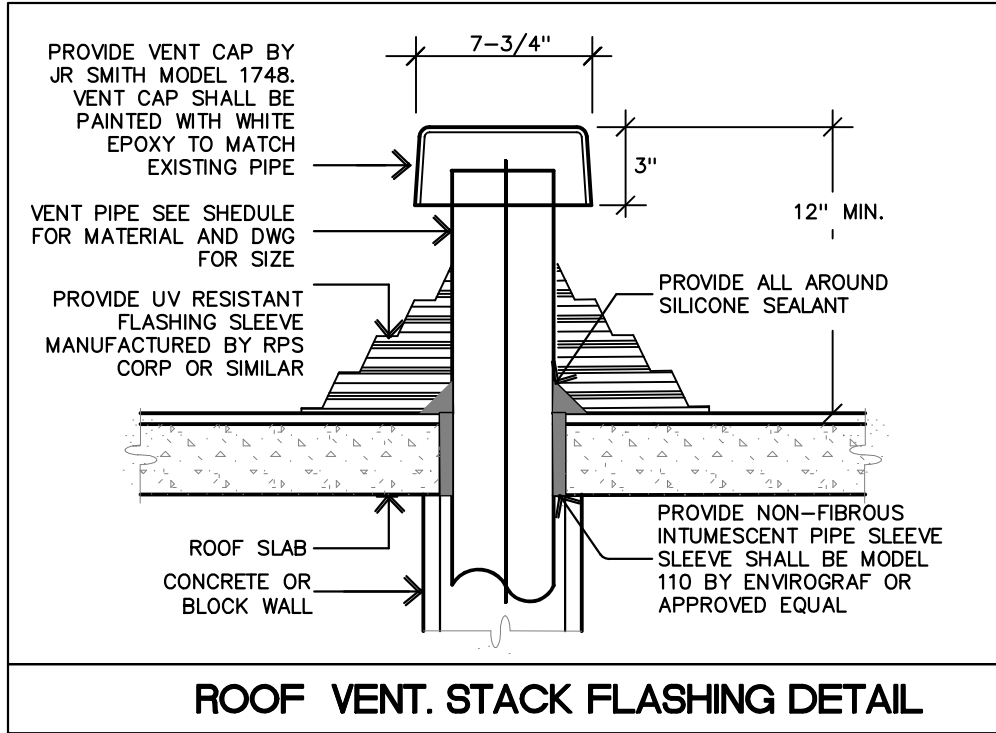
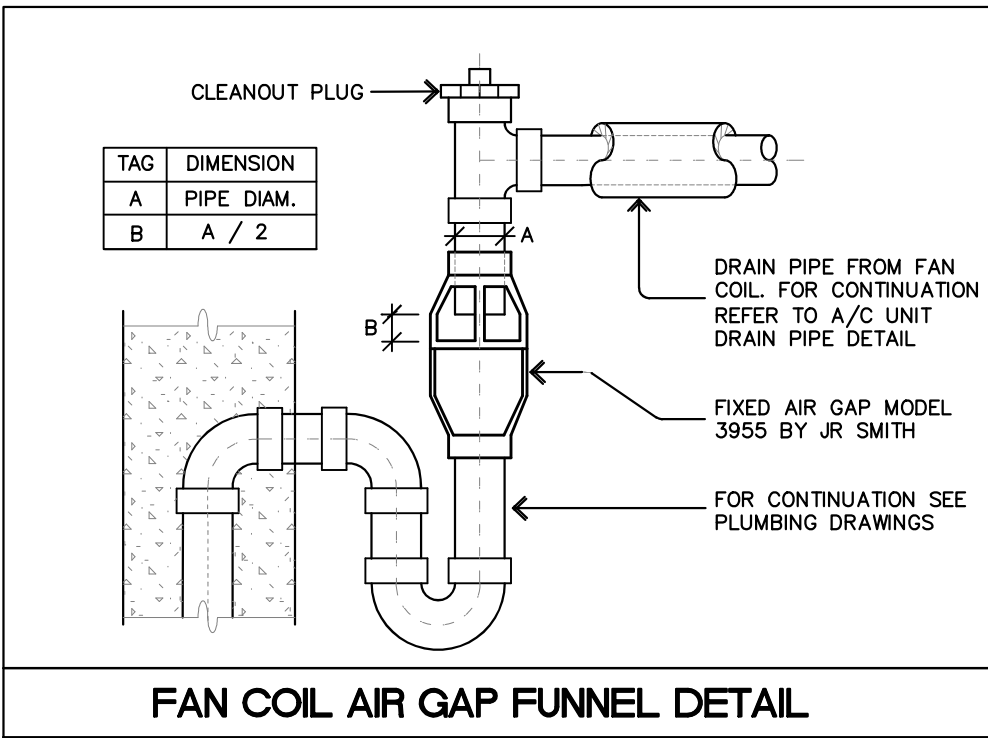
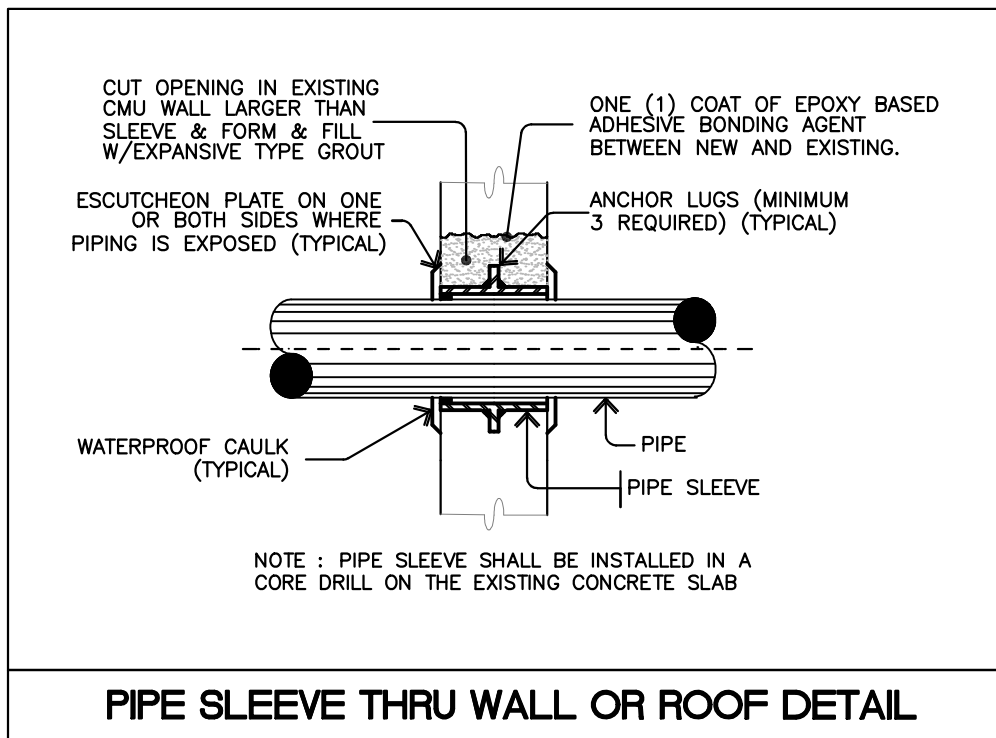
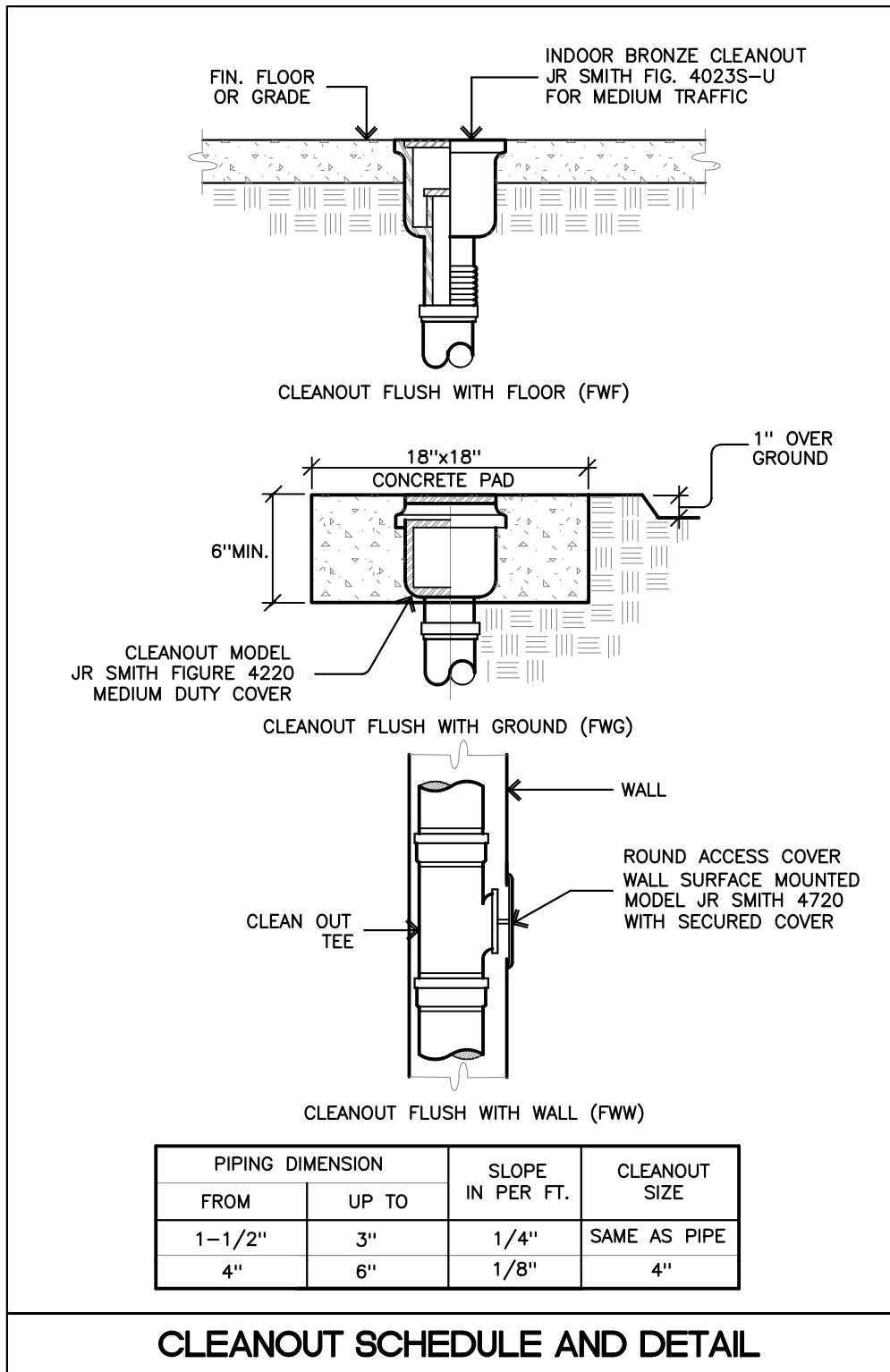
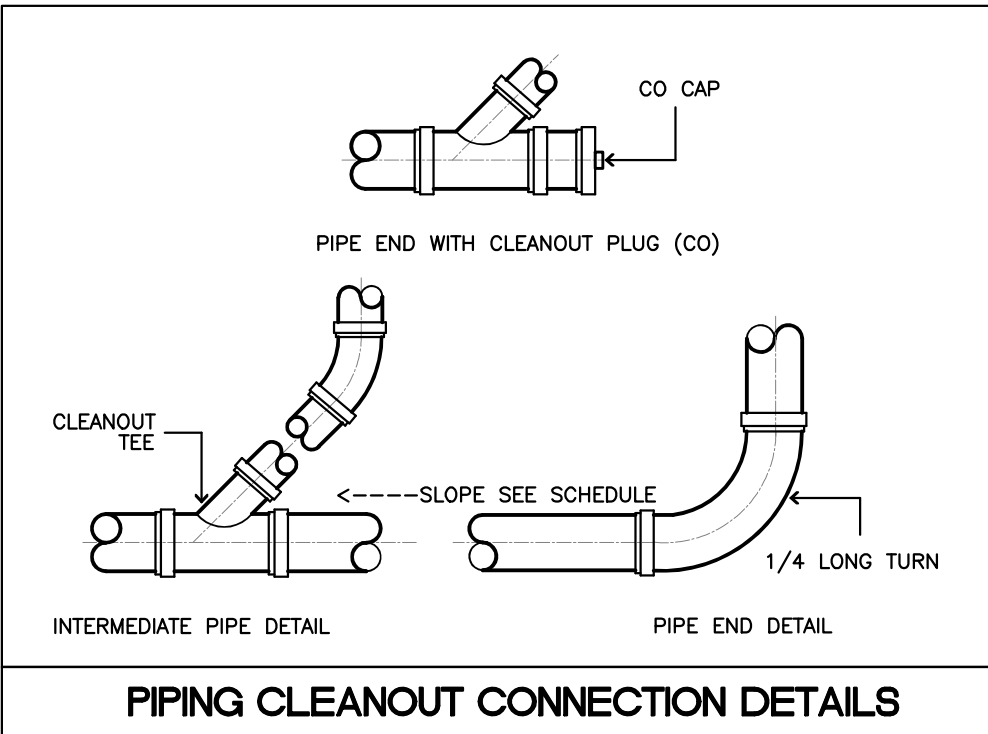
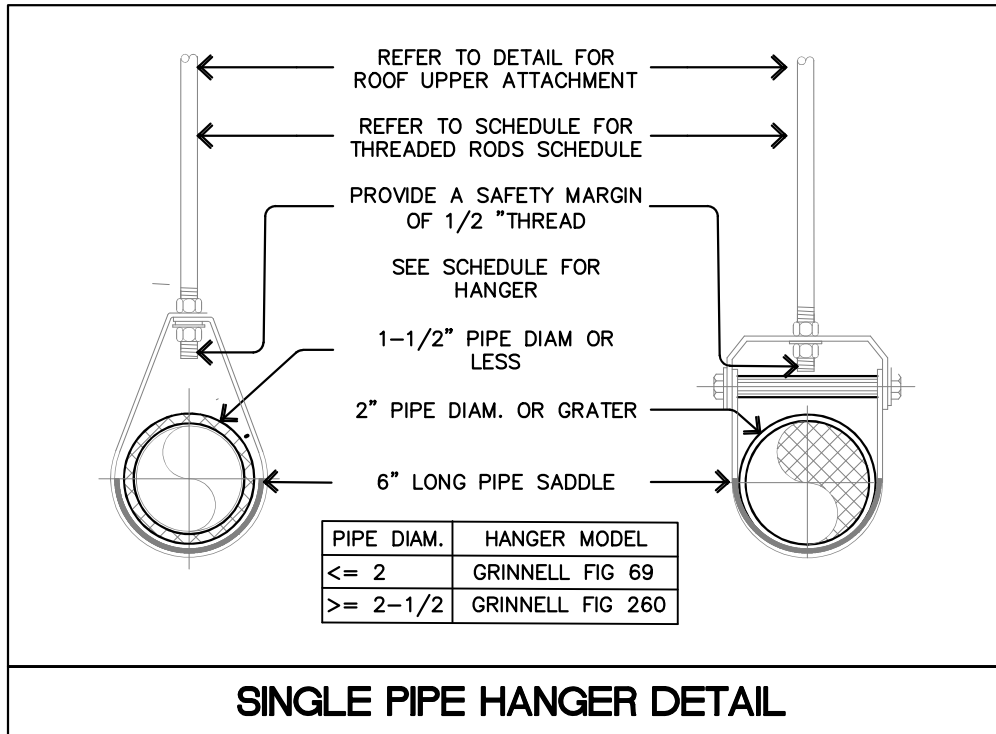
ALL EQUIPMENT OR COMPONENTS SELECTION SHOWN ON DETAILS ARE BASE BID. SIMILAR ITEM CAN BE SUBMITTED. REFER TO BASE BID CLAUSE FOR ADDITIONAL INFORMATION FOR ALTERNATE COMPONENTS OR EQUIPMENT.

ALL COMPONENTS SHOWN ON DETAILS SHALL BE NEW AND UL CERTIFIED AND INCLUDED IN THE SUBMITTAL FOR ENDORSEMENT. DETAILS ARE NOT TO SCALE AND DIMENSION SHOWN ARE IN INCHES UNLESS OTHERWISE NOTIFY.

ANY EQUIPMENT NOT REQUIRED FOR INSTALLATION, DETAILS THAT APPLIES IS FOR REFERENCE ONLY. IN CASE OF DISCREPANCY BETWEEN DETAILS, NOTES AND DRAWINGS REFER TO INTERPRETATION CLAUSE IN MECHANICAL NOTES FOR FURTHER ACTION.

REFER TO MECHANICAL GENERAL NOTES AND SCHEDULES FOR EQUIPMENT SPECS AND ADDITIONAL INFORMATION.

GENERAL NOTES FOR ALL DETAILS



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PROJECT OWNER

CONSULTANT

PROJECT NAME
**HURRA
PROPOSED TEMPORARY
OPERATING ROOM**

LOCATION

BAYAMON, PUERTO RICO

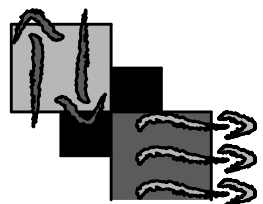
DRAWING NAME
PLUMBING DETAILS

ISSUE FOR:

PRELIMINARY DRAWINGS

TAG	REVISION NAME	DATE
△	REVISION	MM/DD/YY

P-2



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PUMPING EQUIPMENT NOTES

REV: JAN / 24

EQUIPMENT LOCATION

ALL EQUIPMENT SHALL BE INSTALLED IN THE LOCATION APPROVED IN THE SHOP DRAWING AND INSTALLER SHALL MAINTAIN UNIT SPACE CLEARANCE RECOMMENDED BY MANUFACTURER.

EQUIPMENT CERTIFICATION

ALL PUMPING EQUIPMENT SHALL BE NEW FROM FACTORY, UL LISTED AND ARI CERTIFIED.

OUTDOOR EQUIPMENT REQUIREMENT

ALL PUMPING EQUIPMENT IN SCHEDULE THAT WILL BE LOCATED OUTDOOR SHALL COMPLIES WITH SEISMIC ZONE 3 AND SHALL SUSTAIN 145 MPH HURRICANES WINDS AS INDICATED IN PUERTO RICO BUILDING CODES. THIS COMPLIANCE CERTIFICATION SHALL BE INCLUDED IN THE EQUIPMENT SUBMITTAL. REFER TO DETAILS FOR ANCHORING HVAC UNITS AND COMPONENTS.

EQUIPMENT CONCRETE PADS

ALL EQUIPMENT UNDER THIS PROJECT INSTALLED IN DIRECT CONTACT TO FINISH FLOOR IS NOT ACCEPTABLE. THE CONCRETE PAD DIMENSIONS ON DRAWINGS ARE APPROXIMATE AND IS FOR BID PURPOSE. CONTRACTOR SHALL PREPARE A SHOP DRAWING TO SHOW THE PAD FINAL DIMENSIONS WITH THE APPROVED EQUIPMENT SUBMITTAL DIMENSION AND CLEARANCE. THE PROPOSED EQUIPMENT IN SCHEDULE SHALL BE INSTALLED OVER FINISH FLOOR AS FOLLOW:

- A. FOR INTERIOR EQUIPMENT – 4" 3000 PSI CONCRETE PAD. REFER TO DETAIL FOR SPECS.
- B. FOR EXTERIOR EQUIPMENT – 6" CONCRETE PAD OR A PREFABRICATED ROOF CURB. REFER TO DETAIL FOR SPECS.
- C. ALL EXPOSED OR OUTDOOR UNITS SHALL BE ANCHOR TO CONCRETE PAD WITH EXPANSION BOLTS FOLLOWING UNIT FACTORY RECOMMENDATIONS. REFER TO DETAILS FOR ANCHOR SELECTION.
- D. OUTDOOR UNITS SHALL BE ANCHORED WITH 1/4" STEEL CABLE TO PREVENT OVERTURNING BY WIND.

