US Army Corps of Engineers
Mobile District
BUILDING STRONG®

JUNE 2024

CONSTRUCTION PLANS FOR

CADD CODE: MEF24005

CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452
COLUMBUS AIR FORCE BASE, MISSISSIPPI

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

LOWNDES COUNTY, MISSISSIPPI

RTA SUBMITTAL

DRAWINGS IN THIS FOLIO HAVE BEEN REDUCED TO ONE HALF THE ORIGINAL SCALE

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US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: T. HYMAN	ISSUE DATE: JUNE 2024
DRAWN BY: J. JOHNSON	SOLICITATION NO.: -
CHECKED BY: R. WEED	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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CESAM v20181203

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DESIGNED BY:
T. HYMAN

DRAWN BY:
J. JOHNSON

CHECKED BY:
R. WEED

SUBMITTED BY:
T. HYMAN

SIZE:
ANSI D

FILE NAME:
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INDEX OF DRAWINGS

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G-001

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GENERAL NOTES:

I. ACCESS

A. ACCESS TO THE PROJECT FOR ALL CONTRACTOR PERSONNEL, VEHICLES, AND EQUIPMENT IS ILLUSTRATED ON SHEET G-006. ACCESS ROUTES MAY BE SUBJECT TO CHANGE BASED ON OPERATIONAL REQUIREMENTS ON BASE. POTENTIAL SCHEDULE IMPACTS SHALL BE COORDINATED WITH THE CONTRACTING OFFICER.

B. CONTRACTOR SHALL PROVIDE A PROFESSIONALLY PAINTED SIGN, MEETING CONTRACTING OFFICER APPROVAL, AT THE CONSTRUCTION ENTRANCE TO DIRECT MATERIAL SUPPLIERS AND EMPLOYEES TO THE CONSTRUCTION SITE.

C. LOCATION OF CONTRACTOR'S STAGING (LAYDOWN) AREA WILL BE APPROVED BY THE CONTRACTING OFFICER'S REPRESENTATIVE AFTER CONTRACTOR SUBMITS THE CONTRACTOR AREA USE PLAN. AVAILABILITY OF CONTRACTOR'S STAGING AREA SHALL BE DEPENDENT ON TIMING OF OTHER GOVERNMENT PROJECTS. WHEN NOT ENGAGED IN CONSTRUCTION ACTIVITY, THE CONTRACTOR'S CONSTRUCTION EQUIPMENT AND VEHICLES SHALL BE PARKED IN THE CONTRACTOR'S STAGING AREA. STAGING OF MATERIALS SHALL BE COORDINATED WITH USER THROUGH CONTRACTING OFFICER'S REPRESENTATIVE.

D. LOCATION OF ACCESS/HAUL ROADS ARE AS INDICATED ON SHEET G-006.

E. ALL HAUL ROADS SHALL BE MAINTAINED SUCH THAT UNOBSTRUCTED ACCESS WILL BE PROVIDED AT ALL TIMES FROM THE ROAD TO THE STAGING AREA AND FROM THE STAGING AREA TO THE WORK SITE AND FACILITATE GOVERNMENT ACCESS TO THE BASE AT ALL TIMES. THE MAINTENANCE OF HAUL ROADS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNMENT.

F. CONTRACTOR SHALL COORDINATE ACTIVITIES THROUGHOUT THE PROJECT IN A MANNER THAT ALLOWS EMERGENCY ACCESS TO ALL EXISTING ROADWAYS AT ALL TIMES WITHOUT DELAYS TO EMERGENCY VEHICLE'S RESPONSE TIME.

G. CONTRACTOR SHALL MAINTAIN THE ACCESS ROUTE TO BE FREE FROM DEBRIS CAUSED FROM CONSTRUCTION ACTIVITY. ON A DAILY BASIS, CONTRACTOR SHALL SWEEP AFFECTED ROADWAYS. CONTRACTOR TO PROVIDE SWEEPER.

H. STAGING AREA AND ANY OTHER AREA DISTURBED BY CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION OF EXISTING SITE, SUBJECT TO THE APPROVAL OF THE CONTRACTING OFFICERS REPRESENTATIVE.

I. THE CONTRACTOR SHALL MAINTAIN USER VEHICULAR ACCESS TO ALL EXISTING PARKING TO REMAIN AND PEDESTRIAN ACCESS TO ALL ADJACENT BUILDINGS AT ALL TIMES DURING THE PROJECT.

J. THE CONTRACTOR SHALL TAKE THE STEPS TO ENSURE THAT PROJECT CONSTRUCTION ACTIVITY DOES NOT INTERFERE WITH REGULAR BASE OPERATIONS. REGULAR BRIEFINGS SHALL BE CONDUCTED BY THE CONTRACTOR WITH THE RESPONSIBLE BASE OFFICIALS FOR THE PURPOSE OF COORDINATING CONSTRUCTION ACTIVITIES AND SCHEDULED BASE OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INTERVAL (WEEKLY, BIWEEKLY, ETC.) FOR THE REQUIRED BRIEFINGS PRIOR TO COMMENCEMENT OF SITE CONSTRUCTION ACTIVITY. THE BASE COMMANDER AND/OR THE CONTRACTING OFFICER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO IMMEDIATELY SUSPEND AUTHORIZATION TO WORK IN A PARTICULAR AREA OF THE SITE DURING MILITARY EMERGENCIES OR FOR BASE SECURITY REASONS.

K. CONTRACTOR IS REQUIRED TO GPS LOCATE ALL UTILITY LINES AND APPURTENANCES IMMEDIATELY AFTER INSTALLATION FOR UPDATING RED-LINE AS-BUILT DRAWINGS MAINTAINED ON-SITE BY THE CONTRACTOR.

L. ALL CRANES COMING ON BASE MUST BE FIRST COORDINATED WITH COE/BASE TO GET FULL EXTENSION AND EXPECTED DURATION. THIS MUST BE SUPPLIED TO THE AIRFIELD PRIOR TO CRANE'S ARRIVAL. CONTRACTOR MUST HAVE FAA TEMPORARY CRANE PERMIT IN HAND PRIOR TO ANY CRANE ACTIVITY.

M. COLUMBUS AFB HAS NO DESIGNATED SPOIL AREAS. CONTRACTOR NEEDS TO REMOVE NON-COMBUSTIBLE MATERIALS OFF BASE AND DISPOSE OF PROPERLY.

N. UNLESS OTHERWISE DIRECTED, THE CONTRACTOR SHALL DISPOSE OF ALL WASTE AND UNSUITABLE MATERIAL OFF BASE AT A APPROVED DISPOSAL AREA.

II. COORDINATION

A. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CORDON OFF THE WORK AREAS AND STREET CROSSINGS BY USING BARRICADES APPROVED BY THE CONTRACTING OFFICER, AS NEEDED.

B. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS TO INCLUDE BUT NOT LIMITED TO THE NPDES PERMIT FOR CONSTRUCTION ACTIVITIES, COORDINATING ALL REQUIREMENTS WITH STATE AND LOCAL AUTHORITIES AND FOR SUBMITTING ALL DOCUMENTS FOR PERMITTING AND PERMIT FEES.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF THE PROJECT AND THE EXPENSE THEREOF. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT NO IMPROVEMENTS ARE CONSTRUCTED ON OFF-SITE PARCELS.

D. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE IF THE REQUIRED CONSTRUCTION CAN BE PERFORMED WITHIN THE AREA PROVIDED AND COMPLY WITH REQUIREMENTS OF THE SAFETY AND HEALTH REGULATIONS (OSHA) FOR CONSTRUCTION PROJECTS OF THIS TYPE. ANY SAFETY MEASURES OR METHOD OF CONSTRUCTION THAT IS NECESSARY IN THE CONSTRUCTION OF THIS PROJECT TO COMPLY WITH THESE REGULATIONS IS THE CONTRACTOR'S RESPONSIBILITY.

III. TRAFFIC CONTROL

A. ALL CONTRACTOR OWNED CONSTRUCTION EQUIPMENT AND VEHICLES SHALL BE MARKED WITH COMPANY INSIGNIAS OR OTHER COMPANY MARKINGS, WHICH ARE CLEARLY VISIBLE.

B. CONSTRUCTION EQUIPMENT SHALL HAVE AUTOMATIC SIGNALING DEVICES TO SOUND AN ALARM WHEN MOVING IN REVERSE.

C. ONLY RUBBER-TIRED VEHICLES SHALL BE ALLOWED ON EXISTING PAVEMENT THAT IS TO REMAIN.

D. NON-CONSTRUCTION PEDESTRIAN TRAFFIC SHALL NOT BE ALLOWED INSIDE THE CONSTRUCTION LIMITS.

E. ANY DAMAGE TO ROADS AND PAVEMENT DUE TO UTILITY WORK, CONSTRUCTION EQUIPMENT OR CONSTRUCTION TRAFFIC SHALL BE REPAIRED TO ORIGINAL CONDITION BY THE CONTRACTOR AT HIS/HER OWN EXPENSE TO THE SATISFACTION OF THE CONTRACTING OFFICER.

F. TRAFFIC CONTROL SHALL BE IN COMPLIANCE WITH THE MDOT DESIGN STANDARDS, CURRENT EDITION AND CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD) U.S. DEPARTMENT OF TRANSPORTATION.

G. ALL ROAD CLOSURES SHALL BE COORDINATED A MINIMUM OF 14 DAYS IN ADVANCE OF CLOSURE.

H. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CONTRACTING OFFICER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION.

IV. EROSION CONTROL

A. EROSION CONTROL MEASURES MUST BE IN PLACE PRIOR TO ANY DISTURBANCE.

B. EROSION CONTROL DEVICES SHALL BE USED FOR THE STAGING AREA AND ANY MATERIAL STOCK PILES WHEN NECESSARY TO CONTROL EROSION AND STORM WATER RUNOFF.

C. STOCKPILED MATERIAL SHALL BE CONSTRAINED IN A MANNER TO PREVENT ITS MOVEMENT BY WIND FORCES.

D. LIMITS OF CONSTRUCTION IS DEFINED AS THOSE AREAS AFFECTED BY THE CONTRACTOR'S OPERATIONS INVOLVING EXCAVATION, EMBANKMENT AND FINAL GRADING REQUIRED TO COMPLETE THE WORK IN ACCORDANCE WITH THE ELEVATIONS, GRADES AND SECTIONS SHOWN IN THESE DRAWINGS.

E. CONTRACTOR SHALL GRASS AND FERTILIZE ALL AREAS DISTURBED DURING CONSTRUCTION OUTSIDE THE LIMITS OF PAVED OR SOLID SOD AREAS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS AFTER COMPLETION OF ALL PAVING AND TOPSOIL FINISH GRADING WORK FOR EACH PHASE OF THE PROJECT.

F. THE CONTRACTOR SHALL GRASS ALL DISTURBED AREAS WITHIN THE SITE LIMITS, INCLUDING ALL CUT AND FILL SECTIONS IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. CONTRACTOR SHALL MAINTAIN GRASS UNTIL A PERMANENT VEGETATIVE COVER HAS BEEN ESTABLISHED PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. ESTABLISHMENT OF A PERMANENT VEGETATIVE COVER SHALL INCLUDE: PLACEMENT OF TOPSOIL, APPLICATION OF FERTILIZER, PLANTING OF GRASS SPECIES SELECTED, IRRIGATION AS REQUIRED, AND RAKING OR HAND FINISHING.

G. CONTRACTOR SHALL UTILIZE BEST MANAGEMENT PRACTICES PLAN DETAILS SHOWN HEREIN AND ANY OTHERS NECESSARY THAT ARE APPROVED BY THE CONTRACTING OFFICER'S REPRESENTATIVE.

H. RETENTION/DETENTION AREAS SHALL BE SUBSTANTIALLY COMPLETE PRIOR TO ANY CONSTRUCTION ACTIVITIES THAT MAY INCREASE STORMWATER RUNOFF RATES. THE CONTRACTOR SHALL CONTROL STORMWATER DURING ALL PHASES OF CONSTRUCTION AND TAKE ADEQUATE MEASURES TO PREVENT THE EXCAVATED POND FROM BLINDING DUE TO SEDIMENTS.

I. ALL DISTURBED AREAS WHICH ARE NOT PAVED SHALL BE STABILIZED WITH SOD.

V. EXCAVATION AND TRENCHES

A. OPEN TRENCHES AND EXCAVATIONS WITHIN THE CONSTRUCTION SITE SHALL BE PROMINENTLY MARKED WITH ORANGE FENCING OR OTHER MEANS ACCEPTABLE TO THE CONTRACTING OFFICER.

B. ALL TOPSOIL SHALL BE STRIPPED FROM ALL AREAS WITHIN THE LIMITS OF CONSTRUCTION AND STOCKPILED FOR LATER USE IN THE UPPER 4 INCHES OF FINISHED GRADE TO PROVIDE A SUITABLE GRASS BED. THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE CONTRACTING OFFICERS REPRESENTATIVE FOR TOPSOIL STOCKPILE LOCATIONS.

C. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL LOCATE ALL UTILITIES AND OBTAIN A DIG PERMIT. ANY UTILITY ADJUSTMENTS, EXISTING OR PROPOSED, REQUIRED TO COMPLETE CONSTRUCTION UNDER THIS CONTRACT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THIS ITEM INCLUDES, BUT IS NOT LIMITED TO; THE TEMPORARY RELOCATION OF EXISTING OVERHEAD POWER LINES. ALL WORK IN THE VICINITY OF OVERHEAD POWER LINES SHALL CONFORM TO OSHA REQUIREMENTS AND ANY OTHER APPLICABLE (LOCAL) SAFETY REQUIREMENTS. THE CONTRACTOR IS TO REPAIR ALL DAMAGES TO EXISTING UTILITIES THAT ARE TO REMAIN IN SERVICE IMMEDIATELY AT NO ADDITIONAL COSTS OR EXPENSE TO THE GOVERNMENT. REPAIRS SHALL MEET OR EXCEED CURRENT REQUIRED SPECIFICATIONS.

D. ALL WORK ADJACENT TO OR ON EXISTING ROADWAYS SHALL COMPLY WITH CURRENT MISSISSIPPI DEPARTMENT OF TRANSPORTATION STANDARDS AND CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD) U.S. DEPARTMENT OF TRANSPORTATION FOR TRAFFIC CONTROL AND SAFETY. ALL WORK IN AND ADJACENT TO STREETS OR ROADS SHALL BE COORDINATED WITH CONTRACTING OFFICER'S REPRESENTATIVE. THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICERS REPRESENTATIVE WITH A ONE-WEEK ADVANCE NOTICE PRIOR TO BEGINNING OF WORK ADJACENT TO BASE ROADWAYS. NO WORK ADJACENT TO OR ON EXISTING ROADS SHALL BE INITIATED WITHOUT PRIOR APPROVAL FROM THE CONTRACTING OFFICER'S REPRESENTATIVE.

VI. SAFETY AND SECURITY REQUIREMENTS

A. CONTRACTOR SHALL MAINTAIN SAFETY PRACTICES THAT CONFORM TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS AND USACE SAFETY MANUAL EM385-1-1.

B. OPEN FLAME WELDING OR TORCH CUTTING OPERATIONS SHALL BE PROHIBITED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS ARE PROVIDED AND HAVE BEEN APPROVED BY THE CONTRACTING OFFICERS REPRESENTATIVE.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY FENCING OR OTHER SECURITY MEASURES REQUIRED TO PROTECT WORK OR EQUIPMENT DURING CONSTRUCTION.

D. ANY HOT WORK CONDUCTED FOR THESE PROJECTS WILL REQUIRE A PERMIT ISSUED BY COLUMBUS FIRE & EMERGENCY SERVICES AND COORDINATION WITH WEAPONS SAFETY AND COORDINATED THRU CONTRACTING OFFICER'S REPRESENTATIVE PRIOR TO PERFORMING SUCH WORK.

E. BE ADVISED THAT THE CONTRACTOR'S WORK SHALL BE SUSPENDED WHEN LIGHTNING IS WITH IN 5 MILES.

VII. CONTRACTOR SAFETY PLAN SUBMITTALS

A. CONTRACTOR SHALL FURNISH A CONSTRUCTION SAFETY PLAN IN ACCORDANCE WITH THE SPECIFICATIONS AND USACE SAFETY MANUAL EM 385-1-1 WITH PROJECT SCHEDULE. THE SAFETY PLAN SHALL IDENTIFY THE FOLLOWING ITEMS:

1. PROPOSED ACCESS POINTS, STAGING AREA AND HAUL ROUTES.
2. TEMPORARY MARKINGS TO BE USED, IF ANY.
3. LOCATION AND TYPE OF BARRICADES OR OTHER TRAFFIC CONTROL DEVICES.
4. METHODS BY WHICH THE CONTRACTOR WILL COMMUNICATE WITH THE CONTRACTING OFFICER'S REPRESENTATIVE.

US Army Corps
of Engineers®

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

GENERAL NOTES

SHEET ID
G-002

RTA SUBMITTAL

SITE SYMBOL LEGEND

DESCRIPTION	EXISTING	NEW
BENCHMARK (SET CAPPED IRON ROD)	▲ OR ⊕	▲ OR ⊕
SOIL BORING	◉	◉
FOUND PK NAIL & DISC	△	
FOUND HEX BOLT	⬡	
FOUND IRON ROD	◎	
FOUND IRON ROD AND CAP	◑	
FOUND OPEN TOP PIPE	○	
FOUND CRIMP TOP PIPE	⊖ OR ⊖	
FOUND CONCRETE MONUMENT	⊡ OR ■	
DOT, COM OR GPS BENCHMARK	⊗	
PAVEMENT MARKING (FLOW ARROW)	↰ OR ↱ OR ↑	
SPOT ELEVATION	•— XXX.XX	•— XXX.XX
FLOW ARROW	~→	~→
REMOVAL		▨
BUILDING	▭	▭
TRAFFIC SIGN	—o OR —o—o	—o OR —o
BOLLARD	● BL OR ● BLD	⊙ OR ● BLD
JERSEY BARRIER	▬ JB	▤
RIGID PAVEMENT AND JOINTS	▦	▦
FLEXIBLE PAVEMENT (ASPHALT)	▭	▬
GRADED CRUSHED AGGREGATE SURFACE	▩	▩
RESURFACED FLEXIBLE PAVEMENT		▨
GRASS PAVER		▧
LANDSCAPED AREA	▒	
MAJOR CONTOURS	—— 0.00 ——	—— 0.00 ——
MINOR CONTOURS	- - - - 0.00 - - - -	- — - 0.00 - — -
CENTERLINE	—— – ——	—— – ——
PROPERTY LINE	—··—··℄··—··—	
RIGHT OF WAY (ROW)	—— - - —— - - ——	
RIGHT OF WAY (ROW) EXTENSION	— — — — — — — —	
SIDEWALK DETECTABLE WARNING STRIP		▒
MAILBOX	MB	
TREE LINE OR WOOD LINE	.⌒⌒⌒⌒⌒⌒⌒⌒.	.⌒⌒⌒⌒⌒.
TREE – CREPE MYRTLE	✺ OR ✹	
TREE – PINE	✳	
TREE – OAK	◌	
TREE – CEDAR	◌	
TREE – MAGNOLIA	◌	
TREE – PALM	✱	
TREE – HOLLY	✹	
TREE – BAY LAUREL	○	
TREE – CYPRESS	✹	
BUSH OR SHRUB	✺ OR ✹ OR ◌	
FENCE – CHAINLINK	—— x ——	—— x ——
FENCE – WOOD BOARD	—— // ——	—— // ——
FENCE – HOG WIRE	—— <> ——	—— <> ——

SITE SYMBOL LEGEND

DESCRIPTION	EXISTING	NEW
ROOF DRAIN	DS ☐ OR ○ DS	DS ○ OR DS ☐
ROOF DRAIN COLLECTION PIPE	—— RDC ——	—— RDC ——
ROOF DRAIN COLLECTION CLEANOUT	● CO	
ROOF DRAIN COLLECTION DRAIN BASIN		▣
STORM DRAINAGE MANHOLE	Ⓓ OR DMH	Ⓓ OR Ⓓ
STORM DRAINAGE PIPE	—— SD ——	—— SD ——
DRAINAGE SWALE	—— · · · —— · · · ——	—— · · · —— · · · ——
RIP–RAP	▩	▩
GRATE INLET OR DROP INLET	▥ OR ■	▣ OR ▣
MEDIAN INLET	DMH	
MITERED END SECTION (MES)	⊏	⊏
CURB INLET	DMH OR DMH	◉ OR ◉
BOTTOM OF STORMWATER POND		▨
MONITORING WELL	Ⓦ	
NATURAL GAS LINE	—— NG ——	—— NG ——
NATURAL GAS MANHOLE	GMH	
NATURAL GAS METER OR REGULATOR	GM OR Ⓖ	
NATURAL GAS VALVE	GV ⋈	
NATURAL GAS MARKER POST	GAS ● OR —•— GAS	
UNKNOWN UTILITY LINE	—— UK ——	
HOT WATER / COLD WATER LINE	—— HW/CW ——	
REUSE WATER LINE	—— RU ——	
REUSE WATER VALVE	RUV ⋈	
REUSE WATER MANHOLE	RUMH	
IRRIGATION LINE	—— IGL ——	
IRRIGATION CONTROL VALVE	ICV ⋈ OR IRV ⋈	
IRRIGATION SPRINKLER HEAD	✳	
SANITARY SEWER FORCE MAIN	—— SSFM ——	—— FM ——
SANITARY SEWER LINE	—— SS ——	—— SS ——
SANITARY SEWER MANHOLE	Ⓢ OR SS OR SMH	Ⓢ OR Ⓢ
SANITARY SEWER CLEANOUT	● CO	
SANITARY SEWER VENT PIPE	● VP	
FIRE FLOW LINE	—— FF ——	—— FF ——
POST INDICATOR VALVE	PIV ⋈ OR ⊗ *PIV*	
FIRE HYDRANT	◎ OR ●	◎ OR ●
WATER MANHOLE		Ⓦ
WATER FLUSHING HYDRANT	◎	
FREE STANDING FIRE DEPT. CONNECTION		● FDC
WATER LINE	—— W ——	—— W ——
WATER METER	☐ WM OR WM	☐ WM
WATER BACK FLOW PREVENTOR	BFP ⊟ OR BFP	
WATER VALVE AND VALVE BOX	WV ⋈ OR WV ⊗ OR ☐ WVB	WV ⋈
WATER FAUCET OR HOSE BIBB	—○ WF OR ☒ HB	
TELEPHONE PEDESTAL	TPD ☒ OR TP OR ○ TPED	
TELEPHONE BOX	T	
TELEPHONE LINE – OVERHEAD	—— O/T ——	

SITE SYMBOL LEGEND

DESCRIPTION	EXISTING	NEW
TELEPHONE LINE – UNDERGROUND	—— BT ——	
TELEPHONE MANHOLE	Ⓣ OR TMH	
TELEPHONE POLE	TP	
TELEPHONE JUNCTION BOX	TJB	
COMMUNICATION LINE – UNDERGROUND	—— UC ——	
COMMUNICATION LINE – BURIED COPPER	—— BC ——	
COMMUNICATION LINE – OVERHEAD	—— O/C ——	
COMMUNICATION MANHOLE	Ⓒ OR CMH OR CMH	
COMMUNICATION BOX	CB ☐ OR C	
COMMUNICATION ANTENNA	△ OR ⊙ OR ▲	
FIBER OPTIC LINE – UNDERGROUND	—— UF ——	
FIBER OPTIC LINE – OVERHEAD	—— O/F ——	
FIBER OPTIC MARKER POST	FO ● OR —•— FOC	
FIBER OPTIC VAULT OR BOX	FOV ☐ OR ☐ FOB	
CABLE TV PEDESTAL	☒ CPD	
CABLE TV LINE – UNDERGROUND	—— CATV ——	
CABLE TV BOX	TV	
TRAFFIC SIGNAL MAST ARM	○—— OR ◎	
TRAFFIC SIGNAL BOX	TSB	
TRAFFIC SIGNAL VAULT	TSV	
PEDESTRIAN SIGNAL	PS OR 8	
TRAFFIC SIGNAL LINE – UNDERGROUND	—— BTS ——	
AIR CONDITIONER PAD	AC OR A/C	
RUNWAY OR TAXIWAY LIGHT	☼	
ELECTRICAL METER	EM	
ELECTRICAL PULL BOX	EPB ☐ OR ☐ EB	
ELECTRICAL ACCESS PANEL	☐ EAP	
ELECTRICAL TRANSFORMER PAD	☐ ETP	
ELECTRICAL PEDESTAL	☒ EPD	
ELECTRICAL CONTROL PANEL	☐ ECP	
ELECTRICAL ALARM PANEL OR BOX	AP ☐ OR ☐ AB	
ELECTRICAL BOX OR SERVICE BOX	E OR ESB	
ELECTRICAL TRANSFORMER	ET ▲	
ELECTRICAL SERVICE PANEL	ESP	
ELECTRICAL GENERATOR	GENERATOR	
ELECTRICAL VAULT	EV OR EV	
POWER POLE OR P.P. W/TRANSFORMER	○ OR ○ T	
LIGHT POLE	○ LP OR ☼ OR ○—	
POWER POLE	○ OR ○ PP	○
STREET LIGHT	☼ OR ○ SL	
ELECTRICAL MANHOLE	⚡ OR Ⓔ OR EMH	
ELECTRICAL LINE – OVERHEAD	—— O/E ——	—— OP ——
ELECTRICAL LINE – UNDERGROUND	—— UE ——	—— UP ——
ELECTRICAL OUTLET	EO ⊖ OR ∅ EO	
GUY WIRE	—GY—) OR ——)	
CONDUIT	—— CD ——	—— CD ——

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: T. HYMAN	ISSUE DATE: JUNE 2024
DRAWN BY: J. JOHNSON	SOLICITATION NO.: -
CHECKED BY: R. WEED	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005G-003.DWG

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SYMBOL LEGEND

SHEET ID
G-003

RTA SUBMITTAL

&	AND
∠	ANGLE
@	AT
BL, BL	BASE LINE, BOUNDARY LINE
℄, CL	CENTERLINE
Δ	DELTA
ø, DIA, D	DIAMETER
FL, FL	FLOW LINE
#, NO	NUMBER
±	PLUS OR MINUS
PL, PL	PROPERTY LINE, PLATE
AASHO	**AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS**
AASHTO	**AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS**
AB	ANCHOR BOLT
ABC	ASPHALT BASE COURSE
ABDN	ABANDON
ABS	**ACRYLONITRITE–BUTADIENE–STYRENE PIPE**
AC, A/C	AIR CONDITIONING UNIT
AC, Ac	ACRE
ACCEL	ACCELERATION
ACCV	AUTOMATIC CONTROL CHECK VALVE
ACI	AMERICAN CONCRETE INSTITUTE
AD	ACCESS DOOR
ADA	THE AMERICANS WITH DISABILITIES ACT
ADD, ADDL	ADDITIONAL
ADJ	ADJUSTABLE
ADPT	ADAPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGG	AGGREGATE
AISC	**AMERICAN INSTITUTE OF STEEL CONSTRUCTION**
AISI	AMERICAN IRON AND STEEL INSTITUTE
AL	ALABAMA
ALDOT	**ALABAMA DEPARTMENT OF TRANSPORTATION**
ALK	ALKALINITY
ALUM	ALUMINUM
ALT	ALTERNATE (ING)
AM	12:00 MIDNIGHT UNTIL 11:59 NOON
ANOD	ANODIZE
ANSI	**AMERICAN NATIONAL STANDARDS INSTITUTE**
AP	ACCESS PANEL
APPROX	APPROXIMATE (LY)
AR	ACID RESISTANT
ARCH	ARCHITECT (URAL) (URE)
ARND	AROUND
ARV	AIR RELEASE VALVE
ASP, ASPH	ASPHALT
ASSEM	ASSEMBLY
ASSOC	ASSOCIATION
ASTM	**AMERICAN SOCIETY FOR TESTING MATERIALS**
ATTN	ATTENTION
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
AWL	AVERAGE WATER LEVEL
AWS	AMERICAN WELDING SOCIETY
BC, B/C	BURIED COMMUNICATION LINE OR DUCT
BCCMP	**BITUMINOUS COATED CORRUGATED METAL PIPE CULVERT**
BCPA	**BITUMINOUS COATED PIPE ARCH CULVERT**
BCPCMP	**BITUMINOUS COATED AND PAVED CORRUGATED METAL PIPE CULVERT**
BCPPA	**BITUMINOUS COATED AND PAVED PIPE ARCH CULVERT**
BCV	BALL CHECK VALVE
BCWE	BASE CLEARANCE WATER ELEVATION
BE	BURIED ELECTRIC CABLE OR DUCT
BEG	BEGIN
BFP	BACK FLOW PREVENTOR
BFV	BUTTERFLY VALVE
BG	BURIED NATURAL GAS LINE
BIT	BITUMINOUS
BLC	BASE LINE CONTROL
BLDG	BUILDING
BLK, BLKG	BLOCK (ING)
BLVD	BOULEVARD
BM	BENCHMARK, BACKER MATERIAL
BMP	BEST MANAGEMENT PRACTICES
BNDRY	BOUNDARY
BOC	BACK OF CURB
BOF	BOTTOM OF FOOTING
BOW	BOTTOM OF WALL
BPRV	BACK PRESSURE REGULATING VALVE
BRG	BEARING
BTWN, B/W	BETWEEN
BT, B/T	BURIED TELEPHONE CABLE OR DUCT
BTV, B/TV	BURIED TELEVISION CABLE
BV	BALL VALVE
BVL	BEVEL (ED)
BW	BOTH WAYS
BY, BYP	BYPASS
C&G	CURB AND GUTTER
CAP	**CAPACITY, CORRUGATED ALUMINIZED PIPE**
CASP	CORRUGATED ALUMINIZED STEEL PIPE
CATV	CABLE TELEVISION
CB	CATCH BASIN
CBC	CONCRETE BOX CULVERT
CBR	CALIFORNIA BEARING RATIO
CBS	CONCRETE BOX STRUCTURE
CC, C/C	CENTER TO CENTER
CCEW	CENTER TO CENTER EACH WAY
CCTV	CLOSED CIRCUIT TELEVISION
CCW	COUNTER CLOCKWISE
CD	**CROSS DRAIN, CROSS DIRECTION (GEOTEXTILES)**
CDT	CONDUIT
CF	CUBIC FOOT
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CH	CHANNEL
CHAMF	CHAMFER
CHKD	CHECKED
CHL	CHLORINATOR
CHR	CHLOROPRENE RUBBER (NEOPRENE)
CI	CAST IRON, CURB INLET
CIP	CAST IRON PIPE, CAST IN PLACE
CIR	CIRCLE
CIRC	CIRCUMFERENCE
CIU	CAST IRON PIPE UNLINED
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION WELD
CL2	CHLORINE SYSTEM
CLR	CLEARANCE
CM	CONCRETE MONUMENT, CENTIMETER
CMP	CORRUGATED METAL PIPE
CMAP	CORRUGATED METAL ARCH PIPE
CMU	CONCRETE MASONRY UNITS
CNR	CORNER
CO	CLEAN OUT, COUNTY, COMPANY
COE	CORPS OF ENGINEERS
COL	COLUMN
COR	**CONTRACTING OFFICER'S REPRESENTATIVE**
COMB	COMBINATION
COMM	COMMUNICATION
COMP	COMPRESSIBLE, COMPOSITE
CONC	CONCRETE
CONN	CONNECT, CONNECTION
CONST	CONSTRUCT, CONSTRUCTION
CONT	CONTINUOUS, CONTINUATION
COORD	COORDINATE
COR	**CONTRACTING OFFICER'S REPRESENTATIVE**
CORR	CORRUGATED
CP	CONCRETE PIPE
CPE	CORRUGATED POLYETHYLENE PIPE
CPLG	COUPLING
CPT	CONE PENETRATION TEST
CR	CONTROL RADIUS, COUNTY ROAD
CRS	COURSE (S)
CS	CURVE TO SPIRAL
CSP	CORRUGATED STEEL PIPE
CSTG	CASTING
CTG	COATING
CTJ	CONTROL JOINT
CTPB	CEMENT
CTR	CENTER (ED)
CTSK	COUNTERSINK
CU	CUBIC
CUP	COPPER PIPE
CU YD, CY	CUBIC YARD
CULV	CULVERT
CV	**CHECK VALVE, VALVE FLOW COEFFICIENT**
CW	COLD WATER
CWO	CLEARWELL OVERFLOW
D	**DRAIN (STRUCTURE), DEGREE OF CURVATURE, DEPTH, DISTANCE, DIAMETER**
DA	DRAINAGE AREA, DEFLECTION ANGLE
DBI	DITCH BOTTOM INLET
DBL	DOUBLE
DCS	DEGREE OF CURVATURE (SPIRAL)
DEG	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	**DETAIL, DETOUR, DETECTION, DETECTABLE**
DFE	DESIGN FLOOD ELEVATION
DGN	DRAWING (MICROSTATION)
DHW, DHWE	DESIGN HIGH WATER ELEVATION
DI	DUCTILE IRON, DROP INLET
DIAG	DIAGONAL
DIFF	DIFFUSER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISCH	DISCHARGE
DIST	DISTANCE
DIV	DIVISION
DIW	DEIONIZED WATER
DN	DOWN
DNSTY	DENSITY
DOC	DEGREE OF CURVATURE
DOT	DEPARTMENT OF TRANSPORTATION
DPI	DITCH POINT INTERSECTION
DR	DRAIN, DRIVE, DESIGN REVIEW
DRWY, DWY	DRIVEWAY
DS	DESIGN SPEED
DT	DEPTH, DITCH
DV	DIAPHRAGM VALVE
DWG	DRAWING (AUTOCAD)
DWL	DOWEL
DWTR	DEWATER (ED)
"e"	SUPERELEVATION RATE
E	EAST, EXTERNAL DISTANCE
EA	EACH
ECC	ECCENTRIC
EF	EACH FACE
EFF	EFFLUENT
EL, ELEV	ELEVATION
ELEC	ELECTRIC (AL)
ELLIP	ELLIPTICAL
EMBED	EMBEDMENT
EMBK	EMBANKMENT
EMERG	EMERGENCY
ENGR	ENGINEER
ENT	ENTERING
EP, EOP	EDGE OF PAVEMENT
EQ	EQUAL (LY), EQUATION
EQIV	EQUIVALENT
EQUIP	EQUIPMENT
ES	EACH SIDE
ESMT	EASEMENT
EST	ESTIMATE (D), ESTABLISH (ED)
ETC	ET CETERA (AND SO FORTH)
EVAP	EVAPORATOR (ION)
EW	EACH WAY, ENDWALL
EX	EXCEPT, EXAMPLE
EXC, EXCAV	EXCAVATION
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR, EXTENSION
EXTD	EXTENDED
EXWY	EXPRESSWAY
EY	EPOXY
FA	FINE AGGREGATE, FEDERAL AID
FAB	FABRICATE (ED)
FAC	FACILITY
FBO	FURNISHED BY OTHERS
FC	FLEX CONNECTION, FRICTION COURSE
FD	FRENCH DRAIN
FDN	FOUNDATION
FDOT	**FLORIDA DEPARTMENT OF TRANSPORTATION**
FE	FLOOR ELEVATION
FED	FEDERAL
FES	FLARED END SECTION
FETS	FLARED END TERMINAL SECTION
FF, FFL	FIRE FLOW LINE
FFE	FINISHED FLOOR ELEVATION
FH, FHY	FIRE HYDRANT
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FIG	FIGURE
FIN	FINISH (ED)
FL, FLA	FLORIDA
FLD	FLOOR DRAIN
FLEX	FLEXIBLE
FLG	FLANGE (D)
FLR	FLOOR
FM	FORCE MAIN
FOC	FIBER OPTIC CABLE, FACE OF CURB
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FPT	FEMALE PIPE THREAD
FREQ	FREQUENCY
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET, FOOT
FTG	FOOTING, FITTING
FU	FUSE
FURN	FURNISH (ED)
FW	FLUSHING WATER
G	NATURAL GAS, GRAM, GRAVITY
GA	GAUGE, GAGE
GAL	GALLON
GALV	GALVANIZED
GD	GUTTER DRAIN
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GI	GALVANIZED IRON, GUTTER INLET
GIP	GALVANIZED IRON PIPE
GM	GAS MAIN
GOV	**GOVERNMENT, GOVERNMENT OWNED VEHICLE**
GP	GRADE POINT
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
GR	GRADE, GUARD RAIL, GRATE
GRAV	GRAVITY
GRC	GALVANIZED RIGID STEEL CONDUIT
GRD, GRND	GROUND
GRI	GEOSYNTHETIC RESEARCH INSTITUTE
GRP	GRIT REMOVAL PUMP
GRTG	GRATING
GRU	GRIT REMOVAL UNIT
GSKT	GASKET
GSP	GALVANIZED STEEL PIPE
GTTR	GUTTER
GV	GATE VALVE, NATURAL GAS VALVE
"ha"	HECTARE
HB	HAY BALES, HOSE BIBB
HC	HORIZONTAL CLEARANCE
HD	HIGH DENSITY, HEAVY DUTY, HEAD
HDPE	HIGH DENSITY POLYETHYLENE
HDR	HEADER
HDWKS	HEADWORKS
HDWL	HEADWALL
HDWR	HARDWARE
HEX	HEXAGON
HGR	HANGER
HH	HANDHOLE
HK	HOOK
HMA	HOT MIX ASPHALT
HNDRL	HANDRAIL
HORZ	HORIZONTAL
HOV	HIGH OCCUPANCY VEHICLE
HP	**HIGH POINT, HORSEPOWER, HIGH PRESSURE**
HPA	HIGH PRESSURE AIR
HR	HOUR
HT	HEIGHT
HTHW	HIGH TEMPERATURE HOT WATER
HVAC	**HEATING, VENTILATING AND AIR CONDITIONING**
HW	HOT WATER, HIGH WATER
HWA	HIGH WATER ALARM
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
I	EXTERNAL ANGLE (DELTA), INTERSTATE
ICV	IRRIGATION CONTROL VALVE
ID	INSIDE DIAMETER, IDENTIFICATION
IF	INSIDE FACE
IMC	INTERMEDIATE METAL CONDUIT
IN	INCH (ES)
INC	INCORPORATED, INCLUDING
IND	INDUSTRY, INDUSTRIAL
INF	INFLUENT
INS	INSIDE
INSTR	INSTRUMENT
INSUL	INSULATION
INT	INTERIOR
INTER	INTERMEDIATE
INV	INVERT
IP	IRON PIPE
IR	IRON ROD
IRC	IRON ROD AND CAP
IRR	IRRIGATION
ISECT	INTERSECTION
ISL	ISLAND
ISOL	ISOLATION
ITE	**INSTITUTE OF TRANSPORTATION ENGINEERS**
JB	JUNCTION BOX
JCT	JUNCTION
JT	JOINT
K	KILO, KELVIN, DESIGN HOUR FACTOR
KG	KILOGRAM
KG/m	KILOGRAM PER METER
KG/m^2	KILOGRAM PER SQUARE METER
KG/m^3	KILOGRAM PER CUBIC METER
KILO	ONE THOUSAND
KIP	1000 POUNDS
KM	KILOMETER
KM/H	KILOMETER PER HOUR
KO	KNOCKOUT
kPa	KILOPASCAL
KSI	**KIPS (1000 POUNDS) PER SQUARE INCH**
L	**LENGTH, LENGTH OF CURVE, LITER, LEFT, TAPER LENGTH, BUFFER LENGTH, TAPER LENGTH PLUS BUFFER SPACE**
LAB	LABORATORY
LAM	LAMINATED
LAT	LATERAL, LATITUDE
LAV	LAVATORY
LB	POUND
LB/SY	POUNDS PER SQUARE YARD
LBS	POUNDS
LBR	LIME ROCK BEARING RATIO
LC	LONG CHORD
LCD	LONGITUDINAL CHANNELIZING DEVICE
LF	LINEAR FOOT (FEET)
LFD	LOAD FACTOR DESIGN
LG	LONG
LGB	LAG BOLT
LGTH	LENGTH
LIN	LINEAR
LL	LIVE LOAD
LMRK	LIME ROCK
LNDG	LANDING
LOC	LOCATION, LOCATED
LONG	LONGITUDE (INAL)
LOS	LIMIT OF CLEAR SIGHT
LP	**LOW POINT, LOW PRESSURE, LIGHT POLE**
LR	LONG RADIUS
LS	LUMP SUM, LENGTH OF SPIRAL
LT	LEFT, LIGHT, LEFT TURN
LTD	LIGHTED, LIMITED
LUM	LUMINAIRE
LVG	LEAVING
LW, L/W	LIGHTWEIGHT
LWA	LOW WATER ALARM
LWL	LOW WATER LEVEL
m	**METER, MASS, MIDDLE ORDINATE LENGTH, MEGA, MILLI**
m^2	METER SQUARE
m/S	METERS PER SECOND
m^3	METER CUBED, CUBIC METER
m^3/m	METER CUBED PER METER
MAINT	MAINTENANCE
MASY	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MEGA	ONE MILLION
MES	MITERED END SECTION
MFD	MANUFACTURED
MFG	MANUFACTURING
MG	1000 GALLONS
MG/L	MILLIGRAMS PER LITER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE, MOUNTING HEIGHT
MHW	MEAN HIGH WATER
MHU	MUNITIONS HAULING UNIT
MI	MILE
MID	MIDDLE
MIL	MILITARY
MILLI	ONE THOUSANDTH OF AN METER
MIN	MINIMUM, MINUTE
MISC	MISCELLANEOUS
ML	MILLILITER
MLW	MEAN LOW WATER
mm	MILLIMETER
MOBL	MOBILIZATION
MOD	MODIFY, MODIFIED
MON	MONUMENT
MPa	MEGAPASCAL
MPH	MILES PER HOUR
MRPP	METAL REINFORCED PLASTIC PIPE
MSL	MEAN SEA LEVEL
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MUTCD	MANUAL ON TRAFFIC CONTROL DEVICES
MW	MONITORING WELL
N	NORTH, NEUTRAL, NEWTON
N&C	NAIL AND CAP
N&D	NAIL AND DISK
N&T, NT	NAIL AND TIN, NON TRAFFIC
NA, N/A	NOT AVAILABLE, NOT APPLICABLE
NAVD	NATIONAL AMERICAN VERTICAL DATUM
NB	NORTHBOUND
NC	NORMAL CROWN, NATIONAL COARSE
NE	NORTHEAST
NG, NGL	NATURAL GAS LINE
NGS	NATIONAL GEODETIC SURVEY
NGVD	**NATIONAL GEODETIC VERTICAL DATUM OF 1929**
NHS	NATIONAL HIGHWAY SYSTEM
NHW	NORMAL HIGH WATER
NIC	NOT IN CONTRACT
NOAA	**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**
NOM	NOMINAL
NORM	NORMAL
NOS	NATIONAL OCEANOGRAPHIC SURVEY
NP	NON PLASTIC
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NPW	(NON–POTABLE) RAW WATER
NRCP	NON REINFORCED CONCRETE PIPE
NTS	NOT TO SCALE
NW	NORTHWEST
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OE, O/E	OVERHEAD ELECTRIC
OF	OUTSIDE FACE, OVERFLOW
OH, OHD	OVERHEAD
OO	OUT TO OUT
OPASS	OVERPASS
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTION (AL) (ALLY)
OSHA	**OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION**
OT, O/T	OVERHEAD TELEPHONE
OTV, O/TV	OVERHEAD CABLE TELEVISION
OVF	OVERFLOW
OZ	OUNCE
Pa	PASCAL
PAR	PARALLEL
PAVT	PAVEMENT
PBAV	PLASTIC BALL VALVE
PC	POINT OF CURVATURE
PCBC	PRECAST CONCRETE BOX CULVERT
PCC	**POINT OF COMPOUND CURVATURE, PLAIN CEMENT CONCRETE**
PCCP	**PRESTRESSED CONCRETE CYLINDER PIPE**
PCE	PERMANENT CONSTRUCTION EASEMENT
PCF	POUNDS PER CUBIC FOOT
PCV	PRESSURE CONTROL VALVE
PE	PROFESSIONAL ENGINEER, PLAIN END
PED	PEDESTRIAN, PEDESTAL
PEN	PENETRATION
PERF	PERFORATED
PG	PROFILE GRADE
PGL	PROFILE GRADE LINE
PH	PHASE
PI	POINT OF INTERSECTION
PINF	PRIMARY INFLUENT
PIV	POINT INDICATOR VALVE
PJF	PREMOLDED JOINT FILLER
PKG	PACKAGE, PARKING
PKWY	PARKWAY
PLS	**PLASTIC LINED STEEL, PROFESSIONAL LAND SURVEYOR**
PLYWD	PLYWOOD
PM	**12:00 NOON UNTIL 11:59 MIDNIGHT, PROJECT MANAGER**
PNL	PANEL
POC	POINT ON CURVE
POJ	PUSH ON JOINT
POL	POLYMER
POST	POINT ON SEMI TANGENT
POT	POINT OF TANGENT
PP	POWER POLE
PPM	PARTS PER MILLION
PPP	POLYPROPYLENE PIPE
PRC	POINT OF REVERSE CURVATURE
PRCST	PRECAST
PREFAB	PRE–FABRICATED
PRES	PRESSURE
PREST	PRESTRESSED
PRIM	PRIMARY
PRM	PERMANENT REFERENCE MONUMENT
PROB	PROBABILITY
PROD	PRODUCT, PRODUCTION, PRODUCED
PROG	PROGRAM, PROGRESSION
PROJ	PROJECT, PROJECTION
PROP	PROPOSED
PROV	PROVISIONS
PRV	PRESSURE RELIEF VALVE
PS	PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSU	PRESTRESSED SLAB UNIT
PT	**POINT OF TANGENCY, PRESSURE TREATED**
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PVRV	PRESSURE VACUUM RELIEF VALVE
PW	POTABLE WATER, PRESSURIZED WATER
PWH	PROTECTED HOT WATER
PWL	PEAK WATER LEVEL
PWM	POTABLE WATER METER
Q	PEAK DISCHARGE, FLOW VOLUME
QPL	QUALIFIED PRODUCTS LIST
QTY	QUANTITY, QUALITY
R, RAD	RADIUS, RADIAN
R, RT	RIGHT
RC	**REINFORCED CONCRETE, REVERSE CROWN**
RCCP	REINFORCED CONCRETE CYLINDER PIPE
RCP	REINFORCED CONCRETE PIPE
RCPA, RCAP	REINFORCED CONCRETE ARCH PIPE
RCWM	RECLAIMED WATER MAIN
RD	ROOF DRAIN, ROUND, ROAD
RDC	ROOF DRAIN COLLECTION PIPE
RDSD	ROADSIDE
RDWY	ROADWAY
RED	REDUCER
REF	REFERENCE, REFER
REFL	REFLECTIVE
REG	**REGISTERED, REGULATOR, REGION, REGULAR**
REINF	REINFORCING, REINFORCED
RELOC	RELOCATED
REM	REMOVE, REMOVAL
REPL	REPLACE
REQ, REQ'D	REQUIRED
RES	RESIDUAL, RESIDENCE, RESIDENTIAL
REV	REVISE, REVISED, REVISION
RGS	RIGID GALVANIZED STEEL
RHW	**INSULATION (MOISTURE & HEAT RESISTANT RUBBER)**
RJ	RESTRAINED JOINT
RL	RAIN LEADER
RM	ROOM, REFERENCE MONUMENT
RND	ROUND
RNG	RANGE
R/S	REVOLUTION PER SECOND
RO	ROUGH OPENING
ROW, R/W	RIGHT OF WAY
RP	REFERENCE POINT
RPBP	**REDUCED PRESSURE BACKFLOW PREVENTOR**
RPM	**REVOLUTIONS PER MINUTE, RAISED REFLECTIVE PAVEMENT MARKERS**
RR	RAILROAD
RS	RAW SEWAGE
RSF	RESURFACE
RU	REUSE, RACK UNIT
RW	RAW WATER
SAN	SANITARY SEWER
SB	SOUTHBOUND, STRUCTURE BOTTOM
SC	SEAL COAT, SPIRAL TO CURVE
SCH	SCHEDULE
SCV	SILENT CHECK VALVE
SD	STORM DRAIN, SIDE DRAIN
SE	SOUTHEAST
SEC	SECOND, SECONDARY
SECT	SECTION
SED	SEDIMENT
SEP	SEPARATOR
SEQ	SEQUENTIAL
SERV	SERVICE
SF	SQUARE FOOT, SILT FENCE
SG	SLUICE GATE, SPECIFIC GRAVITY
SHT	SHEET
SHLDR	SHOULDER
SHW	SEASONAL HIGH WATER
SIP	STAY IN PLACE
SJ	SOLDERED JOINT
SL	SLUDGE
SLG	SLIDE GATE
SLV	SLEEVE
SOJ	SLIP ON JOINT
SP	SUPERPAVE, STATIC PRESSURE
SPC	SPACE (S) (ED) (ING)
SPEC	SPECIFICATION, SPECIFIED
SPG	SPRING
SPR	SPRINKLER LINE
SPT	STANDARD PENETRATION TEST
SPW	SPRAY WATER
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SQ YD, SY	SQUARE YARD
SR	STATE ROAD
SRAP	SPIRAL RIB ALUMINUM PIPE
SRASP	SPIRAL RIB ALUMINIZED STEEL PIPE
SRCP	STEEL REINFORCED CONCRETE PIPE
SRSP	SPIRAL RIB STEEL PIPE
SS	STAINLESS STEEL, SANITARY SEWER
SSL	SANITARY SEWER LATERAL
SSLS	SANITARY SEWER LIFT STATION
SSMH	SANITARY SEWER MANHOLE
SSP	STAINLESS STEEL PIPE
ST	SPIRAL TO TANGENT, STREET
STA	STATION
STAB	STABILITY, STABILIZATION
STD	STANDARD
STG	STRONG
STGE	STORAGE
STIFF	STIFFENER
STIR	STIRRUP (S)
STL	STEEL
STR, STRUC	STRUCTURE (S) (URAL)
SU	SINGLE UNIT TRUCKS
SUB	SUBTRACT, SUBSTITUTE, SUBSOIL
SUPPTS	SUPPORTS
SUR	SURVEY
SUSP	SUSPENDED
SW	SOUTHWEST, SWITCH, SIDEWALK
SWBD	SWITCHBOARD
SWD	SIDE WATER DEPTH
SWK	SIDEWALK
SWPPP	**STORMWATER POLLUTION PREVENTION PLAN**
SYM	SYMMETRICAL
SYS, SYST	SYSTEM
T	**TANGENT, LENGTH OF CURVE, TOWNSHIP, METRIC TON**
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TC	TANGENT TO CURVE
TCE	TEMPORARY CONSTRUCTION EASEMENT
TCP	**TERRA COTTA PIPE, TRAFFIC CONTROL PLAN(S)**
TD	TRENCH DRAIN
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPERATURE, TEMPORARY
THD	THREADED
THK	THICK (NESS)
THRMPLSTC	THERMOPLASTIC
THW, THWN	**INSULATION (FLAME RETARDANT, MOISTURE AND HEAT RESISTANT THERMOPLASTIC)**
TKD	TANK DRAIN
TN	TON
TOB	TOP OF BANK/BERM
TOC	TOP OF CURB/CONCRETE
TOS	TOE OF SLOPE
TOW	TOP OF WALL
TP	TURNING POINT
TR	TRIANGULATION POINT
TRAF	TRAFFIC
TRAN	TRANSFER
TRANS	**TRANSVERSE, TRANSITION, TRANSLATE, TRANSFORMER**
TREAT	TREATMENT
TS	**TANGENT TO SPIRAL, STRUCTURAL TUBING (STEEL UNLESS NOTED)**
TSC	LENGTH OF TANGENT (SPIRAL CURVE)
TTC	TEMPORARY TRAFFIC CONTROL
TURB	TURBIDITY
TV	TELEVISION
TWP	TOWNSHIP
TYP	TYPICAL
UC	UNDERGROUND COMMUNICATIONS LINE
UD	UNDERDRAIN
UE	UNDERGROUND ELECTRICAL LINE
UG	**UNDERGROUND, UNDERGROUND NATURAL GAS**
UGTC	UNDERGROUND TELEPHONE CABLE
ULT	ULTIMATE
ULTD	UNLIMITED
UNO	UNLESS NOTED OTHERWISE
UNTR	UNTREATED
UON	UNLESS OTHERWISE NOTED
USACE	US ARMY CORPS OF ENGINEERS
USC&GS	**US COAST AND GEODETIC SURVEY (NOW NATIONAL GEODETIC SURVEY)**
USGS	US GEOLOGICAL SURVEY
USPS	UNITED STATES POSTAL SERVICE
UTIL	UTILITIES
UV	ULTRAVIOLET
V	VOLUME, VOLTS, VELOCITY
VAC	VACUUM
VAR	VARIOUS, VARIABLE
VB	VALVE BOX
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VEH	VEHICLE
VEL	VELOCITY
VERT	VERTICAL
VF	VERTICAL FOOT
VIB	VIBRATION
VOL	VOLUME
VP	VERTICAL PANEL, VENT PIPE
VPD	VEHICLES PER DAY
VPH	VEHICLES PER HOUR
VPHPL	VEHICLES PER HOUR PER LANE
VS	VARIABLE SPEED
VT	VENT
VTR	VENT THRU ROOF
VVE	VERIFIED VERTICAL ELEVATION
VVEHL	**VERIFIED VERTICAL ELEVATION AND HORIZONTAL LOCATION**
VW	VARIABLE WIDTH
W	WATER LINE, WIDTH, WEST
W/	WITH
W/C	WATER CEMENT RATIO
W/O	WITHOUT
WAP	WALL PIPE
WB	WESTBOUND
WBW	WASTE BACKWASH WATER
WC	WATER CLOSET
WF	WIDE FLANGE (STEEL), WATER FAUCET
WH	WATER HEATER
WJ	WELDED JOINT
WL	WATER LEVEL
WM	WATER MAIN, WATER METER
WP	WELDED PIPE, WORKING POINT
WPF	WEATHERPROOF
WR	WASHWATER RECOVERY
WS	WATER STOP, WATER SURFACE
WSD	WASHWATER DRAIN
WSH	WASHWATER
WSV	WALL SLEEVE
WT	**WEIGHT, WATER TABLE, STEEL TEE–SHAPE DESIGNATION**
WTP	WATER TREATMENT PLANT
WW	WASTE WATER
WWF	WELDED WIRE FABRIC
WWR	WELDED WIRE REINFORCING
WWTP	WASTEWATER TREATMENT PLANT
X	**COORDINATE VALUE (EAST–WEST DIRECTION)**
X RD	CROSS ROAD
XING	CROSSING
XSEC	CROSS SECTION
Y	**COORDINATE VALUE (NORTH–SOUTH DIRECTION)**
YD	YARD
YR	YEAR

US Army Corps
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MARK	DESCRIPTION	DATE

DESIGNED BY: T. HYMAN	ISSUE DATE: JUNE 2024
DRAWN BY: J. JOHNSON	SOLICITATION NO.: -
CHECKED BY: R. WEED	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005G-004.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

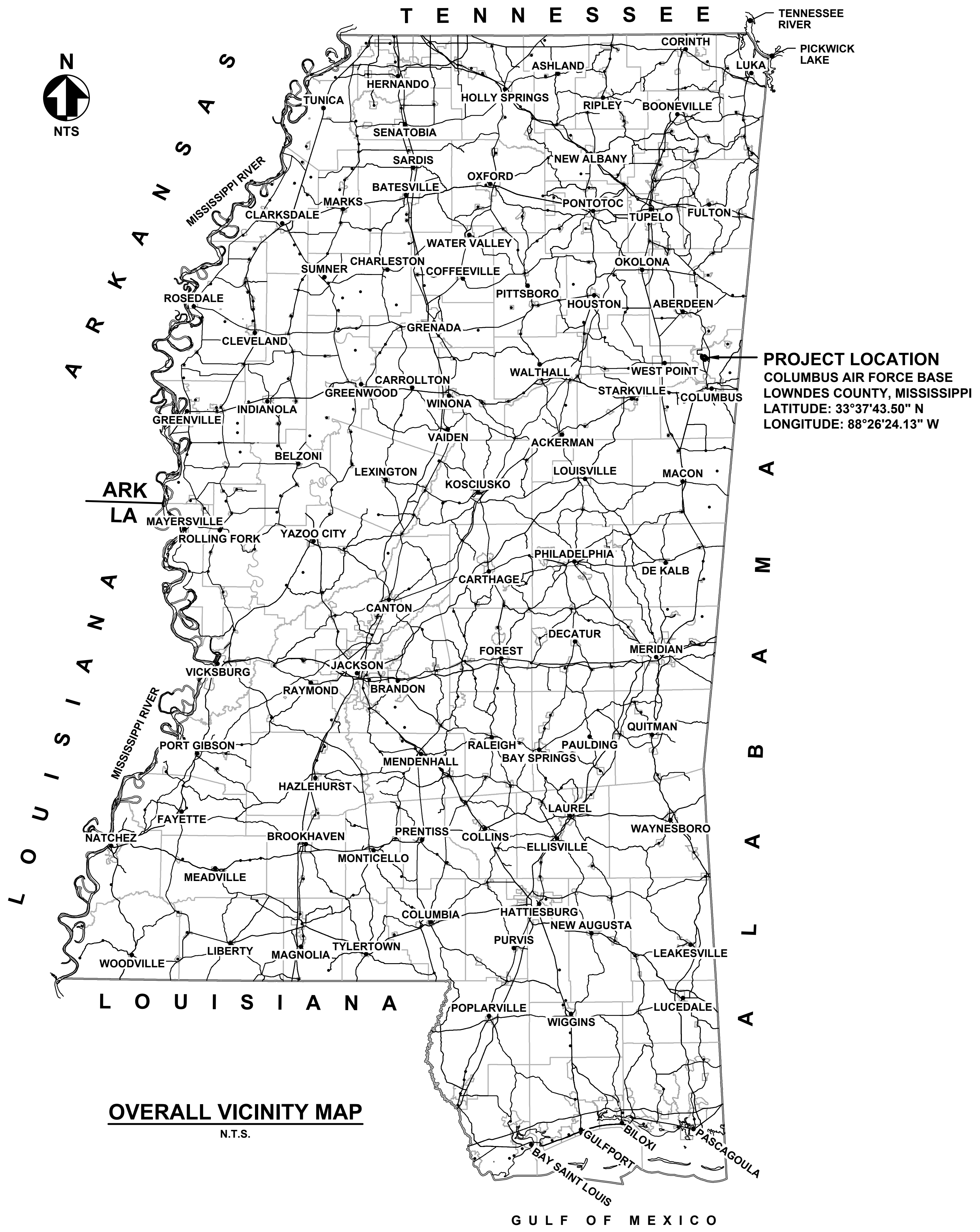
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

ABBREVIATION LEGEND

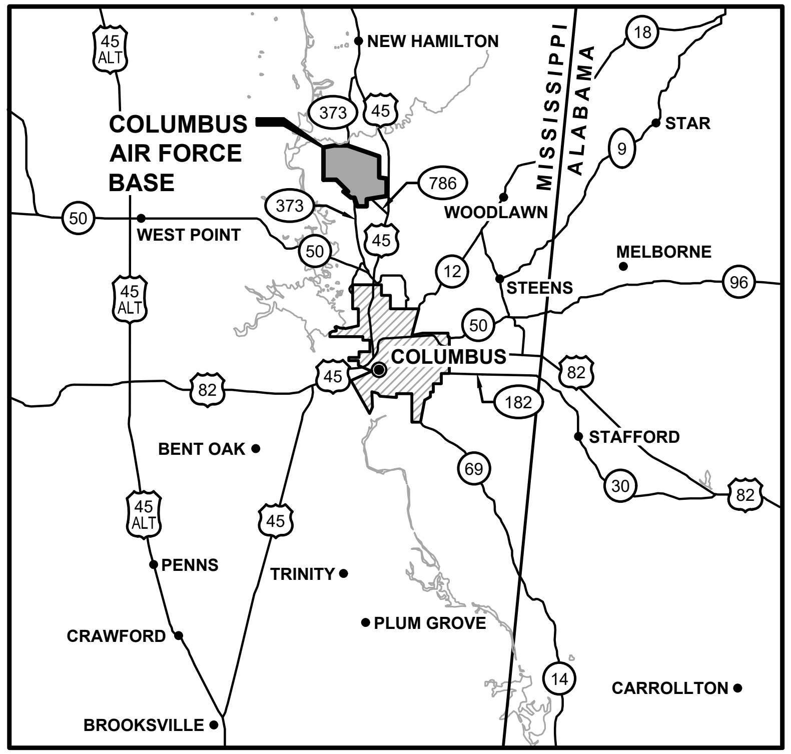
SHEET ID
G-004

RTA SUBMITTAL



OVERALL VICINITY MAP

N.T.S.



BASE VICINITY MAP

N.T.S.

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MARK	DESCRIPTION	DATE

DESIGNED BY: T. HYMAN
DRAWN BY: J. JOHNSON
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SUBMITTED BY: T. HYMAN
SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005G-005.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
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Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

LOCATION AND VICINITY MAPS

SHEET ID
G-005

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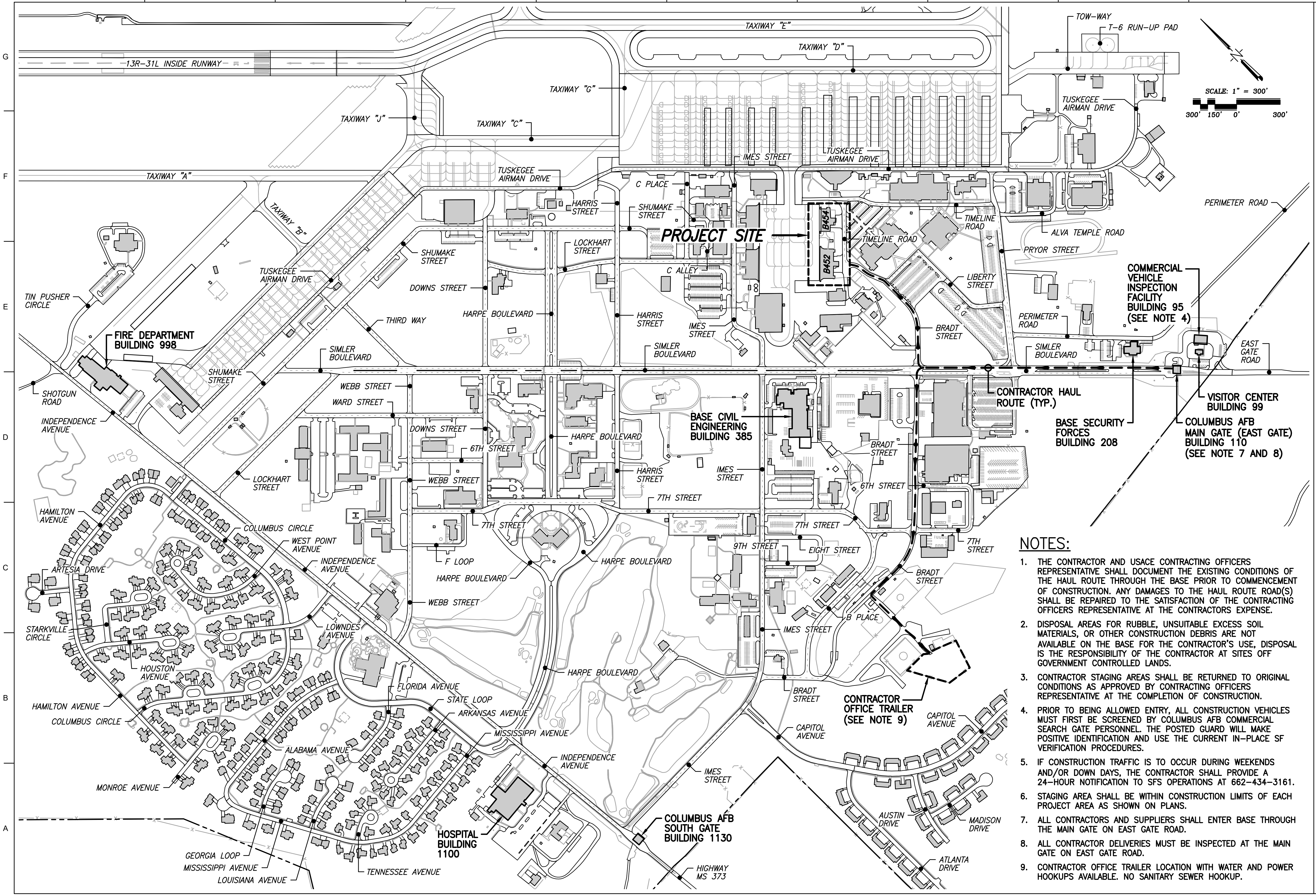
CESAM v20181203



NOTES:

1. THE CONTRACTOR AND USACE CONTRACTING OFFICERS REPRESENTATIVE SHALL DOCUMENT THE EXISTING CONDITIONS OF THE HAUL ROUTE THROUGH THE BASE PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DAMAGES TO THE HAUL ROUTE ROAD(S) SHALL BE REPAIRED TO THE SATISFACTION OF THE CONTRACTING OFFICERS REPRESENTATIVE AT THE CONTRACTORS EXPENSE.
2. DISPOSAL AREAS FOR RUBBLE, UNSUITABLE EXCESS SOIL MATERIALS, OR OTHER CONSTRUCTION DEBRIS ARE NOT AVAILABLE ON THE BASE FOR THE CONTRACTOR'S USE, DISPOSAL IS THE RESPONSIBILITY OF THE CONTRACTOR AT SITES OFF GOVERNMENT CONTROLLED LANDS.
3. CONTRACTOR STAGING AREAS SHALL BE RETURNED TO ORIGINAL CONDITIONS AS APPROVED BY CONTRACTING OFFICERS REPRESENTATIVE AT THE COMPLETION OF CONSTRUCTION.
4. PRIOR TO BEING ALLOWED ENTRY, ALL CONSTRUCTION VEHICLES MUST FIRST BE SCREENED BY COLUMBUS AFB COMMERCIAL SEARCH GATE PERSONNEL. THE POSTED GUARD WILL MAKE POSITIVE IDENTIFICATION AND USE THE CURRENT IN–PLACE SF VERIFICATION PROCEDURES.
5. IF CONSTRUCTION TRAFFIC IS TO OCCUR DURING WEEKENDS AND/OR DOWN DAYS, THE CONTRACTOR SHALL PROVIDE A 24–HOUR NOTIFICATION TO SFS OPERATIONS AT 662–434–3161.
6. STAGING AREA SHALL BE WITHIN CONSTRUCTION LIMITS OF EACH PROJECT AREA AS SHOWN ON PLANS.
7. ALL CONTRACTORS AND SUPPLIERS SHALL ENTER BASE THROUGH THE MAIN GATE ON EAST GATE ROAD.
8. ALL CONTRACTOR DELIVERIES MUST BE INSPECTED AT THE MAIN GATE ON EAST GATE ROAD.
9. CONTRACTOR OFFICE TRAILER LOCATION WITH WATER AND POWER HOOKUPS AVAILABLE. NO SANITARY SEWER HOOKUP.

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MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024	DESIGNED BY: T. HYMAN
SOLICITATION NO.: -	DRAWN BY: J. JOHNSON
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FILE NAME: MEF24005G-006.DWG	SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

BASE ACCESS AND CONTRACTOR HAUL ROUTE PLAN

SHEET ID

G-006

RTA SUBMITTAL

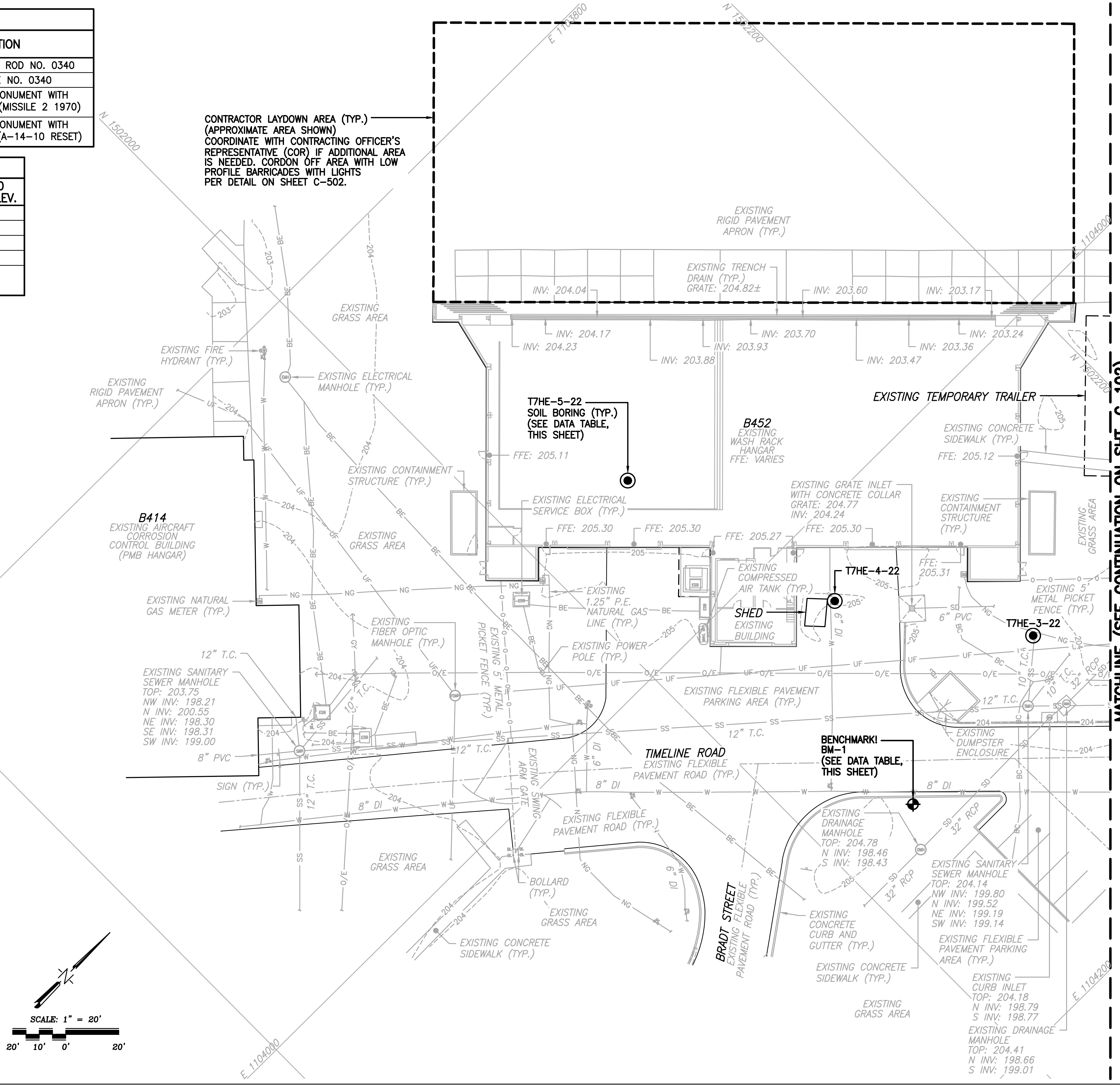
CESAM v20181203

BENCHMARK DATA TABLE

DESIGNATION	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM–1	1502036.01	1104103.31	204.88'	SET ⅝" CAPPED IRON ROD NO. 0340
BM–2	1502227.07	1104286.24	204.51'	SET NAIL & DISK NO. 0340
GPS1	1500985.02	1104674.83	206.00'	FOUND CONCRETE MONUMENT WITH BRASS DISK STAMPED (MISSILE 2 1970)
GPS2	1504353.76	1099849.19	208.57'	FOUND CONCRETE MONUMENT WITH BRASS DISK STAMPED (A–14–10 RESET)

SOIL BORING DATA TABLE

SOIL BORING	NORTHING	EASTING	GROUND ELEVATION	DEPTH	GROUND WATER ELEV.
T7HE–1–22	1502237.00	1104036.00	204.00'	24'	198.40'
T7HE–2–22	1502199.00	1104049.00	204.00'	24'	200.90'
T7HE–3–22	1502113.00	1104090.00	204.00'	15'	200.80'
T7HE–4–22	1502069.00	1104028.00	204.00'	15'	200.90'
T7HE–5–22 (CONC. CORE)	1502045.50	1103940.72	–	8" CONC. CORE	–


CONTRACTOR LAYDOWN AREA (TYP.)
(APPROXIMATE AREA SHOWN)
COORDINATE WITH CONTRACTING OFFICER'S REPRESENTATIVE (COR) IF ADDITIONAL AREA IS NEEDED. CORDON OFF AREA WITH LOW PROFILE BARRICADES WITH LIGHTS PER DETAIL ON SHEET C–502.
N 1502000
N 1501800
N 1502200
E 1103800
E 1104000
E 1104200
EXISTING RIGID PAVEMENT APRON (TYP.)
EXISTING TRENCH DRAIN (TYP.) GRATE: 204.82±
INV: 204.04
INV: 203.60
INV: 203.17
INV: 204.17
INV: 204.23
INV: 203.88
INV: 203.93
INV: 203.70
INV: 203.47
INV: 203.36
INV: 203.24
EXISTING GRASS AREA
EXISTING FIRE HYDRANT (TYP.)
EXISTING ELECTRICAL MANHOLE (TYP.)
EXISTING CONTAINMENT STRUCTURE (TYP.)
T7HE–5–22
SOIL BORING (TYP.)
(SEE DATA TABLE, THIS SHEET)
B452
EXISTING WASH RACK HANGAR
FFE: VARIES
EXISTING TEMPORARY TRAILER
EXISTING CONCRETE SIDEWALK (TYP.)
FFE: 205.11
FFE: 205.12
EXISTING ELECTRICAL SERVICE BOX (TYP.)
EXISTING GRATE INLET WITH CONCRETE COLLAR
GRATE: 204.77
INV: 204.24
FFE: 205.30
FFE: 205.30
FFE: 205.27
FFE: 205.30
FFE: 205.31
B414
EXISTING AIRCRAFT CORROSION CONTROL BUILDING (PMB HANGAR)
EXISTING NATURAL GAS METER (TYP.)
EXISTING 1.25" P.E. NATURAL GAS LINE (TYP.)
EXISTING COMPRESSED AIR TANK (TYP.)
T7HE–4–22
SHED
EXISTING BUILDING
EXISTING 5' METAL PICKET FENCE (TYP.)
T7HE–3–22
EXISTING FIBER OPTIC MANHOLE (TYP.)
EXISTING 5' METAL PICKET FENCE (TYP.)
EXISTING POWER POLE (TYP.)
12" T.C.
EXISTING SANITARY SEWER MANHOLE
TOP: 203.75
NW INV: 198.21
N INV: 200.55
NE INV: 198.30
SE INV: 198.31
SW INV: 199.00
8" PVC
SIGN (TYP.)
10" T.C.
8" DI
6" DI
6" PVC
EXISTING FLEXIBLE PAVEMENT PARKING AREA (TYP.)
EXISTING DUMPSTER ENCLOSURE
32" RCP
BENCHMARK!
BM–1
(SEE DATA TABLE, THIS SHEET)
TIMELINE ROAD
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING SWING ARM GATE
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
BOLLARD (TYP.)
EXISTING DRAINAGE MANHOLE
TOP: 204.78
N INV: 198.46
S INV: 198.43
EXISTING SANITARY SEWER MANHOLE
TOP: 204.14
NW INV: 199.80
N INV: 199.52
NE INV: 199.19
SW INV: 199.14
EXISTING CONCRETE SIDEWALK (TYP.)
BRADT STREET
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING CONCRETE CURB AND GUTTER (TYP.)
EXISTING FLEXIBLE PAVEMENT PARKING AREA (TYP.)
EXISTING CONCRETE SIDEWALK (TYP.)
EXISTING CURB INLET
TOP: 204.18
N INV: 198.79
S INV: 198.77
EXISTING DRAINAGE MANHOLE
TOP: 204.41
N INV: 198.66
S INV: 199.01
SCALE: 1" = 20'
20' 10' 0' 20'
MATCHLINE (SEE CONTINUATION ON SHT. C–102)

SURVEYOR'S NOTES:

1. NORTH AND THE SURVEY DATUM SHOWN HEREON IS BASED ON THE MISSISSIPPI STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83), AND EXISTING FIELD MONUMENTATION.
2. ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88 DATUM, AND EXISTING FIELD MONUMENTATION.
3. THE FIELD SURVEY SHOWN HEREON AND WAS CONDUCTED BY BASKERVILLE-DONOVAN, INC. 449 WEST MAIN STREET PENSACOLA, FLORIDA 32502, AND WAS PERFORMED FROM NOVEMBER 29 THROUGH DECEMBER 8, 2022 AND THE DATA RECORDED IN FIELD BOOK 12-09, PG. 12 THRU 19.
4. SUBSURFACE UTILITY LOCATION WAS BASED ON GROUND PENETRATING RADAR (GPR), ELECTROMAGNETIC UTILITY LOCATOR, UTILITY/GIS MAPS, SUNSHINE ONE CALL AND OTHER METHODS WERE USED TO DETERMINE SUBSURFACE UTILITIES.
5. LIMITATIONS: THE UTILITY LOCATING TECHNIQUES DESCRIBED ABOVE QUALITY LEVEL B, ALTHOUGH RELIABLE, IS SUBJECT TO OUTSIDE INTERFERENCES WHICH ARE BEYOND THE CONTROL OF THE SURVEYOR AND MAY IMPEDE THE EFFECTIVENESS OF THE SUBSURFACE INVESTIGATION. SOIL CONDITIONS, MATERIAL, SIZE, DEPTH AND SOIL CONDUCTIVITY MAY PREVENT THE LOCATION OF SOME UTILITIES. NO WARRANTEE IS HEREBY EXPRESSED OR IMPLIED THAT ALL UTILITIES ARE DETECTED AND LOCATED.
6. ALL DISTANCES ARE EXPRESSED IN FEET AND DECIMAL PARTS THEREOF.
7. PRIOR TO COMMENCEMENT OF SITE CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL VERIFY THE LOCATIONS FOR ALL FACILITIES, UTILITIES, ROADWAYS AND OTHER IMPROVEMENTS SHOWN HEREON.
8. SEE SHEET G-002 FOR GENERAL NOTES.
9. SEE SHEET G-003 FOR SYMBOL LEGEND AND SHEET G-004 FOR ABBREVIATION LEGEND.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: T. HYMAN
DRAWN BY: J. JOHNSON
CHECKED BY: R. WEED
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
FILE NAME: MEF24005C-101.DWG
ISSUE DATE: JUNE 2024
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CONTRACT NO.: -
PROJECT NUMBER: MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

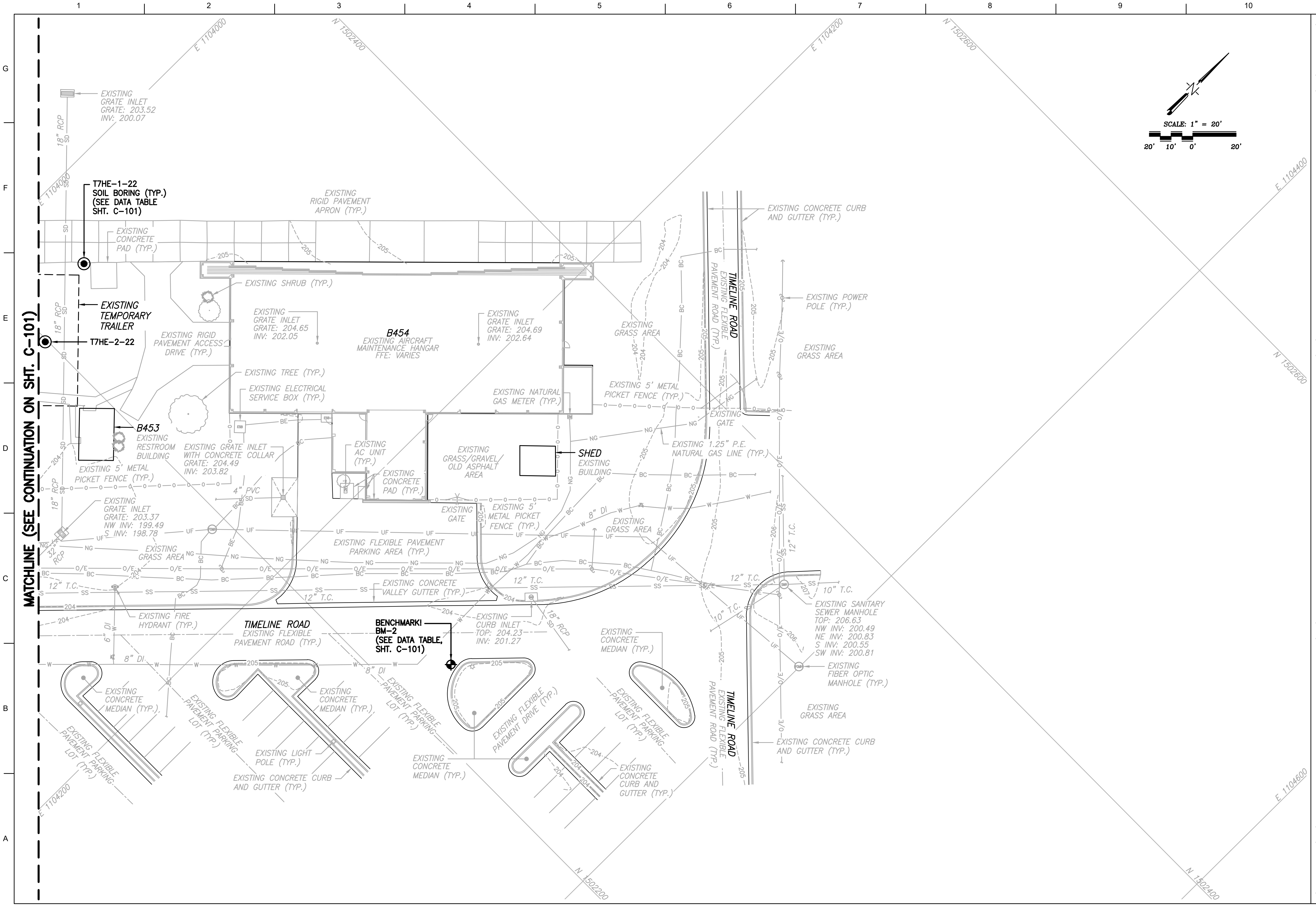
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

EXISTING CONDITIONS,
SURVEY CONTROL AND
SOIL BORING LOCATION PLAN

SHEET ID
C-101

RTA SUBMITTAL

CESAM v20181203


1
2
3
4
5
6
7
8
9
10
G
F
E
D
C
B
A
E 1104000
N 1502400
E 1104200
N 1502600
E 1104400
N 1502600
E 1104600
N 1502400
N 1502200
E 1104200
E 1104000
SCALE: 1" = 20'
20'
10'
0'
20'
EXISTING GRATE INLET GRATE: 203.52 INV: 200.07
18" RCP
SD
T7HE-1-22 SOIL BORING (TYP.) (SEE DATA TABLE SHT. C-101)
EXISTING RIGID PAVEMENT APRON (TYP.)
EXISTING CONCRETE PAD (TYP.)
EXISTING CONCRETE CURB AND GUTTER (TYP.)
205
204
EXISTING SHRUB (TYP.)
EXISTING TEMPORARY TRAILER
T7HE-2-22
MATCHLINE (SEE CONTINUATION ON SHT. C-101)
EXISTING GRATE INLET GRATE: 204.65 INV: 202.05
B454
EXISTING AIRCRAFT MAINTENANCE HANGAR
FFE: VARIES
EXISTING GRATE INLET GRATE: 204.69 INV: 202.64
EXISTING GRASS AREA
TIMELINE ROAD
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING POWER POLE (TYP.)
EXISTING GRASS AREA
EXISTING RIGID PAVEMENT ACCESS DRIVE (TYP.)
EXISTING TREE (TYP.)
EXISTING ELECTRICAL SERVICE BOX (TYP.)
EXISTING NATURAL GAS METER (TYP.)
EXISTING 5' METAL PICKET FENCE (TYP.)
EXISTING GATE
B453
EXISTING RESTROOM BUILDING
EXISTING GRATE INLET WITH CONCRETE COLLAR GRATE: 204.49 INV: 203.82
EXISTING AC UNIT (TYP.)
EXISTING CONCRETE PAD (TYP.)
EXISTING GRASS/GRAVEL/OLD ASPHALT AREA
SHED
EXISTING BUILDING
EXISTING 1.25" P.E. NATURAL GAS LINE (TYP.)
EXISTING 5' METAL PICKET FENCE (TYP.)
4" PVC
EXISTING GRATE INLET GRATE: 203.37 NW INV: 199.49 S INV: 198.78
EXISTING GATE
EXISTING 5' METAL PICKET FENCE (TYP.)
8" DI
EXISTING GRASS AREA
EXISTING GRASS AREA
EXISTING FLEXIBLE PAVEMENT PARKING AREA (TYP.)
32" RCP
12" T.C.
EXISTING CONCRETE VALLEY GUTTER (TYP.)
12" T.C.
12" T.C.
12" T.C.
10" T.C.
10" T.C.
EXISTING SANITARY SEWER MANHOLE TOP: 206.63 NW INV: 200.49 NE INV: 200.83 S INV: 200.55 SW INV: 200.81
EXISTING FIRE HYDRANT (TYP.)
TIMELINE ROAD
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING CURB INLET TOP: 204.23 INV: 201.27
18" RCP
6" DI
8" DI
8" DI
BENCHMARK! BM-2 (SEE DATA TABLE, SHT. C-101)
EXISTING CONCRETE MEDIAN (TYP.)
EXISTING FIBER OPTIC MANHOLE (TYP.)
EXISTING CONCRETE MEDIAN (TYP.)
EXISTING CONCRETE MEDIAN (TYP.)
EXISTING FLEXIBLE PAVEMENT PARKING LOT (TYP.)
EXISTING FLEXIBLE PAVEMENT PARKING LOT (TYP.)
EXISTING FLEXIBLE PAVEMENT PARKING LOT (TYP.)
EXISTING FLEXIBLE PAVEMENT DRIVE (TYP.)
EXISTING FLEXIBLE PAVEMENT PARKING LOT (TYP.)
EXISTING LIGHT POLE (TYP.)
EXISTING CONCRETE CURB AND GUTTER (TYP.)
EXISTING CONCRETE MEDIAN (TYP.)
EXISTING CONCRETE CURB AND GUTTER (TYP.)
TIMELINE ROAD
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING GRASS AREA
EXISTING CONCRETE CURB AND GUTTER (TYP.)

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005

DESIGNED BY: T. HYMAN
DRAWN BY: J. JOHNSON
CHECKED BY: R. WEED
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
FILE NAME: MEF24005C-102.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

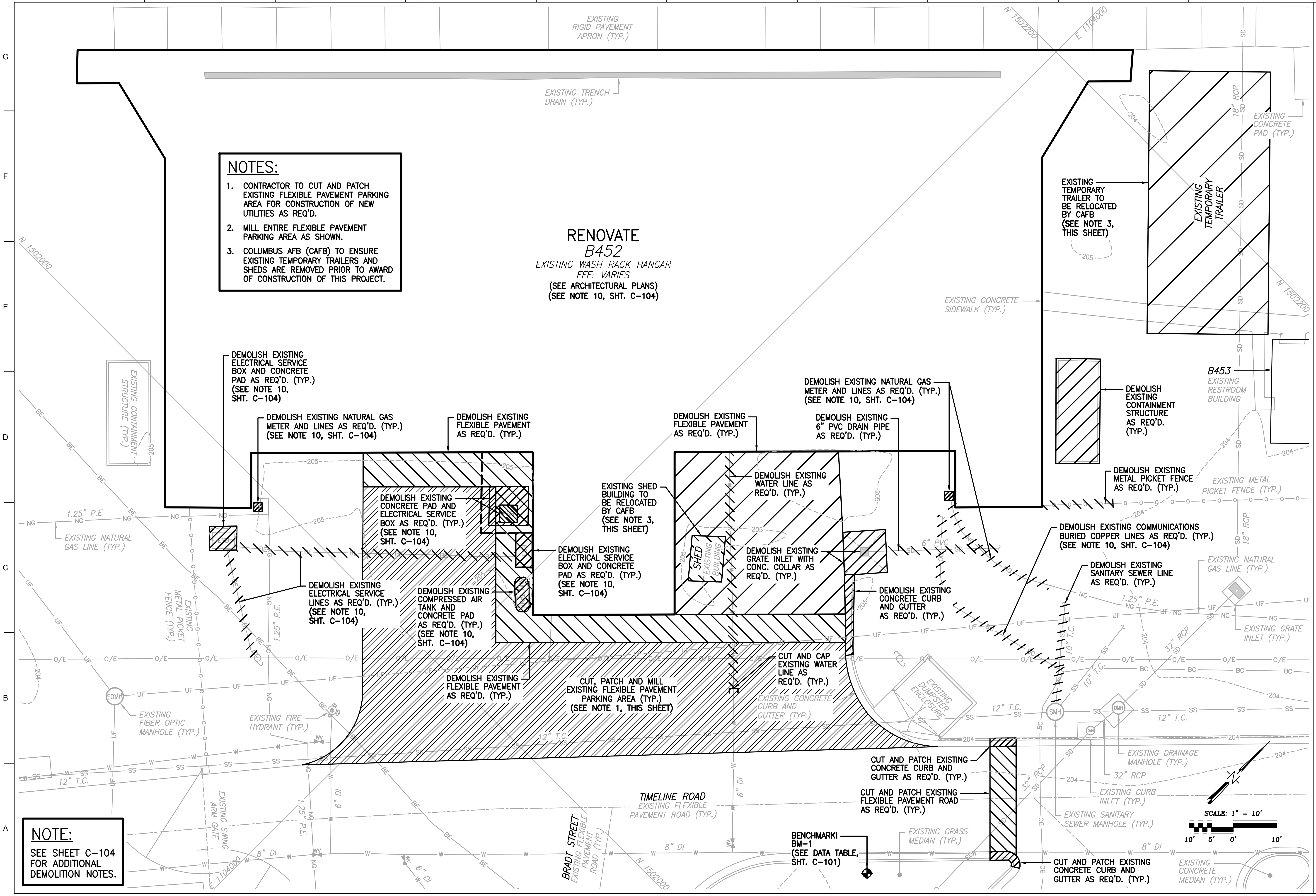
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

EXISTING CONDITIONS, SURVEY CONTROL AND SOIL BORING LOCATION PLAN

SHEET ID
C-102

RTA SUBMITTAL

CESAM v20181203


1
2
3
4
5
6
7
8
9
10
G
F
E
D
C
B
A
EXISTING RIGID PAVEMENT APRON (TYP.)
EXISTING TRENCH DRAIN (TYP.)
N 1502200
E 1104000
N 1502000
RENOVATE
B452
EXISTING WASH RACK HANGAR
FFE: VARIES
(SEE ARCHITECTURAL PLANS)
(SEE NOTE 10, SHT. C-104)
EXISTING TEMPORARY TRAILER TO BE RELOCATED BY CAFB (SEE NOTE 3, THIS SHEET)
EXISTING TEMPORARY TRAILER
EXISTING CONCRETE PAD (TYP.)
18" RCP
EXISTING CONCRETE SIDEWALK (TYP.)
DEMOLISH EXISTING CONTAINMENT STRUCTURE AS REQ'D. (TYP.)
B453
EXISTING RESTROOM BUILDING
EXISTING CONTAINMENT STRUCTURE (TYP.)
DEMOLISH EXISTING ELECTRICAL SERVICE BOX AND CONCRETE PAD AS REQ'D. (TYP.) (SEE NOTE 10, SHT. C-104)
DEMOLISH EXISTING NATURAL GAS METER AND LINES AS REQ'D. (TYP.) (SEE NOTE 10, SHT. C-104)
DEMOLISH EXISTING FLEXIBLE PAVEMENT AS REQ'D. (TYP.)
DEMOLISH EXISTING FLEXIBLE PAVEMENT AS REQ'D. (TYP.)
DEMOLISH EXISTING NATURAL GAS METER AND LINES AS REQ'D. (TYP.) (SEE NOTE 10, SHT. C-104)
DEMOLISH EXISTING 6" PVC DRAIN PIPE AS REQ'D. (TYP.)
DEMOLISH EXISTING METAL PICKET FENCE AS REQ'D. (TYP.)
EXISTING METAL PICKET FENCE (TYP.)
DEMOLISH EXISTING WATER LINE AS REQ'D. (TYP.)
EXISTING SHED BUILDING TO BE RELOCATED BY CAFB (SEE NOTE 3, THIS SHEET)
SHED
EXISTING BUILDING
DEMOLISH EXISTING CONCRETE PAD AND ELECTRICAL SERVICE BOX AS REQ'D. (TYP.) (SEE NOTE 10, SHT. C-104)
DEMOLISH EXISTING ELECTRICAL SERVICE BOX AND CONCRETE PAD AS REQ'D. (TYP.) (SEE NOTE 10, SHT. C-104)
DEMOLISH EXISTING GRATE INLET WITH CONC. COLLAR AS REQ'D. (TYP.)
6" PVC
DEMOLISH EXISTING COMMUNICATIONS BURIED COPPER LINES AS REQ'D. (TYP.) (SEE NOTE 10, SHT. C-104)
DEMOLISH EXISTING SANITARY SEWER LINE AS REQ'D. (TYP.)
EXISTING NATURAL GAS LINE (TYP.)
EXISTING NATURAL GAS LINE (TYP.)
1.25" P.E.
DEMOLISH EXISTING ELECTRICAL SERVICE LINES AS REQ'D. (TYP.) (SEE NOTE 10, SHT. C-104)
DEMOLISH EXISTING COMPRESSED AIR TANK AND CONCRETE PAD AS REQ'D. (TYP.) (SEE NOTE 10, SHT. C-104)
DEMOLISH EXISTING CURB AND GUTTER AS REQ'D. (TYP.)
EXISTING GRATE INLET (TYP.)
EXISTING METAL PICKET FENCE (TYP.)
CUT AND CAP EXISTING WATER LINE AS REQ'D. (TYP.)
DEMOLISH EXISTING FLEXIBLE PAVEMENT AS REQ'D. (TYP.)
CUT, PATCH AND MILL EXISTING FLEXIBLE PAVEMENT PARKING AREA (TYP.) (SEE NOTE 1, THIS SHEET)
EXISTING CONCRETE CURB AND GUTTER (TYP.)
EXISTING DUMPSTER ENCLOSURE
EXISTING FIBER OPTIC MANHOLE (TYP.)
FOMH
EXISTING FIRE HYDRANT (TYP.)
12" T.C.
10" T.C.
32" RCP
SMH
DMH
EXISTING DRAINAGE MANHOLE (TYP.)
CUT AND PATCH EXISTING CONCRETE CURB AND GUTTER AS REQ'D. (TYP.)
CUT AND PATCH EXISTING FLEXIBLE PAVEMENT ROAD AS REQ'D. (TYP.)
EXISTING CURB INLET (TYP.)
EXISTING SANITARY SEWER MANHOLE (TYP.)
EXISTING GRASS MEDIAN (TYP.)
EXISTING SWING ARM GATE
9" DI
8" DI
6" DI
TIMELINE ROAD
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
BRADT STREET
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
BENCHMARK! BM-1 (SEE DATA TABLE, SHT. C-101)
CUT AND PATCH EXISTING CONCRETE CURB AND GUTTER AS REQ'D. (TYP.)
EXISTING CONCRETE MEDIAN (TYP.)
SCALE: 1" = 10'
10' 5' 0' 10'
204
205

NOTES:

1. CONTRACTOR TO CUT AND PATCH EXISTING FLEXIBLE PAVEMENT PARKING AREA FOR CONSTRUCTION OF NEW UTILITIES AS REQ'D.
2. MILL ENTIRE FLEXIBLE PAVEMENT PARKING AREA AS SHOWN.
3. COLUMBUS AFB (CAFB) TO ENSURE EXISTING TEMPORARY TRAILERS AND SHEDS ARE REMOVED PRIOR TO AWARD OF CONSTRUCTION OF THIS PROJECT.

NOTE:

SEE SHEET C-104 FOR ADDITIONAL DEMOLITION NOTES.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: T. HYMAN
DRAWN BY: J. JOHNSON
CHECKED BY: R. WEED
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
FILE NAME: MEF24005C-103.DWG
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

DEMOLITION PLAN

SHEET ID
C-103

RTA SUBMITTAL

CESAM v20181203

DEMOLITION NOTES:

1. SEE SHEETS C-101 AND C-102 FOR SURVEY CONTROL POINTS, BENCHMARKS AND COORDINATES.
2. SEE SHEET G-003 FOR SYMBOL LEGEND AND SHEET G-004 FOR ABBREVIATION LEGEND.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE ACCURACY OF THE EXISTING SITE INFORMATION SHOWN HERE IN. ANY CHANGED OR ALTERED SITE CONDITION SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER'S REPRESENTATIVE IMMEDIATELY.
4. ALL EXISTING DEBRIS AND DEBRIS FROM CONSTRUCTION OPERATIONS SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTOR'S EXPENSE.
5. TOPSOIL SUITABLE FOR REUSE SHALL BE STOCKPILED ON-SITE IN AN APPROVED LOCATION AND REDISTRIBUTED OVER ALL DISTURBED AREAS IN ONE 4" LAYER, (LOOSE THICKNESS). REFER TO PROJECT SPECIFICATIONS FOR STOCKPILE MAINTENANCE REQUIREMENTS.
6. ALL WORK ADJACENT TO OR ON EXISTING ROADWAYS SHALL COMPLY WITH CURRENT MISSISSIPPI DEPARTMENT OF TRANSPORTATION STANDARDS FOR TRAFFIC CONTROL AND SAFETY. THE CONTRACTOR SHALL HOLD THE GOVERNMENT HARMLESS FOR ANY INCIDENT OCCURRING ON OR ADJACENT TO THE PROJECT SITE.
7. EXISTING TREES SHOWN OUTSIDE THE LIMITS OF CLEARING AND GRUBBING ARE TO REMAIN. PRIOR TO SITE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL CLEARLY IDENTIFY THE CLEARING LIMITS.
8. CLEARING AND GRUBBING OF TREES AND SHRUBS NOT OTHERWISE IDENTIFIED SHALL BE LIMITED TO THAT WHICH IS ABSOLUTELY REQUIRED FOR NEW CONSTRUCTION. ANY ADDITIONAL CLEARING AND/OR GRUBBING OF TREES SHALL BE COMPLETED AS APPROVED BY THE CONTRACTING OFFICER'S REPRESENTATIVE.
9. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL LOCATE ALL UTILITIES. ANY UTILITY ADJUSTMENTS, EXISTING OR PROPOSED, REQUIRED TO COMPLETE CONSTRUCTION UNDER THIS CONTRACT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THIS ITEM INCLUDES, BUT IS NOT LIMITED TO, THE TEMPORARY RELOCATION OF EXISTING OVERHEAD POWER LINES. ALL WORK IN THE VICINITY OF OVERHEAD POWER LINES SHALL CONFORM TO APPLICABLE (LOCAL) SAFETY REQUIREMENTS. THE CONTRACTOR IS TO REPAIR DAMAGES TO EXISTING UTILITIES THAT ARE TO REMAIN IN SERVICE IMMEDIATELY AT NO ADDITIONAL COSTS OR EXPENSE TO THE GOVERNMENT.
10. REFER TO MECHANICAL, PLUMBING, ELECTRICAL, COMMUNICATIONS AND OTHER DISCIPLINES FOR UTILITIES REQUIRING DEMOLITION, REMOVAL, COORDINATION AND/OR RELOCATION.
11. THE CONSTRUCTION CONTRACTOR SHALL INVESTIGATE, MARK, AND PROTECT IN PLACE, AS NEEDED, ALL APPLICABLE EXISTING UNDERGROUND UTILITIES THAT ARE TO REMAIN IN PLACE/SERVICE DURING CONSTRUCTION OPERATIONS THAT MAY BE SUBJECT TO DAMAGE DUE TO THE ONGOING CONSTRUCTION OPERATIONS.
12. CONTRACTOR SHALL SAW CUT THE LIMITS OF FLEXIBLE PAVEMENT TO BE REMOVED AND PROTECT EDGE OF ASPHALT FROM DAMAGE. ANY DAMAGE TO THE SAW CUT LINE SHALL REQUIRE THE CONTRACTOR TO RE-SAW CUT A NEW LINE BEFORE PLACEMENT OF NEW FLEXIBLE PAVEMENT.

US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

DESIGNED BY:
T. HYMAN
DRAWN BY:
J. JOHNSON
CHECKED BY:
R. WEED
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D
FILE NAME:
MEF24005C-104.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

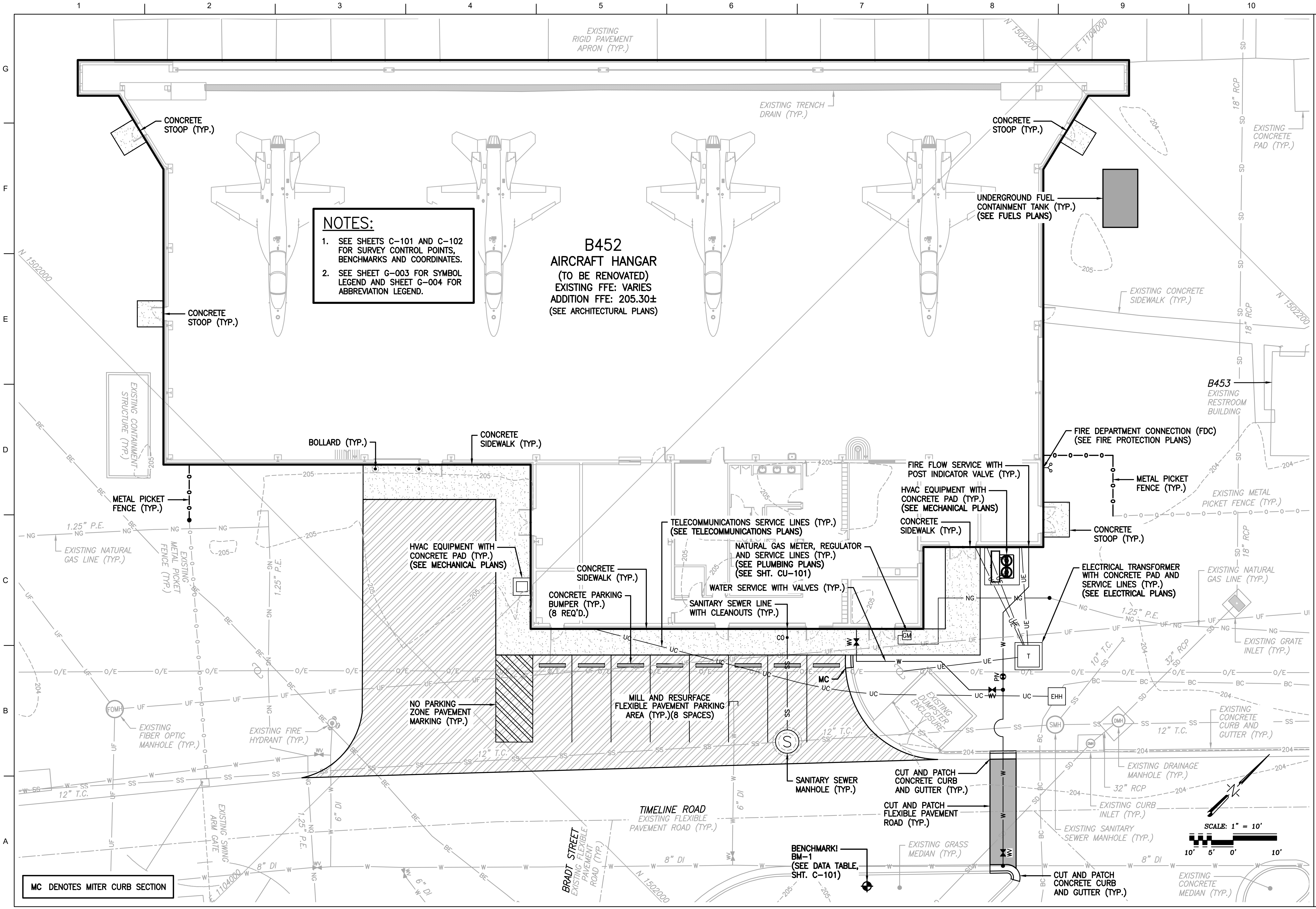
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

DEMOLITION NOTES

SHEET ID
C-104

RTA SUBMITTAL


EXISTING RIGID PAVEMENT APRON (TYP.)
EXISTING TRENCH DRAIN (TYP.)
CONCRETE STOOP (TYP.)
B452
AIRCRAFT HANGAR
(TO BE RENOVATED)
EXISTING FFE: VARIES
ADDITION FFE: 205.30±
(SEE ARCHITECTURAL PLANS)
UNDERGROUND FUEL CONTAINMENT TANK (TYP.) (SEE FUELS PLANS)
EXISTING CONCRETE PAD (TYP.)
EXISTING CONCRETE SIDEWALK (TYP.)
18" RCP
N 1502000
N 1502200
E 1104000
B453
EXISTING RESTROOM BUILDING
EXISTING CONTAINMENT STRUCTURE (TYP.)
BOLLARD (TYP.)
CONCRETE SIDEWALK (TYP.)
FIRE DEPARTMENT CONNECTION (FDC) (SEE FIRE PROTECTION PLANS)
FIRE FLOW SERVICE WITH POST INDICATOR VALVE (TYP.)
HVAC EQUIPMENT WITH CONCRETE PAD (TYP.) (SEE MECHANICAL PLANS)
METAL PICKET FENCE (TYP.)
EXISTING METAL PICKET FENCE (TYP.)
1.25" P.E.
EXISTING NATURAL GAS LINE (TYP.)
TELECOMMUNICATIONS SERVICE LINES (TYP.) (SEE TELECOMMUNICATIONS PLANS)
NATURAL GAS METER, REGULATOR AND SERVICE LINES (TYP.) (SEE PLUMBING PLANS) (SEE SHT. CU-101)
CONCRETE SIDEWALK (TYP.)
CONCRETE PARKING BUMPER (TYP.) (8 REQ'D.)
WATER SERVICE WITH VALVES (TYP.)
SANITARY SEWER LINE WITH CLEANOUTS (TYP.)
ELECTRICAL TRANSFORMER WITH CONCRETE PAD AND SERVICE LINES (TYP.) (SEE ELECTRICAL PLANS)
EXISTING GRATE INLET (TYP.)
10" T.C.
32" RCP
MC
EXISTING DUMPSTER ENCLOSURE
EHH
SMH
DMH
FOMH
EXISTING FIBER OPTIC MANHOLE (TYP.)
EXISTING FIRE HYDRANT (TYP.)
NO PARKING ZONE PAVEMENT MARKING (TYP.)
MILL AND RESURFACE FLEXIBLE PAVEMENT PARKING AREA (TYP.)(8 SPACES)
12" T.C.
EXISTING CONCRETE CURB AND GUTTER (TYP.)
EXISTING DRAINAGE MANHOLE (TYP.)
SANITARY SEWER MANHOLE (TYP.)
CUT AND PATCH CONCRETE CURB AND GUTTER (TYP.)
CUT AND PATCH FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING CURB INLET (TYP.)
EXISTING SANITARY SEWER MANHOLE (TYP.)
TIMELINE ROAD
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING SWING ARM GATE
BRADT STREET
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
BENCHMARK! BM-1 (SEE DATA TABLE, SHT. C-101)
EXISTING GRASS MEDIAN (TYP.)
EXISTING CONCRETE MEDIAN (TYP.)
8" DI
6" DI
9" DI
SCALE: 1" = 10'
10' 5' 0' 10'
MC DENOTES MITER CURB SECTION

NOTES:

1. SEE SHEETS C-101 AND C-102 FOR SURVEY CONTROL POINTS, BENCHMARKS AND COORDINATES.
2. SEE SHEET G-003 FOR SYMBOL LEGEND AND SHEET G-004 FOR ABBREVIATION LEGEND.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: T. HYMAN
DRAWN BY: J. JOHNSON
CHECKED BY: R. WEED
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
FILE NAME: MEF24005C-105.DWG
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

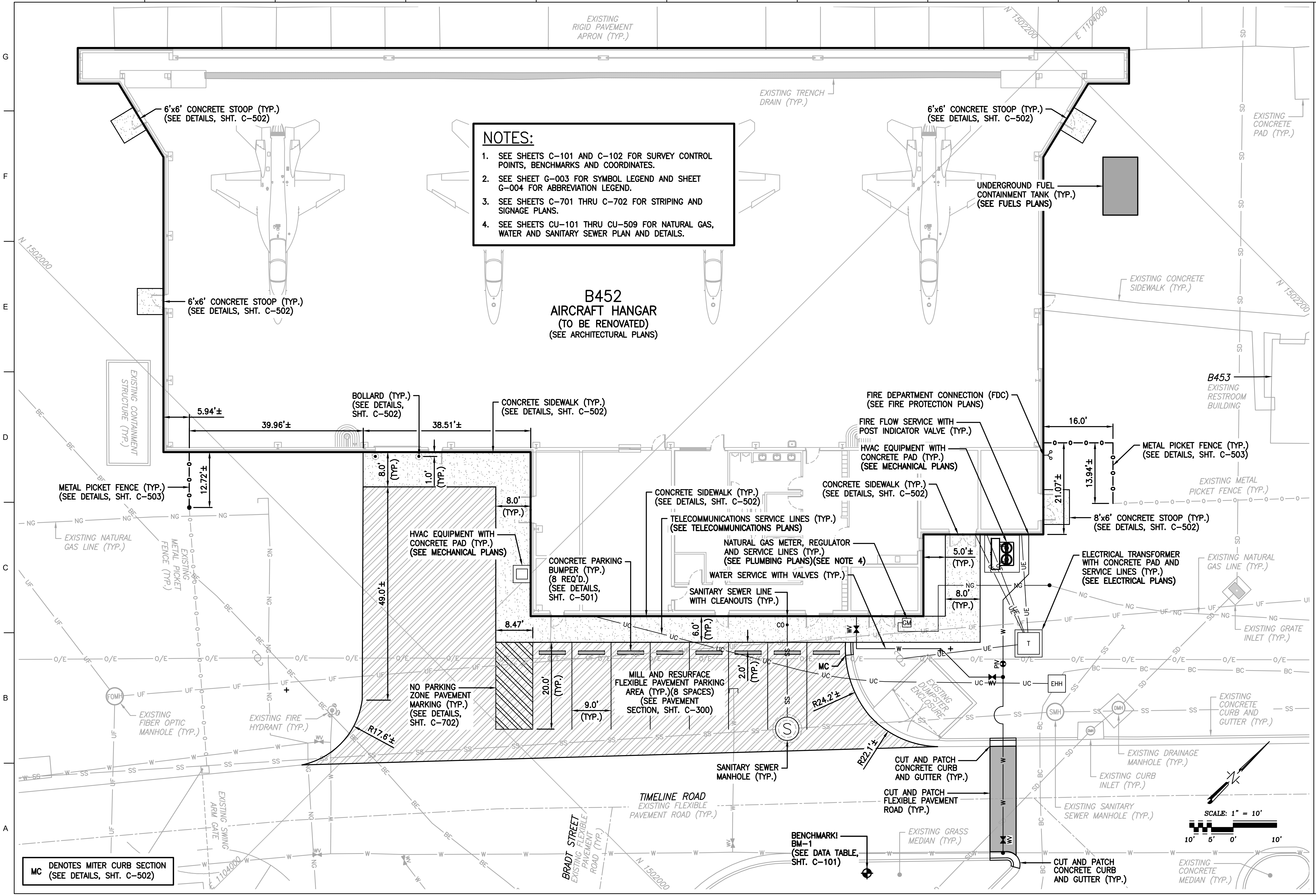
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PROJECT OVERVIEW

SHEET ID
C-105

RTA SUBMITTAL

CESAM v20181203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G
F
E
D
C
B
A
EXISTING RIGID PAVEMENT APRON (TYP.)
N 1502200
E 1104000
EXISTING TRENCH DRAIN (TYP.)
6'x6' CONCRETE STOOP (TYP.) (SEE DETAILS, SHT. C-502)
6'x6' CONCRETE STOOP (TYP.) (SEE DETAILS, SHT. C-502)
EXISTING CONCRETE PAD (TYP.)
UNDERGROUND FUEL CONTAINMENT TANK (TYP.) (SEE FUELS PLANS)
N 1502000
6'x6' CONCRETE STOOP (TYP.) (SEE DETAILS, SHT. C-502)
B452
AIRCRAFT HANGAR
(TO BE RENOVATED)
(SEE ARCHITECTURAL PLANS)
EXISTING CONCRETE SIDEWALK (TYP.)
N 1502200
EXISTING CONTAINMENT STRUCTURE (TYP.)
B453
EXISTING RESTROOM BUILDING
5.94'±
39.96'±
38.51'±
BOLLARD (TYP.) (SEE DETAILS, SHT. C-502)
CONCRETE SIDEWALK (TYP.) (SEE DETAILS, SHT. C-502)
FIRE DEPARTMENT CONNECTION (FDC) (SEE FIRE PROTECTION PLANS)
FIRE FLOW SERVICE WITH POST INDICATOR VALVE (TYP.)
HVAC EQUIPMENT WITH CONCRETE PAD (TYP.) (SEE MECHANICAL PLANS)
16.0'
METAL PICKET FENCE (TYP.) (SEE DETAILS, SHT. C-503)
13.94'±
21.07'±
EXISTING METAL PICKET FENCE (TYP.)
8.0' (TYP.)
1.0' (TYP.)
12.72'±
METAL PICKET FENCE (TYP.) (SEE DETAILS, SHT. C-503)
CONCRETE SIDEWALK (TYP.) (SEE DETAILS, SHT. C-502)
CONCRETE SIDEWALK (TYP.) (SEE DETAILS, SHT. C-502)
8'x6' CONCRETE STOOP (TYP.) (SEE DETAILS, SHT. C-502)
EXISTING NATURAL GAS LINE (TYP.)
EXISTING METAL PICKET FENCE (TYP.)
8.0' (TYP.)
TELECOMMUNICATIONS SERVICE LINES (TYP.) (SEE TELECOMMUNICATIONS PLANS)
HVAC EQUIPMENT WITH CONCRETE PAD (TYP.) (SEE MECHANICAL PLANS)
NATURAL GAS METER, REGULATOR AND SERVICE LINES (TYP.) (SEE PLUMBING PLANS)(SEE NOTE 4)
5.0'± (TYP.)
ELECTRICAL TRANSFORMER WITH CONCRETE PAD AND SERVICE LINES (TYP.) (SEE ELECTRICAL PLANS)
EXISTING NATURAL GAS LINE (TYP.)
49.0'±
CONCRETE PARKING BUMPER (TYP.) (8 REQ'D.) (SEE DETAILS, SHT. C-501)
WATER SERVICE WITH VALVES (TYP.)
8.0' (TYP.)
SANITARY SEWER LINE WITH CLEANOUTS (TYP.)
8.47'
6.0' (TYP.)
EXISTING GRATE INLET (TYP.)
NO PARKING ZONE PAVEMENT MARKING (TYP.) (SEE DETAILS, SHT. C-702)
20.0' (TYP.)
9.0' (TYP.)
MILL AND RESURFACE FLEXIBLE PAVEMENT PARKING AREA (TYP.)(8 SPACES) (SEE PAVEMENT SECTION, SHT. C-300)
2.0' (TYP.)
MC
R24.2'±
EXISTING DUMPSTER ENCLOSURE
EHH
T
EXISTING FIBER OPTIC MANHOLE (TYP.)
FOMH
EXISTING FIRE HYDRANT (TYP.)
R17.6'±
R22.1'±
SANITARY SEWER MANHOLE (TYP.)
SMH
DMH
EXISTING CONCRETE CURB AND GUTTER (TYP.)
EXISTING DRAINAGE MANHOLE (TYP.)
EXISTING CURB INLET (TYP.)
CUT AND PATCH CONCRETE CURB AND GUTTER (TYP.)
CUT AND PATCH FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING SANITARY SEWER MANHOLE (TYP.)
TIMELINE ROAD
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING SWING ARM GATE
BRADT STREET
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING GRASS MEDIAN (TYP.)
BENCHMARK! BM-1 (SEE DATA TABLE, SHT. C-101)
CUT AND PATCH CONCRETE CURB AND GUTTER (TYP.)
EXISTING CONCRETE MEDIAN (TYP.)
E 1104000
N 1502000
SCALE: 1" = 10'
10' 5' 0' 10'
NG
UF
O/E
BE
SS
W
UC
UE
SD
BC
CO
GM
PIV
WV

NOTES:

1. SEE SHEETS C-101 AND C-102 FOR SURVEY CONTROL POINTS, BENCHMARKS AND COORDINATES.
2. SEE SHEET G-003 FOR SYMBOL LEGEND AND SHEET G-004 FOR ABBREVIATION LEGEND.
3. SEE SHEETS C-701 THRU C-702 FOR STRIPING AND SIGNAGE PLANS.
4. SEE SHEETS CU-101 THRU CU-509 FOR NATURAL GAS, WATER AND SANITARY SEWER PLAN AND DETAILS.

MC	DENOTES MITER CURB SECTION (SEE DETAILS, SHT. C-502)

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: T. HYMAN	ISSUE DATE: JUNE 2024
DRAWN BY: J. JOHNSON	SOLICITATION NO.: -
CHECKED BY: R. WEED	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005C-106.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

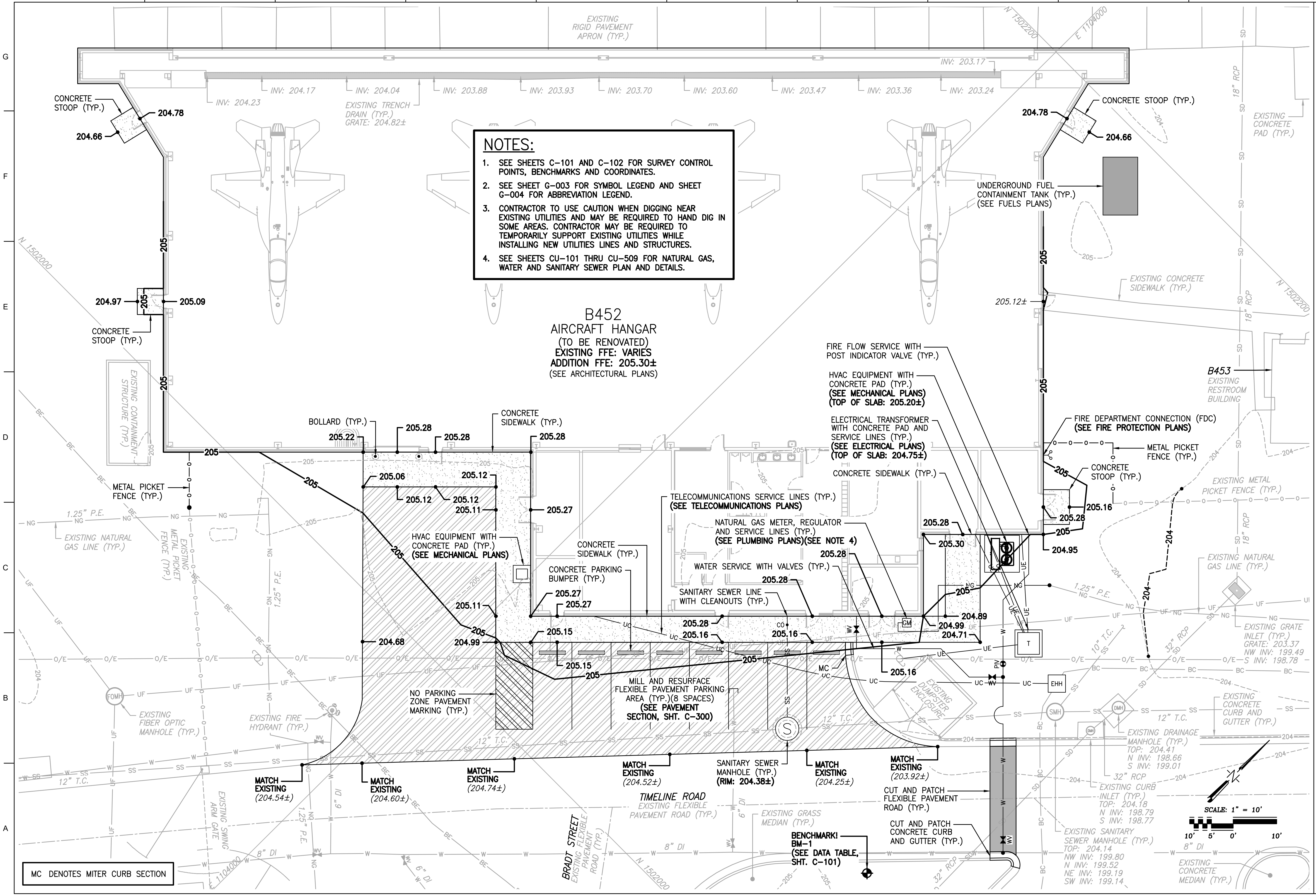
GEOMETRY PLAN

SHEET ID

C-106

RTA SUBMITTAL

CESAM v20181203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A
EXISTING RIGID PAVEMENT APRON (TYP.)
N 1502200
E 1104000
INV: 203.17
INV: 204.23
INV: 204.17
INV: 204.04
INV: 203.88
INV: 203.93
INV: 203.70
INV: 203.60
INV: 203.47
INV: 203.36
INV: 203.24
EXISTING TRENCH DRAIN (TYP.) GRATE: 204.82±
CONCRETE STOOP (TYP.)
204.78
204.66
18" RCP
EXISTING CONCRETE PAD (TYP.)
UNDERGROUND FUEL CONTAINMENT TANK (TYP.) (SEE FUELS PLANS)
N 1502000
204.97
205.09
205.12±
EXISTING CONCRETE SIDEWALK (TYP.)
B452
AIRCRAFT HANGAR
(TO BE RENOVATED)
EXISTING FFE: VARIES
ADDITION FFE: 205.30±
(SEE ARCHITECTURAL PLANS)
FIRE FLOW SERVICE WITH POST INDICATOR VALVE (TYP.)
HVAC EQUIPMENT WITH CONCRETE PAD (TYP.) (SEE MECHANICAL PLANS) (TOP OF SLAB: 205.20±)
ELECTRICAL TRANSFORMER WITH CONCRETE PAD AND SERVICE LINES (TYP.) (SEE ELECTRICAL PLANS) (TOP OF SLAB: 204.75±)
CONCRETE SIDEWALK (TYP.)
B453 EXISTING RESTROOM BUILDING
FIRE DEPARTMENT CONNECTION (FDC) (SEE FIRE PROTECTION PLANS)
METAL PICKET FENCE (TYP.)
EXISTING METAL PICKET FENCE (TYP.)
EXISTING CONTAINMENT STRUCTURE (TYP.)
BOLLARD (TYP.)
CONCRETE SIDEWALK (TYP.)
205.22
205.28
205.06
205.12
205.11
205.27
HVAC EQUIPMENT WITH CONCRETE PAD (TYP.) (SEE MECHANICAL PLANS)
TELECOMMUNICATIONS SERVICE LINES (TYP.) (SEE TELECOMMUNICATIONS PLANS)
NATURAL GAS METER, REGULATOR AND SERVICE LINES (TYP.) (SEE PLUMBING PLANS)(SEE NOTE 4)
WATER SERVICE WITH VALVES (TYP.)
SANITARY SEWER LINE WITH CLEANOUTS (TYP.)
CONCRETE PARKING BUMPER (TYP.)
205.30
204.95
204.89
204.99
204.71
205.16
205.15
204.68
EXISTING NATURAL GAS LINE (TYP.)
1.25" P.E.
EXISTING METAL PICKET FENCE (TYP.)
EXISTING GRATE INLET (TYP.) GRATE: 203.37 NW INV: 199.49 S INV: 198.78
NO PARKING ZONE PAVEMENT MARKING (TYP.)
MILL AND RESURFACE FLEXIBLE PAVEMENT PARKING AREA (TYP.)(8 SPACES) (SEE PAVEMENT SECTION, SHT. C-300)
MC
EXISTING DUMPSTER ENCLOSURE
EHH
SMH
DMH
EXISTING FIBER OPTIC MANHOLE (TYP.)
EXISTING FIRE HYDRANT (TYP.)
EXISTING CONCRETE CURB AND GUTTER (TYP.)
EXISTING DRAINAGE MANHOLE (TYP.) TOP: 204.41 N INV: 198.66 S INV: 199.01
12" T.C.
32" RCP
EXISTING CURB INLET (TYP.) TOP: 204.18 N INV: 198.79 S INV: 198.77
MATCH EXISTING (204.54±)
MATCH EXISTING (204.60±)
MATCH EXISTING (204.74±)
MATCH EXISTING (204.52±)
SANITARY SEWER MANHOLE (TYP.) (RIM: 204.38±)
MATCH EXISTING (204.25±)
MATCH EXISTING (203.92±)
CUT AND PATCH FLEXIBLE PAVEMENT ROAD (TYP.)
CUT AND PATCH CONCRETE CURB AND GUTTER (TYP.)
TIMELINE ROAD EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING GRASS MEDIAN (TYP.)
BENCHMARK! BM-1 (SEE DATA TABLE, SHT. C-101)
EXISTING SWING ARM GATE
BRADT STREET EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING SANITARY SEWER MANHOLE (TYP.) TOP: 204.14 NW INV: 199.80 N INV: 199.52 NE INV: 199.19 SW INV: 199.14
8" DI
6" DI
EXISTING CONCRETE MEDIAN (TYP.)
SCALE: 1" = 10'
10' 5' 0' 10'

NOTES:

1. SEE SHEETS C-101 AND C-102 FOR SURVEY CONTROL POINTS, BENCHMARKS AND COORDINATES.
2. SEE SHEET G-003 FOR SYMBOL LEGEND AND SHEET G-004 FOR ABBREVIATION LEGEND.
3. CONTRACTOR TO USE CAUTION WHEN DIGGING NEAR EXISTING UTILITIES AND MAY BE REQUIRED TO HAND DIG IN SOME AREAS. CONTRACTOR MAY BE REQUIRED TO TEMPORARILY SUPPORT EXISTING UTILITIES WHILE INSTALLING NEW UTILITIES LINES AND STRUCTURES.
4. SEE SHEETS CU-101 THRU CU-509 FOR NATURAL GAS, WATER AND SANITARY SEWER PLAN AND DETAILS.

MC DENOTES MITER CURB SECTION

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EF-000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: T. HYMAN	ISSUE DATE: JUNE 2024
DRAWN BY: J. JOHNSON	SOLICITATION NO.: -
CHECKED BY: R. WEED	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005C-107.DWG

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

GRADING AND STORM DRAINAGE PLAN

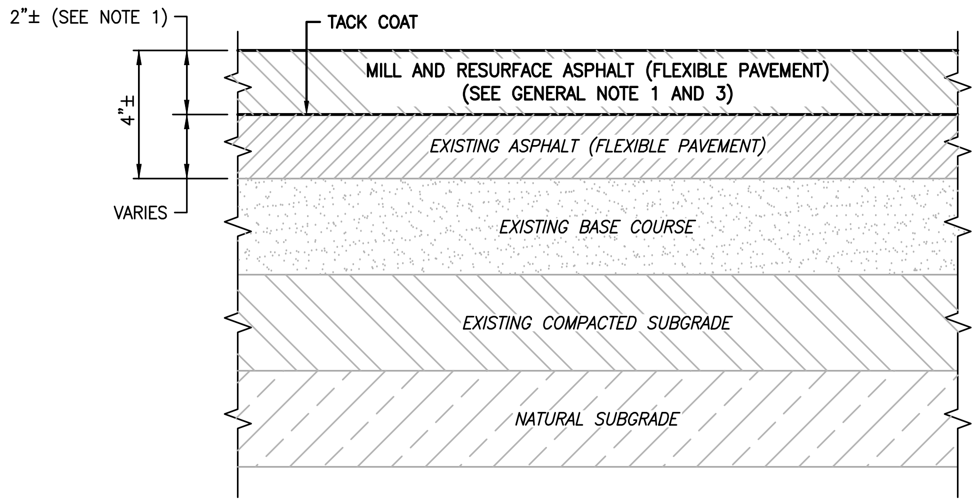
SHEET ID
C-107

RTA SUBMITTAL

CESAM v20181203

GENERAL NOTES:

1. ASPHALT (FLEXIBLE PAVEMENT) REFERS TO ROAD-MIX ASPHALT PAVING SPECIFICATION 32 12 16.16.
2. SEE SPECIFICATION 31 00 00 EARTHWORK FOR UNDERCUTTING, COMPACTION, BACKFILLING, ETC.
3. SEE SPECIFICATION 32 01 16.71 COLD MILLING ASPHALT PAVING.


2"± (SEE NOTE 1)
TACK COAT
4"±
MILL AND RESURFACE ASPHALT (FLEXIBLE PAVEMENT)
(SEE GENERAL NOTE 1 AND 3)
EXISTING ASPHALT (FLEXIBLE PAVEMENT)
VARIES
EXISTING BASE COURSE
EXISTING COMPACTED SUBGRADE
NATURAL SUBGRADE

MILL AND RESURFACE
FLEXIBLE PAVEMENT SECTION
N.T.S.

NOTES:

1. CONTRACTOR SHALL ADJUST MILLING DEPTH AS REQUIRED FOR PROPOSED PLAN GRADE SUCH THAT A SOLID 2" RESURFACING IS PROVIDED.

US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: T. HYMAN
DRAWN BY: J. JOHNSON
CHECKED BY: R. WEED
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005C-300.DWG

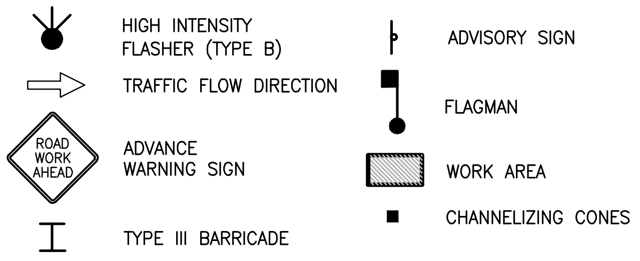
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

TYPICAL PAVEMENT SECTIONS

SHEET ID
C-300

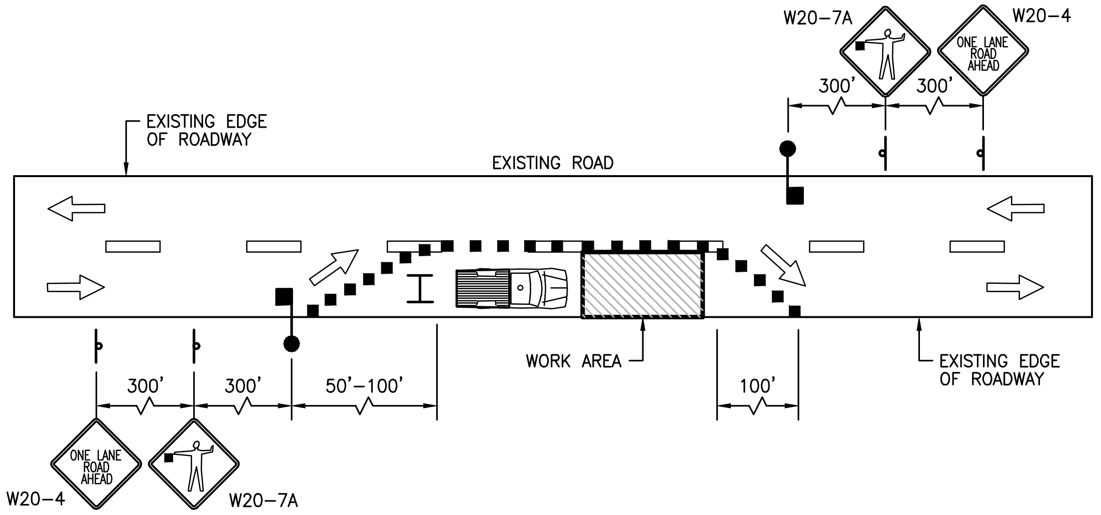
RTA SUBMITTAL

CESAM v20181203



TCP LEGEND

N.T.S.

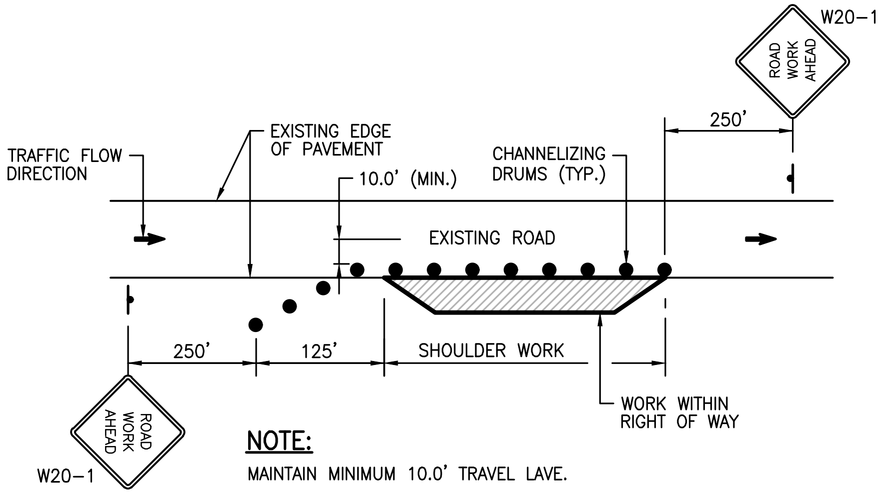


ONE LANE CLOSURE PLAN

N.T.S.

TRAFFIC CONTROL NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR STRICT COMPLIANCE WITH PART VI OF THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

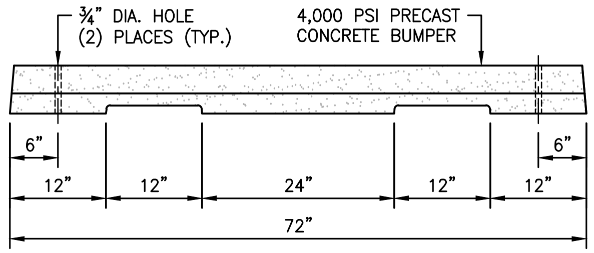


NOTE:

MAINTAIN MINIMUM 10.0' TRAVEL LAVE.

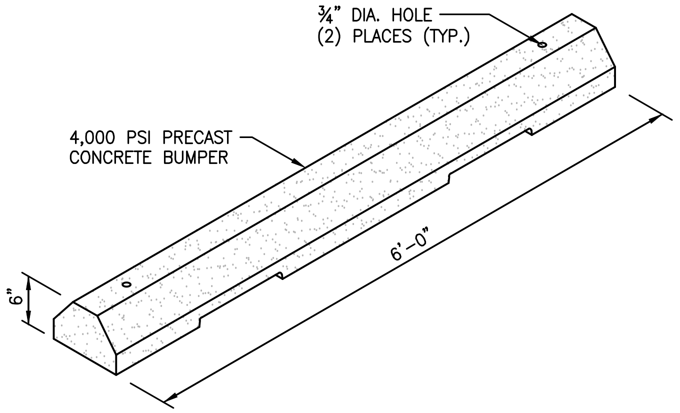
CONSTRUCTION WITH MINOR ENCROACHMENT

N.T.S.


¾" DIA. HOLE (2) PLACES (TYP.)
4,000 PSI PRECAST CONCRETE BUMPER
6"
6"
12"
12"
24"
12"
12"
72"

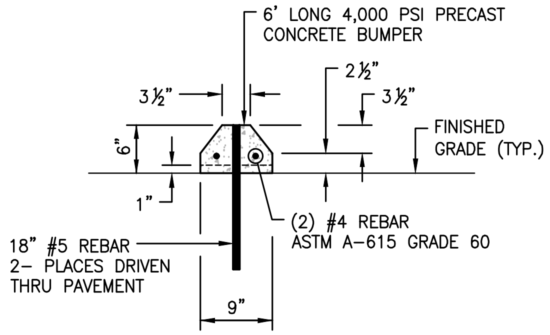
CONCRETE PARKING BUMPER WITH DRAINAGE SLOT – ELEVATION VIEW

N.T.S.


¾" DIA. HOLE (2) PLACES (TYP.)
4,000 PSI PRECAST CONCRETE BUMPER
6'–0"
6"

CONCRETE PARKING BUMPER WITH DRAINAGE SLOT – ISOMETRIC VIEW

N.T.S.


6' LONG 4,000 PSI PRECAST CONCRETE BUMPER
3½"
2½"
3½"
FINISHED GRADE (TYP.)
6"
1"
(2) #4 REBAR ASTM A–615 GRADE 60
18" #5 REBAR 2– PLACES DRIVEN THRU PAVEMENT
9"

NOTE: DIMENSIONS MAY VARY BY 1", EXCEPT HEIGHT SHALL NOT EXCEED 6".

CONCRETE PARKING BUMPER WITH DRAINAGE SLOT – SECTION VIEW

N.T.S.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024

SOLICITATION NO.:
-

CONTRACT NO.:
-

PROJECT NUMBER:
MEF24005

DESIGNED BY:
T. HYMAN

DRAWN BY:
J. JOHNSON

CHECKED BY:
R. WEED

SUBMITTED BY:
T. HYMAN

SIZE:
ANSI D

FILE NAME:
MEF24005C-501.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

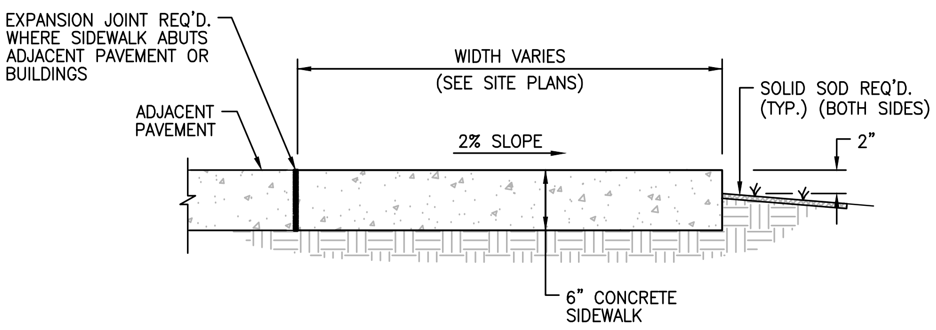
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MISCELLANEOUS DETAILS

SHEET ID

C-501

RTA SUBMITTAL

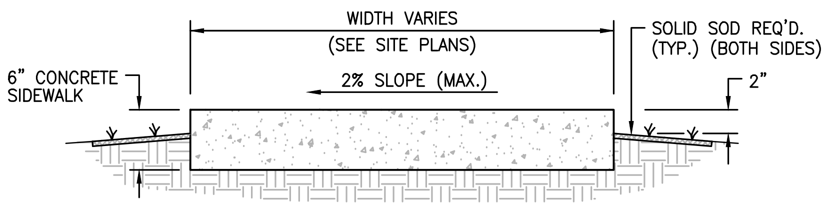

EXPANSION JOINT REQ'D. WHERE SIDEWALK ABUTS ADJACENT PAVEMENT OR BUILDINGS
ADJACENT PAVEMENT
WIDTH VARIES (SEE SITE PLANS)
SOLID SOD REQ'D. (TYP.) (BOTH SIDES)
2% SLOPE
2"
6" CONCRETE SIDEWALK

NOTES:

1. 2 STRIPS SOLID SOD REQ'D. (MINIMUM, UNLESS SHOWN OR NOTED OTHERWISE) ALONG ALL SIDEWALKS.

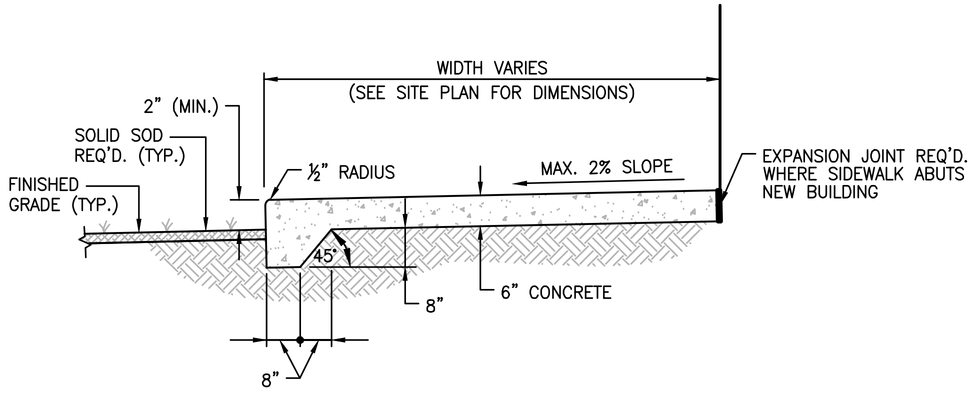
SIDEWALK DETAIL

N.T.S.


WIDTH VARIES (SEE SITE PLANS)
SOLID SOD REQ'D. (TYP.) (BOTH SIDES)
6" CONCRETE SIDEWALK
2% SLOPE (MAX.)
2"

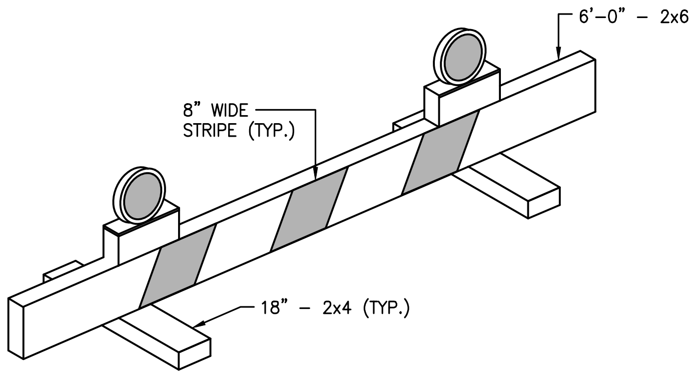
SIDEWALK DETAIL

N.T.S.


WIDTH VARIES (SEE SITE PLAN FOR DIMENSIONS)
2" (MIN.)
SOLID SOD REQ'D. (TYP.)
FINISHED GRADE (TYP.)
½" RADIUS
MAX. 2% SLOPE
EXPANSION JOINT REQ'D. WHERE SIDEWALK ABUTS NEW BUILDING
45°
8"
6" CONCRETE
8"

CONCRETE STOOP DETAIL AT FACILITY DOOR LOCATION

N.T.S.



BARRICADE NOTES:

1. AS DIRECTED BY THE CONTRACTING OFFICERS' REPRESENTATIVE USE REFLECTIVE ORANGE AND WHITE COLORED BARRICADES WITH AMBER-YELLOW LIGHTS AT OPEN CUT AREAS ON RUNWAY. ALL BARRICADES MUST BE ANCHORED OR BE OF SUFFICIENT MASS TO RETAIN AN ESTABLISHED POSITION WHERE THEY ARE PLACED. FLASHING LIGHTS MUST BE AT LEAST FIVE CANDELAS EFFECTIVE INTENSITY AND FLASH AT A RATE OF FROM 55 TO 75 FLASHES PER MINUTE. CONTINUOUS BURNING LIGHTS MUST HAVE AN EFFECTIVE INTENSITY OF 10 CANDELAS.
2. PLACE BARRICADES AT 50FT MINIMUM INTERVALS (SPACING NO GREATER THAN 100') AND USE DUAL MARKERS AND LIGHTS ON CORNERS AND ENDS.

LOW-PROFILE TEMPORARY LIGHTED BARRICADE

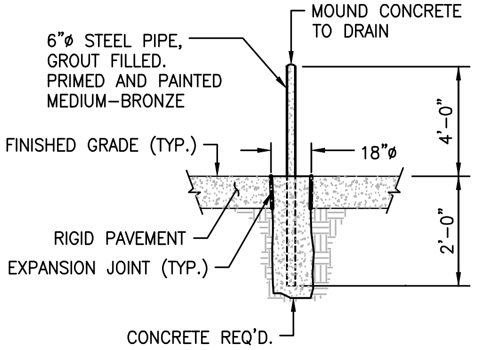
N.T.S.

PIPE BOLLARD NOTE:

COLOR: 27769 FROM FEDERAL STANDARD 595C COLOR CHART

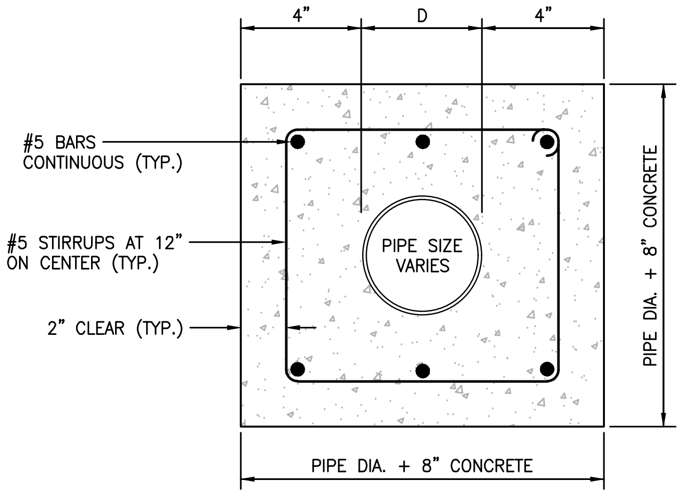
NOTE:

REFER TO GEOMETRY PLAN AND ARCHITECTURAL DRAWINGS FOR BOLLARD LOCATIONS.



PIPE BOLLARD DETAIL

N.T.S.

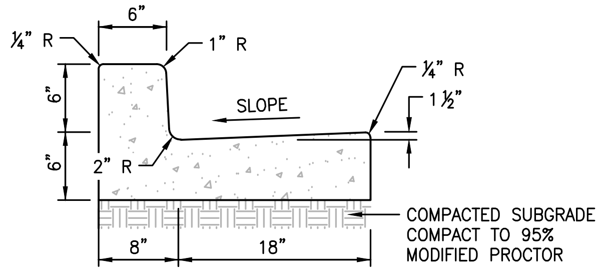


NOTES:

1. ALL ENCASEMENTS SHALL EXTEND 3 FEET BEYOND THE EDGE OF ALL ASPHALT SHOULDERS.
2. FOR PIPE LESS THAN 6" ø, ADJUST DIMENSIONS OF ENCASEMENT TO ENSURE A MINIMUM OF 4" OF CONCRETE ON ALL SIDES OF PIPE.

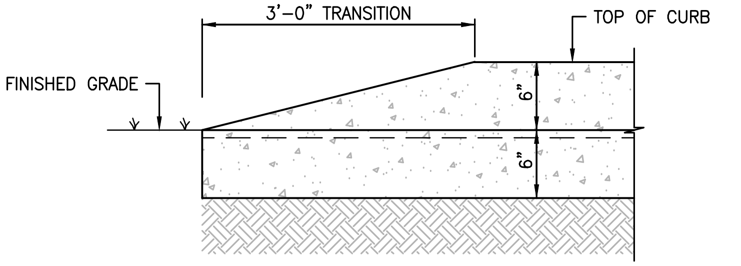
REINFORCED CONCRETE ENCASEMENT DETAIL

N.T.S.



CURB AND GUTTER DETAIL

N.T.S.



NOTE:

PROVIDE MITER AT END OF CURB NOT JOINED TO EXISTING CURB OR SIDEWALK (TYP.) ALL LOCATIONS.

MITERED CURB DETAIL

N.T.S.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
T. HYMAN
DRAWN BY:
J. JOHNSON
CHECKED BY:
R. WEED
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D
FILE NAME:
MEF24005C-502.DWG
ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MISCELLANEOUS DETAILS

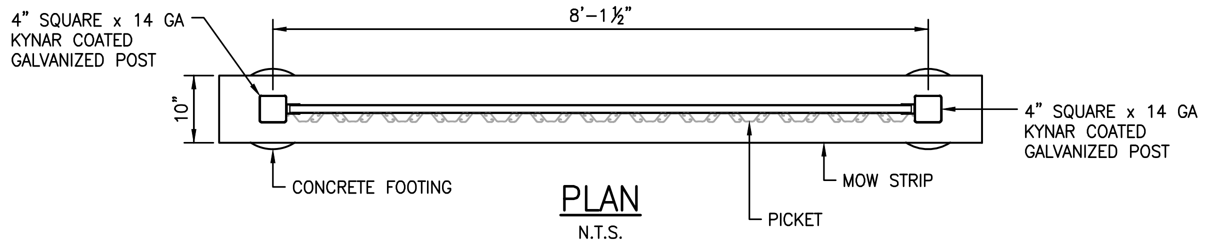
SHEET ID
C-502

RTA SUBMITTAL

CESAM v20181203

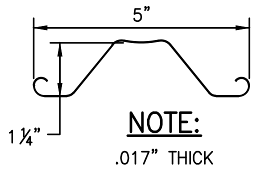
NOTE:

THE BASIS OF DESIGN FOR THE AIRFIELD SECURITY FENCE IS CHOSEN TO MATCH THE EXISTING FENCING AND IS THE BASTEEL PERIMETER SYSTEMS TOTAL PRIVATE PICKET FENCE, KYNAR COATED IN THE COLOR BRONZE. THE CONTRACTOR IS ALLOWED TO USE THIS FENCE OR AN APPROVED EQUAL.



PLAN

N.T.S.

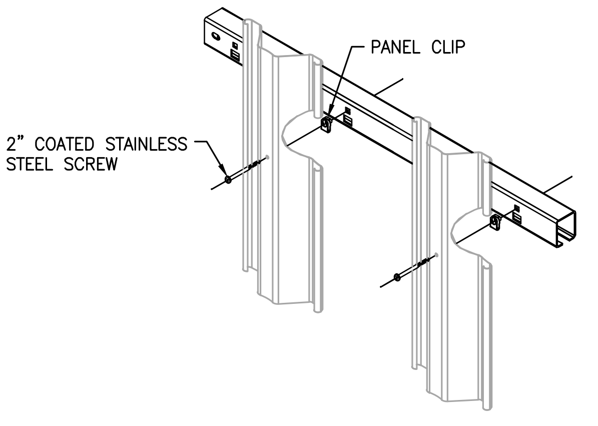


NOTE:

.017" THICK
80,000 PSI
KYNAR COATED

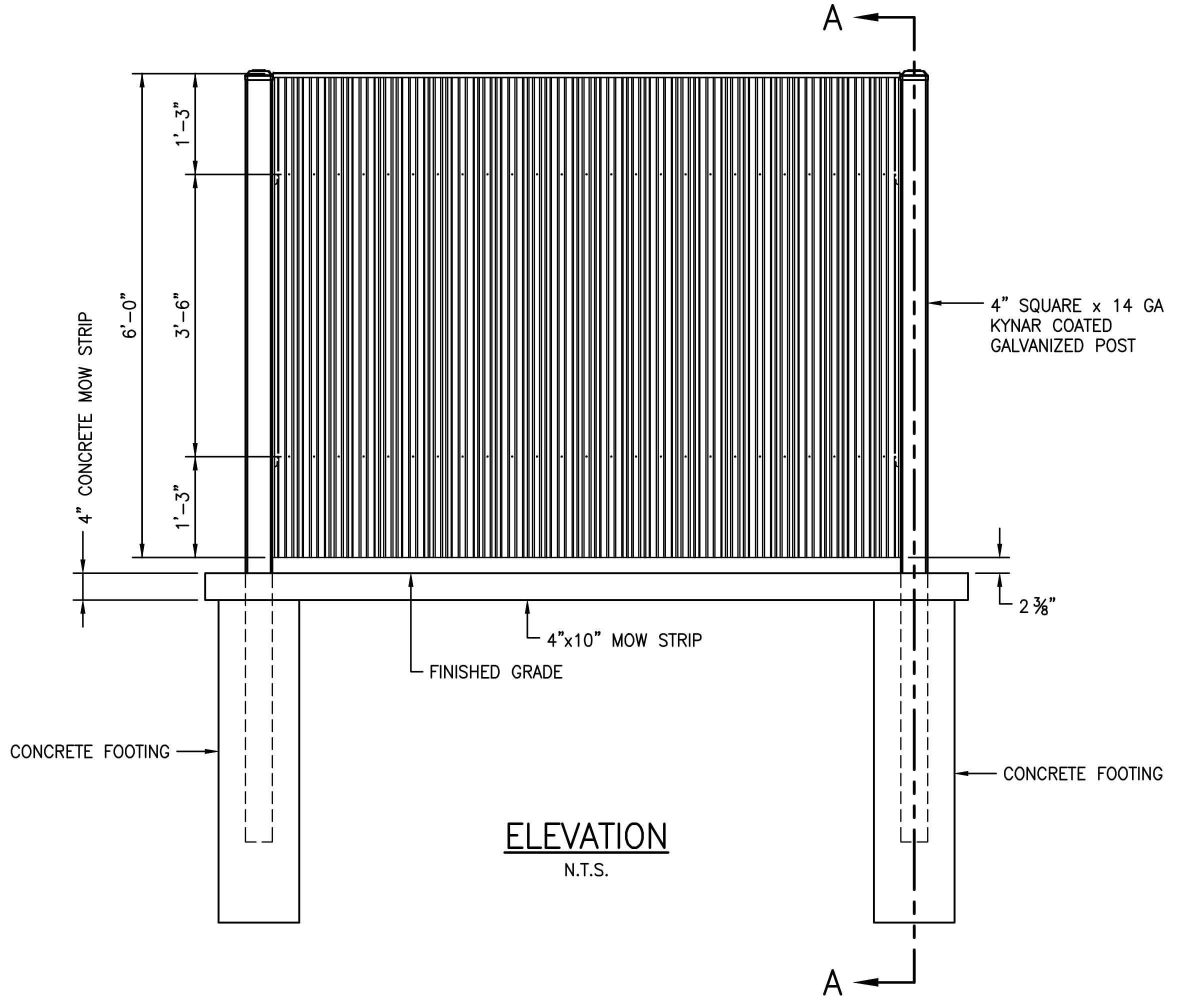
PICKET DETAIL

N.T.S.



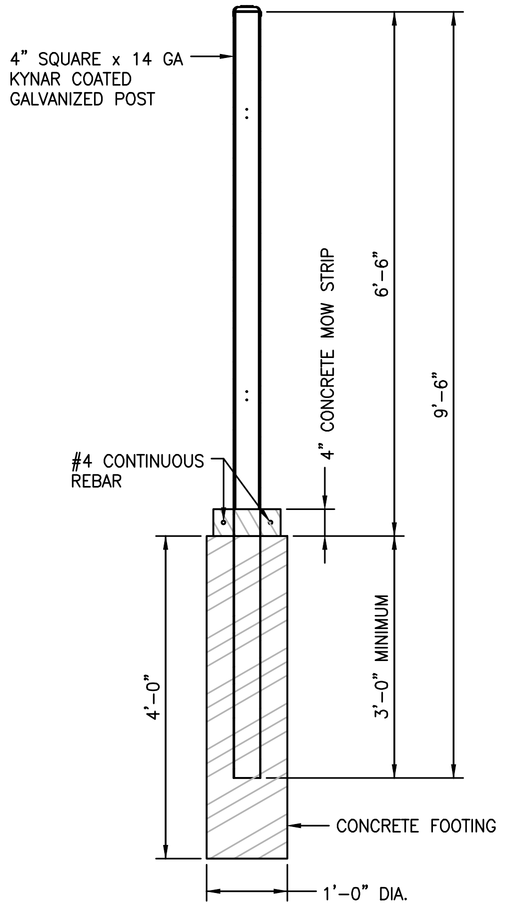
PICKET CONNECTION DETAIL

N.T.S.



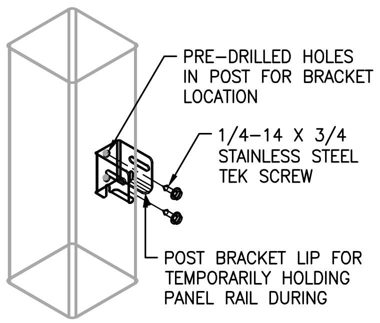
ELEVATION

N.T.S.



SECTION A–A

N.T.S.

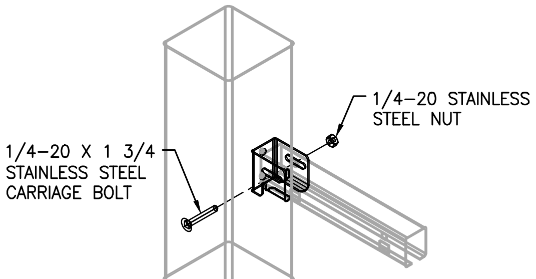


NOTE:

14 GA KYNAR COATED
GALVANIZED STEEL

POST BRACKET DETAIL

N.T.S.

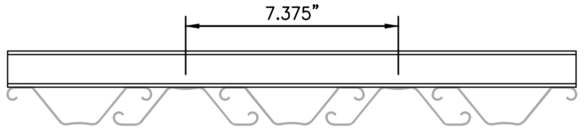


NOTE:

14 GA KYNAR COATED
GALVANIZED STEEL

PANEL RAIL DETAIL

N.T.S.



TOTAL PRIVATE PICKET LAYOUT DETAIL

N.T.S.

TYPICAL PRIVATE PICKET FENCE DETAILS

N.T.S.

US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

DESIGNED BY:
T. HYMAN
DRAWN BY:
J. JOHNSON
CHECKED BY:
R. WEED
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D
FILE NAME:
MEF24005C-503.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MISCELLANEOUS
FENCING DETAILS

SHEET ID

C-503

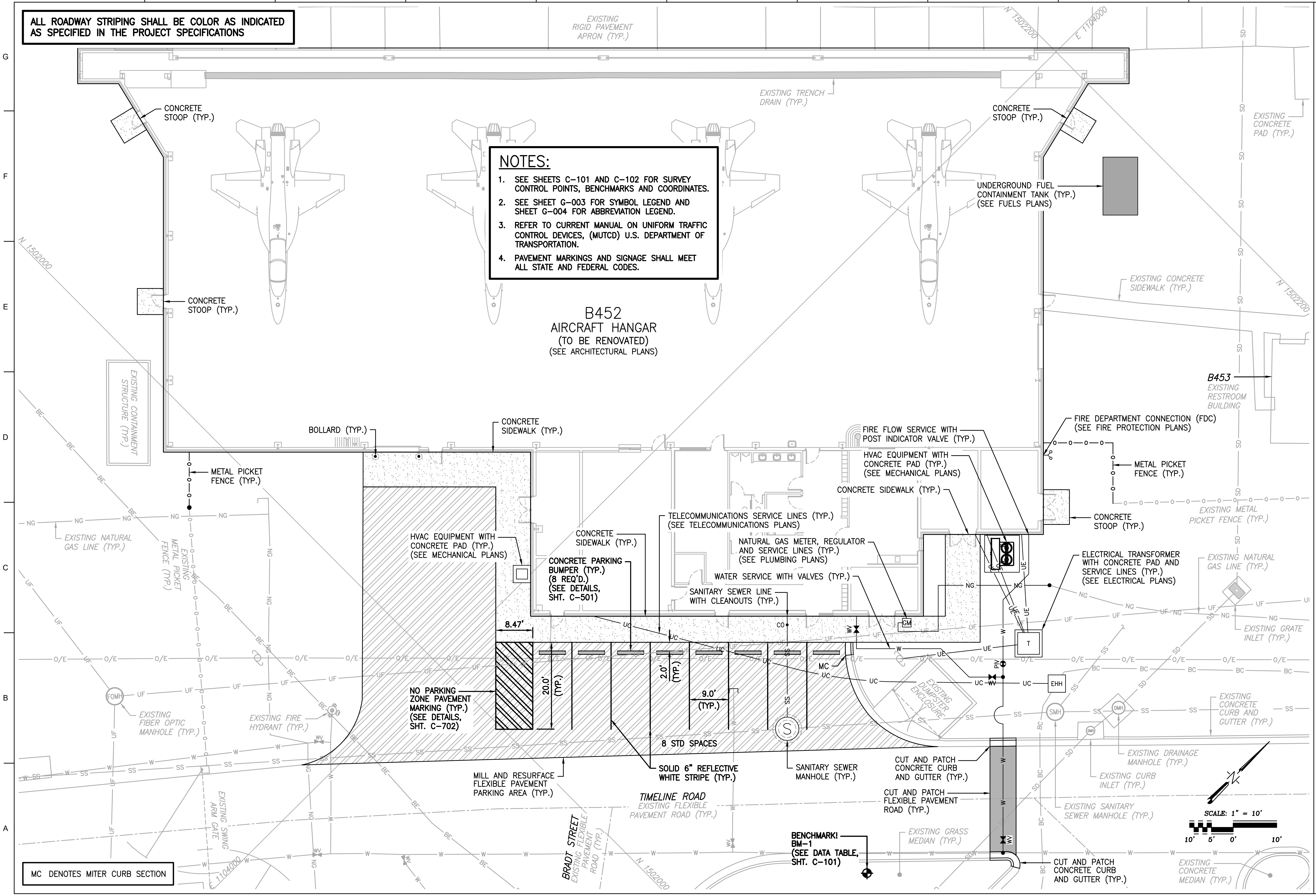
RTA SUBMITTAL

CESAM v20181203

ALL ROADWAY STRIPING SHALL BE COLOR AS INDICATED AS SPECIFIED IN THE PROJECT SPECIFICATIONS

NOTES:

1. SEE SHEETS C-101 AND C-102 FOR SURVEY CONTROL POINTS, BENCHMARKS AND COORDINATES.
2. SEE SHEET G-003 FOR SYMBOL LEGEND AND SHEET G-004 FOR ABBREVIATION LEGEND.
3. REFER TO CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD) U.S. DEPARTMENT OF TRANSPORTATION.
4. PAVEMENT MARKINGS AND SIGNAGE SHALL MEET ALL STATE AND FEDERAL CODES.


1
2
3
4
5
6
7
8
9
10
G
F
E
D
C
B
A
EXISTING RIGID PAVEMENT APRON (TYP.)
N 1502200
E 1104000
EXISTING TRENCH DRAIN (TYP.)
CONCRETE STOOP (TYP.)
CONCRETE STOOP (TYP.)
EXISTING CONCRETE PAD (TYP.)
SD
UNDERGROUND FUEL CONTAINMENT TANK (TYP.) (SEE FUELS PLANS)
N 1502000
EXISTING CONCRETE SIDEWALK (TYP.)
N 1502200
CONCRETE STOOP (TYP.)
B452
AIRCRAFT HANGAR
(TO BE RENOVATED)
(SEE ARCHITECTURAL PLANS)
EXISTING CONTAINMENT STRUCTURE (TYP.)
B453
EXISTING RESTROOM BUILDING
BOLLARD (TYP.)
CONCRETE SIDEWALK (TYP.)
FIRE FLOW SERVICE WITH POST INDICATOR VALVE (TYP.)
FIRE DEPARTMENT CONNECTION (FDC) (SEE FIRE PROTECTION PLANS)
HVAC EQUIPMENT WITH CONCRETE PAD (TYP.) (SEE MECHANICAL PLANS)
METAL PICKET FENCE (TYP.)
METAL PICKET FENCE (TYP.)
CONCRETE SIDEWALK (TYP.)
CONCRETE STOOP (TYP.)
EXISTING METAL PICKET FENCE (TYP.)
TELECOMMUNICATIONS SERVICE LINES (TYP.) (SEE TELECOMMUNICATIONS PLANS)
CONCRETE SIDEWALK (TYP.)
NATURAL GAS METER, REGULATOR AND SERVICE LINES (TYP.) (SEE PLUMBING PLANS)
ELECTRICAL TRANSFORMER WITH CONCRETE PAD AND SERVICE LINES (TYP.) (SEE ELECTRICAL PLANS)
EXISTING NATURAL GAS LINE (TYP.)
EXISTING NATURAL GAS LINE (TYP.)
EXISTING METAL PICKET FENCE (TYP.)
HVAC EQUIPMENT WITH CONCRETE PAD (TYP.) (SEE MECHANICAL PLANS)
CONCRETE PARKING BUMPER (TYP.) (8 REQ'D.) (SEE DETAILS, SHT. C-501)
WATER SERVICE WITH VALVES (TYP.)
SANITARY SEWER LINE WITH CLEANOUTS (TYP.)
EXISTING GRATE INLET (TYP.)
8.47'
20.0' (TYP.)
2.0' (TYP.)
9.0' (TYP.)
MC
EXISTING DUMPSTER ENCLOSURE
EHH
T
PIV
NO PARKING ZONE PAVEMENT MARKING (TYP.) (SEE DETAILS, SHT. C-702)
EXISTING FIBER OPTIC MANHOLE (TYP.)
EXISTING FIRE HYDRANT (TYP.)
FOMH
SMH
DMH
EXISTING CONCRETE CURB AND GUTTER (TYP.)
EXISTING DRAINAGE MANHOLE (TYP.)
8 STD SPACES
MILL AND RESURFACE FLEXIBLE PAVEMENT PARKING AREA (TYP.)
SOLID 6" REFLECTIVE WHITE STRIPE (TYP.)
SANITARY SEWER MANHOLE (TYP.)
CUT AND PATCH CONCRETE CURB AND GUTTER (TYP.)
CUT AND PATCH FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING CURB INLET (TYP.)
EXISTING SANITARY SEWER MANHOLE (TYP.)
EXISTING SWING ARM GATE
TIMELINE ROAD
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
BRADT STREET
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
E 1104000
N 1502000
BENCHMARK! BM-1 (SEE DATA TABLE, SHT. C-101)
EXISTING GRASS MEDIAN (TYP.)
CUT AND PATCH CONCRETE CURB AND GUTTER (TYP.)
EXISTING CONCRETE MEDIAN (TYP.)
SCALE: 1" = 10'
10'
5'
0'
10'
NG
UF
O/E
BE
W
SS
UC
UE
BC
SD
CO
GM
WV

MC DENOTES MITER CURB SECTION

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: T. HYMAN
DRAWN BY: J. JOHNSON
CHECKED BY: R. WEED
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005C-701.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

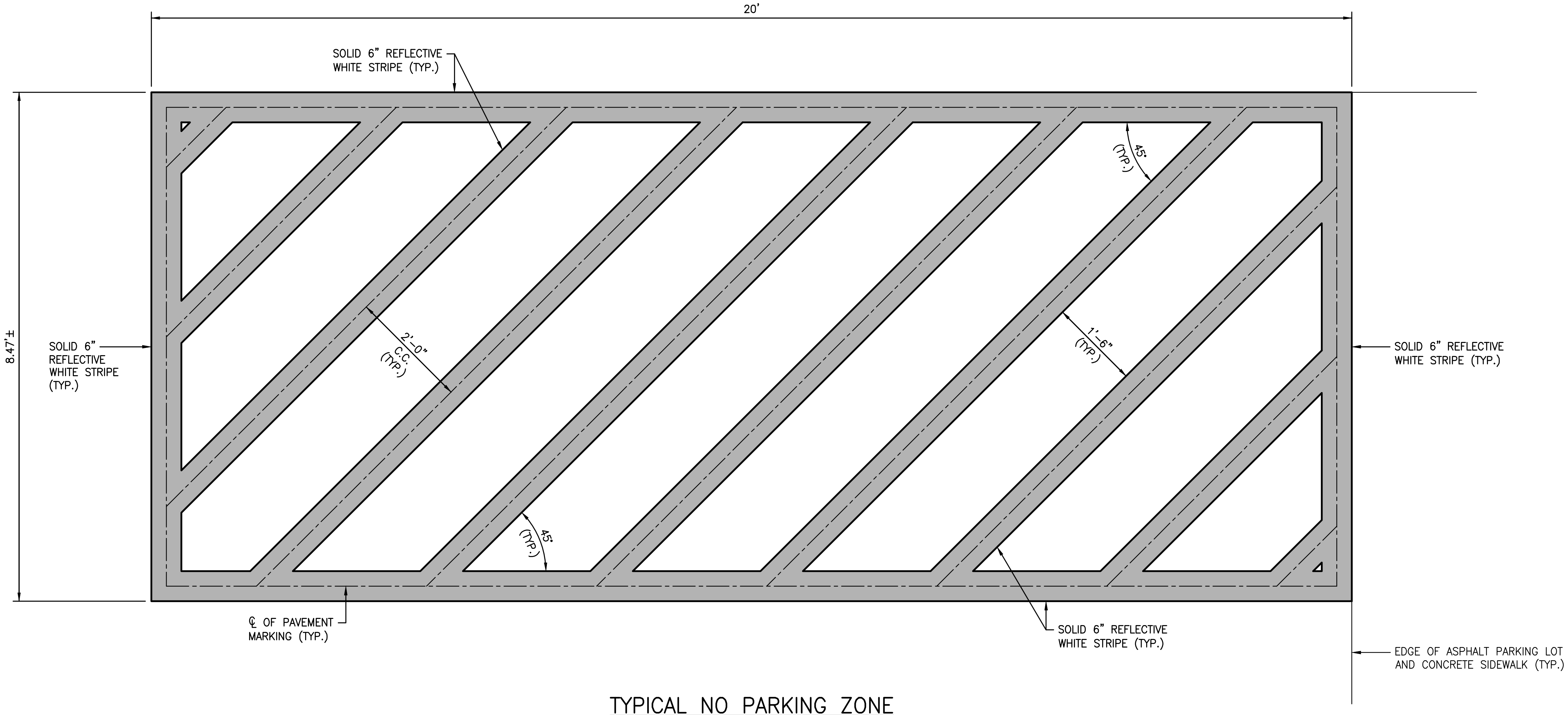
STRIPING AND SIGNAGE PLAN

SHEET ID
C-701

RTA SUBMITTAL

CESAM v20181203

ALL ROADWAY STRIPING SHALL BE COLOR AS INDICATED AS SPECIFIED IN THE PROJECT SPECIFICATIONS


20'
SOLID 6" REFLECTIVE WHITE STRIPE (TYP.)
8.47'±
SOLID 6" REFLECTIVE WHITE STRIPE (TYP.)
2'-0" C.C. (TYP.)
45° (TYP.)
1'-6" (TYP.)
45° (TYP.)
SOLID 6" REFLECTIVE WHITE STRIPE (TYP.)
℄ OF PAVEMENT MARKING (TYP.)
SOLID 6" REFLECTIVE WHITE STRIPE (TYP.)
EDGE OF ASPHALT PARKING LOT AND CONCRETE SIDEWALK (TYP.)

TYPICAL NO PARKING ZONE PAVEMENT MARKING DETAIL

N.T.S.

NOTES:

1. REFER TO CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD) U.S. DEPARTMENT OF TRANSPORTATION.
2. PAVEMENT MARKINGS AND SIGNAGE SHALL MEET ALL STATE AND FEDERAL CODES.
3. CONTRACTOR TO ADJUST PAVEMENT MARKING IF REQUIRED.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
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DESIGNED BY: T. HYMAN	ISSUE DATE: JUNE 2024
DRAWN BY: J. JOHNSON	SOLICITATION NO.: -
CHECKED BY: R. WEED	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005C-702.DWG

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MISCELLANEOUS STRIPING
AND SIGNAGE DETAILS

SHEET ID
C-702

RTA SUBMITTAL

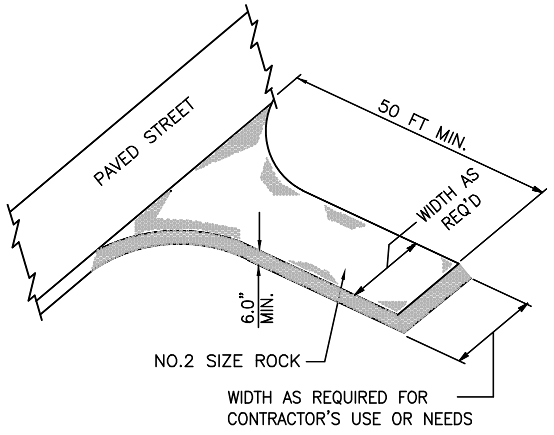
CONSTRUCTION SCHEDULING & BEST MANAGEMENT PRACTICES (BMP) IMPLEMENTATION SCHEDULE

CONSTRUCTION ACTIVITY	B.M.P. CONSIDERATION
1. DEMOLITION AND REMOVALS	INSTALL BMP #1, 2, & 3
2. STOCKPILE AREAS	INSTALL SILT FENCING, HAY BALES, AND OTHER BMPS AS NECESSARY
3. SITEWORK CONSTRUCTION;	CLEAR AND STRIP SITE OR WORK AREA AS REQUIRED TO INSTALL BMPS IN ACCORDANCE WITH PLANS OR AS NECESSARY. INSTALL SILT FENCES, HAY BALES, SEDIMENT TRAPS, INLET PROTECTION, AND OTHER BMPS AS NECESSARY.
4. ROUGH GRADING (SLOPES)	PERFORM TEMPORARY SEEDING OR SODDING AS SLOPES ARE COMPLETED
5. SITE GRADING	STABILIZE AND SOD AS EACH AREA OF WORK IS COMPLETED, FINAL STABILIZATION NO LATER THAN 14 DAYS.
6. ROUTINE MAINTENANCE	MAINTAIN SILT FENCES AND OTHER BMPS INSTALL SEDIMENT TRAPS OR ADD BMPS AS NECESSARY.
7. FINAL STABILIZATION OF WORK AREAS AND COMPLETION OF LANDSCAPING	AFTER STABILIZATION OF GRADED AREAS AND AS APPROVED BY THE C.O.R. THE CONTRACTOR MAY REMOVE AND STABILIZE ALL BMP MEASURES.

MAINTENANCE: MAINTENANCE INSPECTIONS SHALL BE IN ACCORDANCE WITH THE "GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES. MAINTENANCE REPAIRS OR ADJUSTMENTS TO BMPS SHALL BE PERFORMED IMMEDIATELY OR AS DIRECTED BY THE COR. MAINTENANCE WATERING OF GRASSED AREAS SHALL BE IN ACCORDANCE WITH SECTION(S) 32 92 19 AND 32 92 23.

BEST MANAGEMENT PRACTICES IMPLEMENTATION SCHEDULE

BMP 1



NOTE:

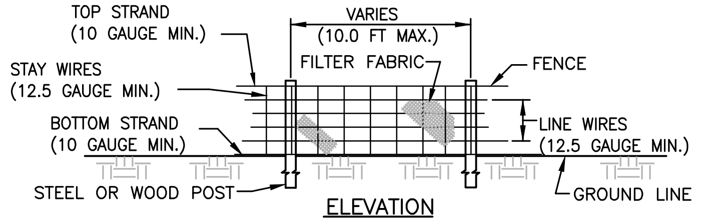
GRAVEL PAD IS REQUIRED TO PROVIDE BUFFER AREA WHERE VEHICLES CAN DROP THEIR MUD AND SEDIMENT TO AVOID TRANSPORTING IT ONTO PAVED STREETS, TO CONTROL EROSION FROM SURFACE RUNOFF, AND TO HELP CONTROL DUST.

CRUSHED AGGREGATE ENTRANCE/EXIT PAD

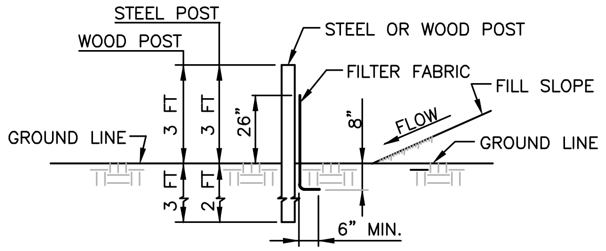
* SEDIMENT TRACKING CONTROL

N.T.S.

BMP 3


TOP STRAND (10 GAUGE MIN.)
VARIES (10.0 FT MAX.)
FILTER FABRIC
FENCE
STAY WIRES (12.5 GAUGE MIN.)
BOTTOM STRAND (10 GAUGE MIN.)
LINE WIRES (12.5 GAUGE MIN.)
STEEL OR WOOD POST
GROUND LINE

ELEVATION



SECTION

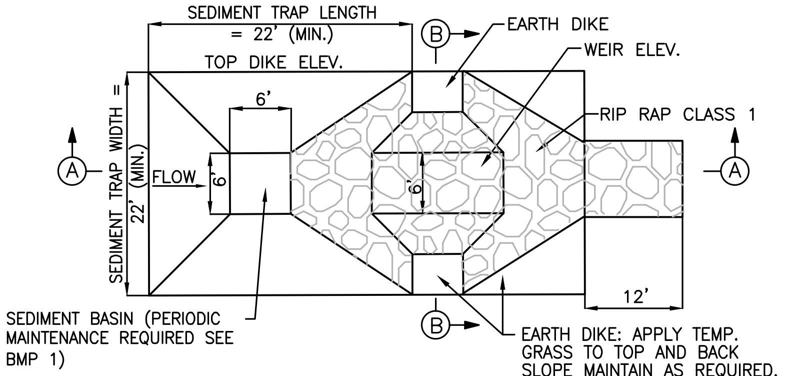
NOTES:

1. SILT FENCE MAY BE INSTALLED ALONG TOE OF EMBANKMENTS, ALONG AREAS OF DISTURBED GROUND, AND AROUND STORM DRAIN INLETS AND MANHOLES.
2. WIRE SHALL BE A MIN. WIDTH OF 32 WITH A MIN. OF 6 LINE WIRES WITH 12" STAY SPACING.
3. FILTER FABRIC MIN. WIDTH IS 36".
4. FILTER FABRIC TO BE SECURELY FASTENED TO THE WIRE.
5. STEEL POSTS TO BE 5' IN LENGTH AND SELF-FASTENER ANGLE STEEL TYPE.
6. WOOD POSTS TO BE A MIN. OF 6' IN LENGTH AND 3" OR MORE IN DIAMETER.
7. WIRE FABRIC TO BE FASTENED TO WOOD POST WITH NOT LESS THAN NO. 9 WIRE STAPLES, 1.5" LONG.
8. ACCUMULATED SEDIMENTS SHALL BE REMOVED PERIODICALLY AS NECESSARY OR DIRECTED.
9. THE FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS:
   - A. EOS IS NOT LARGER THAN U.S. STANDARD SIEVE NO.70
   - B. GRAB STRENGTH 90-120 LB
   - C. CONFORM TO ASTM D-1682 OR ASTM D-177

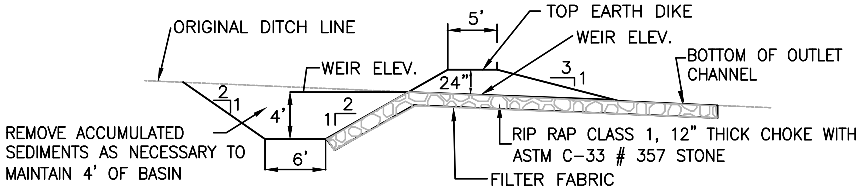
SILT FENCE BARRIER

N.T.S.

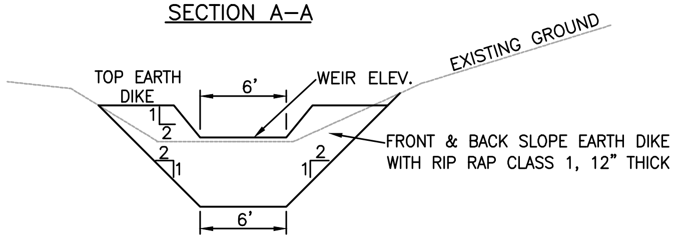
BMP 2


SEDIMENT TRAP LENGTH = 22' (MIN.)
TOP DIKE ELEV.
B
EARTH DIKE
WEIR ELEV.
RIP RAP CLASS 1
6'
A
FLOW
6'
SEDIMENT TRAP WIDTH = 22' (MIN.)
6'
A
12'
B
SEDIMENT BASIN (PERIODIC MAINTENANCE REQUIRED SEE BMP 1)
EARTH DIKE: APPLY TEMP. GRASS TO TOP AND BACK SLOPE MAINTAIN AS REQUIRED.

PLAN


ORIGINAL DITCH LINE
5'
TOP EARTH DIKE
WEIR ELEV.
WEIR ELEV.
BOTTOM OF OUTLET CHANNEL
2
1
4'
24"
3
1
1
2
REMOVE ACCUMULATED SEDIMENTS AS NECESSARY TO MAINTAIN 4' OF BASIN
6'
RIP RAP CLASS 1, 12" THICK CHOKE WITH ASTM C-33 # 357 STONE
FILTER FABRIC

SECTION A-A


EXISTING GROUND
TOP EARTH DIKE
6'
WEIR ELEV.
1
2
2
1
2
1
FRONT & BACK SLOPE EARTH DIKE WITH RIP RAP CLASS 1, 12" THICK
6'

SECTION B-B

EXCAVATED SEDIMENT TRAP WITH EARTH AND ROCK DIKE

N.T.S.