CONTRACTOR SHALL EVALUATE BY AN STRUCTURAL ENGINEER LICENSED IN PUERTO RICO THE CONDITIONS OF THE EXISTING ROOF SLAB PREVIOUS TO ANCHORING AND REPORT TO OWNER FOR ANY ACTION REQUIRED.

NOISE AND VIBRATION

CONTRACTOR SHALL PROVIDE ATTENUATION DEVICE OR CONTROL TO ANY UNACCEPTABLE NOISE (> 85db) OR VIBRATION CAUSED IN THE EQUIPMENT, PIPING OR DUCTS.

EQUIPMENT INSTALLATION

CONTRACTOR SHALL ASSEMBLY IN SITE ANY EQUIPMENT THAT ARRIVES SECTIONALIZED FROM MANUFACTURER AND SHALL PROVIDE CRANE SERVICE TO LOCATE EQUIPMENT IN THE FINAL POSITION.

ELECTRICAL INSTALLATION

ALL PUMPING SYSTEM INDICATED IN SCHEDULE SHALL INCLUDE A DISCONNECT SWITCH AND/OR COMBINATION STARTER, WIRING AND CONDUIT AS PART OF BID BASE WHENEVER IS SHOWN ON DRAWINGS OR NOT. IN CASE OF DISCREPANCY REFER TO INTERPRETATION CLAUSE. ALL SWITCH OR STARTER LOCATED OUTDOOR SHALL BE NEMA 3R.

THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR THE EXACT VOLTAGE, BREAKER, FUSE AND WIRING REQUIRED FOR EQUIPMENT PROPOSED. FINAL VOLTAGE SHALL BE CONFIRMED WITH ELECTRICAL DRAWINGS. ANY DISCREPANCY BETWEEN ELECTRICAL AND PLUMBING DRAWINGS SHALL FOLLOW INTERPRETATION CLAUSE. CONTRACTOR SHALL NOT PROVIDE SUBMITTAL OR FURNISH ANY EQUIPMENT UNTIL CLARIFICATION IS SUBMITTED.

MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL WIRING AND ELECTRICAL PIPING TO PROPOSED PUMPING EQUIPMENT FROM DISCONNECT SWITCH INSTALLED BY ELECTRICAL CONTRACTOR.

EQUIPMENT CONTROLS

ALL PUMPING SYSTEM THAT CONTROL WATER TEMPERATURE INDICATED IN SCHEDULE SHALL INCLUDE A TEMPERATURE CONTROL MODULE AS PART OF BID BASE WHENEVER IS SHOWN ON DRAWINGS OR NOT. IN CASE OF DISCREPANCY REFER TO INTERPRETATION CLAUSE. THE CONTROL MODULE SHALL BE SUPPLIED BY UNIT MANUFACTURER AND CONNECTED TO EXISTING CONTROL SYSTEM AS PART OF THE BASE BID. REFER TO CONTROL DRAWING AND NOTES FOR SPECIFICATIONS.

EQUIPMENT START-UP

THE CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SUPPLIER THE REQUIRED START-UP SERVICE. ANY SUPPLIER FEE REQUIRED FOR EQUIPMENT START-UP SHALL BE INCLUDED BY CONTRACTOR IN THE BID.

EQUIPMENT IDENTIFICATION

ALL EQUIPMENT AND COMPONENTS SHALL BE IDENTIFIED BY A UNIT TAG BY THE FOLLOWING:

- EQUIPMENT – 3" BLACK PAINTED STENCIL LABEL AND TAG SIMILAR TO SETONGUARD ASSET ID LABEL
- COMPONENTS – 2"Ø ROUND STAINLESS STEEL 304 GAGE 20 TAG SHOWING NAME AND USE SIMILAR TO SETON CUSTOM STAMPED VALVE

PLUMBING SPECIAL NOTES

REV: JAN / 24

PLUMBING SCOPE

CONTRACTOR AS PART OF THE BASE BID SHALL REPLACE ALL PLUMBING EQUIPMENT WITH THE ONES REFER IN SCHEDULE.

DEMOLITION

ALL PLUMBING EQUIPMENT TO BE REMOVED UNDER THIS PROJECT SHALL BE DISPOSE BY THE CONTRACTOR AS PART OF THE BASE BID. ANY FEE, TAX OR COST RELATED TO DISPOSITION SHALL BE INCLUDED AS PART OF BID. THE PLUMBING PIPING WILL BE REUSE IN THIS PROJECT.

VALVES

CONTRACTOR SHALL INCLUDE AS PART OF THE BASE BID THE THE VALVES FOR ALL EQUIPMENT REPLACED AND SHALL INCLUDE ANY COMPONENTS FOR EQUIPMENT CONNECTION.

INSULATION

HOT WATER LINES INSULATION SHALL DEMOLISH AND REPLACE BY THE ONES SHOWN ON SCHEDULE

PLUMBING PIPE MATERIAL SCHEDULE

TYPE OF SERVICE	DIAMETER (IN)		PIPING MATERIAL SPECIFICATIONS		FITTING CHARACTERISTICS
	MIN	MAX	ABOVEGROUND	UNDERGROUND	
POTABLE WATER HOT OR COLD	1/2	2	RIGID COPPER TYP. L SEAMLESS ASTM B88	RIGID COPPER TYP. K SEAMLESS ASTM B88	WELDED OR VIEGA PROPPRESS
	2-1/2	8	DUCTILE CAST IRON AWWA C-151		
SANITARY WASTE VENTILATION	2	6	PVC SCH 40 DR22 ASTM D2665	SDR 14-PR ASTM F-714	GLUE OR COMPRESSIONS WELDED

HOT WATER INSULATION SCHEDULE

TEMP. RANGE F	DIAMETER (IN)		INSULATION CHARACTERISTICS			INSULATION FINISH		
	MIN	MAX	THICKNESS	K VALUE	MATERIAL TYPE	EXTERIOR	INTERIOR	INT. EXPOSED
100 F TO 120F	1/2	1-1/2	1"	0.14 BTU-IN/FT-H AT 75 F	POLY-ISOICIANURATE	6 OZ. CANVAS WITH MON ECO 55-10 & 60-25 MASTIC AND 0.16" ALUM. ALLOY JACKET WITH VAPOR BARRIER FOL	MON ECO MASTIC 60-25 WHITE FINISH WITH VAPOR BARRIER FOL	MON ECO 60-25 MASTIC AND PVC JACKET AND VAPOR BARRIER FOL
	2	4						
	6"	8						

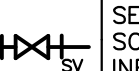
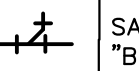
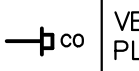
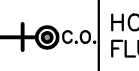
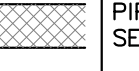
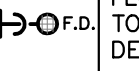
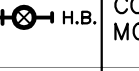
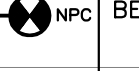
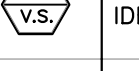
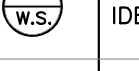
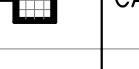
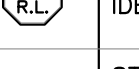
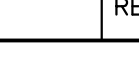
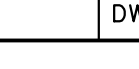
PIPING TRAPEZE HANGER SCHEDULE

PIPE DIMENSION FROM	PIPE DIMENSION UP TO	ROD DIAM. IN.	HANGER SPAING		ANGLE SIZE	NOTES
			PVC	CORR. / IRON		
1/2"	2"	3/8	4 FT	8 FT	1-1/2" x 1-1/2" x 1/8"	APPLIES ONLY FOR TWO PIPES IN PARALLEL RUN
2"	4"	1/2	6 FT	10 FT	2" x 2" x 1/4"	
6"	8"	5/8	10 FT	10 FT	2-1/2" x 2-1/2" x 3/16"	HANGER MATERIAL SHALL BE ASTM A1011 SS GRADE 33 STRUCTURAL STEEL WITH ONE COAT RUST ENAMEL PAINTING
10"	12"	3/4"	10 FT	10 FT	3" x 3" x 1/4"	
14"	16"	1"	10 FT	10 FT	3-1/2" x 3-1/2" x 1/4"	
18"	18"	1-1/4"	10 FT	10 FT	4" x 4" x 5/16"	

PLUMBING ABBREVIATURE TABLE

TAG	DESCRIPTION	TAG	DESCRIPTION
FWG	FLUSH WITH GRADE	Ø"	DIAMETER IN INCHES
FWF	FLUSH WITH FLOOR	SV	SERVICE VALVE
FWW	FLUSH WITH WALL	FD	FLOOR DRAIN
CW	COLD WATER SUPPLY	RD	ROOF DRAIN
HW	HOT WATER SUPPLY	RL	RAIN LEADER
HWR	HOT WATER RETURN	VS	VENT STACK
WH	WATER HEATER	WS	WASTE STACK

PLUMBING LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SERVICE VALVE REFER TO VALVE SCHEDULE AND DETAIL FOR MODEL INFORMATION		SANITARY 90 DEGREE ELBOW "BOSTON Y" TYPE.
	VERTICAL CLEAN OUT LINE AND PLUG FLUSH TO WALL LINE SIZE		HORIZONTAL CLEAN OUT PLUG FLUSH TO FLOOR LINE SIZE
	PIPING TO BE DEMOLISH AND DISPOSE. SEE PLUMBING DEMOLITION NOTES		FLOOR DRAIN HEAVY DUTY REFER TO DWG FOR AND REFER TO DETAIL FOR MODEL
	COLD WATER BRASS 1/2" HOSE BIBB MODEL MURDOCK 8120.		NEW POINT OF CONNECTION BETWEEN NEW AND EXISTING PIPE
	SANITARY VENTILATION STACK IDENTIFICATION AND DIAMETER		SANITARY WASTE STACK IDENTIFICATION AND DIAMETER
	CATCH BASIN MODEL ZURN Z887 24X24		RAIN LEADER STACK IDENTIFICATION AND DIAMETER
	VENTILATION PIPE. FOR DIAMETER REFER TO PLUMBING DWG.		STORM DRAIN PIPING. FOR DIAMETER REFER TO PLUMBING DWG.

SERVICE VALVE SCHEDULE

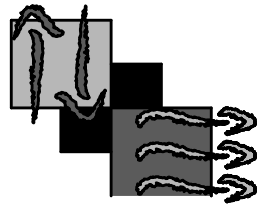
TYPE OF SERVICE	DIAM. (IN)		VALVE CHARACTERISTICS	MODEL
	MIN	MAX		
POTABLE WATER HOT OR COLD	1/2	3	CAST BRONZE 2 PC. BALL VALVE FULL PORT. LOCK LEVER, ST. STEEL HANDLE. NFS 61 COMPLIANT	MILWAUKEE UPB4100
	4	8	CAST IRON GATE VALVE FULL PORT, NON RISING STEM AND NFS 61 COMPLIANT 250 PSI	MILWAUKEE F-2882

PLUMBING FIXTURE SCHEDULE

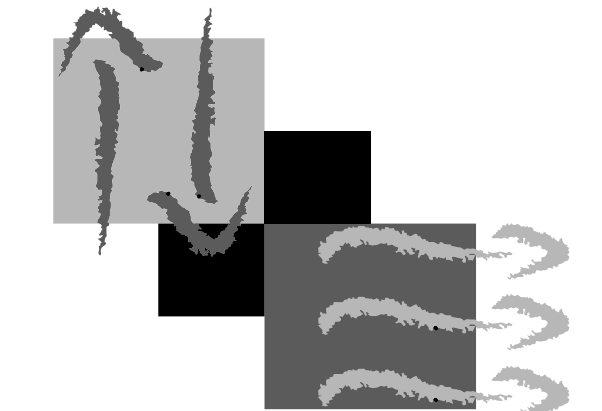
TAG	DESCRIPTION	PIPE DIAMETER IN.				REMARKS
		WASTE	VENT	COLD	HOT	
P-1	WATER CLOSET	3Ø	2Ø	1/2Ø		REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURES MODEL AND SPECIFICATIONS.
P-2	LAVATORY	1-1/2Ø	1-1/2Ø	1/2Ø	1/2Ø	
P-3	SHOWER	2Ø	1-1/2Ø	1/2Ø	1/2Ø	
P-4	SINK	2Ø	1-1/2Ø	1/2Ø	1/2Ø	
						FOR EQUIPMENT NOT LISTED REFER TO IPC 2018 TABLE 709.1 FOR TRAP SIZE

ACCESS DOOR SCHEDULE

SERVICE	SIZE MIN.	ACCESS DOOR SIZE	MODEL SELECTION
PIPE & VALVE	12"x12"	CUSTOM SIZE EQUAL TO 2 TIMES THE DIAMETER OF PIPING TO BE SERVED	ACUDOR DW-5058
CLEANOUT	12"x12"	SIZE EQUAL TO 3 TIMES THE DIAMETER OF THE PLUG TO BE SERVED	



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PLUMBING GENERAL NOTES

REV. JAN / 24

1: DESIGN INTENTION
THESE MECHANICAL DRAWINGS SHOWS THE COMPLETE DESIGN CONCEPT AND INTENT TO FULFILL THE CODE REQUIREMENTS. THEREFORE FOR "COMPLETE" MEANS THAT ANY EQUIPMENT, COMPONENTS OR MATERIAL NOT SHOWN ON DRAWINGS BUT REQUIRED FOR INSTALLATION AND/OR OPERATION SHALL BE INCLUDED AS PART OF THESE BID QUOTE. FOR "INTENT" MEANS THAT PLUMBING EQUIPMENT THAT SHALL NEED WATER AND SANITARY SERVICE FOR THE PROPER OPERATION SHALL HAVE DISTRIBUTION LINES AND WASTE LINES WHENEVER IS NOT SHOWN ON DRAWINGS.

PLUMBING NOTES SHOWN ARE FOR WATER AND SANITARY SYSTEMS. IF ANY OF SYSTEM IS NOT REQUIRED FOR INSTALLATION, SYSTEM NOTES THAT NOT APPLIES IS FOR REFERENCE ONLY AND THE REMAINING NOTES CONTINUE AS INDICATED. GENERAL NOTES, EQUIPMENT, DEMOLITION AND PLUMBING PIPING APPLIES FOR BOTH SYSTEMS.

2: SCOPE OF WORK
DESIGN DOCUMENTS ARE FOR CONTRACTOR TO PROVIDE ALL EQUIPMENT, LABOR, MATERIAL & SERVICES FOR THE COMPLETE EXECUTION OF THE PLUMBING SYSTEM INSTALLATION & PERFORMANCE AS CALLED FOR ON PLANS AND/OR AS DESCRIBED HEREIN.

ALL EQUIPMENT SHOWN ON ARCHITECTURAL SCHEDULE THAT REQUIRES PLUMBING IS REQUIRED FOR CONTRACTOR TO INCLUDE A SANITARY AND COLD WATER PROVISION CONNECTED TO NEAREST NEAR FIXTURE. AS PART OF BASE BID, WHENEVER IS PLUMBING PIPING IS NOT SHOWN ON DRAWINGS, ANY DISCREPANCY BETWEEN DRAWINGS REFER TO INTERPRETATION CLAUSE IN THIS NOTES.

DRAWINGS WITH THE NOTE OF "ADVANCE OR PRELIMINARY DRAWING" ARE ONLY FOR OWNERS REVISION AND CANNOT BE USED FOR CONSTRUCTION. IF BID DRAWINGS SHOWS THE NOTE PROVIDE A RFI FOR CLARIFICATIONS.

3: CODE COMPLIANCE
THE PROPOSED MECHANICAL SYSTEM SHALL COMPLY WITH MOST RECENT STANDARD OR CODES HEREAFTER "THE CODES" WHICH APPLIES IN PUERTO RICO. THE CODES ARE BUT NOT LIMITED TO:

- INTERNATIONAL BUILDING CODE 2018 WITH THE CORRESPONDENT MECHANICAL, PLUMBING, FIRE, ENERGY SECTIONS
- FGI GUIDELINES 2022 WITH ASHRAE 170
- ASHRAE 90.1, 62.1, 170-2017
- NFPA 101-2012 90A 90B, 99
- SMACNA SHEET METAL GUIDELINES AND SEISMIC RESTRAIN MANUAL
- ASCE 7 SEISMIC STANDARD
- ANSI 13.1
- GUIA DE DISEÑO DE AAA
- ANY CODE FROM LOCAL AUTHORITY HAVING JURISDICTION OVER THE PROJECT.

4: INTERPRETATION
ANY DISCREPANCY DURING BID PROCESS BETWEEN DRAWINGS, SPECIFICATIONS, SCHEDULES, DIMENSION, QUANTITY OF EQUIPMENT OR IN ANY OTHER TRADE SHALL BE REFER TO A REQUEST FOR INFORMATION TO OWNER. AN ADDENDA WILL BE ISSUED AS NECESSARY FOR THESE DISCREPANCIES AND WILL BECOME PART OF THE CONTRACT DOCUMENTS. THOSE DISCREPANCIES NOT BROUGHT TO THE ATTENTION OF THE ENGINEER IT WILL BE ASSUMED THAT THE CONTRACTOR HAS BID THE MORE EXPENSIVE MATERIAL OR MORE STRICT METHOD OF CONSTRUCTION.

ANY DISCREPANCY DURING PROJECT CONSTRUCTION BETWEEN DRAWINGS, SPECIFICATIONS, SCHEDULES, DIMENSION, QUANTITY OF EQUIPMENT OR ANY OTHER TRADE SHALL BE NOTIFY IN A REQUEST FOR INFORMATION (RFI) LETTER OR EMAIL TO THE OWNERS REPRESENTATIVE FOR CLARIFICATION OF THE DRAWING INTENTION AND/OR ADDENDA ISSUED DURING THE BID PROCESS. A CLARIFICATION DRAWING OR DOCUMENT WILL BE ISSUED AS NECESSARY FOR THESE DISCREPANCIES AND WILL BECOME PART OF THE CONTRACT DOCUMENTS. CONTRACTOR SHALL NOT PROCEED TO PURCHASE OR INSTALL UNTIL CLARIFICATION IS SOLVED. THOSE DISCREPANCIES NOT BROUGHT TO THE ATTENTION OF THE ENGINEER IT WILL BE ASSUMED THAT THE CONTRACTOR WILL FURNISH AND INSTALL THE MORE EXPENSIVE MATERIAL UNDER THE MORE STRICT METHOD OF CONSTRUCTION.

DETAILS AND LARGE SCALE DRAWING ARE PRECEDENTS OVER SMALL SCALE DRAWINGS. ALL DETAILS SHOWN ARE APPROXIMATE, NOT TO SCALE AND PRESENTS THE MINIMUM COMPONENTS REQUIRED FOR PROPER FUNCTIONING AND OPERATION. REFER TO EQUIPMENT SUBMITTAL OR MANUFACTURER RECOMMENDATIONS GUIDE FOR ASSEMBLY, CLEARANCE SPACE AND INSTALLATION.

WHEN SIMILAR IS INDICATED IN NOTES AND/OR DETAILS IT REFER TO AN ALTERNATIVE EQUIPMENT MANUFACTURER OR COMPONENT MODEL WHICH PERFORMANCE, DIMENSIONS AND COMPLIANCE IS EQUIVALENT TO THE EQUIPMENT SPECIFIED OR IN SCHEDULE.

WHEN TYPICAL (TYP.) IS INDICATED IN DRAWINGS, NOTES AND/OR DETAILS IT REFER THAT INFORMATION, DIMENSIONS, DIRECTION OF EQUIPMENT, PIPING OR DUCTS APPLIES TO ALL SIMILAR CONDITIONS IN DRAWINGS.

5: PROJECT VISIT
THE CONTRACTOR SHALL ARRANGE WITH PROJECT OWNER OR REPRESENTATIVE TO VISIT PROJECT LOCATION AND EXAMINE CAREFULLY THE WORK SITE CONDITIONS WHERE THE SYSTEM WILL TO BE INSTALLED. TO FAMILIARIZE HIM WITH THE SITUATION THAT WILL BE ENCOUNTERED WITH OTHER TRADES AND WITH THE SCOPE, CHARACTER, EXTENT, QUALITY AND QUANTITY OF WORK TO BE PERFORMED AND MATERIAL TO BE FURNISHED. DISCREPANCIES OF SITE SHALL BE PROCESS AS INDICATED IN INTERPRETATION CLAUSE. AFTER CONTRACT GETS AWARDED, DISCREPANCIES NOT BROUGHT DURING SITE VISIT WILL NOT BE CONSIDERED AND NO EXTRAS COST WILL BE ALLOWED FOR COORDINATION CAUSED BY PROJECT SITE CONDITIONS.

6: BASE BID EQUIPMENT
ALL EQUIPMENT, COMPONENTS AND DEVICES SPECIFIED AND ON SCHEDULE IN THESE DRAWINGS SHALL BE INCLUDED AS PART OF THE BASE BID WITH THE CORRESPONDENT LOCAL OR STATE TAX THAT APPLIES. IN CASE THAT TAX EXEMPTION APPLIES, A CREDIT TO THE OWNER SHALL BE SUBMITTED AFTER THE PROJECT IS AWARDED.

ALL EQUIPMENT SELECTED IS A BASE DESIGN THEREFORE DOES NOT MEANS THAT IS ENGINEER PREFERENCE, SO ANY EQUIPMENT WHICH IS DEFINE AS SIMILAR CAN BE SUBMITTED IN THE BID AS AN ALTERNATE ITEM ONLY IF IT RESULTS IN THE SAME COST OR IN COST SAVINGS TO THE OWNER. THE ALTERNATE SUBMITTAL SHALL HAVE COMPARATIVE TABLE BETWEEN SPECIFIED AN ALTERNATE EQUIPMENT WITH THE PROPOSED SAVINGS FOR ENGINEER EVALUATION AND OWNERS ACCEPTANCE PRIOR TO PROCEEDING WITH THE RELATED WORK.

BID PRICE IS USING ONLY EQUIPMENT SPECIFIED ON SCHEDULES AND/OR ADDENDA PROVIDED, THE ALTERNATIVE SIMILAR ITEM SHALL BE SUBMITTED IN THE BID IN A SEPARATED ITEM FOR OWNERS EVALUATION.

7: PLUMBING SYSTEM TESTING
THE CONTRACTOR SHALL VERIFY ALL SYSTEMS SHALL BE INSTALLED AND TESTED PRIOR TO PERFORM THE CONNECT TO WATER SYSTEM. THE TEST SHALL BE AS FOLLOW:

- WATER PIPING SHALL BE SUBJECTED TO 100 PSI HYDROSTATIC PRESSURE FOR A PERIOD OF TIME SUFFICIENT TO EXAMINE THE WHOLE SYSTEM AND FIXTURE FITTINGS, BUT NOT LESS THAN ONE HOUR
- DRAINAGE PIPING -- THE ENDS OF THE PIPING SHALL BE PLUGGED AND THE SYSTEM FILLED WITH 5 FOOT HEAD OF WATER. WATER SHALL STAND UNTIL INSPECTION IS MADE AND WATER LEVEL REMAINS CONSTANT

CONTRACTOR SHALL CORRECT ALL DEFECTS AND FURNISH AND INSTALL ANY VALVE AND REGULATOR REQUIRED FOR ADJUSTING WATER PERFORMANCE. WORK TO BE CONCEALED SHALL REMAIN UNCOVERED UNTIL REQUIRED TESTS HAVE BEEN COMPLETED IN PRESENCE OF PROJECT INSPECTOR AND OTHER REQUIRED REPRESENTATIVE.

8: PROJECT TIME
ALL INSTALLATION WORK DURING CONSTRUCTION SHALL BE MADE TO MAINTAIN IN A MINIMUM SHUTDOWN TIME THE EXISTING AIR CONDITIONING SYSTEM. IF ANY SHUTDOWN IS REQUIRED, THE INSTALLATION AND CONNECTION SHALL BE FROM 12:00 AM TO 7:00 AM, SATURDAY OR SUNDAY. ANY LABOR OVERTIME REQUIRED SHALL INCLUDED AS PART OF THE BASE BID. PROJECT

PLUMBING GENERAL NOTES (CONT.)

REV JAN / 24

9: PROJECT WARRANTY
THE CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK, EQUIPMENT AND COMPONENTS TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DAY OF ACCEPTANCE BY OWNER. THE CONTRACTOR ALSO SHALL REPLACE OR REPAIR TO THE SATISFACTION OF THE OWNER ALL DAMAGE DONE TO THE BUILDING OR ITS CONTENTS IN CONSEQUENCE OF THE WORK PERFORMED IN FULFILLING ANY WARRANTY.

10: PROJECT CLOSING
THE CONTRACTOR SHALL PROVIDE WITHIN 60 DAYS AFTER SUBSTANTIAL COMPLETION THE RECORD DRAWINGS WHICH INCLUDES ALL SITE CHANGES AND EQUIPMENT MANUAL WHICH INCLUDES SUBMITTAL, OPERATION MANUALS AND WARRANTS, CONTROLS WIRING AND SCHEMATIC DIAGRAM, SEQUENCE OF OPERATION, TAB REPORT AND CERTIFICATION FOR USE

PLUMBING DEMOLITION NOTES

REV. JAN / 24

1: GENERAL
CONTRACTOR SHALL REMOVE AND DISPOSE ALL EXISTING PLUMBING PIPING, AND FIXTURE EQUIPMENT PRESENTLY SERVING THE AREAS TO BE REMODELED AS INDICATED ON DEMOLITIONS DRAWINGS.

2: PERMITS AND ENDORSEMENT
CONTRACTOR SHALL ISSUE AS PART OF THE BID BASE THE NECESSARY DEMOLITION PERMIT, CEST AND/OR PUI PLAN. ANY ASBESTOS AND LEAD STUDIES AND TAXES OR FEES OR ENDORSEMENT REQUIRED BY THE AGENCY SHALL BE INCLUDED BY CONTRACTOR IN ORDER TO PERFORM THE WORKS INDICATED IN DRAWINGS.

3: DEMOLITION SUBMITTAL
CONTRACTOR SHALL SUBMIT PRIOR TO BID PROPOSAL, THE METHODOLOGY AND PROCEDURE TO THE DEMOLITION ACTIVITY. SUBMITTAL SHALL INCLUDE THE DAYS, HOURS, SAFETY MEASURE, AND COORDINATION WITH OWNER TO PROTECT THE AREAS NOT INCLUDED IN THE SCOPE OF THE PROJECT. ANY CAP OR VALVE REQUIRED FOR PROPER OPERATION OF EXISTING LINES SHALL BE INCLUDED IN SUBMITTAL

4: ENVIRONMENTAL AWARENESS
THE CONTRACTOR SHALL INSPECT THE PROJECT AREA CONTINUOUSLY IN ORDER TO SEE IF ANY MATERIAL OR EQUIPMENT CAN BE CONSIDERED AS ENVIRONMENTAL OR A SAFETY HAZARD IS FOUND CONTRACTOR SHALL STOP THE DEMOLITION AND REPORT IMMEDIATE TO THE OWNER REPRESENTATIVE TO RECEIVE INSTRUCTIONS.

5: COORDINATION
SPECIAL COORDINATION WITH THE OWNER OR ITS REPRESENTATIVE MUST BE TAKEN IN ORDER NOT TO DISRUPT THE OPERATION OF THE AREAS PRESENTLY USED.

CONTRACTOR SHALL COORDINATE WITH OWNER FOR ELECTRICAL AND MECHANICAL SHUTDOWN AFTER OPERATION HOURS, CONTRACTOR SHALL CONSIDER ANY REQUIRED OVERTIME IN HIS BID TO ACCOMPLISH THE JOB. NO OTHER EXTENSION TIME OR OVERHEAD FEES IS CONSIDERED AFTER PROJECT START.

6: SITE PROTECTION
CONTRACTOR SHALL BUILT A BARRICADE PRIOR TO START DEMOLITION IN ORDER PROTECT AND AVOID INJURIES TO THE PEDESTRIAN AND PRIVATE PROPERTIES. THE BARRICADE MATERIAL AND LOCATION SHALL BE INDICATED IN THE SHOP DRAWINGS.

7: DISPOSITION
ANY EXISTING PIPES AND VALVES ABANDONED IN PLACES SHALL BE PROPERLY VALVED AND/OR CAPPED AT A POINT WHERE THEY WILL NOT DISTURB THE NEW CONSTRUCTION, THE FUTURE OPERATION OF THE AREAS OR AS REQUESTED BY OWNER.

EQUIPMENT OR PIPING REMOVED SHALL BE DISPOSED OFF-SITE AT NO COST TO THE OWNER. THE CONTRACTOR SHALL PAY ANY FEE OR OBTAIN ANY PERMIT REQUIRED FOR DISPOSITION.

EQUIPMENT TO BE SAVED AS REQUIRED BY OWNER MUST BE PROPERLY PROTECTED AND STORED ADEQUATELY IN THE SPACE DESIGNATED BY THE OWNER.

8: CLEANING
THE CONTRACTOR SHALL REMOVE HIS CONSTRUCTION DEBRIS FROM THE PROJECT SITE WEEKLY AND DISPOSE OF IT PROPERLY ACCORDING TO CODES AND RULES OF THE SOLID WASTE AUTHORITY, THE PUBLIC SERVICE COMMISSION, ENVIRONMENTAL QUALITY BOARD AND OTHER GOVERNMENT AGENCIES RELATED IN ORDER TO REDUCE FIRE HAZARDS OR STRUCTURAL LOADING TO A MINIMUM.

ALL DIRT, RUBBISH, GREASE AND STAIN CAUSED BY THE INSTALLATION OF THE AIR CONDITIONING SYSTEM SHALL BE REMOVED AND THE PREMISES SHALL BE LEFT CLEAN AND FREE OF ANY OBSTRUCTION OF MECHANICAL EQUIPMENT.

9: ENVIRONMENTAL PROTECTION
UNDER ANY CIRCUMSTANCES, THE CONTRACTOR, DURING THE CONSTRUCTION ACTIVITY, SHOULD INCURRED IN ANY ENVIRONMENTAL VIOLATION.

IF SITUATION OCCURS, THE CONTRACTOR SHALL PAY AND RESTORE ANY DAMAGE AREAS. THE COST OF THIS CIRCUMSTANCES SHALL BE COVERED BY THE CONTRACTOR WITHOUT ANY CHANGE ORDER TO OWNER OR TIME EXTENSION TO CONTRACT FOR THIS PROJECT.

10: EQUIPMENT PROTECTION
THIS CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING EQUIPMENT, ROOFING SYSTEM AND WALLS IN THE AREAS WHERE THE DEMOLITION IS TO BE DONE. IF ANY EQUIPMENT OR MATERIAL IS DAMAGED DURING THE DEMOLITION ACTIVITY.

THE GENERAL CONTRACTOR SHALL REPLACE THE EQUIPMENT OR MATERIAL EQUAL TO THE DAMAGED ONES. THE COST OF THIS REPLACEMENT SHALL BE COVER BY THE GENERAL CONTRACTOR.

PLUMBING DOCUMENTS NOTES

REV JAN / 24

1: SUBMITTAL DOCUMENTS
ALL EQUIPMENT AND ACCESSORIES SHOWN IN SCHEDULES AND DETAILS SHALL BE PROVIDED IN A SUBMITTAL FOR ENGINEER ENDORSEMENT. THE SUBMITTAL SHALL INCLUDE THE EQUIPMENT PERFORMANCE FOR REVIEW TO DESIGN INTENT. PRODUCT BROCHURE OR CATALOG WITH NO ITEM SELECTION WILL NOT BE EVALUATED. QUANTITY OF EQUIPMENT OR ANY COORDINATION WITH OTHER TRADES SUCH AS ELECTRICAL OR AIR CONDITIONING SYSTEM SHALL DONE BY THE MECHANICAL CONTRACTOR, ANY DISCREPANCY REFER TO INTERPRETATION NOTE HERE ABOVE.

ALL SUBMITTAL WILL BE EVALUATED IN 15 WORKING DAYS AFTER RECEIVING AT ENGINEER OFFICE. DESIGN ENGINEER CAN REQUEST TO OWNER A TIME EXTENSION FOR ADDITIONAL EVALUATION ON COMPLEX SUBMITTAL. ADDITIONAL COST IS NOT ACCEPTABLE TO OWNER DUE TO SUBMITTAL REJECTION, TIME EXTENSION OR DELAY.

THE ENGINEERS ENDORSEMENT OF SHOP DRAWINGS OR SAMPLES SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ANY DEVIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS THE CONTRACTOR HAS INFORMED THE OWNER IN WRITING OF SUCH DEVIATION.

PLUMBING DOCUMENTS NOTES (CONT.)

REV JAN / 24

2: SHOP DRAWING
THE DESIGN DRAWINGS DOES NOT HAVE THE INTENTION TO SUBSTITUTE OR WAIVE THE PREPARATIONS OF A FABRICATION AND INSTALLATION DRAWINGS REQUIRED TO THE MECHANICAL CONTRACTOR. EQUIPMENT OR MATERIAL INSTALLED WITHOUT SUBMITTAL AND/OR SHOP DRAWING ENDORSEMENT CAN BE SUBJECT TO REMOVAL BY THE INSTALLER AT NO COST TO THE OWNER. SHOP DRAWING SHALL BE SUBMITTED TO OWNER FOR APPROVAL AND SHALL INCLUDE AT LEAST THE FOLLOWING INFORMATION:

- SHOP DRAWING SCALE IN A 1/4" = 1'-0"
- PLUMBING ISOMETRIC IN A 3/16" = 1'-0"

- FINAL EQUIPMENT LOCATION, PIPING DISTRIBUTION LAYOUT, DIAMETER, SPACING, HANGER, SEISMIC BRAZING LOCATIONS, DETAILS AND COORDINATION WITH OTHER TRADES TO AVOID INTERFERENCE WITH EXISTING AND PROPOSED DUCTWORK AND PIPING

CONTRACTOR SHALL COORDINATE ALL TRADES AS INDICATED ABOVE AND SHALL MAKE ALL NECESSARY ALTERATIONS TO PLUMBING SYSTEM LAYOUT DURING THE SHOP DRAWING PHASE. WHERE INTERFERENCE OR CEILING HEIGHT SITUATIONS OCCURS. CONTRACTOR SHALL RE-ROUTE WATER AND SANITARY PIPING AS REQUIRED TO AVOID CONFLICTS DURING CONSTRUCTION AND FACILITATE ACCESSIBILITY FOR MAINTENANCE.

SHOP DRAWINGS ALTERATIONS DUE TO COORDINATION SHALL BE CLEARLY CLOUDED AND LABELED WITH DATE FOR QUICK REFERENCE AND ARE SUBJECT FOR SUBMITTAL ENDORSEMENT FROM THE INSPECTION AND SUPERVISION. SHOP DRAWING SHOWING ONLY DUCTWORK OR PIPING WITH NO OTHER TRADES WILL BE ASSUMED THAT IS FULLY COORDINATED WITH NO INTERFERENCES. ADDITIONAL COST DUE TO LACK OF COORDINATION IN SHOP DRAWING IN NOT ACCEPTABLE.

A COPY OF ORIGINAL DESIGN DRAWING AT SAME OR BIGGER SCALE IS NOT ACCEPTABLE AS SHOP DRAWING AND WILL NOT BE EVALUATED. DESIGN ENGINEER HAS NO OBLIGATION TO PROVIDE CAD DRAWINGS FOR THE DEVELOPMENT OF SHOP/COORDINATION DRAWINGS, HOWEVER IF DRAWINGS ARE PROVIDED, THE DRAWINGS ARE FOR REFERENCE ONLY AND DOES NOT RELIEVE THE CONTRACTOR TO CONFIRM IN FIELD ALL TRADES MEASUREMENT, HEIGHT AND EQUIPMENT DIMENSIONS OF THE PROJECT. IN CASE OF DISCREPANCY FOLLOW THE INTERPRETATION CLAUSE

PLUMBING PIPING NOTES

REV. JAN / 24

1: COMPLIANCE
ALL PIPE SHALL BE INSTALLED IN COMPLIANCE WITH THE CODE AS INDICATED IN PLUMBING GENERAL NOTES

2: LOCATION
THE DRAWINGS ARE DIAGRAMMATIC, PIPING LOCATION IS APPROXIMATE ONLY. FINAL AND EXACT LOCATION SHALL BE SHALL BE DETERMINED BY THE CONTRACTOR AND SHALL BE ILLUSTRATED IN THE SHOP DRAWINGS SUBMITTED FOR OWNERS APPROVAL

ALL SANITARY PIPING SHALL BE CONCEALED IN FLOOR TOPPING, SLAB WALL OR 18 INCHES UNDER SLAB UNLESS OTHERWISE NOTICED.

ALL VENTILATION PIPING SHALL BE ROUTE IN PLENUM CEILING UNLESS OTHERWISE NOTICED.

3: PIPING DIAMETER
SIZE SHOWN ON DRAWINGS ARE FOR MINIMUM COMPLIANCE AND SHALL BE INCREASE TO COMPLY WITH CODES. ALL REDUCTION IN PIPE SIZES SHALL BE MADE WITH ONE-PIECE REDUCING FITTING. BUSHING FITTINGS ARE NOT ACCEPTABLE.

4: MATERIAL AND SLOPE
REFER TO PIPING SCHEDULE FOR PIPING MATERIAL FOR BASE BID, UNLESS OTHERWISE NOTIFY ALL POTABLE WATER PIPE SHALL NEW AND COMPLY WITH NSF 61. FLEXIBLE COPPER TUBBING IS NOT ACCEPTABLE FOR WATER PIPING. ALL SANITARY SHALL COMPLY WITH SLOPE IN IPC 2018 TABLE 704.1.

5: FIRE RATED WALL OR ROOF INSTALLATION
THE CONTRACTOR SHALL PROVIDE UL LISTED FIRE RETARDANT SEALANT TO CLOSE ANY OPENING IN ANY WALL OR ROOF THAT IS PENETRATED BY A PLUMBING PIPING IN ORDER TO MAINTAIN WALL FIRE RESISTANCE RATE AS SPECIFIED BY OWNER OR AS INDICATED IN ARCHITECTURAL DRAWINGS. REFER TO DETAIL FOR FIRESTOP SPECIFICATIONS

6: PIPING INSULATION
PIPING SHALL BE INSULATED ACCORDING TO SCHEDULE. POTABLE COLD WATER PIPING SHALL BE INSULATED WHEN WATER IS AT 60 F OR LESS.

7: SANITARY STACKS
ALL STACK SHALL HAVE LONG TURN, A CLEANOUT FITTINGS AT THE BASE AND SHALL BE SUPPORTED BY A THRUST BLOCK. REFER TO DETAILS FOR SPECS

8: INVERTS
CONTRACTOR SHALL VERIFY IN FIELD ALL INVERT AND GRADE ELEVATIONS AND SHALL SUBMIT FOR APPROVAL THE NECESSARY ADJUSTMENTS AS REQUIRED TO OBTAIN THE PROPER SLOPE.