BMP 4

BEST MANAGEMENT PRACTICES PLAN GENERAL NOTES:

1. THE SEDIMENT AND EROSION CONTROL BMP'S INDICATED HEREIN ARE INTENDED AS A MINIMUM BMP PLAN (SWPPP) FOR PURPOSES OF OBTAINING THE EPA AND MDEQ CONSTRUCTION PERMIT(S) ONLY. THE BMP PLAN (SWPPP) SHALL BE AMENDED AS NECESSARY FOR THE SPECIFIC PROJECT REQUIREMENTS.
2. EROSION AND SEDIMENT CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL DEVELOP A SITE SPECIFIC BEST MANAGEMENT PRACTICES (BMP) PLAN DESIGNED FOR THE SPECIFIC METHOD(S) OF CONSTRUCTION PREFERRED BY THE CONTRACTOR FOR EACH PHASE OF CONSTRUCTION. THE CONTRACTOR'S BMP PLAN (SWPPP) SHALL MEET THE REQUIREMENTS OF THE EPA AND MDEQ "GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES", PROJECT SPECIFICATIONS, AND THE MINIMUM BMP REQUIREMENTS SHOWN IN THIS PLAN SET. THE CONTRACTOR'S BMP PLAN SHALL BE DESIGNED TO MINIMIZE EROSION OF THE EXISTING SITE, NEWLY GRADED AREAS OF THE SITE, AND SHALL NOT ALLOW ANY SEDIMENTS FROM EXITING THE PROJECT SITE.
3. CONTRACTOR MAY PROPOSE BMP MEASURES IN ADDITION TO THOSE AS PRESENTED ON THIS SHEET. ALL BMP'S SHALL BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO IMPLEMENTATION, AND INSTALLED PER MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY REQUIREMENTS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER APPLICATION OF ALL BMP'S. THE CONTRACTOR MAY IMPLEMENT BMPS NOT LIMITED TO THE BMPS PRESENTED AS NECESSARY TO INSURE COMPLIANCE WITH THE REQUIRED "GENERAL PERMIT(S) FOR CONSTRUCTION ACTIVITIES."
5. THE CONTRACTOR IS REQUIRED TO IMPLEMENT ANY BMP'S REQUIRED OR AS DIRECTED BY THE CONTRACTING OFFICER.
6. THE CONTRACTOR SHALL OBTAIN THE REQUIRED NOTICE OF INTENT (NOI) NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT APPLICATION PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE APPLICATION AND OBTAIN THE NPDES PERMIT.

* CONTRACTOR SHALL INSTALL BMP 3 - SEDIMENT TRACKING CONTROL AT ALL EXIT POINTS FROM CONTRACTOR STAGING AREA AND OTHER LOCATIONS AS REQUIRED OR DIRECTED BY THE CONTRACTING OFFICER. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF THE INSTALLED BMP-3 THROUGHOUT THE CONSTRUCTION PERIOD.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: T. HYMAN	ISSUE DATE: JUNE 2024
DRAWN BY: J. JOHNSON	SOLICITATION NO.: -
CHECKED BY: R. WEED	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005C-801.DWG

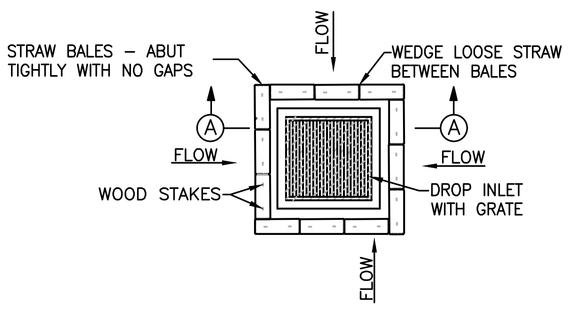
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

BEST MANAGEMENT
PRACTICES DETAILS

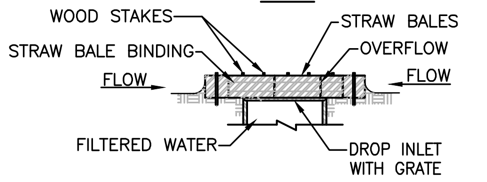
SHEET ID

C-801

RTA SUBMITTAL


FLOW
STRAW BALES – ABUT TIGHTLY WITH NO GAPS
WEDGE LOOSE STRAW BETWEEN BALES
A
FLOW
A
FLOW
WOOD STAKES
DROP INLET WITH GRATE
FLOW

PLAN



SECTION A–A

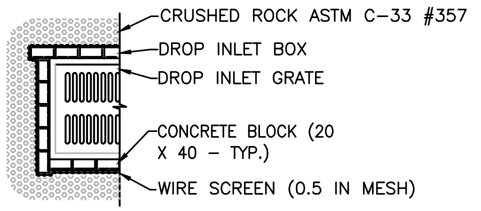
NOTES:

1. THE NUMBER OF BALES REQUIRED TO PROVIDE AN ADEQUATE BARRIER WILL BE DETERMINED BY THE CONTRACTOR AT THE BARRIER LOCATION.
2. SEE BMP 8 FOR STRAW BALE INSTALLATION DETAILS.

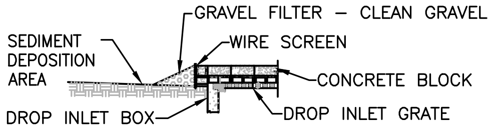
DROP INLET PROTECTION WITH STRAW BALE BARRIER

N.T.S.

BMP 5


CRUSHED ROCK ASTM C–33 #357
DROP INLET BOX
DROP INLET GRATE
CONCRETE BLOCK (20 X 40 – TYP.)
WIRE SCREEN (0.5 IN MESH)

PLAN VIEW – PARTIAL



SECTION VIEW – PARTIAL

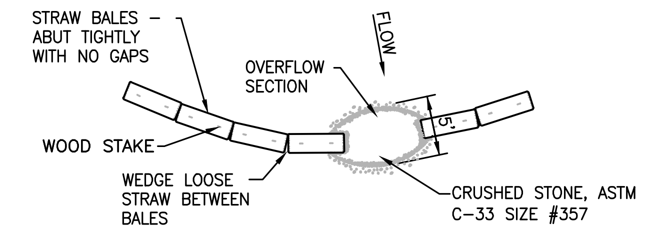
NOTES:

1. PLACE BOTTOM ROW OF BLOCKS ON SIDE AND AROUND PERIMETER OF DROP INLET BOX. EXCAVATE AT LEAST 6" BELOW TOP OF DROP INLET BOX BEFORE PLACEMENT OF BLOCKS AGAINST THE BOX. LATERAL SUPPORT OF THE TOP ROW OF BLOCKS SHALL BE SUPPLIED AS REQUIRED.
2. USE 1/4" MESH WIRE SCREEN OVER BLOCK HOLES TO HOLD GRAVEL.
3. PLACE GRAVEL TO TOP OF BLOCKS ON A 1V:2H OR FLATTER SLOPE.

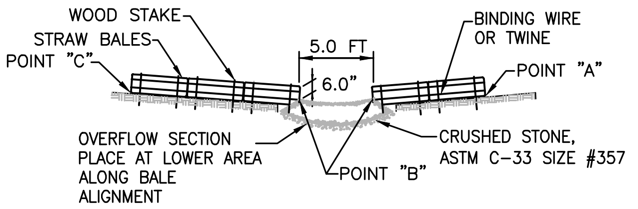
DROP INLET PROTECTION WITH ROCK FILTER

N.T.S.

BMP 6


STRAW BALES – ABUT TIGHTLY WITH NO GAPS
FLOW
OVERFLOW SECTION
5'
WOOD STAKE
WEDGE LOOSE STRAW BETWEEN BALES
CRUSHED STONE, ASTM C–33 SIZE #357

PLAN


WOOD STAKE
BINDING WIRE OR TWINE
STRAW BALES
5.0 FT
POINT "C"
6.0"
POINT "A"
OVERFLOW SECTION PLACE AT LOWER AREA ALONG BALE ALIGNMENT
CRUSHED STONE, ASTM C–33 SIZE #357
POINT "B"

ELEVATION

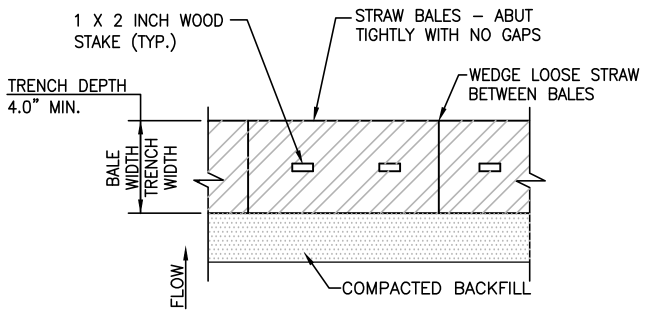
NOTES:

1. THE NUMBER OF BALES REQUIRED TO PROVIDE AN ADEQUATE BARRIER WILL BE DETERMINED BY THE CONTRACTOR AT THE BARRIER LOCATION.
2. THE ELEVATION OF POINTS "A" AND "C" MUST EXCEED THE ELEVATION OF POINT "B" BY 8" MINIMUM.
3. SEE BMP 8 FOR STRAW BALE INSTALLATION DETAILS.
4. THE WIDTH OF ROCK OVERFLOW WEIR SHALL BE WIDENED AS NECESSARY TO ACCOMMODATE THE SPECIFIC FLOW FOR THE POINT OF USE.

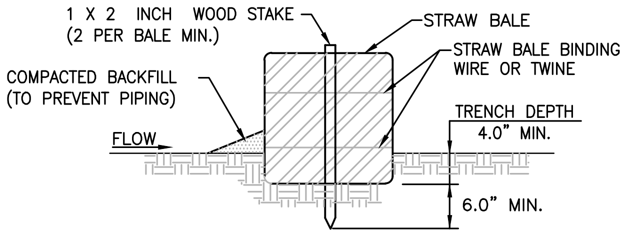
STRAW BALE BARRIER WITH STONE OVERFLOW SECTION

N.T.S.

BMP 7


1 X 2 INCH WOOD STAKE (TYP.)
STRAW BALES – ABUT TIGHTLY WITH NO GAPS
TRENCH DEPTH 4.0" MIN.
WEDGE LOOSE STRAW BETWEEN BALES
BALE WIDTH
TRENCH WIDTH
FLOW
COMPACTED BACKFILL

PLAN

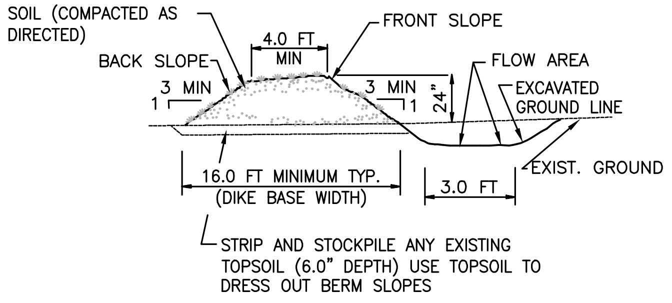

1 X 2 INCH WOOD STAKE (2 PER BALE MIN.)
STRAW BALE
COMPACTED BACKFILL (TO PREVENT PIPING)
STRAW BALE BINDING WIRE OR TWINE
TRENCH DEPTH 4.0" MIN.
FLOW
6.0" MIN.

SECTION

STRAW BALE INSTALLATION

N.T.S.

BMP 8


SOIL (COMPACTED AS DIRECTED)
FRONT SLOPE
4.0 FT MIN
BACK SLOPE
FLOW AREA
3 MIN
1
3 MIN
1
24"
EXCAVATED GROUND LINE
EXIST. GROUND
16.0 FT MINIMUM TYP. (DIKE BASE WIDTH)
3.0 FT
STRIP AND STOCKPILE ANY EXISTING TOPSOIL (6.0" DEPTH) USE TOPSOIL TO DRESS OUT BERM SLOPES

ELEVATION VIEW

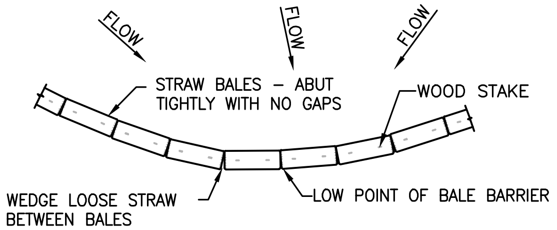
NOTES – USE AT LOCATIONS:

1. ABOVE DISTURBED EXISTING SLOPES AND ABOVE CUT OR FILL SLOPES TO PREVENT RUN–OFF DOWN THE SLOPE.
2. ACROSS UNPROTECTED SLOPES, AS SLOPE BREAKS, TO REDUCE SLOPE LENGTH.
3. BELOW SLOPES, TO DIVERT EXCESS RUN–OFF TO STABILIZED OUTLETS.
4. WHERE NEEDED TO DIVERT SEDIMENT–LADEN WATER TO SEDIMENT TRAPS.
5. AT OR NEAR PERIMETER OF THE CONSTRUCTION AREA TO PREVENT SEDIMENT LEAVING THE SITE.

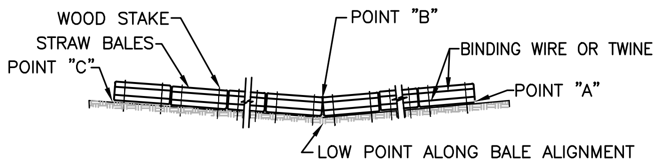
EARTH DIKE

N.T.S.

BMP 9


FLOW
FLOW
FLOW
STRAW BALES – ABUT TIGHTLY WITH NO GAPS
WOOD STAKE
WEDGE LOOSE STRAW BETWEEN BALES
LOW POINT OF BALE BARRIER

PLAN



ELEVATION

NOTES:

1. THE NUMBER OF BALES REQUIRED TO PROVIDE AN ADEQUATE BARRIER WILL BE DETERMINED BY THE CONTRACTOR AT THE BARRIER LOCATION.
2. THE ELEVATION OF POINTS "A" AND "C" MUST EXCEED THE ELEVATION OF POINT "B" BY 6" MINIMUM.
3. SEE BMP 2 FOR STRAW BALE INSTALLATION DETAILS.
4. THIS BMP IS FOR USE WHERE FLOW QUANTITIES ARE MINIMAL SUCH THAT OVER TOPPING OF THE HAY BALES WILL NOT OCCUR. WHERE CONDITIONS EXIST SUCH THAT OVER TOPPING CAN BE EXPERIENCED IMPLEMENT BMP #7 IN LIEU OF BMP#10.

STRAW BALE BARRIER

N.T.S.

BMP 10

BEST MANAGEMENT PRACTICES PLAN GENERAL NOTES:

1. THE SEDIMENT AND EROSION CONTROL BMP'S INDICATED HEREIN ARE INTENDED AS A MINIMUM BMP PLAN (SWPPP) FOR PURPOSES OF OBTAINING THE EPA AND MDEQ CONSTRUCTION PERMIT(S) ONLY. THE BMP PLAN (SWPPP) SHALL BE AMENDED AS NECESSARY FOR THE SPECIFIC PROJECT REQUIREMENTS.
2. EROSION AND SEDIMENT CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL DEVELOP A SITE SPECIFIC BEST MANAGEMENT PRACTICES (BMP) PLAN DESIGNED FOR THE SPECIFIC METHOD(S) OF CONSTRUCTION PREFERRED BY THE CONTRACTOR FOR EACH PHASE OF CONSTRUCTION. THE CONTRACTOR'S BMP PLAN (SWPPP) SHALL MEET THE REQUIREMENTS OF THE EPA AND MDEQ "GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES", PROJECT SPECIFICATIONS, AND THE MINIMUM BMP REQUIREMENTS SHOWN IN THIS PLAN SET. THE CONTRACTOR'S BMP PLAN SHALL BE DESIGNED TO MINIMIZE EROSION OF THE EXISTING SITE, NEWLY GRADED AREAS OF THE SITE, AND SHALL NOT ALLOW ANY SEDIMENTS FROM EXITING THE PROJECT SITE.
3. CONTRACTOR MAY PROPOSE BMP MEASURES IN ADDITION TO THOSE AS PRESENTED ON THIS SHEET. ALL BMP'S SHALL BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO IMPLEMENTATION, AND INSTALLED PER MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY REQUIREMENTS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER APPLICATION OF ALL BMP'S. THE CONTRACTOR MAY IMPLEMENT BMPS NOT LIMITED TO THE BMPS PRESENTED AS NECESSARY TO INSURE COMPLIANCE WITH THE REQUIRED "GENERAL PERMIT(S) FOR CONSTRUCTION ACTIVITIES."
5. THE CONTRACTOR IS REQUIRED TO IMPLEMENT ANY BMP'S REQUIRED OR AS DIRECTED BY THE CONTRACTING OFFICER.
6. THE CONTRACTOR SHALL OBTAIN THE REQUIRED NOTICE OF INTENT (NOI) NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT APPLICATION PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE APPLICATION AND OBTAIN THE NPDES PERMIT.

* CONTRACTOR SHALL INSTALL BMP 3 – SEDIMENT TRACKING CONTROL AT ALL EXIT POINTS FROM CONTRACTOR STAGING AREA AND OTHER LOCATIONS AS REQUIRED OR DIRECTED BY THE CONTRACTING OFFICER. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF THE INSTALLED BMP–3 THROUGHOUT THE CONSTRUCTION PERIOD.

US Army Corps of Engineers®

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DESIGNED BY: T. HYMAN	ISSUE DATE: JUNE 2024
DRAWN BY: J. JOHNSON	SOLICITATION NO.: -
CHECKED BY: R. WEED	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005C-802.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

BEST MANAGEMENT PRACTICES DETAILS

SHEET ID

C-802

RTA SUBMITTAL

CESAM v20181203

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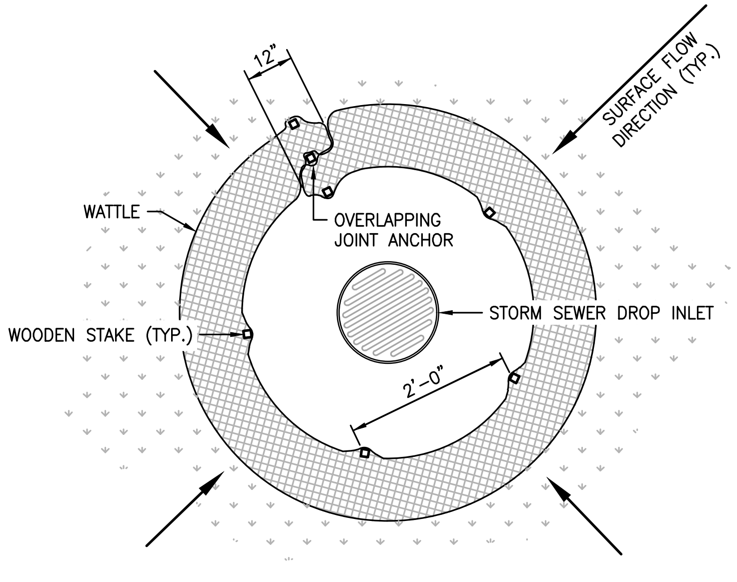
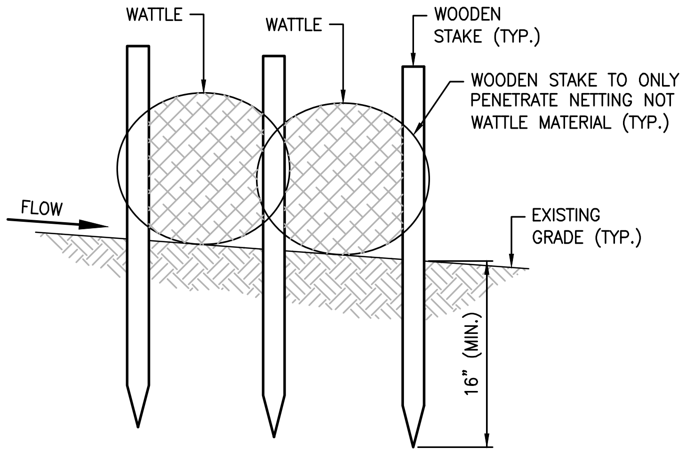


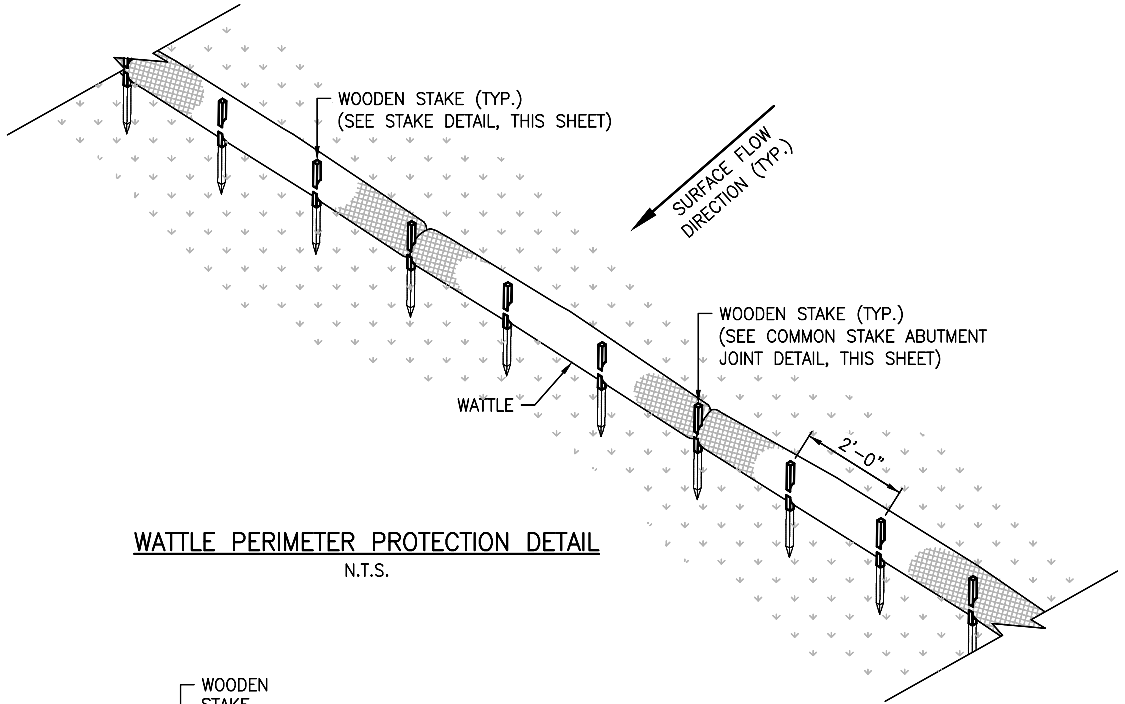
WATTLE DROP INLET PROTECTION DETAIL – PLAN VIEW

N.T.S.



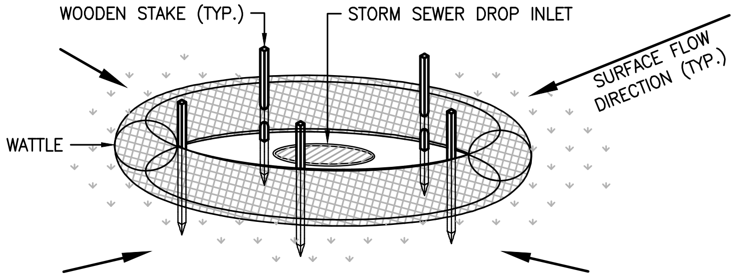
WATTLE OVERLAPPING JOINT ANCHOR STAKE DETAIL

N.T.S.


WOODEN STAKE (TYP.) (SEE STAKE DETAIL, THIS SHEET)
SURFACE FLOW DIRECTION (TYP.)
WOODEN STAKE (TYP.) (SEE COMMON STAKE ABUTMENT JOINT DETAIL, THIS SHEET)
WATTLE
2'-0"

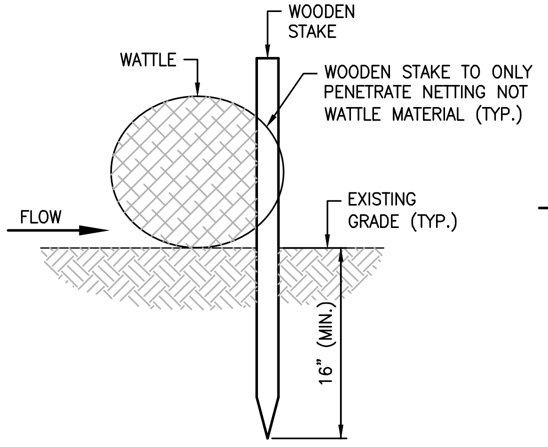
WATTLE PERIMETER PROTECTION DETAIL

N.T.S.



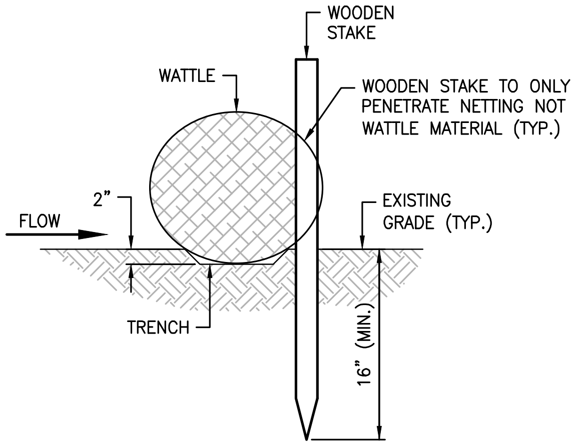
WATTLE DROP INLET PROTECTION DETAIL

N.T.S.


WOODEN STAKE
WATTLE
WOODEN STAKE TO ONLY PENETRATE NETTING NOT WATTLE MATERIAL (TYP.)
FLOW
EXISTING GRADE (TYP.)
16" (MIN.)

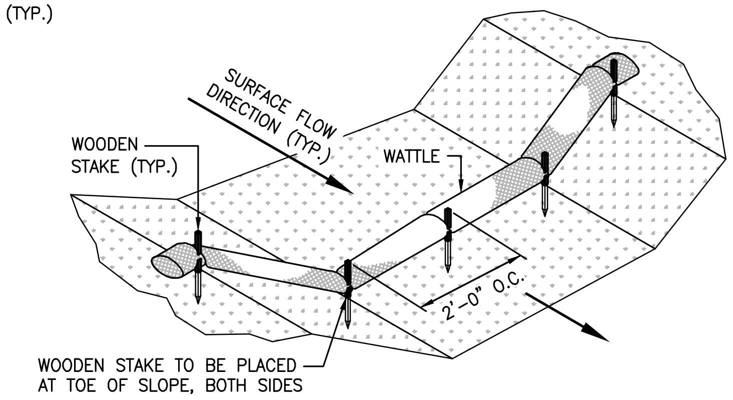
WATTLE STAKE DETAIL

N.T.S.


WOODEN STAKE
WATTLE
WOODEN STAKE TO ONLY PENETRATE NETTING NOT WATTLE MATERIAL (TYP.)
2"
FLOW
EXISTING GRADE (TYP.)
TRENCH
16" (MIN.)

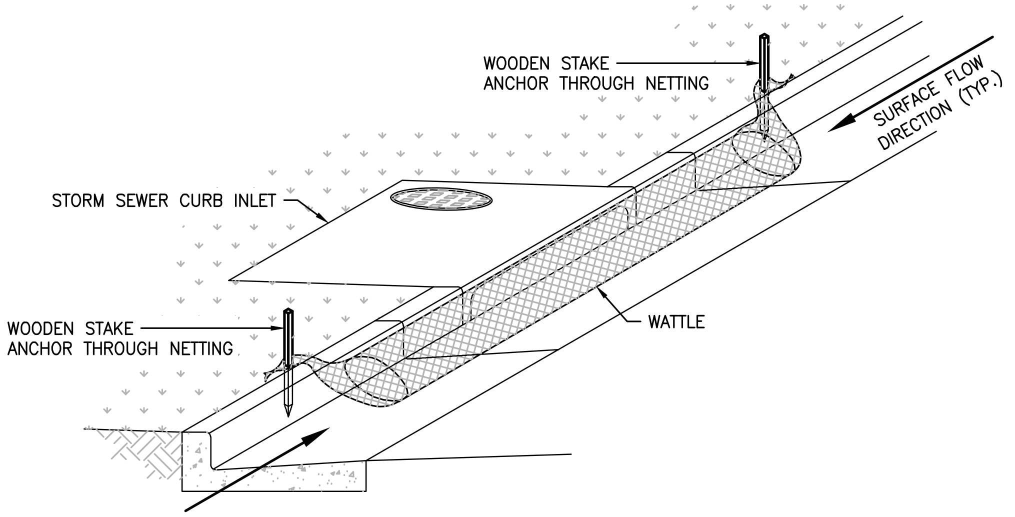
WATTLE STAKE WITH TRENCH DETAIL

N.T.S.


SURFACE FLOW DIRECTION (TYP.)
WOODEN STAKE (TYP.)
WATTLE
2'-0" O.C.
WOODEN STAKE TO BE PLACED AT TOE OF SLOPE, BOTH SIDES

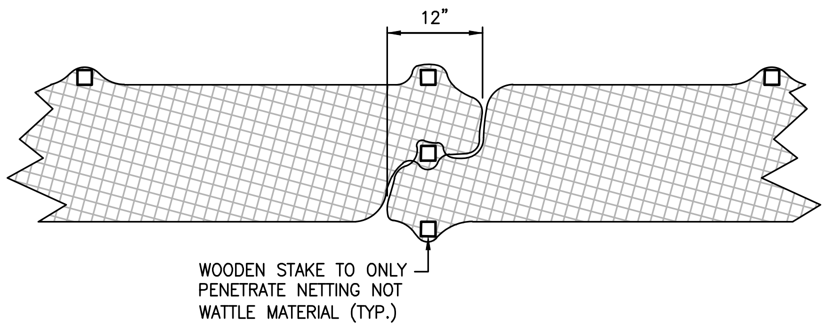
WATTLE SWALE PROTECTION DETAIL

N.T.S.


WOODEN STAKE ANCHOR THROUGH NETTING
SURFACE FLOW DIRECTION (TYP.)
STORM SEWER CURB INLET
WATTLE
WOODEN STAKE ANCHOR THROUGH NETTING

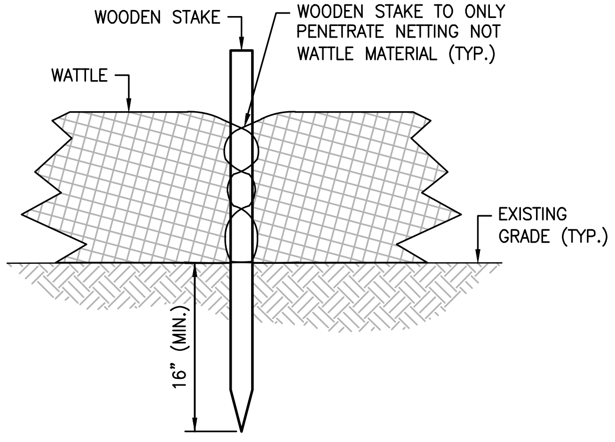
WATTLE CURB INLET PROTECTION DETAIL

N.T.S.


12"
WOODEN STAKE TO ONLY PENETRATE NETTING NOT WATTLE MATERIAL (TYP.)

WATTLE OVERLAPPING JOINT ANCHOR DETAIL

N.T.S.


WOODEN STAKE
WOODEN STAKE TO ONLY PENETRATE NETTING NOT WATTLE MATERIAL (TYP.)
WATTLE
EXISTING GRADE (TYP.)
16" (MIN.)

WATTLE COMMON STAKE ABUTMENT JOINT DETAIL

N.T.S.

WATTLE DETAILS

N.T.S.

BMP 11

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
T. HYMAN
DRAWN BY:
J. JOHNSON
CHECKED BY:
R. WEED
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
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PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005C-803.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

BEST MANAGEMENT
PRACTICES DETAILS

SHEET ID
C-803

RTA SUBMITTAL

CESAM v20181203

WATER STRUCTURE DATA TABLE

STRUCTURE NO. WS-XX	TYPE	NORTHING	EASTING
WS-1	POST INDICATOR VALVE (PIV)	1502092.14	1104091.22

WATER PIPE DATA TABLE

PIPE NO. WP-X	SIZE (IN)	TYPE	LENGTH (FT)
WP-1	8	PVC	40.44
WP-2	8	PVC	35.22
WP-3	3	PVC	43.87

ALL PIPE LENGTHS ARE ±

UTILITY GEOMETRIC POINT DATA TABLE

SYMBOL NO. XX	NORTHING	EASTING	DESCRIPTION
1	1502090.02	1104093.35	8"X8"X3" TEE (WATER)
2	1502102.54	1104080.76	45° BEND (8" WATER)
3	1502110.87	1104080.74	45° BEND (8" WATER)
4	1502084.49	1104087.85	45° BEND (3" WATER)
5	1502084.47	1104078.66	45° BEND (3" WATER)
6	1502070.71	1104064.98	90° BEND (3" WATER)

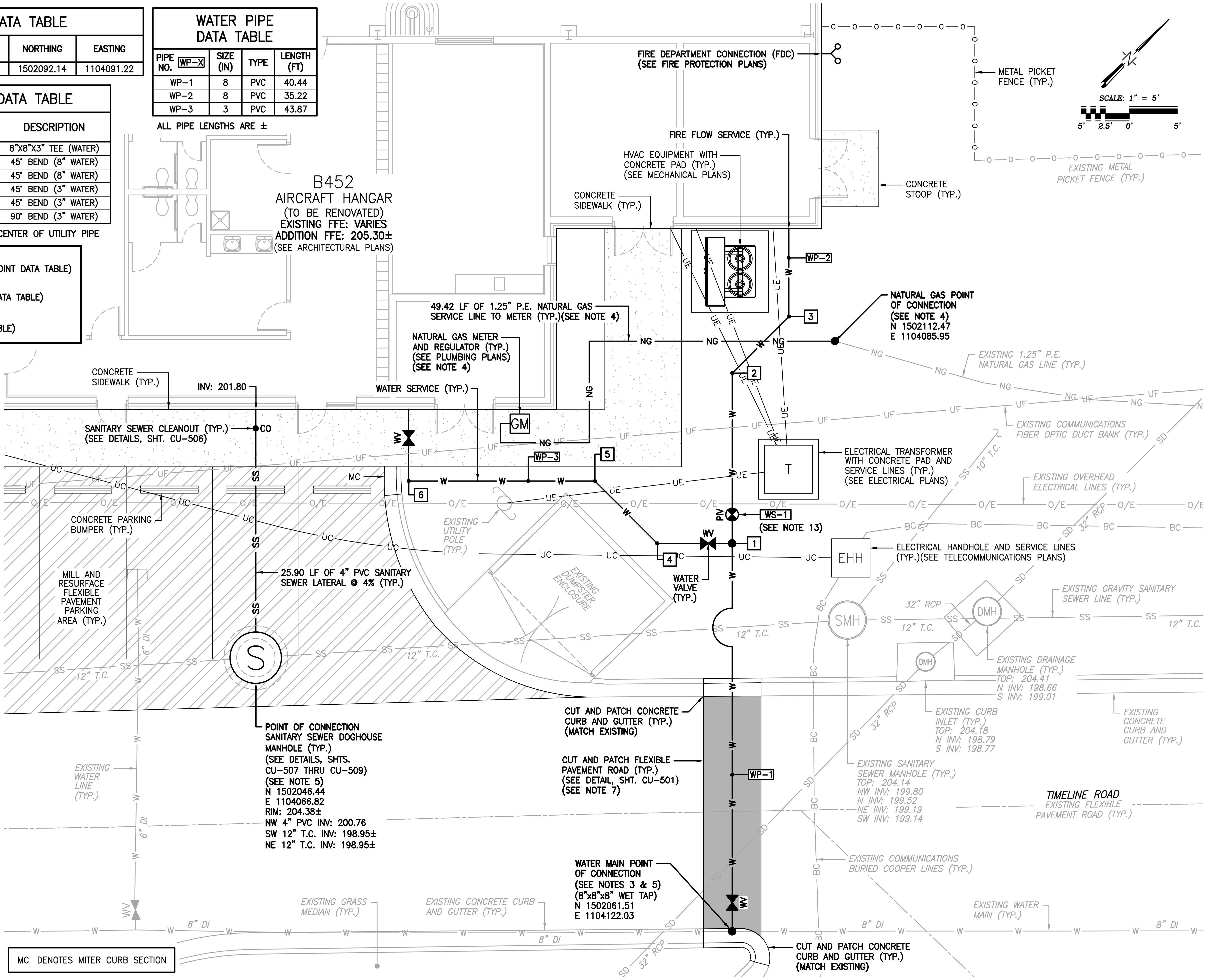
NORTHING AND EASTING COORDINATES BASED ON CENTER OF UTILITY PIPE

XX	DENOTES UTILITY GEOMETRIC POINT (SEE THIS SHEET UTILITY GEOMETRIC POINT DATA TABLE)
WS-X	DENOTES WATER STRUCTURE (SEE THIS SHEET WATER STRUCTURE DATA TABLE)
WP-X	DENOTES WATER PIPE (SEE THIS SHEET WATER PIPE DATA TABLE)

NOTES:

1. SEE SHEETS C-101 AND C-102 FOR SURVEY CONTROL POINTS, BENCHMARKS AND COORDINATES.
2. SEE SHEET G-003 FOR SYMBOL LEGEND AND SHEET G-004 FOR ABBREVIATION LEGEND.
3. PROVIDE A TEE FITTING AT WATER MAIN CONNECTION POINTS. THIS WORK SHOULD BE COORDINATED WITH CONTRACTING OFFICER'S REPRESENTATIVE PRIOR TO BEGINNING WORK. WATER SHUT OFFS SHOULD BE DONE AFTER WORK HOURS OR ON WEEKENDS.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY GAS SERVICE CONSTRUCTION UP TO AND INCLUDING THE METER, REGULATOR AND BUILDING INTERIOR.
5. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL NECESSARY WATER AND SANITARY SEWER SERVICE CONSTRUCTION WITH COLUMBUS UTILITY SHOPS.
6. CONTRACTOR TO TEMPORARILY SUPPORT EXISTING UTILITIES DURING NEW UTILITY TRENCHING AND INSTALLATION.
7. WATER LINE CONNECTION MAY REQUIRE LANE CLOSURE. IF LANE CLOSURE IS REQUIRED, CONTRACTOR SHALL SUBMIT A LANE CLOSURE PLAN TO THE CONTRACTING OFFICER'S REPRESENTATIVE FOR APPROVAL.
8. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITY LINES BEFORE PROCEEDING WITH ANY UTILITY WORK. CHANGES IN LOCATION OR DEPTH SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER'S REPRESENTATIVE.
9. USE CAUTION DURING INSTALLATION OF GRAVITY SEWER SYSTEM, WATER SERVICE, FIRE FLOW SERVICE AND NATURAL GAS SERVICE DUE TO NUMEROUS UTILITIES ALONG THE ALIGNMENT.
10. PIPE LENGTHS SHOWN ARE FROM CENTER TO CENTER OF STRUCTURES.
11. NORTHING AND EASTING COORDINATES BASED ON CENTER OF UTILITY PIPE BENDS.
12. SEE DETAILS FOR POST INDICATOR VALVE (PIV) ON SHEET CU-505.
13. DI – DENOTES DUCTILE IRON PIPE
PVC – DENOTES POLYVINYL CHLORIDE PIPE
T.C. – DENOTES TERRACOTTA PIPE
P.E. – DENOTES POLYETHYLENE PIPE

MC DENOTES MITER CURB SECTION


B452
AIRCRAFT HANGAR
(TO BE RENOVATED)
EXISTING FFE: VARIES
ADDITION FFE: 205.30±
(SEE ARCHITECTURAL PLANS)
FIRE DEPARTMENT CONNECTION (FDC)
(SEE FIRE PROTECTION PLANS)
METAL PICKET FENCE (TYP.)
SCALE: 1" = 5'
5' 2.5' 0' 5'
EXISTING METAL PICKET FENCE (TYP.)
FIRE FLOW SERVICE (TYP.)
HVAC EQUIPMENT WITH CONCRETE PAD (TYP.)
(SEE MECHANICAL PLANS)
CONCRETE STOOP (TYP.)
CONCRETE SIDEWALK (TYP.)
WP-2
3
NATURAL GAS POINT OF CONNECTION
(SEE NOTE 4)
N 1502112.47
E 1104085.95
49.42 LF OF 1.25" P.E. NATURAL GAS SERVICE LINE TO METER (TYP.)(SEE NOTE 4)
NATURAL GAS METER AND REGULATOR (TYP.)
(SEE PLUMBING PLANS)
(SEE NOTE 4)
EXISTING 1.25" P.E. NATURAL GAS LINE (TYP.)
2
CONCRETE SIDEWALK (TYP.)
INV: 201.80
WATER SERVICE (TYP.)
EXISTING COMMUNICATIONS FIBER OPTIC DUCT BANK (TYP.)
SANITARY SEWER CLEANOUT (TYP.)
(SEE DETAILS, SHT. CU-506)
CO
GM
WP-3
5
ELECTRICAL TRANSFORMER WITH CONCRETE PAD AND SERVICE LINES (TYP.)
(SEE ELECTRICAL PLANS)
T
MC
6
EXISTING OVERHEAD ELECTRICAL LINES (TYP.)
CONCRETE PARKING BUMPER (TYP.)
EXISTING UTILITY POLE (TYP.)
PIV
WS-1
(SEE NOTE 13)
WV
1
4
ELECTRICAL HANDHOLE AND SERVICE LINES
(TYP.)(SEE TELECOMMUNICATIONS PLANS)
EHH
MILL AND RESURFACE FLEXIBLE PAVEMENT PARKING AREA (TYP.)
25.90 LF OF 4" PVC SANITARY SEWER LATERAL @ 4% (TYP.)
EXISTING DUMPSTER ENCLOSURE
WATER VALVE (TYP.)
EXISTING GRAVITY SANITARY SEWER LINE (TYP.)
32" RCP
12" T.C.
SMH
DMH
S
EXISTING DRAINAGE MANHOLE (TYP.)
TOP: 204.41
N INV: 198.66
S INV: 199.01
POINT OF CONNECTION SANITARY SEWER DOGHOUSE MANHOLE (TYP.)
(SEE DETAILS, SHTS. CU-507 THRU CU-509)
(SEE NOTE 5)
N 1502046.44
E 1104066.82
RIM: 204.38±
NW 4" PVC INV: 200.76
SW 12" T.C. INV: 198.95±
NE 12" T.C. INV: 198.95±
CUT AND PATCH CONCRETE CURB AND GUTTER (TYP.)
(MATCH EXISTING)
EXISTING CURB INLET (TYP.)
TOP: 204.18
N INV: 198.79
S INV: 198.77
EXISTING CONCRETE CURB AND GUTTER (TYP.)
EXISTING WATER LINE (TYP.)
6" DI
CUT AND PATCH FLEXIBLE PAVEMENT ROAD (TYP.)
(SEE DETAIL, SHT. CU-501)
(SEE NOTE 7)
WP-1
EXISTING SANITARY SEWER MANHOLE (TYP.)
TOP: 204.14
NW INV: 199.80
N INV: 199.52
NE INV: 199.19
SW INV: 199.14
TIMELINE ROAD
EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
EXISTING COMMUNICATIONS BURIED COOPER LINES (TYP.)
WATER MAIN POINT OF CONNECTION
(SEE NOTES 3 & 5)
(8"x8"x8" WET TAP)
N 1502061.51
E 1104122.03
EXISTING GRASS MEDIAN (TYP.)
EXISTING CONCRETE CURB AND GUTTER (TYP.)
EXISTING WATER MAIN (TYP.)
8" DI
CUT AND PATCH CONCRETE CURB AND GUTTER (TYP.)
(MATCH EXISTING)
W
SS
NG
UE
UF
UC
O/E
BC
SD

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
DESIGNED BY: T. HYMAN
DRAWN BY: J. JOHNSON
CHECKED BY: R. WEED
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
FILE NAME: MEF24005CU-101.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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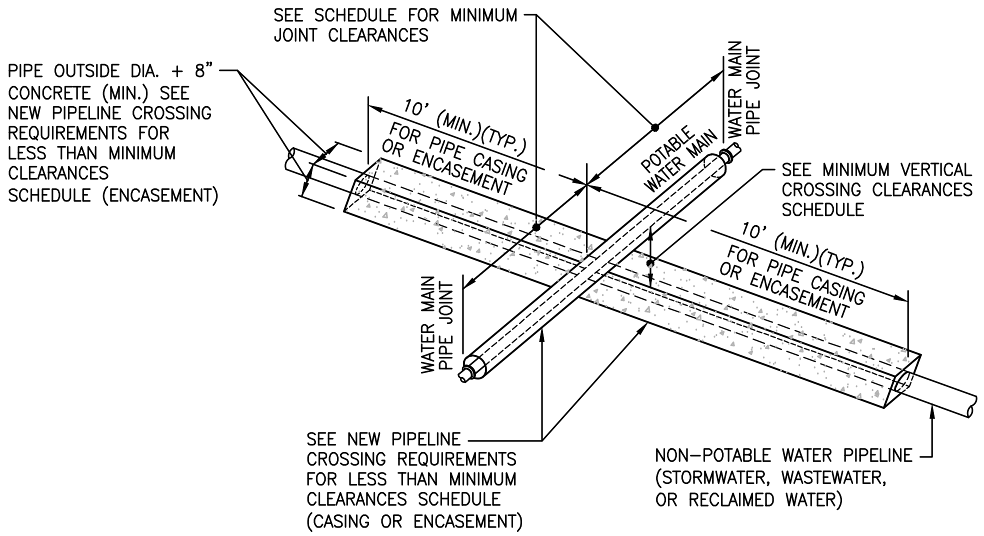
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

WATER, SANITARY SEWER
AND NATURAL GAS OVERVIEW

SHEET ID
CU-101

RTA SUBMITTAL


SEE SCHEDULE FOR MINIMUM JOINT CLEARANCES
PIPE OUTSIDE DIA. + 8" CONCRETE (MIN.) SEE NEW PIPELINE CROSSING REQUIREMENTS FOR LESS THAN MINIMUM CLEARANCES SCHEDULE (ENCASEMENT)
10' (MIN.)(TYP.) FOR PIPE CASING OR ENCASEMENT
POTABLE WATER MAIN
WATER MAIN PIPE JOINT
SEE MINIMUM VERTICAL CROSSING CLEARANCES SCHEDULE
10' (MIN.)(TYP.) FOR PIPE CASING OR ENCASEMENT
WATER MAIN PIPE JOINT
SEE NEW PIPELINE CROSSING REQUIREMENTS FOR LESS THAN MINIMUM CLEARANCES SCHEDULE (CASING OR ENCASEMENT)
NON-POTABLE WATER PIPELINE (STORMWATER, WASTEWATER, OR RECLAIMED WATER)

MINIMUM VERTICAL CROSSING CLEARANCES:

1. SANITARY SEWER LINES (GRAVITY OR PRESSURE) SHALL HAVE 18" OR GREATER VERTICAL CLEARANCE BELOW ANY POTABLE WATER LINE CROSSING. A MINIMUM OF 6" VERTICAL CLEARANCE IS REQUIRED FOR OTHER UTILITIES.
2. HORIZONTAL CLEARANCE BETWEEN SANITARY SEWER LINE THAT IS PARALLEL TO AND LESS THAN 18" BELOW A POTABLE WATER LINE SHALL BE 10' OR GREATER. A MINIMUM OF 30" IS REQUIRED FOR OTHER UTILITIES.
3. FOR CROSSING: ENCASE AS ABOVE SO THAT THE ENDS OF ENCASEMENT ARE AT LEAST 12' FROM ANY WATER LINE JOINT. WATER LINE JOINT MUST NOT BE CLOSER THAN 5' TO THE POINT OF CROSSING, OR IT MUST ALSO BE ENCASED.

MINIMUM WATER MAIN JOINT SPACING:

1. STORMWATER (GRAVITY & PRESSURE), WASTEWATER (VACUUM) OR RECLAIMED WATER (PRESSURE): 3' O.C.
2. WASTEWATER (GRAVITY & PRESSURE): 6' O.C.

NEW PIPELINE CROSSING REQUIREMENTS FOR LESS THAN MINIMUM VERTICAL CROSSING CLEARANCES:

1. POTABLE WATER MAIN:
   WATER MAIN OR WATER MAIN IN CASING PIPE OF AWWA C-150 DUCTILE IRON PIPE (DIP):
   - 4"-12" – CLASS 350 OR EQUIVALENT WALL STRENGTH PIPE
   - 14"-24" – CLASS 250 OR EQUIVALENT WALL STRENGTH PIPE
   - 30"+ – CLASS 150 OR EQUIVALENT WALL STRENGTH PIPE

   OR

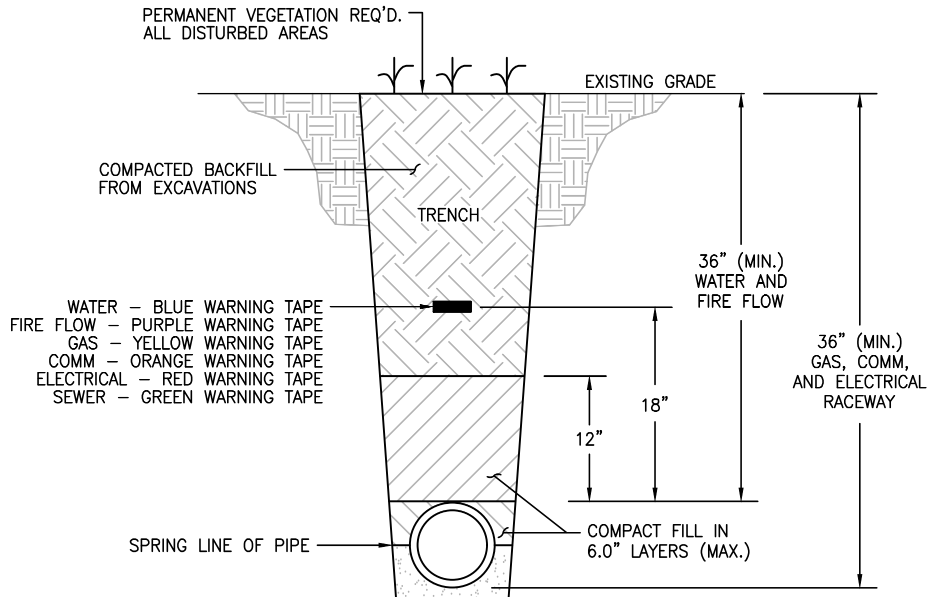
   4" (MIN.) CONCRETE (2500 PSI MIN.) ENCASEMENT OF WATER MAIN – 10' (MIN.) EACH SIDE OF CROSSING
2. WASTEWATER / RECLAIMED WATER MAIN:
   WASTEWATER / RECLAIMED WATER MAIN OR WASTEWATER / RECLAIMED WATER MAIN IN CASING PIPE OF AWWA C-150 DUCTILE IRON PIPE (DIP):
   - 4"-12" – CLASS 350 OR EQUIVALENT WALL STRENGTH PIPE
   - 14"-24" – CLASS 250 OR EQUIVALENT WALL STRENGTH PIPE
   - 30"+ – CLASS 150 OR EQUIVALENT WALL STRENGTH PIPE

   OR

   4" (MIN.) CONCRETE (2500 PSI MIN.) ENCASEMENT OF WASTEWATER / RECLAIMED WATER MAIN – 10' (MIN.) EACH SIDE OF CROSSING

VERTICAL CROSSING SEPARATION REQUIREMENTS

N.T.S.

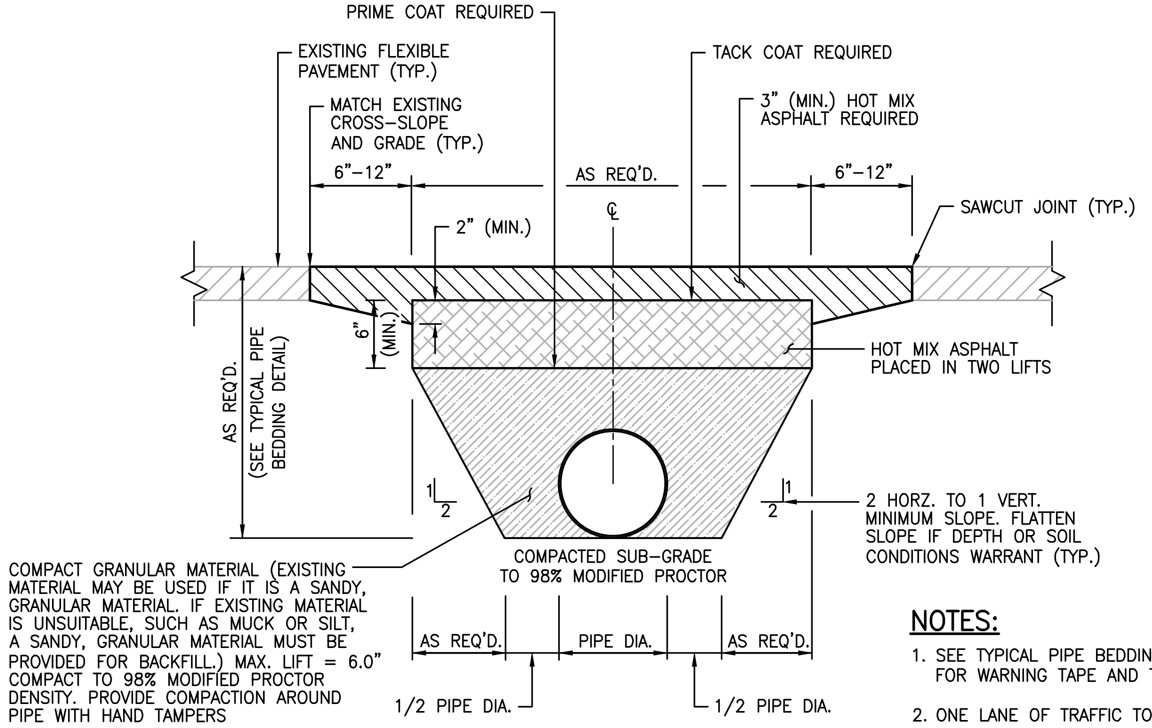

PERMANENT VEGETATION REQ'D. ALL DISTURBED AREAS
EXISTING GRADE
COMPACTED BACKFILL FROM EXCAVATIONS
TRENCH
36" (MIN.) WATER AND FIRE FLOW
36" (MIN.) GAS, COMM, AND ELECTRICAL RACEWAY
WATER – BLUE WARNING TAPE
FIRE FLOW – PURPLE WARNING TAPE
GAS – YELLOW WARNING TAPE
COMM – ORANGE WARNING TAPE
ELECTRICAL – RED WARNING TAPE
SEWER – GREEN WARNING TAPE
18"
12"
COMPACT FILL IN 6.0" LAYERS (MAX.)
SPRING LINE OF PIPE
COMPACT GRANULAR MATERIAL (EXISTING MATERIAL MAY BE USED IF IT IS A SANDY, GRANULAR MATERIAL. IF EXISTING MATERIAL IS UNSUITABLE, SUCH AS MUCK OR SILT, A SANDY, GRANULAR MATERIAL MUST BE PROVIDED FOR BACKFILL.) EXISTING MATERIAL SHALL BE TESTED FOR APPROVAL BY THE CONTRACTING OFFICER REPRESENTATIVE.

NOTE:

DURING EXCAVATION, CONTRACTOR SHALL SEPARATE ORGANIC TOPSOIL FROM TRENCH EXCAVATION AND REUSE ORGANIC TOPSOIL PRIOR TO PLACING PERMANENT VEGETATION.

TYPICAL PIPE BEDDING NON-PAVED AREAS

N.T.S.


PRIME COAT REQUIRED
EXISTING FLEXIBLE PAVEMENT (TYP.)
MATCH EXISTING CROSS-SLOPE AND GRADE (TYP.)
TACK COAT REQUIRED
3" (MIN.) HOT MIX ASPHALT REQUIRED
6"-12"
AS REQ'D.
6"-12"
℄
2" (MIN.)
SAWCUT JOINT (TYP.)
6" (MIN.)
AS REQ'D. (SEE TYPICAL PIPE BEDDING DETAIL)
HOT MIX ASPHALT PLACED IN TWO LIFTS
1
2
1
2
2 HORZ. TO 1 VERT. MINIMUM SLOPE. FLATTEN SLOPE IF DEPTH OR SOIL CONDITIONS WARRANT (TYP.)
COMPACTED SUB-GRADE TO 98% MODIFIED PROCTOR
COMPACT GRANULAR MATERIAL (EXISTING MATERIAL MAY BE USED IF IT IS A SANDY, GRANULAR MATERIAL. IF EXISTING MATERIAL IS UNSUITABLE, SUCH AS MUCK OR SILT, A SANDY, GRANULAR MATERIAL MUST BE PROVIDED FOR BACKFILL.) MAX. LIFT = 6.0" COMPACT TO 98% MODIFIED PROCTOR DENSITY. PROVIDE COMPACTION AROUND PIPE WITH HAND TAMPERS
AS REQ'D.
PIPE DIA.
AS REQ'D.
1/2 PIPE DIA.
1/2 PIPE DIA.

NOTES:

1. SEE TYPICAL PIPE BEDDING DETAIL FOR WARNING TAPE AND TRACER WIRE.
2. ONE LANE OF TRAFFIC TO BE LEFT OPEN AT ALL TIMES. SEE LANE CLOSURE DETAILS THIS SHEET.

OPEN CUT AND PATCH DETAIL; EXISTING FLEXIBLE PAVEMENT

N.T.S.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: T. HYMAN
DRAWN BY: J. JOHNSON
CHECKED BY: R. WEED
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
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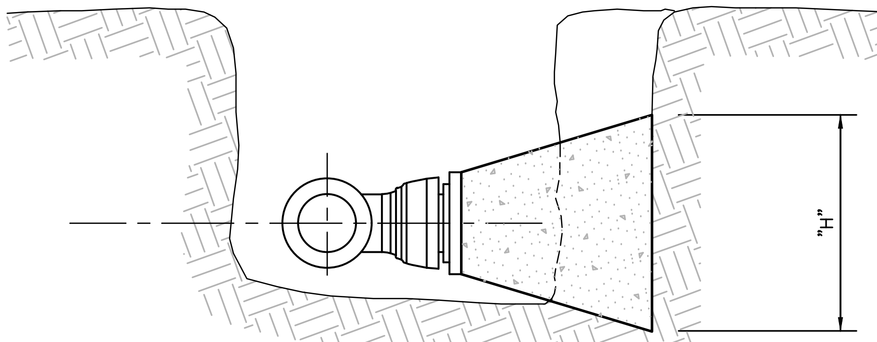
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MISCELLANEOUS WATER AND SANITARY SEWER DETAILS

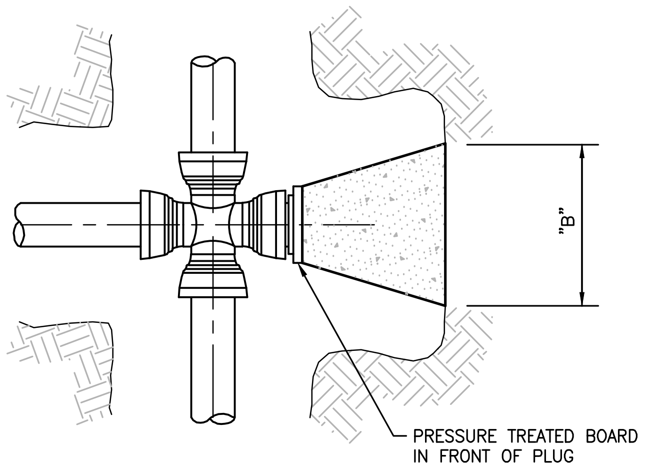
SHEET ID
CU-501

RTA SUBMITTAL



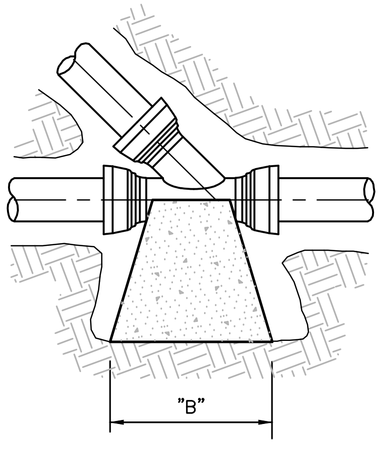
TYPICAL SECTION

N.T.S.



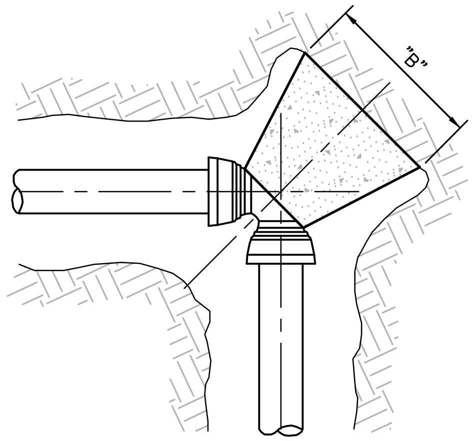
CROSS WITH PLUG

N.T.S.



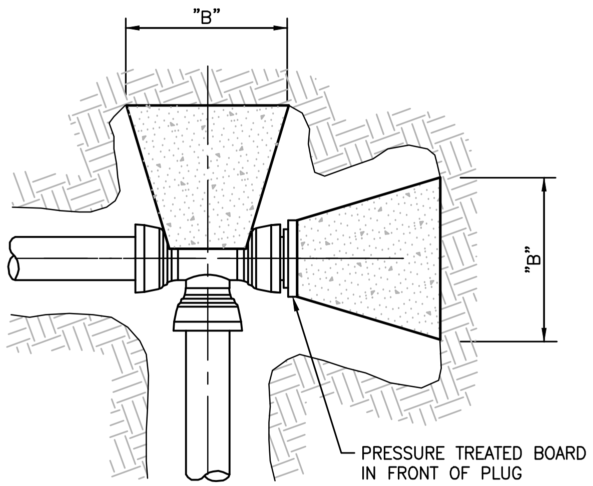
LATERAL

N.T.S.



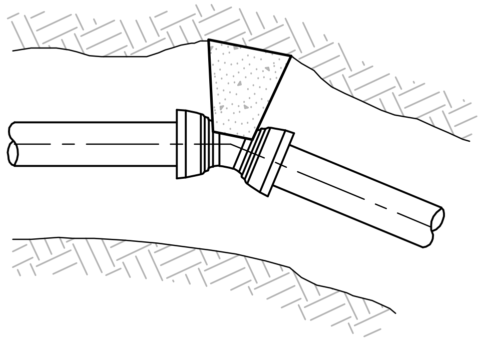
90° BEND

N.T.S.



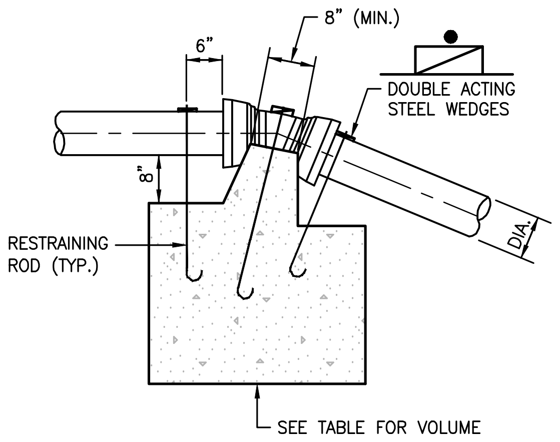
TEE WITH PLUG

N.T.S.



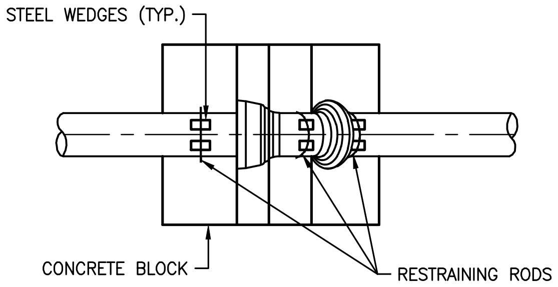
45°, 22½", 11 ¼° BENDS

N.T.S.



ELEVATION

N.T.S.



PLAN

N.T.S.

DOWN BEND THRUST BLOCKS

N.T.S.

THRUST BLOCK DIMENSION TABLE

SOIL BEARING 2000 P.S.F.–TEST PRESSURE 200 P.S.I.

PIPE SIZE	90° BEND			45° BEND AND WYE			22½° BEND			11¼° BEND			TEE		
	H	B	COV.	H	B	COV.	H	B	COV.	H	B	COV.	H	B	COV.
6"	14	62	30"	14	34	30"	14	17	30"	14	9	30"	14	44	30"
8"	18	85	30"	18	46	30"	18	24	30"	18	12	30"	18	60	30"
10"	20	120	30"	20	65	30"	20	33	30"	20	17	30"	20	85	30"
12"	24	144	30"	24	78	30"	24	40	30"	24	20	30"	24	102	30"
14"	24	196	30"	24	106	30"	24	54	30"	24	27	30"	24	138	30"

DOWN BEND THRUST BLOCKS

SOIL BEARING 2000 P.S.F.–TEST PRESSURE 200 P.S.I.

PIPE SIZE (DIA.)	90° BEND	45° BEND AND WYE	22½° BEND	11¼° BEND
	CUBIC FEET	CUBIC FEET	CUBIC FEET	CUBIC FEET
6"	56	40	22	11
8"	100	71	38	20
10"	160	112	60	31
12"	226	160	86	44
14"	308	218	118	60

US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
T. HYMAN
DRAWN BY:
J. JOHNSON
CHECKED BY:
R. WEED
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D
FILE NAME:
MEF24005CU-502.DWG
ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

THRUST BLOCK DETAILS

SHEET ID
CU-502

RTA SUBMITTAL

L = MINIMUM LENGTH TO BE RESTRAINED ON EACH SIDE OF FITTING (FEET)

NOMINAL PIPE SIZE (INCHES)	11 1/4° HORIZONTAL ELBOW	22 1/2° HORIZONTAL ELBOW	45° HORIZONTAL ELBOW	90° HORIZONTAL ELBOW	HORIZONTAL TEES	HORIZONTAL PLUGS & VALVES (SEE NOTE 3)	45° VERTICAL OFFSET UPPER LENGTH/ LOWER LENGTH	22 1/2° VERT. OFFSET UPPER LENGTH/ LOWER LENGTH	REDUCER TO 1 SIZE SMALLER LENGTH ON LARGER SIZE SIDE
4	2	3	7	15	20 – RUN 1 – BRANCH	39	17/3	8/2	13
6	3	5	11	25	20 – RUN 1 – BRANCH	55	23/4	11/2	29
8	4	7	14	33	20 – RUN 1 – BRANCH	72	30/6	15/3	31
12	5	9	19	45	20 – RUN 1 – BRANCH	102	43/8	21/4	30

NOTES:

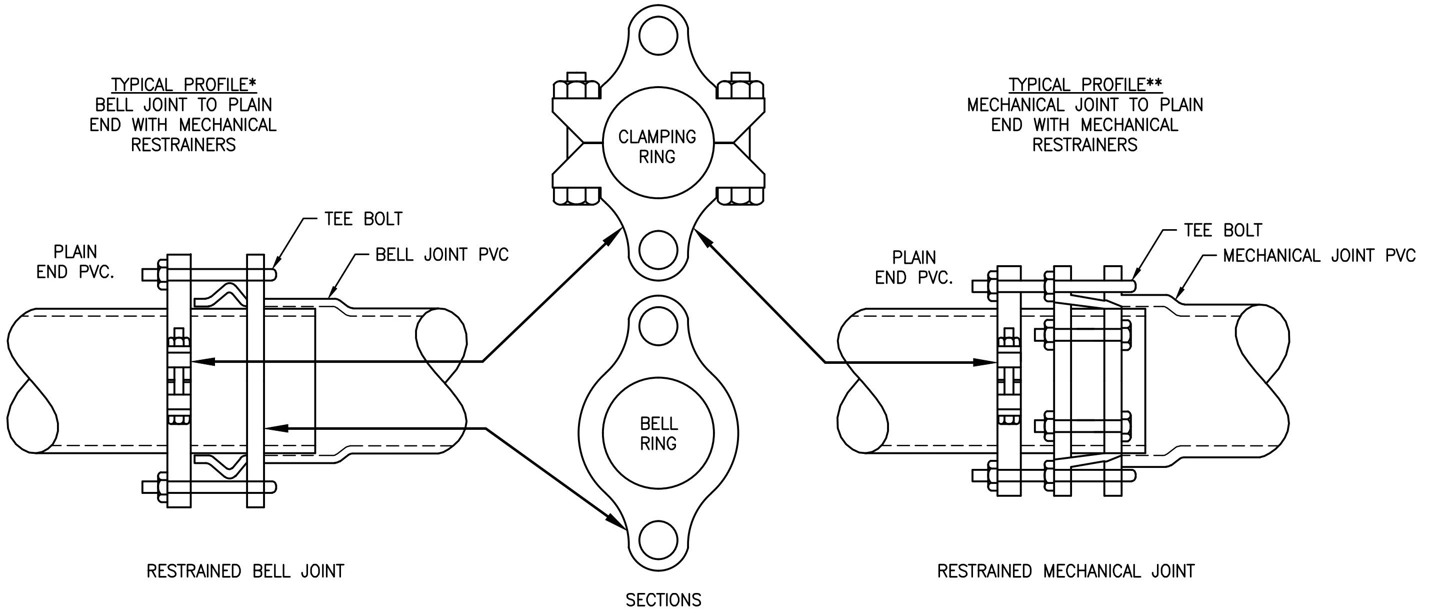
1. TABLE ASSUMPTIONS FOR PVC PIPE:
SAFETY FACTOR = 1.5
TEST PRESSURE = 150 PSI
SOIL = GM OR SM
3 FT. BURY DEPTH TO TOP OF PIPE
TRENCH TYPE 3
BRANCH ON TEE IS ONE SIZE SMALLER THAN RUN OF TEE SIZE AND 20 FEET OF PIPE IS INSTALLED PAST THE TEE ON THE RUN SIDE (SMALLER BRANCH SIZES MUST BE CALCULATED BY THE ENGINEER).
VERTICAL OFFSETS ARE 3 FEET DEEP ON TOP AND 8 FEET DEEP ON BOTTOM.
REDUCERS ARE CALCULATED FOR ONE SIZE REDUCTION.
OTHER CONDITIONS WILL REQUIRE ADDITIONAL CALCULATIONS.

2. ALL FITTINGS MUST BE RESTRAINED. ONE OF THE FOLLOWING METHODS MAY BE USED:
A. MECHANICAL RESTRAINTS AT FITTING AND AT ADJACENT JOINTS TO A LENGTH AS SPECIFIED IN CHART.
B. TIE RODS AT FITTING AND THROUGH JOINTS TO A LENGTH AS SPECIFIED IN CHART.

3. NOT APPLICABLE TO IN LINE VALVES UNDER 12 INCHES IN DIAMETER.

MECHANICAL RESTRAINT LENGTH TABLE – PVC

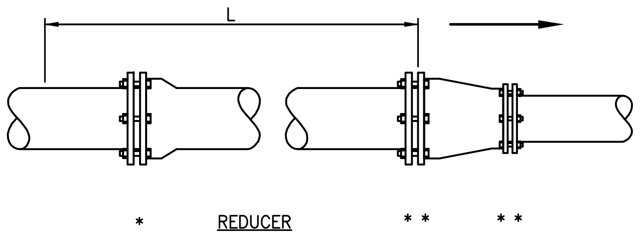
N.T.S.



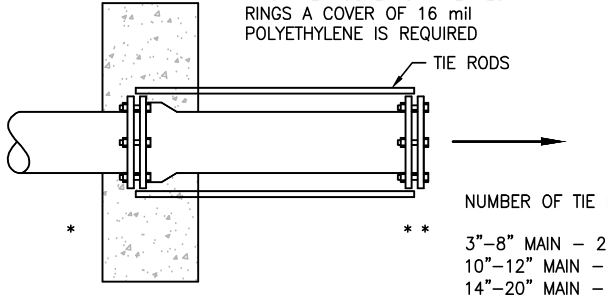
RESTRAINED BELL JOINT

SECTIONS

RESTRAINED MECHANICAL JOINT



REDUCER



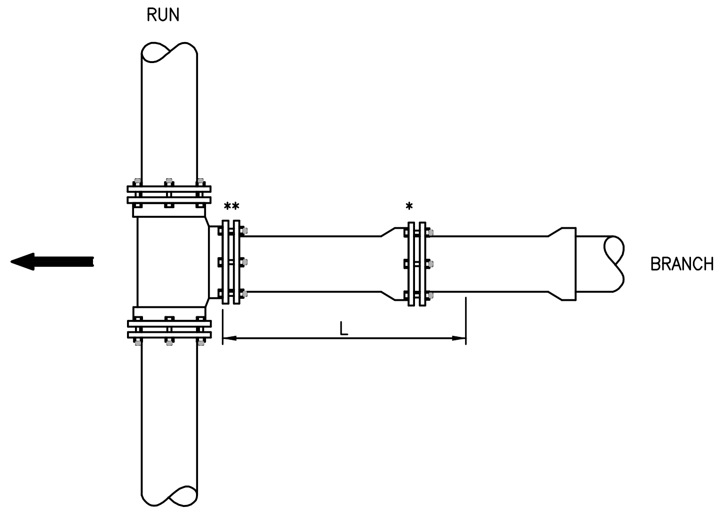
TO PREVENT THE INTRUSION OF CEMENT INTO THE POCKET OF THE RESTRAINT RINGS A COVER OF 16 mil POLYETHYLENE IS REQUIRED

NUMBER OF TIE RODS REQUIRED

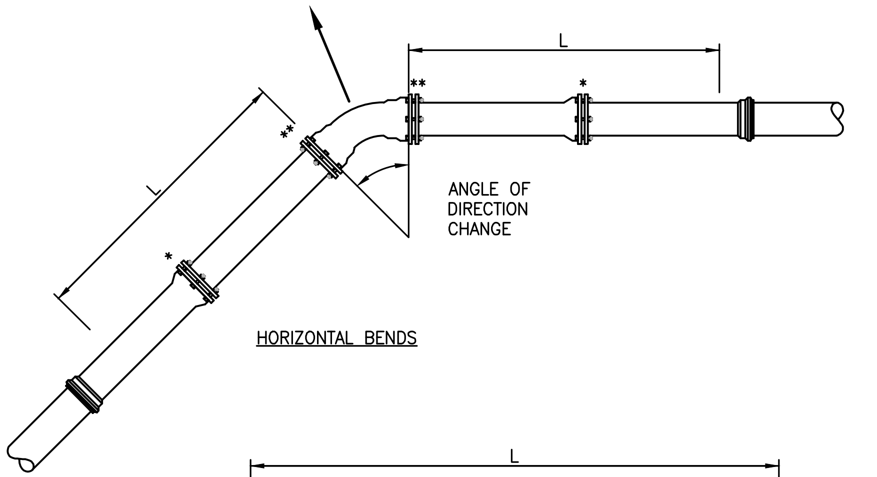
3"–8" MAIN – 2 RODS
10"–12" MAIN – 4 RODS
14"–20" MAIN – 6 RODS
24"–36" MAIN – 8 RODS
42"–48" MAIN – 10 RODS

THRUST COLLAR ANCHOR

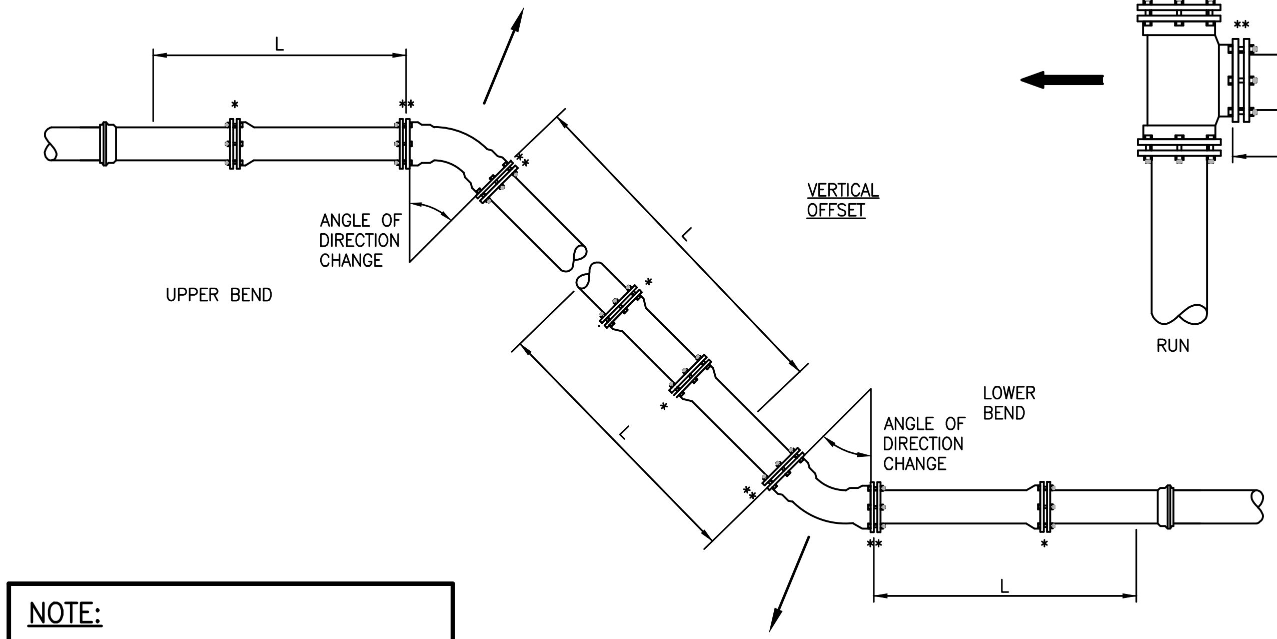
TO BE USED INSTEAD OF TOTAL RESTRAINED LENGTH (OPTIONAL) SIZE AS PER THRUST BLOCK DETAIL



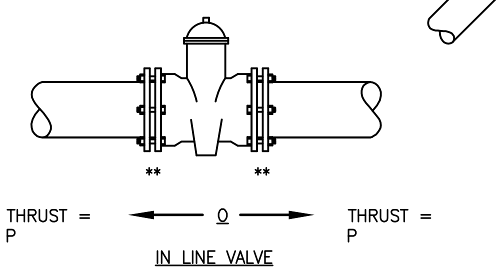
TEES



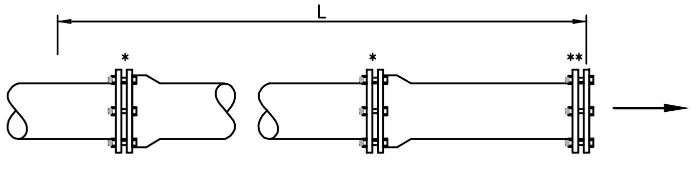
HORIZONTAL BENDS



VERTICAL OFFSET



IN LINE VALVE



DEAD END

NOTE:

ALL BELOW GRADE METALLIC COMPONENTS SHALL HAVE AN EPOXY COATING AS REQUIRED BY CATHODIC PROTECTION REQUIREMENTS.

MECHANICAL RESTRAINT JOINT DETAILS

N.T.S.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005CU-503.DWG
DESIGNED BY:
T. HYMAN
DRAWN BY:
J. JOHNSON
CHECKED BY:
R. WEED
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

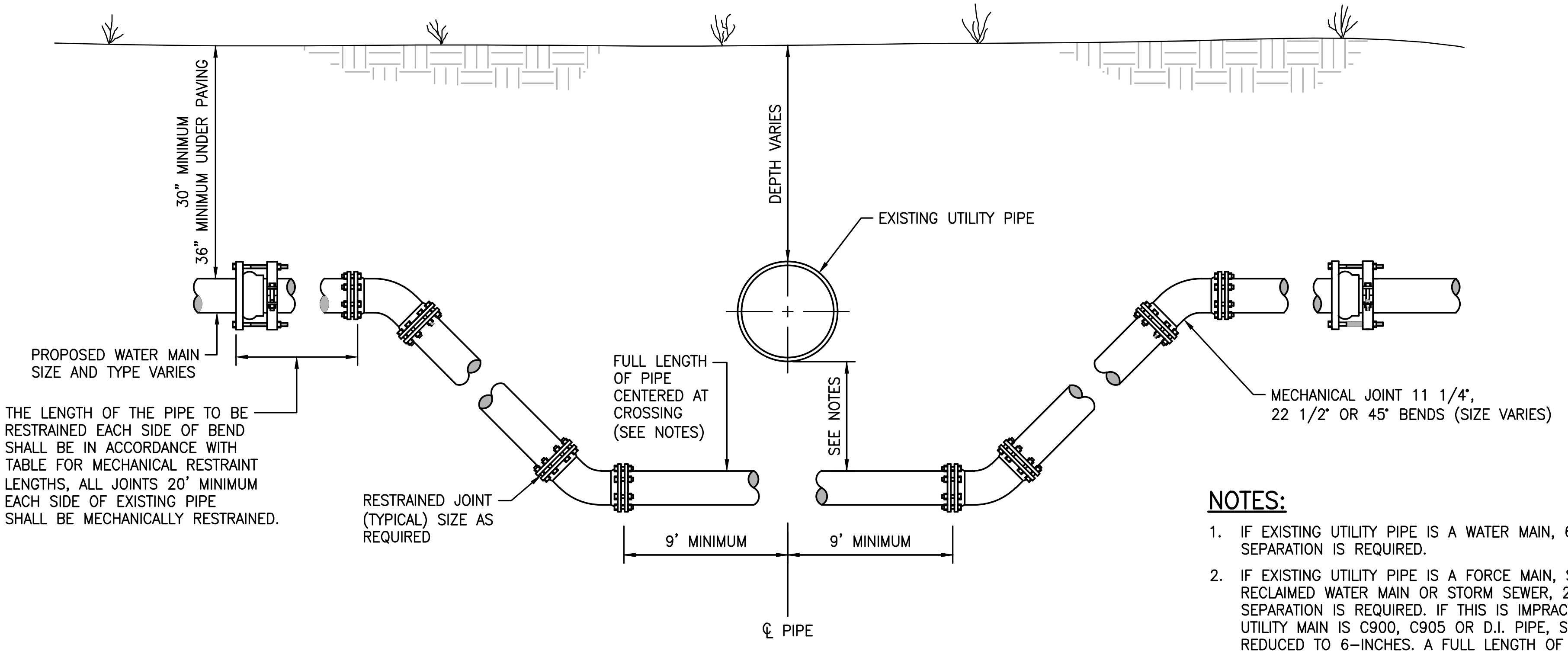
MECHANICAL RESTRAINT
JOINT DETAILS

SHEET ID
CU-503

RTA SUBMITTAL

CESAM v20181203

NOTE:
ALL BELOW GRADE METALLIC COMPONENTS SHALL HAVE AN EPOXY COATING AS REQUIRED.


30" MINIMUM
36" MINIMUM UNDER PAVING
DEPTH VARIES
EXISTING UTILITY PIPE
PROPOSED WATER MAIN SIZE AND TYPE VARIES
THE LENGTH OF THE PIPE TO BE RESTRAINED EACH SIDE OF BEND SHALL BE IN ACCORDANCE WITH TABLE FOR MECHANICAL RESTRAINT LENGTHS, ALL JOINTS 20' MINIMUM EACH SIDE OF EXISTING PIPE SHALL BE MECHANICALLY RESTRAINED.
FULL LENGTH OF PIPE CENTERED AT CROSSING (SEE NOTES)
SEE NOTES
RESTRAINED JOINT (TYPICAL) SIZE AS REQUIRED
MECHANICAL JOINT 11 1/4", 22 1/2" OR 45° BENDS (SIZE VARIES)
9' MINIMUM
9' MINIMUM
℄ PIPE

ADJUSTMENT UNDER EXISTING UTILITIES
N.T.S.

NOTES:

1. IF EXISTING UTILITY PIPE IS A WATER MAIN, 6-INCHES OF SEPARATION IS REQUIRED.
2. IF EXISTING UTILITY PIPE IS A FORCE MAIN, SANITARY SEWER, RECLAIMED WATER MAIN OR STORM SEWER, 24 INCHES OF SEPARATION IS REQUIRED. IF THIS IS IMPRACTICAL AND EXISTING UTILITY MAIN IS C900, C905 OR D.I. PIPE, SEPARATION CAN BE REDUCED TO 6-INCHES. A FULL LENGTH OF PIPE SHALL BE CENTERED UNDER EXISTING UTILITY MAIN TO PROVIDE MAXIMUM JOINT SPACING FOR ALL CROSSINGS. ALL WATER MAINS ARE TO BE INSTALLED ABOVE PRESSURE FORCE MAINS WHERE POSSIBLE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. LOCATING WIRING REQUIRED.
4. ALL BELOW GRADE METALLIC COMPONENTS SHALL HAVE AN EPOXY COATING AS REQUIRED.

US Army Corps
of Engineers

MARK	DESCRIPTION	DATE

DESIGNED BY:
T. HYMAN
DRAWN BY:
J. JOHNSON
CHECKED BY:
R. WEED
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D
ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005CU-504.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

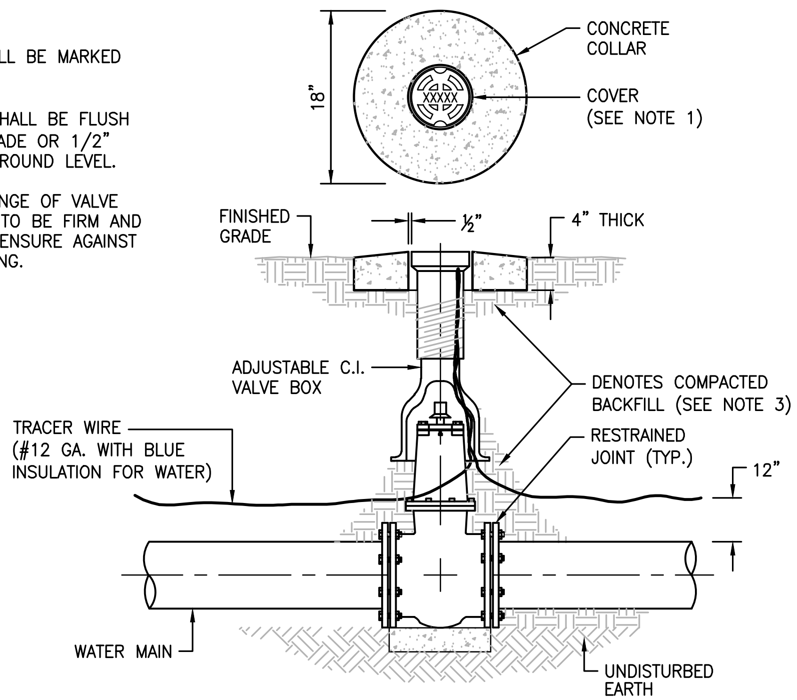
MISCELLANEOUS WATER DETAILS

SHEET ID
CU-504

RTA SUBMITTAL

NOTES:

1. VALVE COVER SHALL BE MARKED "WATER".
2. VALVE BOX TOP SHALL BE FLUSH WITH FINISHED GRADE OR 1/2" ABOVE NATURAL GROUND LEVEL.
3. EARTH UNDER FLANGE OF VALVE BOX AND COLLAR TO BE FIRM AND WELL TAMPED TO ENSURE AGAINST VALVE BOX SETTLING.

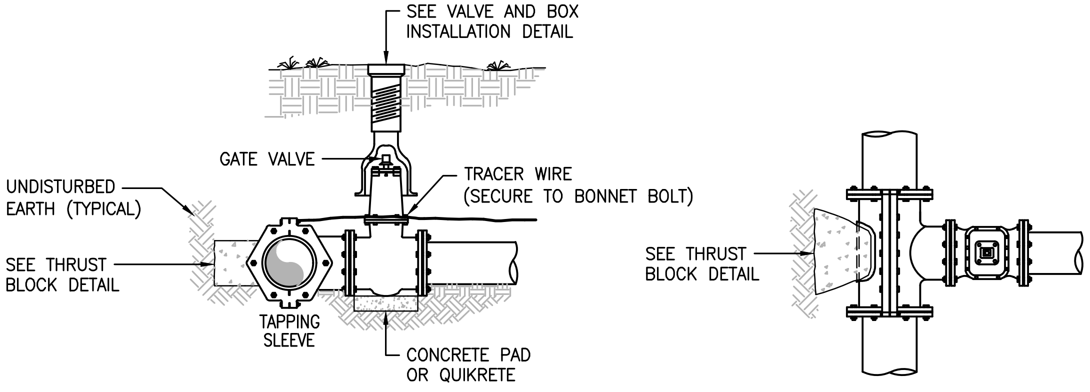


TYPICAL VALVE AND BOX DETAILS

N.T.S.

NOTE:

ALL BELOW GRADE METALLIC COMPONENTS SHALL HAVE AN EPOXY COATING AS REQUIRED.

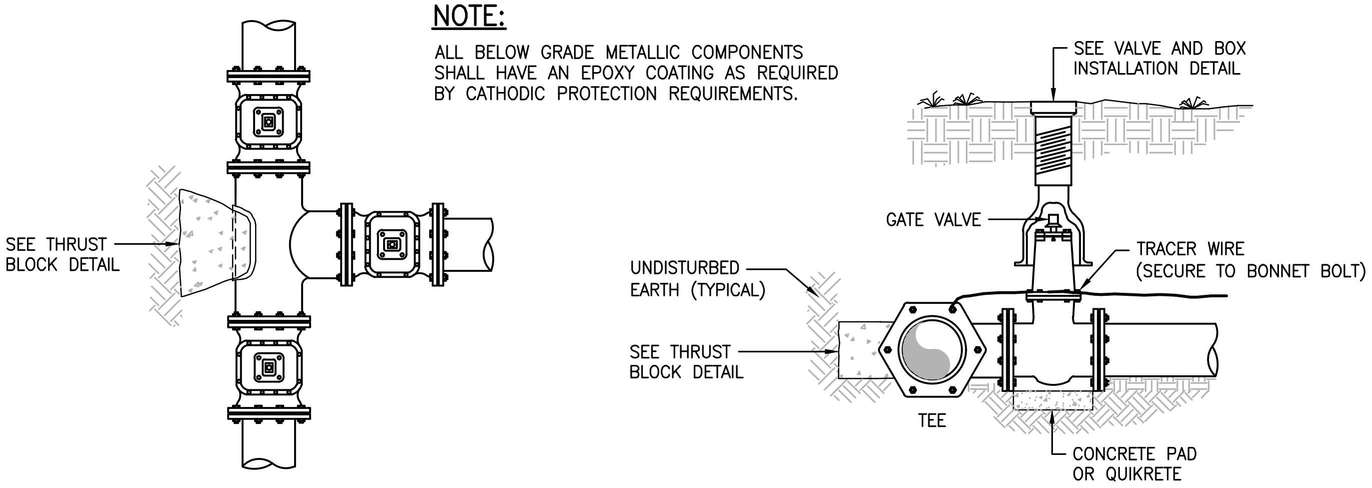

SEE VALVE AND BOX INSTALLATION DETAIL
GATE VALVE
TRACER WIRE (SECURE TO BONNET BOLT)
UNDISTURBED EARTH (TYPICAL)
SEE THRUST BLOCK DETAIL
TAPPING SLEEVE
CONCRETE PAD OR QUIKRETE
SEE THRUST BLOCK DETAIL

TYPICAL TAPPING SLEEVE AND VALVE DETAIL

N.T.S.

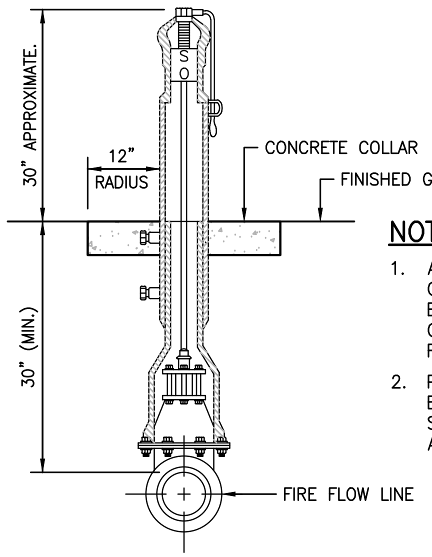
NOTE:

ALL BELOW GRADE METALLIC COMPONENTS SHALL HAVE AN EPOXY COATING AS REQUIRED BY CATHODIC PROTECTION REQUIREMENTS.


SEE THRUST BLOCK DETAIL
SEE VALVE AND BOX INSTALLATION DETAIL
GATE VALVE
TRACER WIRE (SECURE TO BONNET BOLT)
UNDISTURBED EARTH (TYPICAL)
SEE THRUST BLOCK DETAIL
TEE
CONCRETE PAD OR QUIKRETE

TYPICAL TEE AND VALVE DETAIL

N.T.S.



NOTES:

1. ALL BELOW GRADE METALLIC COMPONENTS SHALL HAVE AN EPOXY COATING AS REQUIRED BY CATHODIC PROTECTION REQUIREMENTS.
2. POST INDICATOR VALVES ARE TO BE ELECTRONICALLY SUPERVISED. SEE FIRE PROTECTION DRAWINGS AND SPECIFICATIONS.

POST INDICATOR VALVE

N.T.S.

US Army Corps of Engineers®

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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: T. HYMAN
DRAWN BY: J. JOHNSON
CHECKED BY: R. WEED
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005CU-505.DWG

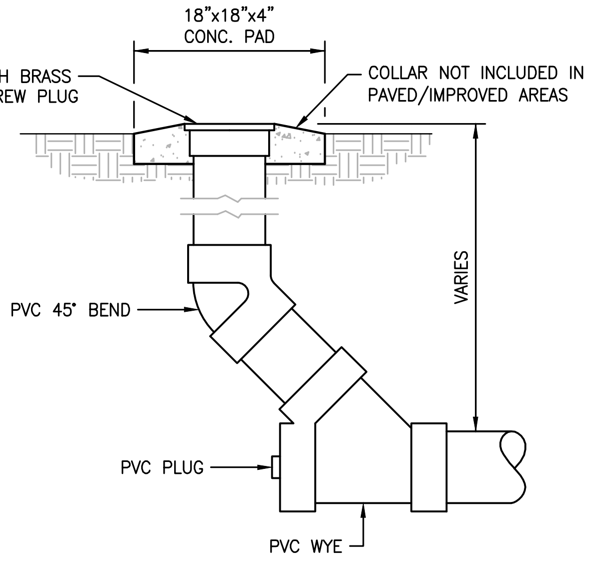
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MISCELLANEOUS WATER DETAILS

SHEET ID
CU-505

RTA SUBMITTAL

CESAM v20181203



SANITARY SEWER CLEANOUT DETAIL

N.T.S.

US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

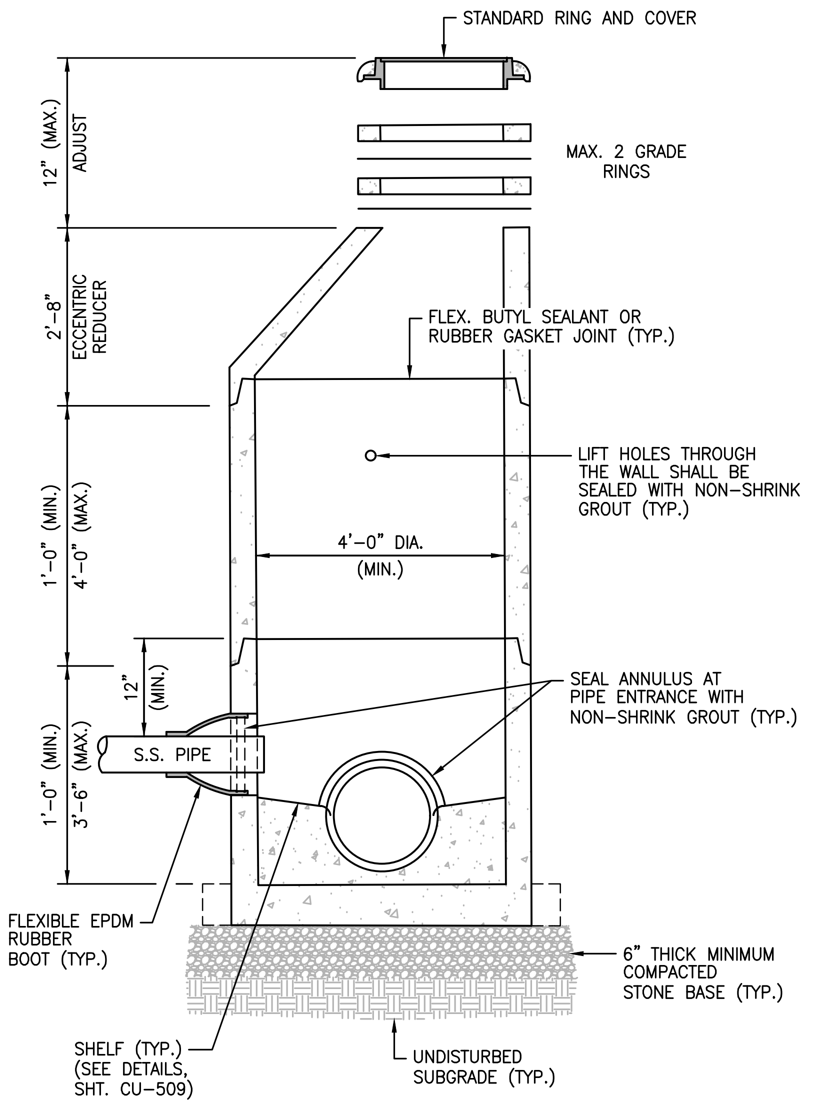
DESIGNED BY: T. HYMAN
DRAWN BY: J. JOHNSON
CHECKED BY: R. WEED
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
FILE NAME: MEF24005CU-506.DWG
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MISCELLANEOUS
SANITARY SEWER DETAILS

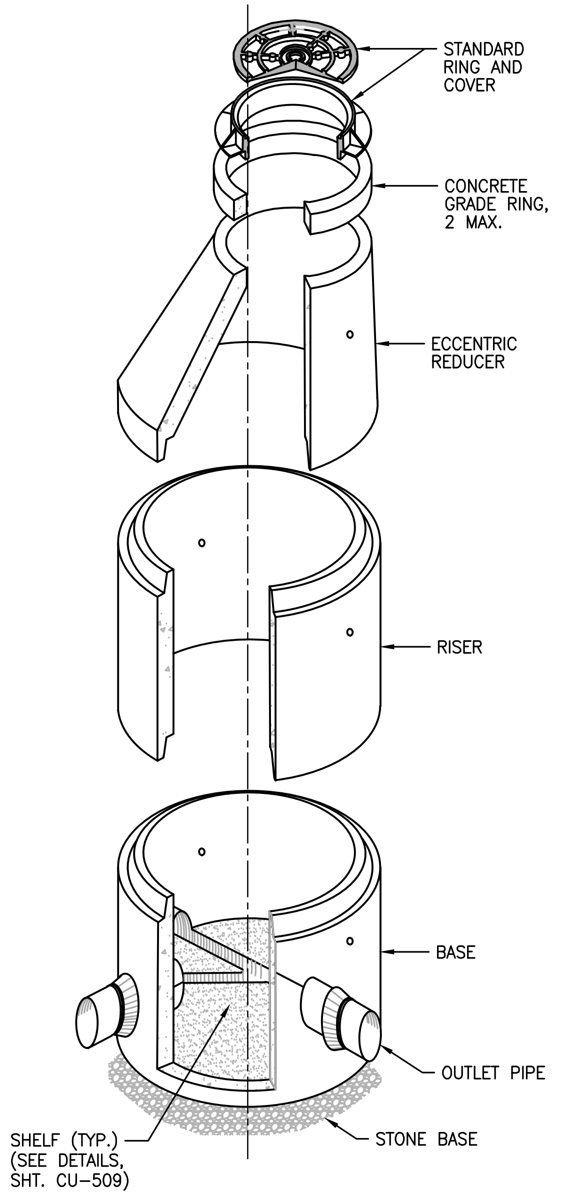
SHEET ID
CU-506

RTA SUBMITTAL


STANDARD RING AND COVER
12" (MAX.) ADJUST
MAX. 2 GRADE RINGS
2'-8" ECCENTRIC REDUCER
FLEX. BUTYL SEALANT OR RUBBER GASKET JOINT (TYP.)
LIFT HOLES THROUGH THE WALL SHALL BE SEALED WITH NON-SHRINK GROUT (TYP.)
1'-0" (MIN.) 4'-0" (MAX.)
4'-0" DIA. (MIN.)
12" (MIN.)
SEAL ANNULUS AT PIPE ENTRANCE WITH NON-SHRINK GROUT (TYP.)
1'-0" (MIN.) 3'-6" (MAX.)
S.S. PIPE
FLEXIBLE EPDM RUBBER BOOT (TYP.)
6" THICK MINIMUM COMPACTED STONE BASE (TYP.)
SHELF (TYP.) (SEE DETAILS, SHT. CU-509)
UNDISTURBED SUBGRADE (TYP.)

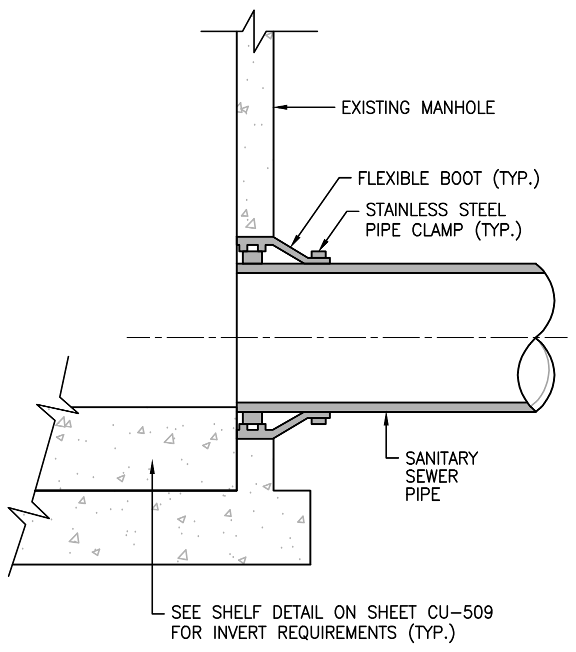
SECTION

N.T.S.



ISOMETRIC

N.T.S.


EXISTING MANHOLE
FLEXIBLE BOOT (TYP.)
STAINLESS STEEL PIPE CLAMP (TYP.)
SANITARY SEWER PIPE
SEE SHELF DETAIL ON SHEET CU-509 FOR INVERT REQUIREMENTS (TYP.)

PIPE SEAL DETAIL

N.T.S.

NOTES:

1. CONNECTIONS TO EXISTING MANHOLES SHALL BE BY CORING MANHOLE AND FIELD INSTALLING A FLEX-BOOT CONNECTOR. DO NOT ALLOW DEBRIS TO ENTER SYSTEM.
2. VERTICAL DROPS BETWEEN INFLOW AND OUTFLOW PIPES SHALL REQUIRE THE FOLLOWING:
   - A. 1' TO 2' SEE PIPE SLIDE DETAILS ON SHEET CU-509
   - B. <1' SEE CONCRETE SLIDE DETAILS ON SHEET CU-509
3. MANHOLE SHALL CONFORM TO A.S.T.M. C 478 SPECIFICATIONS.
4. DIAMETER OF OPENING FOR PIPE SHALL BE 1" LARGER DIAMETER THAN BELL OF THE PIPE BEING USED.
5. JOINTING SEALANT SHALL BE FLEXIBLE PLASTIC GASKET.
6. ALL PATCHING TO BE DONE WITH HYDRAULIC CEMENT. NO MORTAR REPAIRS PERMITTED.
7. CONCRETE TO BE 4000 P.S.I., REINFORCING STEEL TO BE A.S.T.M. A 615 GRADE 60.
8. SEAL PER SPECIFICATIONS.
9. BITUMASTIC COATING SHALL BE FACTORY APPLIED.
10. STANDARD RING AND COVER. REFER TO SPECIFICATIONS.
11. REFER TO SPECIFICATION 33 30 00 FOR CONNECTION TO EXISTING MANHOLES.
12. CAST IN PLACE MANHOLES MAY BE ALLOWED SUBJECT TO THE APPROVAL OF THE CONTRACTING OFFICER.
13. MINIMUM BENCH THICKNESS 4", AS MEASURED BELOW LOWEST PIPE INVERT.

STANDARD PRECAST CONCRETE SANITARY SEWER MANHOLE DETAILS

N.T.S.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
T. HYMAN
DRAWN BY:
J. JOHNSON
CHECKED BY:
R. WEED
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005CU-507.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

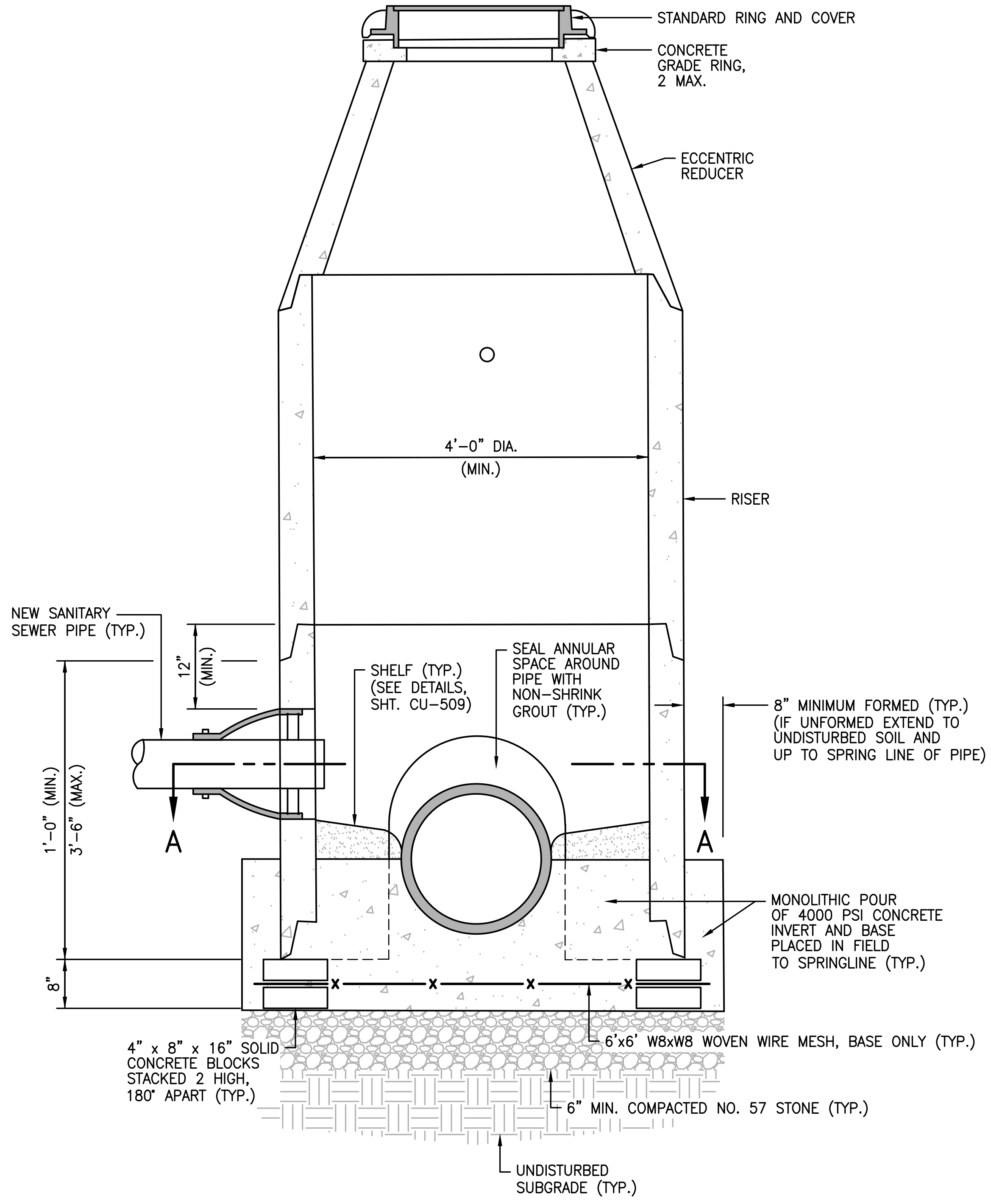
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MISCELLANEOUS
SANITARY SEWER DETAILS

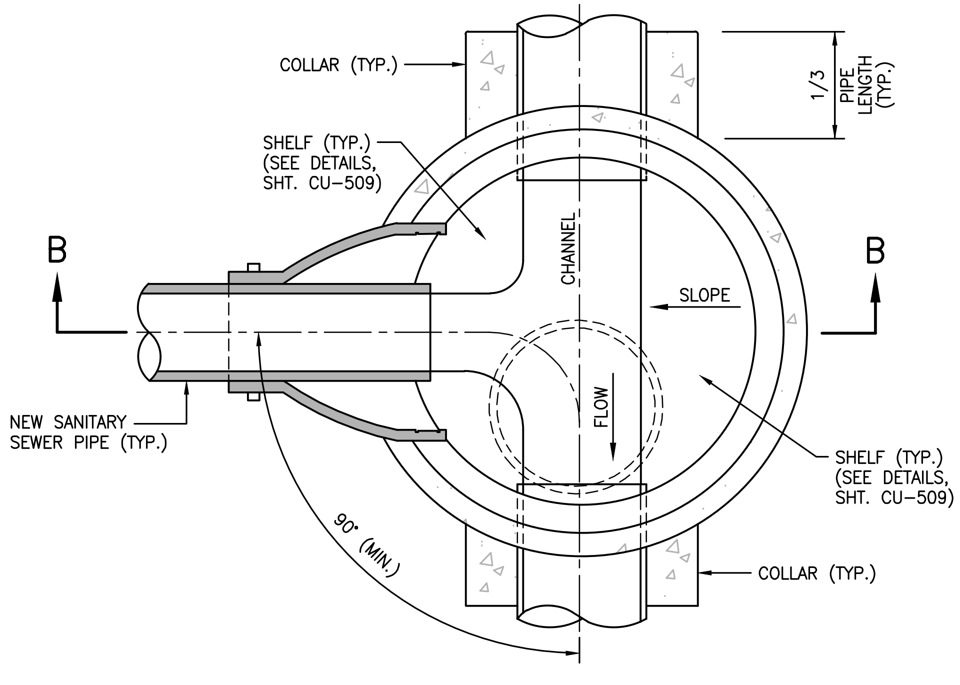
SHEET ID
CU-507

RTA SUBMITTAL

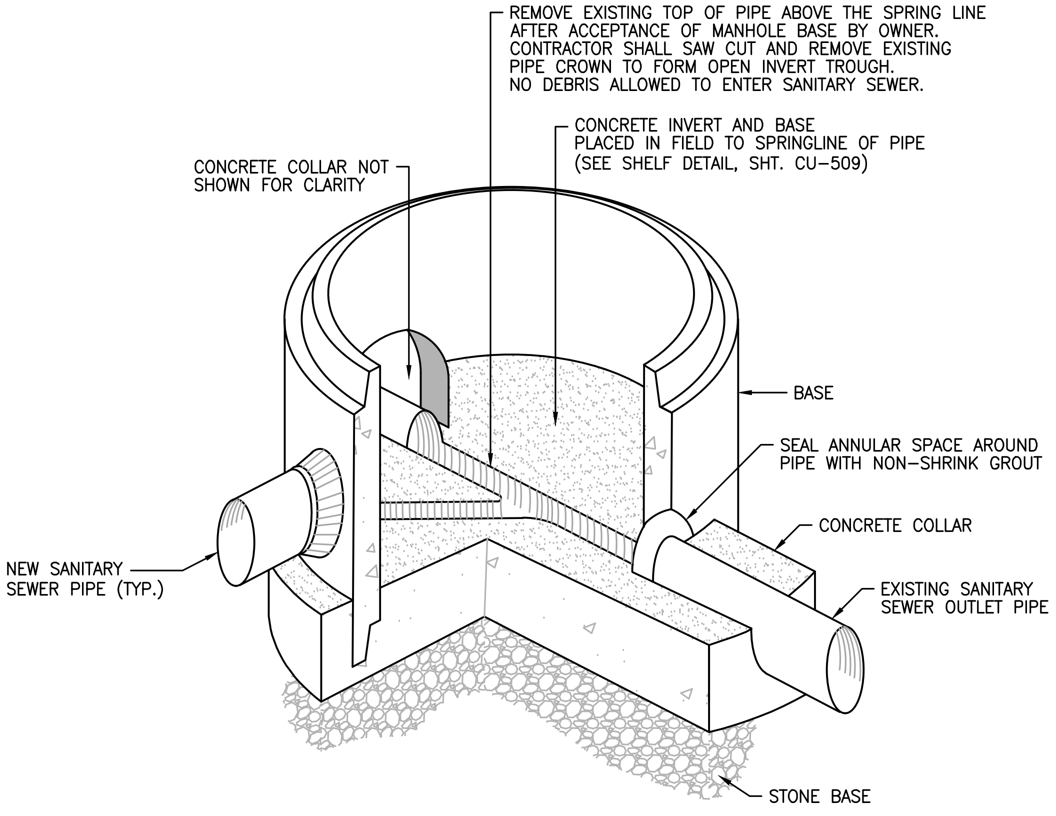
CESAM v20181203


STANDARD RING AND COVER
CONCRETE GRADE RING, 2 MAX.
ECCENTRIC REDUCER
4'-0" DIA. (MIN.)
RISER
NEW SANITARY SEWER PIPE (TYP.)
12" (MIN.)
SHELF (TYP.) (SEE DETAILS, SHT. CU-509)
SEAL ANNULAR SPACE AROUND PIPE WITH NON-SHRINK GROUT (TYP.)
8" MINIMUM FORMED (TYP.) (IF UNFORMED EXTEND TO UNDISTURBED SOIL AND UP TO SPRING LINE OF PIPE)
1'-0" (MIN.)
3'-6" (MAX.)
A
A
MONOLITHIC POUR OF 4000 PSI CONCRETE INVERT AND BASE PLACED IN FIELD TO SPRINGLINE (TYP.)
8"
4" x 8" x 16" SOLID CONCRETE BLOCKS STACKED 2 HIGH, 180° APART (TYP.)
6'x6' W8xW8 WOVEN WIRE MESH, BASE ONLY (TYP.)
6" MIN. COMPACTED NO. 57 STONE (TYP.)
UNDISTURBED SUBGRADE (TYP.)

SECTION B-B
N.T.S.


COLLAR (TYP.)
1/3 PIPE LENGTH (TYP.)
SHELF (TYP.) (SEE DETAILS, SHT. CU-509)
B
B
CHANNEL
SLOPE
FLOW
NEW SANITARY SEWER PIPE (TYP.)
SHELF (TYP.) (SEE DETAILS, SHT. CU-509)
90° (MIN.)
COLLAR (TYP.)

SECTION A-A
N.T.S.


REMOVE EXISTING TOP OF PIPE ABOVE THE SPRING LINE AFTER ACCEPTANCE OF MANHOLE BASE BY OWNER. CONTRACTOR SHALL SAW CUT AND REMOVE EXISTING PIPE CROWN TO FORM OPEN INVERT TROUGH. NO DEBRIS ALLOWED TO ENTER SANITARY SEWER.
CONCRETE INVERT AND BASE PLACED IN FIELD TO SPRINGLINE OF PIPE (SEE SHELF DETAIL, SHT. CU-509)
CONCRETE COLLAR NOT SHOWN FOR CLARITY
BASE
SEAL ANNULAR SPACE AROUND PIPE WITH NON-SHRINK GROUT
CONCRETE COLLAR
EXISTING SANITARY SEWER OUTLET PIPE
NEW SANITARY SEWER PIPE (TYP.)
STONE BASE

ISOMETRIC
N.T.S.

NOTES:

1. WITH THE EXCEPTION OF THE MANHOLE BASE, ALL MATERIALS, INSTALLATION, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH UTILITY'S STANDARD PRECAST CONCRETE MANHOLE DETAIL ON SHEET CU-507.
2. SEE UTILITY'S STANDARD PRECAST CONCRETE MANHOLE DETAIL ON SHEET CU-507 FOR REQUIREMENTS FOR VERTICAL DROPS.
3. SEE UTILITY'S STANDARD PRECAST CONCRETE MANHOLE DETAIL ON SHEET CU-507 FOR ADDITIONAL REQUIREMENTS.
4. NO RISERS SHALL BE PLACED UNTIL BASE AND INVERT HAVE REACHED A STRENGTH OF 4000 PSI.

SANITARY SEWER DOGHOUSE MANHOLE DETAILS

N.T.S.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: T. HYMAN	ISSUE DATE: JUNE 2024
DRAWN BY: J. JOHNSON	SOLICITATION NO.: -
CHECKED BY: R. WEED	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005CU-508.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

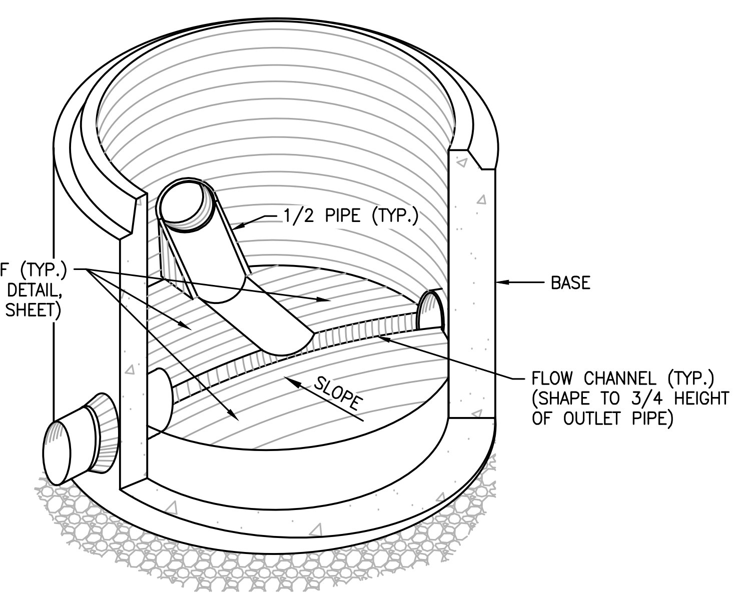
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

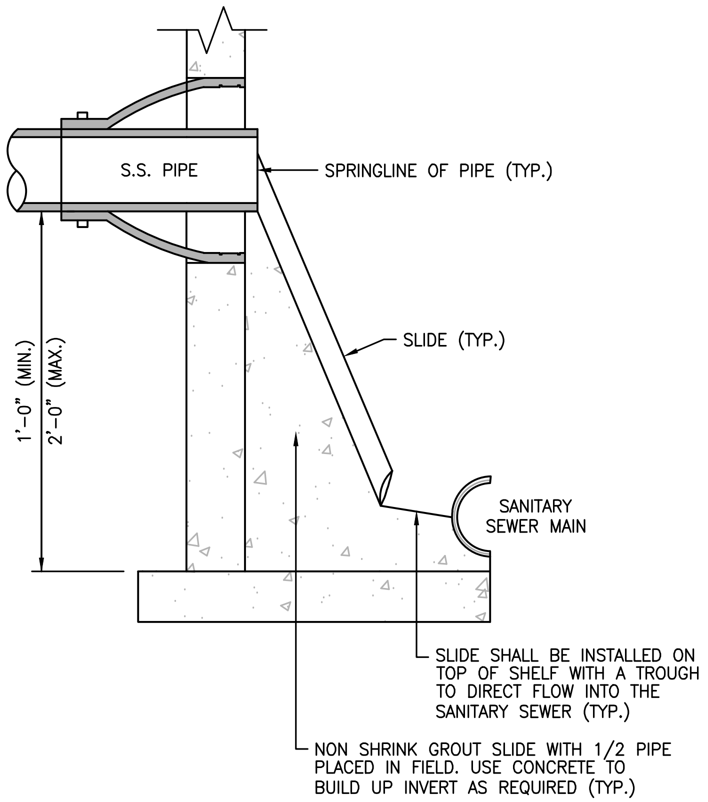
MISCELLANEOUS
SANITARY SEWER DETAILS

SHEET ID
CU-508

RTA SUBMITTAL


1/2 PIPE (TYP.)
SHELF (TYP.) (SEE DETAIL, THIS SHEET)
BASE
FLOW CHANNEL (TYP.) (SHAPE TO 3/4 HEIGHT OF OUTLET PIPE)
SLOPE

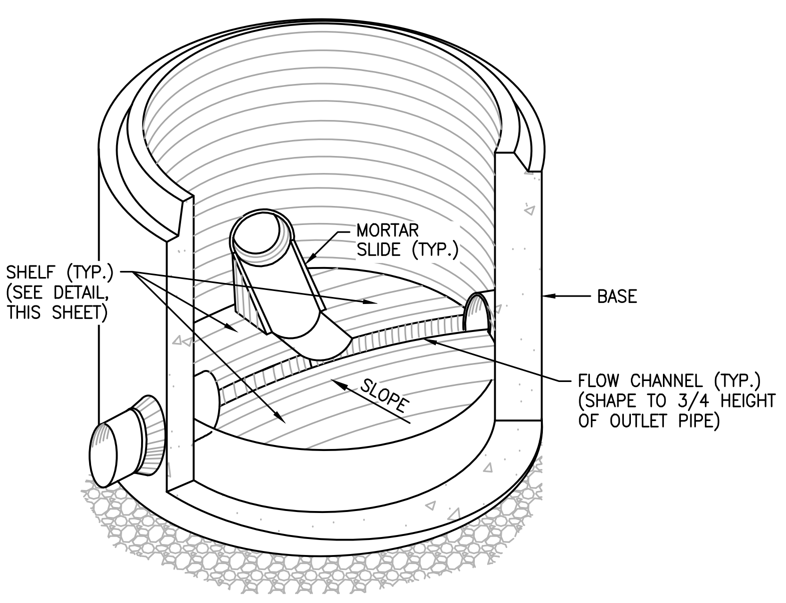
ISOMETRIC
N.T.S.


S.S. PIPE
SPRINGLINE OF PIPE (TYP.)
SLIDE (TYP.)
1'-0" (MIN.)
2'-0" (MAX.)
SANITARY SEWER MAIN
SLIDE SHALL BE INSTALLED ON TOP OF SHELF WITH A TROUGH TO DIRECT FLOW INTO THE SANITARY SEWER (TYP.)
NON SHRINK GROUT SLIDE WITH 1/2 PIPE PLACED IN FIELD. USE CONCRETE TO BUILD UP INVERT AS REQUIRED (TYP.)

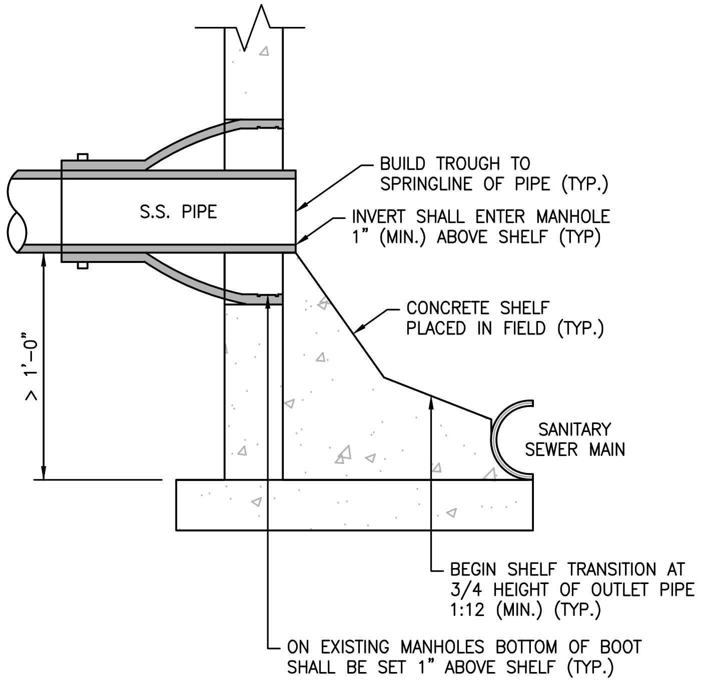
VERTICAL DROP BETWEEN 1' & 2'
N.T.S.

PIPE SLIDE DETAIL

N.T.S.


MORTAR SLIDE (TYP.)
SHELF (TYP.) (SEE DETAIL, THIS SHEET)
BASE
FLOW CHANNEL (TYP.) (SHAPE TO 3/4 HEIGHT OF OUTLET PIPE)
SLOPE

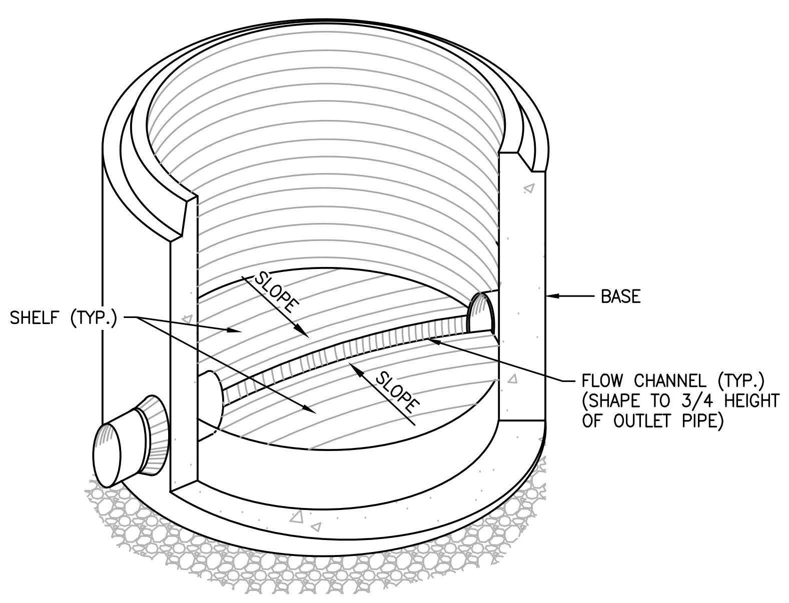
ISOMETRIC
N.T.S.


S.S. PIPE
BUILD TROUGH TO SPRINGLINE OF PIPE (TYP.)
INVERT SHALL ENTER MANHOLE 1" (MIN.) ABOVE SHELF (TYP)
CONCRETE SHELF PLACED IN FIELD (TYP.)
> 1'-0"
SANITARY SEWER MAIN
BEGIN SHELF TRANSITION AT 3/4 HEIGHT OF OUTLET PIPE 1:12 (MIN.) (TYP.)
ON EXISTING MANHOLES BOTTOM OF BOOT SHALL BE SET 1" ABOVE SHELF (TYP.)

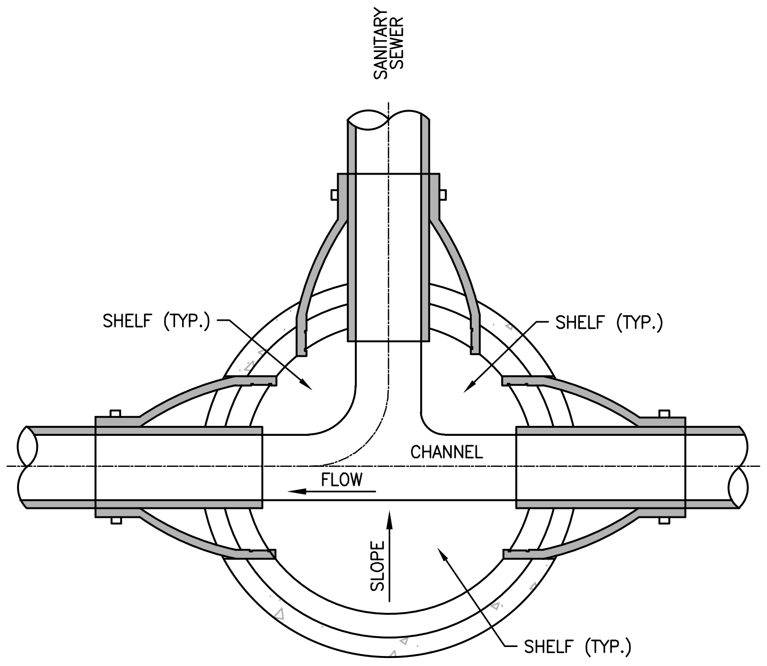
VERTICAL DROP LESS THAN 1'
N.T.S.

CONCRETE SLIDE DETAIL

N.T.S.



ISOMETRIC
N.T.S.



PLAN
N.T.S.

NOTES:

1. SANITARY SEWER MANHOLE AND CONNECTIONS SHALL BE IN ACCORDANCE WITH UTILITY'S STANDARD PRECAST SANITARY SEWER MANHOLE DETAIL (SEE DETAILS, SHEET CU-507).
2. USE CONCRETE FOR INVERT AND SHELF CONSTRUCTION.

SHELF DETAIL

N.T.S.

SANITARY SEWER MANHOLE
PIPE SLIDE, CONCRETE SLIDE AND SHELF DETAILS

N.T.S.

US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

DESIGNED BY:
T. HYMAN
DRAWN BY:
J. JOHNSON
CHECKED BY:
R. WEED
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D
FILE NAME:
MEF24005CU-509.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MISCELLANEOUS
SANITARY SEWER DETAILS

SHEET ID
CU-509

RTA SUBMITTAL

ABBREVIATIONS

CMU	CONCRETE MASONRY UNIT
COR	CONTRACTING OFFICER REPRESENTATIVE
DI	DROP INLET
DIA.	DIAMETER
EX	EXISTING
FT	FEET
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HORZ.	HORIZONTAL
INV	INVERT
LF	LINEAR FEET
MAX	MAXIMUM
M.E.	MATCH EXISTING
MIN	MINIMUM
NO.	NUMBER
NTS	NOT TO SCALE
O.D.	OUTSIDE DIAMETER
PSI	POUNDS PER SQUARE INCH
TYP	TYPICAL;
VERT.	VERTICAL
WWF	WELDED WIRE FABRIC
W/	WITH

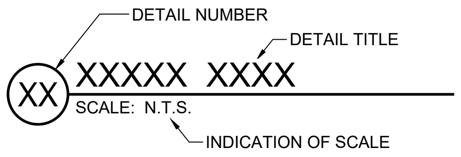
GENERAL CIVIL NOTES

1. EXISTING CONDITIONS WERE COMPILED FROM THE FIELD SURVEY BY BASKERVILLE-DONOVAN, INC. 449 WEST MAIN STREET PENSACOLA, FLORIDA 32502, PERFORMED FROM NOVEMBER 29 THROUGH DECEMBER 8, 2022 AND AS BUILTS PROVIDED BY COLUMBUS AFB, W.O. 32368, DATED APRIL 3, 1990. THE DATA RECORDED IN FIELD BOOK 12-09, PG. 12 THRU 19.
2. WORK TO COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES.
3. FIELD VERIFY COORDINATE AND DIMENSIONAL INFORMATION PRIOR TO CONSTRUCTION. BRING ANY DIFFERING CONDITIONS TO THE ATTENTION OF THE CONTRACTING OFFICER PRIOR TO WORK.

a. UTILITIES SHOWN HEREON ARE BASED ON VISIBLE UTILITIES. SUBSURFACE UTILITY LOCATION WAS BASED ON GROUND PENETRATING RADAR (GPR), ELECTROMAGNETIC UTILITY LOCATOR, UTILITY/GIS MAPS AND OTHER METHODS WERE USED TO DETERMINE SUBSURFACE UTILITIES. ACTUAL EXISTING CONDITIONS MAY VARY FROM WHAT IS REPRESENTED IN THESE DRAWINGS. VERIFY EXISTING TOPOGRAPHIC AND UTILITY DATA IN THE FIELD PRIOR TO WORK AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO EXISTING UTILITIES. BEFORE BEGINNING ANY MECHANIZED DIGGING OR EXCAVATION WORK, CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR LOCATING AND MARKING THE EXACT LOCATION OF ALL EXISTING UTILITIES. CONTRACTOR MUST NOTIFY CONTRACTING OFFICER OF ANY DIFFERING CONDITIONS PRIOR TO CONSTRUCTION.

4. HAND DIG WITHIN 3 FEET OF KNOWN UTILITIES.
5. IF DIFFERING CONDITIONS EXIST BETWEEN THE DRAWINGS, SPECIFICATION, AND/OR OTHER APPLICABLE REGULATIONS AND GUIDELINES, SUBMIT THE DISCREPANCIES TO THE COR.
6. STOCKPILE AND MAINTAIN ALL TOPSOIL AND EXCAVATED MATERIAL IN AN APPROVED AREA DURING CONSTRUCTION. DISPOSE OF EXCESS OR UNUSABLE TOPSOIL OFF-SITE IN A MANNER THAT IS LEGAL AND CONSISTENT WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
7. "DEMOLISH" MEANS TO REMOVE AN OBJECT IN ITS ENTIRETY. RESTORE GRADES AND SURFACE IMPROVEMENTS TO MATCH EXISTING CONDITIONS OR TO REQUIREMENTS OF NEW WORK, AS APPLICABLE.
8. REMOVE AND PROPERLY DISPOSE OF ALL CONSTRUCTION WASTE AND DEBRIS OUTSIDE THE LIMITS OF GOVERNMENT-CONTROLLED LANDS IN A MANNER THAT IS LEGAL AND CONSISTENT WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
9. PAVEMENT TO BE REMOVED BY SAWCUTTING ALONG A CLEAN EVEN EDGE OR JOINT TO PROVIDE A SMOOTH TIE-IN OF NEW PAVEMENT. MATCH ALL NEW PAVEMENT FLUSH WITH EXISTING, UNLESS OTHERWISE NOTED.
10. ALL DIMENSIONS ARE APPROXIMATE, UNLESS OTHERWISE NOTED.
11. SCHEDULE AND COORDINATE THE DEMOLITION OF EXISTING UTILITIES AND INSTALLATION OF NEW UTILITIES WITH CONTRACTING OFFICER AND BASE REPRESENTATIVE OF UTILITY OPERATIONS.
12. MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES IN PERFORMING THE WORK IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR, WHO IS ALSO RESPONSIBLE FOR COMPLYING WITH ALL HEALTH AND SAFETY PRECAUTIONS AS REQUIRED BY ANY REGULATORY AGENCY HAVING JURISDICTION.
13. AREAS DISTURBED THAT ARE NOT PART OF THE PROJECT ARE TO BE RETURNED TO THEIR ORIGINAL OR BETTER CONDITION AT THE COMPLETION OF THE PROJECT. THIS INCLUDES, BUT IS NOT LIMITED TO, EXISTING STRUCTURES AND PAVEMENT.

VIEW IDENTIFICATION



3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

US Army Corps
of Engineers®

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Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY:
B CRUZTITLA-JUAREZ
DRAWN BY:
B CRUZTITLA-JUAREZ
CHECKED BY:
R FERNANDEZ
SUBMITTED BY:
N.LEROSE
SIZE:
ANSI D
ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
CONTRACT NO.:
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005CF-001.dwg

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

CIVIL FUELING GENERAL NOTES, LEGEND
AND ABBREVIATIONS

SHEET ID
CF-001

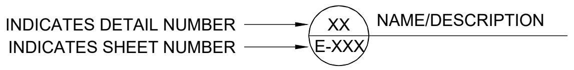
RTA SUBMITTAL

CESAM v20181203

LEGEND:

SYMBOL	DESCRIPTION
▭	EQUIPMENT AS INDICATED
Ⓙ J	JUNCTION BOX; BOX NUMBER ADJACENT
◒	GROUND ROD 3/4" X 10"-0" COPPERCLAD
●	GROUND CABLE CONNECTION
──G──	#1/0 BARE COPPER GROUND CONDUCTOR UNLESS INDICATED OTHERWISE
── G4 ──	#4/0 BARE COPPER GROUND CONDUCTOR
── G6 ──	#6 BARE COPPER GROUND CONDUCTOR
◌	CONDUIT STUB-UP
FM	FLOW METER
────	RACEWAY EXPOSED
– – – – – – –	RACEWAY CONCEALED BELOW SLAB/GRADE
R5 OR C5	CONDUIT AND CONDUCTOR TAG SEE DRAWING CF-602 FOR SCHEDULE
●	ELECTRICAL CONNECTION
FMCU	FIRE ALARM CONTROL UNIT WITH INTEGRAL FIBER CARD
OR S	SOLENOID
⊬ | |	N.C. & N.O. CONTACT
	LEVEL SWITCH HIGH OR LEVEL SWITCH HIGH-HIGH
A	ALARM HORN/STROBE ASSEMBLY
A	ALARM BEACON, ROTATING OR FLASHING RED, AS NOTED
Ⓐ	PILOT LIGHT (G=GREEN, R=RED, A=AMBER, W=WHITE)
⧄	DISCONNECT SWITCH - FUSIBLE
TO XXX	CONDUIT HOMERUN, TEXT INDICATES FINAL TERMINATION LOCATION
XX ZZ	INSTRUMENT TAG AS FOLLOWS: XX-INDICATES TYPE LSHH = HIGH-HIGH LEVEL SWITCH LSH = HIGH LEVEL SWITCH MOV = MOTOR OPERATED VALVE ZZ-INDICATES NUMBER CORRESPONDING TO I/O DIAGRAMS

DETAIL CALLOUT:



ABBREVIATIONS:

ABBREVIATION	DESCRIPTION
A OR AMP	AMPERES
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALM	ALARM
AIC	AMPERES INTERRUPTING CAPACITY
ATG	AUTOMATIC TANK GAUGING
BLDG	BUILDING
C	CONDUIT
CID1	CLASS I, DIVISION 1
CB	CIRCUIT BREAKER
CKT	CIRCUIT
COM	COMMON
CNTL	CONTROL
CP	CATHODIC PROTECTION
CU	COPPER OR CONDENSING UNIT
D	DEPTH
DC	DIRECT CURRENT
DISC	DISCONNECT SWITCH
DPST	DOUBLE POLE SINGLE THROW
DPDT	DOUBLE POLE DOUBLE THROW
E	EMERGENCY
E/G	ENGINE/GENERATOR
EC	EMPTY CONDUIT
EFSO	EMERGENCY FUEL SHUT OFF
ELL	ELBOW
EPDS	EMERGENCY POWER DOWN STATION
ESO	EMERGENCY SHUT OFF
ELEC	ELECTRICAL
EUH	ELECTRIC UNIT HEATER
EXIST OR EX	EXISTING
EXP	EXPLOSION PROOF
FMCU	FIRE ALARM CONTROL UNIT WITH INTEGRAL FIBER CARD
FU	FUSE
FDR	FEEDER
FO	FIBER OPTIC
FP	FUEL PUMP
FS	FLOW SWITCH
FSC	FUEL SYSTEM CONTROL
FTP	FUEL TRANSFER PUMP
FVNR	FULL VOLTAGE NON-REVERSING
G OR GND	GROUND
GFGI	GOVERNMENT FURNISHED, GOVERNMENT INSTALLED
GFCI	GROUND-FAULT-INTERRUPTER
GRS	GALVANIZED RIGID STEEL
H OR HT	HEIGHT
HH	HAND HOLE
HP	HORSEPOWER
HTR	HEATER
HVCP	HIGH VOLTAGE CONTROL PANEL
J OR JB	JUNCTION BOX
KVA	KILOVOLT - AMPERES
KW	KILOWATTS

ABBREVIATION	DESCRIPTION
L	LENGTH
LACP	LEVEL ALARM CONTROL PANEL
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH-HIGH
LSL	LEVEL SWITCH LOW
LSLL	LEVEL SWITCH LOW-LOW
LVCP	LOW VOLTAGE CONTROL PANEL
MCB OR MB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MLO	MAIN LUGS ONLY
MT OR MTD	MOUNT OR MOUNTED
MTR	MOTOR
N	NEUTRAL
NC	NORMALLY CLOSED
NCTO	NORMALLY CLOSED TIMED OPEN
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NESC	NATIONAL ELECTRICAL SAFETY CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NETWORK INTERFACE CARD
NOTC	NORMALLY OPEN TIMED CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
P	POLES
PH	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PMT	PAD MOUNTED TRANSFORMER
PNL	PANELBOARD
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWR	POWER
R	RADIUS
RECEPT	RECEPTACLE
RMS	ROOT MEAN SQUARE
RVAT	REDUCED VOLTAGE AUTOTRANSFORMER
SA	SURGE ARRESTOR
SHLD	SHIELDED SPEC SPECIFICATIONS
SPD	SURGE PROTECTIVE DEVICE
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
TSP	TWISTED SHIELDED PAIR
TW PR	TWISTED PAIR
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITER'S LABORATORIES
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VA	VOLT AMPERES
VLV	VALVE
W	WATTS OR WIDTH OR WIRE
WHDM	WATTHOUR DEMAND METER
WP	WEATHER PROOF
XFMR	TRANSFORMER
Z	IMPEDANCE

GENERAL ELECTRICAL NOTES:

1. PROJECT DESIGN AND EXECUTION SHALL CONFORM TO THE LATEST VERSIONS OF:
   - (A) NEC (NATIONAL ELECTRICAL CODE)
   - (B) NESC (NATIONAL ELECTRICAL SAFETY CODE)
   - (C) APPLICABLE LOCAL, STATE AND FEDERAL CODES
2. CONTRACTOR SHALL CAREFULLY COORDINATE WORK WITH ALL OTHER TRADES BEFORE ANY INSTALLATION IS MADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING SPACE REQUIREMENTS FOR ELECTRICAL EQUIPMENT CLEARANCE AND CORRECT ROUGH-IN LOCATIONS OF ELECTRICAL CONNECTIONS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING CATALOG NUMBERS SHOWN ON THESE DRAWINGS TO MATCH WITH MATERIAL DESCRIPTIONS INDICATED. ANY DISCREPANCIES SHALL BE COMMUNICATED TO THE ENGINEER IN WRITTEN FORM.
4. DRAWINGS ARE IN GENERAL DIAGRAMMATIC IN NATURE. FIELD ADJUST CONDUIT AND TRAY ROUTING BASED ON COORDINATION WITH OTHER NEW UTILITIES, STRUCTURES AND EQUIPMENT. NOT ALL COMPONENTS, CONDUITS, AND EQUIPMENT ARE SHOWN IN ALL VIEWS. THE CONTRACTOR SHALL MAKE USE OF THE ENTIRE SET OF DRAWINGS, REQUIREMENTS, AND SPECIFICATIONS IN ORDER TO INCLUDE ALL COMPONENTS NECESSARY TO CONSTRUCT A FULLY OPERATIONAL SYSTEM.
5. WRITTEN DIMENSIONS ON DRAWINGS SHALL HAVE PRECEDENCE OVER SCALE DIMENSIONS.
6. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S APPROVED, PUBLISHED LITERATURE.
7. INSTALLATION OF EQUIPMENT SHALL PERMIT ACCESSIBILITY FOR SERVICE AND/OR REPLACEMENT.
8. ALL CONDUCTORS AND CABLES SHALL BE COPPER. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR CONDUCTORS AND CABLES.
9. PROVIDE THE NECESSARY COMPONENTS TO ALLOW THE TERMINATION OF CONDUCTORS WHICH HAVE BEEN OVERSIZED DUE TO VOLTAGE DROP ON STANDARD LUGS, CONNECTIONS, AND TERMINATIONS. TRIMMING OF WIRES AT TERMINATIONS SHALL NOT BE PERMITTED.
10. ALL CONTROL PANELS, CUSTOM OR STANDARD, SHALL BE SHOP FABRICATED AND ASSEMBLED IN A UL508 CERTIFIED SHOP. THE FABRICATION/ASSEMBLY SHOP SHALL PRODUCE SHOP DRAWINGS FOR REVIEW AND APPROVAL OF THE ENGINEER. NO FIELD ASSEMBLED PANELS WILL BE ACCEPTABLE.
11. THE PROJECT ENCOMPASSES BOTH EXISTING AND NEW COMPONENTS AND DEVICES. NEW EQUIPMENT, CONDUITS, COMPONENTS, WIRES, CONDUCTORS, ETC ARE SHOWN IN BOLD. EXISTING ITEMS ARE SHOWN IN GRAY OR SHADED COLOR.
12. PRIOR TO ANY CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES IN THE AFFECTED AREAS. MAINTAIN EXISTING UTILITIES AND PROTECT FROM DAMAGE THROUGHOUT THE ENTIRE DURATION OF CONSTRUCTION ACTIVITIES.
13. SHOULD EXISTING ELECTRICAL POWER, LIGHTING, CONTROL, INSTRUMENTATION, OR AUXILIARY CIRCUIT, FEEDER, OR EQUIPMENT BE SEVERED, DISCONNECTED, DAMAGED, AND/OR DEMOLISHED IN THE PROCESS OF CONSTRUCTION UNLESS IT IS SPECIFICALLY DESIGNATED BY THE DRAWINGS TO BE DEMOLISHED, THEN SAID CIRCUIT, FEEDER, OR EQUIPMENT SHALL BE RESTORED TO THE ORIGINAL, FIRST CLASS CONDITION. THE RESTORATION SHALL INCLUDE REROUTING, RELOCATION, RECONNECTION, AND/OR REPLACEMENT. SUCH WORK REQUIRED SHALL BE INCLUDED IN THE CONTRACT AND SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE GOVERNMENT.
14. THE TERM PROVIDE IS AN INCLUSIVE TERM USED TO DESCRIBE ASPECTS OF THE WORK, AND IS HEREBY DEFINED TO REQUIRE CONTRACTOR TO STORE, FURNISH, INSTALL, MOUNT, CONNECT, CONTROL AND POWER EQUIPMENT INDICATED, AS WELL AS APPURTENANCES TO MAKE ELECTRICAL SYSTEMS OPERATE AS INDICATED WITHIN THE DRAWINGS AND SPECIFICATIONS.
15. NOT ALL SYMBOLS AND ABBREVIATIONS LISTED HAVE BEEN REFERENCED.

3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

US Army Corps
of Engineers ®

MARK
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DATE

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DESIGNED BY:
L. HERNANDEZ
DRAWN BY:
L. HERNANDEZ
CHECKED BY:
L. MCCAULEY
SUBMITTED BY:
N.LEROSE
SIZE:
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CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

ELECTRICAL FUELING GENERAL NOTES,
LEGEND AND ABBREVIATIONS

SHEET ID
CF-002

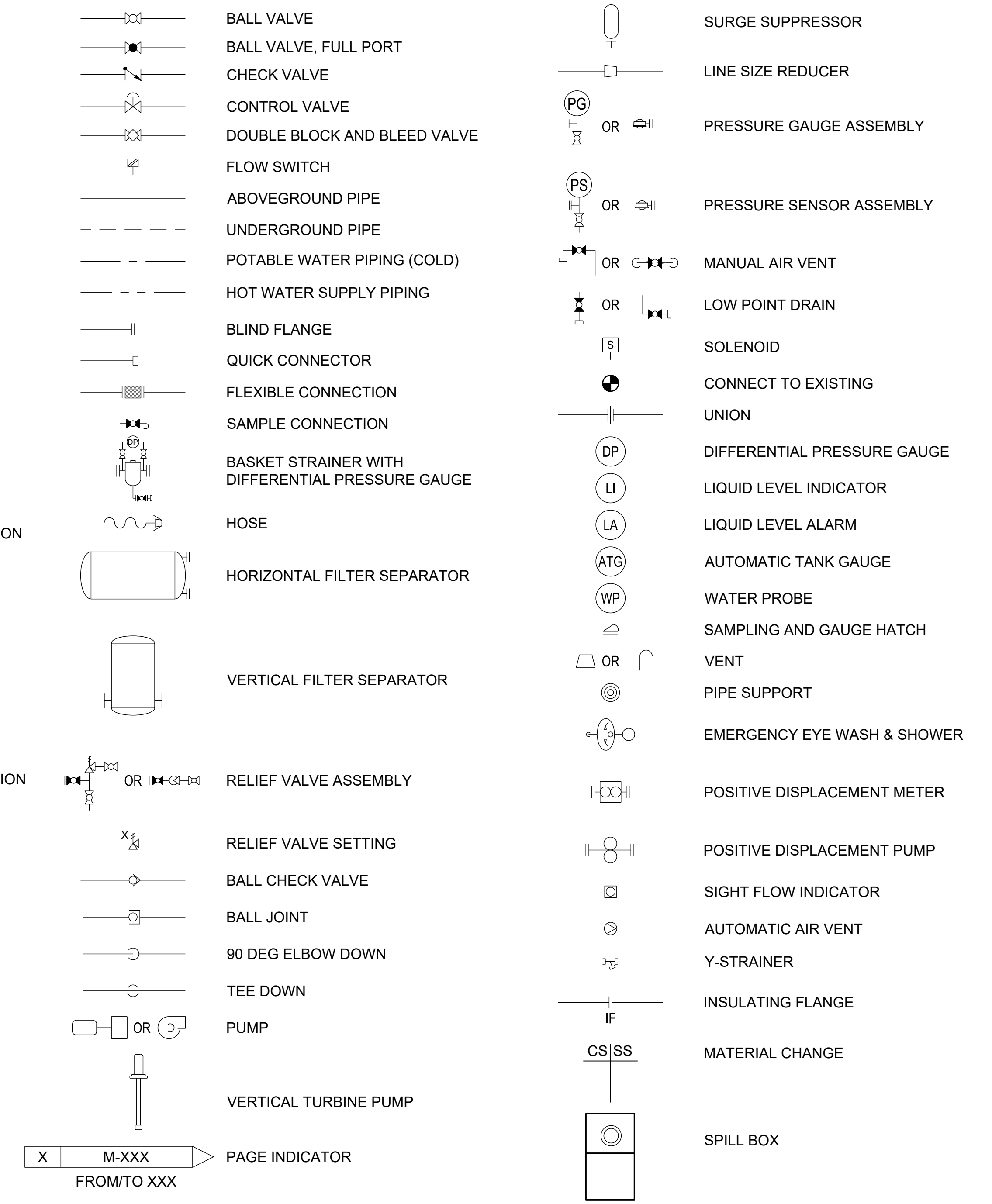
RTA SUBMITTAL

CESAM v20181203

ABBREVIATIONS

&	AND	HP	HORSE POWER
AAV	AUTOMATIC AIR VENT	HW	HOT WATER - POTABLE
AFC	ABOVE FINISHED CONCRETE	ID	INSIDE DIAMETER
AG	ABOVEGROUND	IF	INSULATING FLANGE
AST	ABOVEGROUND STORAGE TANK	LA	LEVEL ALARM
ATG	AUTOMATIC TANK GAUGE	LG	LONG
API	AMERICAN PETROLEUM INSTITUTE	LI	LEVEL INDICATOR
ASTM	AMERICAN STANDARDS FOR TESTING AND MATERIALS	LLA	LOW LEVEL ALARM
ATG	AUTOMATIC TANK GAUGE	LLLA	LOW-LOW LEVEL ALARM
AWS	AMERICAN WELDING SOCIETY	LO	LOCK OPEN (VALVE)
BLDG	BUILDING	LPD	LOW POINT DRAIN
BS	BASKET STRAINER	MFR	MANUFACTURER
BV	BALL VALVE	MAV	MANUAL AIR VENT
℄	CENTERLINE	MAX	MAXIMUM
CONC	CONCRETE	MIN	MINIMUM
COR	CONTRACTING OFFICER'S REPRESENTATIVE	NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION
CC	CARBON STEEL (INTERNALLY COATED)	NC	NORMALLY CLOSED
CKV	CHECK VALVE	NIC	NOT IN CONTRACT
CS	CARBON STEEL (NON-INTERNALLY COATED)	NO	NORMALLY OPEN
CV	CONTROL VALVE	NOM	NOMINAL
CW	COLD WATER - POTABLE	NPT	NATIONAL PIPE THREAD
DBB	DOUBLE BLOCK & BLEED	OD	OUTSIDE DIAMETER
DEG	DEGREE	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
DN	DOWN	OV	OVERFILL VALVE
DP	DIFFERENTIAL PRESSURE	PD	POSITIVE DISPLACEMENT
EA	EACH	PG	PRESSURE GAUGE
EFSO	EMERGENCY FUEL SHUT-OFF	PPCV	PANTOGRAPH PRESSURE CONTROL VALVE
EX	EXISTING	PS	PIPE SUPPORT
FCV	FLOW CONTROL VALVE	PSI	POUNDS PER SQUARE INCH
FF	FINISHED FLOOR	PSID	POUNDS PER SQUARE INCH DIFFERENTIAL
FP	FUEL PUMP	PRT	PRODUCT RECOVERY TANK
FOB	FLAT ON BOTTOM	RED	REDUCER
FOT	FLAT ON TOP	RTB	RETURN TO BULK
FS	FLOW SWITCH	SC	SAMPLE CONNECTION
FSCV	FILTER SEPARATOR CONTROL VALVE	SCAT	SELF CONTAINED ABOVEGROUND TANK
FSI	FILTER SEPARATOR ISSUE	SCHD	SCHEDULE
FSM	FUELING STATION METER	SP	SUMP PUMP
FSR	FILTER SEPARATOR RECEIPT	SPR	SINGLE POINT RECEPTACLE
FSV	FUELING STATION VENTURI	SS	STAINLESS STEEL
F/S	FILTER SEPARATOR	STD	STANDARD
FTP	FUEL TRANSFER PUMP	SW	SOCKET WELD
GA	GAUGE	TFV	TRUCK FILL STAND CONTROL VALVE
GAL	GALLON	TOC	TOP OF CURB
GPM	GALLONS PER MINUTE	TOD	TOP OF DECK
HHLA	HIGH-HIGH LEVEL ALARM	TYP	TYPICAL
HLA	HIGH LEVEL ALARM	UG	UNDERGROUND
HLS	HIGH LEVEL SWITCH	UST	UNDERGROUND STORAGE TANK
HLV	HIGH LEVEL CONTROL VALVE	W/	WITH

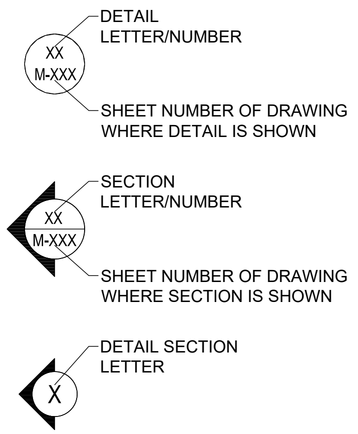
LEGEND



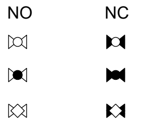
BALL VALVE
BALL VALVE, FULL PORT
CHECK VALVE
CONTROL VALVE
DOUBLE BLOCK AND BLEED VALVE
FLOW SWITCH
ABOVEGROUND PIPE
UNDERGROUND PIPE
POTABLE WATER PIPING (COLD)
HOT WATER SUPPLY PIPING
BLIND FLANGE
QUICK CONNECTOR
FLEXIBLE CONNECTION
SAMPLE CONNECTION
BASKET STRAINER WITH DIFFERENTIAL PRESSURE GAUGE
HOSE
HORIZONTAL FILTER SEPARATOR
VERTICAL FILTER SEPARATOR
RELIEF VALVE ASSEMBLY
RELIEF VALVE SETTING
BALL CHECK VALVE
BALL JOINT
90 DEG ELBOW DOWN
TEE DOWN
PUMP
VERTICAL TURBINE PUMP
PAGE INDICATOR

SURGE SUPPRESSOR
LINE SIZE REDUCER
PRESSURE GAUGE ASSEMBLY
PRESSURE SENSOR ASSEMBLY
MANUAL AIR VENT
LOW POINT DRAIN
SOLENOID
CONNECT TO EXISTING
UNION
DIFFERENTIAL PRESSURE GAUGE
LIQUID LEVEL INDICATOR
LIQUID LEVEL ALARM
AUTOMATIC TANK GAUGE
WATER PROBE
SAMPLING AND GAUGE HATCH
VENT
PIPE SUPPORT
EMERGENCY EYE WASH & SHOWER
POSITIVE DISPLACEMENT METER
POSITIVE DISPLACEMENT PUMP
SIGHT FLOW INDICATOR
AUTOMATIC AIR VENT
Y-STRAINER
INSULATING FLANGE
MATERIAL CHANGE
SPILL BOX

DETAIL/SECTION IDENTIFICATION

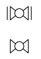

DETAIL LETTER/NUMBER
XX
M-XXX
SHEET NUMBER OF DRAWING WHERE DETAIL IS SHOWN
SECTION LETTER/NUMBER
XX
M-XXX
SHEET NUMBER OF DRAWING WHERE SECTION IS SHOWN
DETAIL SECTION LETTER
X

VALVE POSITIONS



BALL VALVE
BALL VALVE, FULL PORT
PLUG VALVE, DOUBLE BLOCK AND BLEED

VALVE END TYPES



FLANGED END TYPE
THREADED END TYPE

GENERAL MECHANICAL NOTES:

1. CONTRACTOR TO REFERENCE PROJECT SPECIFICATIONS FOR ADDITIONAL PROJECT REQUIREMENTS.
2. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. NOT ALL COMPONENTS ARE SHOWN IN ALL VIEWS. THE CONTRACTOR SHALL MAKE USE OF THE ENTIRE SET OF DRAWINGS AND INCLUDE ALL COMPONENTS TO CONSTRUCT A FULLY OPERATIONAL FUELING SYSTEM.
3. INSTALLATION OF WORK SHALL BE COORDINATED WITH ALL OTHER TRADES. EQUIPMENT, PIPING OR DUCTWORK INTERFERING WITH OTHER TRADES SHALL BE RELOCATED AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
4. WRITTEN DIMENSIONS ON DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
5. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL OTHER TRADES BEFORE ANY INSTALLATION IS MADE.
6. AT START OF CONSTRUCTION, THE CONTRACTOR AND EACH SUBCONTRACTOR SHALL PREPARE TYPED LISTS OF ALL EQUIPMENT THAT THEY ARE SUPPLYING WHICH REQUIRE ELECTRICAL WORK, AND SEND LISTS TO THE ELECTRICAL CONTRACTOR AND THE USACE COR FOR REVIEW AND COORDINATION. THE LISTS SHALL INCLUDE AS A MINIMUM THE PROPOSED VOLTAGE, PHASE, FREQUENCY AND EQUIPMENT MOTOR SIZE OR ELECTRICAL DEMAND, AS APPLICABLE. LISTS SHALL BE UPDATED WHENEVER NEW ITEMS ARE ADDED OR OF ANY CHANGES THAT ARE MADE.
7. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S APPROVED PUBLISHED LITERATURE.
8. INSTALLATION OF EQUIPMENT SHALL PERMIT ACCESSIBILITY FOR SERVICE AND/OR REPLACEMENT.
9. THE CONTRACTOR SHALL COORDINATE ALL WALL, FLOOR AND ROOF PENETRATIONS WITH THE GENERAL CONTRACTOR.
10. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SUPPORTS, EQUIPMENT, AND PIPING PRIOR TO DEMOLITION AND CONSTRUCTION.

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DESIGNED BY:
C.DAVIDSON
DRAWN BY:
C.DAVIDSON
CHECKED BY:
Z.TONSMEIRE
SUBMITTED BY:
N.LEROSE
SIZE:
ANSI D
ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
CONTRACT NO.:
PROJECT NUMBER:
MEF24005
FILE NAME:
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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL FUELING GENERAL
NOTES, LEGEND AND ABBREVIATIONS

SHEET ID

CF-003

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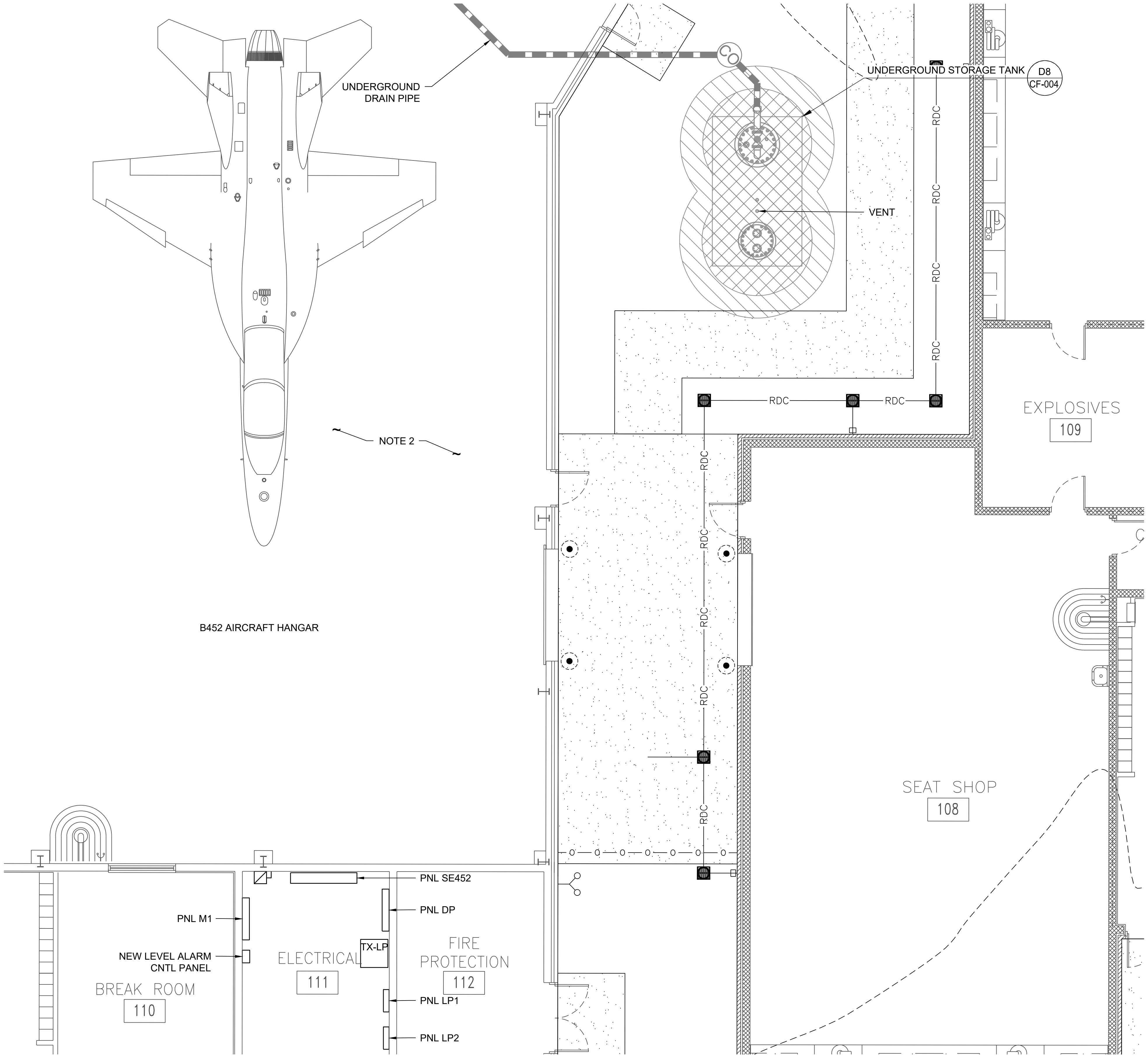
POND
3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832



A1 FUELING HAZARDOUS AREA CLASSIFICATION PLAN

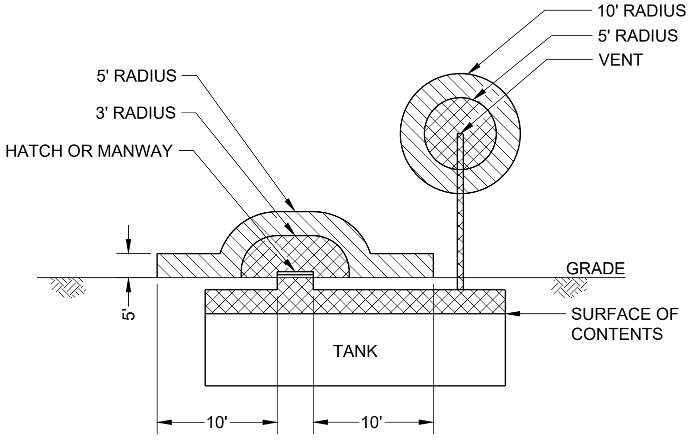
SCALE: 1" = 5'

0 2.5' 5' 10' 15'

N

NOTES:

1. SEE CF-001, CF-002, AND CF-003 FOR FUELING GENERAL NOTES, LEGEND AND ABBREVIATIONS.
2. SEE NOTE 3 ON E-204 FOR HAZARDOUS CLASSIFICATION OF HANGAR AREA.
3. ALL WORK IN HAZARDOUS AREAS SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE, ARTICLES 500, 501, AND 504 FOR CLASSIFICATION INDICATED.



D8 UNDERGROUND STORAGE TANK

SCALE: N.T.S.

CLASSIFICATION LEGEND:

▩	CLASS I, DIVISION 1, GROUP D HAZARDOUS AREA (T3, 392°F MAX)
▨	CLASS I, DIVISION 2, GROUP D HAZARDOUS AREA (T3, 392°F MAX)
☐	NONCLASSIFIED AREA

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1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: L. HERNANDEZ		ISSUE DATE: JUNE 2024
DRAWN BY: L. HERNANDEZ		SOLICITATION NO.:
CHECKED BY: L. MCCAULEY		CONTRACT NO.:
SUBMITTED BY: N.LEROSE		PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005CF-004.dwg	

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FUELING HAZARDOUS AREA
CLASSIFICATION PLAN

SHEET ID
CF-004

RTA SUBMITTAL

3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

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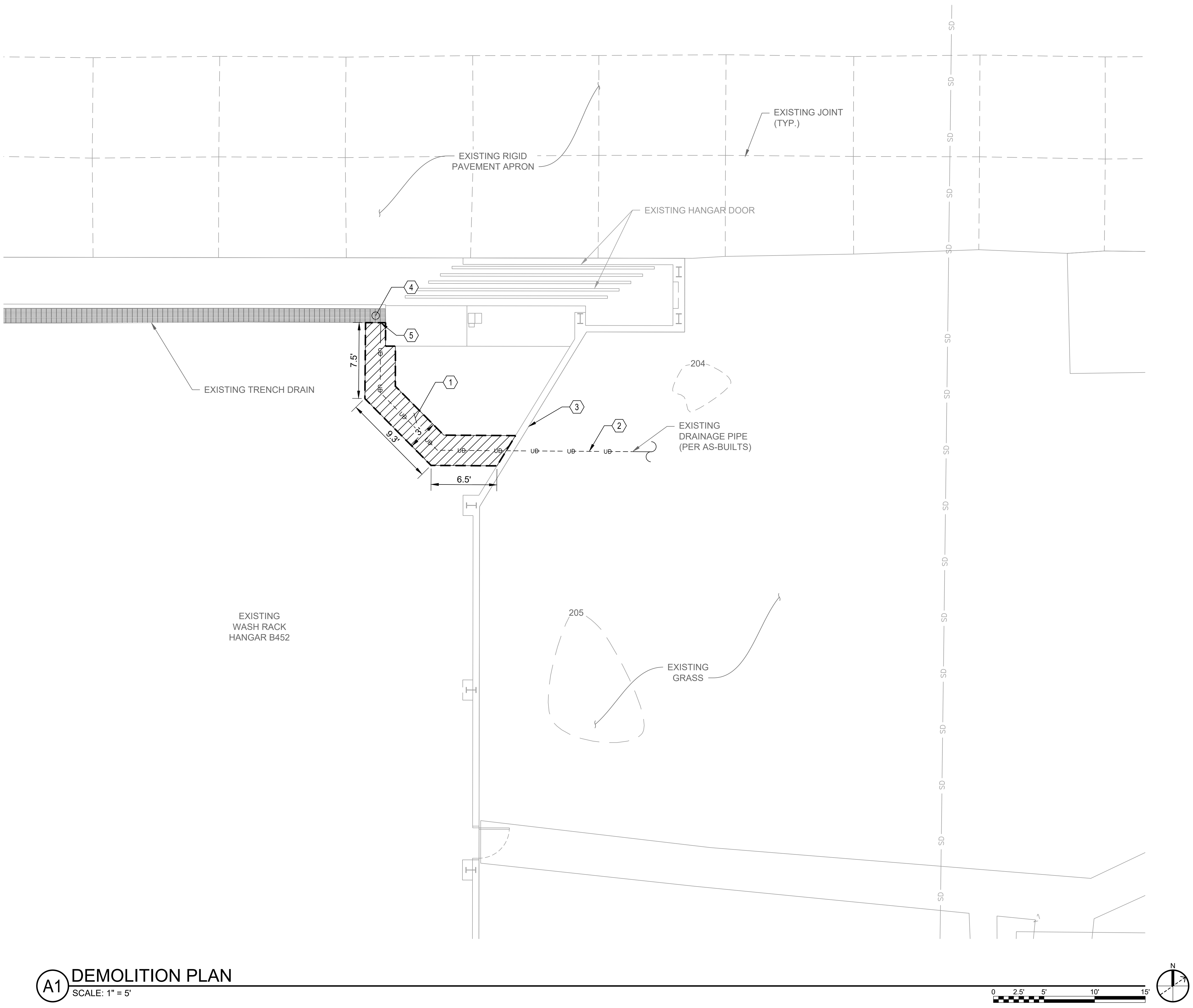

A1 DEMOLITION PLAN

SCALE: 1" = 5'

SHEET NOTES:

1. REFER TO SHEET CF-001, CF-002 AND CF-003 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.

KEYNOTES:

1. SAWCUT AND DEMOLISH CONCRETE FLOOR FOR PROPOSED DRAINAGE PIPE INSTALLATION. IF REQUIRED DEMOLITION LIMITS ARE WITHIN 2 FT OF AN EXISTING JOINT, SAWCUT AT THE JOINT.
2. DEMOLISH EXISTING DRAINAGE PIPE
3. PROTECT EXISTING WALL AND BEAM FOOTING DURING ALL PHASES OF CONSTRUCTION
4. CAP EXISTING PENETRATION AT BOTTOM OF TRENCH
5. PIPE CONNECTION TO TRENCH WALL SEE DETAIL A5/CF-502.

LEGEND:

▨	CONCRETE FLOOR DEMOLITION
– – – –	SAWCUT

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DRAWN BY:
B CRUZTITLA-JUAREZ
CHECKED BY:
R FERNANDEZ
SUBMITTED BY:
N.LEROSE
SIZE:
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MOBILE DISTRICT
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BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

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CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FUELING DEMOLITION PLAN

SHEET ID

CF-101

RTA SUBMITTAL

POND
3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

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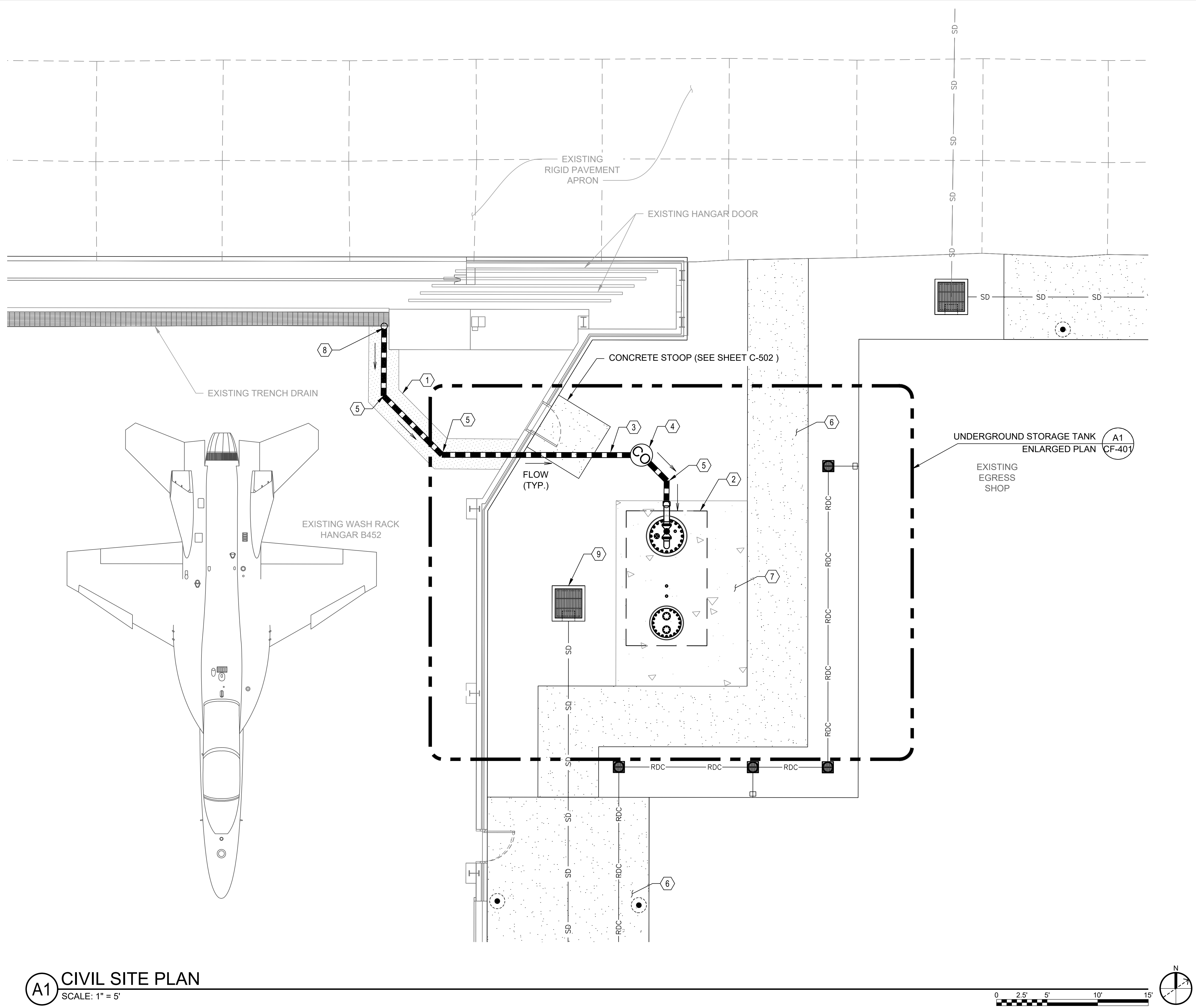

A1 CIVIL SITE PLAN

SCALE: 1" = 5'

SHEET NOTES:

1. REFER TO SHEET CF-001, CF-002 AND CF-003 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.

KEYNOTES:

1. CONCRETE PAVEMENT REPLACEMENT, MATCH EXISTING GRADE. SEE D8/CF-501.
2. 5,000 GAL. UNDERGROUND STORAGE TANK WITH 6" THICK CONCRETE PAD ON GRADE. SEE SHEET CF-401.
3. 6" Ø HDPE PIPE WITH FUSION WELDED JOINTS. MIN SLOPE, 0.5%. SEE STANDARD PIPE TRENCH DETAIL A8/CF-501.
4. CLEANOUT. SEE F5/CF-501.
5. 45° BEND/FUSION WELDED ELBOW (TYP).
6. CONCRETE SIDEWALK. SEE SHEET C-502
7. TANK PAD. SEE DETAIL A1/CF-502
8. CONNECT PIPE TO BOTTOM OF LATERAL FACE OF TRENCH THROUGH PERFORATION. SEE DETAIL A5/CF-502
9. DROP INLET. SEE T-7A EGRESS SHOP DRAWINGS.

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DRAWN BY:
B CRUZTITLA-JUAREZ
CHECKED BY:
R FERNANDEZ
SUBMITTED BY:
N.LEROSE
SIZE:
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BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FUELING SITE PLAN

SHEET ID

CF-102

RTA SUBMITTAL

POND
3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

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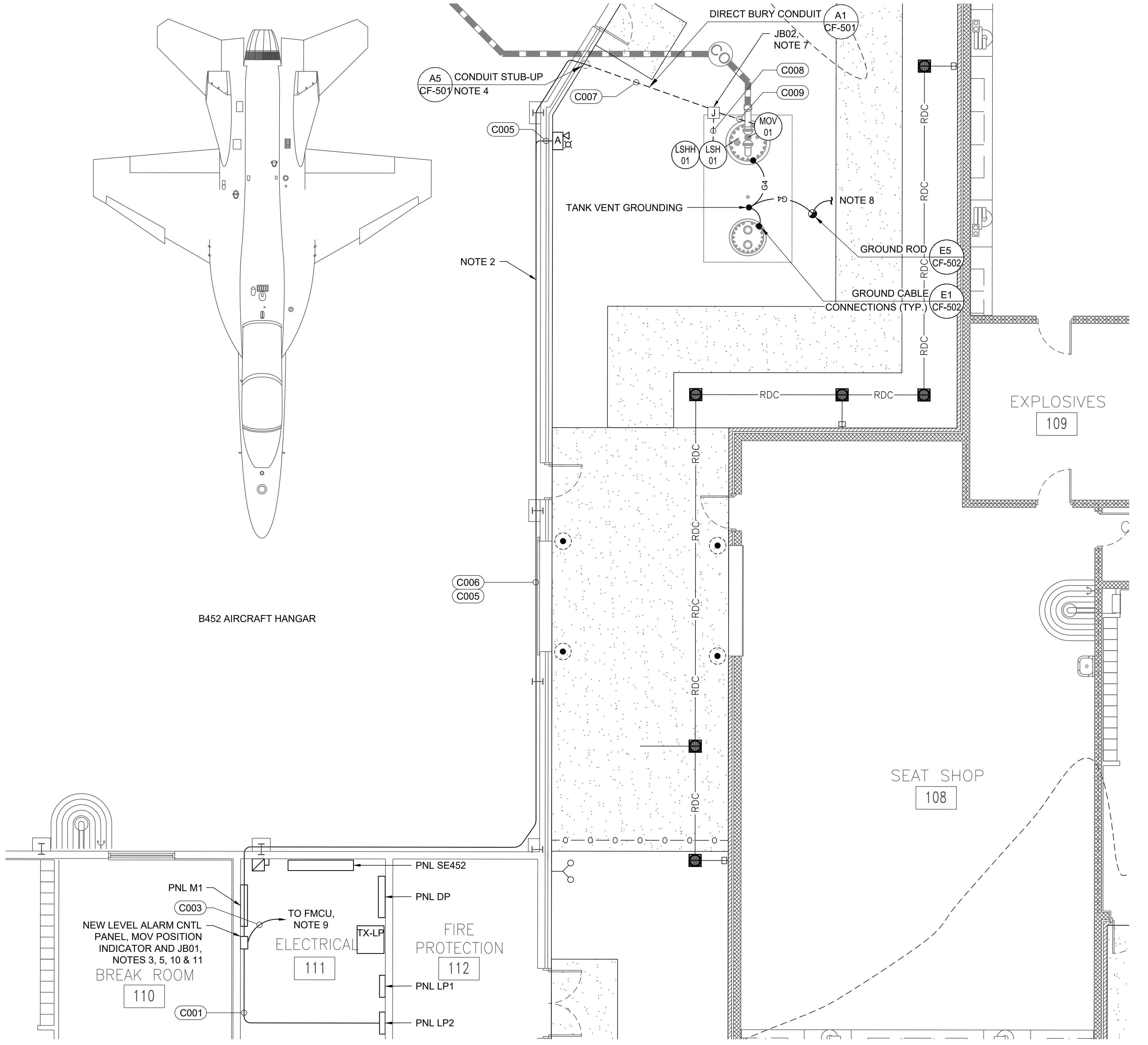

A1 FUELING PLAN

SCALE: 1" = 5'

NOTES:

1. SEE CF-001 ,CF-002, AND CF-003 FOR FUELING GENERAL NOTES, LEGEND AND ABBREVIATIONS.
2. CONDUIT TO RUN HORIZONTAL 8'-0" AFF. THE CONTRACTOR SHALL PROVIDE CONDUIT STRAPS TO SUPPORT CONDUIT AT INTERVALS REQUIRED PER NFPA 70. COORDINATE PLACEMENT AND QUANTITY WITH LAYOUT AND ROUTING OF CONDUITS.
3. CONTRACTOR SHALL PROVIDE AND INSTALL A NEW LEVEL ALARM PANEL IN NEW ELECTRICAL ROOM. NEW LEVEL ALARM PANEL SHALL BE POWERED BY A NEW 20A SINGLE PHASE BREAKER FROM PANEL LP2 IN THE ELECTRICAL ROOM.
BOD: PNEUMERCATOR LC1000-A SERIES OR APPROVED EQUAL.
4. CONTRACTOR SHALL INSTALL LB CONDUIT FITTING FOR WALL PENETRATION TO HANGAR INTERIOR. CONTRACTOR SHALL STUB DOWN CONDUIT AND ROUTE BELOW GRADE.
5. CONTRACTOR SHALL PROVIDE AND INSTALL A NEW HIGH LEVEL SWITCH THAT INTERFACES WITH THE NEW LEVEL ALARM PANEL. THE HIGH LEVEL SWITCH WILL ACTIVATE AN LED LIGHT AND ANNUNCIATE THE HORN/STROBE ALARMS ON THE LEVEL ALARM PANEL. THE HIGH LEVEL SWITCH SHALL BE SET TO 5% OF THE CAPACITY OF THE TANK. CONTRACTOR SHALL PROVIDE A NEW HIGH-HIGH LEVEL SWITCH THAT INTERFACES WITH THE NEW LEVEL ALARM PANEL. THE HIGH-HIGH LEVEL SWITCH WILL ACTUATE THE VALVE AT THE UNDERGROUND TANK TO THE CLOSED POSITION. THE HIGH-HIGH LEVEL SWITCH SHALL BE SET TO 95% OF THE CAPACITY OF THE TANK. SEE CF-601 FOR WIRING DIAGRAM.
6. SEE D5 ON CF-501 FOR TANK LEVEL SWITCH DETAIL.
7. NEW JUNCTION BOX 02 SHALL BE EXPLOSION PROOF RATED AND SHALL BE MOUNTED INSIDE THE MANHOLE CONTAINMENT SUMP WALL.
8. TANK GROUNDING SHALL CONNECT TO GROUND GRID. SEE E-204 FOR AUXILIARY AND GROUNDING FLOOR PLAN.
9. CONTRACTOR SHALL ROUTE CONDUIT AND CONDUCTORS TO FMCU. SEE FA-101 FOR LOCATION OF FMCU.
10. NEW JUNCTION BOX 01 SHALL BE LOCATED DIRECTLY ABOVE THE NEW LEVEL ALARM CNTRL PANEL AND SHALL BE RATED NEMA 12. SEE E8/CF-502 FOR ELECTRICAL BLOCK DIAGRAM AND CF-601 FOR WIRING DIAGRAM.
11. NEW NEMA 12 MOV POSITION INDICATOR PANEL SHALL BE LOCATED ADJACENT TO NEW LEVEL ALARM CONTROL PANEL.
12. SEE CF-602 FOR CONDUIT AND CABLE SCHEDULE.