9: PIPING UNDERGROUND
ALL PIPING UNDERGROUND INTERIOR AND EXTERIOR SHALL HAVE DETECTABLE WARNING RIBBON AS INDICATED ON DETAIL

10: VALVES
ALL VALVES SHALL REFER TO SCHEDULE. ANY VALVES LOCATED AT FLOOR SLAB OR WALL SHALL BE INSIDE A METAL BOX WITH ACCESS COVER.

11: ACCESS DOOR
PROVIDE AN ACCESS DOOR IN GYPSUM BOARD CEILING IN ANY PIPING COMPONENT THAT REQUIRE SERVICE OR MAINTENANCE WHICH INCLUDES BUT NOT LIMITED TO SERVICE VALVE, CLEANOUT PLUGS OR PIPING WYE ELBOW. ACCESS DOOR SHALL BE MODEL ACUDOR-5040 OR SIMILAR AND LOCATION SHALL BE SHOWN IN SHOP DRAWING

12: CLEANOUT
ALL SANITARY LINES REQUIRES A CLEANOUT PLUG EVERY 100 FT AND IN ANY CHANGE OF DIRECTION. CLEANOUT SIZE AS PER SCHEDULE.

13: PIPING INSTALLATION
ALL PLUMBING PIPING SHALL INSTALLED BY PR CERTIFIED MASTER PLUMBER WITH AT LEAST 5 YEARS OF EXPERIENCE IN SIMILAR PROJECTS. QUALIFICATIONS SHALL BE SUBMITTED FOR EVALUATION AND APPROVAL

14: PIPE THRU WALL OR FLOOR SLAB
ALL CORE DRILLING MUST BE PRECEDED BY A GPR SCAN OF THE SLAB TO PREVENT DAMAGE TO ANY ELECTRICAL, FIRE ALARM, REINFORCEMENT MEMBERS, ETC.

ALL PIPING PENETRATING A ROOF, WALL OR FLOOR SLAB SHALL BE BORE CORED GROUTED, SLEEVED AND SEALED AS INDICATING IN DETAIL. PIPING IN DIRECT CONTACT WITH CONCRETE IS NOT ACCEPTABLE

15: PIPING DISINFECTION
THE POTABLE WATER SYSTEM SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED PRIOR TO UTILIZATION. A BACTERIOLOGICAL REPORT SHALL BE SUBMITTED SHOWING NO CONTAMINATION REMAINS PRESENT IN THE SYSTEM.

STERILIZE POTABLE WATER LINES WITH A MIXTURE OF 2 LBS OF CHLORINATED LIME TO EACH 1000 GALLONS OF WATER. RETAIN THE MIXTURE IN PIPES FOR 24 HOURS AND FLUSH THOROUGHLY WITH POTABLE WATER BEFORE PLACING IN SERVICE. WATER TEST SHALL INDICATE RESIDUAL CHLORINE.

PLUMBING FIXTURES NOTES

REV. JAN / 24

1: EQUIPMENT
ALL FIXTURE UNITS ARE SHOWN ON ARCHITECTURAL SCHEDULES AND CONSIDERED AS PART OF BASE BID. FIXTURES SHALL BE OF LOW CONSUMPTION. ALL WATER CLOSET AND URINAL SHALL BE 1 GPF CONSUMPTION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT SELECTION.

2: LOCATION
FINAL LOCATION OF UNIT SHALL BE INCLUDED IN SHOP DRAWING FOR OWNERS APPROVAL.

3: INSTALLATION
CONTRACTOR SHALL MAINTAIN UNIT MANUFACTURER MINIMUM CLEARANCE ON ALL FIXTURES UNDER THIS SCOPE OF WORK. ALL FIXTURE OR PLUMBING EQUIPMENT SHALL BE VALVE ACCORDING TO MANUFACTURER RECOMMENDATION AND PLUMBING CODES.

4: FIXTURES RELOCATION
WHEN FIXTURES NEW LOCATION IS APPROXIMATE TO SANITARY OR POTABLE WATER CONNECTION, THEREFORE CONTRACTOR SHALL INCLUDES AS PART OF THE BID THE NECESSARY WORK TO RELOCATE WATER AND OR SANITARY/VENT CONNECTION TO FINAL FIXTURE LOCATION.

5: SLEEVES
ALL PLUMBING CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR LEAVING SLEEVES AT SLAB OR BEAM FOR PIPING INSTALLATION. THE PLUMBING CONTRACTOR SHALL PROTECT THE SLEEVES WITH A CAP OF AN APPROPRIATE SIZE. ANY TYPE OF TAPE USED AS CAP IS NOT ACCEPTABLE.

6: EQUIPMENT PROTECTION
ALL PLUMBING FIXTURES SHALL BE PROTECTED TO AVOID DAMAGE TO THE SURFACE OF THE EQUIPMENT. THE CONTRACTOR SHALL REPLACE ANY FIXTURE THAT PRESENT DAMAGE PRIOR TO FINAL INSPECTION.

7: NOISE AND VIBRATION
THE CONTRACTOR SHALL INSTALL THE EQUIPMENT FREE FROM OBJECTIONABLE NOISE AND VIBRATION. ALL NOISE MORE THAN 85 DB IN SCALE AND PIPING VIBRATION A SHALL BE ATTENUATED.

8: VALVES
ALL NEW OR RELOCATED FIXTURE UNIT REQUIRES A SHUT OFF SERVICE VALVE AT THE EQUIPMENT PIPING ENTRANCE OR AT EXIT FROM WALL OR FLOOR.

9: EXISTING BATHROOM
WHEN REFURNISHING AN EXISTING BATHROOM, THE CONTRACTOR SHALL ACCOUNT FOR ANY DEMOLITION, PLUMBING PIPING RELOCATION AND/OR ADDITION DUE TO NEW PLUMBING FIXTURE LOCATION. FOR EXACT FIXTURES LOCATION SEE ARCHITECTURAL DRAWINGS.

10: SHOWER
ALL SHOWER FLOOR SHALL HAVE 1% SLOPE TO FULLY DRAIN WATER. SHOWER THAT CANNOT FULLY DRAIN WILL BE DEMOLISH AND REINSTALL TO COMPLY WITH SLOPE AT NO ADDITIONAL COST TO OWNER.



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PROJECT OWNER

CONSULTANT

PROJECT NAME

HURRA
PROPOSED TEMPORARY
OPERATING ROOM

LOCATION

BAYAMON, PUERTO RICO

DRAWING NAME

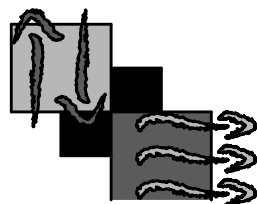
PLUMBING NOTES

ISSUE FOR:

PRELIMINARY DRAWINGS

TAG	REVISION NAME	DATE
	REVISION	MM/DD/YY

P-4



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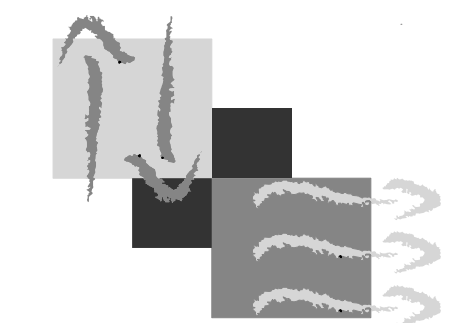
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SEAL

CONSULTANTS

PROJECT OWNER

PROJECT NAME
**REMODELATION OF
SURGICAL SUITE AREA**

FACILITY LOCATION
**HOSPITAL RAMON RUIZ
ARNAU**
LOCATION
BAYAMON, PR

DRAWING NAME
**POWER & LIGHTING
PLAN**

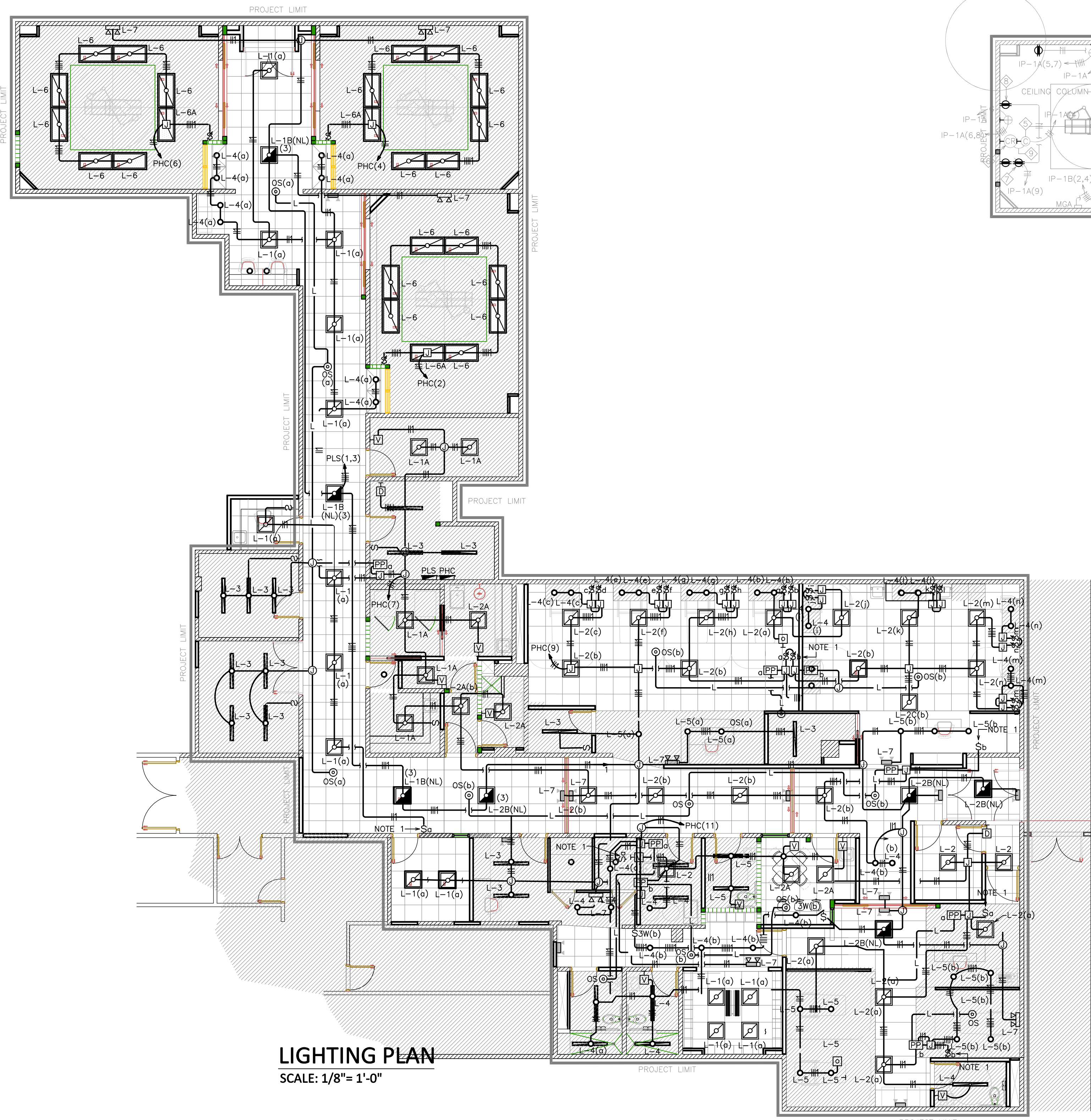
REVISION TABLE		
TAG	DESCRIPTION	DATE

PRELIMINARY DRAWINGS
15/FEB/25

THESE DRAWINGS IS FOR OWNERS APPROVAL. FOR THE DEVELOPMENT OF ADVANCE DRAWINGS. ANY DRAWINGS WITH THIS SEAL CANT BE USED FOR BID OR CONSTRUCTION.

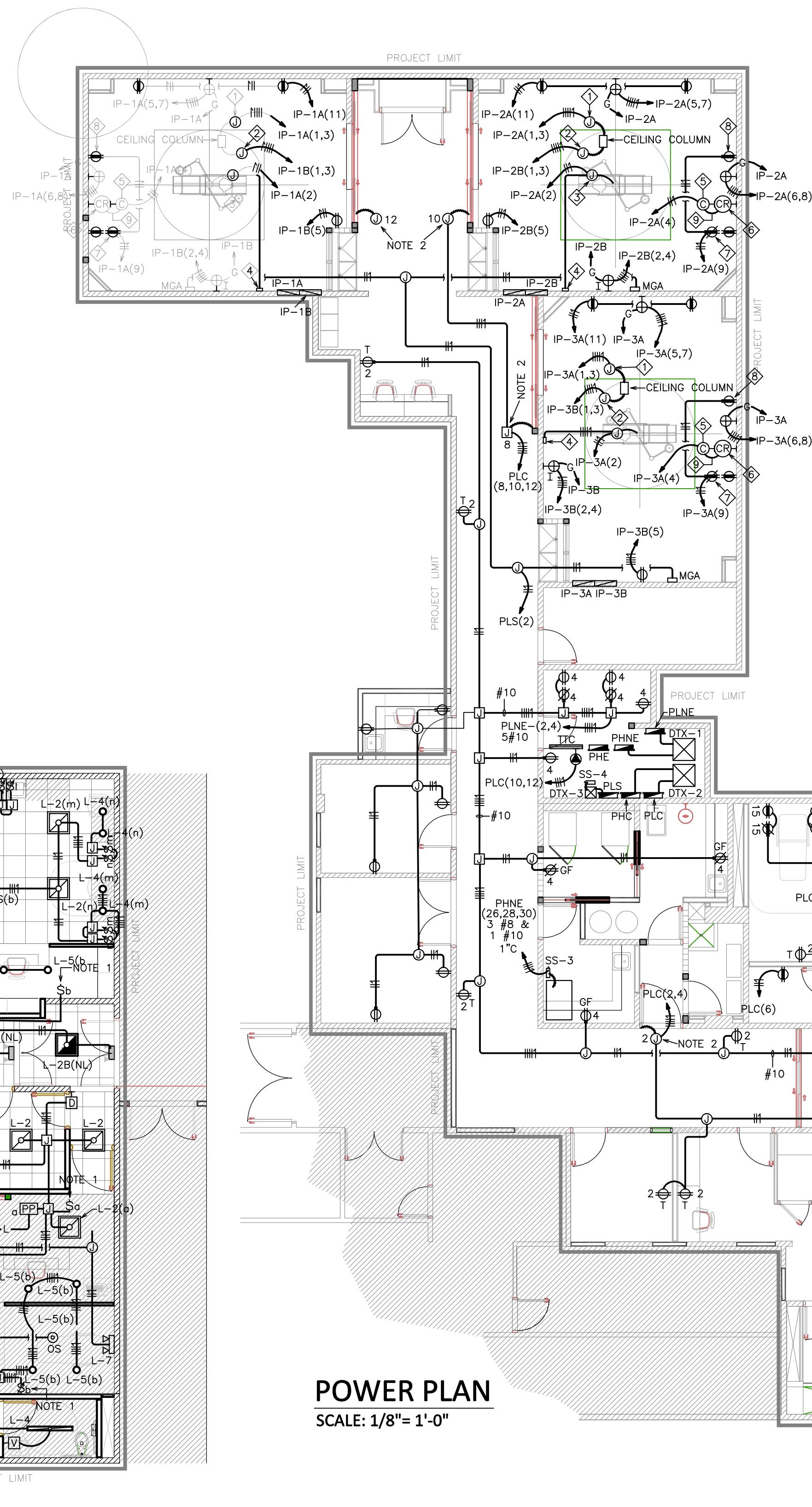
DRAWN BY : W.Z.C.
REVISE BY : W.Z.C.
PROJECT NUMBER : XX-XXX
DESIGN YEAR : APRIL 2025

E-1.0



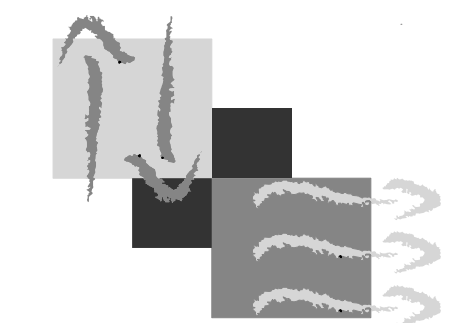
LIGHTING PLAN
SCALE: 1/8"= 1'-0"

- OPERATING ROOMS EQUIPMENT LEGEND:
- 1 POWER PROVISION FOR BOOM. PROVIDE 8 DUPLEX RECEPTACLES HOSPITAL GRADE RED COLOR IN TWO CIRCUITS.
 - 2 POWER PROVISION FOR BOOM. PROVIDE 4 DUPLEX RECEPTACLES HOSPITAL GRADE IVORY COLOR IN TWO CIRCUITS.
 - 3 CONNECT TO SURGICAL LIGHT. SURGICAL LIGHT TO BE SUPPLIED BY OWNER.
 - 4 PROVIDE 4-11/16" x 2-1/8" SQUARE BOX WITH ONE GANG RAISED COVER FOR SURGICAL LIGHT CONTROL. INSTALL 48" AFF. SURGICAL LIGHT CONTROL TO BE SUPPLIED BY OWNER.
 - 5 INSTALL 6"-6" AFF FOR CHRONOMETER.
 - 6 INSTALL 48" AFF FOR CHRONOMETER CONTROL.
 - 7 INSTALL 54" AFF FOR FILM ILLUMINATOR.
 - 8 INSTALL 48" AFF FOR MONITOR. CONTRACTOR TO COORDINATE FINAL HEIGHT W/ARCHITECT.
 - 9 PROVIDE 8 #16 TFFN IN 3/4" CONDUIT FOR CLOCK/TIMER CONTROL.



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

- POWER PLAN NOTES:
- 1- INSTALL 4" 54" AFF FOR HANDRYER.
 - 2- POWER PROVISION ABOVE HUNG CEILING FOR FUTURE ELECTRIC DOOR.
 - 3- POWER PROVISION ABOVE HUNG CEILING FOR FUTURE DOOR ACCESS CONTROL.
 - 4- ALL WIRING INSIDE OPERATING ROOMS TO BE XHHW-2 INSULATION WITH THE FOLLOWING COLOR IDENTIFICATION:
A. INSULATED CONDUCTOR 1 - ORANGE WITH AT LEAST ONE DISTINCTIVE COLOR STRIPE OTHER THAN WHITE, GREEN, OR GRAY ALONG THE ENTIRE LENGTH OF CONDUCTOR.
B. INSULATED CONDUCTOR 2 - BROWN WITH AT LEAST ONE DISTINCTIVE COLOR STRIPE OTHER THAN WHITE, GREEN, OR GRAY ALONG THE ENTIRE LENGTH OF CONDUCTOR.



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SEAL

CONSULTANTS

PROJECT OWNER

PROJECT NAME
**REMEDIATION OF
SURGICAL SUITE AREA**

FACILITY LOCATION
**HOSPITAL RAMON RUIZ
ARNAU**
LOCATION
BAYAMON , PR

DRAWING NAME
**FIRE ALARM AND
SPECIAL SYSTEMS PLAN**

REVISION TABLE		
TAG	DESCRIPTION	DATE

PRELIMINARY DRAWINGS
15/FEB/25

THESE DRAWINGS IS FOR OWNERS APPROVAL, FOR THE DEVELOPMENT OF ADVANCE DRAWINGS. ANY DRAWINGS WITH THIS SEAL CANT BE USED FOR BID OR CONSTRUCTION.