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CONTRACT NO.:	CHECKED BY: L. MCCAULEY
PROJECT NUMBER: MEF24005	SUBMITTED BY: N.LEROSE
FILE NAME: MEF24005CF-103.dwg	SIZE: ANSI D

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MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FUELING PLAN

3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

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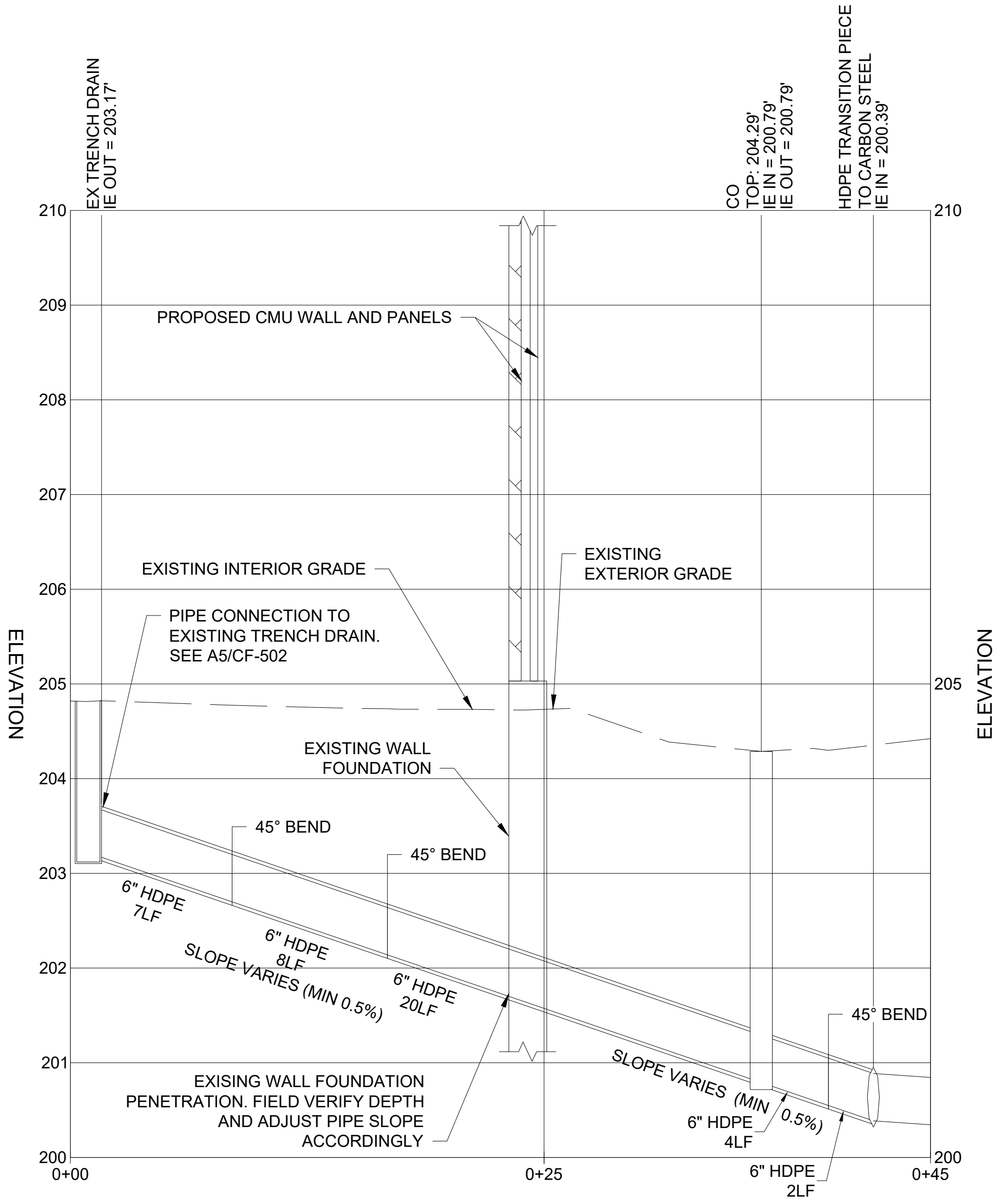


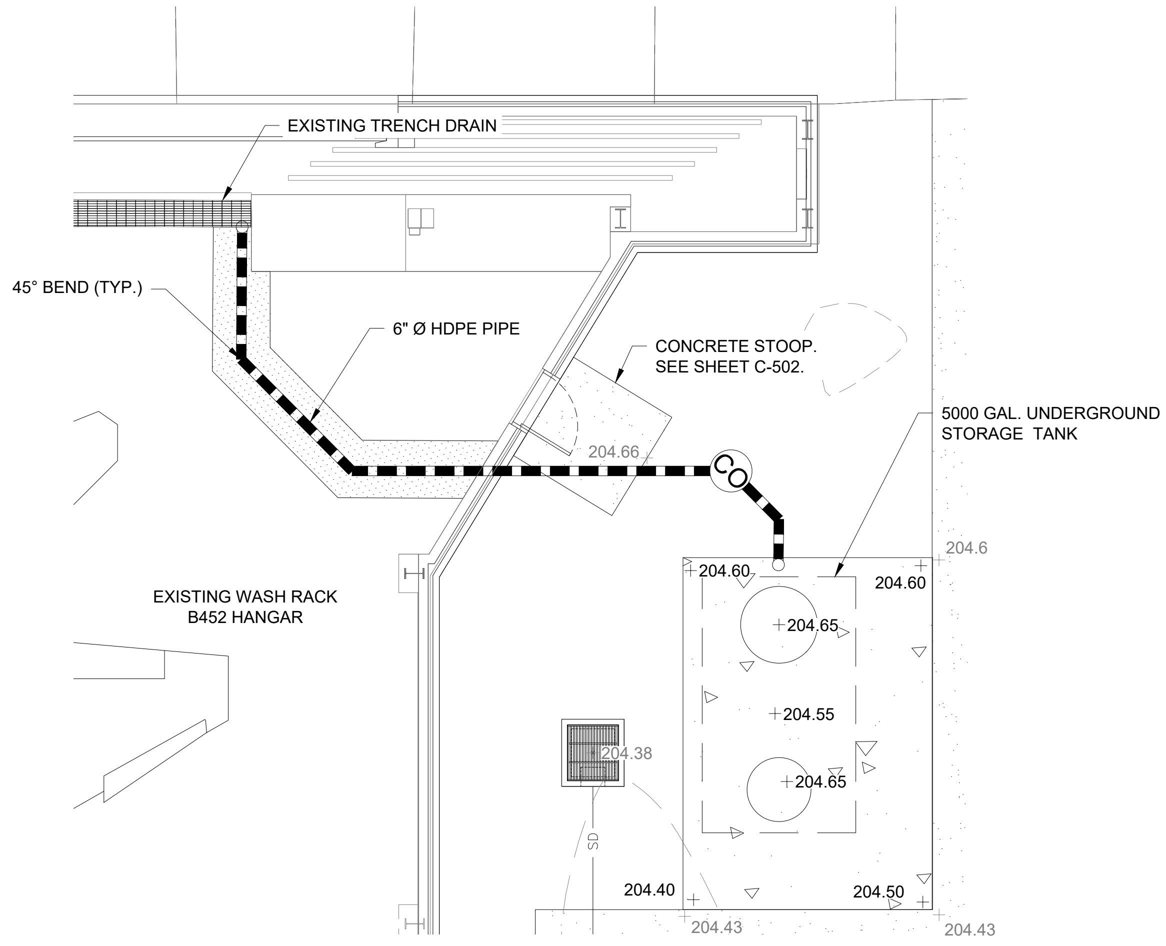
A1 DRAIN LINE PROFILE

HORZ. SCALE: 1" = 5'

0 2.5' 5' 10' 15'

VERT. SCALE: 1" = 1'

0 6" 1' 2' 3'



B5 DRAIN LINE PLAN

HORZ. SCALE: 1" = 5'

0 2.5' 5' 10' 15'

N

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DESIGNED BY:
B. CRUZTITLA-JUAREZ
DRAWN BY:
B. CRUZTITLA-JUAREZ
CHECKED BY:
R. FERNANDEZ
SUBMITTED BY:
N.LEROSE
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MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FUELING DRAIN LINE PLAN
AND PROFILE

SHEET ID

CF-201

3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

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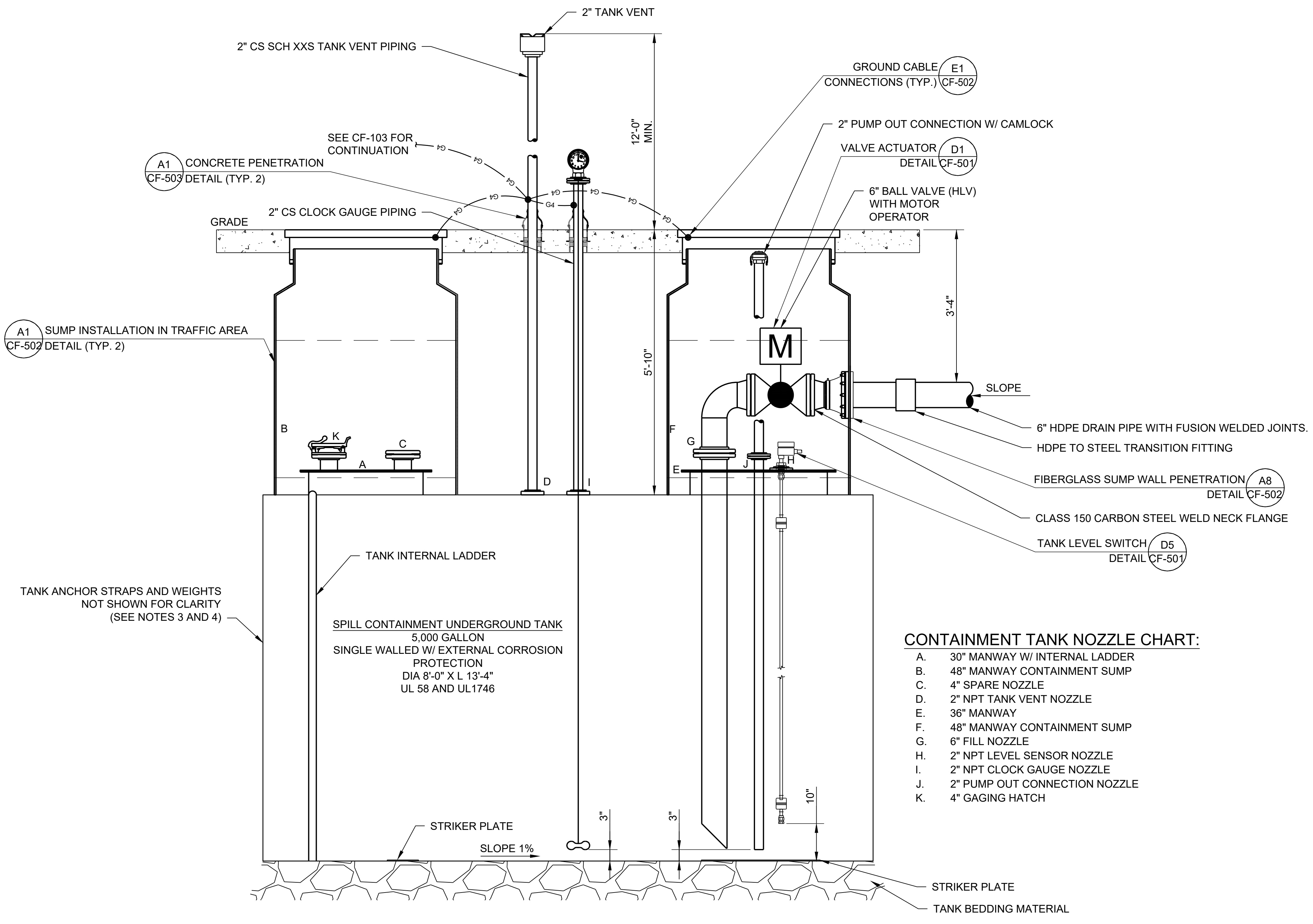
SHEET NOTES:

1. REFER TO SHEETCF-001, CF-002, AND CF-003 FOR GENERAL CIVIL, ELECTRICAL, AND MECHANICAL NOTES, LEGEND, AND ABBREVIATIONS.
2. ALL MANHOLES ABOVE UST SHALL BE H20 RATED.
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE CORRECT NUMBER OF HOLD DOWN STRAPS AND PRE-ENGINEERED CONCRETE ANCHORS (WEIGHTS) PER MANUFACTURER'S RECOMMENDATIONS. THE ANCHOR SYSTEM SHALL BE SIZED FOR THE ENTIRE TANK BUOYANT FORCE AND SHALL NOT RELY ON CONCRETE OR SOIL ABOVE THE TANK FOR ANY HOLD DOWN FORCE. BITUMINOUS ASPHALT COATING SHALL BE APPLIED TO TURNBUCKLES AND EXPOSED PORTIONS OF MASONRY ANCHOR.
4. CONTRACTOR IS RESPONSIBLE TO ADHERE TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLING THE UNDERGROUND STORAGE TANKS. THIS INCLUDES BUT IS NOT LIMITED TO THE EXCAVATION, BEDDING, AND BACKFILL AROUND THE TANKS.
5. TANK DATA PLATE TO BE PROVIDED ON TANK MANWAY.
6. TANK MANWAYS AND NOZZLES SHALL BE PLUMB.

LEVEL ALARM SETTINGS		
LEVEL	CAPACITY	TANK LEVEL
HIGH-HIGH LEVEL SHUT OFF	4756 GAL	95%
HIGH LEVEL FILL EVENT	250 GAL	5%


2" TANK VENT
2" CS SCH XXS TANK VENT PIPING
GROUND CABLE CONNECTIONS (TYP.) E1 CF-502
2" PUMP OUT CONNECTION W/ CAMLOCK
VALVE ACTUATOR DETAIL D1 CF-501
6" BALL VALVE (HLV) WITH MOTOR OPERATOR
SEE CF-103 FOR CONTINUATION
A1 CF-503 CONCRETE PENETRATION DETAIL (TYP. 2)
2" CS CLOCK GAUGE PIPING
GRADE
G4
12'-0" MIN.
5'-10"
3'-4"
M
SLOPE
A1 CF-502 SUMP INSTALLATION IN TRAFFIC AREA DETAIL (TYP. 2)
6" HDPE DRAIN PIPE WITH FUSION WELDED JOINTS.
HDPE TO STEEL TRANSITION FITTING
FIBERGLASS SUMP WALL PENETRATION DETAIL A8 CF-502
CLASS 150 CARBON STEEL WELD NECK FLANGE
TANK LEVEL SWITCH DETAIL D5 CF-501
A
B
C
D
E
F
G
H
I
J
K
TANK INTERNAL LADDER
TANK ANCHOR STRAPS AND WEIGHTS NOT SHOWN FOR CLARITY (SEE NOTES 3 AND 4)
SPILL CONTAINMENT UNDERGROUND TANK
5,000 GALLON
SINGLE WALLED W/ EXTERNAL CORROSION PROTECTION
DIA 8'-0" X L 13'-4"
UL 58 AND UL1746
STRIKER PLATE
SLOPE 1%
3"
3"
10"
STRIKER PLATE
TANK BEDDING MATERIAL

CONTAINMENT TANK NOZZLE CHART:

A.	30" MANWAY W/ INTERNAL LADDER
B.	48" MANWAY CONTAINMENT SUMP
C.	4" SPARE NOZZLE
D.	2" NPT TANK VENT NOZZLE
E.	36" MANWAY
F.	48" MANWAY CONTAINMENT SUMP
G.	6" FILL NOZZLE
H.	2" NPT LEVEL SENSOR NOZZLE
I.	2" NPT CLOCK GAUGE NOZZLE
J.	2" PUMP OUT CONNECTION NOZZLE
K.	4" GAGING HATCH

A1 UNDERGROUND STORAGE TANK SECTION

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

0 6" 1' 2' 3' 4'

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MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024
SOLICITATION NO.:
CONTRACT NO.:
PROJECT NUMBER: MEF24005
DESIGNED BY: JAH
DRAWN BY: JAH
CHECKED BY: ZWT
SUBMITTED BY: N.LEROSE
SIZE: ANSI D
FILE NAME: MEF24005CF-301.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

UNDERGROUND STORAGE TANK
SECTION

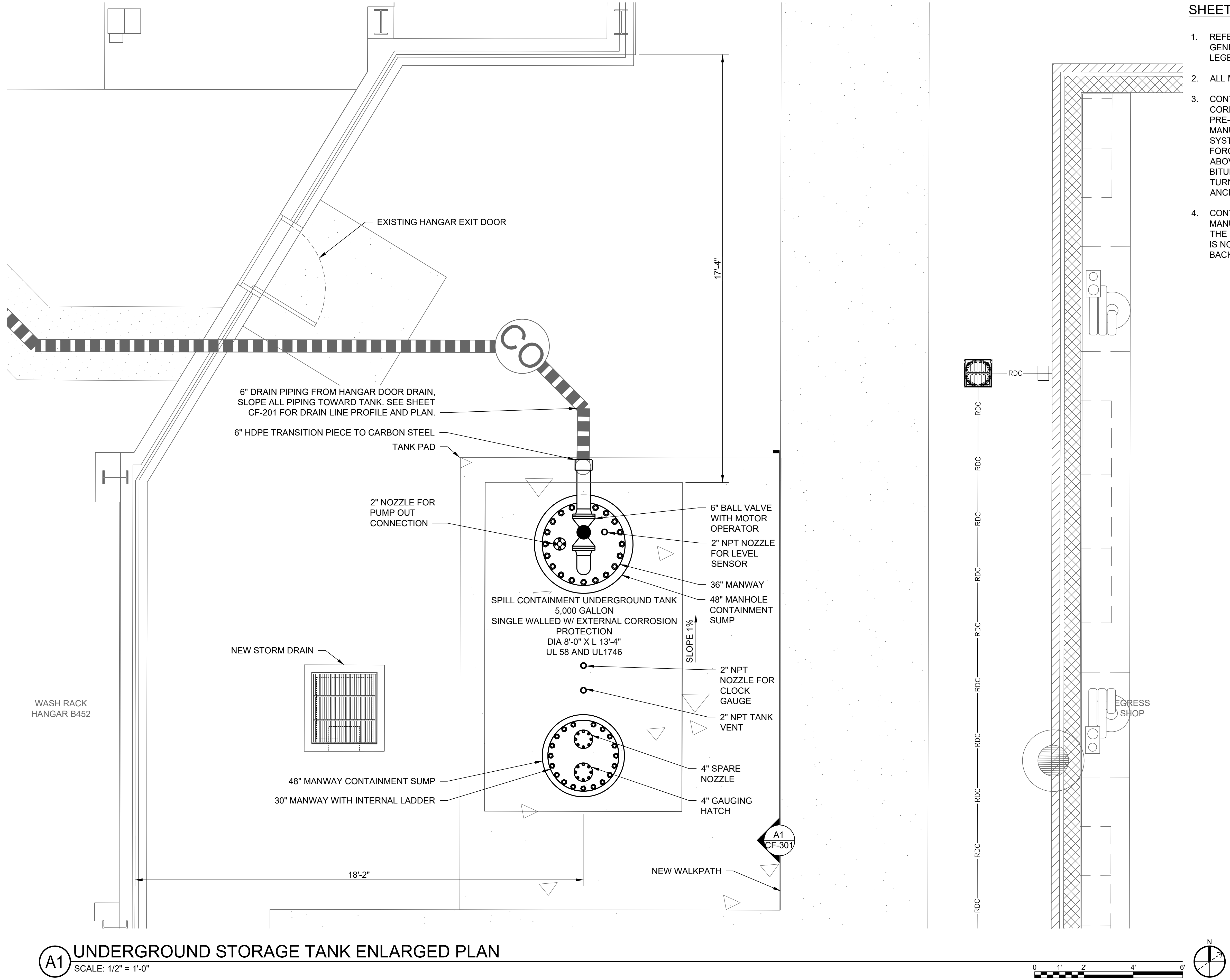
3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

SHEET ID

CF-301

RTA SUBMITTAL

CESAM v20181203


EXISTING HANGAR EXIT DOOR
CO
6" DRAIN PIPING FROM HANGAR DOOR DRAIN, SLOPE ALL PIPING TOWARD TANK. SEE SHEET CF-201 FOR DRAIN LINE PROFILE AND PLAN.
6" HDPE TRANSITION PIECE TO CARBON STEEL
TANK PAD
17'-4"
2" NOZZLE FOR PUMP OUT CONNECTION
6" BALL VALVE WITH MOTOR OPERATOR
2" NPT NOZZLE FOR LEVEL SENSOR
36" MANWAY
48" MANHOLE CONTAINMENT SUMP
SPILL CONTAINMENT UNDERGROUND TANK
5,000 GALLON
SINGLE WALLED W/ EXTERNAL CORROSION PROTECTION
DIA 8'-0" X L 13'-4"
UL 58 AND UL1746
SLOPE 1%
NEW STORM DRAIN
2" NPT NOZZLE FOR CLOCK GAUGE
2" NPT TANK VENT
WASH RACK HANGAR B452
4" SPARE NOZZLE
48" MANWAY CONTAINMENT SUMP
30" MANWAY WITH INTERNAL LADDER
4" GAUGING HATCH
A1
CF-301
NEW WALKPATH
18'-2"
RDC
EGRESS SHOP
0
1'
2'
4'
6'
N

A1 UNDERGROUND STORAGE TANK ENLARGED PLAN

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

SHEET NOTES:

1. REFER TO SHEET CF-001, CF-002, AND CF-003 FOR GENERAL CIVIL, ELECTRICAL, AND MECHANICAL NOTES, LEGEND, AND ABBREVIATIONS.
2. ALL MANHOLES ABOVE UST SHALL BE H20 RATED.
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE CORRECT NUMBER OF HOLD DOWN STRAPS AND PRE-ENGINEERED CONCRETE ANCHORS (WEIGHTS) PER MANUFACTURER'S RECOMMENDATIONS. THE ANCHOR SYSTEM SHALL BE SIZED FOR THE ENTIRE TANK BUOYANT FORCE AND SHALL NOT RELY ON CONCRETE OR SOIL ABOVE THE TANK FOR ANY HOLD DOWN FORCE. BITUMINOUS ASPHALT COATING SHALL BE APPLIED TO TURNBUCKLES AND EXPOSED PORTIONS OF MASONRY ANCHOR.
4. CONTRACTOR IS RESPONSIBLE TO ADHERE TO MANUFACTURER'S RECOMMENDATIONS FOR INSTALLING THE UNDERGROUND STORAGE TANKS. THIS INCLUDES BUT IS NOT LIMITED TO THE EXCAVATION, BEDDING, AND BACKFILL AROUND THE TANKS.

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DESIGNED BY: JAH
DRAWN BY: JAH
CHECKED BY: ZWT
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SIZE: ANSI D
FILE NAME: MEF24005CF-401.dwg
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SOLICITATION NO.:
CONTRACT NO.:
PROJECT NUMBER: MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
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Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

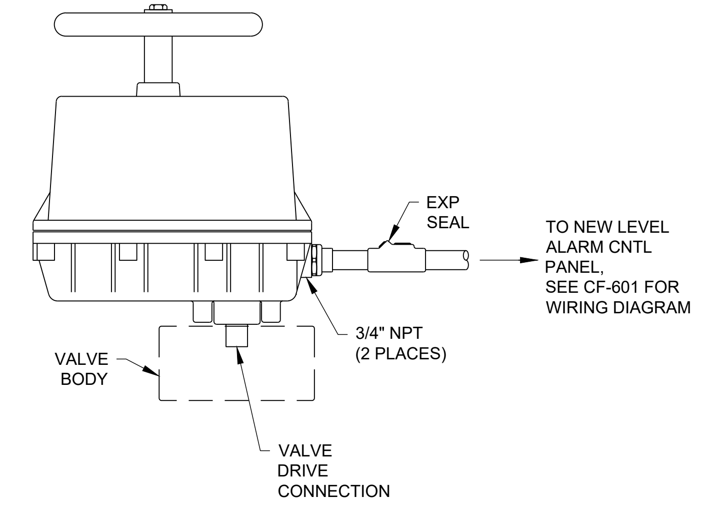
UNDERGROUND STORAGE TANK
ENLARGED PLAN

SHEET ID
CF-401

RTA SUBMITTAL

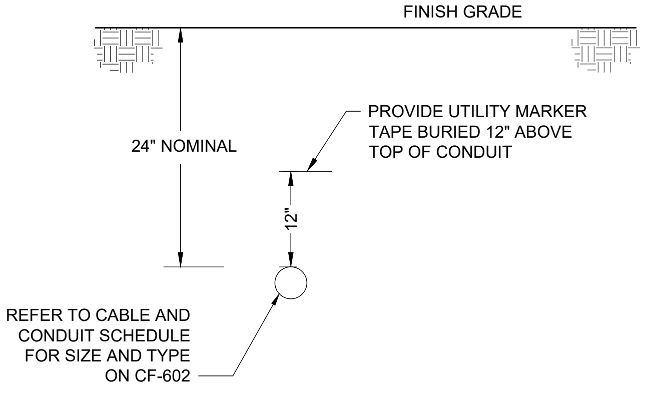
3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

CESAM v20181203



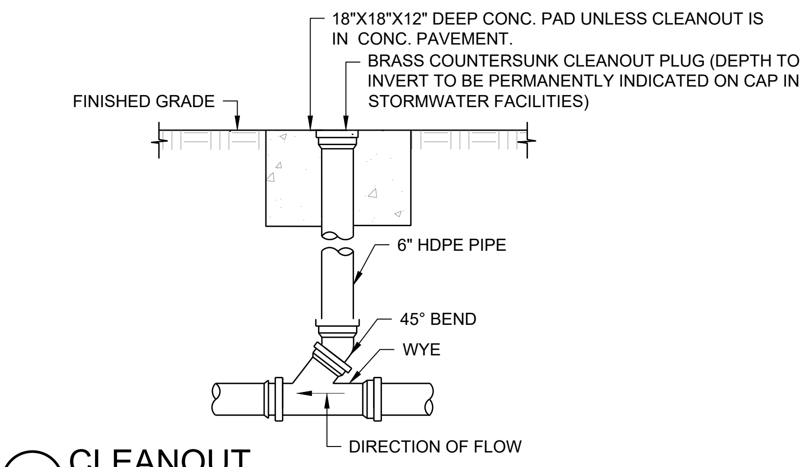
D1 VALVE ACTUATOR DETAIL

SCALE: N.T.S.



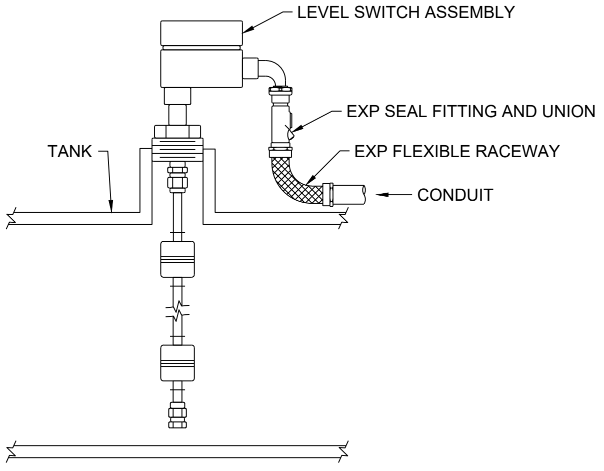
A1 DIRECT BURY CONDUIT

SCALE: N.T.S.


18"X18"X12" DEEP CONC. PAD UNLESS CLEANOUT IS
IN CONC. PAVEMENT.
BRASS COUNTERSUNK CLEANOUT PLUG (DEPTH TO
INVERT TO BE PERMANENTLY INDICATED ON CAP IN
STORMWATER FACILITIES)
FINISHED GRADE
6" HDPE PIPE
45° BEND
WYE
DIRECTION OF FLOW

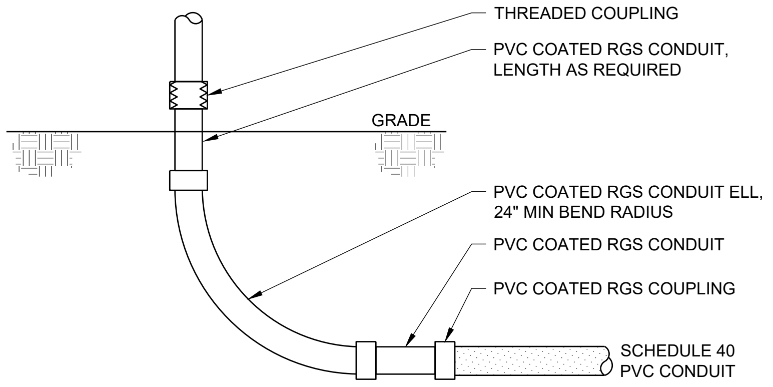
F5 CLEANOUT

SCALE: N.T.S.



D5 TANK LEVEL SWITCH

SCALE: N.T.S.



A5 CONDUIT STUB-UP

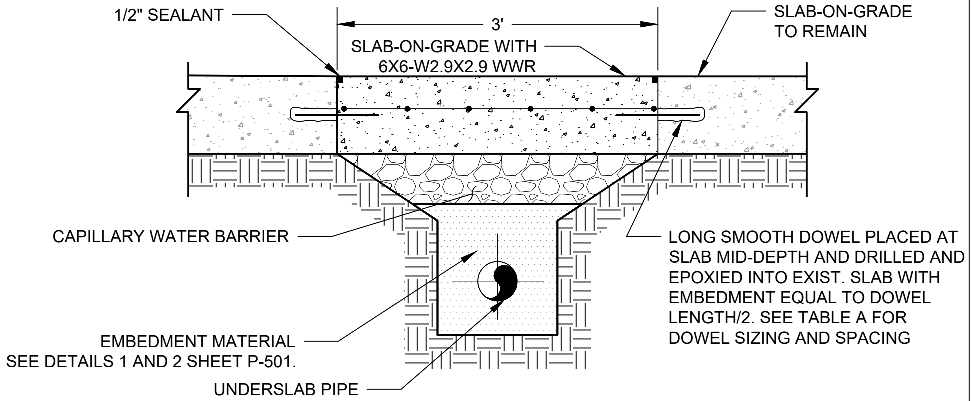
SCALE: N.T.S.

NOTES:

1. SEE CF-001 AND CF-002 FOR FUELING GENERAL NOTES, LEGEND AND ABBREVIATIONS.

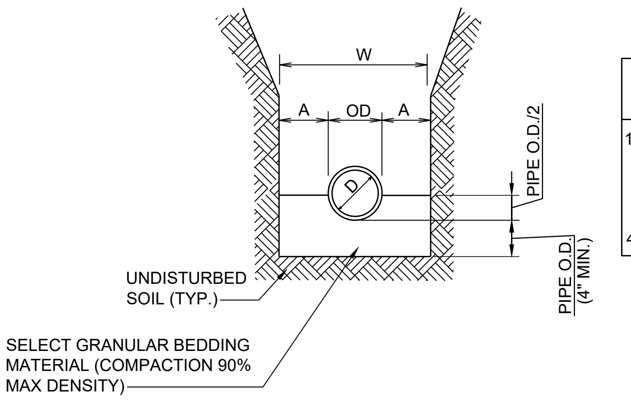
TABLE A:
DOWEL SIZE AND SPACING FOR CONSTRUCTION, CONTRACTION, AND EXPANSION JOINTS

PAVEMENT THICKNESS (IN.)	MINIMUM DOWEL LENGTH (IN.)	MAXIMUM DOWEL SPACING (IN.)	DOWEL DIAMETER AND TYPE
<8	16	12	3/4 IN. BAR
8-11.5	16	12	1 IN. BAR
12-15.5	20	15	1- 1 1/4 IN BAR OR 1 IN. EXTRA STRENGTH PIPE
16-20.5	20	18	1- TO 1-1/2 IN. BAR OR 1- TO 1-1/2 IN. EXTRA STRENGTH PIPE



D8 PAVEMENT REPLACEMENT

SCALE: N.T.S.



PIPE DIA. "D"	MAXIMUM "A"
15" OR SMALLER	8"
16" TO 21"	10"
24" TO 30"	12"
33" TO 42"	15"
48" & LARGER	18"

NOTES:

1. PROVIDE BEDDING IN ACCORDANCE WITH SPEC 31 00 00.
2. MAXIMUM TRENCH WIDTH "W" TAKEN AT TOP OF PIPE.

A8 STANDARD PIPE TRENCH

SCALE: N.T.S.

US Army Corps
of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY:
L. HERNANDEZ
DRAWN BY:
L. HERNANDEZ
CHECKED BY:
L. MCCAULEY
SUBMITTED BY:
N.LEROSE
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
CONTRACT NO.:
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005CF-501.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FUELING DETAILS

3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

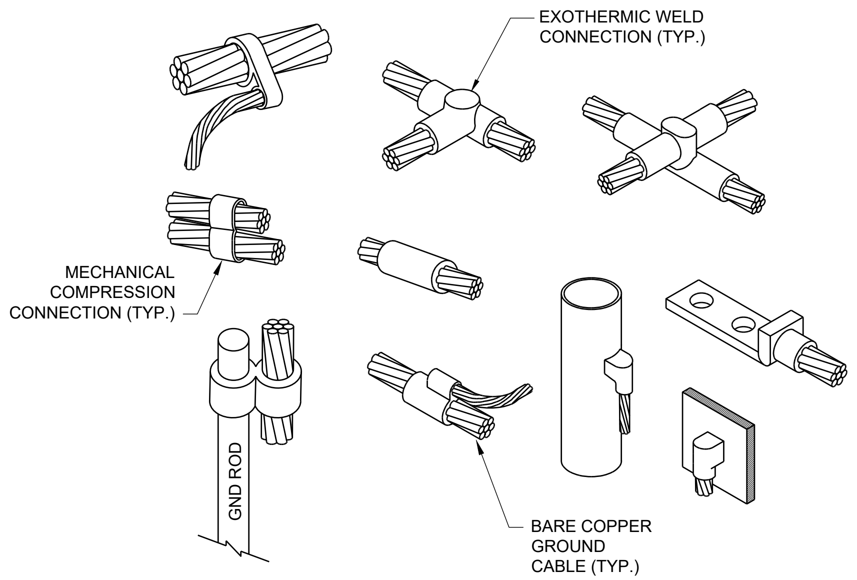
SHEET ID

CF-501

RTA SUBMITTAL

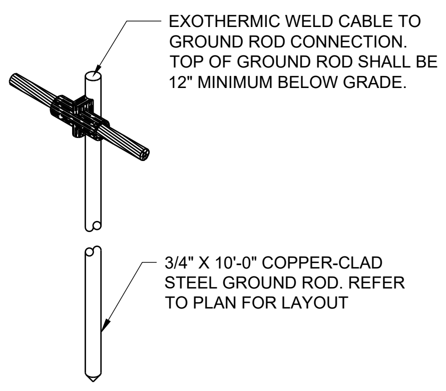
NOTES:

1. SEE CF-001, CF-002, AND CF-003 FOR FUELING GENERAL NOTES, LEGEND AND ABBREVIATIONS.


EXOTHERMIC WELD CONNECTION (TYP.)
MECHANICAL COMPRESSION CONNECTION (TYP.)
GND ROD
BARE COPPER GROUND CABLE (TYP.)

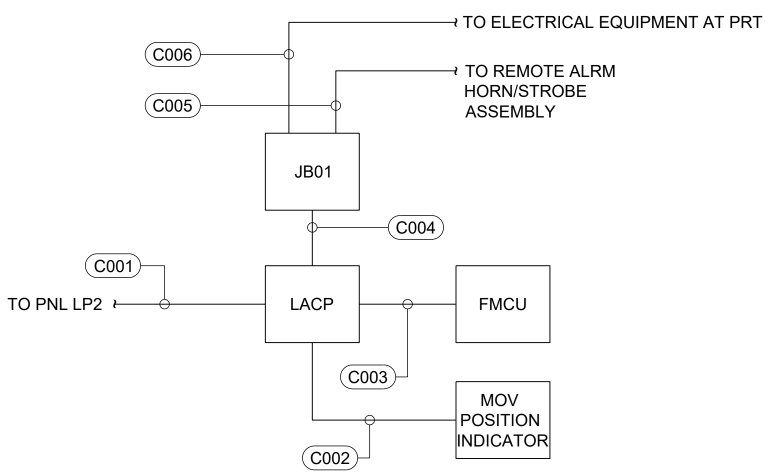
E1 GROUND CABLE CONNECTIONS

SCALE: N.T.S.


EXOTHERMIC WELD CABLE TO GROUND ROD CONNECTION. TOP OF GROUND ROD SHALL BE 12" MINIMUM BELOW GRADE.
3/4" X 10'-0" COPPER-CLAD STEEL GROUND ROD. REFER TO PLAN FOR LAYOUT

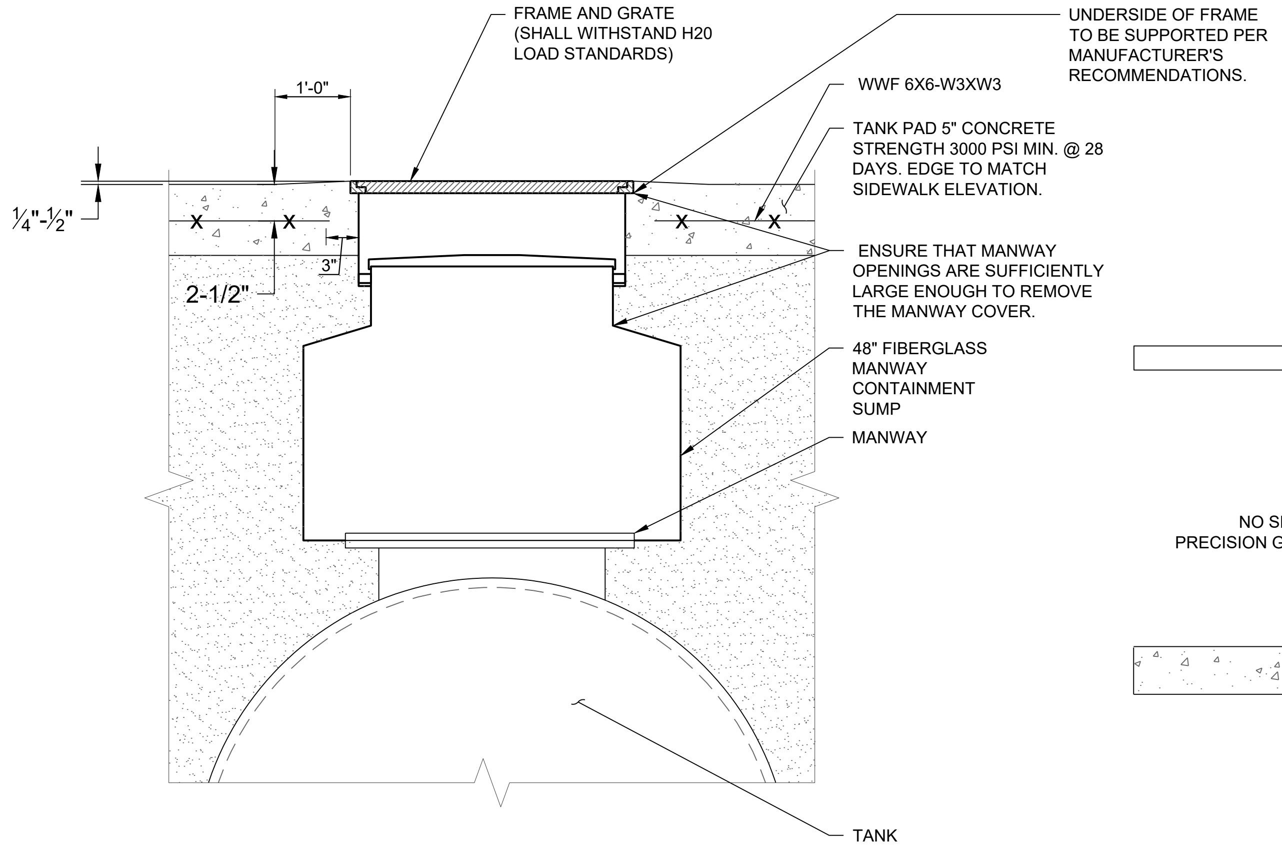
E5 GROUND ROD

SCALE: N.T.S.



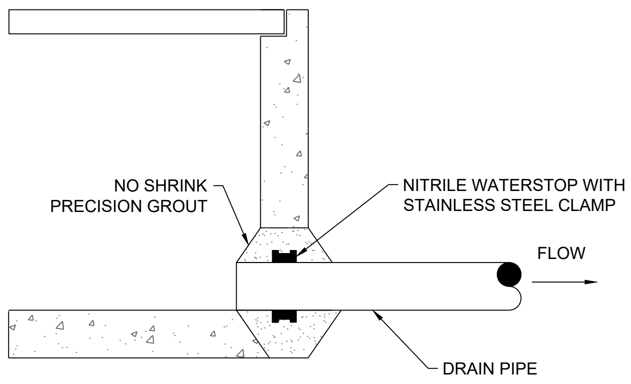
E8 ELECTRICAL BLOCK DIAGRAM

SCALE: N.T.S.


FRAME AND GRATE (SHALL WITHSTAND H20 LOAD STANDARDS)
UNDERSIDE OF FRAME TO BE SUPPORTED PER MANUFACTURER'S RECOMMENDATIONS.
1'-0"
WWF 6X6-W3XW3
TANK PAD 5" CONCRETE STRENGTH 3000 PSI MIN. @ 28 DAYS. EDGE TO MATCH SIDEWALK ELEVATION.
¼"-½"
3"
2-1/2"
ENSURE THAT MANWAY OPENINGS ARE SUFFICIENTLY LARGE ENOUGH TO REMOVE THE MANWAY COVER.
48" FIBERGLASS MANWAY CONTAINMENT SUMP
MANWAY
TANK

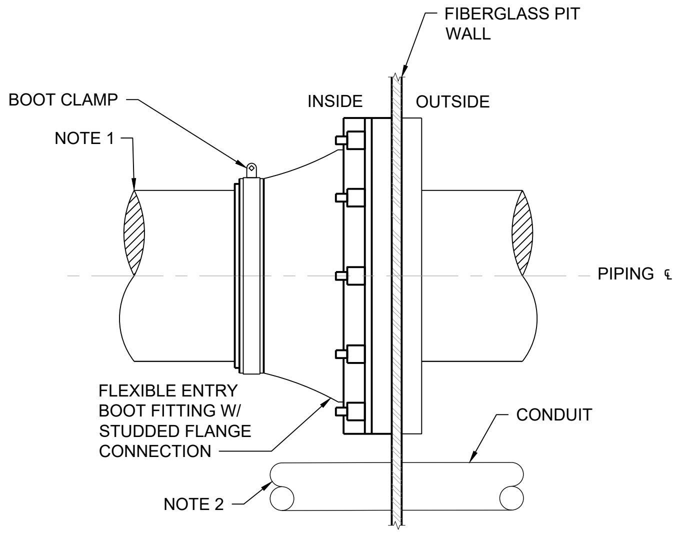
A1 SUMP INSTALLATION IN TRAFFIC AREA

SCALE: N.T.S.


NO SHRINK PRECISION GROUT
NITRILE WATERSTOP WITH STAINLESS STEEL CLAMP
FLOW
DRAIN PIPE

A5 PIPE CONNECTION TO TRENCH

SCALE: N.T.S.



NOTE:

1. INSTALLATION TYPICAL FOR 6" FUEL DRAIN LINE.

2. CONDUIT ENTERING SUMP SHALL BE SEALED. SPLICED CONNECTIONS SHALL BE MADE IN A JUNCTION BOX. SPLICED CONNECTIONS SHALL BE COLD SHRINK WRAPPED TO WATERPROOF CONNECTIONS.

A8 FIBERGLASS SUMP WALL PENETRATION

SCALE: N.T.S.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
L. HERNANDEZ
DRAWN BY:
L. HERNANDEZ
CHECKED BY:
L. MCCAULEY
SUBMITTED BY:
N.LEROSE
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
CONTRACT NO.:
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005CF-502.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FUELING DETAILS

POND
3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

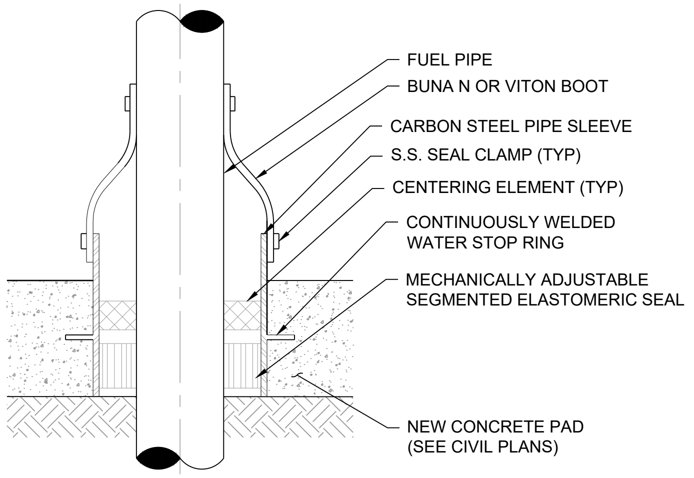
SHEET ID

CF-502

RTA SUBMITTAL

NOTES:

1. SEE CF-001, CF-002, AND CF-003 FOR FUELING GENERAL NOTES, LEGEND AND ABBREVIATIONS.


FUEL PIPE
BUNA N OR VITON BOOT
CARBON STEEL PIPE SLEEVE
S.S. SEAL CLAMP (TYP)
CENTERING ELEMENT (TYP)
CONTINUOUSLY WELDED WATER STOP RING
MECHANICALLY ADJUSTABLE SEGMENTED ELASTOMERIC SEAL
NEW CONCRETE PAD (SEE CIVIL PLANS)

PRODUCT PIPE	SLEEVE DIAMETER
2"	6" DIA.

A1 CONCRETE PENETRATION DETAIL

SCALE: N.T.S.

3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
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US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
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1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: C.DAVIDSON
DRAWN BY: C.DAVIDSON
CHECKED BY: G.SMIRNOV
SUBMITTED BY: N.LEROSE
SIZE: ANSI D
FILE NAME: MEF24005CF-503.dwg
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PROJECT NUMBER: MEF24005

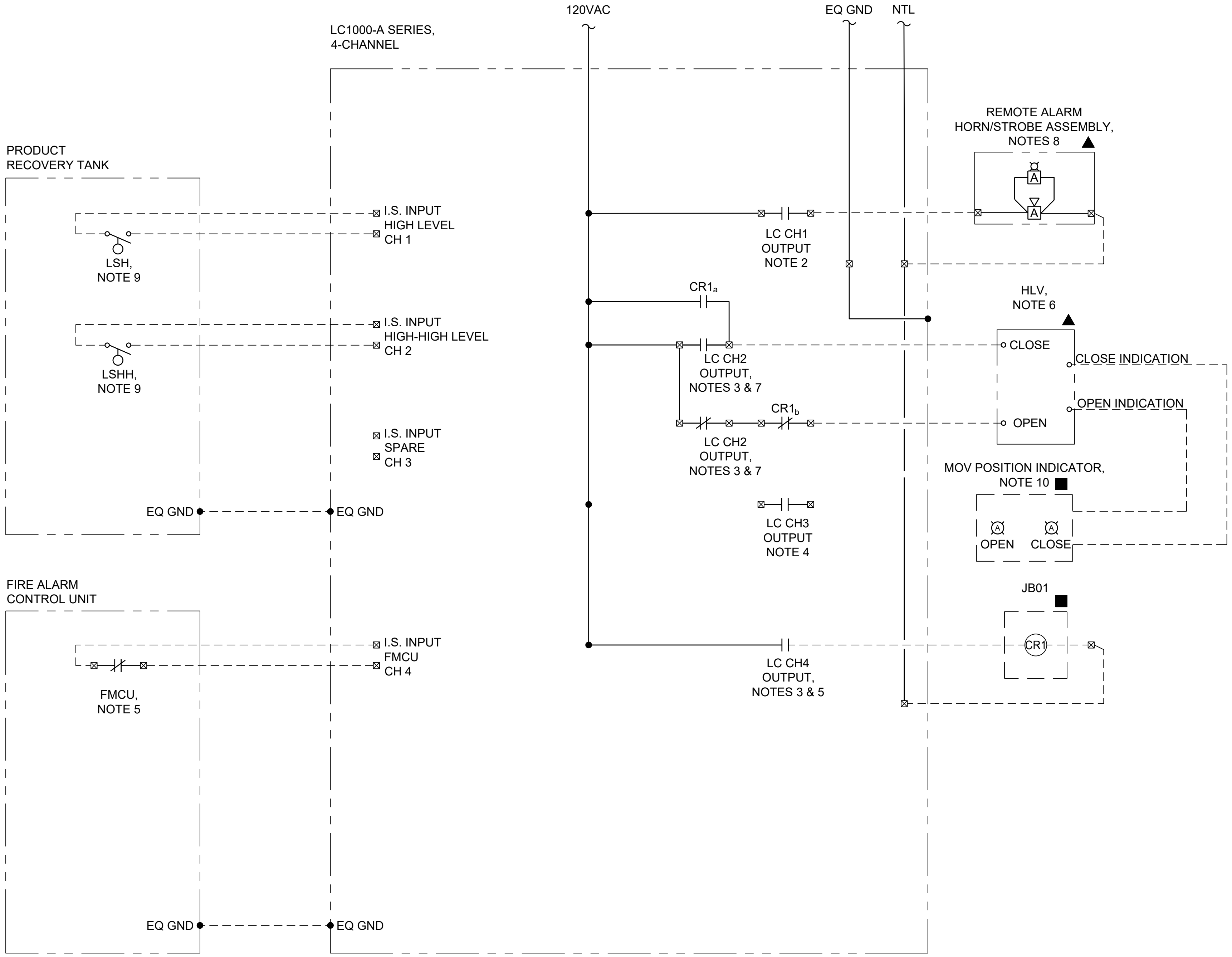
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FUELING DETAILS

SHEET ID
CF-503

RTA SUBMITTAL

CESAM v20181203



NOTES:

1. SEE CF-001, CF-002, AND CF-003 FOR FUELING GENERAL NOTES, LEGEND AND ABBREVIATIONS.
2. THE LC1000-A CONTROL PANEL SHALL ACTIVATE THE CHANNEL 1 OUTPUT RELAY TO ILLUMINATE AN LED LIGHT AND ANNUNCIATE THE HORN/STROBE ALARM WHEN THE HIGH LEVEL IS PRESENT IN THE UNDERGROUND RECOVERY TANK. THE LED LIGHT SHALL REMAIN ACTIVATED UNTIL THE TANK HAS LESS THAN 5% CAPACITY.
3. THE LC1000-A CONTROL PANEL SHALL ACTIVATE THE CHANNEL 2 OUTPUT RELAY TO ILLUMINATE AN LED LIGHT AND TO CLOSE THE HIGH LEVEL CONTROL VALVE (HLV), CAUSING VALVE TO CLOSE. THE OUTPUT SHALL REMAIN ACTIVE UNTIL THE HIGH-HIGH LEVEL CONDITION IS REMOVED, ALLOWING THE VALVE TO RE-OPEN.
4. THE LC100- A CONTROL PANEL SHALL ACTIVATE THE CHANNEL 3 OUTPUT SIMULTANEOUSLY WITH THE CHANNEL 2 OUTPUT IN ORDER TO ILLUMINATE AN LED LIGHT TO SIGNAL THAT THE HIGH LEVEL CONTROL VALVE IS CLOSED. THE OUTPUT SHALL REMAIN ACTIVE UNTIL THE HIGH HIGH LEVEL CINDITION IS REMOVED, ALLOWING THE VALVE TO RE-OPEN.
5. CONDUIT AND CONDUCTORS SHALL BE ROUTED FROM THE EXISTING FIRE ALARM CONTROL UNIT WITH INTEGRAL FIBER CARD (FMCU) TO THE PNEUMERCATOR LC1000-A.THE FMCU SHALL ACTIVATE THE CHANNEL 4 OUTPUT RELAY TO ILLUMINATE AN LED LIGHT AND TO CLOSE CONTACT CR1_A, CAUSING THE VALVE TO CLOSE WHEN THE FIRE ALARM CONTROL UNIT RECEIVES A SIGNAL TO ACTIVATE. THE OUTPUT SHALL REMAIN ACTIVE UNTIL THE FMCU IS RESET ALLOWING THE VALVE TO RE-OPEN.
6. CONTRACTOR SHALL PROVIDE A 6" VALVE WITH ACTUATOR. VALVE SHALL BE NORMALLY CLOSED, (ENERGIZED TO OPEN, DE-ENERGIZED TO CLOSE). UPON LOSS OF POWER VALVE SHALL BE DRIVEN TO FAILSAFE POSITION (CLOSED).
7. THE LC1000-A PANEL RELAY OUTPUTS CAN BE PROGRAMMED TO ACTUATE ON ANY COMBINATION OF INPUT CONDITIONS. CHANNEL 2 RELAY OUTPUT CONTACTS SHALL BE PROGRAMMED TO CLOSE AND LATCH UPON ANY ACTIVATION OF INPUT CHANNELS 1, OR 2. OUTPUT CHANNEL 2 SHALL BE UNLATCHED BY PRESSING RESET REGARDLESS OF THE INPUT CONDITIONS.
8. PROVIDE A REMOTE VEEDER ROOT HORN/STROBE ASSEMBLY, PART NUMBER 790091-001 OR APPROVED EQUAL. ADJUST HORN CUT-OFF TIMER TO APPROXIMATELY 10 SECONDS. THE LC1000-A CONTROL PANEL SHALL ACTIVATE THE CHANNEL 1 OUTPUT RELAY TO ACTIVATE THE REMOTE ALARM HORN/STROBE ASSEMBLY.
9. PROVIDE A PNEUMERCATOR LS-600 LEVEL PROBE OR APPROVED EQUAL. PROBE SHALL FEATURE TWO (2) LEVEL POINTS; LSH SHALL BE SET AT 5% AND LSHH SHALL BE SET AT 95% PRODUCT LEVEL.
10. CONTRACTOR SHALL PROVIDE AND INSTALL A NEMA 12 MOV POSITION INDICATOR PANEL. PANEL SHALL BE EQUIPPED WITH ONE OPEN AMBER LED LIGHT AND ONE CLOSE AMBER LED LIGHT. CONTRACTOR SHALL MOUNT PANEL ADJACENT TO LC1000-A SERIES PANEL.

LOCATION LEGEND:

———	INDICATES LOCAL WIRING WITHIN EQUIPMENT
- - -	INDICATES WIRING EXTERNAL TO EQUIPMENT
- · -	INDICATES ENCLOSURE
▲	AT OR NEAR UNDERGROUND STORAGE TANK
■	AT OR NEAR LC1000 CONTROL PANEL

SUPPLEMENTAL LEGEND:

HLV	HIGH LEVEL CONTROL VALVE
I.S.	INTRINSICALLY SAFE
⊠	TERMINAL CONNECTIONS
CRX_x	SMALL LETTER INDICATES FORM C CONTACT FOR DPDT RELAY

3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
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POND JOB NO: 1220832

US Army Corps
of Engineers®

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JUNE 2024
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PROJECT NUMBER:
MEF24005
DESIGNED BY:
L. HERNANDEZ
DRAWN BY:
L. HERNANDEZ
CHECKED BY:
L. MCCAULEY
SUBMITTED BY:
N.LEROSE
SIZE:
ANSI D
FILE NAME:
MEF24005CF-601.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

WIRING DIAGRAM

SHEET ID
CF-601

RTA SUBMITTAL

CESAM v20181203

NOTES:

1. SEE CF-001, CF-002, AND CF-003 FOR FUELING GENERAL NOTES, LEGEND AND ABBREVIATIONS.
2. CONTRACTOR SHALL INSTALL PULL STRING FOR FUTURE.

CONDUIT AND CABLE SCHEDULE

CONDUIT NUMBER	CIRCUIT		CONDUIT		CONDUCTORS PER CONDUIT				NOTE
	FROM	TO	QTY	SIZE	QTY	SIZE	GND	TYPE	
C001	PANEL LP2	NEW LEVEL ALARM CNTL PANEL	1	3/4"	2	#12	#12	THWN	LEVEL ALARM CONTROL PANEL POWER
					2	#12	#12	THWN	MOV POWER
			1	3/4"					SPARE, NOTE 2
C002	NEW LEVEL ALARM CNTL PANEL	MOV POSITION INDICATOR PANEL	1	3/4"	3	#12	#12	THWN	MOV INDICATORS
C003	NEW LEVEL ALARM CNTL PANEL	FMCU	1	3/4"	2	#12	#12	THWN	FMCU SIGNAL
C004	NEW LEVEL ALARM CNTL PANEL	JB01	1	1"	2	#12	#12	THWN	HORN/STROBE ANNUNCIATOR
					2	#12	#12	THWN	LSH 01
					2	#12	#12	THWN	LSHH 01
					3	#12	#12	THWN	MOV POWER
					3	#12	#12	THWN	MOV INDICATORS
			1	3/4"					SPARE, NOTE 2
			1	3/4"					SPARE, NOTE 2
			1	3/4"					SPARE, NOTE 2
C005	JB01	HORN/STROBE ANNUNCIATOR	1	3/4"	2	#12	#12	THWN	HORN/STROBE ANNUNCIATOR
C006	JB01	CONDUIT STUB UP	1	3/4"	2	#12	#12	THWN	LSH 01
					2	#12	#12	THWN	LSHH 01
					3	#12	#12	THWN	MOV POWER
					3	#12	#12	THWN	MOV INDICATORS
			1	3/4"					SPARE, NOTE 2
			1	3/4"					SPARE, NOTE 2
			1	3/4"					SPARE, NOTE 2
C007	CONDUIT STUB UP	JB02	1	3/4"	2	#12	#12	THWN	LSH 01
					2	#12	#12	THWN	LSHH 01
					3	#12	#12	THWN	MOV POWER
					3	#12	#12	THWN	MOV INDICATORS
			1	3/4"					SPARE, NOTE 2
			1	3/4"					SPARE, NOTE 2
			1	3/4"					SPARE, NOTE 2
C008	JB02	LEVEL PROBE	1	3/4"	2	#12	#12	THWN	LSH 01
					2	#12	#12	THWN	LSHH 01
			1	3/4"					SPARE
C009	JB02	MOV	1	3/4"	3	#12	#12	THWN	MOV POWER
					3	#12	#12	THWN	MOV INDICATORS
			1	3/4"					SPARE, NOTE 2
			1	3/4"					SPARE, NOTE 2

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
CONTRACT NO.:
PROJECT NUMBER:
MEF24005

DESIGNED BY:
L. HERNANDEZ
DRAWN BY:
L. HERNANDEZ
CHECKED BY:
L. MCCAULEY
SUBMITTED BY:
N.LEROSE
SIZE:
ANSI D
FILE NAME:
MEF24005CF-602.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

CONDUIT AND CABLE SCHEDULE

SHEET ID
CF-602

RTA SUBMITTAL

POND
3500 PARKWAY LANE, SUITE 500
PEACHTREE CORNERS, GA 30092
PHONE (678) 336-7740
FAX (678) 336-7744
WEBSITE: WWW.PONDCO.COM
POND JOB NO: 1220832

CESAM v20181203

EXISTING CONDITIONS AND COORDINATION:

1. PROJECT PLANS HAVE BEEN DEVELOPED FROM A VISUAL EXAMINATION (WHERE APPLICABLE) OF THE EXISTING BUILDING AND/OR PROJECT PLANS PROVIDED BY THE ARCHITECT OR PROJECT MANAGER. ACTUAL CONDITIONS MAY VARY. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND DETAILS RELATED TO EXISTING CONSTRUCTION AND CONDITIONS AND MAKE MINOR ADJUSTMENTS AS REQUIRED. REPORT SIGNIFICANT DIFFERENCES TO ARCHITECT/ENGINEER.
2. SEE ARCHITECTURAL PLANS FOR ALL DIMENSIONS NOT SHOWN.
3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL PROJECT DRAWINGS AND SPECIFICATIONS INCLUDING THESE STRUCTURAL DRAWINGS.
4. APPLICABLE SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO PRODUCTION.
5. FINISH FLOOR ELEVATION IS TO TOP OF PLYWOOD DECKING OR TOP OF SLAB AS APPLICABLE U.N.O.
6. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT / SEOR OF ANY POTENTIAL OR DISCOVERED CONFLICTS, OMISSIONS OR DISCREPANCIES IN THE CONTRACT DRAWINGS OF OR RELATED TO THE STRUCTURAL DESIGN OF THE BUILDING PRIOR TO PROCEEDING.
7. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR PROVIDING DESIGN OR COORDINATING OTHER ENGINEERING DISCIPLINES, ARCHITECTURAL DETAILING, ADA COMPLIANCE, OR ANY OTHER NON-STRUCTURAL CODES OR STANDARDS. EVERY EFFORT HAS BEEN MADE TO ACCOMMODATE AND COORDINATE THESE ITEMS, BUT FINAL COORDINATION AND COMPLIANCE IS THE RESPONSIBILITY OF THE ARCHITECT, PROJECT MANAGER, OR OWNER AS IS APPLICABLE FOR THE PROJECT.

STATEMENT OF SPECIAL INSPECTIONS

1. THE SEOR IS NOT RESPONSIBLE FOR PERFORMING THE SPECIAL INSPECTIONS ON THIS PROJECT. A QUALIFIED INSPECTOR SHALL BE REQUIRED IN ACCORDANCE WITH IBC 1704.2.1.
2. THE MATERIAL, SYSTEMS, COMPONENTS, AND WORK REQUIRED TO HAVE SPECIAL INSPECTIONS OR TESTS ARE INDICATED IN THE SCHEDULE OF SPECIAL INSPECTIONS.
3. THE TYPE OF EACH SPECIAL INSPECTION OR TEST IS NOTED IN THE SPECIAL INSPECTION SCHEDULE.
4. ANY ADDITIONAL STRUCTURAL OBSERVATIONS IN ACCORDANCE WITH IBC 1704.6 ARE NOTED ON THESE DRAWINGS.
5. THE FREQUENCY OF THE SPECIAL INSPECTION (PERIODIC / CONTINUOUS) IS NOTED WITH THE SPECIAL INSPECTION SCHEDULE.

GEOTECHNICAL INFORMATION

1. THE FOUNDATION SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT BY THE UNITED STATE ARMY CORP OF ENGINEERS (USACE), MOBILE DISTRICT DATED JANUARY 2024 . FOR THE PURPOSE OF THESE STRUCTURAL DRAWINGS, SELECT INFORMATION HAS BEEN EXTRACTED FROM THE REFERENCED GEOTECHNICAL REPORT AND NOTED BELOW; HOWEVER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN, READ, AND FOLLOW ALL RECOMMENDATIONS CONTAINED IN THE REFERENCED GEOTECHNICAL REPORT.
2. THE CONTRACTOR SHALL VERIFY THE CAPABILITY OF THE SOIL STRATA TO SUPPORT FOUNDATIONS PRIOR TO CASTING THE FOUNDATION.
3. THE FOUNDATION SHALL EXTEND TO A MINIMUM OF THE FROST PENETRATION DEPTH, TO A DEPTH WHERE SOIL MOISTURE CONTENT DOES NOT FLUCTUATE, A MINIMUM DEPTH OF 24" INTO ORIGINAL SOIL OR A MINIMUM DEPTH TO ACHIEVE THE BELOW NOTED BEARING CAPACITY (WHICHEVER IS GREATER).
4. NOTIFY THE ENGINEER SHOULD ANY UNUSUAL SOIL CONDITIONS BE ENCOUNTERED.

FOUNDATIONS:

1. THE "CONTROLLED AREA" SHALL EXTEND BENEATH AND 5 FEET BEYOND THE BUILDING AREA. THE "CONTROLLED AREA" SHALL BE COMPLETELY STRIPPED AND ALL SURFACE VEGETATION, ORGANIC FILL OR TOPSOIL, DEBRIS AND ANY OTHER
2. THE SUBGRADE ELEVATIONS SHALL BE ESTABLISHED BY CONSTRUCTION OF AN ENGINEERED FILL USING SUITABLE FILL EARTH AND PLACED IN LIFTS NOT TO EXCEED 8". THE SUBGRADE SHALL BE DENSIFIED TO 98% (MIN.) STANDARD DENSITY (ASTM D-698A). VERIFYING IN-PLACE DENSITY TESTS ARE REQUIRED.
3. THE CONTRACTOR SHALL DE-WATER THE AREA OF THE BUILDING FOOTPRINT AS REQUIRED TO PREVENT PONDING OF WATER IN THE FOOTING TRENCHES AND SLAB AREAS DURING EXCAVATION AND PRIOR TO CASTING FOOTINGS.
4. ASSUMED BEARING CAPACITY AS LISTED BELOW SHALL BE VERIFIED PRIOR TO CASTING FOOTINGS.
   - 4.1. FOUNDATION DESIGN:
     - 4.1.1. NEW ADDITION SHALL BE SUPPORTED ON HELICAL PIERS FOUNDATION AT GRID SHOWN ON DRAWINGS. HELICAL PIER DESIGNER SHALL DESIGN FOR LOADS INDICATED ON DRAWINGS.
     - 4.1.2. INSTALLATION OF PIERS SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATION, MANUFACTURER RECOMMENDATION, AND APPLICABLE INDUSTRY STANDARDS.

CONCRETE:

1. CONCRETE SHALL CONFORM TO THE BUILDING CODE REQUIREMENT FOR REINFORCED CONCRETE (ACI 318).
2. CONCRETE SHALL HAVE THE FOLLOWING COMPRESSIVE STRENGTH (f'c) AT 28 DAYS BASED UPON ITS USE:
   - 2.1. FOOTINGS -- 3000 PSI (MIN.)
   - 2.2. SLAB ON GRADE --- 3000 PSI (MIN.)
   - 2.3. COLUMNS, BEAMS -- 4000 PSI (MIN.)
   - 2.4. ELEVATED SLABS --- 4000 PSI (MIN.)
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60.
4. WELDED WIRE FABRIC (W.W.F.) SHALL CONFORM TO ASTM A1064.
5. SLABS ON GRADE SHALL BE REINFORCED AS INDICATED ON PLANS W.W.F. PLACED AT 1/3 SLAB THICKNESS FROM TOP.
6. CAST IN PLACE ANCHOR RODS SHALL CONFORM TO ASTM F 1554 GR. 36.
7. MINIMUM CONCRETE COVER, (UNLESS OTHERWISE NOTED ON DRAWINGS) FOR REINFORCING SHALL BE:
   - 7.1. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH --------- 3 IN.
   - 7.2. EXPOSED TO EARTH OR WEATHER -- 2 IN.
   - 7.3. BEAMS AND COLUMNS --- $1\frac{1}{2}$ IN.
8. LAP ALL CONTINUOUS REINFORCEMENT WITH A CLASS B LAP SPLICE AS SPECIFIED IN LAP SPLICE SCHEDULE.
9. AT EXTERIOR BUILDING CORNERS FOOTINGS, PROVIDE 3'-0" X 3'-0" CORNER BARS, SAME SIZE AND NUMBER AS DETAILED HORIZONTAL BARS.
10. DOWEL ALL FOOTINGS WHERE THEY ABUT WITH SAME REINFORCEMENT AS DETAILED HORIZONTALLY AND WITH 2'-0" MINIMUM LAP.
11. CAST IN PLACE CONCRETE WALLS ARE UNSTABLE AND REQUIRE TEMPORARY CONSTRUCTION BRACING UNTIL INSTALLATION OF PERMANENT CONNECTION . TEMPORARY CONSTRUCTION BRACING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR
12. SUBMITTALS
13. CONCRETE MIX DESIGNS
   - 13.1. SUBMITTALS SHALL BE IN ACCORDANCE WITH ACI 301 AND ACI 318 (LATEST EDITIONS) PRIOR TO COMMENCEMENT OF CONCRETE WORK.
   - 13.2. SUBMITTAL SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT AND ENGINEER OF RECORD PRIOR TO SCHEDULING CONCRETE DELIVERY TO JOB SITE.
14. REINFORCEMENT SUBMITTALS
   - 14.1. SUBMITTALS SHALL BE IN ACCORDANCE WITH ACI 315 (LATEST EDITION) AND SHOW, AT MINIMUM, ALL SIZES, DIMENSIONS, LOCATIONS OF ALL REINFORCEMENT AND EMBEDMENTS.
   - 14.2. SUBMITTAL SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD PRIOR TO FABRICATING REINFORCEMENT.

MASONRY:

1. CONCRETE MASONRY UNITS SHALL BE HOLLOW LOADBEARING CONFORMING TO ASTM C 90 ALL LOCATIONS.
2. MORTAR SHALL BE BE PROPORTIONED IN ACCORDANCE WITH ASTM C270.
3. GROUT SHALL BE PROPORTIONED IN ACCORDANCE WITH ASTM C476.
4. TYPE M OR S FOR BELOW GROUND LEVEL AND EITHER TYPE N OR S FOR ABOVE GROUND CONFORMING TO ASTM C-270.
   - 4.3. MINIMUM INDIVIDUAL NET AREA COMPRESSIVE STRENGTH OF SINGLE CMU----------------------------------- 2000 PSI
   - 4.4. MINIMUM DESIGN STRENGTH OF MASONRY (f'_m)-- 2000 PSI
   - 4.5. GROUT COMPRESSIVE STRENGTH -- 3000 PSI
5. HORIZONTAL JOINT REINFORCING SHALL BE LADDER TYPE FABRICATED WITH A SINGLE PAIR OF 9 GAGE SIDE RODS AND 9 GAGE CROSSRODS SPACED NOT MORE THAN 16" O.C. REINFORCEMENT SHALL BE FOR TOTAL WIDTH OF SINGLE AND MULTIPLE WIDTH UNIT WALLS.
6. FILLED CELLS INDICATED ON PLAN SHALL BE FILLED WITH GROUT IN LIFTS OF 48" (MAX). TERMINATE LIFT 1-1/2" BELOW BED JOINT TO CREATE SHEAR KEY TO NEXT LIFT.
7. STARTER DOWELS AND EACH ADDITIONAL VERTICAL BAR SHALL BE TIED IN ACCORDANCE WITH TMS SPECIFICATIONS AND LAPPED PER CMU LAP SCHEDULE.
8. "WET SETTING" DOWELS SHALL NOT BE ALLOWED.
9. MASONRY WALLS ARE UNSTABLE AND REQUIRE TEMPORARY CONSTRUCTION BRACING UNTIL INSTALLATION OF PERMANENT CONNECTION. TEMPORARY CONSTRUCTION BRACING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. MASONRY CONTROL JOINTS (M.C.J.) SHALL BE REQUIRED WITH SPACING SHOWN ON ARCHITECTURAL PLAN, MAXIMUM SPACING OF 25' OR 3 TIMES WALL HEIGHT ALONG WALL LENGTH AND 12'-0" MAX FROM WALL CORNERS. CONSTRUCT AS SHOWN ON MASONRY CONTROL JOINT DETAIL ON STRUCTURAL DRAWINGS.

STRUCTURAL STEEL

1. STRUCTURAL W-SECTION SHAPES SHALL CONFORM TO ASTM A992.
2. STRUCTURAL RECTANGULAR HSS SHALL CONFORM TO ASTM A500 GR. C.
3. STRUCTURAL ROUND HSS SHALL CONFORM TO ASTM A500 GR. C.
4. STRUCTURAL AND MISCELLANEOUS STEEL ITEMS SHALL CONFORM TO ASTM A36.
5. STRUCTURAL BOLTS SHALL BE ASTM A-325X WITH NUTS AND WASHERS.
6. DETAIL, FABRICATION, AND ERECTION OF ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH LATEST AISC STANDARDS AND SPECIFICATIONS.
7. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 (LATEST EDITION)
8. ELECTRODES SHALL BE E70XX.
9. UNLESS OTHERWISE NOTED OR DETAILED, ALL SHEAR CONNECTIONS SHALL BE DESIGNED USING THE APPROPRIATE DATA FROM PART 10 -“DESIGN OF SIMPLE SHEAR CONNECTIONS” FROM THE AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION. DESIGN END REACTION IS 60% OF TOTAL ALLOWABLE LOAD (60% x Wc) FROM THE ALLOWABLE LOAD OF BEAM TABLE FROM PART 9 - “DESIGN OF CONNECTING ELEMENTS” OF THE AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.

STEEL DECK:

1. TYPICAL ROOF DECK
   - 1.1. STEEL ROOF DECK SHALL BE 22 GAUGE, TYPE "B" (WIDE RIB) CORRUGATED DECK WHERE INDICATED ON THE ROOF PLAN, WITH THE FOLLOWING MINIMUM PROPERTIES:
     - 1.1.1. MOMENT OF INERTIA, POSITIVE (Ip): 0.155 in^4/ft
     - 1.1.2. MOMENT OF INERTIA, NEGATIVE (In): 0.183 in^4/ft
     - 1.1.3. SECTION MODULUS, POSITIVE (Sp): 0.186 in^3/ft
     - 1.1.4. SECTION MODULUS, NEGATIVE (Sn): 0.192 in^3/ft
   - 1.2. THE ROOF DECK SHALL BE INSTALLED AND ANCHORED TO THE SUPPORTING STRUCTURE IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND/OR AS INDICATED IN FASTENING PATTERN SCHEDULE ON THESE DRAWINGS (WHICHEVER IS MORE STRINGENT).

DESIGN LOADS AND PARAMETERS:

1. LIVE LOADS:
   - 1.1. ROOF -- 20 PSF (REDUCIBLE)
   - 1.2. ADDITION FLOOR -- 125 PSF
   - 1.3. CATWALK -- 40 PSF
2. DEAD LOADS
   - 2.1. ROOF-- 10 PSF
   - 2.2. CEILING -- 10 PSF
3. SNOW LOAD --- 10 PSF
4. WIND PARAMETERS:
   - 4.1. DESIGN CODE -- ASCE 7-16
   - 4.2. DESIGN WIND SPEED (ULT. 3 SEC GUST) -------------------------- 108 MPH
   - 4.3. OCCUPANCY CATEGORY -- II
   - 4.4. WIND EXPOSURE CATEGORY --- C
   - 4.5. INTERNAL PRESSURE COEFFICIENTS (ADDITION) -------------- +/- 0.18
   - 4.5. INTERNAL PRESSURE COEFFICIENTS (EXISTING) -------------- +/- 0.55
5. SEISMIC PARAMETERS:
   - 5.1. SEISMIC USE GROUP -- II
   - 5.2. SEISMIC IMPORTANCE FACTOR (Ie)-------------------------------------1.00
   - 5.4. SITE CLASS--- D (ASSUMED)
   - 5.8. SEISMIC DESIGN CATEGORY --- C
   - 5.9. PEAK GROUND ACCELERATION (PGA) ------------------------------ 0.121
   - 5.10. MAPPED SPECTRAL RESPONSE ACCELERATION:
     - 5.10.1. Ss --- 0.241
     - 5.10.2. S1 --- 0.116
   - 5.11. SPECTRAL RESPONSE COEFFICIENTS:
     - 5.11.1. Sds --- 0.257
     - 5.11.2. Sd1 --- 0.183

APPLICABLE CODES

UNLESS OTHERWISE NOTED OR SPECIFIED, ALL CONSTRUCTION SHALL CONFIRM TO THE FOLLOWING CODES (LATEST EDITION UNLESS NOTED OTHERWISE):

UFC 1-200-01	DOD BUILDING CODE, WITH CHANGE 1 06-12-2023
UFC 3-310-03	ROOFING, WITH CHANGE 5, 06-12-2020
UFC 3-301-01	STRUCTURAL ENGINEERING, 10-02-2023
UFC 4-010-01	DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS, WITH CHANGE 2,07-30-2022
UFC 4-211-01	AIRCRAFT MAINTENANCE HANGARS, WITH CHANGE 2, 04-20-2021
IBC 2021	INTERNATIONAL BUILDING CODE
IEBC 2021	INTERNATIONAL EXISTING BUILDING CODE
ASCE 7-16	MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES
ACI 318	AMERICAN CONCRETE INSTITUTE
AISC 360	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI S100	NORTH AMERICAN SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
AISI S202	CODE OF STANDARD PRACTICE FOR COLD-FORMED STEEL MEMBERS
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS (AS SPECIFIED IN CODES)
AWS D1.1	AMERICAN WELDING SOCIETY
SDI-RD	STANDARD FOR STEEL ROOF DECK
SDI-QA/QC	STANDARD FOR QUALITY CONTROL AND QUALITY ASSURANCE FOR INSTALLATION OF STEEL DECK
SJI 100	STANDARD SPECIFICATION LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS, K-SERIES, LH-SERIES, DHL-SERIES, AND JOIST GIRDERS
TMS 402	BUILDING CODE FOR MASONRY STRUCTURES
TMS 602	SPECIFICATION FOR MASONRY STRUCTURES
WRI/CRSI	DESIGN OF SLAB-ON-GROUND FOUNDATIONS - WITH 1996 UPDATE

CMU LINTEL SCHEDULE

MARK	WALL SIZE	MAX SPAN (X'-X")	SIZE	REINFORCEMENT
8L-1	8"	3'-4"	8" HIGH U-BLOCK	2-#4 BOTT.
8L-2	8"	6'-4"	16" HIGH U-BLOCK	2-#5 TOP & BOTT.
8L-3	8"	10'-8"	24" HIGH U-BLOCK	2-#5 TOP & BOTT.

WALL SCHEDULE NOTES:

1. BEAR LINTELS 8" MINIMUM EACH END. PROVIDE VERTICAL REINFORCEMENT AND FULL HEIGHT GROUT (SAME SIZE REINFORCEMENT AS SPECIFIED IN WALL) AT EACH. JAMB CELL.
2. JAMB CELL REINFORCEMENT SHALL BE CONTINUOUS THROUGH U-BLOCK

CMU WALL REINFORCEMENT SCHEDULE

MARK	LOCATION	SIZE	MAX HT.	VERT. REINF.	NOTES
W-1	INTERIOR	6" CMU	10'-0"	#4 @ 48" O.C.	NON-LOAD BEARING
W-2	INTERIOR	8" CMU	20'-8"	#5 @ 32" O.C.	PARTITION
W-3	ADDITION	8" CMU	20'-8"	#5 @ 24" O.C.	LOAD BEARING

WALL SCHEDULE NOTES:

* WALL HEIGHT MEASURED FROM FINISH FLOOR TO TOP OF BOND BEAM

** WALL HEIGHT MEASURED FROM OUTSIDE FINISH GRADE TO TOP OF WALL/SLAB

1. PROVIDE DOWEL SAME SIZE AS VERTICAL BAR @ EA. VERTICAL BAR. LAP AS INDICATED IN SCHEDULE
2. PROVIDE CORNER REINFORCEMENT AS INDICATED IN 2.6/S-003
3. PROVIDE VERTICAL BAR AT EA. DOOR AND WINDOW JAMB AS INDICATED IN 2.3/S-003

6" CMU REINFORCEMENT LAP SPLICE SCHEDULE

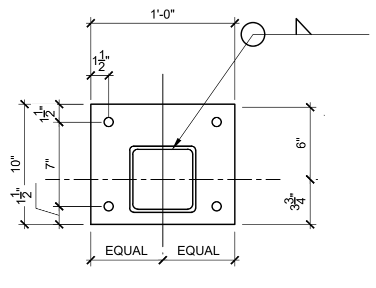
MASONRY STRENGTH (f'm) (PSI)	BAR SIZE (#)	DEVELOPMENT/ LAP LENGTH (FT.-IN.)	NOTES
2000	3	1'-6"	REINFORCEMENT TO BE CENTERED IN CELL UNLESS OTHERWISE NOTED
	4	2'-0"	
	5	2'-6"	
	6	3'-4"	

8" CMU REINFORCEMENT LAP SPLICE SCHEDULE

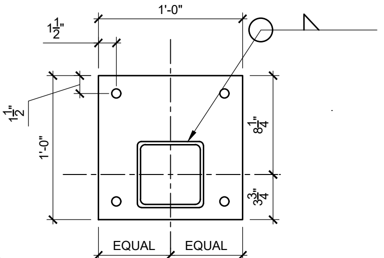
MASONRY STRENGTH (f'm) (PSI)	BAR SIZE (#)	DEVELOPMENT/ LAP LENGTH (FT.-IN.)	NOTES
2000	3	1'-6"	REINFORCEMENT TO BE CENTERED IN CELL UNLESS OTHERWISE NOTED
	4	2'-0"	
	5	2'-6"	
	6	3'-4"	

BASE PLATE & ANCHOR BOLT SCHEDULE

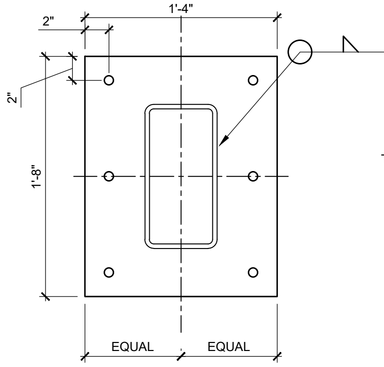
MARK	COLUMN SIZE	SIZE	ANCHOR RODS
BP-1	HSS $5\frac{1}{2}$x$5\frac{1}{2}$	$\frac{3}{4}$"x0'-10"x1'-0"	(4) - $\frac{3}{4}$"Ø (9" EMBED)
BP-2	HSS $5\frac{1}{2}$x$5\frac{1}{2}$	$\frac{3}{4}$"x1'-0"x1'-0"	(4) - $\frac{3}{4}$"Ø (9" EMBED)
BP-3	HSS 12x6	1"x1'-4"x1'-8"	(6) - 1"Ø (12" EMBED)
BP-4	HSS $5\frac{1}{2}$X$5\frac{1}{2}$ W/ BRACE	1"x1'-5"x1'-8"	(4) - 1"Ø (12" EMBED)
BP-5	HSS 5x5	$\frac{3}{4}$"x1'-0"x1'-0"	(4) - $\frac{3}{4}$"Ø (9" EMBED)



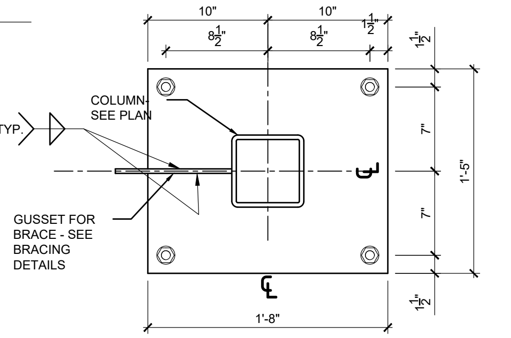
BP-1
S-001
BASE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



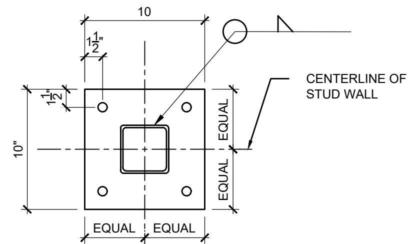
BP-2
S-001
BASE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



BP-3
S-001
BASE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



BP-4
S-001
BASE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"



BP-5
S-001
BASE PLATE DETAIL
SCALE: 1 1/2" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: TNS	ISSUE DATE: JUNE 2024
DRAWN BY: TNS	SOLICITATION NO.: -
CHECKED BY: JDD	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005S-001.DWG

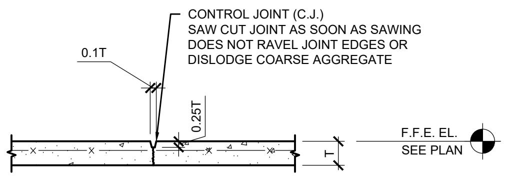
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

GENERAL NOTES,
SCHEDULES, AND DETAILS

SHEET ID
S-001

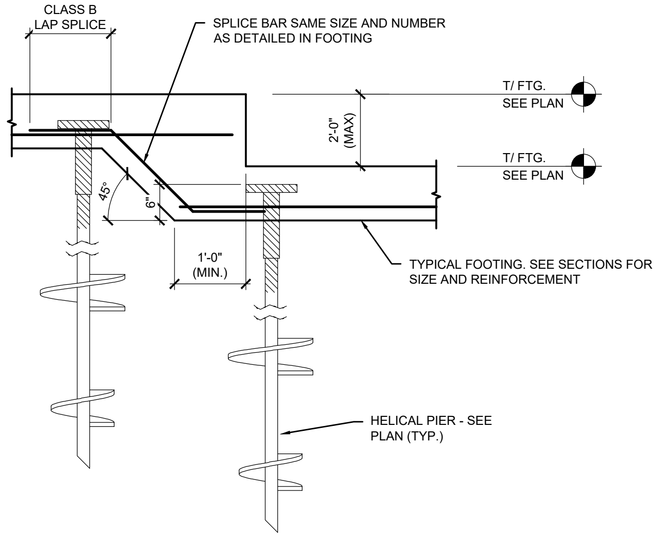
RTA SUBMITTAL

CESAM v20181203


CONTROL JOINT (C.J.)
SAW CUT JOINT AS SOON AS SAWING
DOES NOT RAVEL JOINT EDGES OR
DISLODGE COARSE AGGREGATE
0.1T
0.25T
T
F.F.E. EL.
SEE PLAN

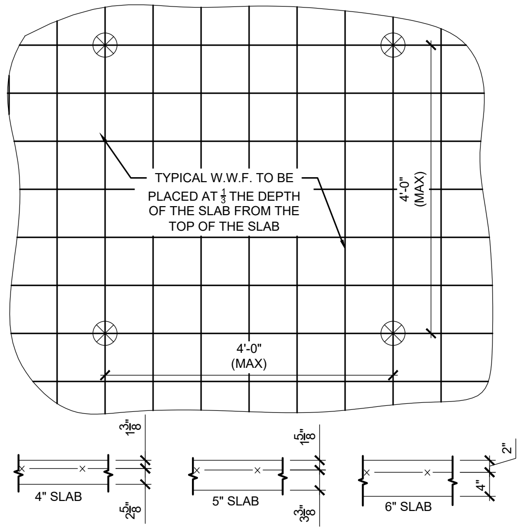
1 S-002 CONCRETE CONTROL JOINT (C.J.)