DRAWN BY : W.Z.C.
REVISE BY : W.Z.C.
PROJECT NUMBER XX-XXX
DESIGN YEAR APRIL 2025

E-2.0

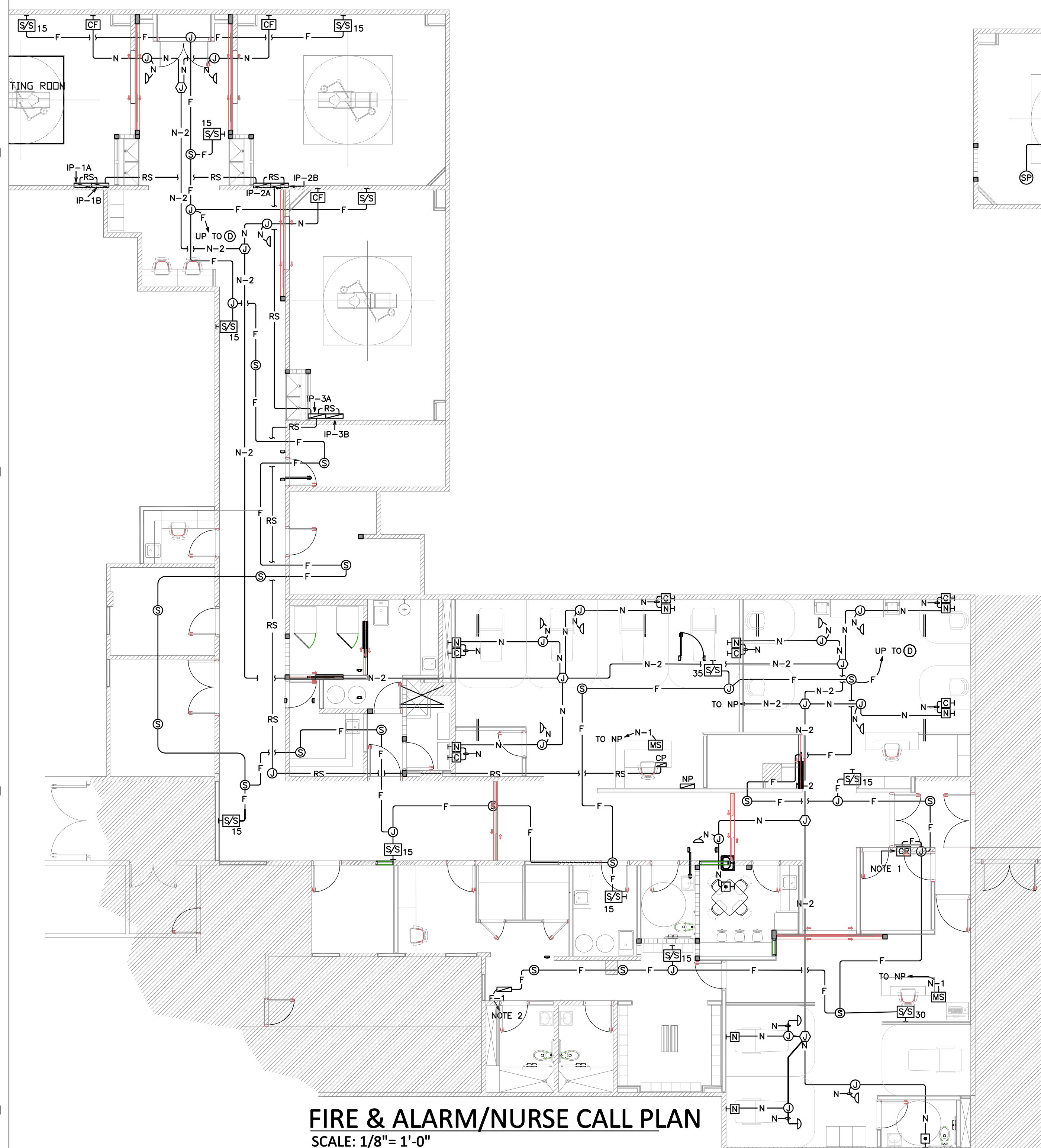
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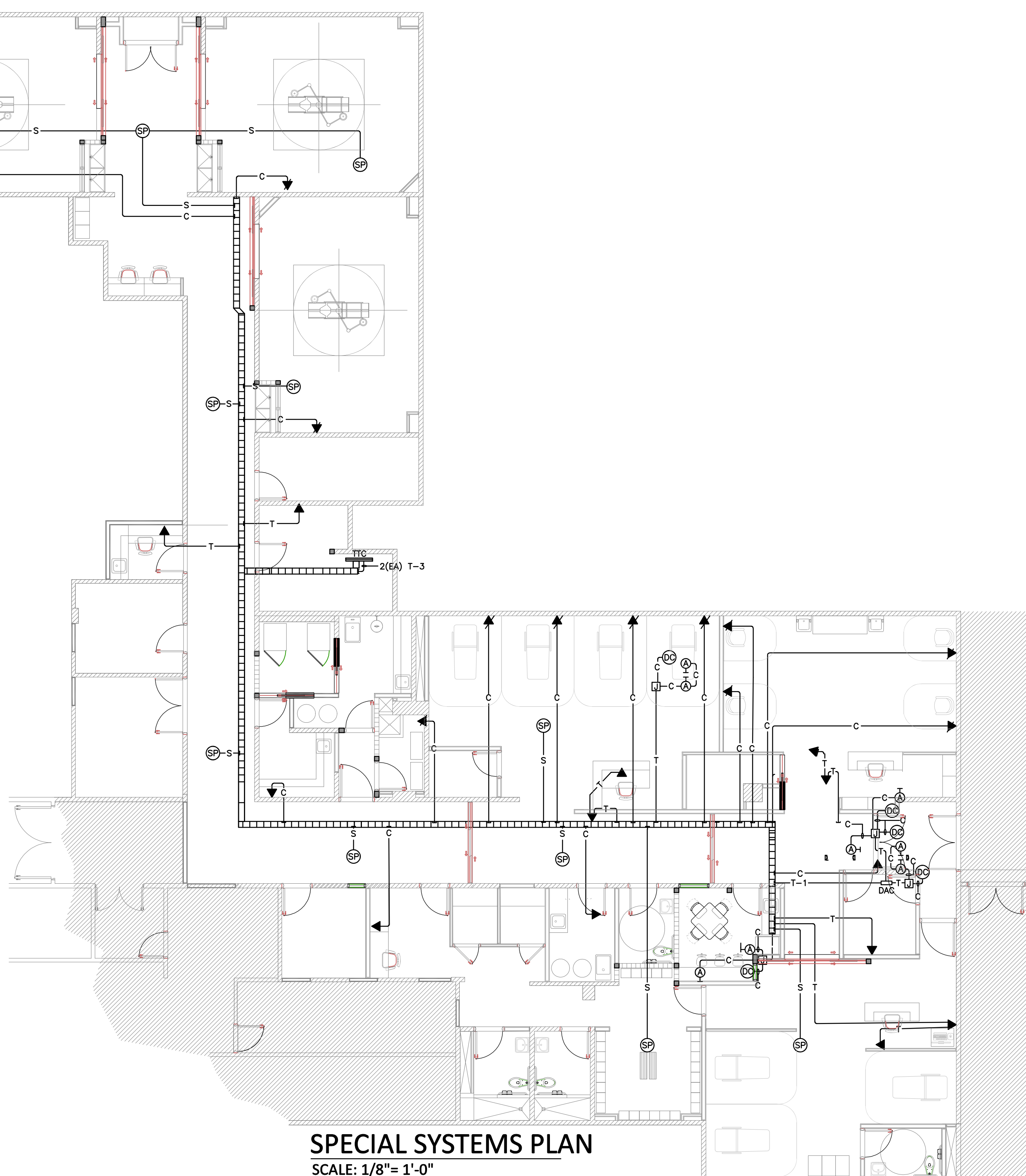
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1



FIRE & ALARM/NURSE CALL PLAN
SCALE: 1/8"= 1'-0"

- NOTES:
- 1- CONNECT TO DOOR ACCESS CONTROL SYSTEMS FOR RELEASE DOOR IN CASE OF FIRE & ALARM ACTIVATION.
 - 2- CONNECT TO EXISTING FIRE & ALARM PANEL ● LOBBY AREA.



5

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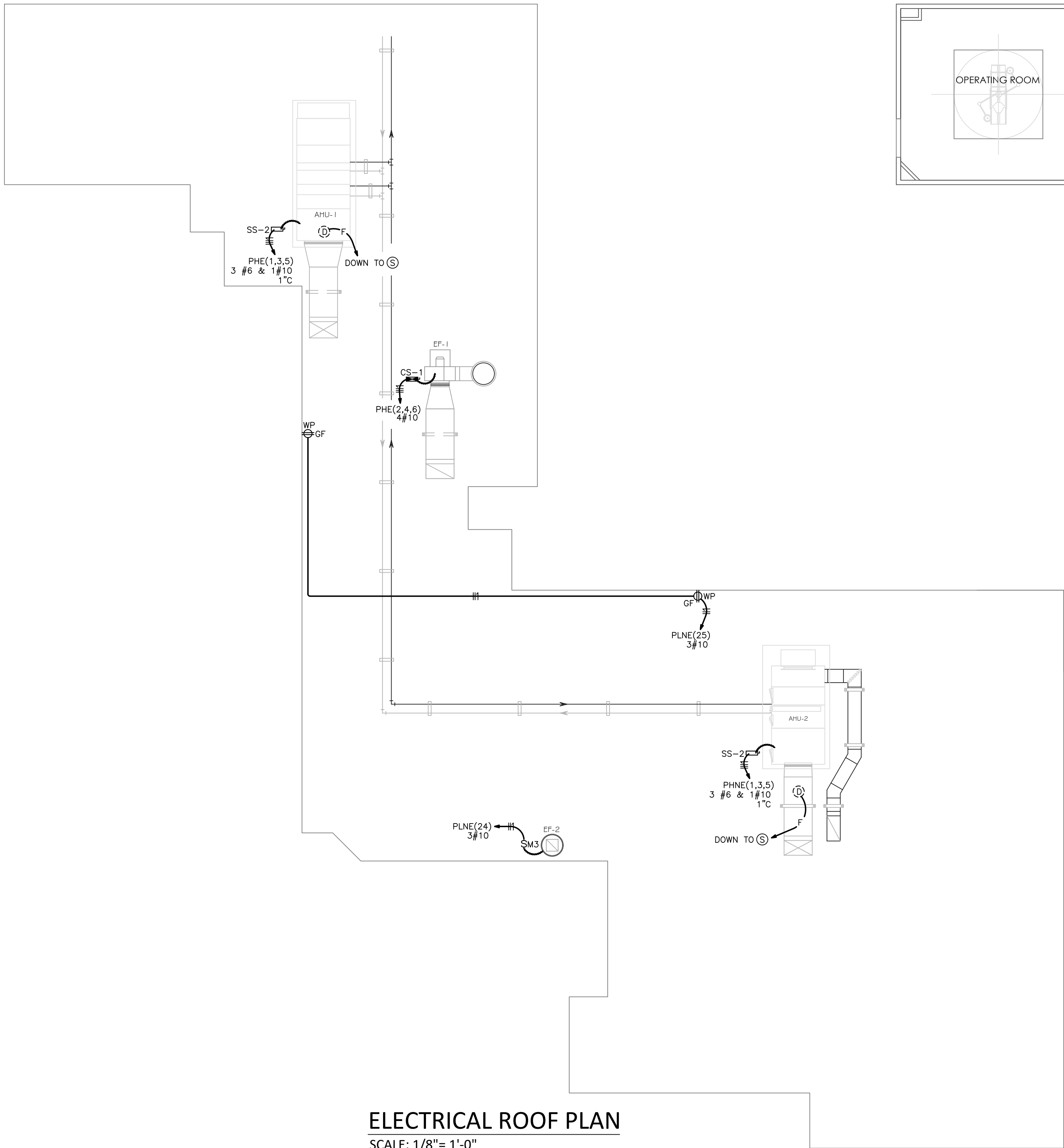
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C

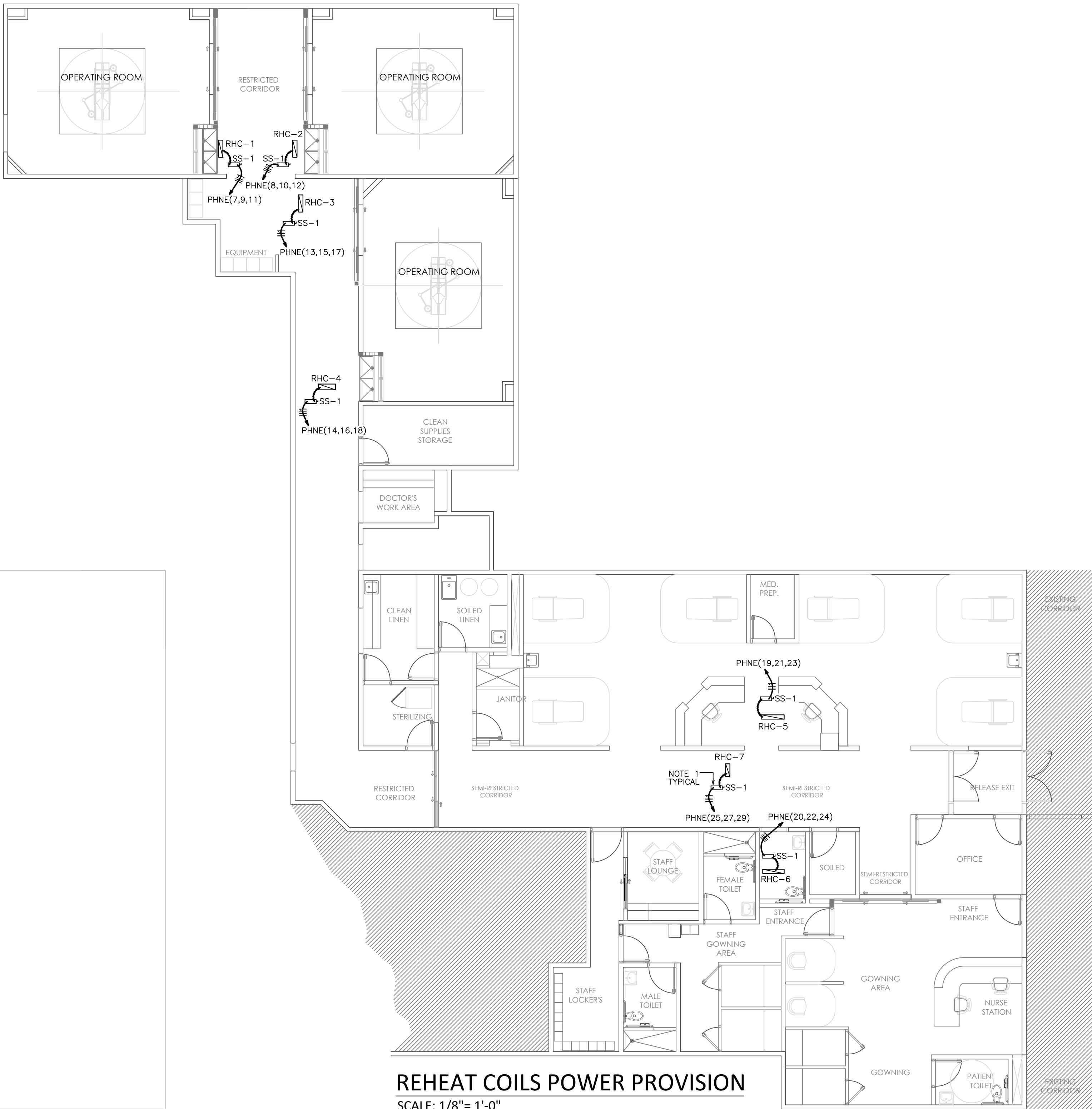
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E



ELECTRICAL ROOF PLAN

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



REHEAT COILS POWER PROVISION

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

NOTE:

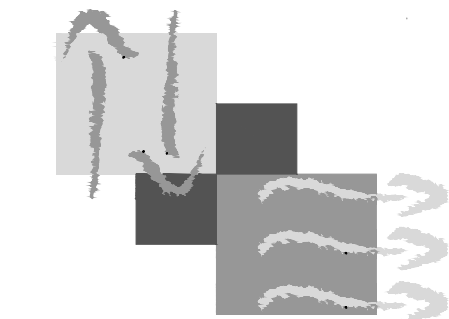
1- INSTALL ABOVE HUNG CEILING. COORDINATE EXACT LOCATION W/MECHANICAL CONTRACTOR.

WILLIAM ZAPATA P.E.

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LIC. 12619

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SEAL

CONSULTANTS

PROJECT OWNER

PROJECT NAME

REMODELATION OF
SURGICAL SUITE AREA

FACILITY LOCATION

HOSPITAL RAMON RUIZ
ARNAU
LOCATION

BAYAMON , PR

DRAWING NAME

ELECTRICAL ROOF PLAN
AND
REHEAT COILS POWER
PROVISION

REVISION TABLE

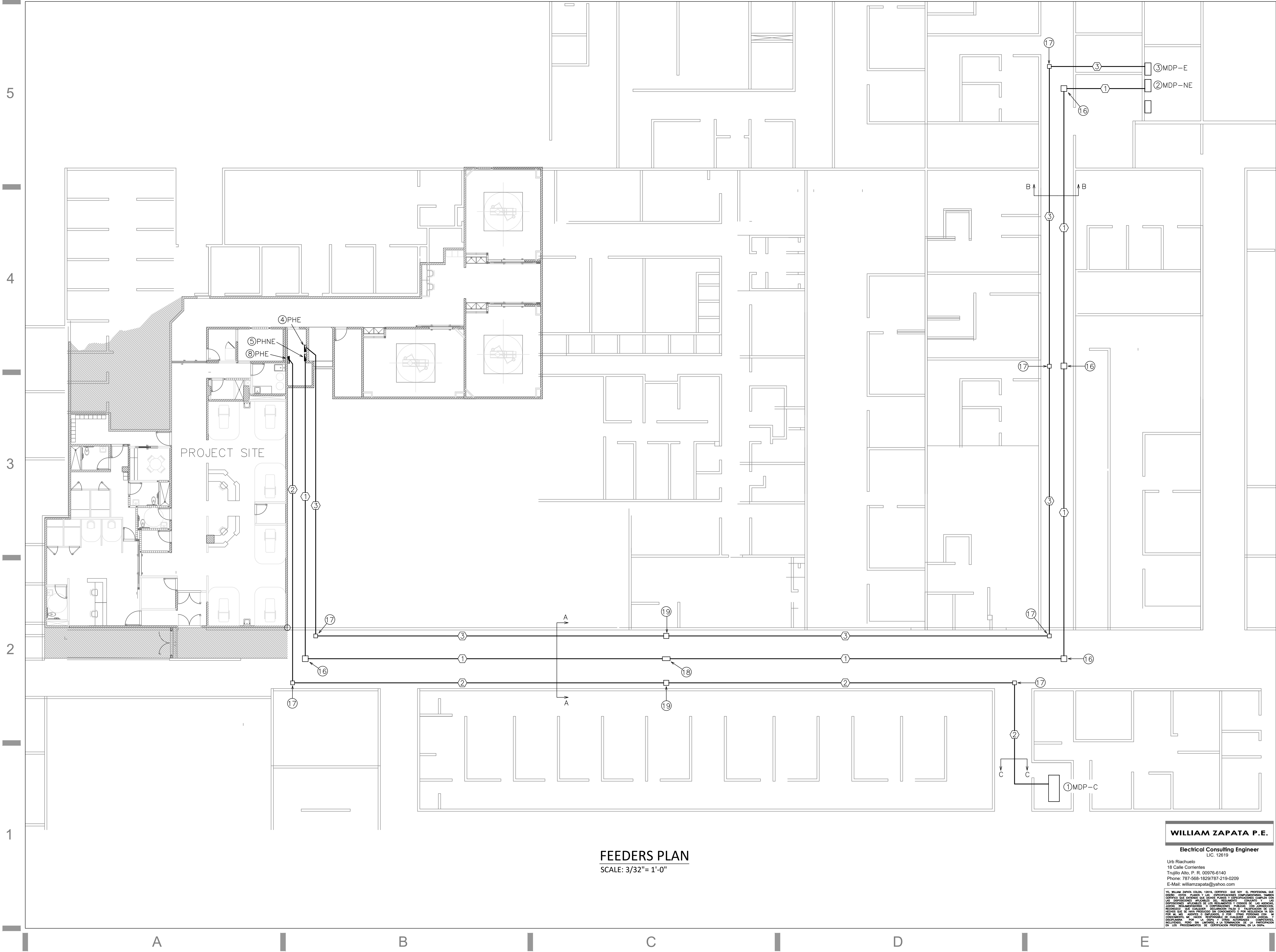
TAG	DESCRIPTION	DATE

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DRAWN BY : W.Z.C.
REVISE BY : W.Z.C.
PROJECT NUMBER xx-xxx
DESIGN YEAR APRIL 2025