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"



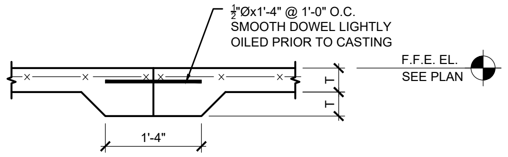
2 S-002 TYPICAL FOOTING STEP

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"



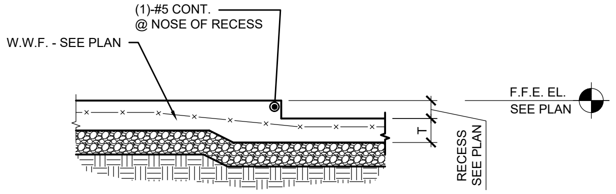
3 S-002 TYP. W.W.F. PLACEMENT DIAGRAM

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"



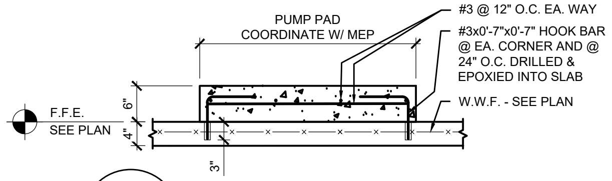
4 S-002 CONSTRUCTION JOINT

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"



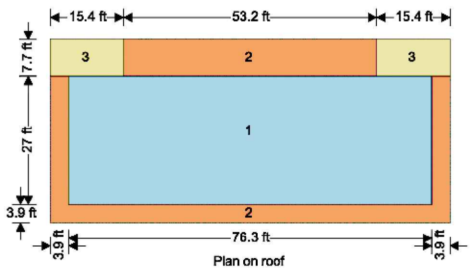
5 S-002 TYP. SLAB RECESS

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"

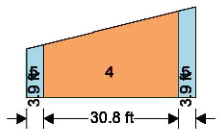


7 S-002 PUMP PAD DETAIL

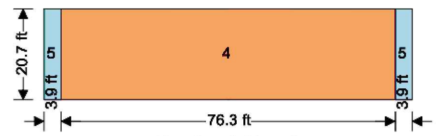
1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"



Plan on roof



Elevation of gable wall



Elevation of side wall

Components and cladding pressures - Roof (Figure 30.3-5B)

Component	Zone	Length (ft)	Width (ft)	Eff. area (ft²)	+GCₚ	-GCₚ	Pres (+ve) (psf)	Pres (-ve (psf)
<=10 sf	1	-	-	10.0	0.40	-1.30	12.6 #	-32.3
20 sf	1	-	-	20.0	0.37	-1.24	12.0 #	-31.0
50 sf	1	-	-	50.0	0.33	-1.16	11.1 #	-29.2
>100 sf	1	-	-	100.1	0.30	-1.10	10.5 #	-27.9
<=10 sf	2	-	-	10.0	0.40	-1.60	12.6 #	-38.8
20 sf	2	-	-	20.0	0.37	-1.48	12.0 #	-36.2
50 sf	2	-	-	50.0	0.33	-1.32	11.1 #	-32.7
>100 sf	2	-	-	100.1	0.30	-1.20	10.5 #	-30.1
<=10 sf	3	-	-	10.0	0.40	-2.90	12.6 #	-67.1
20 sf	3	-	-	20.0	0.37	-2.63	12.0 #	-61.2
50 sf	3	-	-	50.0	0.33	-2.27	11.1 #	-53.4
>100 sf	3	-	-	100.1	0.30	-2.00	10.5 #	-47.5

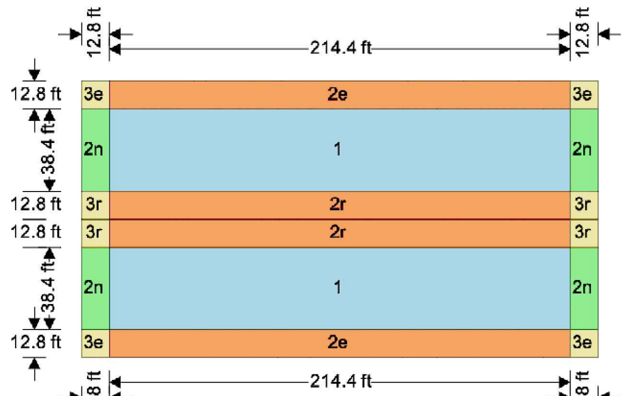
The final net design wind pressure, including all permitted reductions, used in the design shall not be less than 16psf acting in either direction

Components and cladding pressures - Wall (Table 30.3-1)

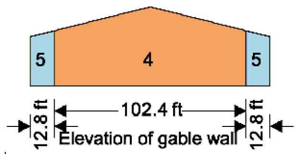
Component	Zone	Length (ft)	Width (ft)	Eff. area (ft²)	+GCₚ	-GCₚ	Pres (+ve) (psf)	Pres (-ve (psf)
<=10 sf	4	-	-	10.0	1.00	-1.10	25.7	-27.9
50 sf	4	-	-	50.0	0.88	-0.98	23.0	-25.2
200 sf	4	-	-	200.0	0.77	-0.87	20.7	-22.9
>500 sf	4	-	-	500.1	0.70	-0.80	19.2	-21.4
<=10 sf	5	-	-	10.0	1.00	-1.40	25.7	-34.4
50 sf	5	-	-	50.0	0.88	-1.15	23.0	-29.1
200 sf	5	-	-	200.0	0.77	-0.94	20.7	-24.4
>500 sf	5	-	-	500.1	0.70	-0.80	19.2	-21.4

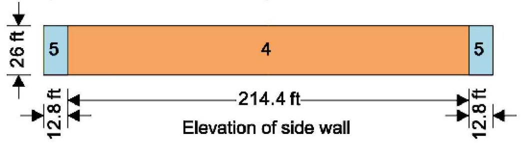
A S-002 ADDITION C&C PRESSURE DIAGRAM AND TABLES

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



Plan on roof





Elevation of side wall

Components and cladding pressures - Roof (Figure 30.3-2B)

Component	Zone	Length (ft)	Width (ft)	Eff. area (ft²)	+GCₚ	-GCₚ	Pres (+ve) (psf)	Pres (-ve (psf)
<=2 sf	1	-	-	2.0	0.70	-2.00	31.9	-65.0
20 sf	1	-	-	20.0	0.46	-2.00	25.9	-65.0
50 sf	1	-	-	50.0	0.37	-1.15	23.5	-43.2
>100 sf	1	-	-	100.1	0.30	-0.50	21.7	-26.8
<=2 sf	2e	-	-	2.0	0.70	-2.00	31.9	-65.0
20 sf	2e	-	-	20.0	0.46	-2.00	25.9	-65.0
50 sf	2e	-	-	50.0	0.37	-1.15	23.5	-43.2
>100 sf	2e	-	-	100.1	0.30	-0.50	21.7	-26.8
<=2 sf	2n	-	-	2.0	0.70	-3.00	31.9	-90.5
10 sf	2n	-	-	10.0	0.54	-3.00	27.7	-90.5
100 sf	2n	-	-	100.0	0.30	-1.57	21.7	-54.0
>250 sf	2n	-	-	250.1	0.30	-1.00	21.7	-39.5
<=2 sf	2r	-	-	2.0	0.70	-3.00	31.9	-90.5
10 sf	2r	-	-	10.0	0.54	-3.00	27.7	-90.5
100 sf	2r	-	-	100.0	0.30	-1.57	21.7	-54.0
>250 sf	2r	-	-	250.1	0.30	-1.00	21.7	-39.5
<=2 sf	3e	-	-	2.0	0.70	-3.00	31.9	-90.5
10 sf	3e	-	-	10.0	0.54	-3.00	27.7	-90.5
100 sf	3e	-	-	100.0	0.30	-1.57	21.7	-54.0
>250 sf	3e	-	-	250.1	0.30	-1.00	21.7	-39.5
<=2 sf	3r	-	-	2.0	0.70	-3.60	31.9	-105.8
10 sf	3r	-	-	10.0	0.54	-3.60	27.7	-105.8
50 sf	3r	-	-	50.0	0.37	-2.34	23.5	-73.7
>100 sf	3r	-	-	100.1	0.30	-1.80	21.7	-59.9

Components and cladding pressures - Wall (Table 30.3-1)

Component	Zone	Length (ft)	Width (ft)	Eff. area (ft²)	+GCₚ	-GCₚ	Pres (+ve) (psf)	Pres (-ve (psf)
<=10 sf	4	-	-	10.0	1.00	-1.10	39.5	-42.0
50 sf	4	-	-	50.0	0.88	-0.98	36.4	-38.9
200 sf	4	-	-	200.0	0.77	-0.87	33.6	-36.2
>500 sf	4	-	-	500.1	0.70	-0.80	31.9	-34.4
<=10 sf	5	-	-	10.0	1.00	-1.40	39.5	-49.7
50 sf	5	-	-	50.0	0.88	-1.15	36.4	-43.4
200 sf	5	-	-	200.0	0.77	-0.94	33.6	-38.0
>500 sf	5	-	-	500.1	0.70	-0.80	31.9	-34.4

B S-002 EXISTING B452 C&C PRESSURE DIAGRAM AND TABLES

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

US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

DESIGNED BY:
TNS
DRAWN BY:
TNS
CHECKED BY:
JDD
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D
FILE NAME:
MEF24005S-002.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

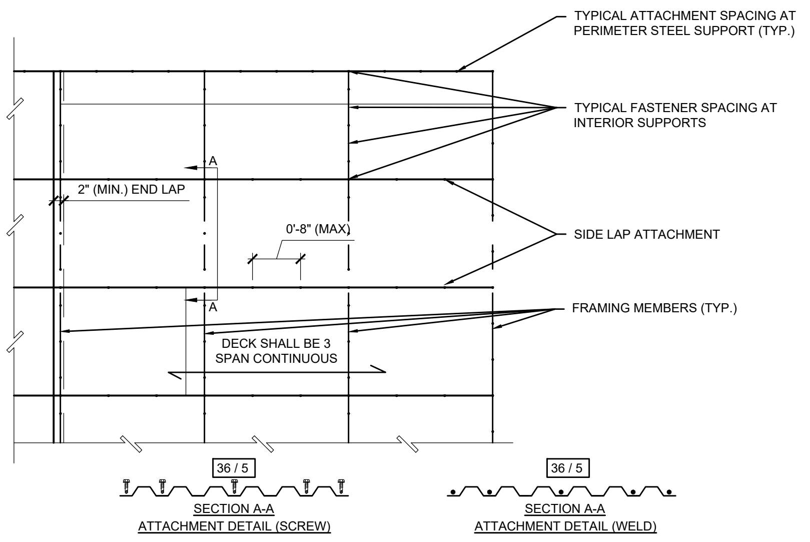
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

TYPICAL SECTIONS,
DETAILS, AND SCHEDULES

SHEET ID
S-002

RTA SUBMITTAL


TYPICAL ATTACHMENT SPACING AT PERIMETER STEEL SUPPORT (TYP.)
TYPICAL FASTENER SPACING AT INTERIOR SUPPORTS
2" (MIN.) END LAP
A
0'-8" (MAX)
SIDE LAP ATTACHMENT
FRAMING MEMBERS (TYP.)
A
DECK SHALL BE 3 SPAN CONTINUOUS
36 / 5
36 / 5

SECTION A-A
ATTACHMENT DETAIL (SCREW)

SECTION A-A
ATTACHMENT DETAIL (WELD)

SCREW ATTACHMENT NOTES:

1. ALL INTERIOR & PERIMETER ATTACHMENT SHALL BE MINIMUM #12 TEK SCREWS @ SPACING SHOWN IN DETAILS
2. ALL SIDE LAP ATTACHMENTS SHALL BE #10 TEK SCREWS @ SPACING SHOWN IN DETAILS

WELD ATTACHMENT NOTES:

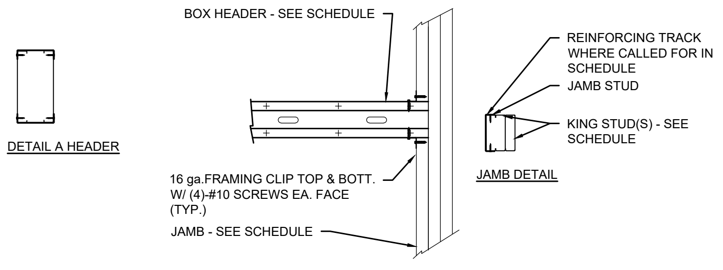
1. ALL WELDS SHALL BE MINIMUM $\frac{5}{8}$"Ø DIAMETER PUDDLE WELDS.
2. FOR DECKS THINNER THAN 22 GAUGE, 14 GAUGE WELDING WASHERS ARE REQUIRED

1 / S-003 TYP. ROOF DECK ATTACHMENT

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"

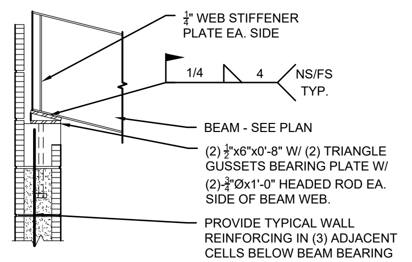
CFMF HEADER SCHEDULE

MARK	MAX SPAN (X'-X")	MEMBER SIZE	TOP & BOTT. TRACK	DETAIL	CONNECTION	JAMB
H-1	3'-4"	2-600S162-43	600T150-43	A	#10 SCREWS @ 12" O.C. TOP & BOTT. TRACK	1-600S162-43 JAMB STUD 2-600S162-54 KING STUDS
H-2	6'-4"	2-800S162-43	600T150-43	A	#10 SCREWS @ 12" O.C. TOP & BOTT. TRACK	1-600S162-43 JAMB STUD 2-600S162-54 KING STUDS


BOX HEADER - SEE SCHEDULE
DETAIL A HEADER
16 ga.FRAMING CLIP TOP & BOTT. W/ (4)-#10 SCREWS EA. FACE (TYP.)
JAMB - SEE SCHEDULE
JAMB SECTION
REINFORCING TRACK WHERE CALLED FOR IN SCHEDULE
JAMB STUD
KING STUD(S) - SEE SCHEDULE
JAMB DETAIL

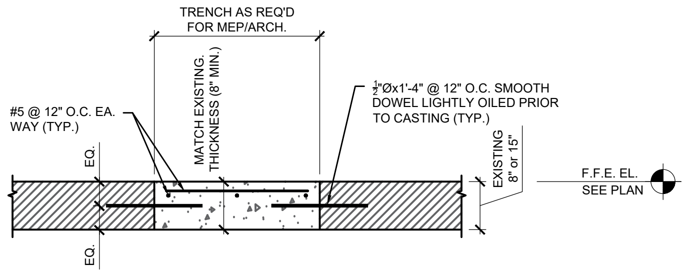
2 / S-003 TYP. CFMF HEADER

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"


$\frac{1}{4}$" WEB STIFFENER PLATE EA. SIDE
1/4
4
NS/FS TYP.
BEAM - SEE PLAN
(2) $\frac{1}{2}$"x6"x0'-8" W/ (2) TRIANGLE GUSSETS BEARING PLATE W/ (2)-$\frac{3}{4}$"Øx1'-0" HEADED ROD EA. SIDE OF BEAM WEB.
PROVIDE TYPICAL WALL REINFORCING IN (3) ADJACENT CELLS BELOW BEAM BEARING

3 / S-003 TYPICAL BEAM BRNG. ON CMU

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"


TRENCH AS REQ'D FOR MEP/ARCH.
MATCH EXISTING. THICKNESS (8" MIN.)
#5 @ 12" O.C. EA. WAY (TYP.)
$\frac{1}{2}$"Øx1'-4" @ 12" O.C. SMOOTH DOWEL LIGHTLY OILED PRIOR TO CASTING (TYP.)
EQ.
EQ.
EXISTING 8" or 15"
F.F.E. EL. SEE PLAN

1.4 / S-003 CONCRETE PATCH DETAIL

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"

CONCRETE REINFORCEMENT LAP SPLICE SCHEDULE

CONCRETE COMPRESSIVE STRENGTH		3000 PSI		4000 PSI		5000 PSI	
BAR SIZE (#)	SPLICE TYPE	TOP BAR (IN.)	OTHER BAR (IN.)	TOP BAR (IN.)	OTHER BAR (IN.)	TOP BAR (IN.)	OTHER BAR (IN.)
3	DEVELOPMENT LENGTH	21	16	18	14	17	13
	CLASS B LAP SPLICE	28	21	24	18	22	17
4	DEVELOPMENT LENGTH	28	22	25	19	22	17
	CLASS B LAP SPLICE	37	28	32	25	29	22
5	DEVELOPMENT LENGTH	36	27	31	24	28	21
	CLASS B LAP SPLICE	46	36	40	31	36	28
6	DEVELOPMENT LENGTH	43	33	37	28	33	25
	CLASS B LAP SPLICE	56	43	48	37	43	33
7	DEVELOPMENT LENGTH	62	48	54	42	48	37
	CLASS B LAP SPLICE	81	62	70	54	63	48
8	DEVELOPMENT LENGTH	71	55	62	47	55	42
	CLASS B LAP SPLICE	93	71	80	62	72	55
9	DEVELOPMENT LENGTH	80	62	70	54	62	48
	CLASS B LAP SPLICE	104	80	90	70	81	62
10	DEVELOPMENT LENGTH	90	70	78	60	70	54
	CLASS B LAP SPLICE	118	90	102	78	91	70
11	DEVELOPMENT LENGTH	100	77	87	67	78	60
	CLASS B LAP SPLICE	131	100	113	87	101	78

REINFORCEMENT LAP SPICE NOTES

1. "TOP BAR" INDICATES MORE THAN 12" OF FRESH CONCRETE PLACED BELOW SPICE (ψ_t = 1.3)
2. "OTHER BAR" INDICATES BAR WITH LESS THAN 12" OF FRESH CONCRETE PLACED BELOW SPLICE (ψ_t = 1.0)
3. LAP SCHEDULE ASSUMES NORMAL WEIGHT CONCRETE (λ = 1.0)
4. LAP SCHEDULE ASSUMES UNCOATED BARS (ψ_e = 1.0)
5. SPACING / CLEAR COVER REQUIREMENTS:
   - 5.1. CLEAR SPACING OF BARS BEING DEVELOPED OR LAP SPLICED NOT LESS THAN ONE BAR DIAMETER, CLEAR COVER NOT LESS THAN ONE BAR DIAMETER, AND STIRRUPS OR TIES THROUGHOUT LAP SPLICE NOT LESS THAN CODE MINIMUM.
   - (OR)
   - 5.2. CLEAR SPACING OF BARS BEING DEVELOPED OR LAP SPLICED NOT LESS THAN 2 BAR DIAMETERS AND CONCRETE COVER NOT LESS THAN BAR DIAMETER.
6. NOTIFY ENGINEER OF RECORD IF CONDITIONS/ASSUMPTIONS ABOVE ARE NOT MET.

STD. 90° HOOK LENGTH

BAR SIZE (#)	TOTAL HOOK LENGTH (IN.)
3	6
4	8
5	10
6	12
7	14
8	15
9	18
10	20
11	22

STD. 180° HOOK LENGTH

BAR SIZE (#)	TOTAL HOOK LENGTH (IN.)
3	4
4	4
5	5
6	6
7	7
8	7
9	9
10	10
11	11

DEVELOPMENT LENGTH OF STD. 90° HOOK

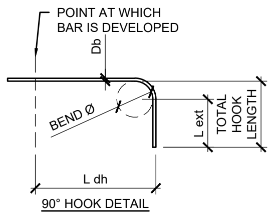
	f'c	3000 PSI	4000 PSI	5000 PSI
BAR SIZE (#)		LENGTH [L dh] (IN.)		
3		6	5	5
4		8	7	6
5		10	9	8
6		12	10	9
7		14	12	11
8		15	14	12
9		17	15	14
10		20	17	16
11		22	19	17

REINFORCEMENT HOOK NOTES

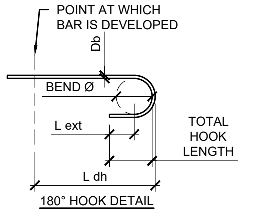
1. HOOK LENGTH ASSUMES NORMAL WEIGHT CONCRETE (λ = 1.0)
2. HOOK LENGTH ASSUMES UNCOATED BARS (ψ_e = 1.0)
3. HOOK LENGTH ASSUMES SIDE COVER (NORMAL TO PLANE OF HOOK >=2.5" AND FOR 90° HOOK WITH COVER ON BAR EXTENSION BEYOND HOOK >=2" (ψ_e = 0.7)
4. HOOK LENGTH ASSUMES NO CONFINEMENT REINFORCEMENT (ψ_e = 1.0)

STD. HOOK GEOMETRY

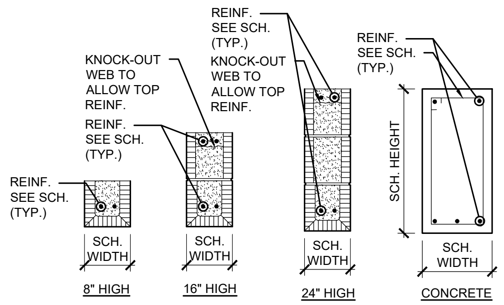
TYPE OF STANDARD HOOK	BAR SIZE (#)	MINIMUM INSIDE BEND DIAMETER	STRAIGHT EXTENSION (IN.)	TYPE OF STANDARD HOOK
90 DEGREE HOOK	#3 - #8	6 * Db	12 * Db	90° DETAIL
	#9 - #11	8 * Db		
180 DEGREE HOOK	#3 - #8	6 * Db	GREATER OF 4 * Db AND 2.5"	180° DETAIL
	#9 - #11	8 * Db		



90° HOOK DETAIL

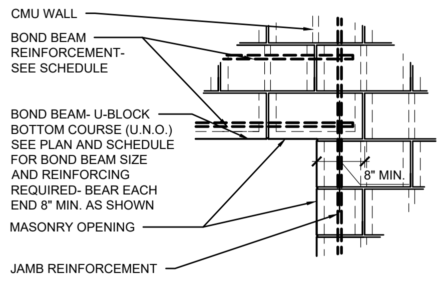


180° HOOK DETAIL



2.1 / S-003 CMU LINTEL DETAILS

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"


CMU WALL
BOND BEAM REINFORCEMENT- SEE SCHEDULE
BOND BEAM- U-BLOCK BOTTOM COURSE (U.N.O.) SEE PLAN AND SCHEDULE FOR BOND BEAM SIZE AND REINFORCING REQUIRED- BEAR EACH END 8" MIN. AS SHOWN
MASONRY OPENING
JAMB REINFORCEMENT
8" MIN.

2.2 / S-003 CMU LINTEL ELEVATION

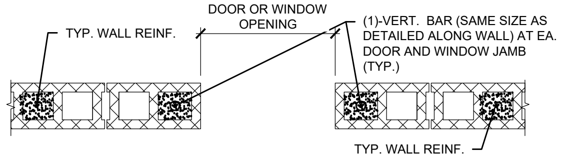
1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"

CMU LINTEL SCHEDULE

MARK	WALL SIZE	MAX SPAN (X'-X")	SIZE	REINFORCEMENT
6L-1	6"	3'-4"	8" HIGH U-BLOCK	1-#5 BOTT.
6L-2	6"	8'-0"	16" HIGH U-BLOCK	1-#5 BOTT.
8L-1	8"	3'-4"	8" HIGH U-BLOCK	2-#4 BOTT.
8L-2	8"	6'-4"	16" HIGH U-BLOCK	2-#5 TOP & BOTT.
8L-3	8"	10'-8"	24" HIGH U-BLOCK	2-#5 TOP & BOTT.

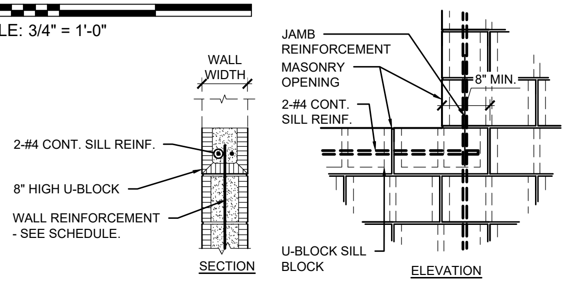
WALL SCHEDULE NOTES:

1. BEAR LINTELS 8" MINIMUM EACH END. PROVIDE VERTICAL REINFORCEMENT AND FULL HEIGHT GROUT (SAME SIZE REINFORCEMENT AS SPECIFIED IN WALL) AT EACH JAMB CELL.
2. JAMB CELL REINFORCEMENT SHALL BE CONTINUOUS THROUGH U-BLOCK


DOOR OR WINDOW OPENING
TYP. WALL REINF.
(1)-VERT. BAR (SAME SIZE AS DETAILED ALONG WALL) AT EA. DOOR AND WINDOW JAMB (TYP.)
TYP. WALL REINF.

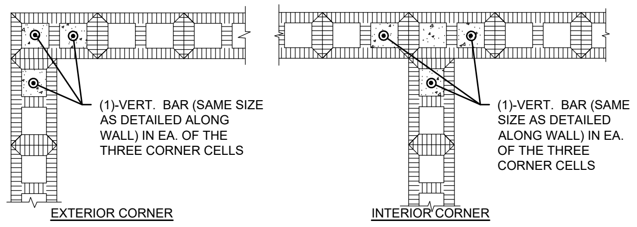
2.3 / S-003 TYP. CMU JAMB REINF.

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"



2.4 / S-003 TYP. CMU SILL REINF.

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"

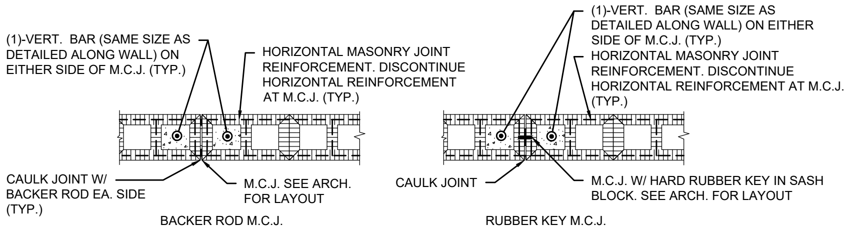

(1)-VERT. BAR (SAME SIZE AS DETAILED ALONG WALL) IN EA. OF THE THREE CORNER CELLS
(1)-VERT. BAR (SAME SIZE AS DETAILED ALONG WALL) IN EA. OF THE THREE CORNER CELLS

EXTERIOR CORNER

INTERIOR CORNER

2.6 / S-003 TYP. CMU CORNER REINF.

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"


(1)-VERT. BAR (SAME SIZE AS DETAILED ALONG WALL) ON EITHER SIDE OF M.C.J. (TYP.)
HORIZONTAL MASONRY JOINT REINFORCEMENT. DISCONTINUE HORIZONTAL REINFORCEMENT AT M.C.J. (TYP.)
CAULK JOINT W/ BACKER ROD EA. SIDE (TYP.)
M.C.J. SEE ARCH. FOR LAYOUT
(1)-VERT. BAR (SAME SIZE AS DETAILED ALONG WALL) ON EITHER SIDE OF M.C.J. (TYP.)
HORIZONTAL MASONRY JOINT REINFORCEMENT. DISCONTINUE HORIZONTAL REINFORCEMENT AT M.C.J. (TYP.)
CAULK JOINT
M.C.J. W/ HARD RUBBER KEY IN SASH BLOCK. SEE ARCH. FOR LAYOUT

BACKER ROD M.C.J.

RUBBER KEY M.C.J.

2.7 / S-003 TYP. M.C.J. DETAILS

1' 4" 8" 0' 1'-4" 2'-8"
SCALE: 3/4" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
TNS
DRAWN BY:
TNS
CHECKED BY:
JDD
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005S-003.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

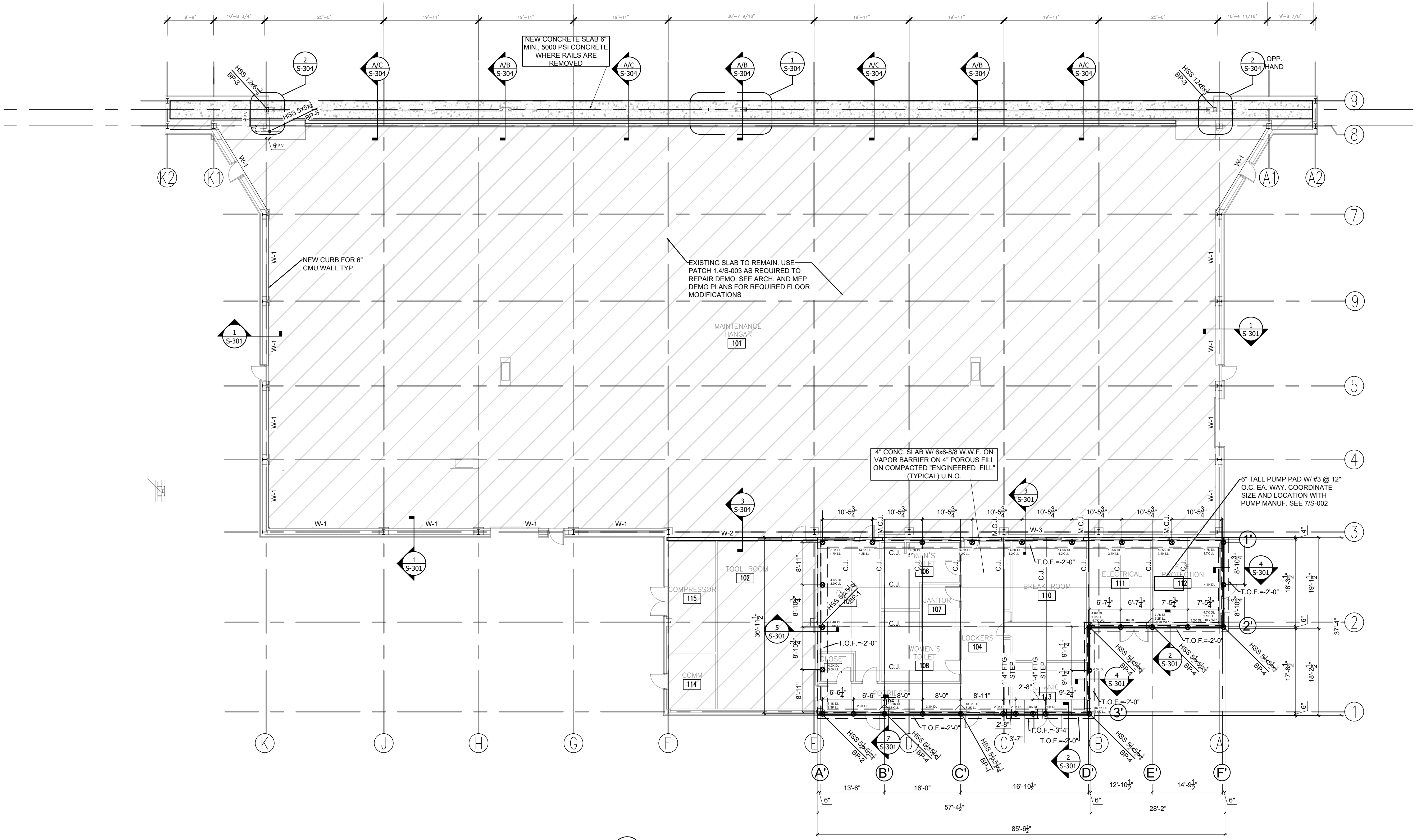
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

TYPICAL DETAILS

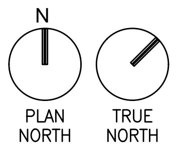
SHEET ID
S-003

RTA SUBMITTAL



FLOOR PLAN

SCALE: 3/32" = 1'-0"



1 S1.01 FOUNDATION PLAN

SCALE: 3/32" = 1'-0"

NOTES:

1. FINISH FLOOR ELEVATION = REF. DATUM 0'-0".
2. FINISH FLOOR ELEVATION IS TO TOP OF PLYWOOD DECKING OR TOP OF SLAB AS APPLICABLE U.N.O.
3. SEE S-001 THROUGH S-003 FOR GENERAL NOTES AND TYPICAL SECTIONS.
4. SEE ARCH. FOR ALL DIMENSIONS NOT SHOWN
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND COORDINATE ALL TOP OF FOOTING ELEVATIONS SHOWN ON DRAWINGS WITH FINAL GRADING PLAN. MINIMUM COVER FROM TOP OF FOOTING TO OUTSIDE FINISH GRADE SHALL BE 1'-0".
6. COORDINATE ALL SLOPES, STEPS, RECESSES, AND PLUMBING FIXTURES W/ CONTRACT DRAWINGS.

LEGEND:

⊗ #.#K DL #.#K LL #.#K WL	INDICATES LOCATION OF VERTICAL HELICAL PIER W/ SERVICE LOAD DESIGN REACTIONS * INDICATES UPLIFT LOAD
▨	INDICATES EXISTING BUILDING FOOTPRINT TO REMAIN

US Army Corps of Engineers

MARK	DESCRIPTION	DATE

DESIGNED BY: TNS
DRAWN BY: TNS
CHECKED BY: JDD
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005S-101.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

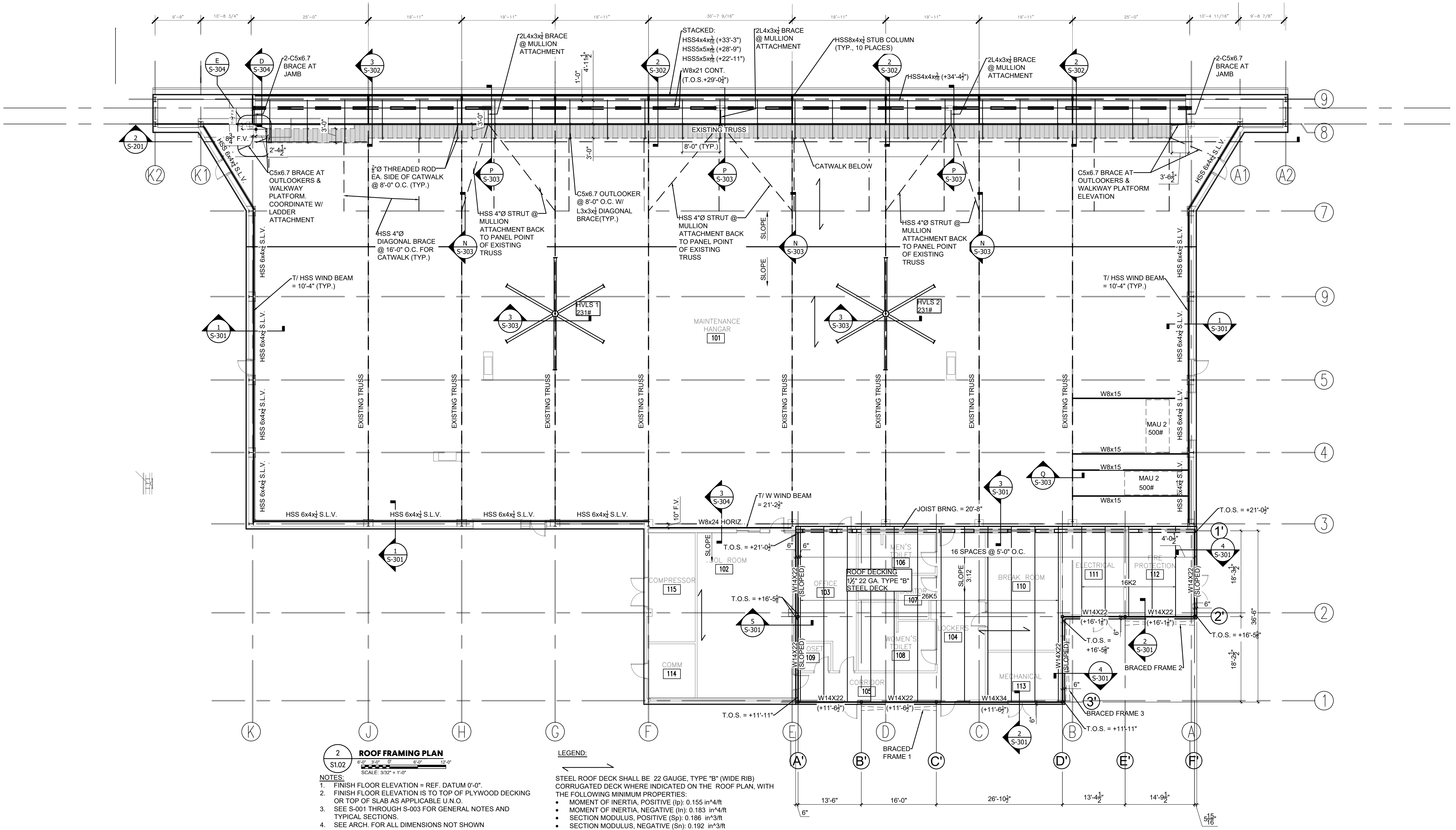
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FOUNDATION PLAN

SHEET ID
S-101

RTA SUBMITTAL

CESAM v20181203



9'-9"
10'-8 3/4"
25'-0"
19'-11"
19'-11"
19'-11"
30'-7 9/16"
19'-11"
19'-11"
19'-11"
25'-0"
10'-4 11/16"
9'-8 7/8"
E S-304
D S-304
2-C5x6.7 BRACE AT JAMB
3 S-302
2L4x3x$\frac{1}{4}$ BRACE @ MULLION ATTACHMENT
4'-11$\frac{1}{2}$"
1'-0"
2 S-302
STACKED:
HSS4x4x$\frac{3}{16}$ (+33'-3")
HSS5x5x$\frac{3}{16}$ (+28'-9")
HSS5x5x$\frac{3}{16}$ (+22'-11")
W8x21 CONT. (T.O.S.+29'-0$\frac{1}{4}$")
2L4x3x$\frac{1}{4}$ BRACE @ MULLION ATTACHMENT
HSS8x4x$\frac{1}{4}$ STUB COLUMN (TYP., 10 PLACES)
2 S-302
HSS4x4x$\frac{3}{16}$ (+34'-4$\frac{1}{2}$")
2L4x3x$\frac{1}{4}$ BRACE @ MULLION ATTACHMENT
2 S-302
2-C5x6.7 BRACE AT JAMB
9
8
2 S-201
3'-0"
8$\frac{1}{2}$" F.V.
HSS 6x4x$\frac{1}{4}$ S.L.V.
2'-4$\frac{1}{2}$"
EXISTING TRUSS
8'-0" (TYP.)
3'-0"
3'-0"
K2
K1
C5x6.7 BRACE AT OUTLOOKERS & WALKWAY PLATFORM. COORDINATE W/ LADDER ATTACHMENT
$\frac{3}{4}$"Ø THREADED ROD EA. SIDE OF CATWALK @ 8'-0" O.C. (TYP.)
P S-303
C5x6.7 OUTLOOKER @ 8'-0" O.C. W/ L3x3x$\frac{1}{4}$ DIAGONAL BRACE(TYP.)
P S-303
CATWALK BELOW
P S-303
C5x6.7 BRACE AT OUTLOOKERS & WALKWAY PLATFORM ELEVATION
3'-6$\frac{3}{4}$"
HSS 6x4x$\frac{1}{4}$ S.L.V.
A1
A2
HSS 4"Ø STRUT @ MULLION ATTACHMENT BACK TO PANEL POINT OF EXISTING TRUSS
HSS 4"Ø STRUT @ MULLION ATTACHMENT BACK TO PANEL POINT OF EXISTING TRUSS
HSS 4"Ø STRUT @ MULLION ATTACHMENT BACK TO PANEL POINT OF EXISTING TRUSS
7
HSS 4"Ø DIAGONAL BRACE @ 16'-0" O.C. FOR CATWALK (TYP.)
N S-303
SLOPE
SLOPE
N S-303
N S-303
T/ HSS WIND BEAM = 10'-4" (TYP.)
T/ HSS WIND BEAM = 10'-4" (TYP.)
HSS 6x4x$\frac{1}{4}$ S.L.V.
1 S-301
3 S-303
HVLS 1 231#
MAINTENANCE HANGAR
101
3 S-303
HVLS 2 231#
1 S-301
9
EXISTING TRUSS
EXISTING TRUSS
EXISTING TRUSS
EXISTING TRUSS
EXISTING TRUSS
EXISTING TRUSS
EXISTING TRUSS
EXISTING TRUSS
W8x15
MAU 2 500#
5
W8x15
4
W8x15
MAU 2 500#
W8x15
Q S-303
3 S-301
3 S-304
T/ W WIND BEAM = 21'-2$\frac{1}{2}$"
10" F.V.
W8x24 HORIZ.
JOIST BRNG. = 20'-8"
HSS 6x4x$\frac{1}{4}$ S.L.V.
HSS 6x4x$\frac{1}{4}$ S.L.V.
HSS 6x4x$\frac{1}{4}$ S.L.V.
HSS 6x4x$\frac{1}{4}$ S.L.V.
T.O.S. = +21'-0$\frac{1}{2}$"
1'
3
4'-0$\frac{1}{2}$"
4 S-301
1 S-301
T.O.S. = +21'-0$\frac{1}{2}$"
6"
6"
SLOPE
TOOL ROOM
102
MEN'S TOILET
106
16 SPACES @ 5'-0" O.C.
ELECTRICAL
111
FIRE PROTECTION
112
W14X22 (SLOPED)
18'-3$\frac{1}{2}$"
COMPRESSOR
115
OFFICE
103
ROOF DECKING
1$\frac{1}{2}$" 22 GA. TYPE "B" STEEL DECK
107
26K5
SLOPE 3:12
BREAK ROOM
110
16K2
W14X22 (SLOPED)
T.O.S. = +16'-5$\frac{3}{8}$"
W14X22 (+16'-1$\frac{1}{8}$")
W14X22 (+16'-1$\frac{1}{8}$")
6"
2'
2
36'-6"
5 S-301
T.O.S. = +16'-5$\frac{3}{8}$"
T.O.S. = +16'-5$\frac{3}{8}$"
6"
CLOSET
109
WOMEN'S TOILET
108
LOCKERS
104
2 S-301
BRACED FRAME 2
18'-2$\frac{1}{2}$"
W14X22 (SLOPED)
COMM
114
CORRIDOR
105
MECHANICAL
113
4 S-301
W14X22 (SLOPED)
6"
3'
1
W14X22 (+11'-6$\frac{1}{2}$")
W14X22 (+11'-6$\frac{1}{2}$")
W14X34 (+11'-6$\frac{1}{2}$")
T.O.S. = +11'-11"
6"
BRACED FRAME 3
T.O.S. = +11'-11"
2 S-301
K
J
H
G
F
E
D
C
B
A
BRACED FRAME 1
A'
B'
C'
D'
E'
F'
13'-6"
16'-0"
26'-10$\frac{1}{2}$"
13'-4$\frac{1}{2}$"
14'-9$\frac{1}{2}$"
6"
5$\frac{15}{16}$"

2 / S1.02 ROOF FRAMING PLAN

6'-0" 3'-0" 0' 6'-0" 12'-0"

SCALE: 3/32" = 1'-0"

NOTES:

1. FINISH FLOOR ELEVATION = REF. DATUM 0'-0".
2. FINISH FLOOR ELEVATION IS TO TOP OF PLYWOOD DECKING OR TOP OF SLAB AS APPLICABLE U.N.O.
3. SEE S-001 THROUGH S-003 FOR GENERAL NOTES AND TYPICAL SECTIONS.
4. SEE ARCH. FOR ALL DIMENSIONS NOT SHOWN
5. (X'-X") INDICATES TOP OF STEEL ELEVATION.

LEGEND:

⇌

STEEL ROOF DECK SHALL BE 22 GAUGE, TYPE "B" (WIDE RIB) CORRUGATED DECK WHERE INDICATED ON THE ROOF PLAN, WITH THE FOLLOWING MINIMUM PROPERTIES:

- MOMENT OF INERTIA, POSITIVE (Ip): 0.155 in^4/ft
- MOMENT OF INERTIA, NEGATIVE (In): 0.183 in^4/ft
- SECTION MODULUS, POSITIVE (Sp): 0.186 in^3/ft
- SECTION MODULUS, NEGATIVE (Sn): 0.192 in^3/ft

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: TNS	ISSUE DATE: JUNE 2024
DRAWN BY: TNS	SOLICITATION NO.: -
CHECKED BY: JDD	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005S-102.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

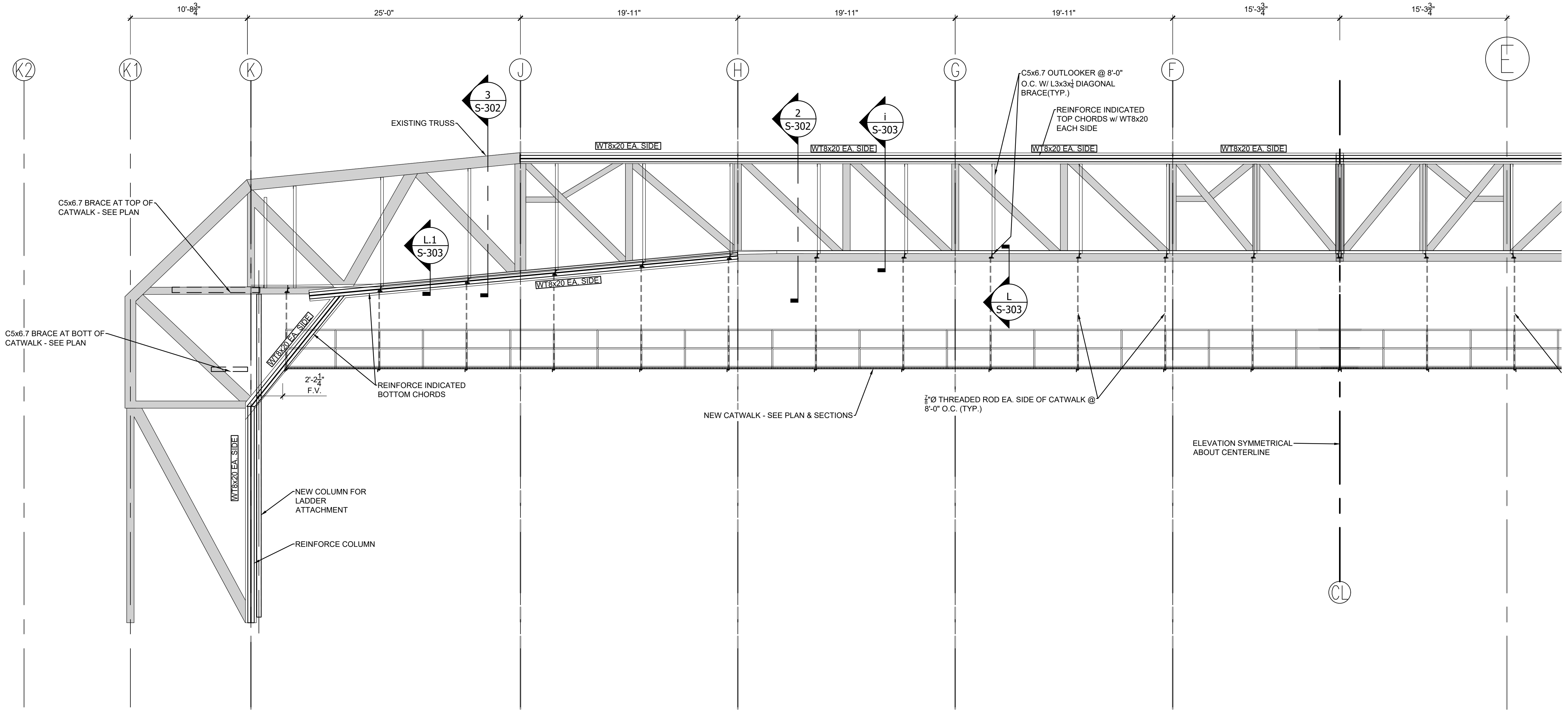
ROOF, CEILING, AND
CATWALK FRAMING PLAN

SHEET ID

S-102

RTA SUBMITTAL

CESAM v20181203


10'-8$\frac{3}{4}$"
25'-0"
19'-11"
19'-11"
19'-11"
15'-3$\frac{3}{4}$"
15'-3$\frac{3}{4}$"
K2
K1
K
J
H
G
F
E
3
S-302
2
S-302
i
S-303
L.1
S-303
L
S-303
EXISTING TRUSS
C5x6.7 OUTLOOKER @ 8'-0" O.C. W/ L3x3x$\frac{1}{4}$ DIAGONAL BRACE(TYP.)
REINFORCE INDICATED TOP CHORDS w/ WT8x20 EACH SIDE
WT8x20 EA. SIDE
WT8x20 EA. SIDE
WT8x20 EA. SIDE
WT8x20 EA. SIDE
WT8x20 EA. SIDE
WT8x20 EA. SIDE
WT8x20 EA. SIDE
C5x6.7 BRACE AT TOP OF CATWALK - SEE PLAN
C5x6.7 BRACE AT BOTT OF CATWALK - SEE PLAN
2'-2$\frac{1}{4}$"
F.V.
REINFORCE INDICATED BOTTOM CHORDS
NEW CATWALK - SEE PLAN & SECTIONS
$\frac{7}{8}$"Ø THREADED ROD EA. SIDE OF CATWALK @ 8'-0" O.C. (TYP.)
ELEVATION SYMMETRICAL ABOUT CENTERLINE
NEW COLUMN FOR LADDER ATTACHMENT
REINFORCE COLUMN
CL

1 / S-201 **INTERIOR CATWALK PARTIAL ELEVATION**

5'-4" 2'-8" 0' 5'-4" 10'-8"

SCALE: 3/16" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024

SOLICITATION NO.:
-

CONTRACT NO.:
-

PROJECT NUMBER:
MEF24005

DESIGNED BY:
TNS

DRAWN BY:
TNS

CHECKED BY:
JDD

SUBMITTED BY:
T. HYMAN

SIZE:
ANSI D

FILE NAME:
MEF24005S-201.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

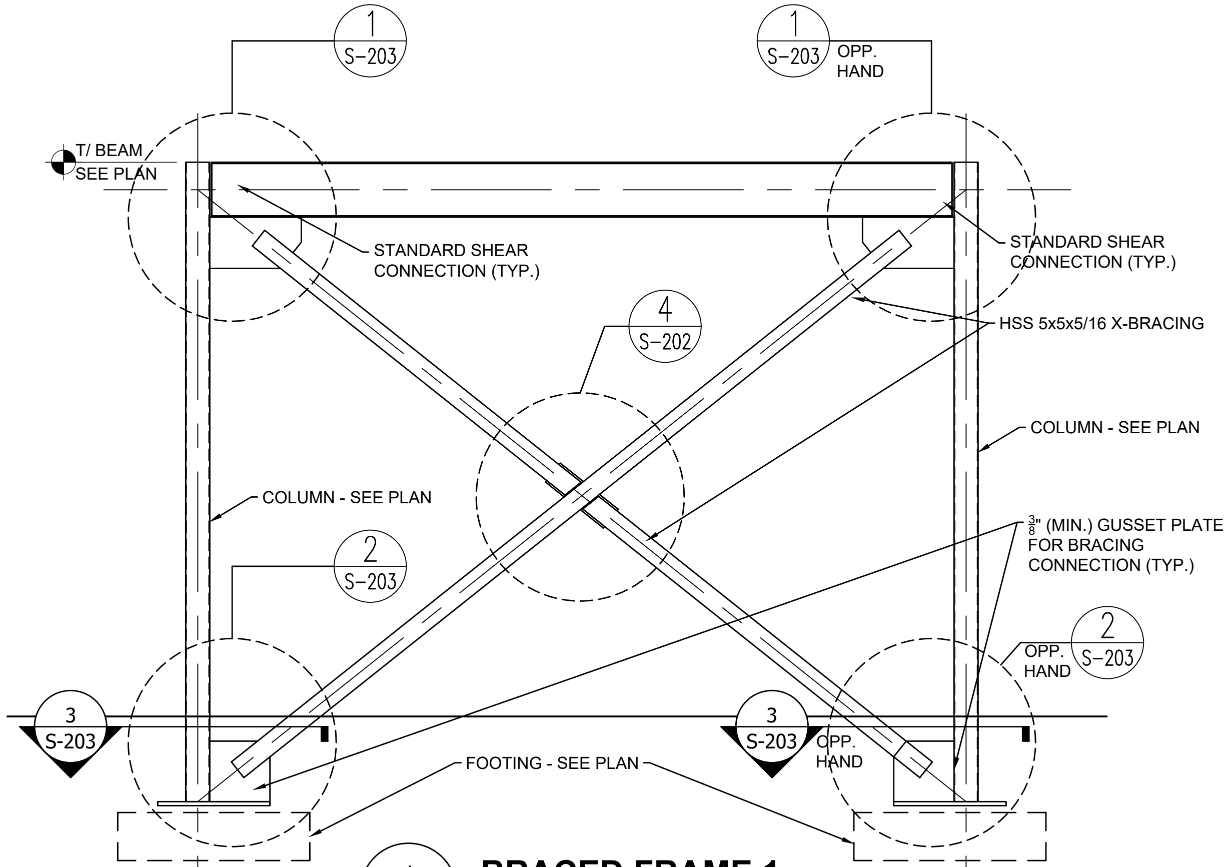
CATWALK ELEVATION AND
TRUSS ELEVATION

SHEET ID

S-201

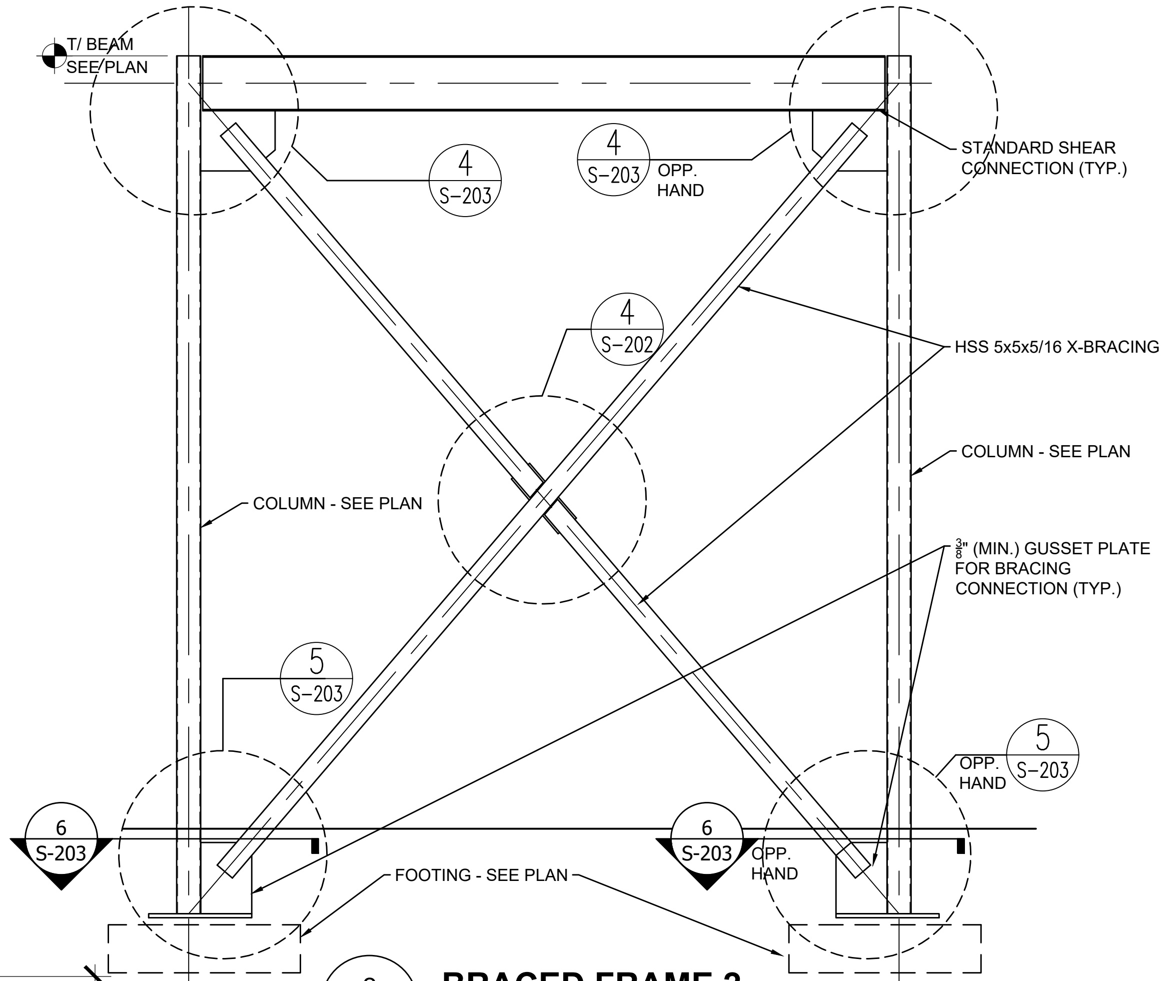
RTA SUBMITTAL

CESAM v20181203



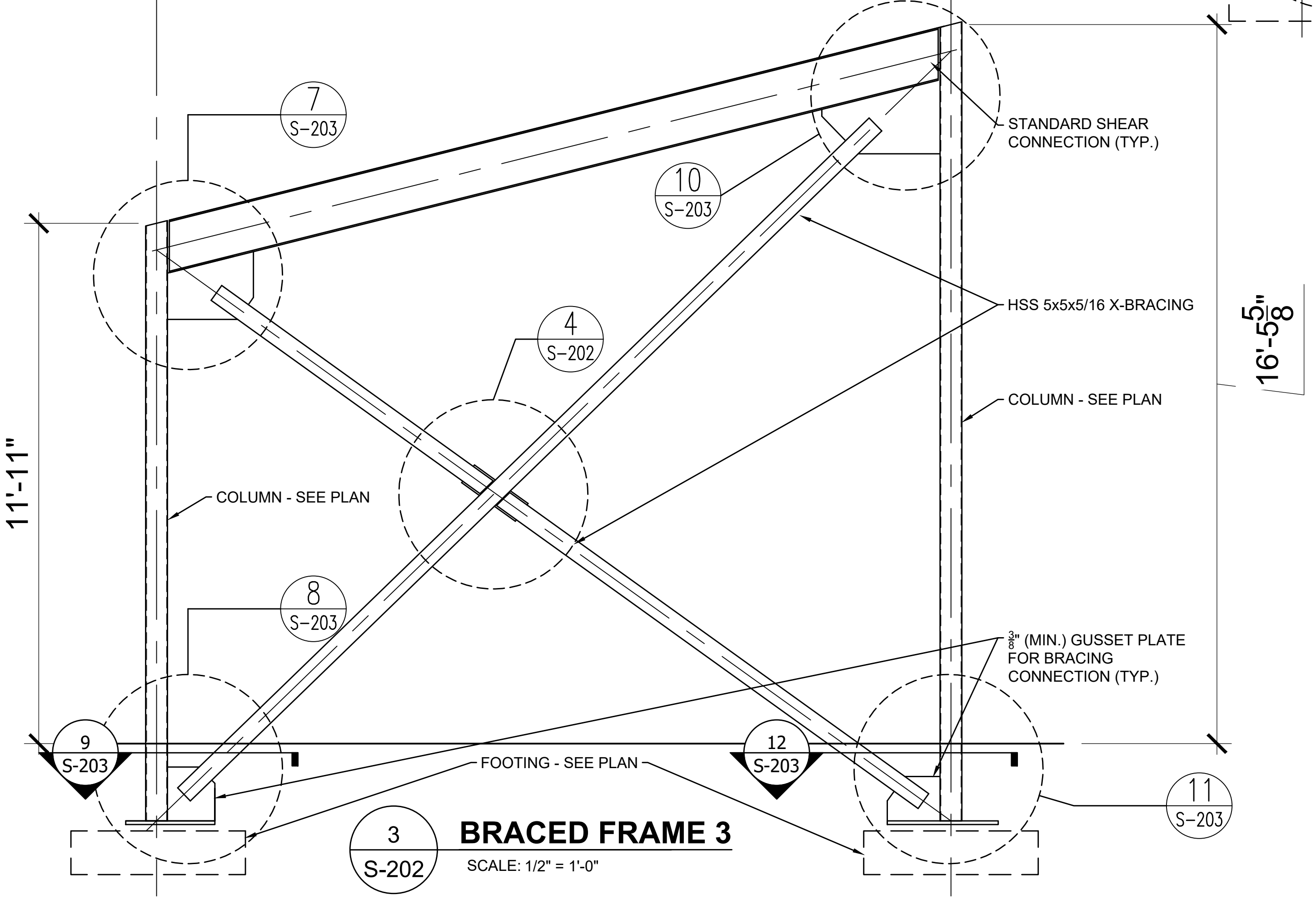
1 S-202 BRACED FRAME 1

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



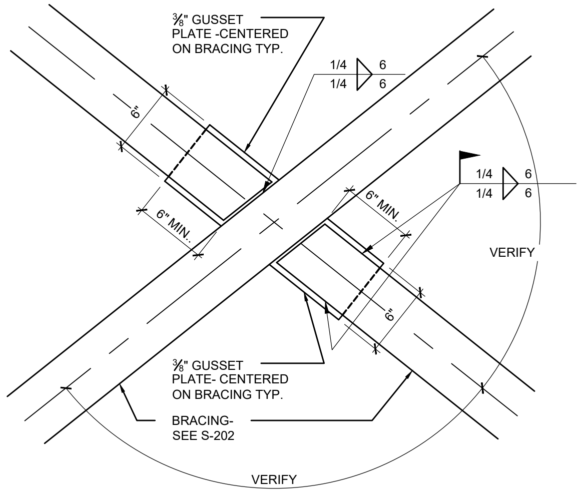
2 S-202 BRACED FRAME 2

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



3 S-202 BRACED FRAME 3

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



4 S-202 TYP. GUSSET @ BRACING INTERSECTION

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

US Army Corps
of Engineers®

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TNS

DRAWN BY:
TNS

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SIZE:
ANSI D

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JUNE 2024

SOLICITATION NO.:
-

CONTRACT NO.:
-

PROJECT NUMBER:
MEF24005

FILE NAME:
MEF24005S-202.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

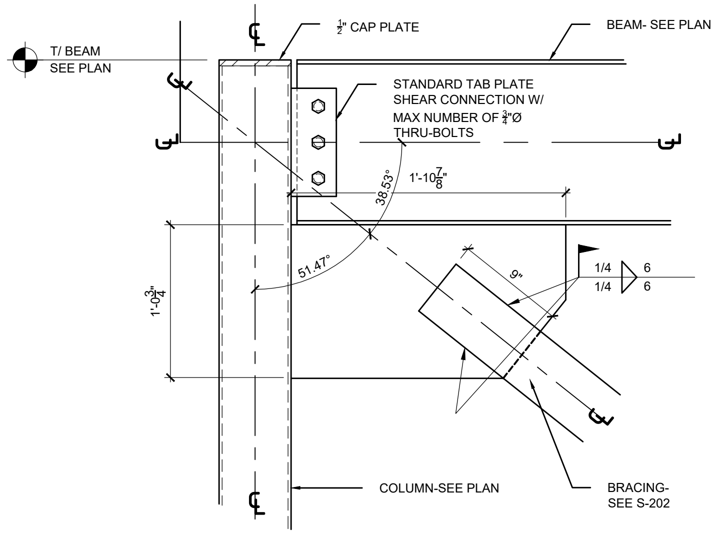
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

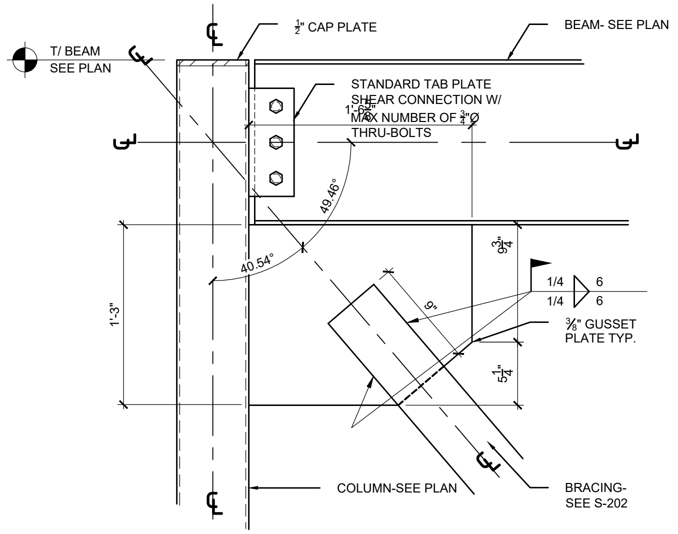
BRACE FRAME
ELEVATIONS AND DETAILS

SHEET ID
S-202

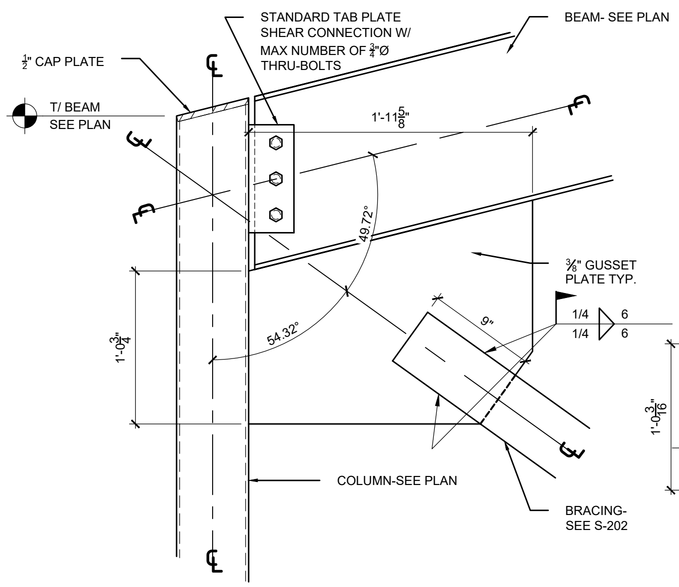
RTA SUBMITTAL



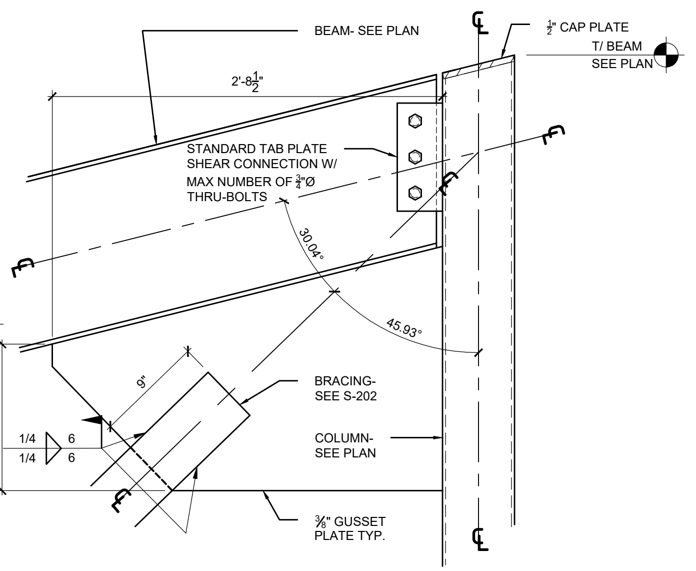
1 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"



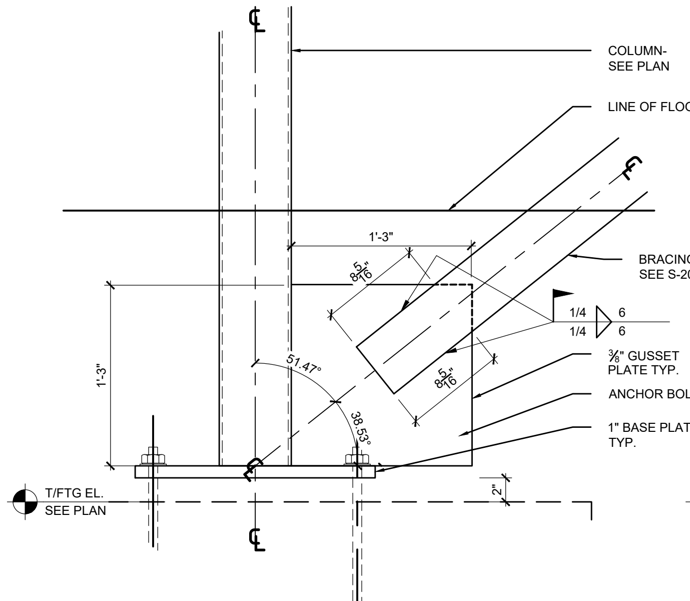
4 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"



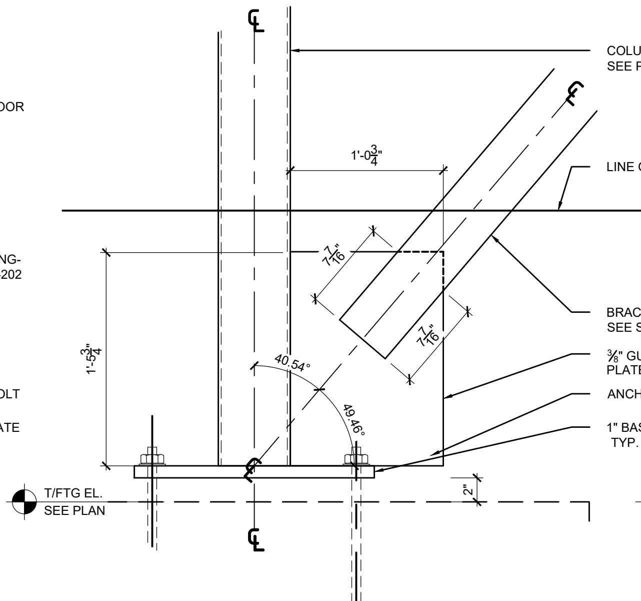
7 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"



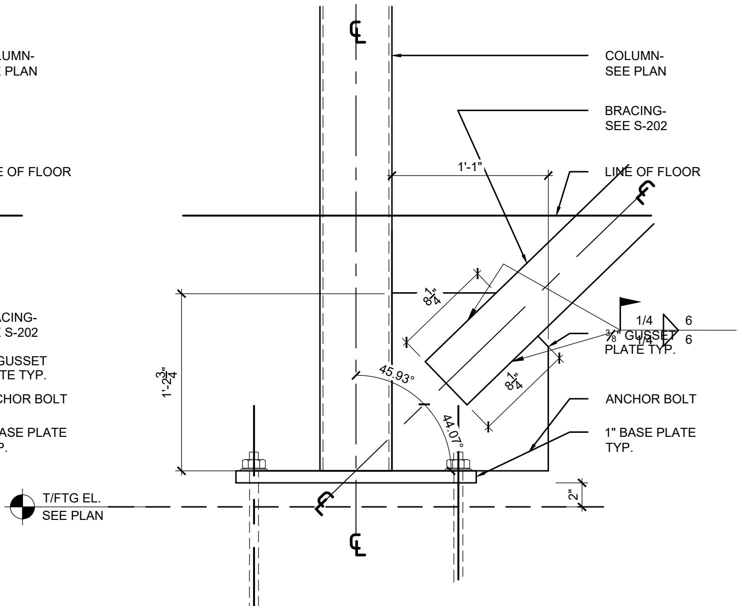
10 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"



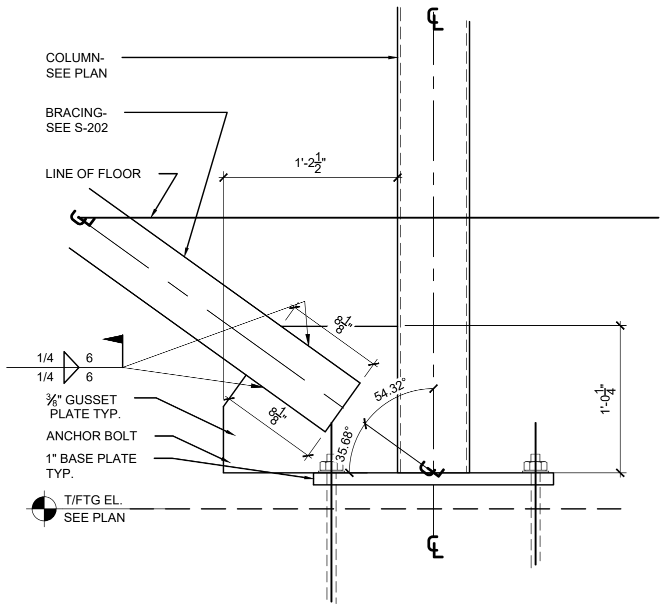
2 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"



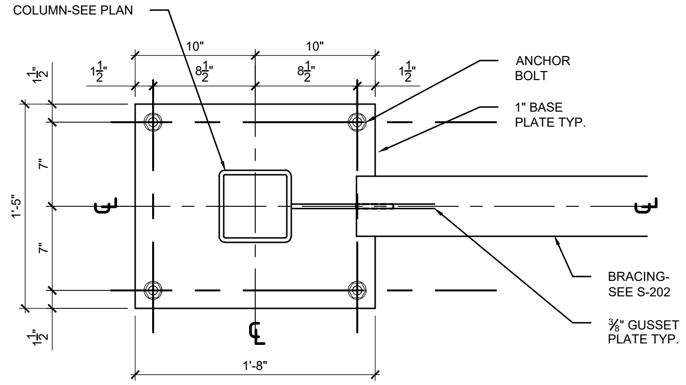
5 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"



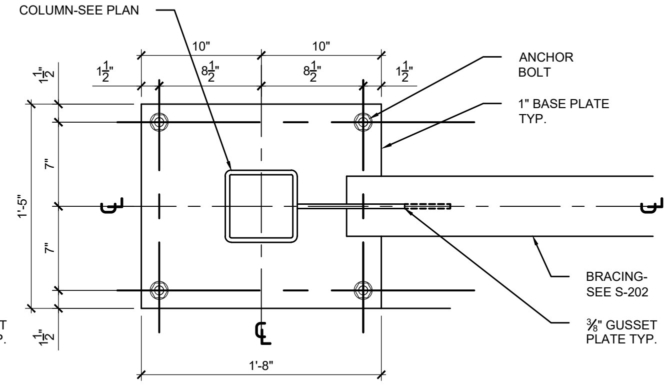
8 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"



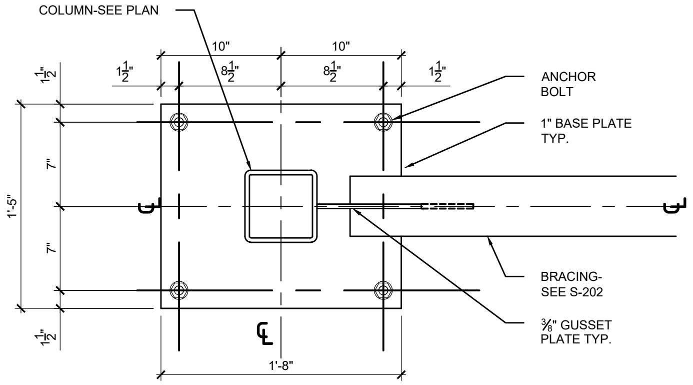
11 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"



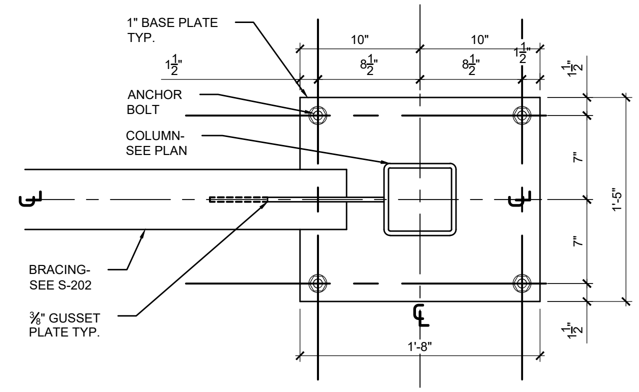
3 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"



6 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"



9 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"



12 S-203 **SECTION**
SCALE: 1 1/2" = 1'-0"

US Army Corps
of Engineers ®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

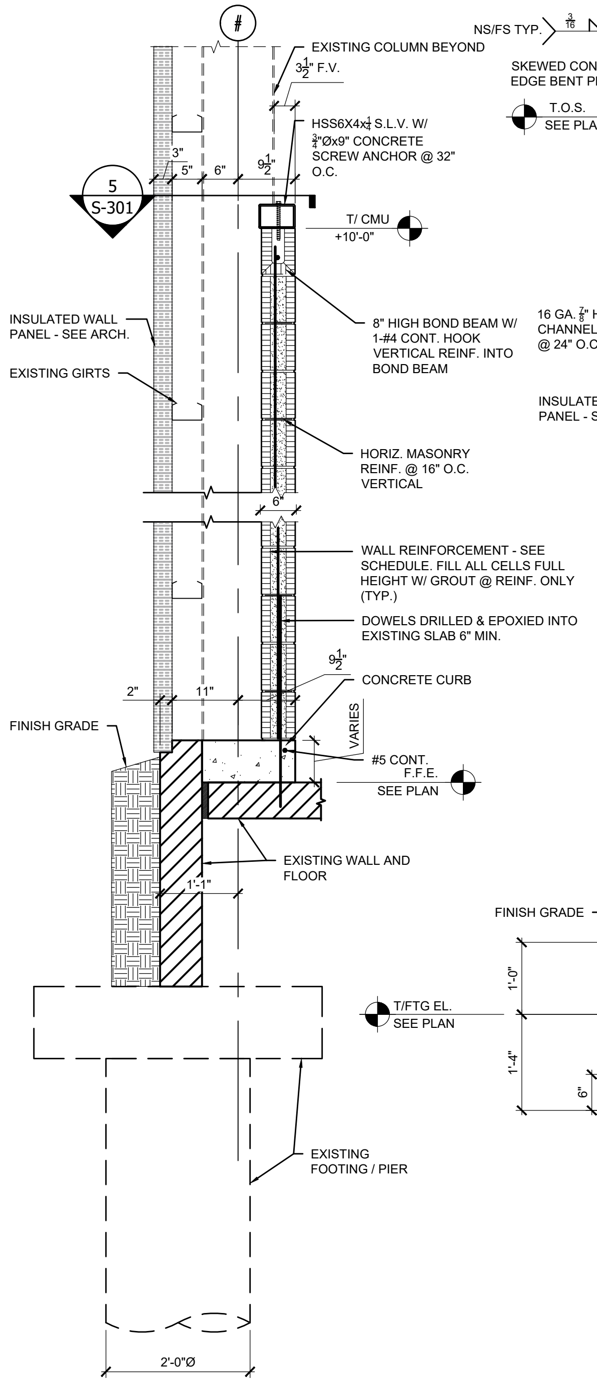
DESIGNED BY: TNS
DRAWN BY: TNS
CHECKED BY: JDD
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
FILE NAME: MEF24005S-203.DWG
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

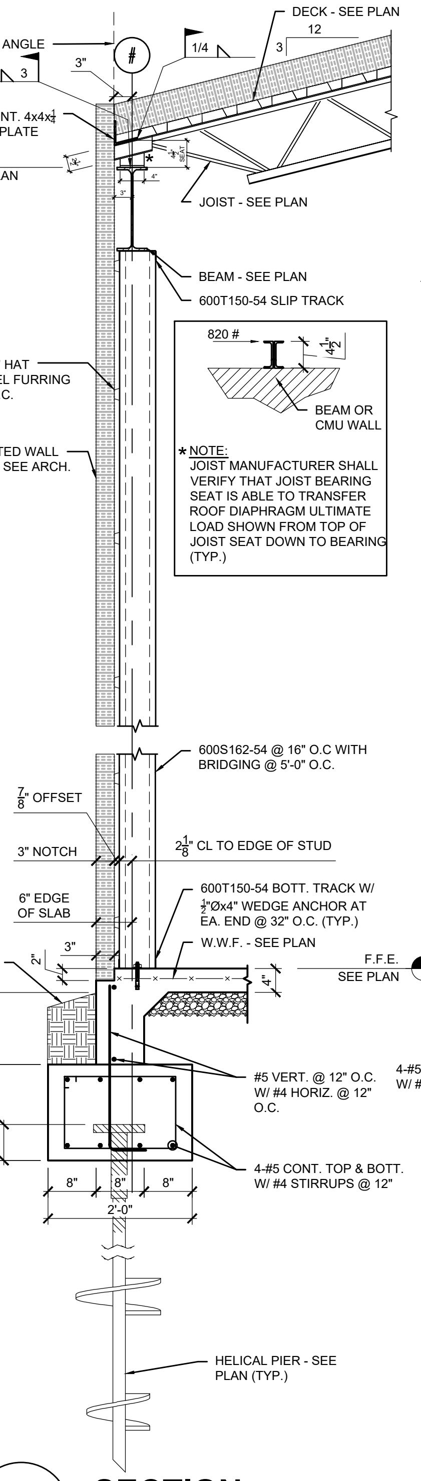
BRACE DETAILS

SHEET ID
S-203

RTA SUBMITTAL

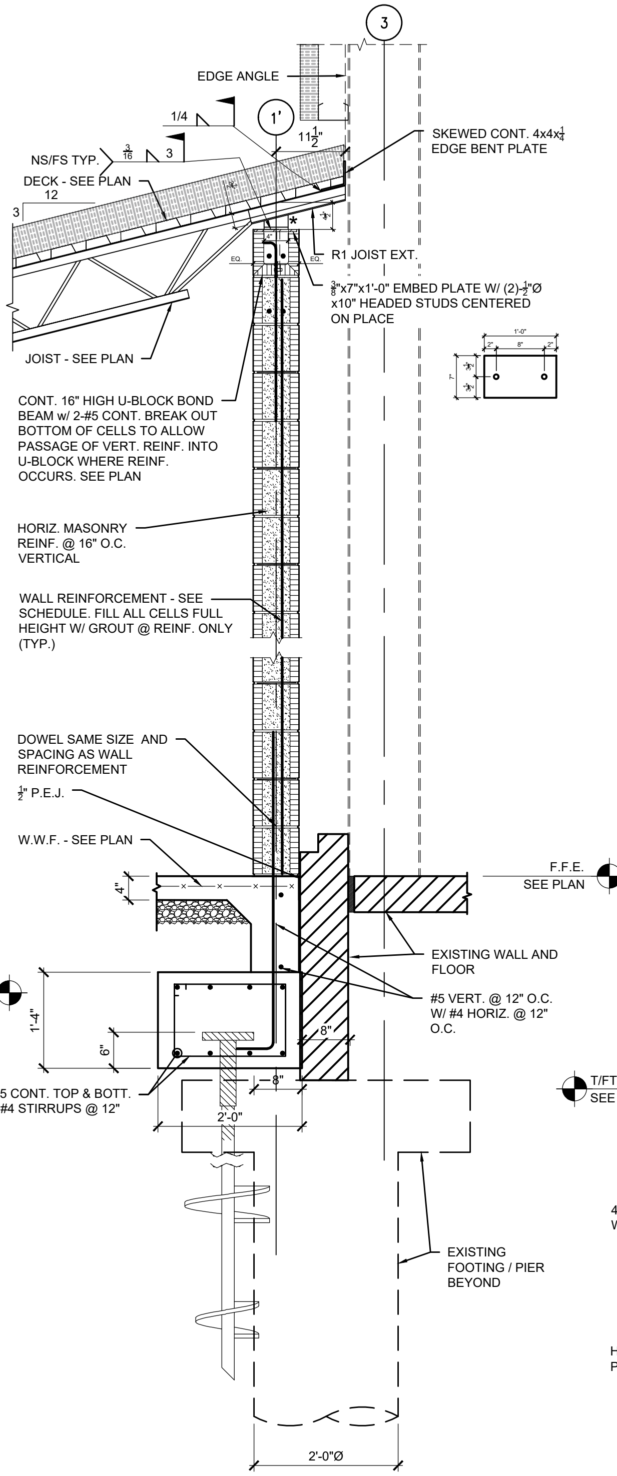

#
EXISTING COLUMN BEYOND
3 1/2" F.V.
HSS6X4x1/4 S.L.V. W/ 3/4"Øx9" CONCRETE SCREW ANCHOR @ 32" O.C.
3"
5"
6"
9 1/2"
5
S-301
T/ CMU
+10'-0"
8" HIGH BOND BEAM W/ 1-#4 CONT. HOOK VERTICAL REINF. INTO BOND BEAM
INSULATED WALL PANEL - SEE ARCH.
EXISTING GIRTS
HORIZ. MASONRY REINF. @ 16" O.C. VERTICAL
6"
WALL REINFORCEMENT - SEE SCHEDULE. FILL ALL CELLS FULL HEIGHT W/ GROUT @ REINF. ONLY (TYP.)
DOWELS DRILLED & EPOXIED INTO EXISTING SLAB 6" MIN.
9 1/2"
CONCRETE CURB
2"
11"
VARIES
FINISH GRADE
#5 CONT.
F.F.E.
SEE PLAN
EXISTING WALL AND FLOOR
1'-1"
EXISTING FOOTING / PIER
2'-0"Ø

1 SECTION
S-301
SCALE: 3/4" = 1'-0"

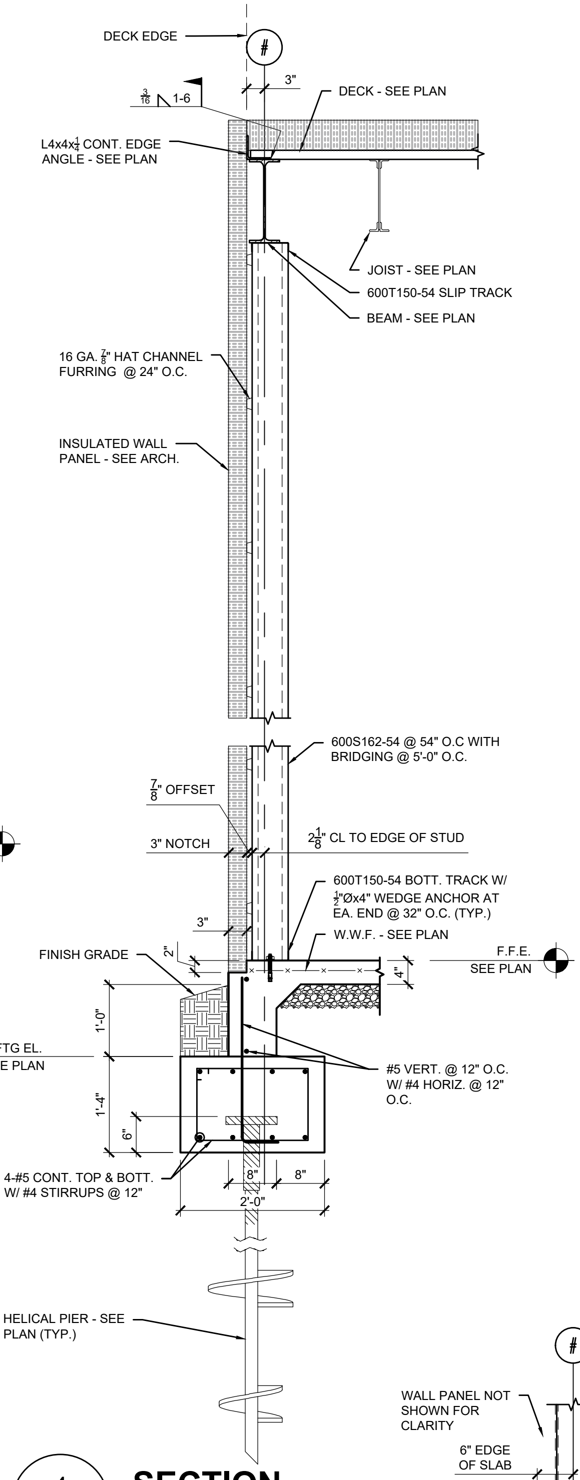

EDGE ANGLE
NS/FS TYP.
3/16
3
3"
#
1/4
DECK - SEE PLAN
12
3
SKEWED CONT. 4x4x1/4 EDGE BENT PLATE
T.O.S.
SEE PLAN
2 1/2"
4 1/2"
SEAT
4"
3"
JOIST - SEE PLAN
BEAM - SEE PLAN
600T150-54 SLIP TRACK
820 #
4 1/2"
BEAM OR CMU WALL
16 GA. 7/8" HAT CHANNEL FURRING @ 24" O.C.
INSULATED WALL PANEL - SEE ARCH.
600S162-54 @ 16" O.C WITH BRIDGING @ 5'-0" O.C.
7/8" OFFSET
3" NOTCH
2 1/8" CL TO EDGE OF STUD
6" EDGE OF SLAB
600T150-54 BOTT. TRACK W/ 3/4"Øx4" WEDGE ANCHOR AT EA. END @ 32" O.C. (TYP.)
3"
W.W.F. - SEE PLAN
FINISH GRADE
2"
F.F.E.
SEE PLAN
4"
1'-0"
T/FTG EL.
SEE PLAN
1'-4"
6"
#5 VERT. @ 12" O.C. W/ #4 HORIZ. @ 12" O.C.
4-#5 CONT. TOP & BOTT. W/ #4 STIRRUPS @ 12"
8"
8"
8"
2'-0"
HELICAL PIER - SEE PLAN (TYP.)

* NOTE:
JOIST MANUFACTURER SHALL VERIFY THAT JOIST BEARING SEAT IS ABLE TO TRANSFER ROOF DIAPHRAGM ULTIMATE LOAD SHOWN FROM TOP OF JOIST SEAT DOWN TO BEARING (TYP.)

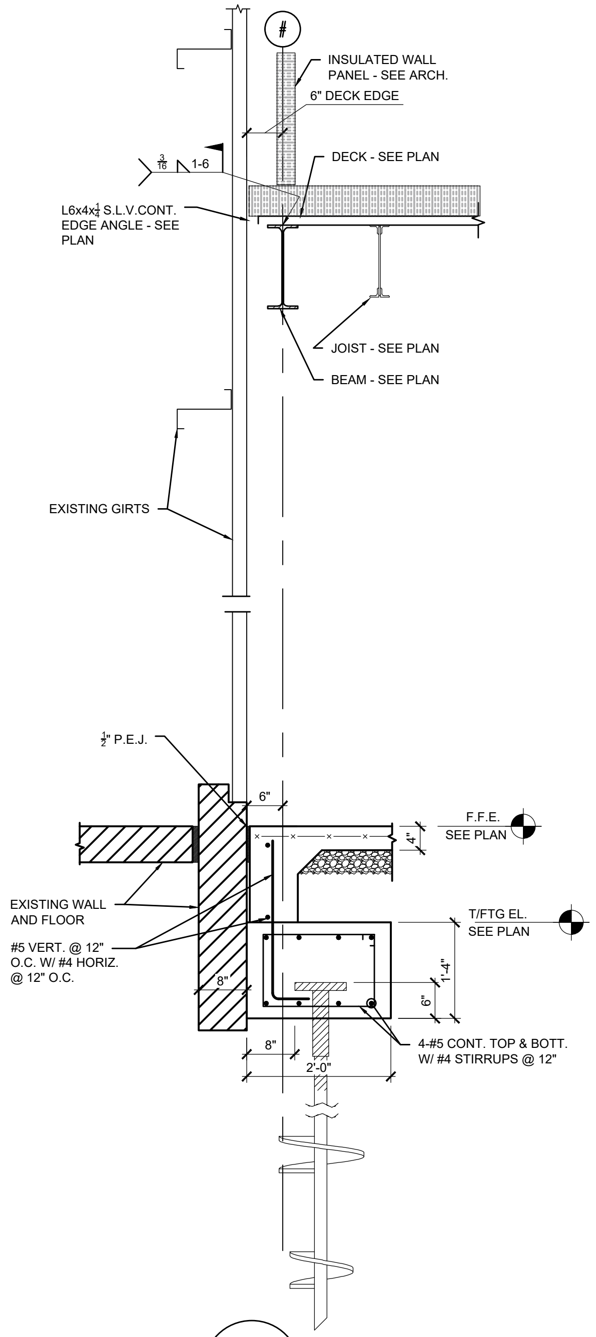
2 SECTION
S-301
SCALE: 3/4" = 1'-0"


3
EDGE ANGLE
1/4
1'
11 1/2"
NS/FS TYP.
3/16
3
SKEWED CONT. 4x4x1/4 EDGE BENT PLATE
DECK - SEE PLAN
12
3
2 1/2"
4 1/2"
4"
EQ.
EQ.
R1 JOIST EXT.
3/8"x7"x1'-0" EMBED PLATE W/ (2)-1/2"Ø x10" HEADED STUDS CENTERED ON PLACE
1'-0"
2"
8"
2"
7"
3 1/2"
3 1/2"
JOIST - SEE PLAN
CONT. 16" HIGH U-BLOCK BOND BEAM w/ 2-#5 CONT. BREAK OUT BOTTOM OF CELLS TO ALLOW PASSAGE OF VERT. REINF. INTO U-BLOCK WHERE REINF. OCCURS. SEE PLAN
HORIZ. MASONRY REINF. @ 16" O.C. VERTICAL
WALL REINFORCEMENT - SEE SCHEDULE. FILL ALL CELLS FULL HEIGHT W/ GROUT @ REINF. ONLY (TYP.)
DOWEL SAME SIZE AND SPACING AS WALL REINFORCEMENT
1/2" P.E.J.
W.W.F. - SEE PLAN
F.F.E.
SEE PLAN
4"
1'-4"
6"
EXISTING WALL AND FLOOR
#5 VERT. @ 12" O.C. W/ #4 HORIZ. @ 12" O.C.
8"
4-#5 CONT. TOP & BOTT. W/ #4 STIRRUPS @ 12"
8"
2'-0"
EXISTING FOOTING / PIER BEYOND
2'-0"Ø

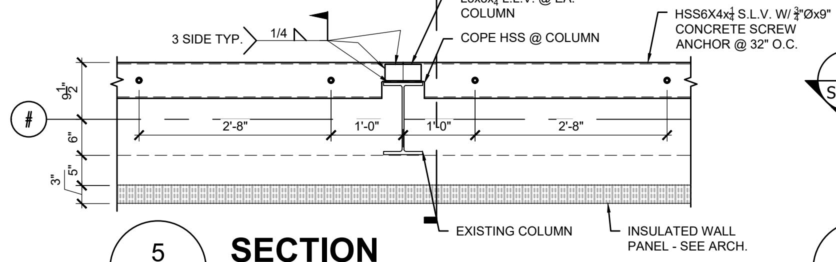
3 SECTION
S-301
SCALE: 3/4" = 1'-0"


DECK EDGE
#
3/16
1-6
3"
DECK - SEE PLAN
L4x4x1/4 CONT. EDGE ANGLE - SEE PLAN
JOIST - SEE PLAN
600T150-54 SLIP TRACK
BEAM - SEE PLAN
16 GA. 7/8" HAT CHANNEL FURRING @ 24" O.C.
INSULATED WALL PANEL - SEE ARCH.
600S162-54 @ 54" O.C WITH BRIDGING @ 5'-0" O.C.
7/8" OFFSET
3" NOTCH
2 1/8" CL TO EDGE OF STUD
600T150-54 BOTT. TRACK W/ 3/4"Øx4" WEDGE ANCHOR AT EA. END @ 32" O.C. (TYP.)
3"
W.W.F. - SEE PLAN
FINISH GRADE
2"
F.F.E.
SEE PLAN
4"
1'-0"
T/FTG EL.
SEE PLAN
1'-4"
6"
#5 VERT. @ 12" O.C. W/ #4 HORIZ. @ 12" O.C.
4-#5 CONT. TOP & BOTT. W/ #4 STIRRUPS @ 12"
8"
8"
2'-0"
HELICAL PIER - SEE PLAN (TYP.)