E-3



FEEDERS PLAN
SCALE: 3/32"= 1'-0"

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SEAL

CONSULTANTS

PROJECT OWNER

PROJECT NAME
REMODELATION OF
SURGICAL SUITE AREA

FACILITY LOCATION
HOSPITAL RAMON RUIZ
ARNAU
LOCATION
BAYAMON, PR

DRAWING NAME
FEEDERS PLAN

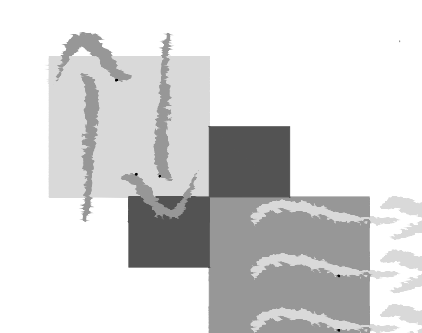
REVISION TABLE		
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15/FEB/25

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DRAWN BY : W.Z.C.
REVISE BY : W.Z.C.
PROJECT NUMBER XX-XXX
DESIGN YEAR APRIL 2025





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SEAL

CONSULTANTS

PROJECT OWNER

PROJECT NAME
REMODELATION OF SURGICAL SUITE AREA

FACILITY LOCATION
HOSPITAL RAMON RUIZ ARNAU
LOCATION
BAYAMON, PR

DRAWING NAME
TELECOMMUNICATIONS PLAN

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PROJECT NUMBER	XX-XXX
DESIGN YEAR	APRIL 2025

E-5

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DESIGN TEAM APRIL 2021

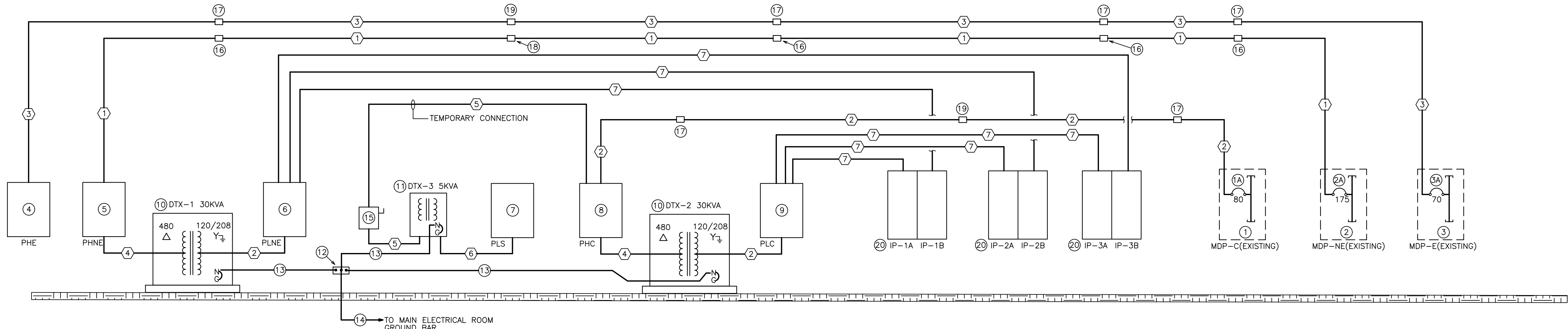
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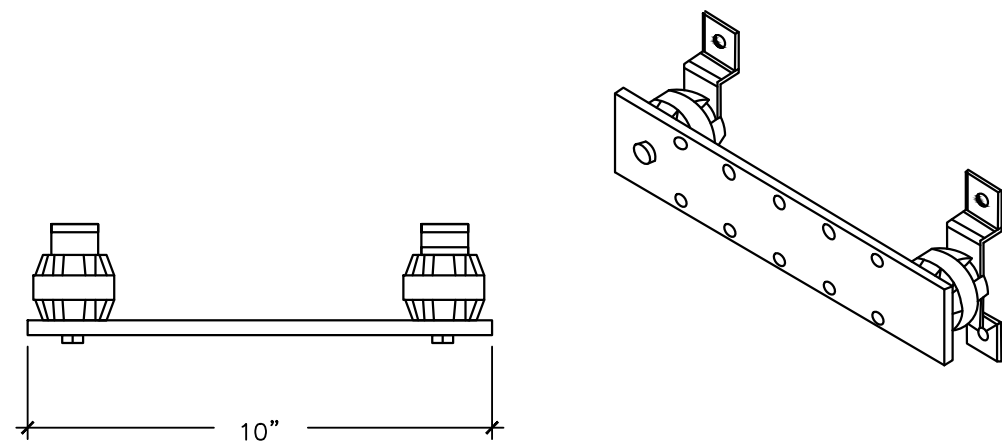


ONE LINE DIAGRAM

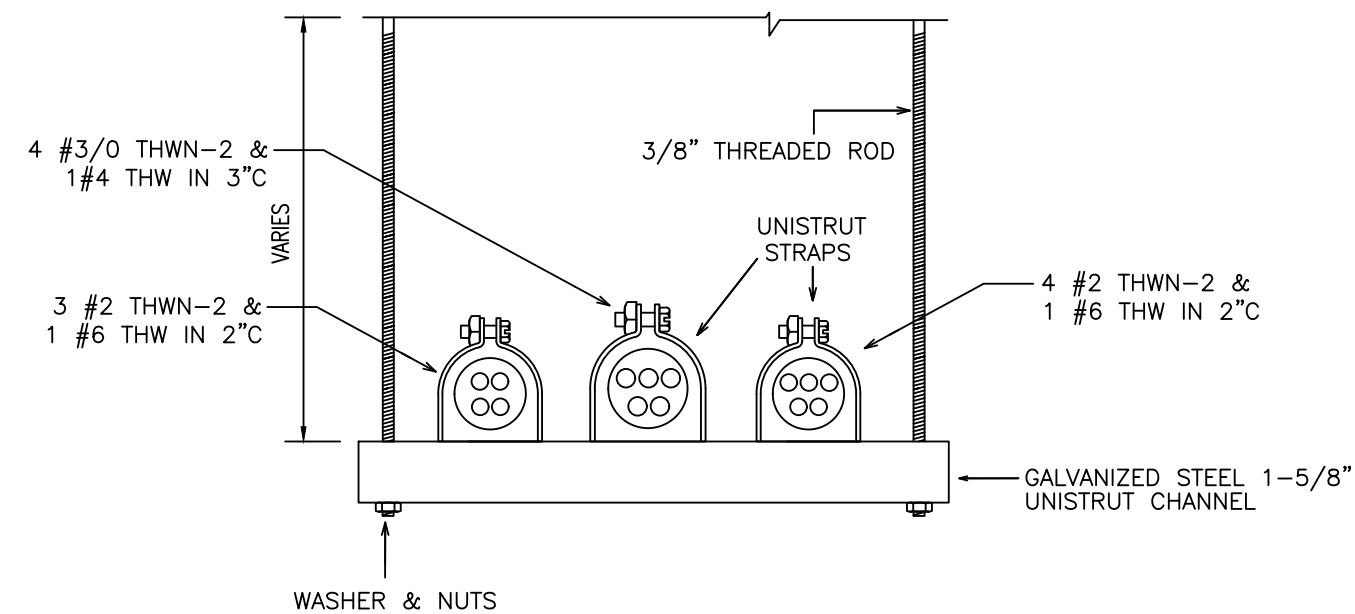
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ONE LINE DIAGRAM & LEGEND:

- EXISTING 480/277V CRITICAL PANELBOARD TO SERVE AS POINT OF CONNECTION. OWNER'S REPRESENTATIVE TO PROVIDE A ONE WEEK LOAD STUDY AND CONFIRM THERE IS AVAILABLE SPARE CAPACITY FOR AN ADDITIONAL 40KVA.
- NEW 70 AMPS-3P-600V BREAKER TO BE INSTALLED IN EXISTING PANELBOARD. CONTRACTOR TO FIELD VERIFY BEFORE BID AND MATCH MANUFACTURER AND KIAC OF PANELBOARD.
- EXISTING 480/277V NON-ESSENTIAL PANELBOARD TO SERVE AS POINT OF CONNECTION. OWNER'S REPRESENTATIVE TO PROVIDE A ONE WEEK LOAD STUDY AND CONFIRM THERE IS AVAILABLE SPARE CAPACITY FOR AN ADDITIONAL LOAD OF 120KVA.
- NEW 175 AMPS-3P-600V BREAKER TO BE INSTALLED IN EXISTING PANELBOARD. CONTRACTOR TO FIELD VERIFY BEFORE BID AND MATCH MANUFACTURER AND KIAC OF EXISTING PANELBOARD.
- EXISTING EQUIPMENT PANELBOARD TO SERVE AS POINT OF CONNECTION. OWNER'S REPRESENTATIVE TO PROVIDE A ONE WEEK LOAD STUDY AND CONFIRM THERE IS AVAILABLE SPARE CAPACITY FOR AN ADDITIONAL LOAD OF 40KVA.
- NEW 480V EQUIPMENT PANELBOARD PHE (SEE SCHEDULE).
- NEW 480/277V NON-ESSENTIAL PANELBOARD PHNE (SEE SCHEDULE).
- NEW 120/208V NON-ESSENTIAL PANELBOARD PLNE (SEE SCHEDULE).
- NEW 120/208V LIFE-SAFETY PANELBOARD PLS (SEE SCHEDULE).
- NEW 480/277V NON-ESSENTIAL PANELBOARD PHNE (SEE SCHEDULE).
- NEW 120/208V NON-ESSENTIAL PANELBOARD PLNE (SEE SCHEDULE).
- DRY TYPE TRANSFORMER 3 PHASES, 30KVA, 480V DELTA PRIMARY, 120/208VWYE SECONDARY, N1 ENCLOSURE < 130°C RISE, COPPER WINDINGS, K7 RATING, EQUAL TO POWERSMITH ESAVER 33L.
- DRY TYPE TRANSFORMER 1 PHASE, 5VA, 480V PRIMARY, 120/240V SECONDARY. EQUAL TO EATON EP SERIES.
- GROUND BUS ASSEMBLY CONSISTING OF A COPPER BUS BARS 10"LENGTH, 250MM THICKNESS, 2 BRACKETS, AND 2 GLASTIC SPACERS. SEE DETAIL.
- 1 #8 THW IN 1-1/2" CONDUIT.
- 1 #4 THW IN 3/4" CONDUIT.
- HEAVY DUTY SAFETY SWITCH 30 AMPS-2P-600V-N1 ENCLOSURE, NON FUSIBLE. INSTALL @ 5'-0" AFF.
- JUNCTION BOX 18"x18"x6" N1 ENCLOSURE, GAGE 14, ANSI GRAY FINISH.
- JUNCTION BOX 12"x12"x6" N1 ENCLOSURE, GAGE 14, ANSI GRAY FINISH.
- JUNCTION BOX 24"x12"x6" N1 ENCLOSURE, GAGE 14, ANSI GRAY FINISH.
- JUNCTION BOX 16"x16"x6" N1 ENCLOSURE, GAGE 14, ANSI GRAY FINISH.
- DUAL ISOLATION PANELBOARD (SEE SCHEDULE).

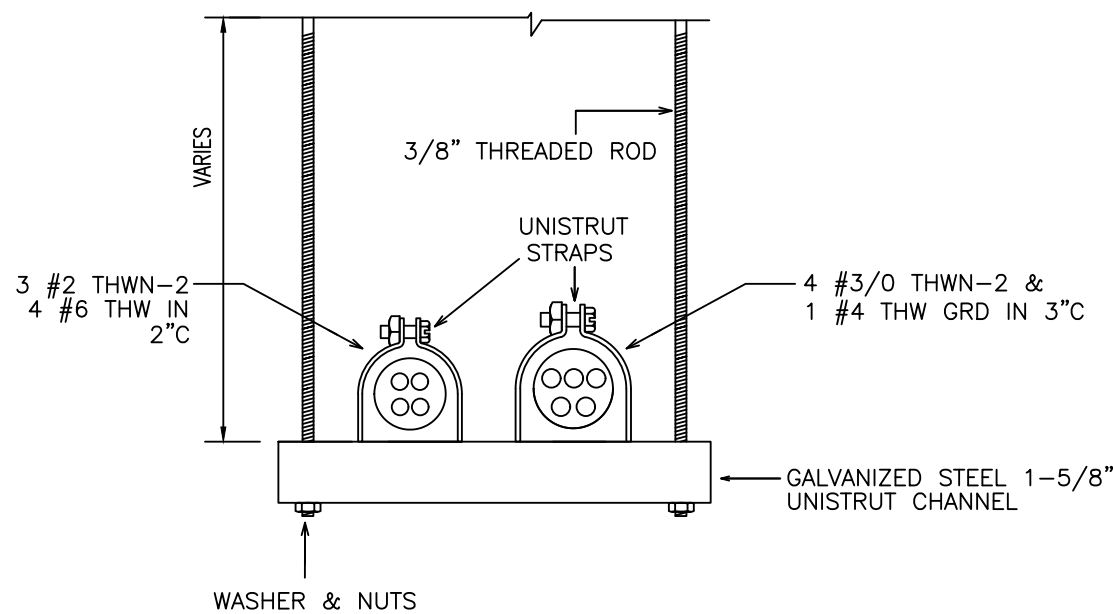


GROUND BUS ASSEMBLY DETAIL
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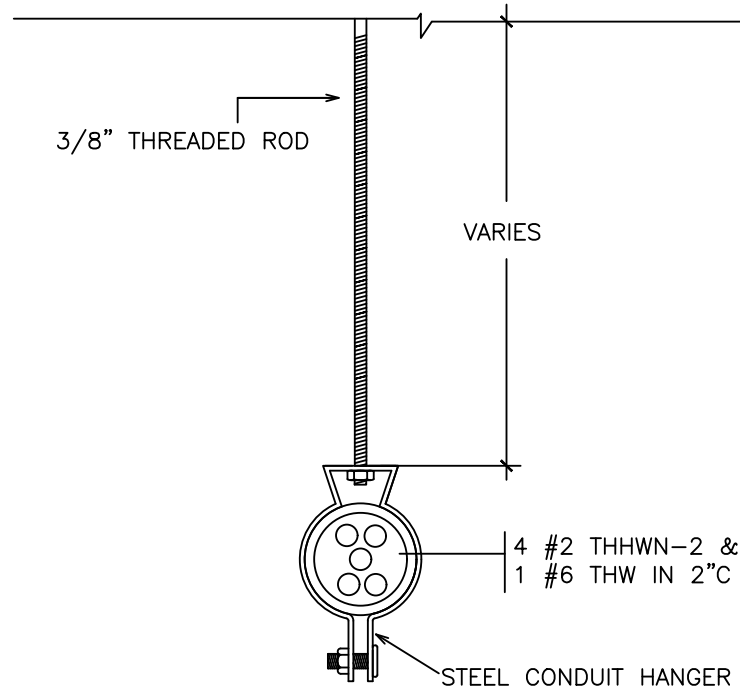
SECTION AA FEEDERS INSTALLATION DETAIL
SCALE: N.T.S.

*PROVIDE SUPPORT AT INTERVALS NOT EXCEEDING 10FT AND WITHIN 3FT OF EACH JUNCTION BOX CABINET OR CONDUIT TERMINATIONS



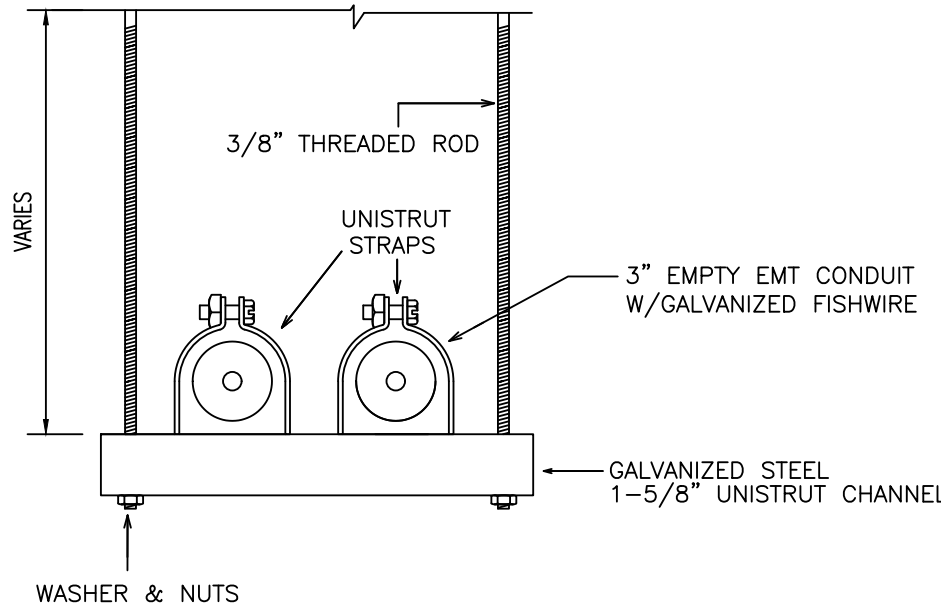
SECTION BB FEEDERS INSTALLATION DETAIL
SCALE: N.T.S.

*PROVIDE SUPPORT AT INTERVALS NOT EXCEEDING 10FT AND WITHIN 3FT OF EACH JUNCTION BOX



SECTION CC FEEDER INSTALLATION DETAIL
SCALE: N.T.S.