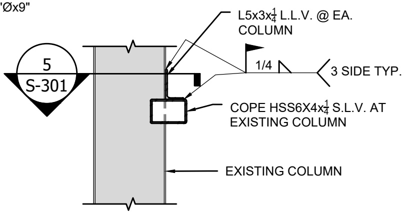
4 SECTION
S-301
SCALE: 3/4" = 1'-0"



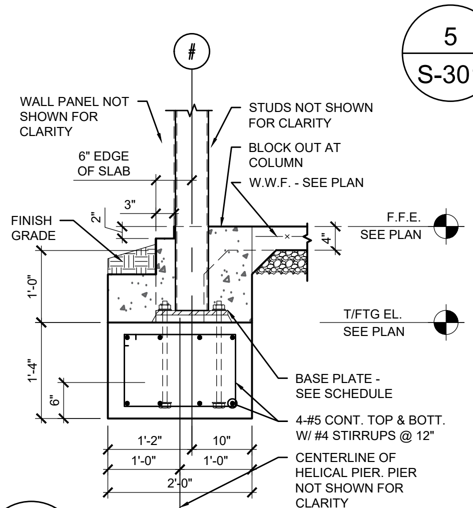
5 SECTION
S-301
SCALE: 3/4" = 1'-0"


A
S-301
3 SIDE TYP.
1/4
L5x3x1/4 L.L.V. @ EA. COLUMN
COPE HSS @ COLUMN
HSS6X4x1/4 S.L.V. W/ 3/4"Øx9" CONCRETE SCREW ANCHOR @ 32" O.C.
#
9 1/2"
6"
5"
3"
2'-8"
1'-0"
1'-0"
2'-8"
EXISTING COLUMN
INSULATED WALL PANEL - SEE ARCH.

5 SECTION
S-301
SCALE: 3/4" = 1'-0"


5
S-301
L5x3x1/4 L.L.V. @ EA. COLUMN
1/4
3 SIDE TYP.
COPE HSS6X4x1/4 S.L.V. AT EXISTING COLUMN
EXISTING COLUMN

A SECTION
S-301
SCALE: 3/4" = 1'-0"


#
WALL PANEL NOT SHOWN FOR CLARITY
STUDS NOT SHOWN FOR CLARITY
BLOCK OUT AT COLUMN
6" EDGE OF SLAB
W.W.F. - SEE PLAN
3"
FINISH GRADE
2"
F.F.E.
SEE PLAN
4"
1'-0"
T/FTG EL.
SEE PLAN
1'-4"
6"
BASE PLATE - SEE SCHEDULE
4-#5 CONT. TOP & BOTT. W/ #4 STIRRUPS @ 12"
1'-2"
10"
1'-0"
1'-0"
2'-0"
CENTERLINE OF HELICAL PIER. PIER NOT SHOWN FOR CLARITY

7 TYP. COL. SECTION
S-301
SCALE: 3/4" = 1'-0"

US Army Corps
of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY:
TNS
DRAWN BY:
TNS
CHECKED BY:
JDD
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005S-301.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SECTIONS AND DETAILS

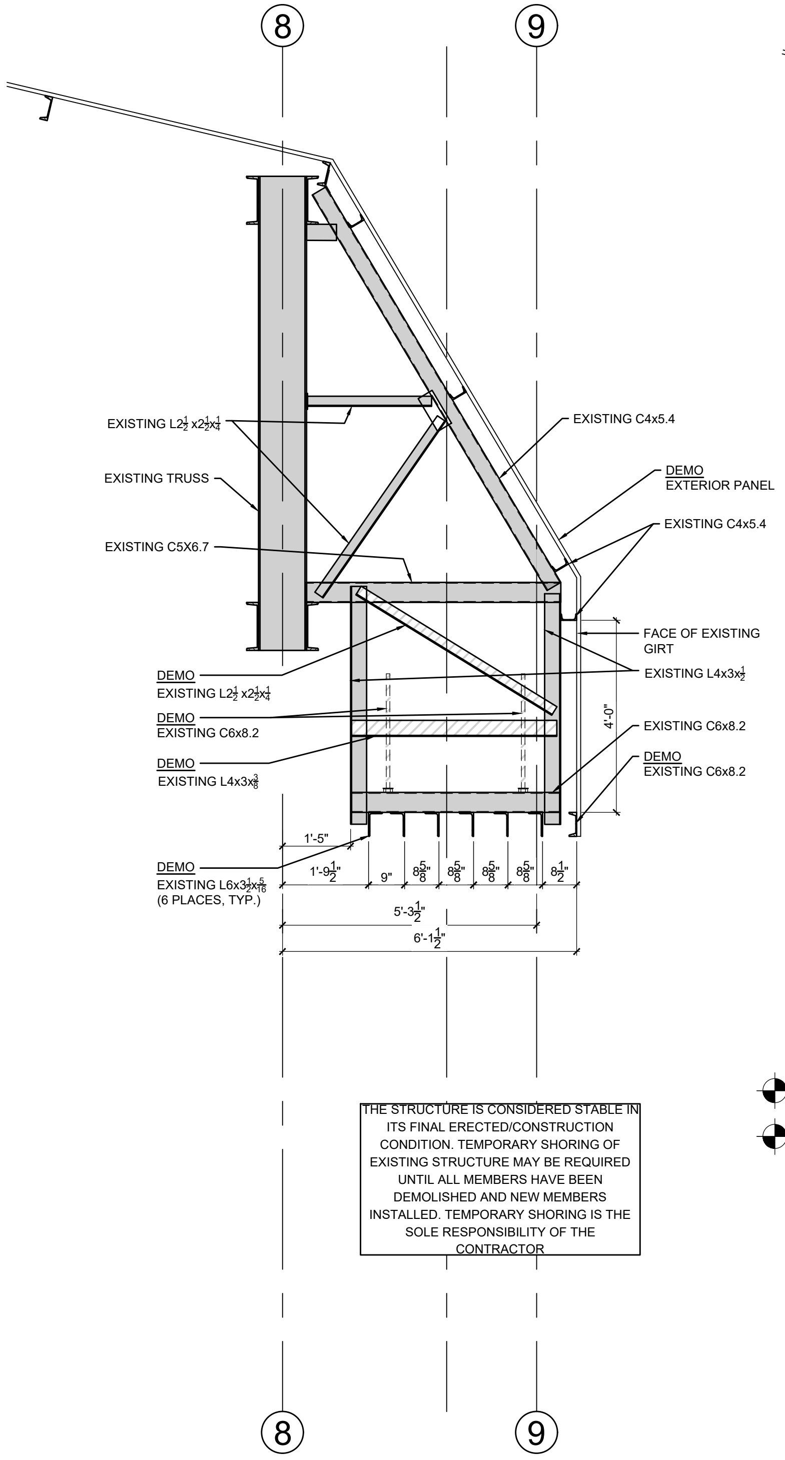
SHEET ID
S-301

RTA SUBMITTAL

CESAM v20181203

1 2 3 4 5 6 7 8 9 10

G F E D C B A

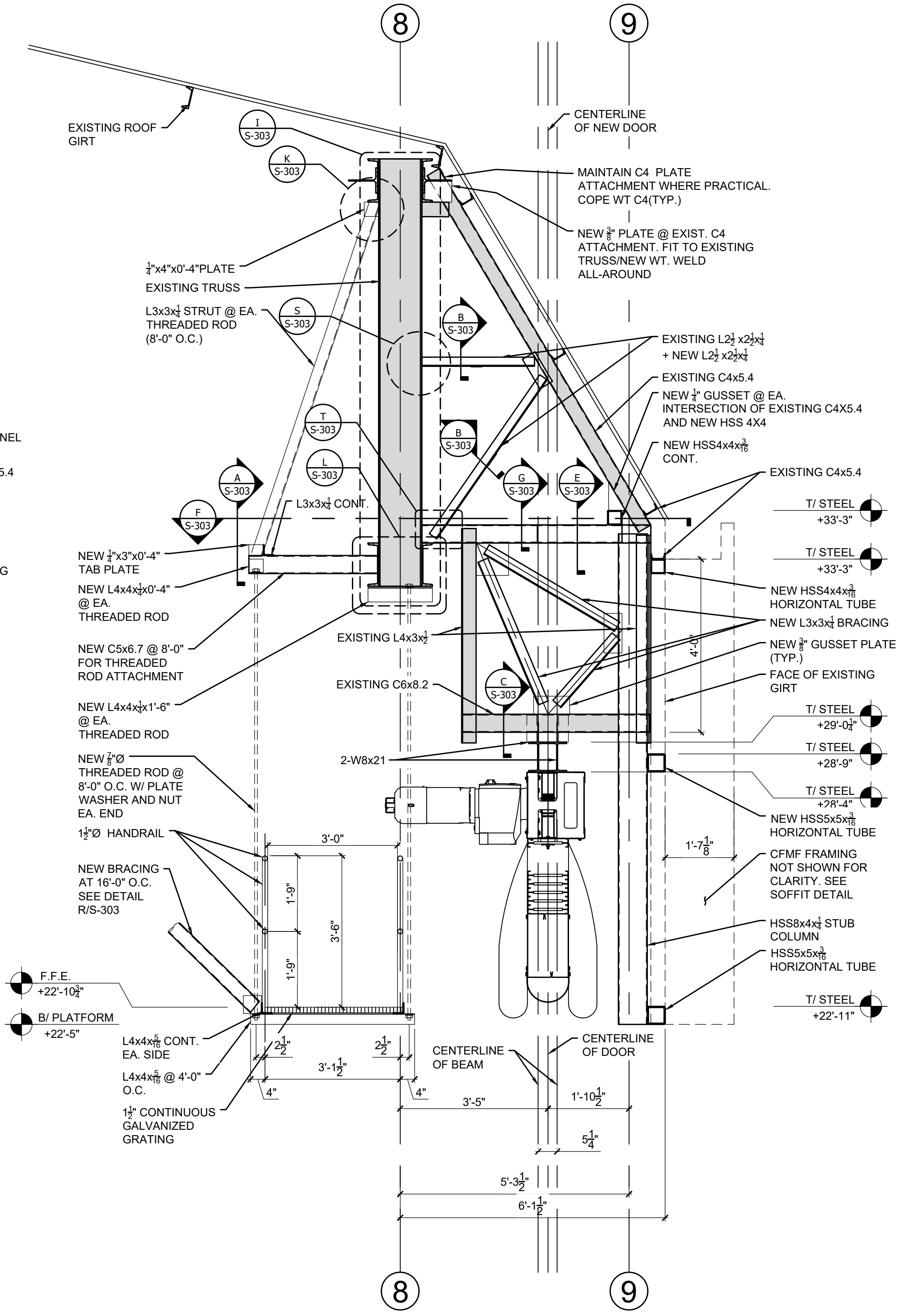


THE STRUCTURE IS CONSIDERED STABLE IN ITS FINAL ERECTED/CONSTRUCTION CONDITION. TEMPORARY SHORING OF EXISTING STRUCTURE MAY BE REQUIRED UNTIL ALL MEMBERS HAVE BEEN DEMOLISHED AND NEW MEMBERS INSTALLED. TEMPORARY SHORING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR

1
S-302

EXISTING DEMO SECTION

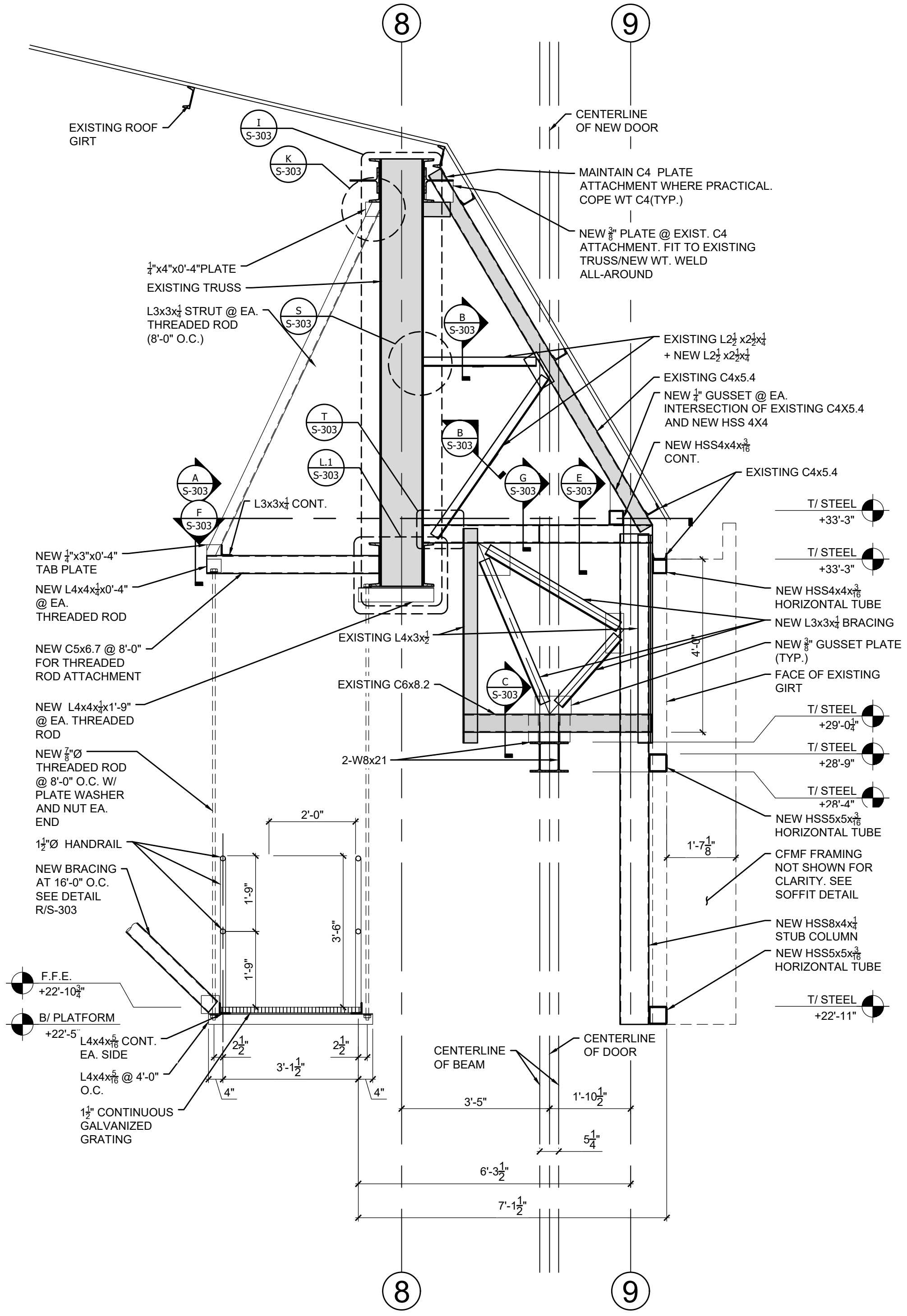
SCALE: 1/2" = 1'-0"


8
9
EXISTING ROOF GIRT
I
S-303
K
S-303
CENTERLINE OF NEW DOOR
MAINTAIN C4 PLATE ATTACHMENT WHERE PRACTICAL. COPE WT C4(TYP.)
NEW ⅜" PLATE @ EXIST. C4 ATTACHMENT. FIT TO EXISTING TRUSS/NEW WT. WELD ALL-AROUND
¼"x4"x0'-4"PLATE
EXISTING TRUSS
L3x3x¼ STRUT @ EA. THREADED ROD (8'-0" O.C.)
S
S-303
B
S-303
EXISTING L2½ x2½x¼ + NEW L2½ x2½x¼
EXISTING C4x5.4
NEW ¼" GUSSET @ EA. INTERSECTION OF EXISTING C4X5.4 AND NEW HSS 4X4
NEW HSS4x4x3/16 CONT.
T
S-303
L
S-303
B
S-303
A
S-303
G
S-303
E
S-303
EXISTING C4x5.4
F
S-303
L3x3x¼ CONT.
T/ STEEL +33'-3"
T/ STEEL +33'-3"
NEW ¼"x3"x0'-4" TAB PLATE
NEW L4x4x¼x0'-4" @ EA. THREADED ROD
NEW C5x6.7 @ 8'-0" FOR THREADED ROD ATTACHMENT
NEW L4x4x¼x1'-6" @ EA. THREADED ROD
EXISTING L4x3x½
EXISTING C6x8.2
C
S-303
NEW HSS4x4x3/16 HORIZONTAL TUBE
NEW L3x3x¼ BRACING
NEW ⅜" GUSSET PLATE (TYP.)
FACE OF EXISTING GIRT
4'-0"
T/ STEEL +29'-0¼"
2-W8x21
T/ STEEL +28'-9"
T/ STEEL +28'-4"
NEW ⅞"Ø THREADED ROD @ 8'-0" O.C. W/ PLATE WASHER AND NUT EA. END
NEW HSS5x5x3/16 HORIZONTAL TUBE
1½"Ø HANDRAIL
3'-0"
1'-7⅛"
NEW BRACING AT 16'-0" O.C. SEE DETAIL R/S-303
CFMF FRAMING NOT SHOWN FOR CLARITY. SEE SOFFIT DETAIL
1'-9"
3'-6"
1'-9"
HSS8x4x¼ STUB COLUMN
HSS5x5x3/16 HORIZONTAL TUBE
F.F.E. +22'-10¾"
B/ PLATFORM +22'-5"
T/ STEEL +22'-11"
L4x4x5/16 CONT. EA. SIDE
L4x4x5/16 @ 4'-0" O.C.
1½" CONTINUOUS GALVANIZED GRATING
2½"
2½"
3'-1½"
4"
4"
CENTERLINE OF BEAM
CENTERLINE OF DOOR
3'-5"
1'-10½"
5¼"
5'-3½"
6'-1½"
8
9

2
S-302

SECTION @ DOOR

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


8
9
EXISTING ROOF GIRT
I
S-303
K
S-303
CENTERLINE OF NEW DOOR
MAINTAIN C4 PLATE ATTACHMENT WHERE PRACTICAL. COPE WT C4(TYP.)
NEW ⅜" PLATE @ EXIST. C4 ATTACHMENT. FIT TO EXISTING TRUSS/NEW WT. WELD ALL-AROUND
¼"x4"x0'-4"PLATE
EXISTING TRUSS
L3x3x¼ STRUT @ EA. THREADED ROD (8'-0" O.C.)
S
S-303
B
S-303
EXISTING L2½ x2½x¼ + NEW L2½ x2½x¼
EXISTING C4x5.4
NEW ¼" GUSSET @ EA. INTERSECTION OF EXISTING C4X5.4 AND NEW HSS 4X4
NEW HSS4x4x3/16 CONT.
T
S-303
L.1
S-303
B
S-303
A
S-303
G
S-303
E
S-303
EXISTING C4x5.4
F
S-303
L3x3x¼ CONT.
T/ STEEL +33'-3"
T/ STEEL +33'-3"
NEW ¼"x3"x0'-4" TAB PLATE
NEW L4x4x¼x0'-4" @ EA. THREADED ROD
NEW C5x6.7 @ 8'-0" FOR THREADED ROD ATTACHMENT
NEW L4x4x¼x1'-9" @ EA. THREADED ROD
EXISTING L4x3x½
EXISTING C6x8.2
C
S-303
NEW HSS4x4x3/16 HORIZONTAL TUBE
NEW L3x3x¼ BRACING
NEW ⅜" GUSSET PLATE (TYP.)
FACE OF EXISTING GIRT
4'-0"
T/ STEEL +29'-0¼"
2-W8x21
T/ STEEL +28'-9"
T/ STEEL +28'-4"
NEW ⅞"Ø THREADED ROD @ 8'-0" O.C. W/ PLATE WASHER AND NUT EA. END
NEW HSS5x5x3/16 HORIZONTAL TUBE
1½"Ø HANDRAIL
2'-0"
1'-7⅛"
NEW BRACING AT 16'-0" O.C. SEE DETAIL R/S-303
CFMF FRAMING NOT SHOWN FOR CLARITY. SEE SOFFIT DETAIL
1'-9"
3'-6"
1'-9"
HSS8x4x¼ STUB COLUMN
HSS5x5x3/16 HORIZONTAL TUBE
F.F.E. +22'-10¾"
B/ PLATFORM +22'-5"
T/ STEEL +22'-11"
L4x4x5/16 CONT. EA. SIDE
L4x4x5/16 @ 4'-0" O.C.
1½" CONTINUOUS GALVANIZED GRATING
2½"
2½"
3'-1½"
4"
4"
CENTERLINE OF BEAM
CENTERLINE OF DOOR
3'-5"
1'-10½"
5¼"
6'-3½"
7'-1½"
8
9

3
S-302

SECTION @ CATWALK END

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

US Army Corps
of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: TNS	ISSUE DATE: JUNE 2024
DRAWN BY: TNS	SOLICITATION NO.: -
CHECKED BY: JDD	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005S-302.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SECTIONS

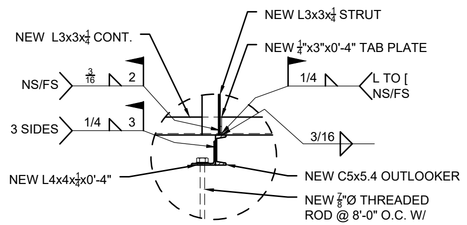
SHEET ID

S-302

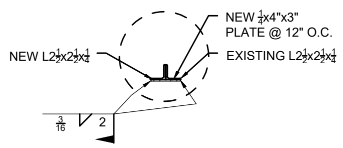
RTA SUBMITTAL

1 2 3 4 5 6 7 8 9 10

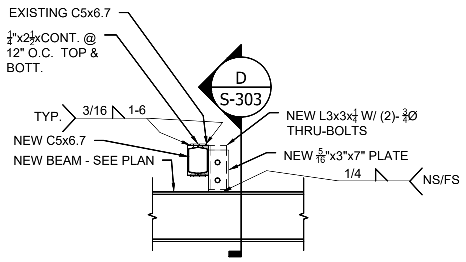
G F E D C B A



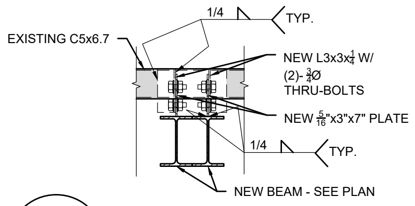
A
S-303
DETAIL
SCALE: 3/4" = 1'-0"



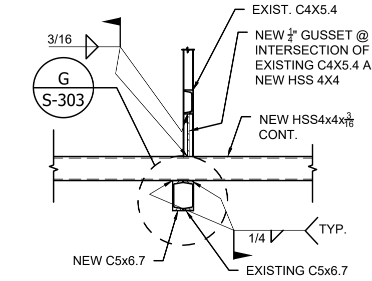
B
S-303
DETAIL
SCALE: 3/4" = 1'-0"



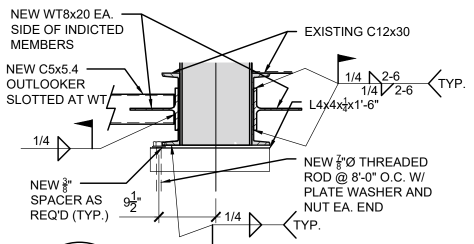
C
S-303
DETAIL
SCALE: 3/4" = 1'-0"



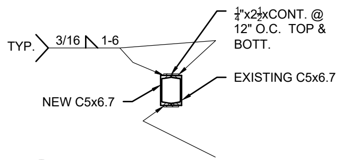
D
S-303
DETAIL
SCALE: 3/4" = 1'-0"



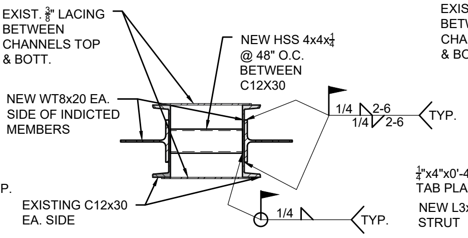
E
S-303
DETAIL
SCALE: 3/4" = 1'-0"


NEW WT8x20 EA. SIDE OF INDICTED MEMBERS
EXISTING C12x30
NEW C5x5.4 OUTLOOKER SLOTTED AT WT
1/4 2-6
1/4 2-6 TYP.
L4x4x¼x1'-6"
1/4
NEW ⅞"Ø THREADED ROD @ 8'-0" O.C. W/ PLATE WASHER AND NUT EA. END
NEW ⅜" SPACER AS REQ'D (TYP.)
9½"
1/4 TYP.

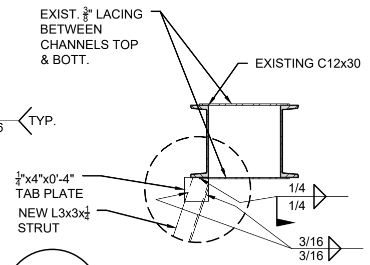
L.1
S-303
DETAIL W/ WT
SCALE: 3/4" = 1'-0"



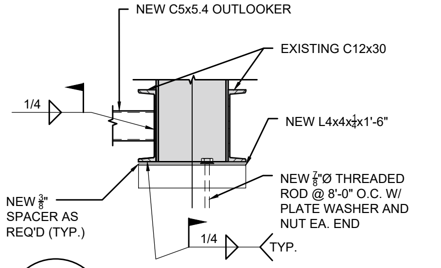
G
S-303
DETAIL
SCALE: 3/4" = 1'-0"


EXIST. ⅜" LACING BETWEEN CHANNELS TOP & BOTT.
NEW HSS 4x4x¼ @ 48" O.C. BETWEEN C12X30
NEW WT8x20 EA. SIDE OF INDICTED MEMBERS
1/4 2-6
1/4 2-6 TYP.
EXISTING C12x30 EA. SIDE
1/4 TYP.

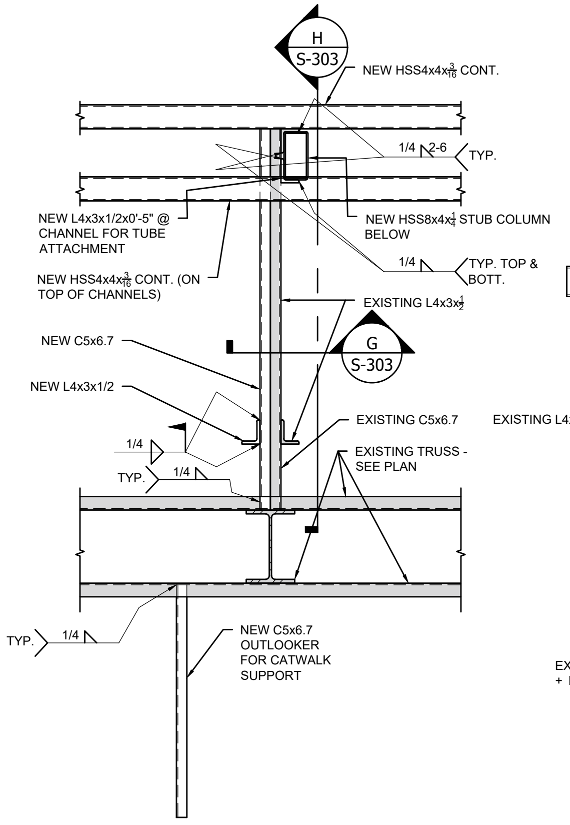
J
S-303
DETAIL
SCALE: 3/4" = 1'-0"



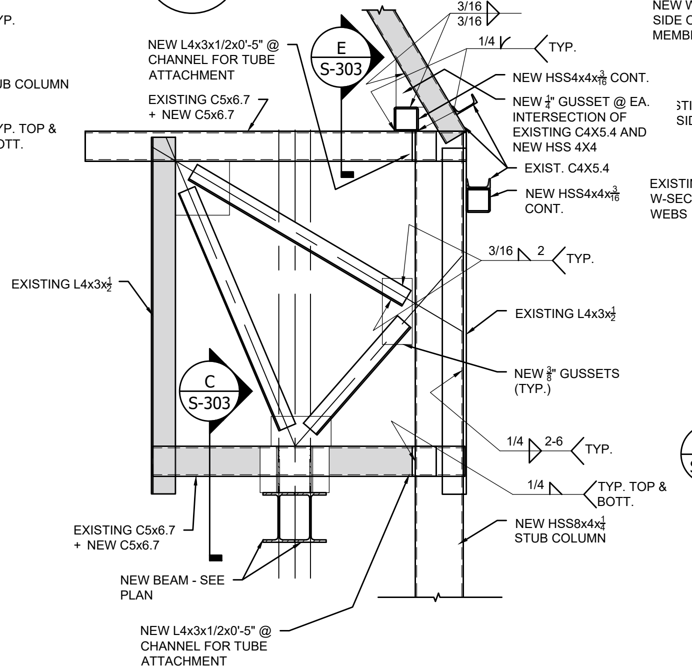
K
S-303
DETAIL
SCALE: 3/4" = 1'-0"


NEW C5x5.4 OUTLOOKER
EXISTING C12x30
1/4
NEW L4x4x¼x1'-6"
NEW ⅞"Ø THREADED ROD @ 8'-0" O.C. W/ PLATE WASHER AND NUT EA. END
NEW ⅜" SPACER AS REQ'D (TYP.)
1/4 TYP.

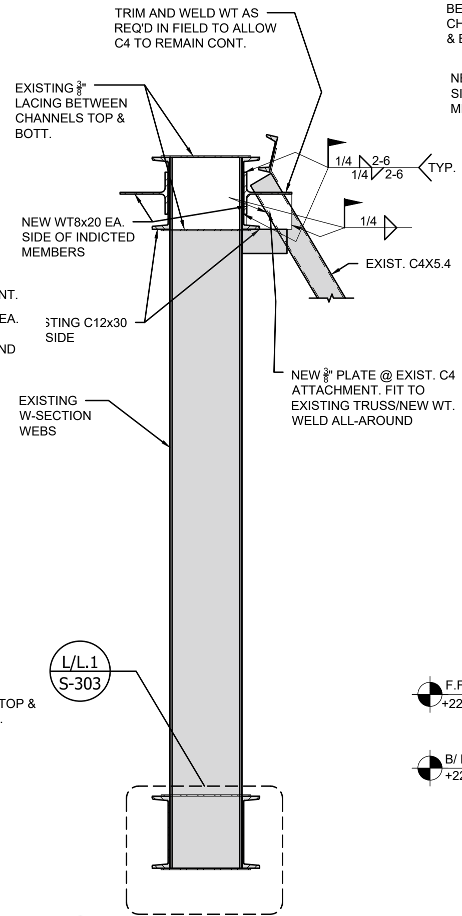
L
S-303
DETAIL W/O WT
SCALE: 3/4" = 1'-0"


H
S-303
NEW HSS4x4x3/16 CONT.
1/4 2-6 TYP.
NEW L4x3x1/2x0'-5" @ CHANNEL FOR TUBE ATTACHMENT
NEW HSS8x4x¼ STUB COLUMN BELOW
1/4 TYP. TOP & BOTT.
NEW HSS4x4x3/16 CONT. (ON TOP OF CHANNELS)
EXISTING L4x3x½
NEW C5x6.7
G
S-303
NEW L4x3x1/2
EXISTING C5x6.7
1/4
EXISTING TRUSS - SEE PLAN
TYP. 1/4
TYP. 1/4
NEW C5x6.7 OUTLOOKER FOR CATWALK SUPPORT

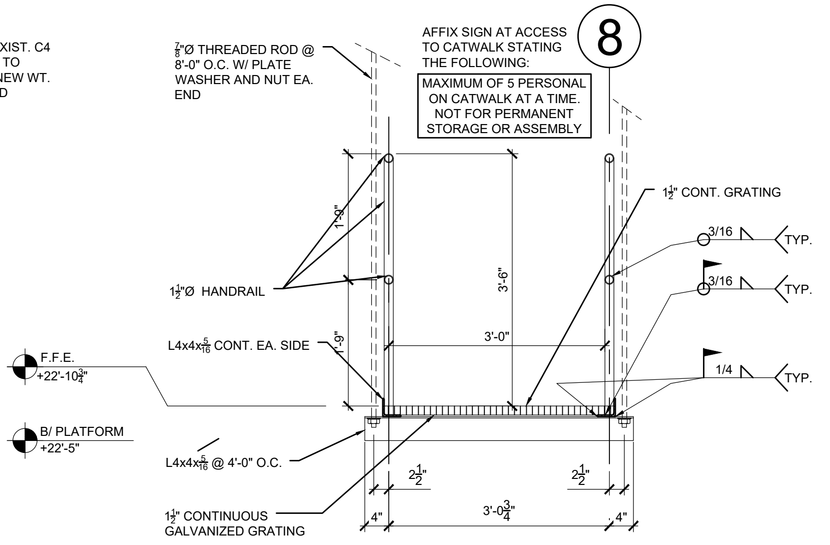
F
S-303
DETAIL
SCALE: 3/4" = 1'-0"



H
S-303
DETAIL
SCALE: 3/4" = 1'-0"


TRIM AND WELD WT AS REQ'D IN FIELD TO ALLOW C4 TO REMAIN CONT.
EXISTING ⅜" LACING BETWEEN CHANNELS TOP & BOTT.
1/4 2-6
1/4 2-6 TYP.
NEW WT8x20 EA. SIDE OF INDICTED MEMBERS
1/4
EXIST. C4X5.4
EXISTING C12x30 SIDE
NEW ⅜" PLATE @ EXIST. C4 ATTACHMENT. FIT TO EXISTING TRUSS/NEW WT. WELD ALL-AROUND
EXISTING W-SECTION WEBS
L/L.1
S-303

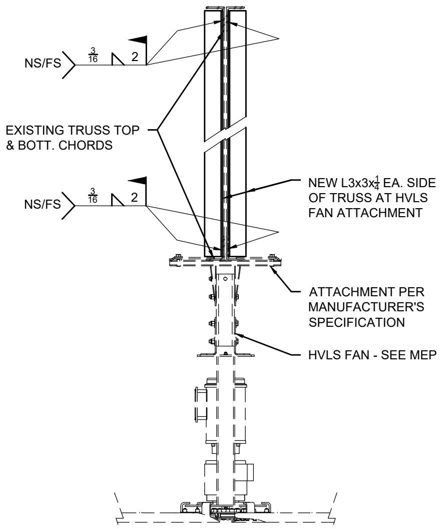
i
S-303
DETAIL
SCALE: 3/4" = 1'-0"



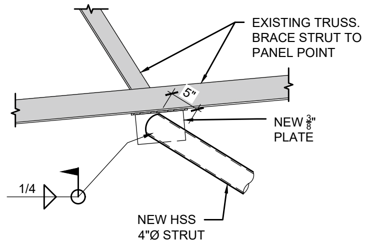
AFFIX SIGN AT ACCESS TO CATWALK STATING THE FOLLOWING:

MAXIMUM OF 5 PERSONAL ON CATWALK AT A TIME. NOT FOR PERMANENT STORAGE OR ASSEMBLY

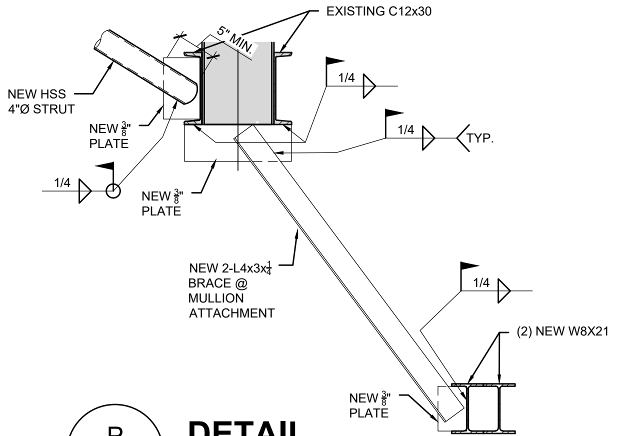
M
S-303
DETAIL
SCALE: 3/4" = 1'-0"


NS/FS 3/16 2
EXISTING TRUSS TOP & BOTT. CHORDS
NEW L3x3x¼ EA. SIDE OF TRUSS AT HVLS FAN ATTACHMENT
NS/FS 3/16 2
ATTACHMENT PER MANUFACTURER'S SPECIFICATION
HVLS FAN - SEE MEP

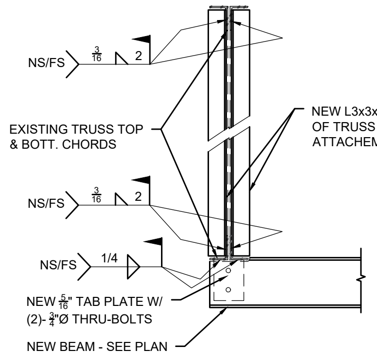
1
S-303
DETAIL
SCALE: 3/4" = 1'-0"



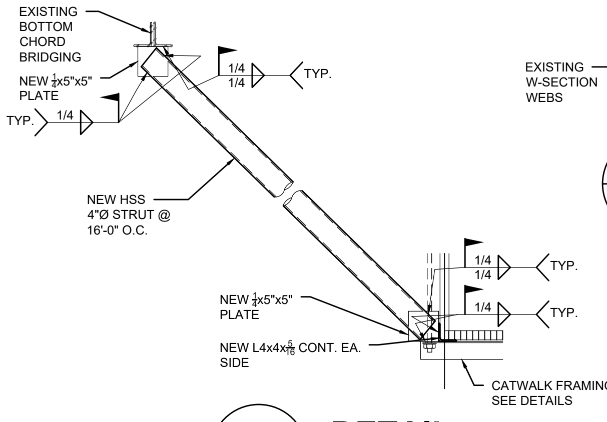
N
S-303
DETAIL
SCALE: 3/4" = 1'-0"



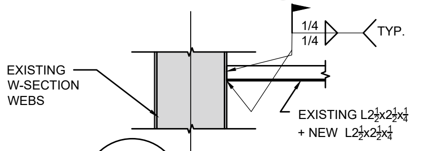
P
S-303
DETAIL
SCALE: 3/4" = 1'-0"


NS/FS 3/16 2
EXISTING TRUSS TOP & BOTT. CHORDS
NEW L3x3x¼ EA. SIDE OF TRUSS AT BEAM ATTACHEMTN
NS/FS 3/16 2
NS/FS 1/4
NEW 5/16" TAB PLATE W/ (2)- ¾"Ø THRU-BOLTS
NEW BEAM - SEE PLAN

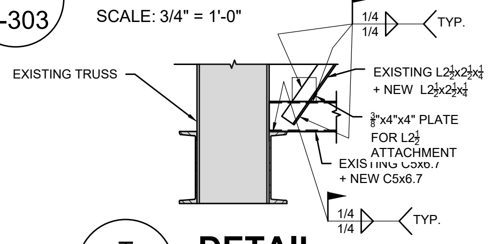
Q
S-303
DETAIL
SCALE: 3/4" = 1'-0"


EXISTING BOTTOM CHORD BRIDGING
NEW ¼x5"x5" PLATE
1/4
1/4 TYP.
TYP. 1/4
NEW HSS 4"Ø STRUT @ 16'-0" O.C.
1/4
1/4 TYP.
1/4 TYP.
NEW ¼x5"x5" PLATE
NEW L4x4x5/16 CONT. EA. SIDE
CATWALK FRAMING - SEE DETAILS

R
S-303
DETAIL
SCALE: 3/4" = 1'-0"



S
S-303
DETAIL
SCALE: 3/4" = 1'-0"


1/4
1/4 TYP.
EXISTING TRUSS
EXISTING L2½x2½x¼ + NEW L2½x2½x¼
⅜"x4"x4" PLATE FOR L2½ ATTACHMENT
EXISTING C5x6.7 + NEW C5x6.7
1/4
1/4 TYP.

T
S-303
DETAIL
SCALE: 3/4" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: TNS
DRAWN BY: TNS
CHECKED BY: JDD
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005S-303.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

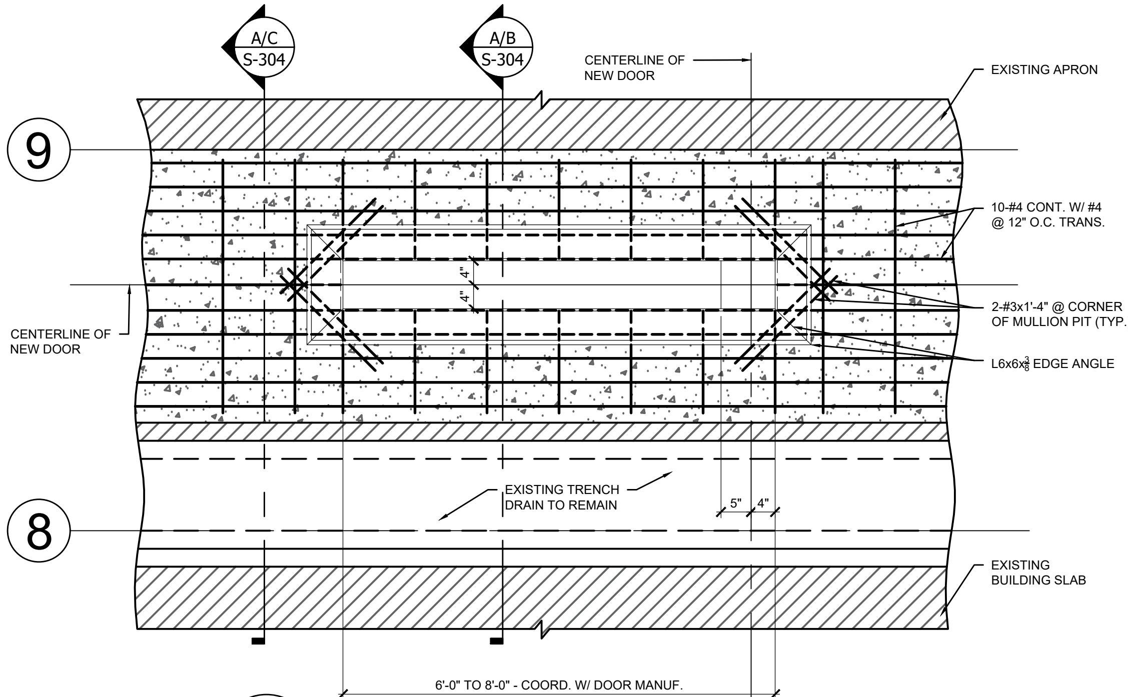
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SECTIONS AND DETAILS

SHEET ID
S-303

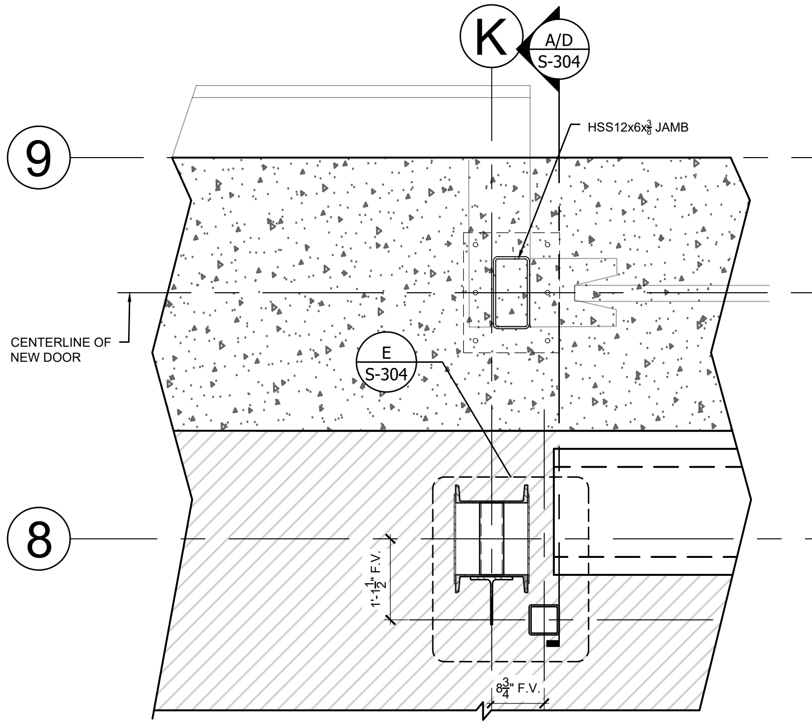
RTA SUBMITTAL

CESAM v20181203


A/C S-304
A/B S-304
CENTERLINE OF NEW DOOR
EXISTING APRON
9
10-#4 CONT. W/ #4 @ 12" O.C. TRANS.
4"
2-#3x1'-4" @ CORNER OF MULLION PIT (TYP.)
CENTERLINE OF NEW DOOR
L6x6x3/8 EDGE ANGLE
EXISTING TRENCH DRAIN TO REMAIN
5"
4"
8
EXISTING BUILDING SLAB
6'-0" TO 8'-0" - COORD. W/ DOOR MANUF.

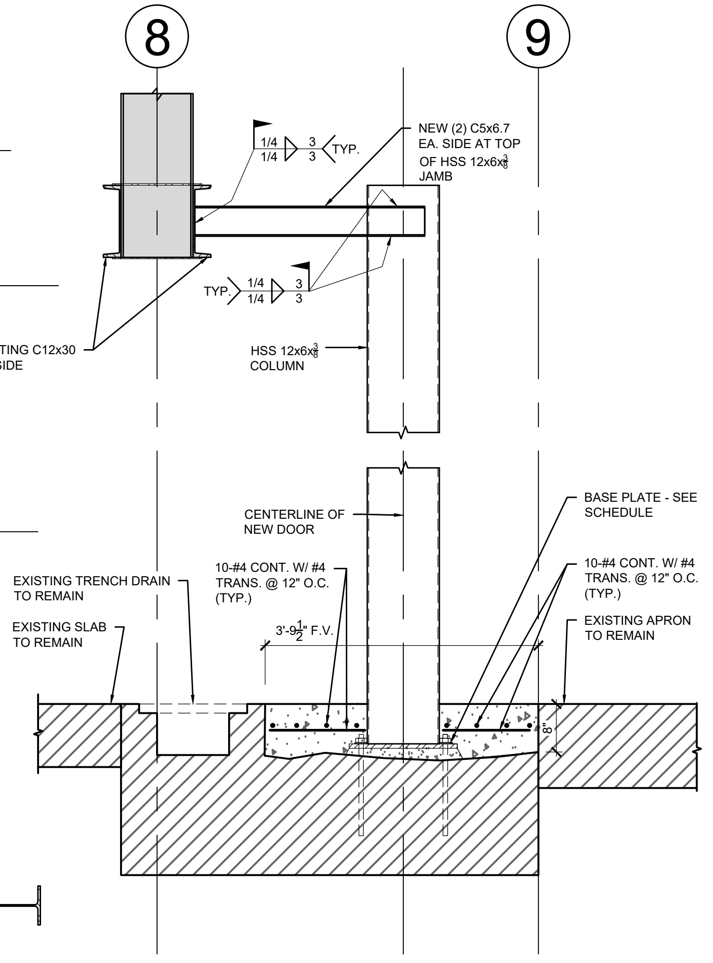
1 S-304 MULLION PIT DETAIL PLAN

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



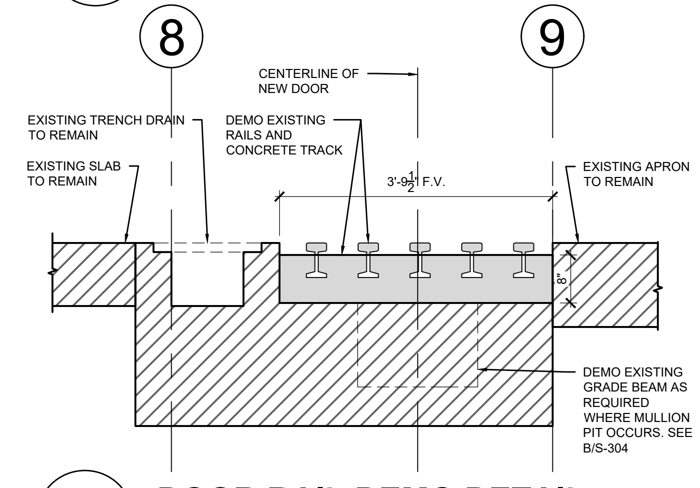
2 S-304 MULLION / COL. DETAIL PLAN

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


8
9
1/4 3
1/4 3 TYP.
NEW (2) C5x6.7 EA. SIDE AT TOP OF HSS 12x6x3/8 JAMB
TYP. 1/4 3
1/4 3
EXISTING C12x30 EA. SIDE
HSS 12x6x3/8 COLUMN
CENTERLINE OF NEW DOOR
BASE PLATE - SEE SCHEDULE
EXISTING TRENCH DRAIN TO REMAIN
10-#4 CONT. W/ #4 TRANS. @ 12" O.C. (TYP.)
10-#4 CONT. W/ #4 TRANS. @ 12" O.C. (TYP.)
EXISTING SLAB TO REMAIN
3'-9 1/2" F.V.
EXISTING APRON TO REMAIN
8"

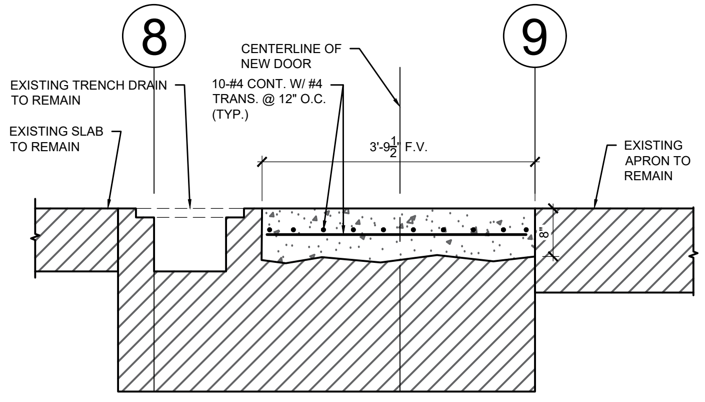
D S-304 DOOR JAMB SECTION

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


8
9
CENTERLINE OF NEW DOOR
EXISTING TRENCH DRAIN TO REMAIN
DEMO EXISTING RAILS AND CONCRETE TRACK
EXISTING SLAB TO REMAIN
3'-9 1/2" F.V.
EXISTING APRON TO REMAIN
8"
DEMO EXISTING GRADE BEAM AS REQUIRED WHERE MULLION PIT OCCURS. SEE B/S-304

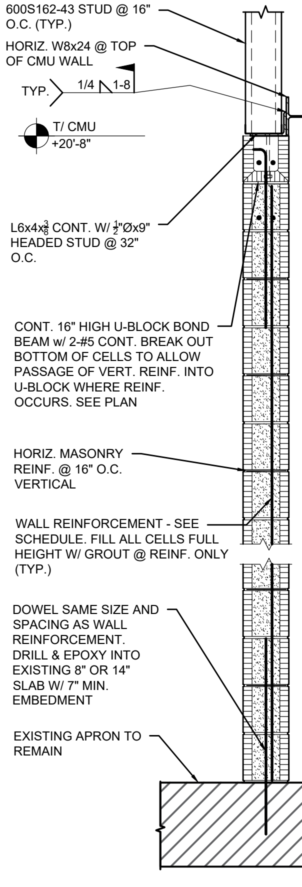
A S-304 DOOR RAIL DEMO DETAIL

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



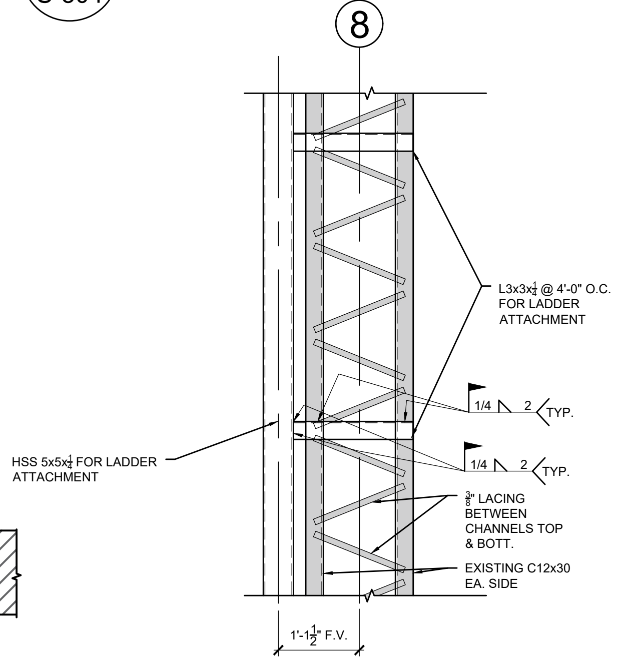
C S-304 RAIL SLAB REPAIR SECTION

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


600S162-43 STUD @ 16" O.C. (TYP.)
HORIZ. W8x24 @ TOP OF CMU WALL
TYP. 1/4 1-8
T/ CMU +20'-8"
L6x4x3/8 CONT. W/ 1/2"Øx9" HEADED STUD @ 32" O.C.
CONT. 16" HIGH U-BLOCK BOND BEAM w/ 2-#5 CONT. BREAK OUT BOTTOM OF CELLS TO ALLOW PASSAGE OF VERT. REINF. INTO U-BLOCK WHERE REINF. OCCURS. SEE PLAN
HORIZ. MASONRY REINF. @ 16" O.C. VERTICAL
WALL REINFORCEMENT - SEE SCHEDULE. FILL ALL CELLS FULL HEIGHT W/ GROUT @ REINF. ONLY (TYP.)
DOWEL SAME SIZE AND SPACING AS WALL REINFORCEMENT. DRILL & EPOXY INTO EXISTING 8" OR 14" SLAB W/ 7" MIN. EMBEDMENT
EXISTING APRON TO REMAIN

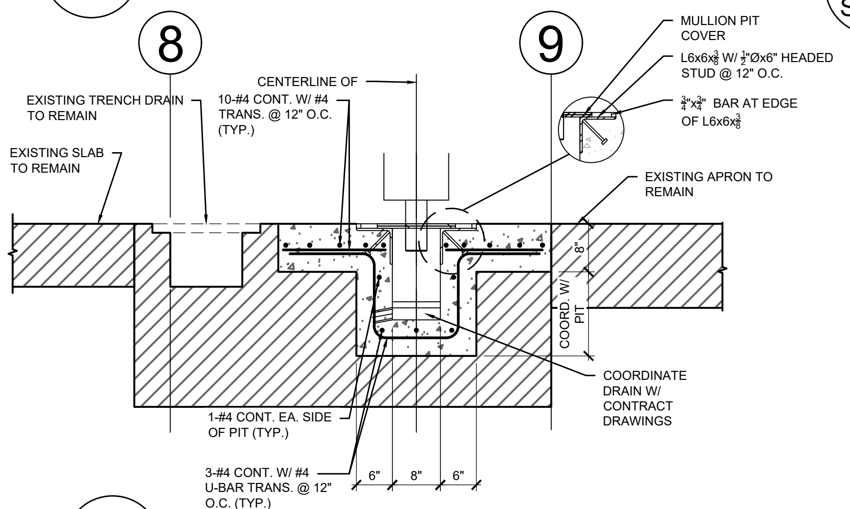
3 S-304 SECTION

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


8
L3x3x1/4 @ 4'-0" O.C. FOR LADDER ATTACHMENT
1/4 2 TYP.
1/4 2 TYP.
HSS 5x5x1/4 FOR LADDER ATTACHMENT
3/8" LACING BETWEEN CHANNELS TOP & BOTT.
EXISTING C12x30 EA. SIDE
1'-1 1/2" F.V.

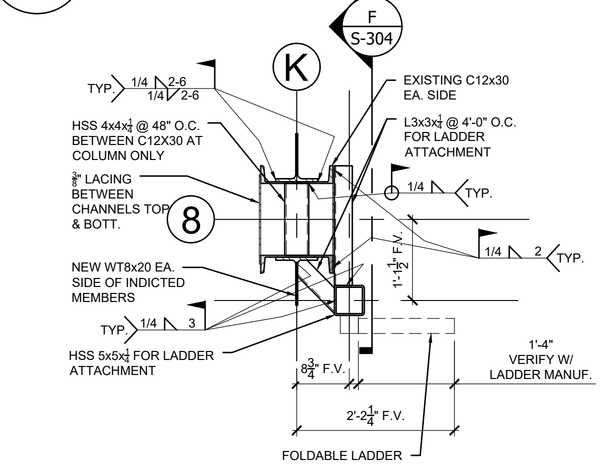
F S-304 LADDER COLUMN ELEVATION

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


8
9
MULLION PIT COVER
L6x6x3/8 W/ 1/2"Øx6" HEADED STUD @ 12" O.C.
3/4"x3/4" BAR AT EDGE OF L6x6x3/8
CENTERLINE OF
EXISTING TRENCH DRAIN TO REMAIN
10-#4 CONT. W/ #4 TRANS. @ 12" O.C. (TYP.)
EXISTING SLAB TO REMAIN
EXISTING APRON TO REMAIN
8"
COORD. W/ PIT
COORDINATE DRAIN W/ CONTRACT DRAWINGS
1-#4 CONT. EA. SIDE OF PIT (TYP.)
3-#4 CONT. W/ #4 U-BAR TRANS. @ 12" O.C. (TYP.)
6"
8"
6"

B S-304 MULLION PIT SECTION

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


F S-304
K
TYP. 1/4 2-6
1/4 2-6
EXISTING C12x30 EA. SIDE
HSS 4x4x1/4 @ 48" O.C. BETWEEN C12x30 AT COLUMN ONLY
L3x3x1/4 @ 4'-0" O.C. FOR LADDER ATTACHMENT
3/8" LACING BETWEEN CHANNELS TOP & BOTT.
8
1/4 TYP.
1'-1 1/2" F.V.
1/4 2 TYP.
NEW WT8x20 EA. SIDE OF INDICTED MEMBERS
TYP. 1/4 3
HSS 5x5x1/4 FOR LADDER ATTACHMENT
8 3/4" F.V.
1'-4" VERIFY W/ LADDER MANUF.
2'-2 1/4" F.V.
FOLDABLE LADDER

E S-304 LADDER COLUMN DETAIL

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

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: TNS	ISSUE DATE: JUNE 2024
DRAWN BY: TNS	SOLICITATION NO.: -
CHECKED BY: JDD	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005S-304.DWG

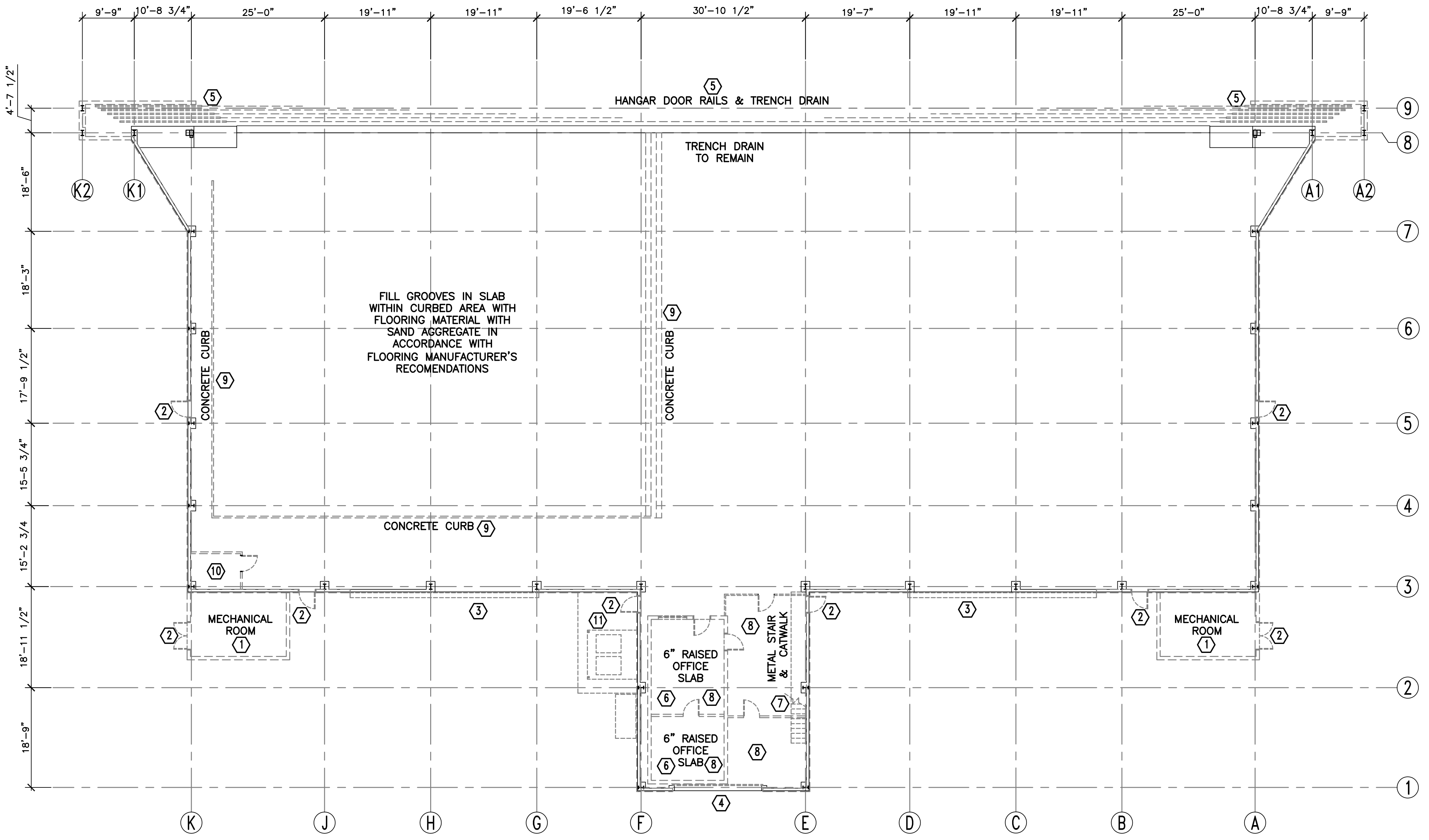
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SECTIONS AND DETAILS

SHEET ID
S-304

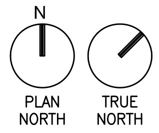
RTA SUBMITTAL

CESAM v20181203



DEMOLITION PLAN

SCALE: 3/32" = 1'-0"



GENERAL DEMOLITION NOTES:

REMOVE WALL PANELS AND WALL INSULATION THROUGHOUT.

REMOVE ROOF PANELS AND INSULATION THROUGHOUT.

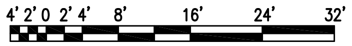
ALL NEW AND EXISTING STRUCTURAL STEEL SHALL BE SAND BLASTED CLEAN TO SSPC SP 6/NACE NO. 3 STANDARDS

EXISTING SLAB TO REMAIN SHALL BE REPAIRED DUE TO ANY DAMAGE CAUSED BY DEMOLITION ACTIVITIES.

KEYED DEMOLITION NOTES:

1. REMOVE MECHANICAL ROOM ROOF, WALL, DOORS, FLOOR, AND ALL STRUCTURE INCLUDING FOUNDATION.
2. REMOVE HOLLOW METAL DOOR, FRAME, AND CONCRETE CURB.
3. REMOVE SLIDING DOOR AND FRAME
4. REMOVE OVERHEAD DOOR AND FRAME.
5. REMOVE SLIDING HANGAR DOOR AND DOOR RAILS. SEE STRUCTURAL FOR FRAMING DEMOLITION REQUIRED FOR NEW HANGAR DOOR SYSTEM.
6. REMOVE 6" RAISED OFFICE TOPPING SLAB. PATCH AND REPAIR REMAINING SLAB AS REQUIRED TO FACILITATE INSTALLATION OF SCHEDULED FLOOR FINISH
7. REMOVE METAL STAIR AND CATWALK.
8. REMOVE ALL INTERIOR WALLS, CEILINGS, DOORS, EXPANDED METAL AND OTHER FINISHES IN OFFICE AND STORAGE AREA.
9. REMOVE CONCRETE CURB. PATCH CONCRETE SLAB DUE TO REMOVAL OPERATIONS AS REQUIRED.
10. REMOVE INTERIOR STRUCTURE.
11. REMOVE CANOPY AND EXTERIOR SLAB.

GRAPHIC SCALE
IMPERIAL



3/32" = 1'-0"

US Army Corps
of Engineers®

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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: JGR	ISSUE DATE: JUNE 2024
DRAWN BY: JGR	SOLICITATION NO.: -
CHECKED BY: CLR	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005A-101.DWG

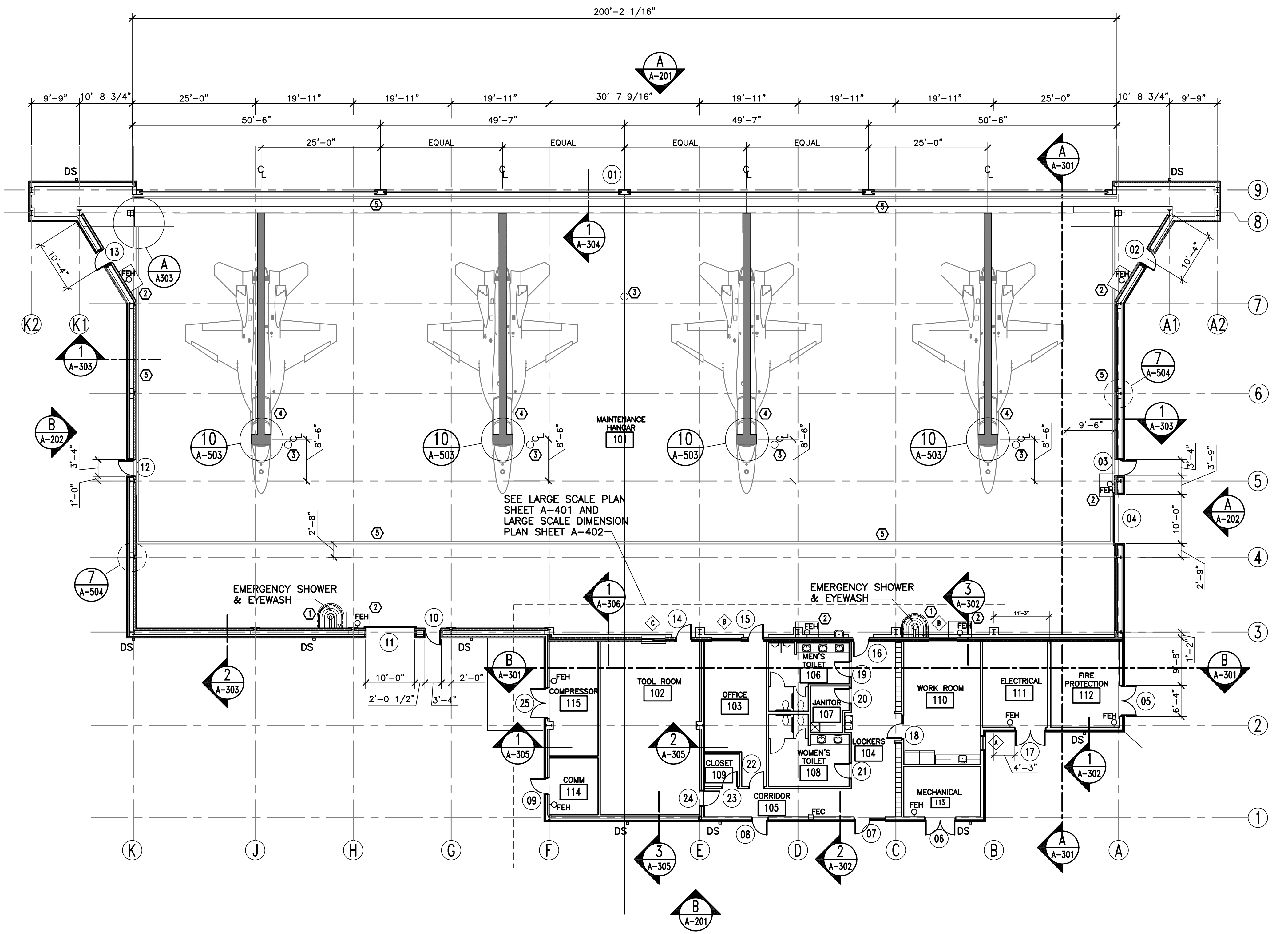
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

DEMOLITION PLAN

SHEET ID
A-101

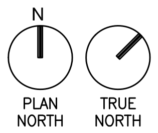
RTA SUBMITTAL

CESAM v20181203



FLOOR PLAN

SCALE: 3/32" = 1'-0"



STRIPING NOTES

1. EMERGENCY EYEWASH FLOOR AND WALL STRIPING–SEE DETAIL 10 / A-502
2. FIRE EXTINGUISHER FLOOR STRIPING–SEE DETAIL 12 / A-503
3. GROUNDING FLOOR STRIPING–SEE DETAIL 11 / A-503
4. TOW LINE AND NOSE WHEEL STOP STRIPING–SEE DETAIL 10 / A-503
5. AIRCRAFT BOUNDARY STRIPING–6" WIDE RETRO YELLOW LINE

PLAN LEGEND

115	ROOM NUMBER–REFER TO ROOM AND FINISH SCHEDULE ON SHEET A-601
01	DOOR NUMBER–SEE DOOR SCHEDULE ON SHEET A-601
A	WINDOW NUMBER–SEE GRAPHIC WINDOW TYPES ON SHEET A-601
A	WALL TYPE TAG–SEE WALL TYPES ON SHEET A-602
▬	1 HOUR RATED ASSEMBLY
DS	DOWNSPOUT WITH CAST IRON BOOT
FEH	FIRE EXTINGUISHER ON A HOOK
FEC	FIRE EXTINGUISHER IN SEMI RECESSED CABINET.

GRAPHIC SCALE
IMPERIAL

4' 2' 0 2' 4' 8' 16' 24' 32'

3/32" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: CLR
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
FILE NAME: MEF24005A-102.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

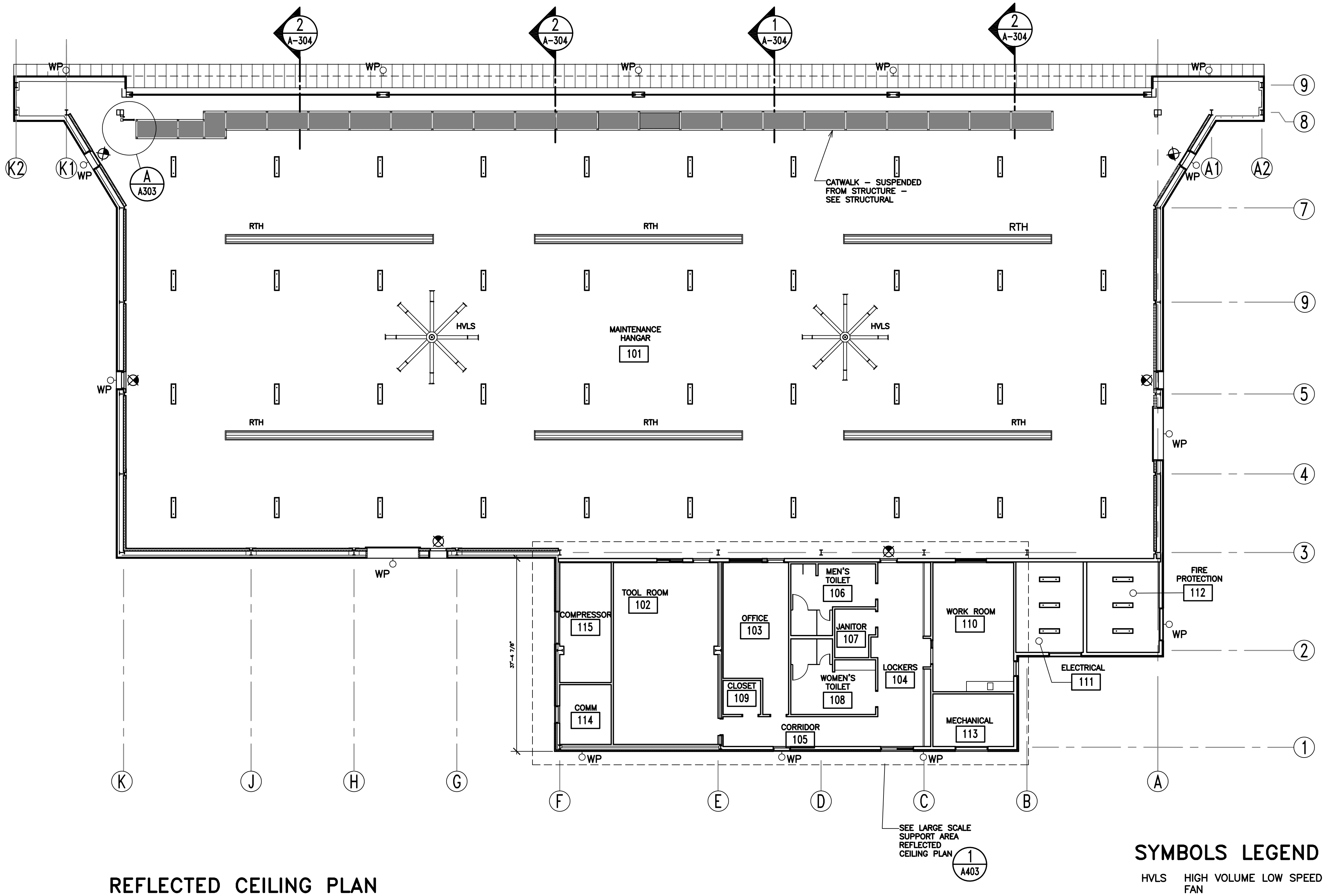
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FLOOR PLAN

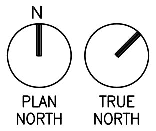
SHEET ID
A-102

RTA SUBMITTAL



REFLECTED CEILING PLAN

SCALE: 3/32" = 1'-0"



SYMBOLS LEGEND

HVLS	HIGH VOLUME LOW SPEED FAN
RTH	RADIANT TUBE HEATER
▭	SUSPENDED LIGHT FIXTURE
WP ○	EXTERIOR WALL PACK LIGHTING
⊠	EGRESS SIGNAGE
•	FIRE SPRINKLER HEAD

GRAPHIC SCALE
IMPERIAL

4' 2' 0 2' 4' 8' 16' 24' 32'

3/32" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

DESIGNED BY:
JGR
DRAWN BY:
JGR
CHECKED BY:
CLR
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D
FILE NAME:
MEF24005A-103.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

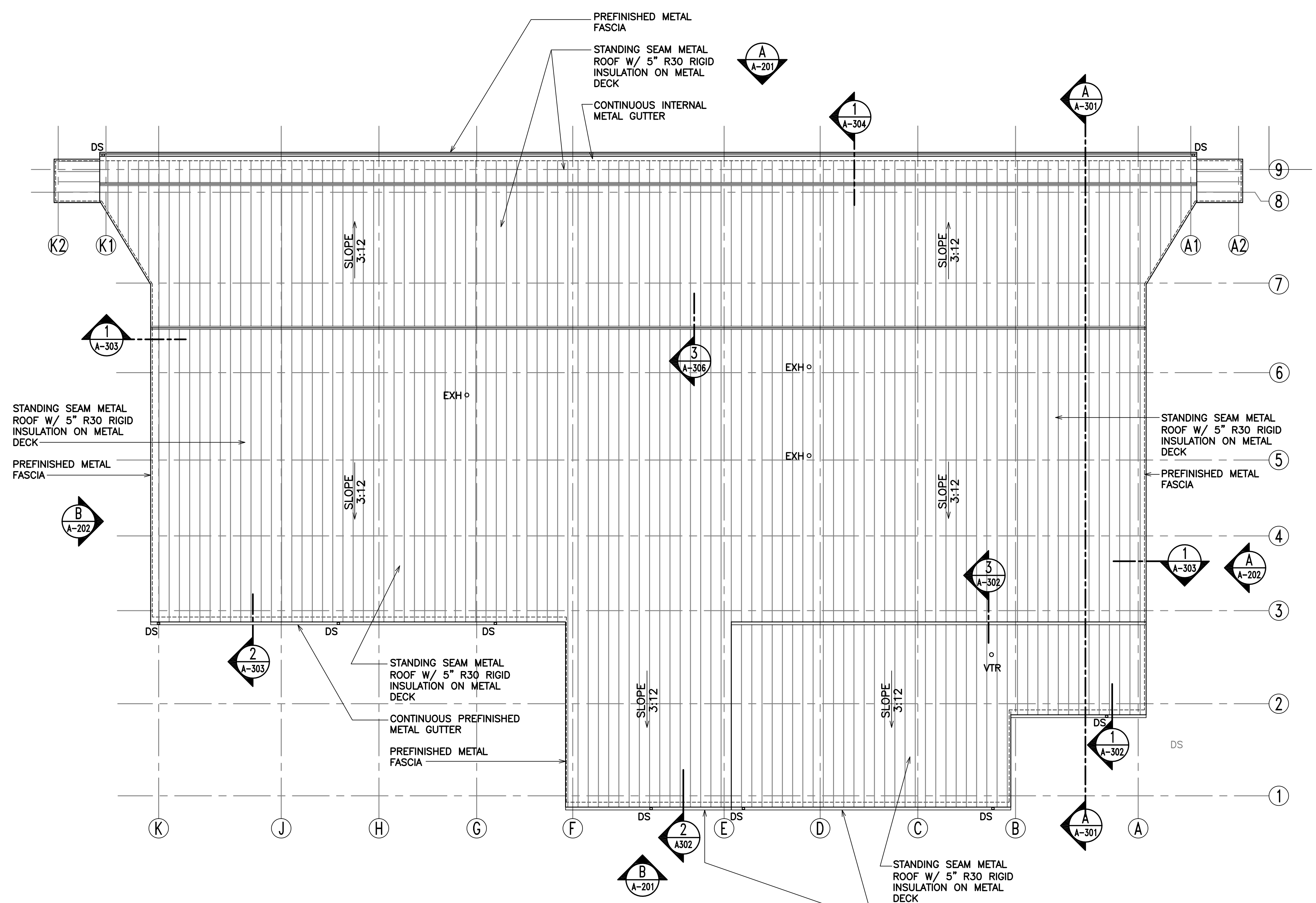
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

REFLECTED CEILING PLAN

SHEET ID
A-103

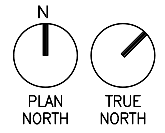
RTA SUBMITTAL

CESAM v20181203


PREFINISHED METAL FASCIA
STANDING SEAM METAL ROOF W/ 5" R30 RIGID INSULATION ON METAL DECK
CONTINUOUS INTERNAL METAL GUTTER
A A-201
1 A-304
A A-301
DS
DS
9
8
K2
K1
A1
A2
SLOPE 3:12
SLOPE 3:12
7
1 A-303
3 A-306
EXH
EXH
EXH
6
STANDING SEAM METAL ROOF W/ 5" R30 RIGID INSULATION ON METAL DECK
PREFINISHED METAL FASCIA
STANDING SEAM METAL ROOF W/ 5" R30 RIGID INSULATION ON METAL DECK
PREFINISHED METAL FASCIA
5
B A-202
SLOPE 3:12
SLOPE 3:12
4
1 A-303
A A-202
3 A-302
3
DS
DS
DS
2 A-303
STANDING SEAM METAL ROOF W/ 5" R30 RIGID INSULATION ON METAL DECK
CONTINUOUS PREFINISHED METAL GUTTER
PREFINISHED METAL FASCIA
VTR
SLOPE 3:12
SLOPE 3:12
2
DS
1 A-302
DS
1
DS
DS
DS
K
J
H
G
F
E
D
C
B
A
2 A302
A A-301
B A-201
STANDING SEAM METAL ROOF W/ 5" R30 RIGID INSULATION ON METAL DECK
CONTINUOUS PREFINISHED METAL GUTTER
FOR PROJECT TYPICAL PREFINISHED METAL GUTTER PROFILE SEE 11 A-502

ROOF PLAN

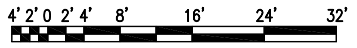
SCALE: 3/32" = 1'-0"



ROOF PLAN LEGEND

DS ▫	DOWNSPOUT WITH CONCRETE SPLASHBLOCK
VTR ○	WASTE STACK VENT THROUGH ROOF
EXH ○	EXHAUST PIPE THROUGH ROOF

GRAPHIC SCALE
IMPERIAL



3/32" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: JGR		ISSUE DATE: JUNE 2024
DRAWN BY: JGR		SOLICITATION NO.: -
CHECKED BY: CLR		CONTRACT NO.: -
SUBMITTED BY: T. HYMAN		PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005A-104.DWG	

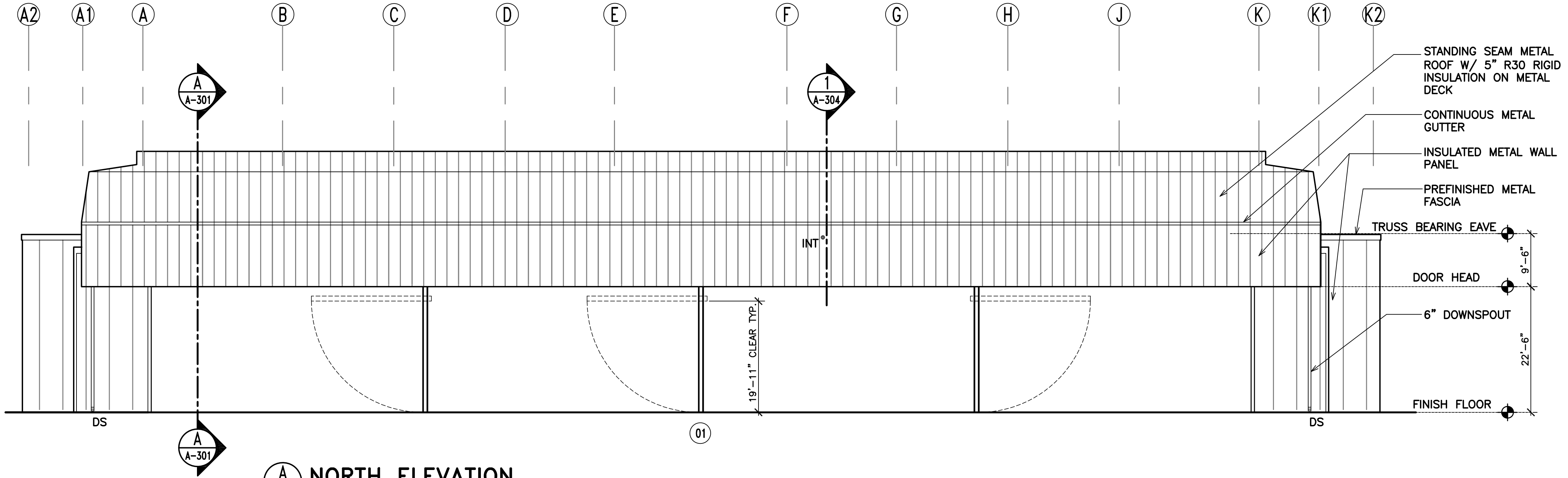
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

ROOF PLAN

SHEET ID
A-104

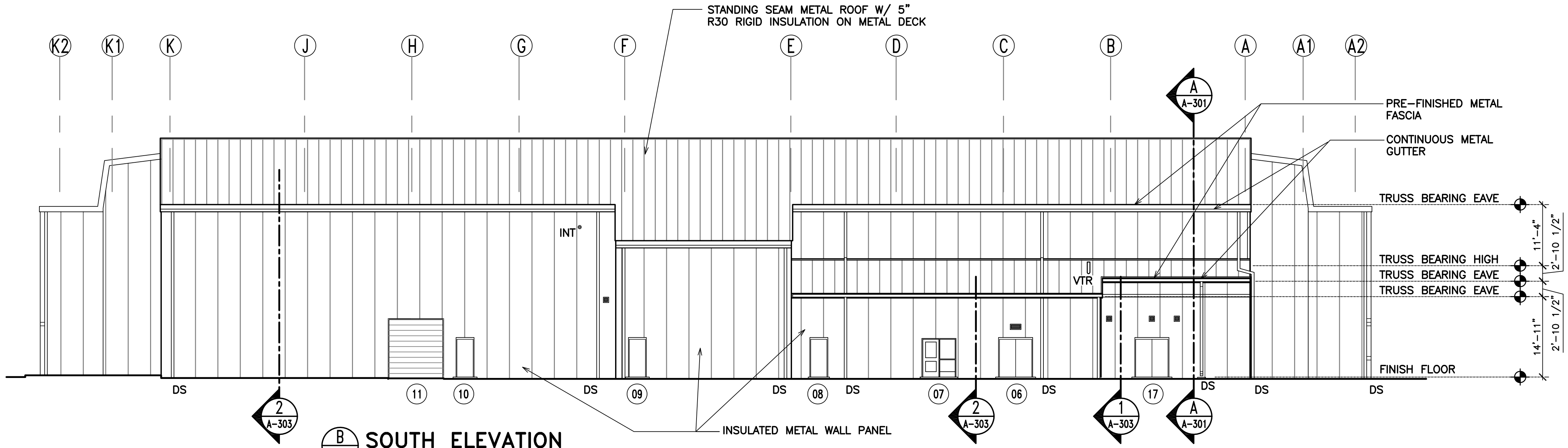
RTA SUBMITTAL

CESAM v20181203



A/A-201 NORTH ELEVATION

SCALE: 3/32" = 1'-0"



B/A-201 SOUTH ELEVATION

SCALE: 3/32" = 1'-0"

ABBREVIATIONS

DS	DOWNSPOUT WITH SPLASHBLOCK
VTR	WASTE STACK VENT THROUGH ROOF
INT	RTH AIR INTAKE

GRAPHIC SCALE
IMPERIAL

4' 2' 0 2' 4' 8' 16' 24' 32'

3/32" = 1'-0"

US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024

SOLICITATION NO.:
-

CONTRACT NO.:
-

PROJECT NUMBER:
MEF24005

DESIGNED BY:
JGR

DRAWN BY:
JGR

CHECKED BY:
CLR

SUBMITTED BY:
T. HYMAN

SIZE:
ANSI D

FILE NAME:
MEF24005A-201.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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Pensacola - Panama City Beach - Tallahassee - Mobile

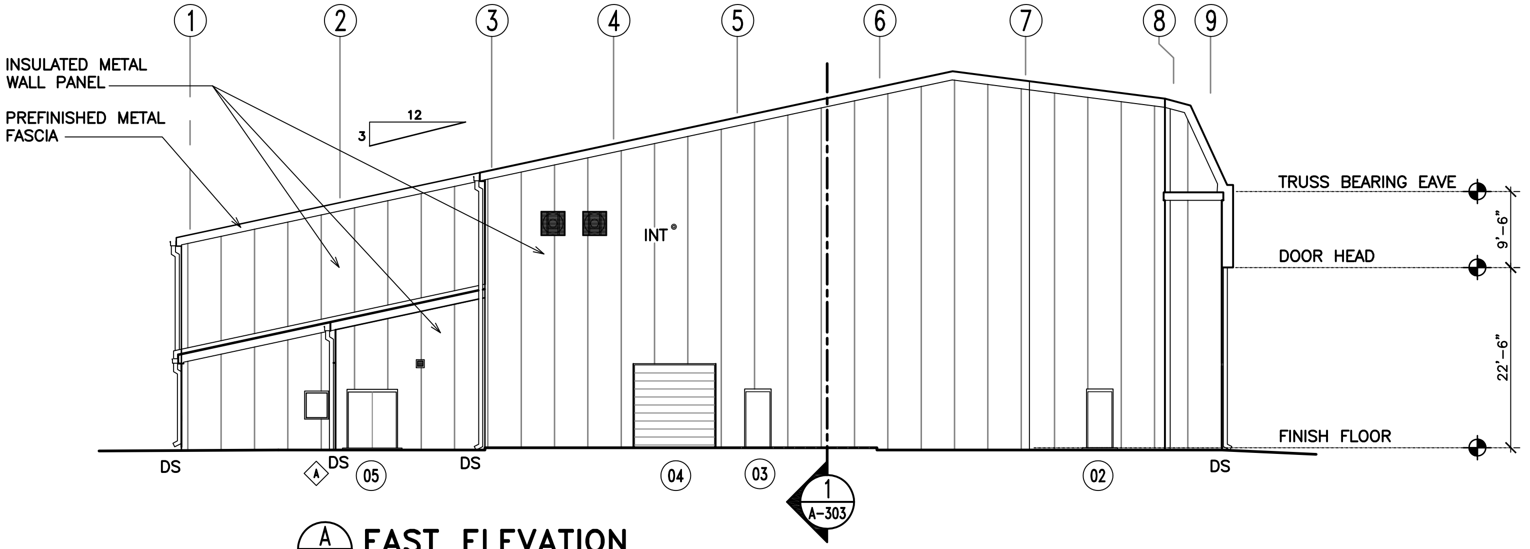
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