*PROVIDE SUPPORT AT INTERVALS NOT EXCEEDING 10FT AND WITHIN 3FT OF EACH JUNCTION BOX CABINET OR CONDUIT TERMINATIONS

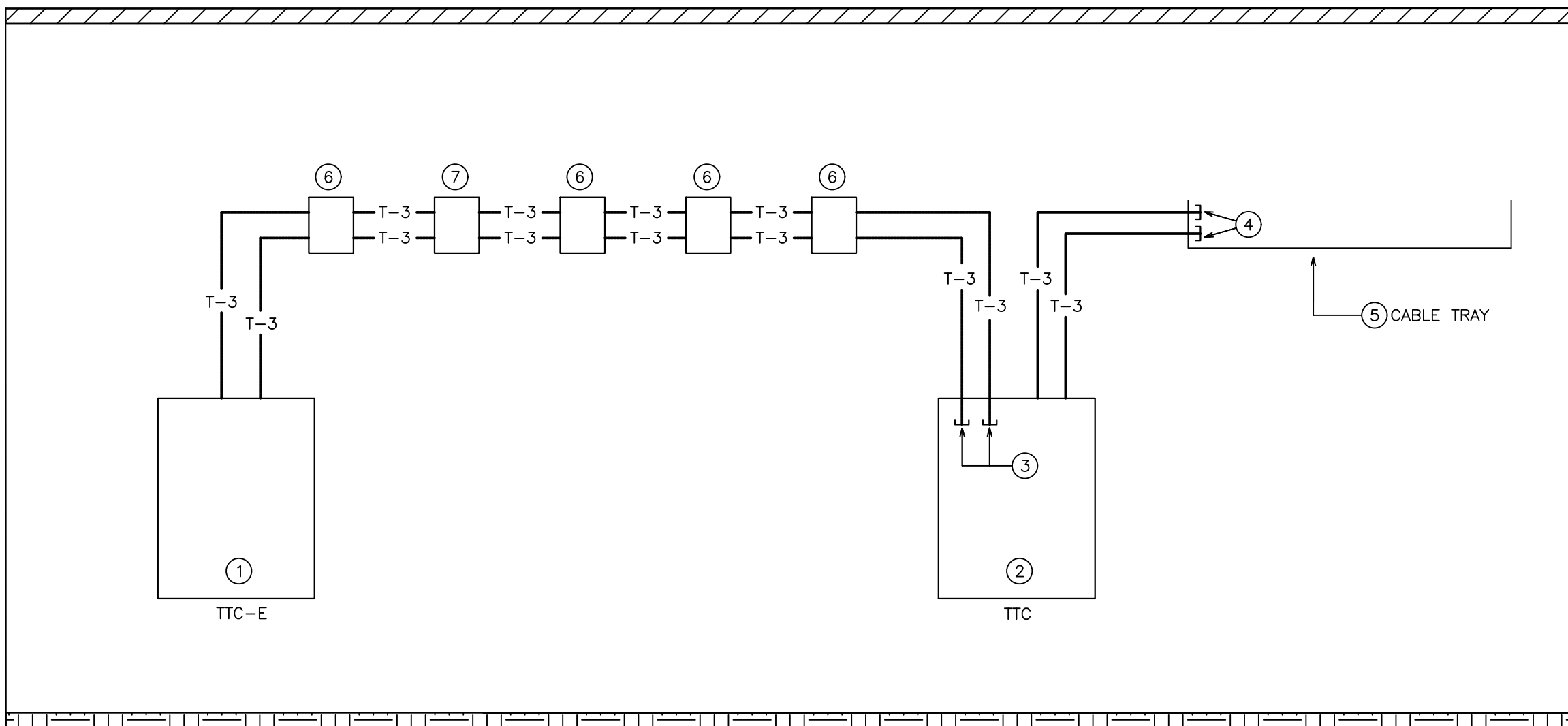


SECTION DD TELECOMMUNICATIONS CONDUITS
INSTALLATION DETAIL
SCALE: N.T.S.

*PROVIDE SUPPORT AT INTERVALS NOT EXCEEDING 10FT AND WITHIN 3FT OF EACH JUNCTION BOX CABINET OR CONDUIT TERMINATIONS

TELECOMMUNICATIONS ONE LINE DIAGRAM

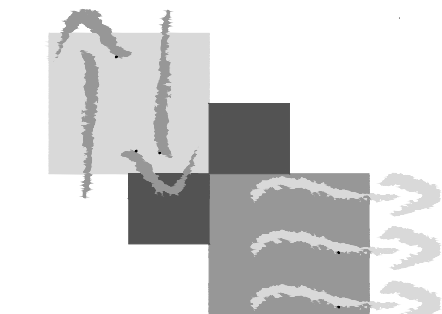
SCALE: N.T.S.



LEGEND:

- EXISTING BUILDING TELECOMMUNICATIONS CABINET. CONTRACTOR TO FIELD VERIFY EXACT LOCATION BEFORE BID.
- TELECOMMUNICATIONS TERMINAL CABINET. SEE DESCRIPTION IN GENERAL LEGEND.
- EMT CONNECTOR AND BUSHING AT CONDUIT END.
- 3" EMT CONNECTOR BUSHING AND CLAMP TO TRAY.
- CABLE TRAY. SEE DESCRIPTION IN GENERAL LEGEND.
- JUNCTION BOX 24"x24"x10" N1 ENCLOSURE, GAGE 14, ANSI GRAY FINISH.
- JUNCTION BOX 24"x18"x10" N1 ENCLOSURE, GAGE 14, ANSI GRAY FINISH.

-T-3- 3" EMT CONDUIT W/GALVANIZED FISHWIRE. WHEN INSTALLED OUTDOORS PROVIDE PVC SCH 80 CONDUIT.



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YO, INGENIERO JAVIER I. CASTILLO, LICENCIA 12261, CERTIFICO QUE SOY EL PROFESIONAL QUE DISEÑO Y PREPARE ESTOS PLANOS Y LAS ESPECIFICACIONES COMPLEMENTARIAS. TAMBIEN CERTIFICO QUE ENTENDI QUE DICHS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APLICABLES DE LOS REGLAMENTOS Y CODIGOS DE CONSTRUCCION VIGENTES DE LAS AGENCIAS, JUNTAS REGULATORIAS O CORPORACIONES PUBLICAS CON JURISDICCION. CERTIFICO ADICIONALMENTE EN LA PREPARACION DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY 14-2004, SEGUN ENMIENDADA, CONOCIDA COMO LA LEY PARA LA INVERSION POR LA INDUSTRIA PUERTORRIQUENA Y CON LA LEY NUM. 316 DE 15 DE MAYO DE 1998, SEGUN ENMIENDADA, LEY NUM. 90 DE 6 DE JULIO DE 1978, SEGUN ENMIENDADA. SEGUN APLIQUE, RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS HECHOS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OPEE Y AGENCIAS CON JURISDICCION.

SEAL

CONSULTANTS

PROJECT OWNER

PROJECT NAME

REMODELATION OF
SURGICAL SUITE AREA

FACILITY LOCATION

HOSPITAL RAMON RUIZ
ARNAU
LOCATION

BAYAMON, PR

DRAWING NAME

ONE LINE DIAGRAMS

REVISION TABLE

TAG	DESCRIPTION	DATE

PRELIMINARY DRAWINGS
15/FEB/25

THESE DRAWINGS IS FOR OWNERS
APPROVAL FOR THE DEVELOPMENT
OF ADVANCE DRAWINGS. ANY
DRAWINGS WITH THIS SEAL CANT BE
USED FOR BID OR CONSTRUCTION.

DRAWN BY : W.Z.C.
REVISE BY : W.Z.C.
PROJECT NUMBER : XX-XXX
DESIGN YEAR : APRIL 2025

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GENERAL NOTES:

- CONDUITS TO BE 3/4" UNLESS OTHERWISE NOTED. TYPE AS FOLLOWS:
A) UNDERGROUND AND CONCRETE ENCASED-PVC-SCH 40.
B) EXPOSED: 1) INDOOR - RIGID STEEL GALVANIZED (RSG).
2) OUTDOOR - RIGID STEEL GALVANIZED (RSG).
C) ABOVE HUNG CEILING AND CONCRETE IN WALLS - EMT.
- ALL ELECTRICAL INSTALLATION MUST BE DONE IN A NEAT WORKMAN MANNER, ACCORDING TO THE LAST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
- ALL EQUIPMENT SHALL BE NEW AND MUST COMPLY WITH ANSI NEMA, UL, AND F.R.E.P.A. STANDARDS.
- ALL WIRE SHALL BE COPPER TYPE THWN-2 INSULATION AND NOT SMALLER THAN #12 THWN-2 UNLESS OTHERWISE NOTED.
- ALL EQUIPMENT SHALL BE GROUNDED ACCORDING TO THE LATEST EDITION OF THE NEC.
- PROVIDE A #12 GREEN JUMPER CABLE BETWEEN THE RECEPTACLE GROUNDING SCREW AND THE OUTLET BOX GROUNDING SCREW.
- INDICATED HEIGHT ARE FROM COUNTER TO BOX, OR EQUIPMENT TO THE FINISH FLOOR.
- MINIMUM BOX SIZE TO BE 4"x4"x1½" UNLESS OTHERWISE NOTED.
- ROUTE OF CONDUITS SHOWN IN THE LAYOUT ARE SCHEMATIC AND INTEND ONLY TO INDICATE INTERCONNECTIONS BETWEEN OUTLETS OR EQUIPMENT. EXACT CONDUIT ROUTING SHALL BE DETERMINED AT JOB SITE TO CONFORM WITH THE STRUCTURAL CONDITIONS AND SHALL BE SUBJECT OF THE FINAL APPROVAL OF THE ARCHITECT/ENGINEER.
- CONTRACTOR MUST SUBMIT FOR APPROVAL ALL EQUIPMENT AND ELECTRICAL MATERIALS REQUIRED FOR THE WORK TO BE PERFORMED.
- THE CONTRACTOR SHALL VISIT THE JOB SITE AND BECAME AQUAINTED WITH THE EXISTING FIELD CONDITIONS. IT SHALL BE DIRECT RESPONSIBILITY OF THE CONTRACTOR TO BRING PROMPTLY TO THE ATTENTION OF THE ENGINEER, ANY DISCREPANCIES BETWEEN THE EXISTING FIELD CONDITIONS AND THOSE THAT WERE USED FOR DESIGN PURPOSES. THIS SHALL BE DONE BEFORE THE CONTRACTOR SUBMITS HIS BID SO THAT THE ENGINEER CAN RENDER A DECISION OF THE WATER BEFORE THE BIDS ARE RECEIVED. THE SUBMITTAL OF THE BID BY THE CONTRACTOR SHALL BE HELD AS PROOF THAT THE CONTRACTOR UNDERSTAND THOROUGHLY AND COMPLETELY THE SCOPE OF THE WORK INVOLVED, HAS FAMILIARIZED HIMSELF WITH THE EXISTING FIELD CONDITIONS, AND HAS INCLUDED IN HIS BID ALL THE ITEM NECESSARY TO PERFORM THE ELECTRICAL WORK. NO ALLOWANCE WILL BE PERMITTED ON THIS MATTER AFTER THE BIDS ARE RECEIVED.
- CONTRACTOR TO COORDINATE EXACT EQUIPMENT ELECTRICAL ENTRANCE WITH APPROVED SHOP DRAWINGS.
- BASED BID EQUIPMENT: ALL ELECTRICAL EQUIPMENT AND DEVICES SPECIFIED IN THESE DRAWINGS SHALL BE INCLUDED AS BASE BID, ANY ALTERATION ITEM WHICH WILL RESULT IN COST SAVINGS TO THE OWNER CAN BE SUBMITTED IN BID WITH THE PROPOSED CREDIT FOR OWNERS EVALUATION. ALL EQUIPMENT SHALL BE SUBMITTED IN FULL COMPLIANCE WITH DRAWINGS FOR OWNERS AND ENGINEER ENDORSEMENT.
- ALL CONDUIT PENETRATIONS THROUGH FIRE RATED FLOORS OR WALLS SHALL BE SEALED WITH FIRE RETARDANT SEALANT TO MAINTAIN THE INTEGRITY OF THE FIRE RATING.
- CONTRACTOR SHALL REVIEW AND VERIFY ALL APPLICABLE EXISTING CONDITIONS ON SITE, INCLUDING TIGHTNESS OF ALL EXISTING ELECTRICAL CONNECTIONS AND ADEQUACY OF GROUND SYSTEM.
- PROVIDE TYPEWRITTEN CIRCUIT DIRECTORY CARD IN PANELBOARD DOOR.
- NO CONDUIT SHALL BE INSTALLED IN THE SLABS.
- ARMORED CABLE TYPE ACTHH, GROUNDING TYPE 1/2" MINIMUM DIAMETER WILL ONLY BE ALLOWED FOR DROPS TO INDOOR LIGHTING FIXTURES AND EQUIPMENT. MAXIMUM LENGTH SHALL BE THREE FEET FOR A MOTOR AND SIX FEET FOR LIGHTING FIXTURES.
- PULLBOXES OR JUNCTION BOXES SHALL BE MINIMUM 12 GAGE GALVANIZED STEEL OUTLETS. BOXES IN WALLS SHALL BE GALVANIZED STAMPED STEEL OR CAST METAL. NO WELDED BOXES ARE PERMITTED. CAULK AROUND BOXES TO ELIMINATE NOISE TRANSMISSION.
- CONDUITS, HANGERS, CLAMPS, LIGHTING FIXTURES, JUNCTION BOXES, SUPPORTS, ETC., SHALL BE FASTENED TO JOIST AND ON BEAMS. DO NOT ATTACH ANYTHING DIRECTLY TO THE METAL SLABS SUPPORTED CONCRETE DECKS, ROOF DECKS, DUCTWORK, PIPING OR OTHER CONDUITS.
- CONTRACTOR TO PROVIDE TO ALL FEEDERS THE NECESSARY BOXES OR CONDUIT BODIES TO NOT EXCEED A TOTAL OF 360° OF BENDS PER CONTINUOUS RUN.
- CALIBRATION AND SETTINGS OF ALL PROTECTIVE DEVICES MUST BE DETERMINED BY A SHORT CIRCUIT AND COORDINATION STUDY TO BE PROVIDED BY ELECTRICAL CONTRACTOR.
- FINAL OUTLET AND JUNCTION BOXES DIMENSIONS TO BE IN COMPLIANCE OF MAXIMUM NUMBER OF CONDUCTORS IN BOX AS PER NEC SECTION 314.16.
- SCOPE OF WORK
PROVIDE ALL EQUIPMENT, LABOR, MATERIAL & SERVICES FOR THE COMPLETE EXECUTION OF THE ELECTRICAL SYSTEM INSTALLATION & PERFORMANCE AS CALLED FOR ON PLANS AND/OR AS DESCRIBED HEREIN. THESE DRAWINGS SHOWS THE DESIGN CONCEPT, INTENT AND PIPING GENERAL ARRANGEMENT TO FULFILL THE CODE REQUIREMENTS, THEREFORE FOR COMPLETE MEANS THAT EQUIPMENT, COMPONENTS OR MATERIAL NOT SHOWN ON DRAWINGS BUT REQUIRED FOR INSTALLATION AND/OR OPERATION SHALL BE INCLUDED AS PART OF THESE DRAWINGS. ANY NOTE THAT DOES NOT APPLIES IS FOR REFERENCE ONLY AND THE REMAINING NOTES CONTINUE AS INDICATED.
- INTERPRETATION
ANY DISCREPANCY BETWEEN DRAWINGS, SPECIFICATIONS AND SCHEDULES OR DIMENSION AND/OR QUANTITY OF EQUIPMENT OR IN ANY OTHER TRADE SHALL BE REFER TO THE OWNERS REPRESENTATIVE FOR CLARIFICATION OF THE INTENTION OF THE DRAWINGS AND SPECIFICATION. CONTRACTOR SHALL NOT PROCEED OR PURCHASE IF DISCREPANCY IS NOT CLEAR OR SOLVED.
- PROJECT CLOSING
THE CONTRACTOR SHALL PROVIDE WITHIN 60 DAYS AFTER SUBSTANTIAL COMPLETION THE RECORD DRAWINGS WHICH INCLUDES ALL SITE CHANGES AND EQUIPMENT MANUAL WHICH INCLUDES SUBMITTAL, OPERATION MANUALS, CONTROLS WIRING AND SCHEMATIC DIAGRAM, SEQUENCE OF OPERATION, TAB REPORT AND CERTIFICATION FOR USE
- SEE STRUCTURAL DRAWINGS FOR EQUIPMENTS CONCRETE PADS DETAILS.
- CONTRACTOR MUST INCLUDE IN PROPOSAL START-UP AND COMMISSIONING OF LIGHTING CONTROL SYSTEM.
- CONTRACTOR TO PROVIDE CIRCUITS AND CORRESPONDING PANELBOARD IDENTIFICATION TO ALL SWITCHES AND RECEPTACLES.
- PANELBOARD LOADS SHALL BE BALANCED AND WITHIN TEN PERCENT (10%) ACROSS ALL PHASES.
- ELECTRICAL CONTRACTOR TO PROVIDE STARTUP, ALL ELECTRICAL TESTS, AND CERTIFICATION OF ISOLATION PANELBOARDS AS PER NFPA 99 REQUIREMENTS. CERTIFICATION MUST BE PROVIDED BY BENDER (MANUFACTURER REPRESENTATIVE).
- CONTRACTOR TO FIELD VERIFY BEFORE BID IF EXISTING PANELBOARD MDP-C IS 480/277V WITH NEUTRAL.

GENERAL LEGEND:

- ⊕ DUPLEX RECEPT 20A 125V HOSPITAL GRADE IVORY COLOR WITH S. STEEL PLATE. INSTAL AT 18" AFF UNLESS OTHERWISE NOTED.
- ⊕ DITTO BUT INSTALLED 6" ABOVE COUNTER OR AT 54" AFF PATIENT BEDSIDES.
- ⊕ GF DUPLEX RECEPTACLE 20A 125V HOSPITAL GRADE IVORY COLOR WITH GROUND FAULT PROTECTION. PROVIDE S. STEEL PLATE. INSTALL @ 18" AFF UNLESS OTHERWISE NOTED.
- ⊕ GF DUPLEX RECEPTACLE 20A 125V HOSPITAL GRADE IVORY COLOR WITH GROUND FAULT PROTECTION AND TAMPER PROOF. PROVIDE S. STEEL PLATE. INSTALL @ 18" AFF UNLESS OTHERWISE NOTED.
- ⊕ GF DITTO BUT INSTALLED 6" ABOVE COUNTER.
- ⊕ GF WP GROUND FAULT PROTECTION & WEATHERPROOF COVER INSTALLED AT 18" AFF UNLESS OTHERWISE NOTED.
- ⊕ DUPLEX RECEPTACLE 20P-125V HOSPITAL GRADE, TAMPER PROOF, IVORY COLOR. INSTALL @ 18" AFF UNLESS OTHERWISE NOTED.
- ⊕ 2(EA) DUPLEX RECEPTACLES 20A 125V HOSPITAL GRADE IVORY COLOR WITH QUADRUPLX STAINLESS STEEL PLATE. INSTALL @ 18" AFF UNLESS OTHERWISE NOTED.
- ⊕ SAME AS ABOVE BUT INSTALLED @ 6" ABOVE COUNTER OR @ 54" AFF AT PATIENT BEDSIDE.
- ⊕ 2(EA) DUPLEX RECEPTACLES 20A 125V HOSPITAL GRADE RED COLOR WITH QUADRUPLX STAINLESS STEEL PLATE. INSTALL @ 18" AFF UNLESS OTHERWISE NOTED.
- ⊕ SAME AS ABOVE BUT INSTALLED @ 6" ABOVE COUNTER OR @ 54" AFF AT PATIENT BEDSIDE.
- ⊕ DUPLEX RECEPTACLE 20A 125V HOSPITAL GRADE RED COLOR WITH STAINLESS STEEL PLATE INSTALLED @ 18" AFF.
- ⊕ DITTO BUT INSTALLED @ 6" ABOVE COUNTER OR AT 54" AFF AT PATIENT BEDSIDES.
- ⊕ SAME AS ⊕ BUT RECEPTACLES TO BE RED COLOR.
- ⊕ GF DUPLEX RECEPTACLE 20A 125V HOSPITAL GRADE WITH GROUND FAULT PROTECTION, RED COLOR WITH STAINLESS STEEL PLATE INSTALLED @ 18" AFF.
- ⊕ GF DITTO BUT INSTALLED @ 6" ABOVE COUNTER.
- ⊕ FLOOR BOX EQUAL TO WIREMOLD 886B. PROVIDE 20 AMPS-DUPLEX RECEPTACLE HOSPITAL GRADE IVORY COLOR WITH 995T COVER PLATE.
- ⊕ COMBINATION DUPLEX RECEPTACLE 20 AMPS 125/250V NEMA 5 20R/NEMA 6 20R, 2 POLE 3 WIRE, SPECIFICATION GRADE. EQUAL TO LEVITON 5842-J. INSTALL @ 18" ABOVE FINISH FLOOR. PROVIDE S. STEEL PLATE.
- ⊕ COMBINATION DISCONNECT SWITCH MAGNETIC STARTER N3R ENCLOSURE, NEMA SIZE 1 GREEN & RED PILOT LIGHTS.
- ⊕ 20 AMPS 120/277V TOGGLE SWITCH IVORY COLOR WITH S. STEEL PLATE. SUBSCRIPT DENOTES FIXTURES CONTROLLED. INSTALL @ 48" AFF.
- ⊕ 3W DITTO BUT THREE WAY.
- ⊕ 2M MANUAL STARTER NEMA 1 ENCLOSURE 240V-2 POLES WITH PILOT LIGHT EQUAL TO CUTLER MS SERIES. PROVIDE HEATERS AS PER MOTOR NAMEPLATE READING.
- ⊕ DIMMER/SWITCH 0-10V EQUAL TO LUTRON NSTIV-DV-IV W/STAINLESS STEEL PLATE 120/277V INPUT. INSTALL @ 48" AFF.
- ⊕ SWITCHES OR DIMMERS GANGED TOGETHER.
- ⊕ DUAL TECH WALL SWITCH VACANCY 120/277V SENSOR EQUAL TO LUTRON MAESTRO MS-A102 IVORY COLOR W/S. STEEL PLATE. INSTALL @ 48" AFF.
- ⊕ SAME AS ⊕ BUT SENSOR MODE TO BE ON OCCUPANCY INSTEAD OF VACANCY.
- ⊕ 0-10 DIMMER/VACANCY SENSOR 120/277 EQUAL TO LUTRON MS-Z10V-IV. INSTALL @ 48" AFF. PROVIDE S. STEEL PLATE.
- CONDUIT EMBEDDED IN CONCRETE.
- HOME RUN TO PANEL. MARKS INDICATES NUMBER OF CONDUCTORS.
- CONDUIT RUN EXPOSED, ABOVE HUNG CEILING OR INSIDE WALLS.
- ⊕ 4"x4"x1-1/2" J. BOX WITH BLANK COVER INSTALLED ABOVE HUNG CEILING. FOR LIGHTING ROUGHIN PROVIDE 4"x4"x2-1/8" DEEP BOX.
- ⊕ DITTO BUT WALL MOUNTED.
- ⊕ J. BOX 4"x4" WITH WEATHERPROOF BLANK COVER.
- ⊕ 4-11/16"x2-1/8" SQUARE BOX W/BLANK COVER.
- TELEPHONE/DATA OUTLET. PROVIDE 4"x4"x2-1/8" BOX W/STEEL PLATE TO BE INSTALLED AT 18" AFF UNLESS OTHERWISE NOTED. SEE DETAIL.
- SAME AS ABOVE BUT INSTALLED @ 6" ABOVE COUNTER OR 54" AFF AT PATIENT BEDSIDE.
- FLOOR BOX EQUAL TO WIREMOLD 886. PROVIDE COVER PLATE FOR TELEPHONE & DATA. COORDINATE W/ARCHITECT PLATE TYPE ACCORDING TO FLOOR FINISH.
- MANUAL STARTER N-1 ENCL 120V 1 POLE WITH PILOT LIGHT EQUAL TO CUTLER HAMMER MS SERIES. PROVIDE HEATER AS PER MOTOR NAMEPLATE READING. INSTALL @ 48" AFF UNLESS OTHERWISE NOTED.
- ⊕ 3M SAME AS ABOVE BUT IN N-4 ENCLOSURE.
- AFF ABOVE FINISH FLOOR.
- NL LIGHTING FIXTURE TO BE "ON" ALL TIME.
- POWER PANELBOARD. SEE SCHEDULE.
- MEDICAL GASES ALARM TO BE SUPPLIED BY MECHANICAL CONTRACTOR. PROVIDE ELECTRICAL CONNECTION.
- ⊕ 4"x4"x2-1/8" BOX WITH BLANK COVER FOR FUTURE DOOR ACCESS CONTROL. INSTALL @ 48" AFF.
- 4' LED STRIP (SEE SCHEDULE).
- 2'x4' LIGHTING FIXTURE (SEE SCHEDULE).
- 2'x2' LIGHTING FIXTURE (SEE SCHEDULE).
- DOWNLIGHT (SEE SCHEDULE).
- JUNCTION BOX 6"x6"x4" INSTALLED ABOVE HUNG CEILING.
- EMERGENCY LIGHTING FIXTURE (SEE SCHEDULE).
- 8" WIDE, 4" DEEP CABLE TRAY. LENGTH AS SHOWN ON DRAWINGS. EQUAL TO LEGRAND CABLE FILL CF105. PROVIDE HANGER SUPPORT KIT MODEL FASP-200 EVERY 8 FEET. PROVIDE FITTINGS AS REQUIRED.
- 3/4" EMPTY CONDUIT W/FISHWIRE.
- 1/2" EMPTY CONDUIT FOR FUTURE SOUND WIRING.
- 1" EMPTY CONDUIT W/GALVANIZED FISHWIRE FOR TELEPHONE/DATA AND CABLE TV.
- 1-1/4" EMPTY CONDUIT W/GALVANIZED FISHWIRE FOR TELEPHONE/DATA AND CABLE TV.
- 1(EA) 2" EMPTY CONDUIT W/GALVANIZED FISHWIRE FOR TELEPHONE/DATA.
- 1(EA) 3" EMPTY CONDUIT W/GALVANIZED FISHWIRE FOR TELEPHONE/DATA.
- 1(EA) 4" EMPTY CONDUIT W/GALVANIZED FISHWIRE FOR TELEPHONE/DATA.
- #8 THW IN 1/2" C CONNECTED TO CORRESPONDING ISOLATION PANELBOARD.
- EMT CONNECTOR W/BUSHING @ CONDUIT END. PROVIDE CLAMP WHEN CONNECTED TO CABLE TRAY.

GENERAL LEGEND (CONT.):

- ⊕ POWER GROUND MODULE CONSISTING OF 4(EA) RED DUPLEX RECEPTACLES & 4(EA) GROUND CONNECTORS EQUAL TO BENDER GPM F4 DR 4.
- ⊕ SAME AS ABOVE BUT WITH IVORY RECEPTACLES.
- ⊕ SURGICAL CLOCK/TIMER EQUAL TO BENDER ZT159RS. INSTALL @ 6"-6" AFF.
- ⊕ SURGICAL CHRONOMETER CONTROL EQUAL TO BENDER MK1550. PROVIDE A 4"x4"x2-1/8" BOX W/ONE GANG RAISED COVER. INSTALL @ 48" AFF.
- ⊕ REHEAT COIL TO BE SUPPLIED BY MECHANICAL CONTRACTOR.
- ⊕ DUAL SYSTEM ISOLATION POWER PANEL (SEE SCHEDULE).
- TELEPHONE TERMINAL CABINET CONSISTING OF A 3'x8"x3/4" TREATED PLYWOOD PAINTED WITH FIRE RETARDANT PAINT.
- HEAVY DUTY SAFETY SWITCH (SEE SCHEDULE).
- GREENFIELD CONDUIT. WHEN OUTDOORS TO BE SEALTITE.
- ⊕ 4"x4"x1-1/2" BOX WITH ONE GANG RAISED COVER FOR FUTURE DOOR CLOSER. INSTALL ABOVE DOOR FRAME. COORDINATE EXACT LOCATION W/ARCHITECT.
- ⊕ OCTAGONAL BOX 1-1/2" DEEP WITH BLANK COVER FOR FUTURE SPEAKER.
- ⊕ DRY TYPE TRANSFORMER (SEE ONE LINE LEGEND FOR DESCRIPTION).
- ⊕ DUAL TECHNOLOGY CEILING MOUNT OCCUPANCY SENSOR EQUAL TO LUTRON LOS-CDT-2000WH.
- ⊕ LUTRON POWER PACK EQUAL TO MODEL PP-DV.
- L-3 #16 TFFN IN 1/2" CONDUIT.
- DOOR ACCESS CONTROL TERMINAL CABINET 12"x12"x4" N1 ENCLOSURE WITH PIANO HINGE DOOR DAC AND PLYWOOD BACKBOARD. INSTALL ABOVE HUNG CEILING.
- BENDER ISOLATION PANELBOARD 15" REMOTE MONITOR MODEL CP-915. INSTALL @ 5"-0" AFF.
- RS-1 PAIR RS485 CABLE EQUAL TO BELDEN 9841. INSTALL IN A 3/4" CONDUIT.
- N-3/4" EMT CONDUIT. WIRING AS PER MANUFACTURER RECOMMENDATIONS.
- N-1" EMT CONDUIT. WIRING AS PER MANUFACTURER RECOMMENDATIONS.
- N-2-1-1/4" EMT CONDUIT. WIRING AS PER MANUFACTURER RECOMMENDATIONS.
- ⊕ NURSE'S CALL CONTROL STATION, DESK MTD., WITH A 4"x4" FLOOR OUTLET BOX W/COVER AND FLEXIBLE CORD CONNECTION TO A 4"x4" OUTLET BOX WITH COVER, FLUSH AT 3"-6" AFF IN COUNTER BACK SPLASH FOR CONSOLE FLEXIBLE CORD. RAULAND MODEL NO. R5KCON.
- ⊕ CODE BLUE STATION MOUNTED IN A SINGLE GANG BACKBOX RAULAND MODEL R5KR4KCB13. INSTALL BEHIND HEAD BED @ 54" AFF.
- ⊕ NURSE'S CALL STAFF STATION, FLUSH WALL MTD. IN A 2 GANG BACK BOX AT 4'-6" AFF. RAULAND MODEL NO. R5K5STF.
- ⊕ NURSE'S CALL DUTY STATION, FLUSH WALL MTD. IN A 2 GANG BACK BOX AT 4'-6" AFF. RAULAND MODEL NO. R5K5STDY.
- ⊕ NURSE'S CALL SINGLE PATIENT STATION MOUNTED IN A 2 GANG BACK BOX RAULAND MODEL NO. R5KPS1A INSTALLED BEHIND HEAD BED.
- ⊕ NURSE'S CALL EMERGENCY STATION WITH PULL CORD RAULAND MODEL NO. R5KPC1WPMOUNTED IN A ONE GANG 4"x4" OUTLET BOX @ 30" AFF IN TOILET AND LAVATORIES AND 60" AFF IN SHOWERS.
- ⊕ STAFF WITH CODE BLUE PROVISION MOUNTED IN A 3 GANG BACK BOX RAULAND MODEL NO. R4KPB23/R4KSPK INSTALLED BEHIND HEAD BED OR AT 54" AFF.
- ⊕ SINGLE LAMP CORRIDOR LIGHT RAULAND MODEL NO. R5KCL. INSTALL ABOVE DOOR FRAME OR CEILING.
- ⊕ DUAL LAMP CORRIDOR LIGHT RAULAND MODEL R5KCL. INSTALL ABOVE DOOR FRAME OR CEILING.
- ⊕ TRIPLE LAMP CORRIDOR LIGHTS RAULAND MODEL R6KCL. INSTALL ABOVE DOOR FRAME OR CEILING.
- ⊕ J. BOX INTERFACE MODULE IN ONE GANG 4"x4" OUTLET BOX, CENTERED ABOVE DOOR FRAME. RAULAND MODEL NO. DCA200 WHERE CORRIDOR LIGHT IS NOT REQUIRED.
- ⊕ NURSE'S CALL TERMINAL CABINET, SURFACE WALL MOUNTED TO INCLUDE RAULAND NP RESPONDER 5000 COMPONENTS.
- ⊕ JUNCTION BOX 10"x10"x4" N-1 ENCLOSURE, GAGE 14, ANSI GRAY FINISH.

NURSE CALL SYSTEM IMPORTANT NOTES:

- EMERGENCY CALL STATIONS (CODE BLUE) MUST SUMMON ASSISTANCE FROM OUTSIDE THE UNIT DEPARTMENT IT IS INSTALLED.
- APPROVED HOSPITAL NURSE CALL SYSTEM IS PCI OR OTHER OWNER'S APPROVED SUPPLIER. CONTRACTOR TO COORDINATE BEFORE BID.
- CONTRACTOR TO COORDINATE FINAL NURSE CALL DEVICES BACK BOXES DIMENSIONS.

FIRE & ALARM LEGEND:

- ⊕ ADDRESSABLE SMOKE DETECTOR EQUAL TO SIEMENS OH921 (CEILING MOUNTED).
- ⊕ PULL STATION EQUAL TO SIEMENS HMS-M. INSTALL @ 48" AFF.
- ⊕ SPEAKER/STROBE EQUAL TO SIEMENS SL2SPSWR-F. INSTALL @ 7'-0" AFF. SUBSCRIPT DENOTES CANDELA SETTING.
- ⊕ DUCT DETECTOR TO BE SUPPLIED BY MECHANICAL CONTRACTOR. PROVIDE CONNECTION TO FIRE & ALARM SYSTEM. SEE FIRE & ALARM NOTE 4.
- ⊕ FIRE TERMINAL CABINET 18"x18"x6" N-1 ENCLOSURE WITH PIANO HINGE DOOR AND PLYWOOD BACKBOARD.
- ⊕ 3/4" EMT CONDUIT FOR FIRE & ALARM SYSTEM. WIRING AS PER MANUFACTURER RECOMMENDATIONS.
- 1" EMT CONDUIT FOR FIRE & ALARM SYSTEM. WIRING AS PER MANUFACTURER RECOMMENDATIONS.
- ⊕ FLOW SWITCH TO BE SUPPLIED BY MECHANICAL CONTRACTOR.
- ⊕ TAMPER SWITCH TO BE SUPPLIED BY MECHANICAL CONTRACTOR.
- ⊕ EXISTING FIRE & ALARM PANEL TO REMAIN.
- ⊕ FIRE & ALARM TERMINAL CABINET 18"x12"x4" WITH PIANO HINGE ROOM AND TELEPHONE BACKBOARD. INSTALL @ 5'-0" AFF.
- ⊕ CONTROL RELAY MODULE FOR DOOR ACCESS CONTROL DOOR RELEASE.

FIRE & ALARM GENERAL NOTES:

- FIRE & ALARM EQUIPMENT AND INSTALLATION SHALL COMPLY WITH LATEST NFPA, IBC, AND LOCAL FIRE DEPARTMENT.
- SMOKE DETECTORS SHALL BE LOCATED 3'-6" OR MORE FROM A/C SUPPLY DIFFUSER.
- FIRE & ALARM PANEL SHALL BE PROVIDED WITH BATTERIES OR EMERGENCY POWER BACKUP AS RECOMMENDED BY MANUFACTURER.
- PROVIDE DUCT DETECTOR WITH RELAY COMPATIBLE W/FIRE & ALARM SYSTEM AT THE AIR HANDLING UNITS DUCTS WHERE REQUIRED BY MECHANICAL DRAWINGS. CONNECT THIS RELAY TO THE A/C UNIT CONTROL CIRCUIT SO THAT THE UNIT SHUTDOWNS UPON DETECTOR'S INITIATION. THE DETECTOR SHALL BE CONNECTED TO THE FIRE & ALARM SYSTEM.

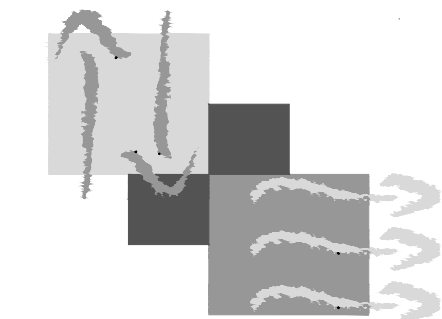
IMPORTANT FIRE & ALARM NOTE:

- BUILDING APPROVED SUPPLIER/MANUFACTURER IS PCI OR OTHER OWNER'S APPROVED SUPPLIER. CONTRACTOR TO COORDINATE BEFORE BID.
- CONTRACTOR TO INCLUDE IN PROPOSAL ALL NECESSARY UPGRADES OF SYSTEM TO CONNECT ADDITIONAL PROJECT DEVICES.

IMPORTANT DEMOLITION NOTES:

- A- CONTRACTOR TO VISIT PROJECT SITE AND MUST INCLUDE IN PROPOSAL THE REMOVAL AND DISPOSAL OF THE FOLLOWING ITEMS INSIDE PROJECT LIMIT:

- LIGHTING FIXTURES AND RELATED CONDUIT & WIRES UP TO CORRESPONDING PANELBOARDS.
- RECEPTACLES AND RELATED CONDUIT & WIRES UP TO CORRESPONDING PANELBOARDS.
- DATA, TELEPHONE, OUTLETS, AND RELATED CONDUIT & CABLES UP TO TERMINAL CABINETS.
- FIRE & ALARM DEVICES & RELATED CONDUIT & CABLES.
- SPEAKERS AND RELATED WIRES.
- NURSE CALL DEVICES AND RELATED CONDUIT CABLES AND PANEL.



JAVIER I. CASTILLO PE

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YO, INGENIERO JAVIER I. CASTILLO, LICENCIA 12091, CERTIFICADO QUE SOY EL PROFESIONAL, QUE DISEÑO Y PREPARE ESTOS PLANOS Y, LAS ESPECIFICACIONES COMPLEMENTARIAS, TAMBIEN CERTIFICADO QUE ENTENDI QUE DICHS PLANOS Y ESPECIFICACIONES CUMPLEN CON LAS DISPOSICIONES APPLICABLES DEL REGLAMENTO CONJUNTO Y LAS DISPOSICIONES APPLICABLES DE LOS REGLAMENTOS Y CODIGOS DE CONSTRUCCION VIGENTES DE LAS AGENCIAS, JUNTA DE REGLAMENTADORAS O CORPORACIONES PUBLICAS CON JURISDICCION, CERTIFICADO ASIMISMO QUE EN LA PREPARACION DE ESTOS PLANOS Y ESPECIFICACIONES SE HA CUMPLIDO CABALMENTE CON LO DISPUESTO EN LA LEY 14-2004, SEGUN ENMIENDADA, CONOCIDA COMO LA LEY PARA LA INVERSION POR LA INDUSTRIA FUERTECORROSIWA Y CON LA LEY NUM. 316 DE 15 DE MAYO DE 1998, SEGUN ENMIENDADA, LEY NUM. 96 DE 5 DE JULIO DE 1978, SEGUN ENMIENDADA; SEGUN APLIQUE, RECONOZCO QUE CUALQUIER DECLARACION FALSA O FALSIFICACION DE LOS REGISTROS QUE SE HAYA PRODUCIDO POR DESCONOCIMIENTO O POR NEGLIGENCIA YA SEA POR MI, MIS AGENTES O EMPLEADOS, O POR OTRAS PERSONAS CON MI CONOCIMIENTO, ME HACEN RESPONSABLE DE CUALQUIER ACCION JUDICIAL Y DISCIPLINARIA POR LA OBRERA Y AGENCIAS CON JURISDICCION.

SEAL

CONSULTANTS

PROJECT OWNER

PROJECT NAME

REMODELATION OF
SURGICAL SUITE AREA

FACILITY LOCATION

HOSPITAL RAMON RUIZ
ARNAU
LOCATION

BAYAMON , PR

DRAWING NAME

LEGENDS

REVISION TABLE

TAG	DESCRIPTION	DATE

PRELIMINARY DRAWINGS
15/FEB/25

THESE DRAWINGS IS FOR OWNERS APPROVAL FOR THE DEVELOPMENT OF ADVANCE DRAWINGS. ANY DRAWINGS WITH THIS SEAL CANT BE USED FOR BID OR CONSTRUCTION.

DRAWN BY : W.Z.C.
REVISE BY : W.Z.C.
PROJECT NUMBER : XX-XXX
DESIGN YEAR : APRIL 2025

E-8

WILLIAM ZAPATA P.E.

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