EXTERIOR ELEVATIONS

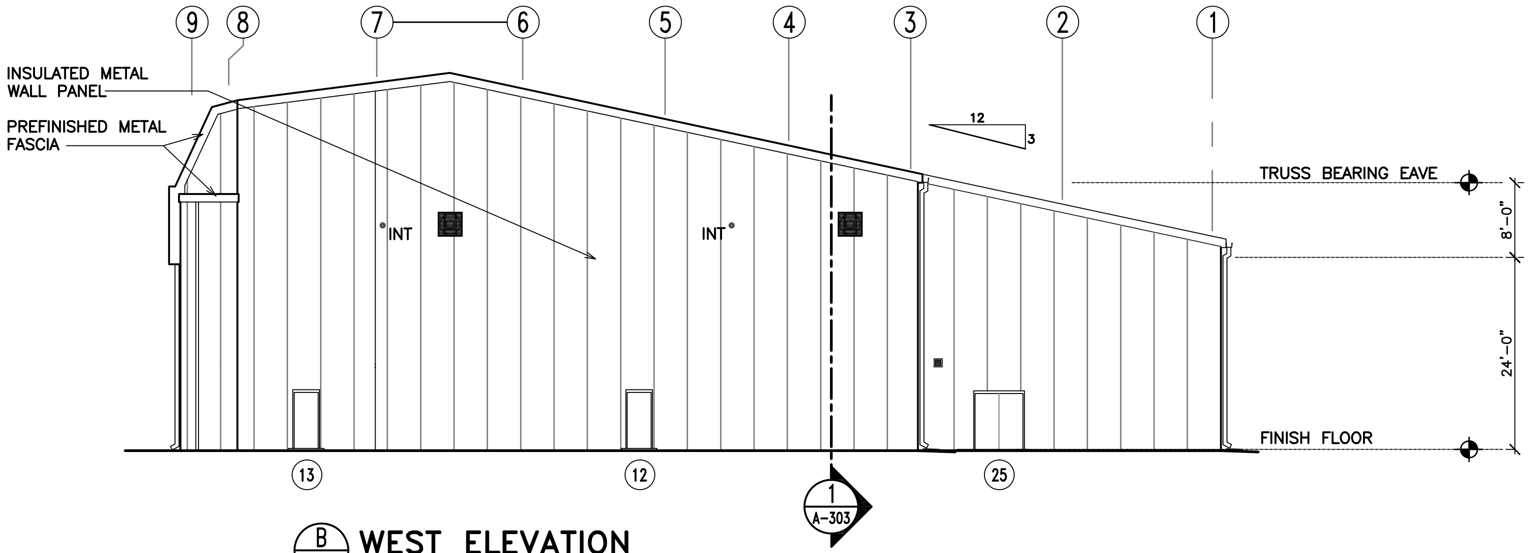
SHEET ID

A-201

RTA SUBMITTAL



A A-202 **EAST ELEVATION**
SCALE: 3/32" = 1'-0"

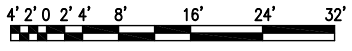


B A-202 **WEST ELEVATION**
SCALE: 3/32" = 1'-0"

ABBREVIATIONS

DS	DOWNSPOUT WITH SPLASHBLOCK
VTR	WASTE STACK VENT THROUGH ROOF
INT	RTH AIR INTAKE

GRAPHIC SCALE
IMPERIAL



3/32" = 1'-0"

US Army Corps of Engineers ®

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DESIGNED BY:
JGR
DRAWN BY:
JGR
CHECKED BY:
CLR
SUBMITTED BY:
T. HYMAN
SIZE:
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ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
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-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005A-202.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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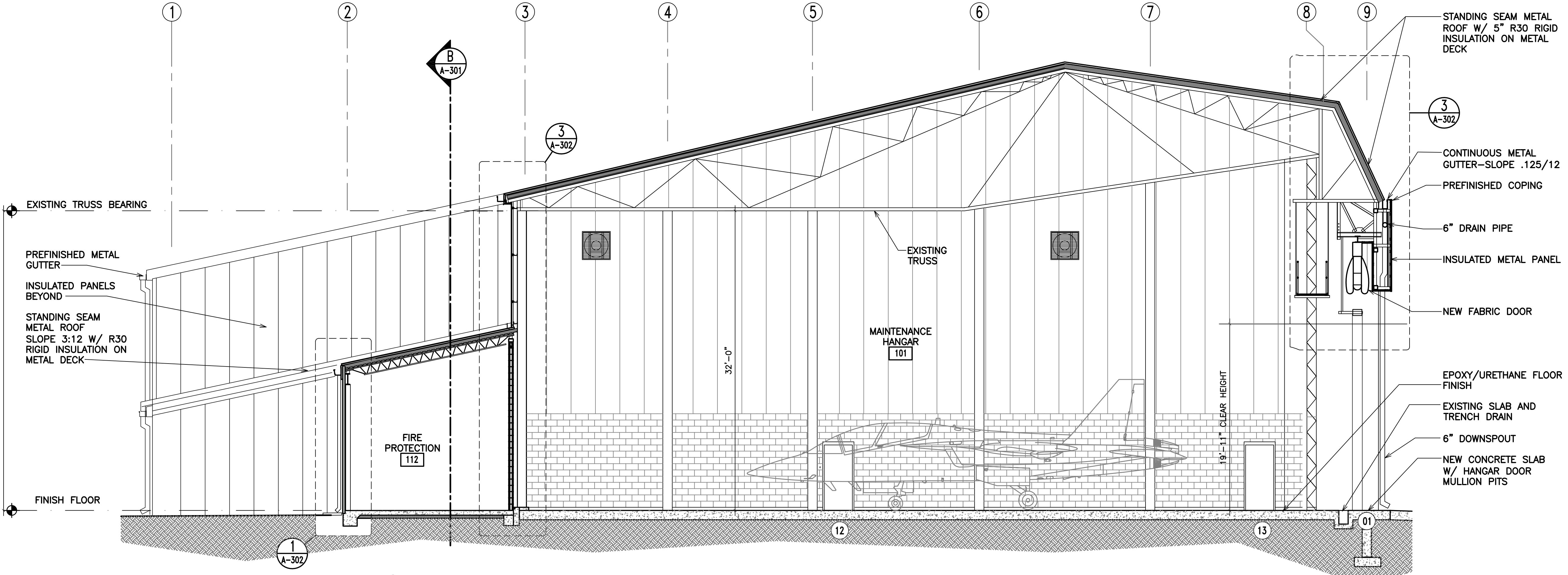
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

EXTERIOR ELEVATIONS

SHEET ID
A-202

RTA SUBMITTAL

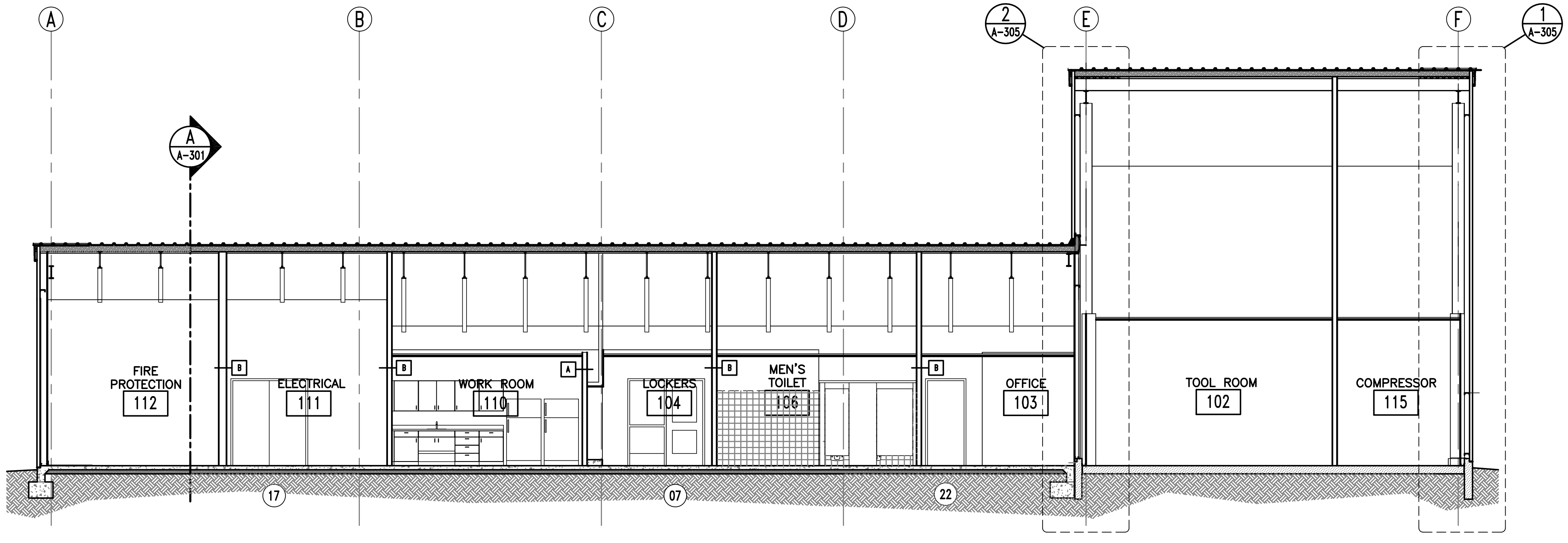


A
A-301

BUILDING SECTION

SCALE: 3/16" = 1'-0"

GENERAL NOTE:
SEE SHEET A-601 ROOM
AND FINISH SCHEDULE
FOR CEILING HEIGHTS



B
A-301

BUILDING SECTION

SCALE: 3/16" = 1'-0"

BUILDING SECTION LEGEND

115	ROOM NUMBER-REFER TO ROOM AND FINISH SCHEDULE ON SHEET A-601
01	DOOR NUMBER-SEE DOOR SCHEDULE ON SHEET A-601
◇	WINDOW NUMBER-SEE GRAPHIC WINDOW TYPES ON SHEET A-601
A	WALL TYPE TAG-SEE WALL TYPES ON SHEET A-602

GRAPHIC SCALE
IMPERIAL

2' 1' 0 1' 2' 4' 8' 12' 16'

3/16" = 1'-0"

US Army Corps
of Engineers ®

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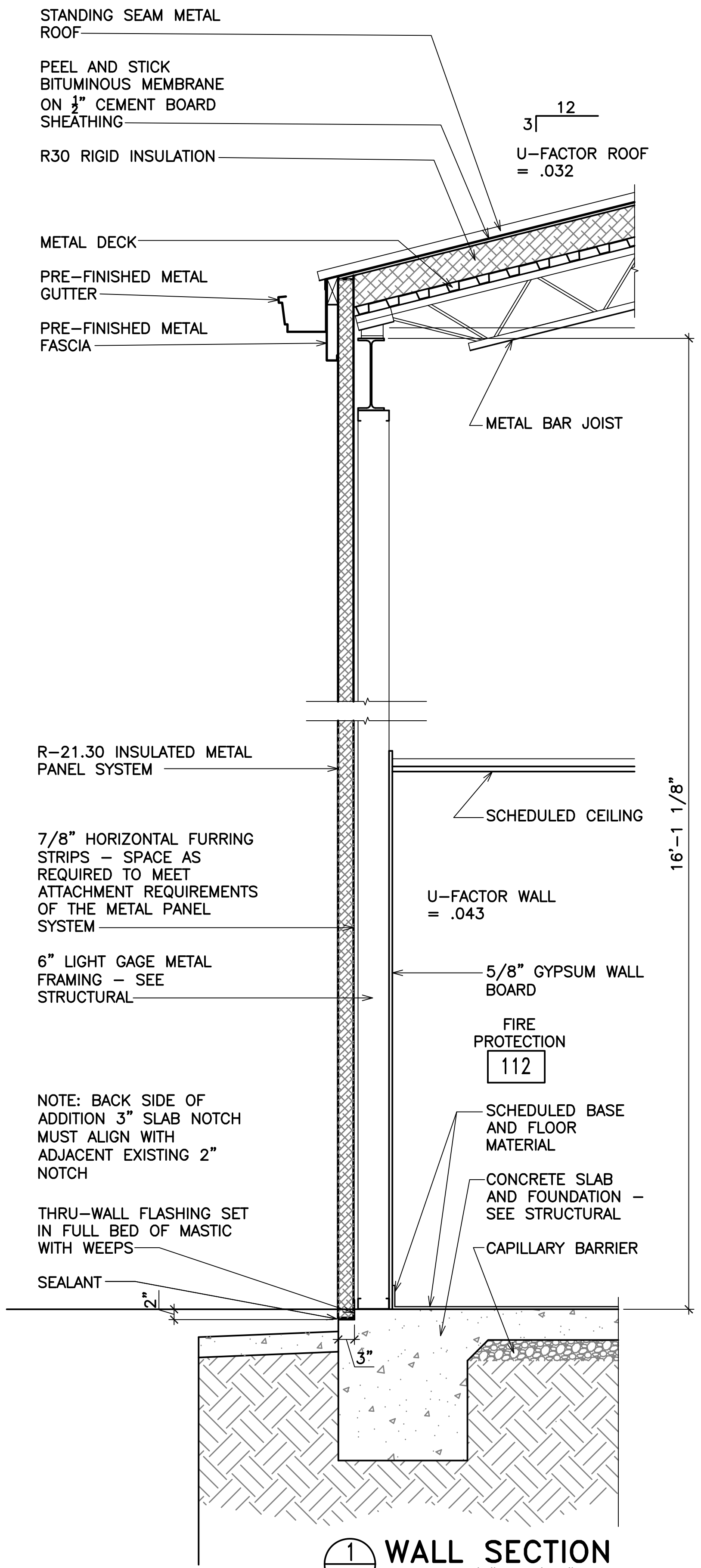
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

BUILDING SECTION

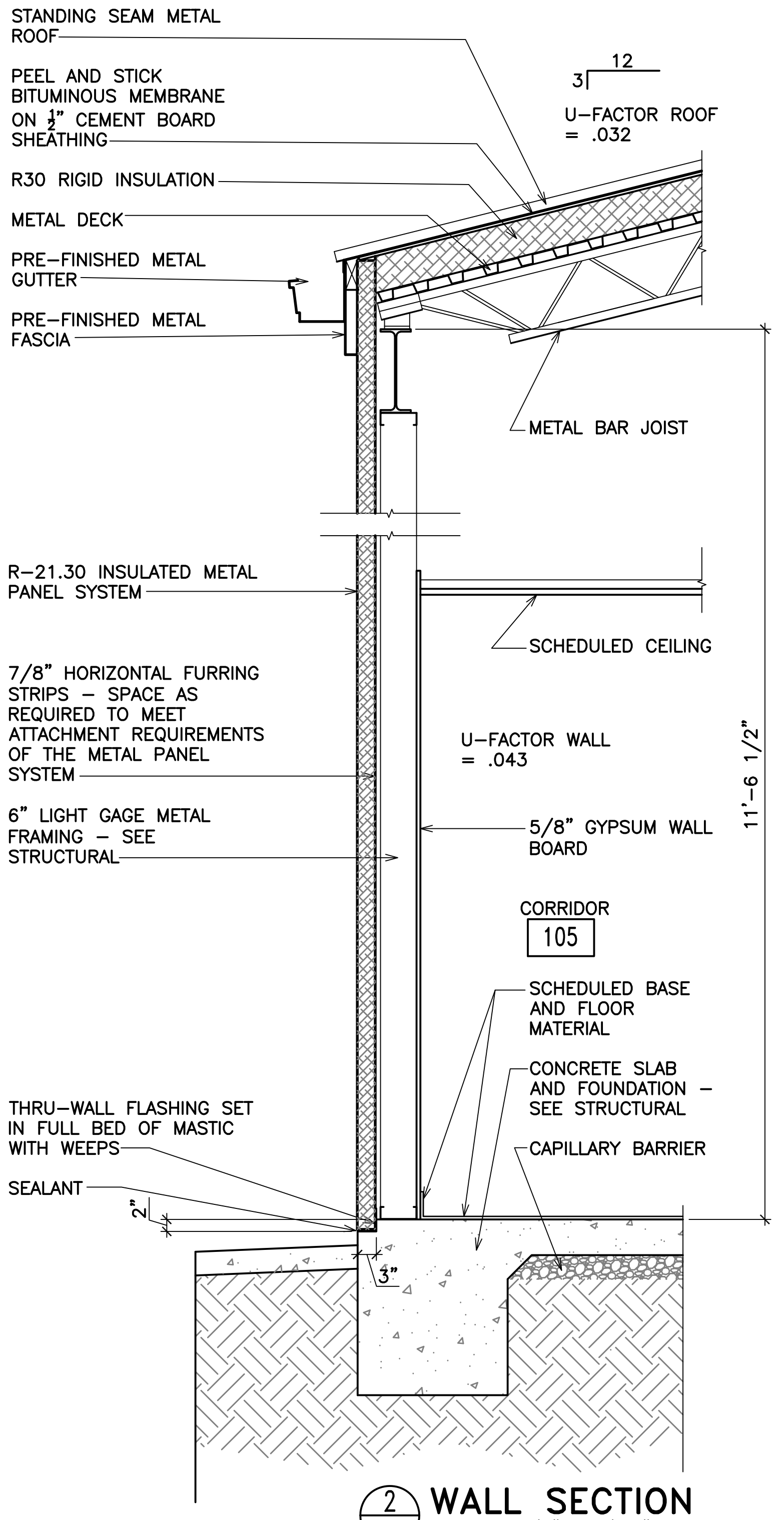
SHEET ID
A-301

RTA SUBMITTAL

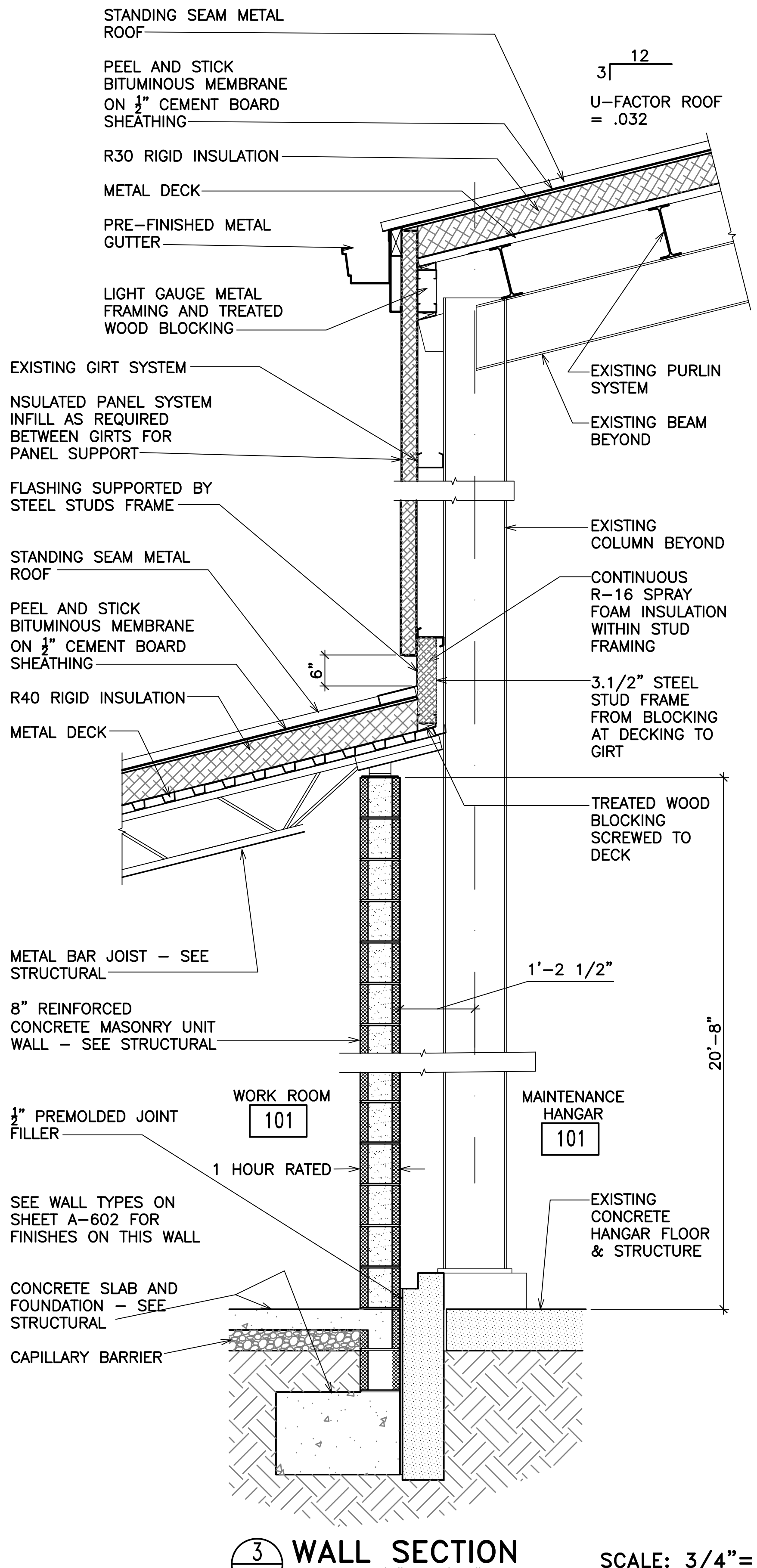
CESAM v20181203


STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
R30 RIGID INSULATION
3
12
U–FACTOR ROOF = .032
METAL DECK
PRE–FINISHED METAL GUTTER
PRE–FINISHED METAL FASCIA
METAL BAR JOIST
R–21.30 INSULATED METAL PANEL SYSTEM
SCHEDULED CEILING
16'–1 1/8"
7/8" HORIZONTAL FURRING STRIPS – SPACE AS REQUIRED TO MEET ATTACHMENT REQUIREMENTS OF THE METAL PANEL SYSTEM
U–FACTOR WALL = .043
6" LIGHT GAGE METAL FRAMING – SEE STRUCTURAL
5/8" GYPSUM WALL BOARD
FIRE PROTECTION
112
NOTE: BACK SIDE OF ADDITION 3" SLAB NOTCH MUST ALIGN WITH ADJACENT EXISTING 2" NOTCH
SCHEDULED BASE AND FLOOR MATERIAL
CONCRETE SLAB AND FOUNDATION – SEE STRUCTURAL
THRU–WALL FLASHING SET IN FULL BED OF MASTIC WITH WEEPS
CAPILLARY BARRIER
SEALANT
2"
3"

1 A-302 WALL SECTION
SCALE: 3/4" = 1'–0"


STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
3
12
U–FACTOR ROOF = .032
R30 RIGID INSULATION
METAL DECK
PRE–FINISHED METAL GUTTER
PRE–FINISHED METAL FASCIA
METAL BAR JOIST
R–21.30 INSULATED METAL PANEL SYSTEM
SCHEDULED CEILING
11'–6 1/2"
7/8" HORIZONTAL FURRING STRIPS – SPACE AS REQUIRED TO MEET ATTACHMENT REQUIREMENTS OF THE METAL PANEL SYSTEM
U–FACTOR WALL = .043
6" LIGHT GAGE METAL FRAMING – SEE STRUCTURAL
5/8" GYPSUM WALL BOARD
CORRIDOR
105
SCHEDULED BASE AND FLOOR MATERIAL
CONCRETE SLAB AND FOUNDATION – SEE STRUCTURAL
THRU–WALL FLASHING SET IN FULL BED OF MASTIC WITH WEEPS
CAPILLARY BARRIER
SEALANT
2"
3"

2 A-302 WALL SECTION
SCALE: 3/4" = 1'–0"


STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
R30 RIGID INSULATION
METAL DECK
PRE–FINISHED METAL GUTTER
LIGHT GAUGE METAL FRAMING AND TREATED WOOD BLOCKING
3
12
U–FACTOR ROOF = .032
EXISTING GIRT SYSTEM
NSULATED PANEL SYSTEM INFILL AS REQUIRED BETWEEN GIRTS FOR PANEL SUPPORT
EXISTING PURLIN SYSTEM
EXISTING BEAM BEYOND
FLASHING SUPPORTED BY STEEL STUDS FRAME
EXISTING COLUMN BEYOND
STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
CONTINUOUS R–16 SPRAY FOAM INSULATION WITHIN STUD FRAMING
6"
R40 RIGID INSULATION
3.1/2" STEEL STUD FRAME FROM BLOCKING AT DECKING TO GIRT
METAL DECK
TREATED WOOD BLOCKING SCREWED TO DECK
METAL BAR JOIST – SEE STRUCTURAL
1'–2 1/2"
8" REINFORCED CONCRETE MASONRY UNIT WALL – SEE STRUCTURAL
20'–8"
WORK ROOM
101
MAINTENANCE HANGAR
101
½" PREMOLDED JOINT FILLER
1 HOUR RATED
SEE WALL TYPES ON SHEET A–602 FOR FINISHES ON THIS WALL
EXISTING CONCRETE HANGAR FLOOR & STRUCTURE
CONCRETE SLAB AND FOUNDATION – SEE STRUCTURAL
CAPILLARY BARRIER

3 A-302 WALL SECTION
SCALE: 3/4" = 1'–0"

SCALE: 3/4"=1'–0"
12" 0 1 2 3FT

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: CLR
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
FILE NAME: MEF24005A-302.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

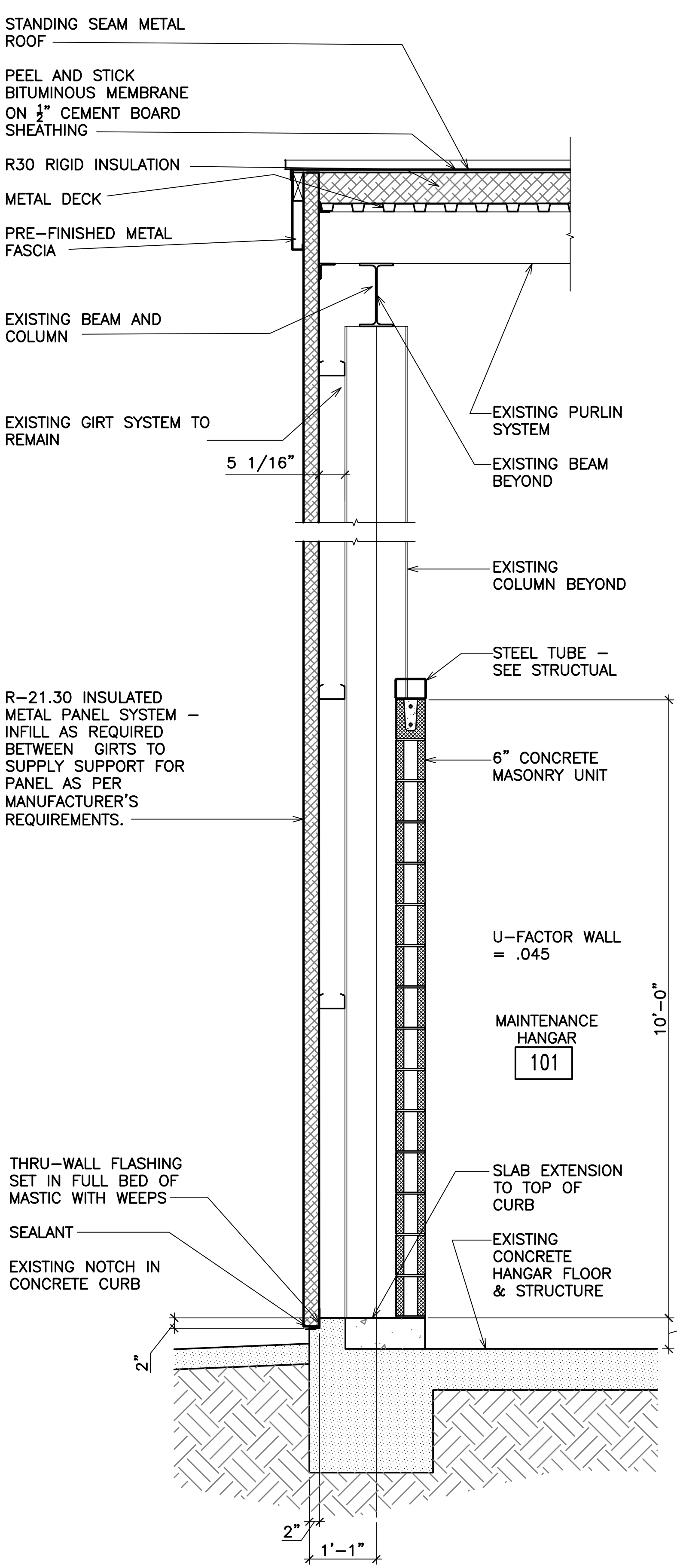
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

WALL SECTIONS

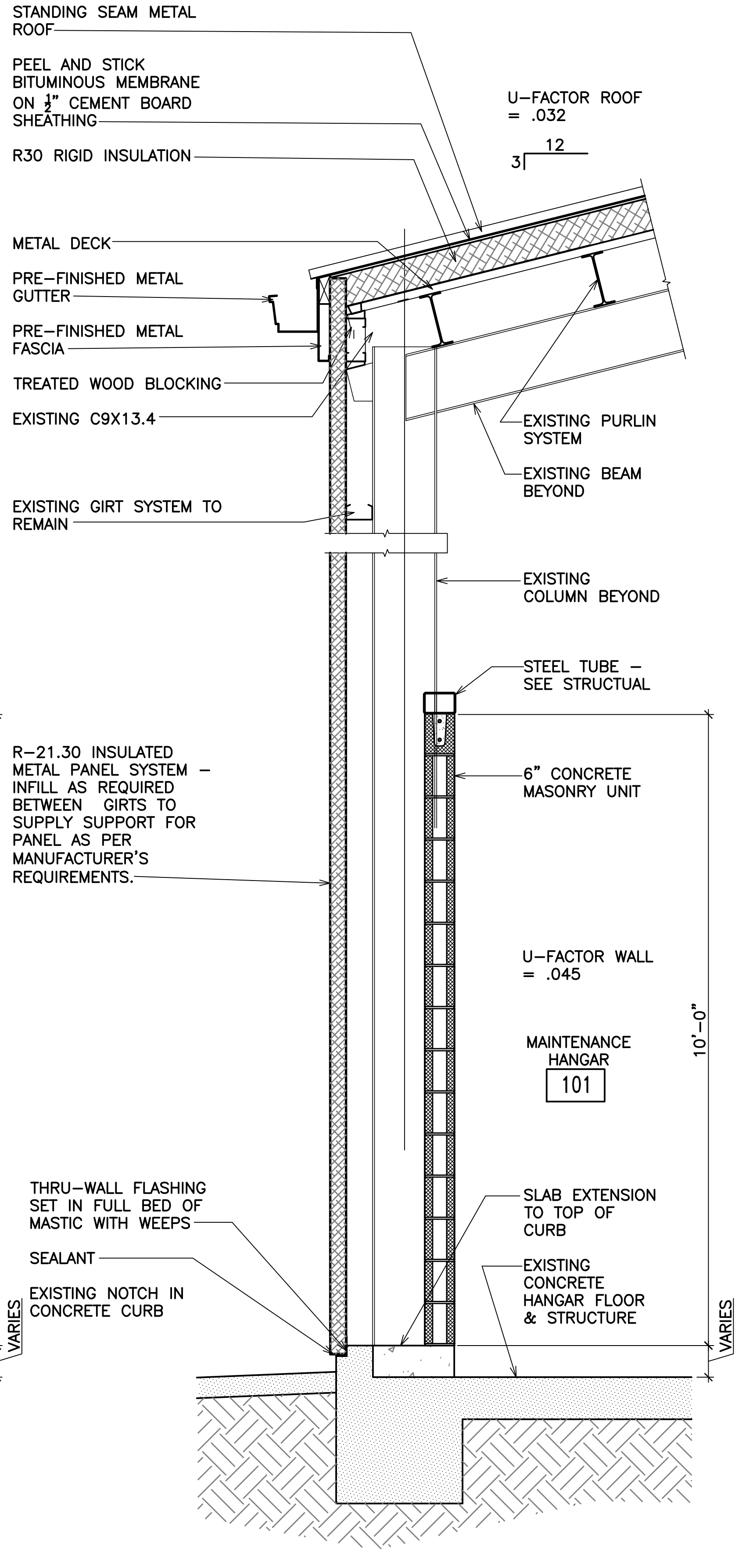
SHEET ID
A-302

RTA SUBMITTAL

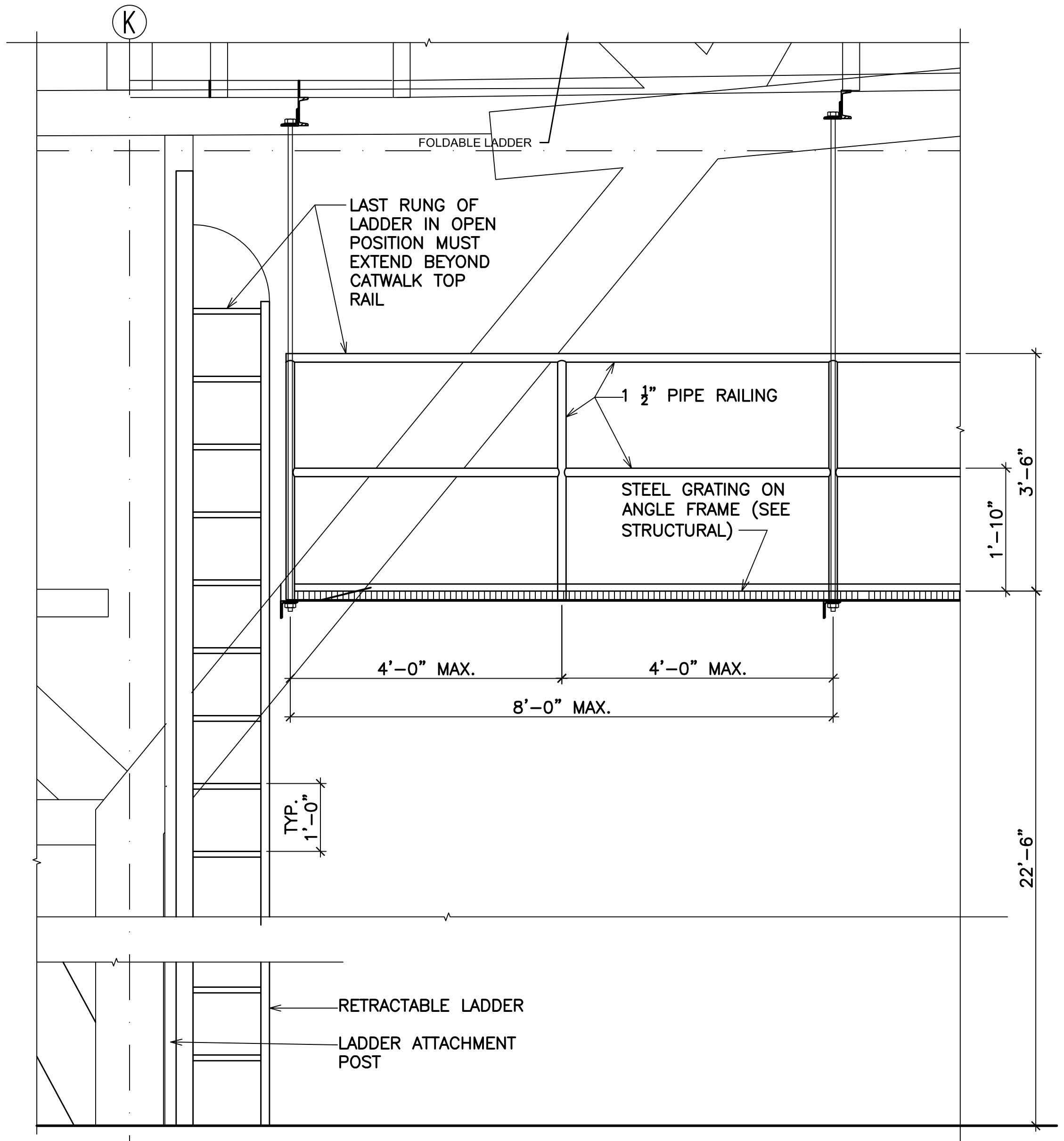
CESAM v20181203


STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
R30 RIGID INSULATION
METAL DECK
PRE–FINISHED METAL FASCIA
EXISTING BEAM AND COLUMN
EXISTING GIRT SYSTEM TO REMAIN
5 1/16"
EXISTING PURLIN SYSTEM
EXISTING BEAM BEYOND
EXISTING COLUMN BEYOND
STEEL TUBE – SEE STRUCTUAL
R–21.30 INSULATED METAL PANEL SYSTEM – INFILL AS REQUIRED BETWEEN GIRTS TO SUPPLY SUPPORT FOR PANEL AS PER MANUFACTURER'S REQUIREMENTS.
6" CONCRETE MASONRY UNIT
U–FACTOR WALL = .045
MAINTENANCE HANGAR
101
10'–0"
THRU–WALL FLASHING SET IN FULL BED OF MASTIC WITH WEEPS
SEALANT
EXISTING NOTCH IN CONCRETE CURB
SLAB EXTENSION TO TOP OF CURB
EXISTING CONCRETE HANGAR FLOOR & STRUCTURE
VARIES
2"
2"
1'–1"

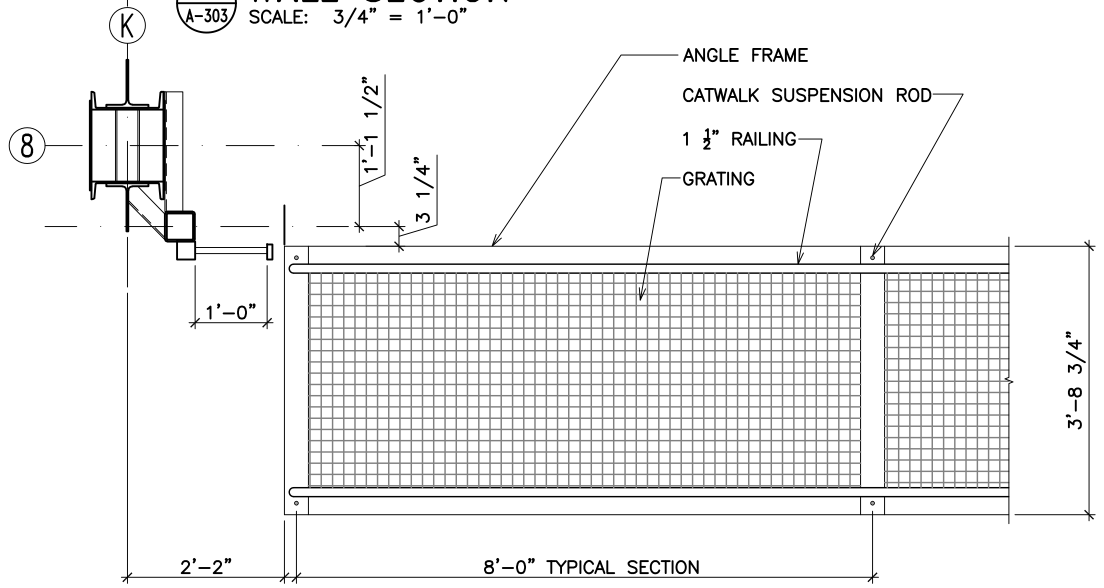
1 A-303 WALL SECTION
SCALE: 3/4" = 1'–0"


STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
R30 RIGID INSULATION
U–FACTOR ROOF = .032
3 12
METAL DECK
PRE–FINISHED METAL GUTTER
PRE–FINISHED METAL FASCIA
TREATED WOOD BLOCKING
EXISTING C9X13.4
EXISTING PURLIN SYSTEM
EXISTING BEAM BEYOND
EXISTING GIRT SYSTEM TO REMAIN
EXISTING COLUMN BEYOND
STEEL TUBE – SEE STRUCTUAL
R–21.30 INSULATED METAL PANEL SYSTEM – INFILL AS REQUIRED BETWEEN GIRTS TO SUPPLY SUPPORT FOR PANEL AS PER MANUFACTURER'S REQUIREMENTS.
6" CONCRETE MASONRY UNIT
U–FACTOR WALL = .045
MAINTENANCE HANGAR
101
10'–0"
THRU–WALL FLASHING SET IN FULL BED OF MASTIC WITH WEEPS
SEALANT
EXISTING NOTCH IN CONCRETE CURB
SLAB EXTENSION TO TOP OF CURB
EXISTING CONCRETE HANGAR FLOOR & STRUCTURE
VARIES

2 A-303 WALL SECTION
SCALE: 3/4" = 1'–0"



3 A-303 WALL SECTION
SCALE: 3/4" = 1'–0"



A A-303 PLAN DETAIL
SCALE: 3/4" = 1'–0"

SCALE: 3/4"=1'–0"
12" 0 1 2 3FT

US Army Corps of Engineers®

DATE
DESCRIPTION
MARK

DESIGNED BY:
JGR
DRAWN BY:
JGR
CHECKED BY:
CLR
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D

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MEF24005
FILE NAME:
MEF24005A-303.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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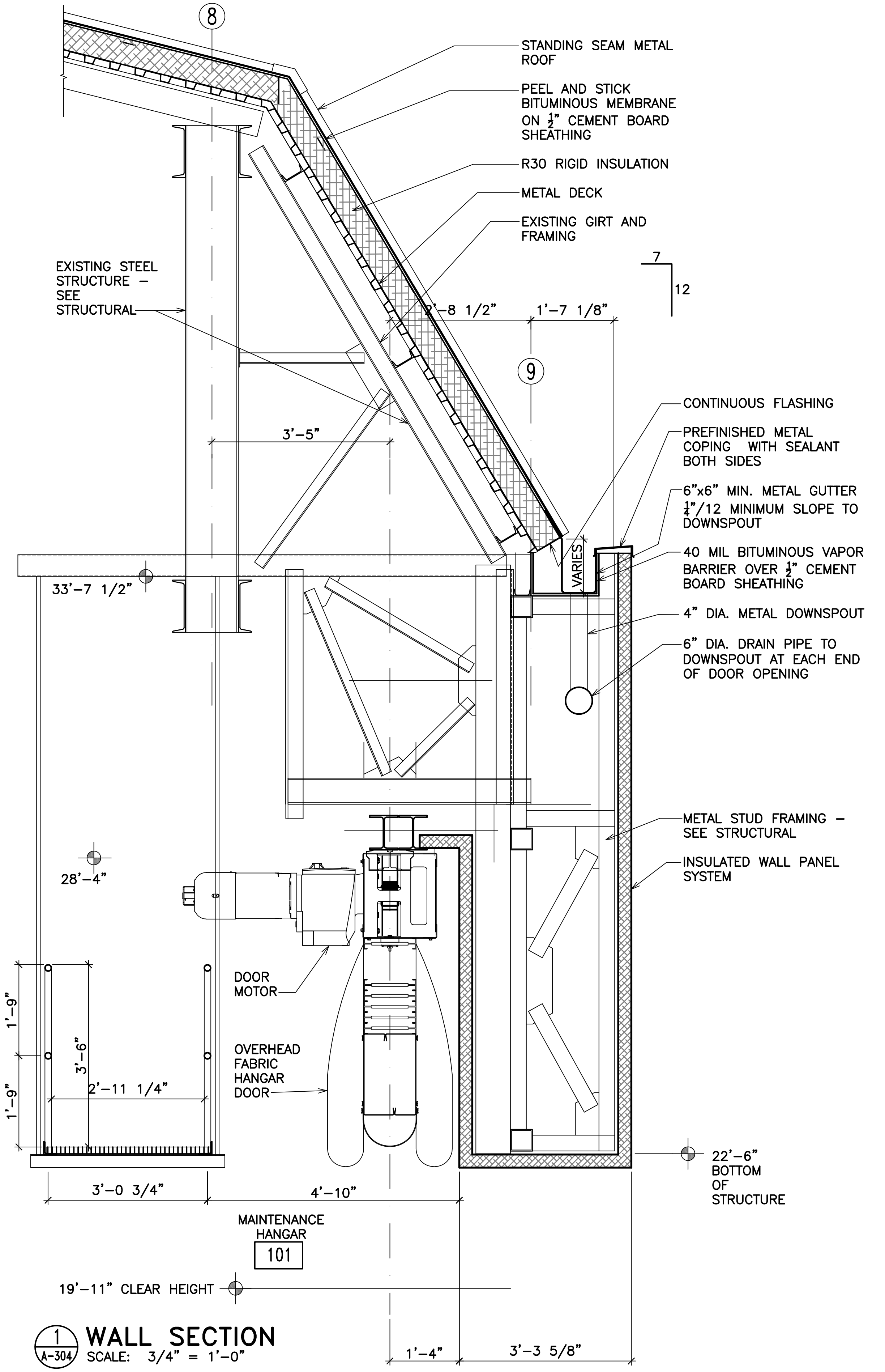
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

WALL SECTIONS

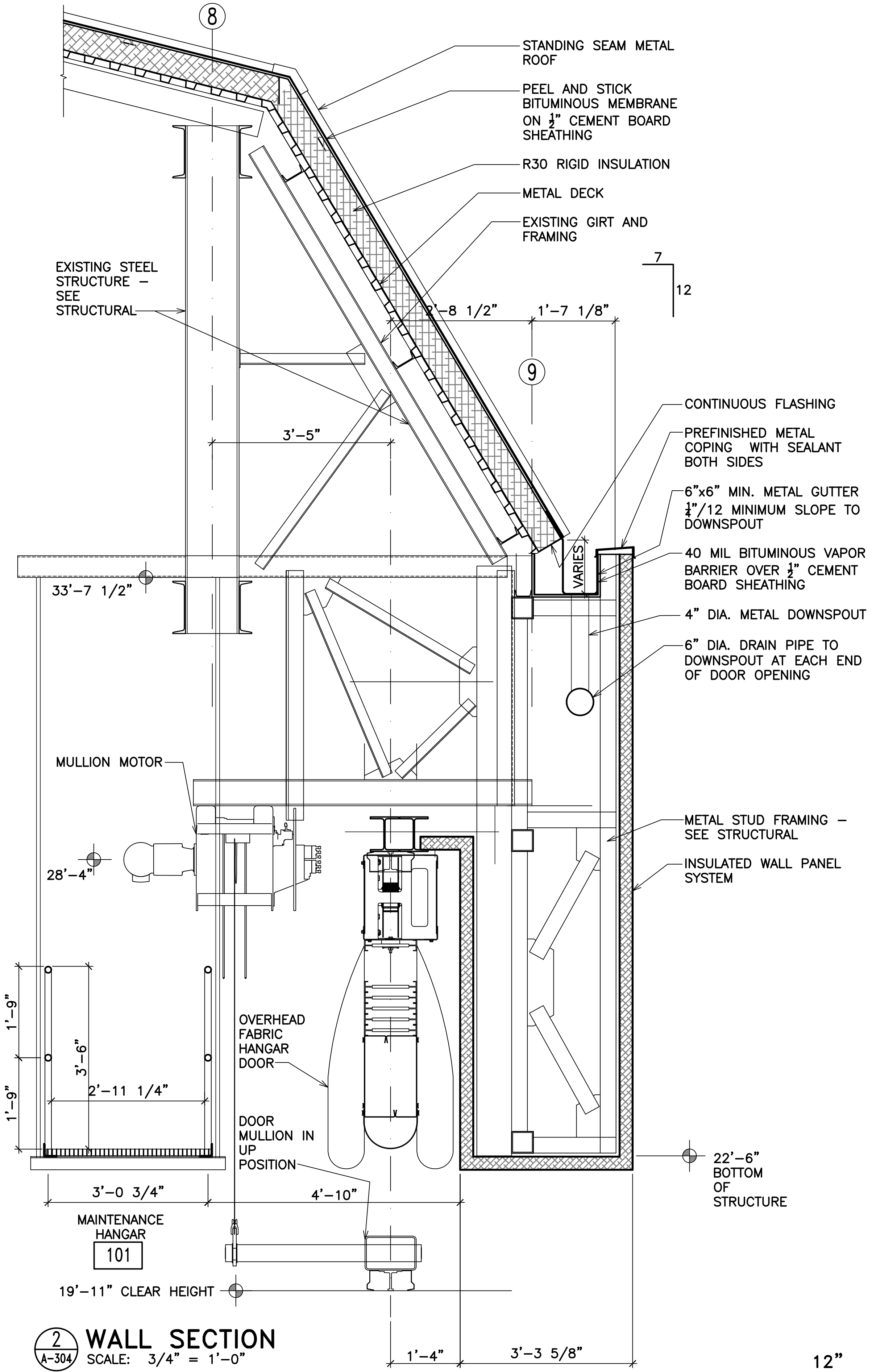
SHEET ID
A-303

RTA SUBMITTAL

CESAM v20181203


8
STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
R30 RIGID INSULATION
METAL DECK
EXISTING GIRT AND FRAMING
7
12
EXISTING STEEL STRUCTURE – SEE STRUCTURAL
2'-8 1/2"
1'-7 1/8"
9
CONTINUOUS FLASHING
PREFINISHED METAL COPING WITH SEALANT BOTH SIDES
3'-5"
6"x6" MIN. METAL GUTTER ¼"/12 MINIMUM SLOPE TO DOWNSPOUT
VARIES
40 MIL BITUMINOUS VAPOR BARRIER OVER ½" CEMENT BOARD SHEATHING
33'-7 1/2"
4" DIA. METAL DOWNSPOUT
6" DIA. DRAIN PIPE TO DOWNSPOUT AT EACH END OF DOOR OPENING
METAL STUD FRAMING – SEE STRUCTURAL
INSULATED WALL PANEL SYSTEM
28'-4"
DOOR MOTOR
1'-9"
3'-6"
1'-9"
OVERHEAD FABRIC HANGAR DOOR
2'-11 1/4"
22'-6" BOTTOM OF STRUCTURE
3'-0 3/4"
4'-10"
MAINTENANCE HANGAR
101
19'-11" CLEAR HEIGHT
1'-4"
3'-3 5/8"

1 A-304 WALL SECTION
SCALE: 3/4" = 1'-0"


8
STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
R30 RIGID INSULATION
METAL DECK
EXISTING GIRT AND FRAMING
7
12
EXISTING STEEL STRUCTURE – SEE STRUCTURAL
2'-8 1/2"
1'-7 1/8"
9
CONTINUOUS FLASHING
PREFINISHED METAL COPING WITH SEALANT BOTH SIDES
3'-5"
6"x6" MIN. METAL GUTTER ¼"/12 MINIMUM SLOPE TO DOWNSPOUT
VARIES
40 MIL BITUMINOUS VAPOR BARRIER OVER ½" CEMENT BOARD SHEATHING
33'-7 1/2"
4" DIA. METAL DOWNSPOUT
6" DIA. DRAIN PIPE TO DOWNSPOUT AT EACH END OF DOOR OPENING
MULLION MOTOR
METAL STUD FRAMING – SEE STRUCTURAL
INSULATED WALL PANEL SYSTEM
28'-4"
1'-9"
3'-6"
1'-9"
OVERHEAD FABRIC HANGAR DOOR
2'-11 1/4"
DOOR MULLION IN UP POSITION
22'-6" BOTTOM OF STRUCTURE
3'-0 3/4"
4'-10"
MAINTENANCE HANGAR
101
19'-11" CLEAR HEIGHT
1'-4"
3'-3 5/8"

2 A-304 WALL SECTION
SCALE: 3/4" = 1'-0"

SCALE: 3/4"=1'-0"
12" 0 1 2 3FT

US Army Corps of Engineers®

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SIZE: ANSI D
FILE NAME: MEF24005A-304.DWG

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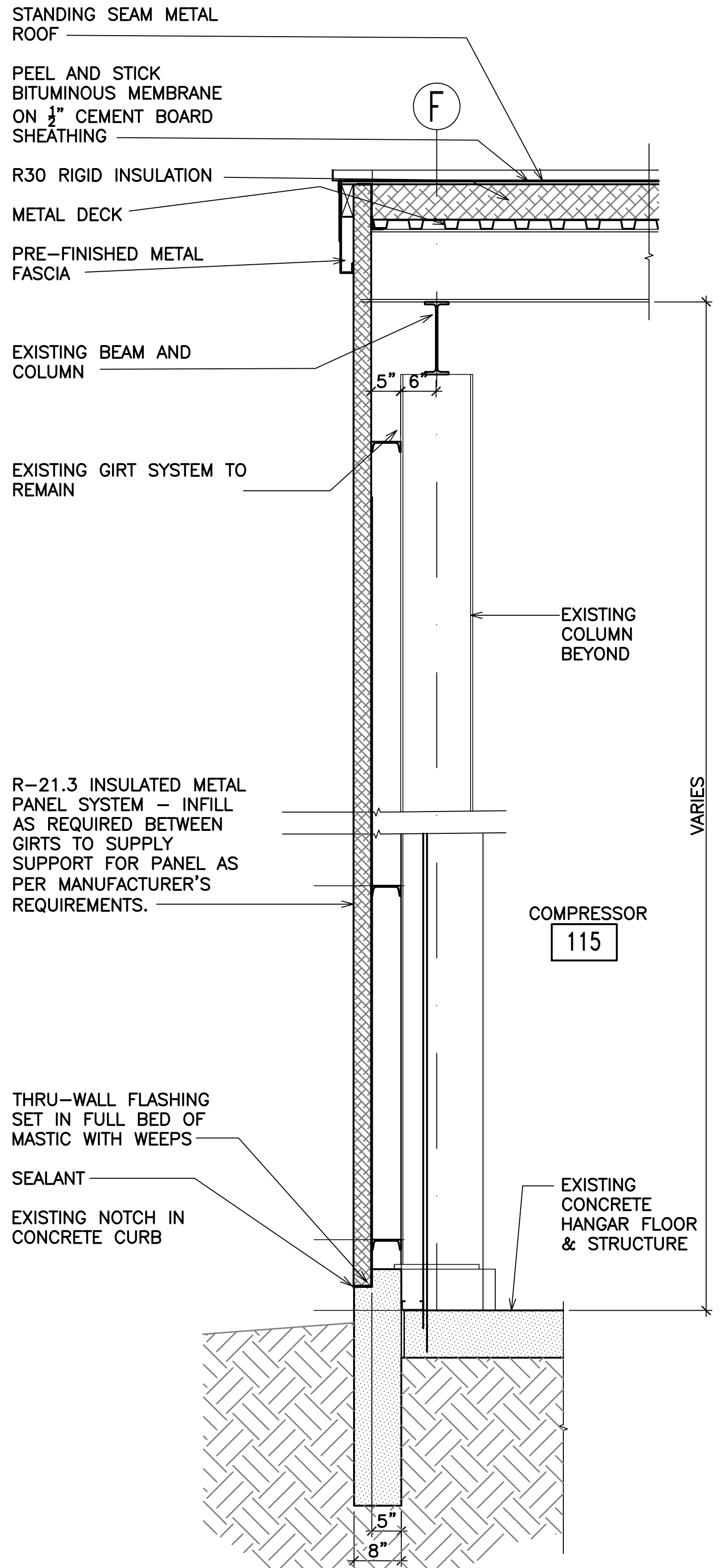
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

WALL SECTIONS

SHEET ID
A-304

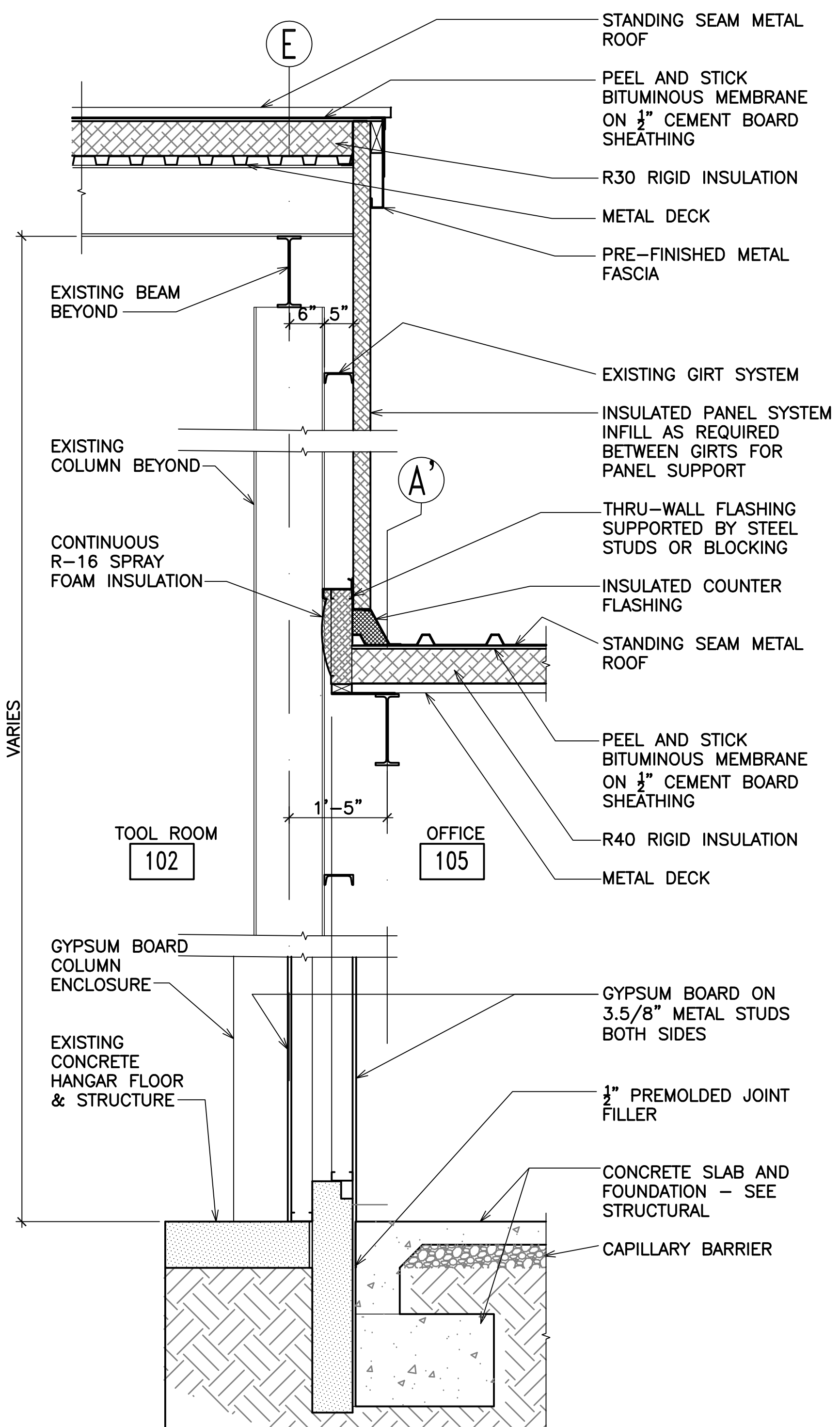
RTA SUBMITTAL

CESAM v20181203


STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
F
R30 RIGID INSULATION
METAL DECK
PRE–FINISHED METAL FASCIA
EXISTING BEAM AND COLUMN
5"
6"
EXISTING GIRT SYSTEM TO REMAIN
EXISTING COLUMN BEYOND
VARIES
R–21.3 INSULATED METAL PANEL SYSTEM – INFILL AS REQUIRED BETWEEN GIRTS TO SUPPLY SUPPORT FOR PANEL AS PER MANUFACTURER'S REQUIREMENTS.
COMPRESSOR
115
THRU–WALL FLASHING SET IN FULL BED OF MASTIC WITH WEEPS
SEALANT
EXISTING NOTCH IN CONCRETE CURB
EXISTING CONCRETE HANGAR FLOOR & STRUCTURE
5"
8"

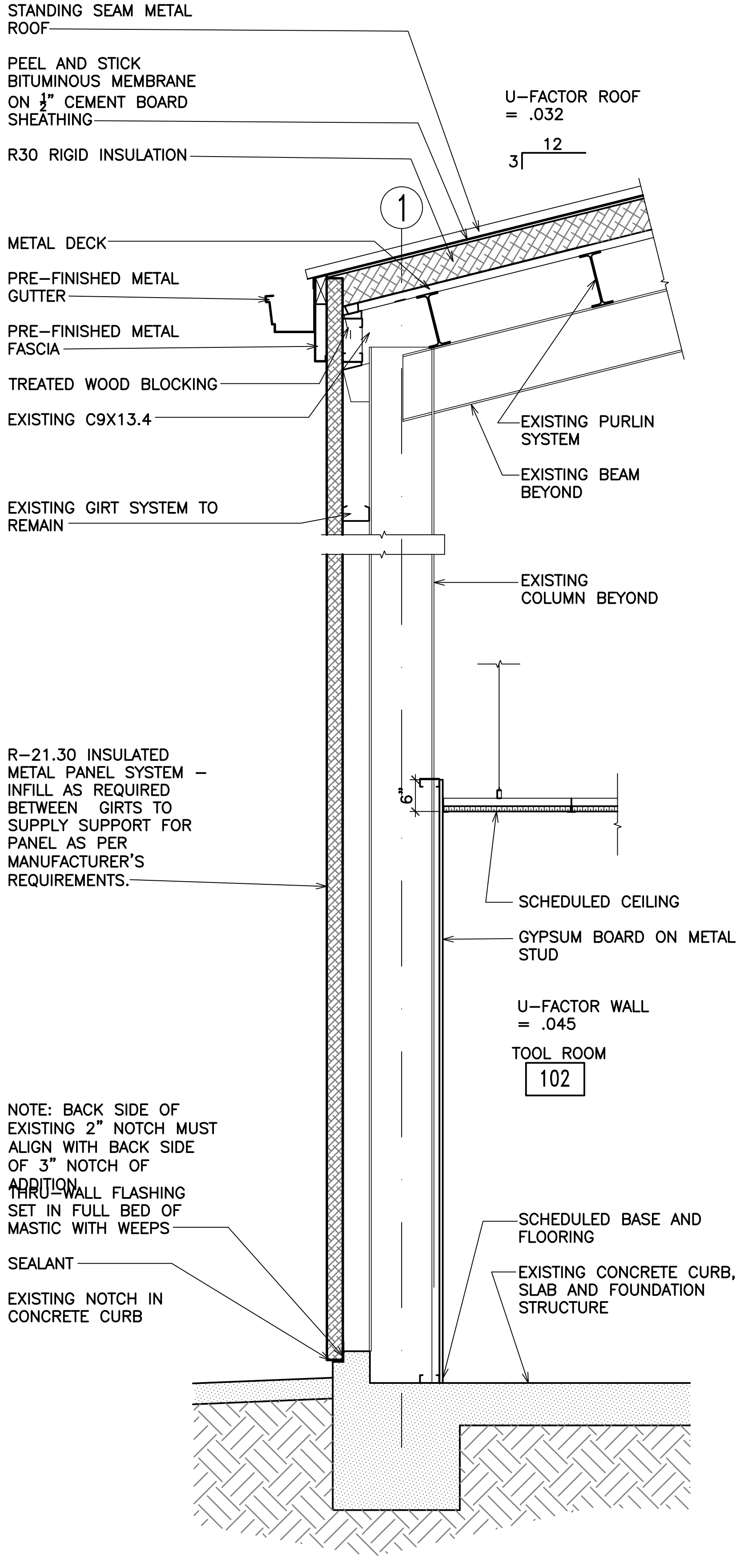
1 A-305 WALL SECTION

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


E
STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
R30 RIGID INSULATION
METAL DECK
PRE–FINISHED METAL FASCIA
EXISTING BEAM BEYOND
6"
5"
EXISTING GIRT SYSTEM
INSULATED PANEL SYSTEM INFILL AS REQUIRED BETWEEN GIRTS FOR PANEL SUPPORT
EXISTING COLUMN BEYOND
A'
THRU–WALL FLASHING SUPPORTED BY STEEL STUDS OR BLOCKING
CONTINUOUS R–16 SPRAY FOAM INSULATION
INSULATED COUNTER FLASHING
STANDING SEAM METAL ROOF
VARIES
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
1'–5"
R40 RIGID INSULATION
TOOL ROOM
102
OFFICE
105
METAL DECK
GYPSUM BOARD COLUMN ENCLOSURE
GYPSUM BOARD ON 3.5/8" METAL STUDS BOTH SIDES
EXISTING CONCRETE HANGAR FLOOR & STRUCTURE
½" PREMOLDED JOINT FILLER
CONCRETE SLAB AND FOUNDATION – SEE STRUCTURAL
CAPILLARY BARRIER

2 A-305 WALL SECTION

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


STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON ½" CEMENT BOARD SHEATHING
R30 RIGID INSULATION
U–FACTOR ROOF = .032
3
12
1
METAL DECK
PRE–FINISHED METAL GUTTER
PRE–FINISHED METAL FASCIA
TREATED WOOD BLOCKING
EXISTING C9X13.4
EXISTING PURLIN SYSTEM
EXISTING BEAM BEYOND
EXISTING GIRT SYSTEM TO REMAIN
EXISTING COLUMN BEYOND
R–21.30 INSULATED METAL PANEL SYSTEM – INFILL AS REQUIRED BETWEEN GIRTS TO SUPPLY SUPPORT FOR PANEL AS PER MANUFACTURER'S REQUIREMENTS.
6"
SCHEDULED CEILING
GYPSUM BOARD ON METAL STUD
U–FACTOR WALL = .045
TOOL ROOM
102
NOTE: BACK SIDE OF EXISTING 2" NOTCH MUST ALIGN WITH BACK SIDE OF 3" NOTCH OF ADDITION
THRU–WALL FLASHING SET IN FULL BED OF MASTIC WITH WEEPS
SEALANT
EXISTING NOTCH IN CONCRETE CURB
SCHEDULED BASE AND FLOORING
EXISTING CONCRETE CURB, SLAB AND FOUNDATION STRUCTURE

3 A-305 WALL SECTION

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

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

12" 0 1 2 3FT

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
JGR
DRAWN BY:
JGR
CHECKED BY:
CLR
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D
FILE NAME:
MEF24005A-305.DWG
ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

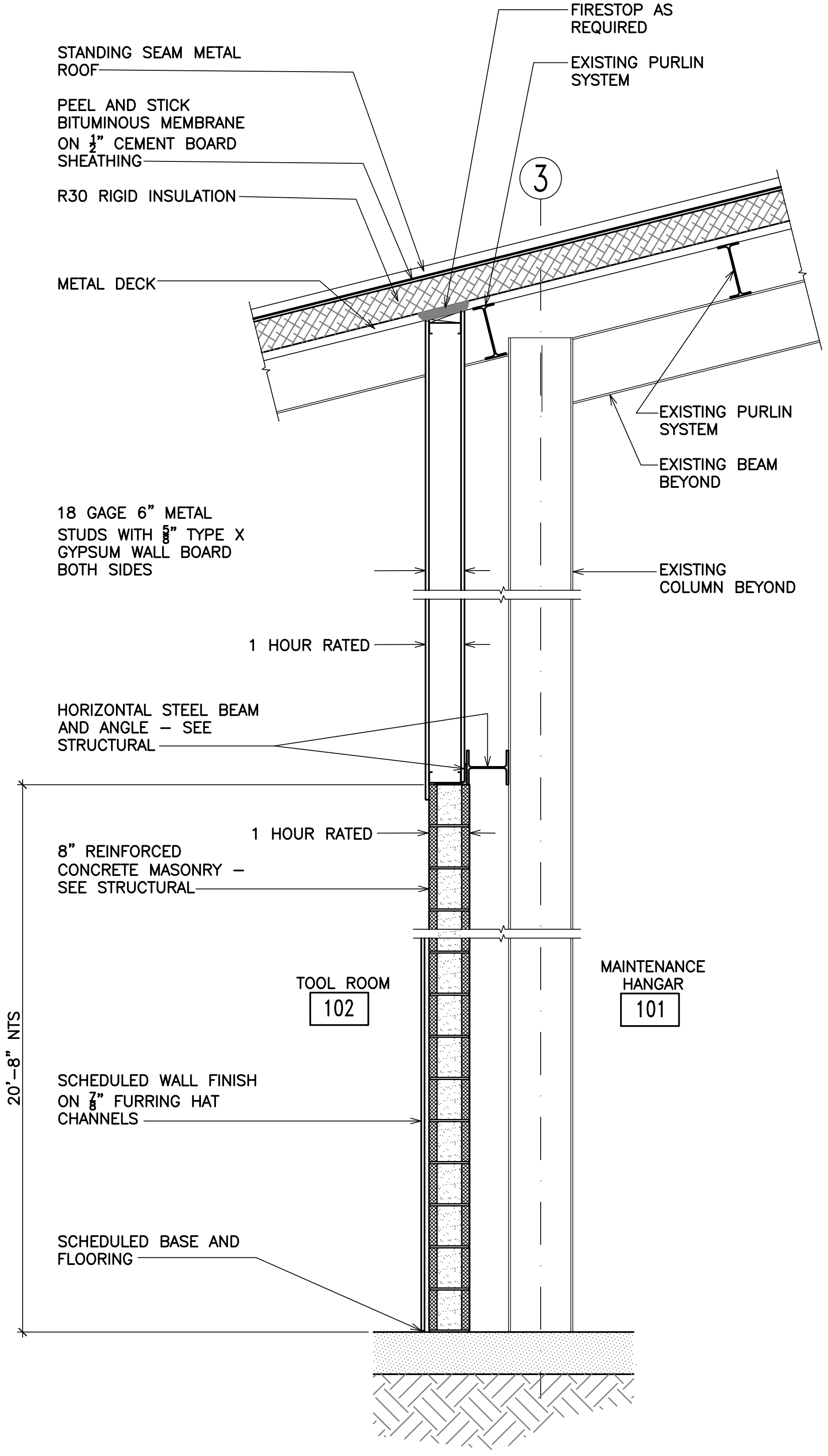
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

WALL SECTIONS

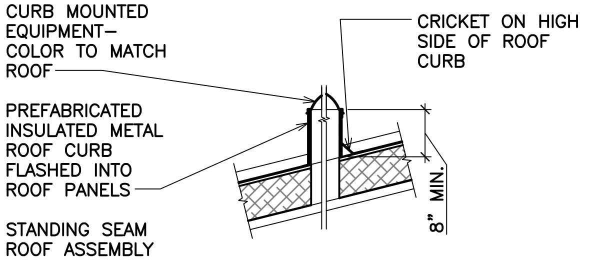
SHEET ID
A-305

RTA SUBMITTAL

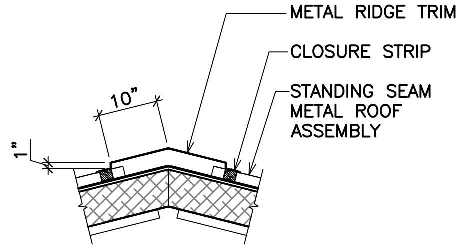
CESAM v20181203


FIRESTOP AS REQUIRED
EXISTING PURLIN SYSTEM
STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON 1/2" CEMENT BOARD SHEATHING
R30 RIGID INSULATION
3
METAL DECK
EXISTING PURLIN SYSTEM
EXISTING BEAM BEYOND
18 GAGE 6" METAL STUDS WITH 5/8" TYPE X GYPSUM WALL BOARD BOTH SIDES
EXISTING COLUMN BEYOND
1 HOUR RATED
HORIZONTAL STEEL BEAM AND ANGLE – SEE STRUCTURAL
1 HOUR RATED
8" REINFORCED CONCRETE MASONRY – SEE STRUCTURAL
TOOL ROOM
102
MAINTENANCE HANGAR
101
20'-8" NTS
SCHEDULED WALL FINISH ON 7/8" FURRING HAT CHANNELS
SCHEDULED BASE AND FLOORING

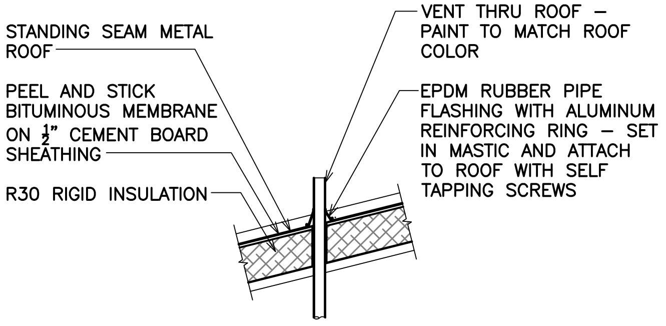
1/A-306 WALL SECTION
SCALE: 3/4" = 1'-0"


CURB MOUNTED EQUIPMENT– COLOR TO MATCH ROOF
PREFABRICATED INSULATED METAL ROOF CURB FLASHED INTO ROOF PANELS
STANDING SEAM ROOF ASSEMBLY
CRICKET ON HIGH SIDE OF ROOF CURB
8" MIN.

2/A-306 CURBED EQUIPMENT DETAIL
SCALE: 3/4" = 1'-0"



3/A-306 RIDGE DETAIL
SCALE: 3/4" = 1'-0"


STANDING SEAM METAL ROOF
PEEL AND STICK BITUMINOUS MEMBRANE ON 1/2" CEMENT BOARD SHEATHING
R30 RIGID INSULATION
VENT THRU ROOF – PAINT TO MATCH ROOF COLOR
EPDM RUBBER PIPE FLASHING WITH ALUMINUM REINFORCING RING – SET IN MASTIC AND ATTACH TO ROOF WITH SELF TAPPING SCREWS

4/A-306 VENT THRU ROOF DETAIL
SCALE: 3/4" = 1'-0"

SCALE: 3/4"=1'-0"
12" 0 1 2 3FT

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: CLR
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005A-306.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

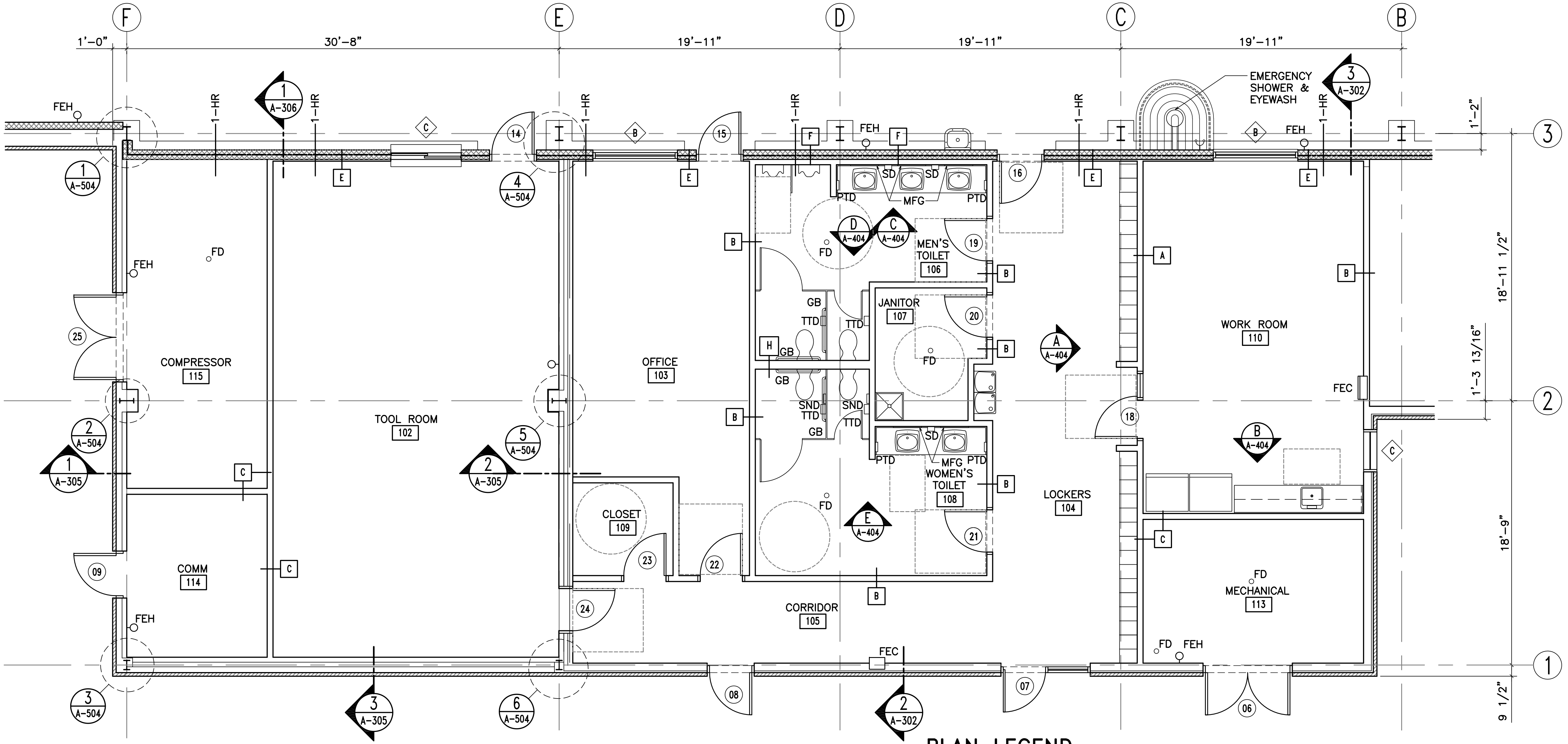
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

WALL SECTIONS

SHEET ID
A-306

RTA SUBMITTAL



LARGE SCALE SUPPORT AREA PLAN

1 A-401

SCALE: 1/4" = 1'–0"

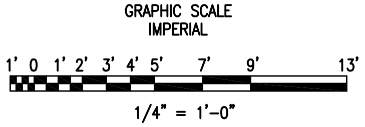
ACCESSORY ABBREVIATIONS

FD	FLOOR DRAIN
GB	GRAB BAR
MFG	MIRROR, FRAMED GLASS
PTD*	PAPER TOWEL DISPENSER
SD*	SOAP DISPENSER
SND	SANITARY NAPKIN DISPOSAL
TTD*	TOILET TISSUE DISPENSER
MIR.	MIRROR OF DETAIL

NOTE:
ITEMS MARKED WITH * ARE GOVERNMENT FURNISHED/CONTRACTOR INSTALLED

PLAN LEGEND

115	ROOM NUMBER–REFER TO ROOM AND FINISH SCHEDULE ON SHEET A–601
01	DOOR NUMBER–SEE DOOR SCHEDULE ON SHEET A–601
◇	WINDOW NUMBER–SEE GRAPHIC WINDOW TYPES ON SHEET A–601
A	WALL TYPE TAG–SEE WALL TYPES ON SHEET A–602
▬	1 HOUR RATED ASSEMBLY
DS	DOWNSPOUT WITH CAST IRON BOOT
FEH	FIRE EXTINGUISHER ON A HOOK
FEC	FIRE EXTINGUISHER IN SEMI RECESSED CABINET. SEE DETAIL 12 A–501
FD	FLOOR DRAIN



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FILE NAME: MEF24005A-401.DWG
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PROJECT NUMBER: MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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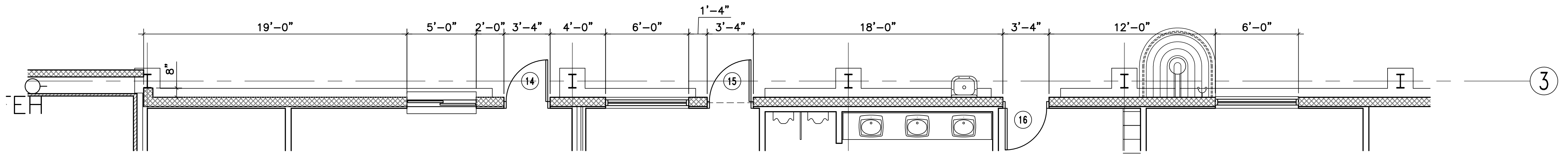
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

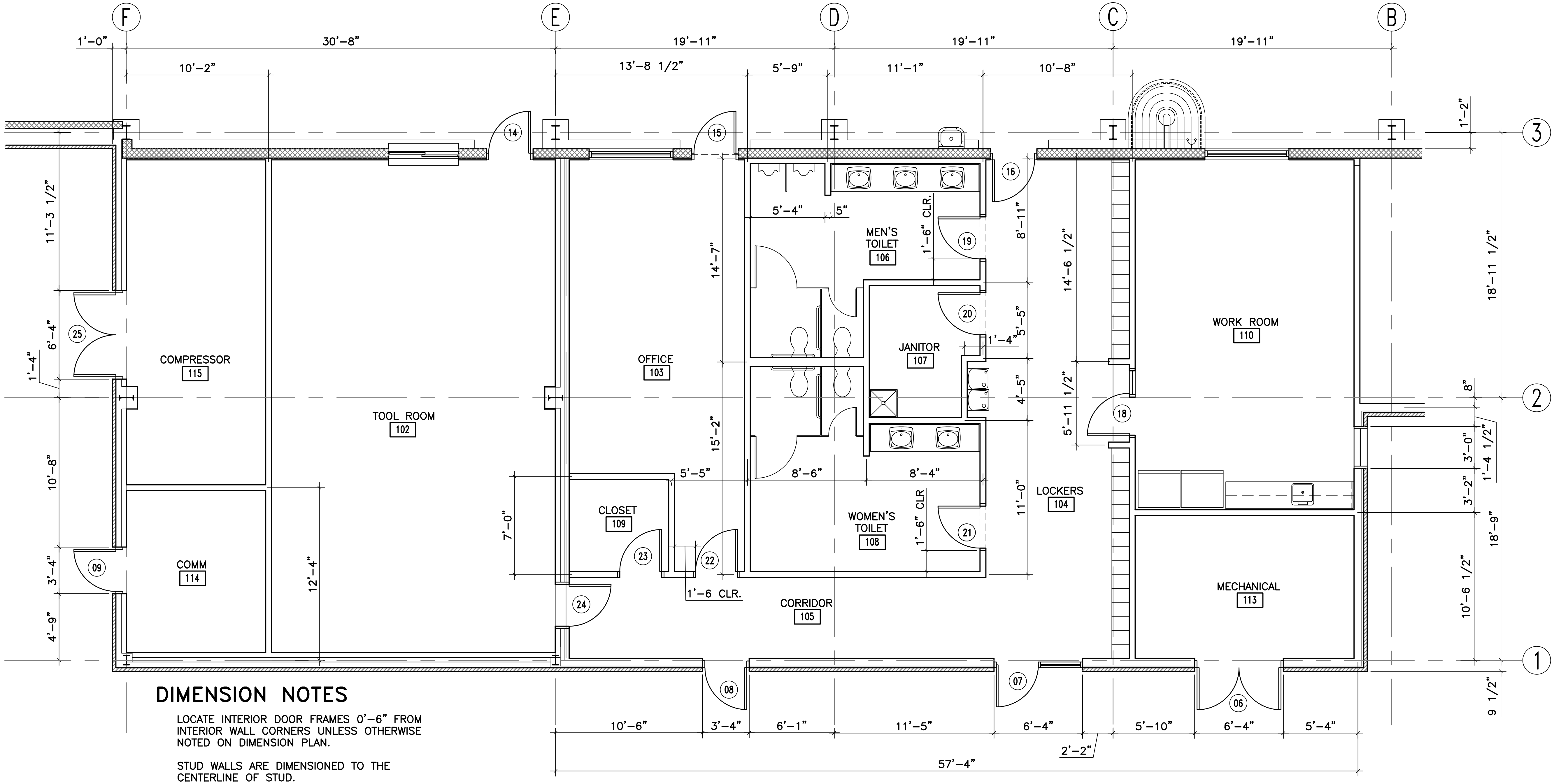
LARGE SCALE PLAN ADMINISTRATION AREA

SHEET ID
A-401

RTA SUBMITTAL



2 A-402 COURSING DIMENSIONS FOR DOORS & WINDOWS IN CMU
SCALE: 1/4" = 1'-0"



DIMENSION NOTES

LOCATE INTERIOR DOOR FRAMES 0'-6" FROM INTERIOR WALL CORNERS UNLESS OTHERWISE NOTED ON DIMENSION PLAN.

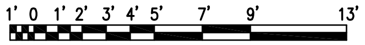
STUD WALLS ARE DIMENSIONED TO THE CENTERLINE OF STUD.

CMU WALLS ARE DIMENSIONED TO FACE OF CMU.

CLR – CLEAR DIMENSION FROM FINISH EDGE

1 A-402 SUPPORT AREA DIMENSION PLAN
SCALE: 1/4" = 1'-0"

GRAPHIC SCALE
IMPERIAL



1/4" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
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Pensacola - Panama City Beach - Tallahassee - Mobile

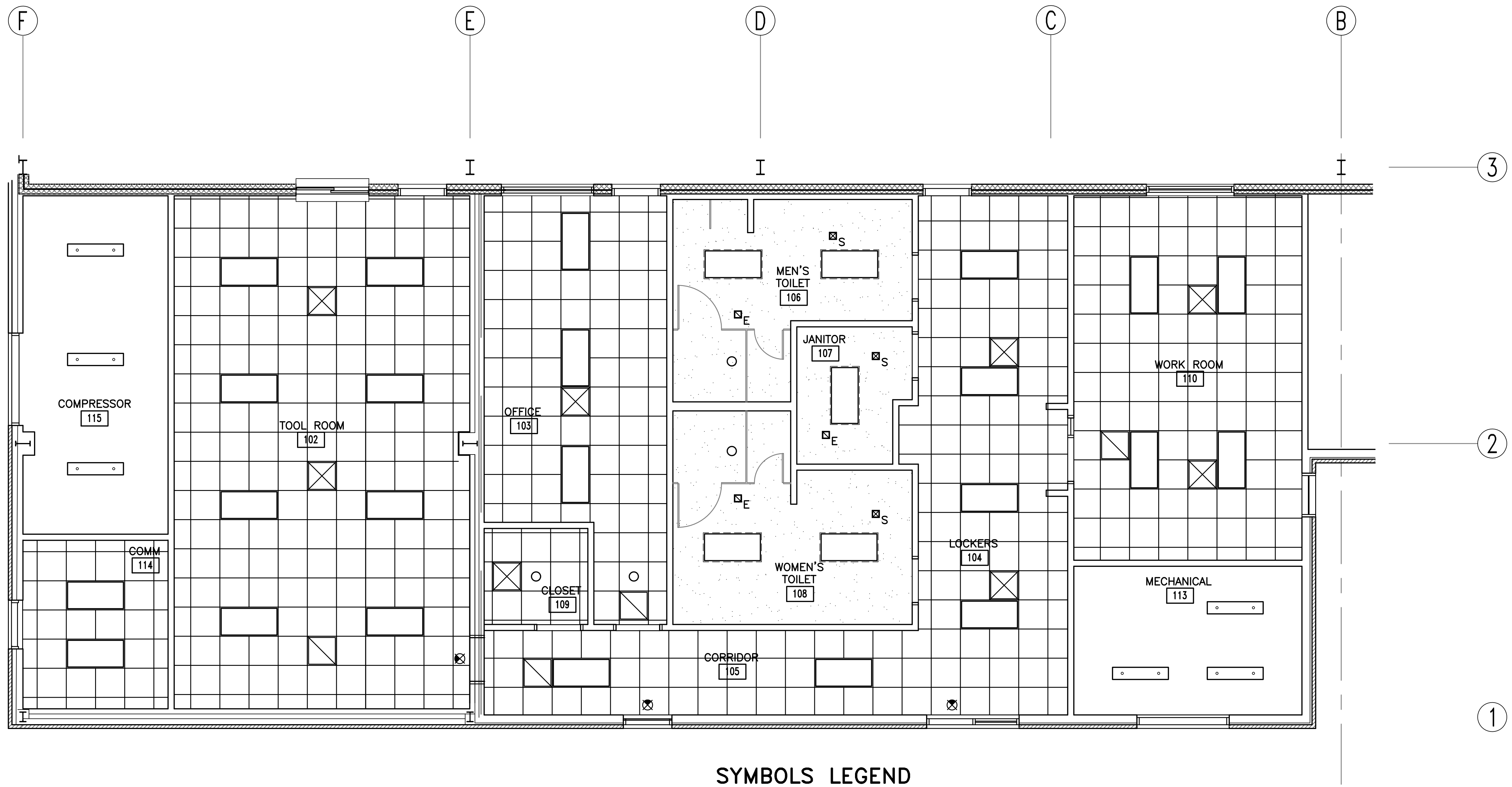
DESIGNED BY: JGR		ISSUE DATE: JUNE 2024
DRAWN BY: JGR		SOLICITATION NO.: -
CHECKED BY: CLR		CONTRACT NO.: -
SUBMITTED BY: T. HYMAN		PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005A-402.DWG	

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SUPPORT AREA DIMENSION PLAN

SHEET ID
A-402

RTA SUBMITTAL



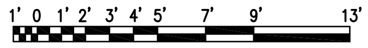
1 / A-403 LARGE SCALE SUPPORT AREA REFLECTED CEILING PLAN

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

SYMBOLS LEGEND

- 24" X 24" SUSPENDED ACOUSTICAL LAY-IN CEILING GRID SYSTEM
- PAINTED GYPSUM BOARD CEILING
- RECESSED LED TROFFER, 24X48
- SUSPENDED LED LIGHT FIXTURE
- RECESSED LED LIGHT FIXTURE
- EGRESS SIGNAGE
- E EXHAUST REGISTER
- RETURN AIR GRILL
- S SUPPLY REGISTER
- 4-WAY AIR DIFFUSER
- FIRE SPRINKLER HEAD

GRAPHIC SCALE
IMPERIAL



1/4" = 1'-0"

US Army Corps
of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY:
JGR
DRAWN BY:
JGR
CHECKED BY:
CLR
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005A-403.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

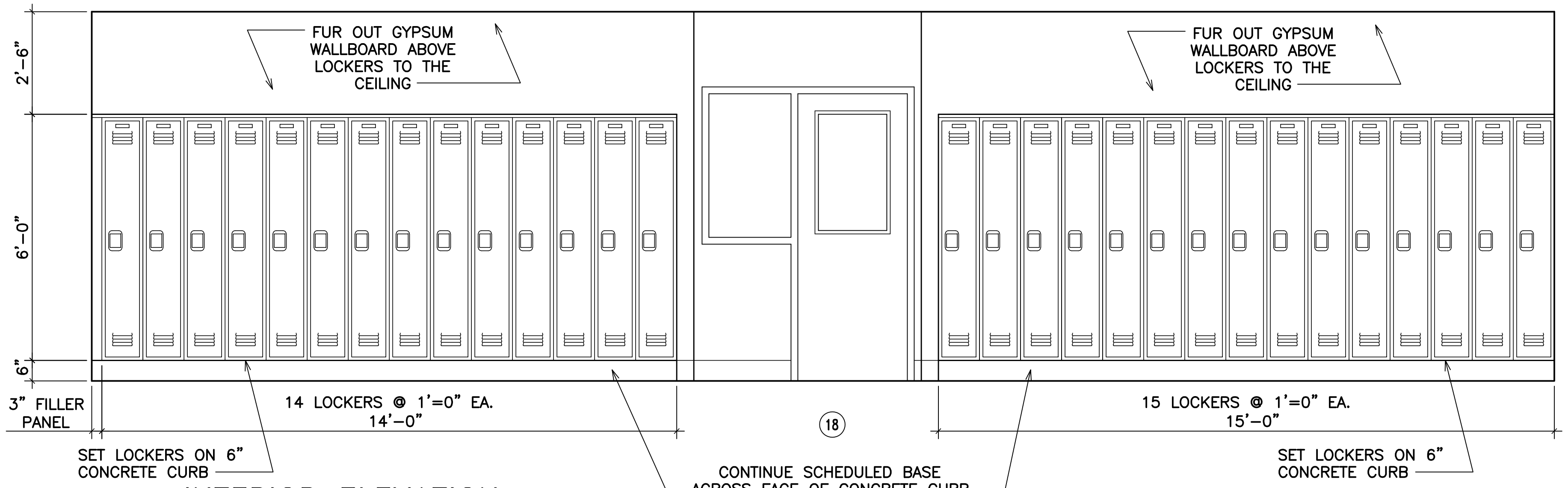
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

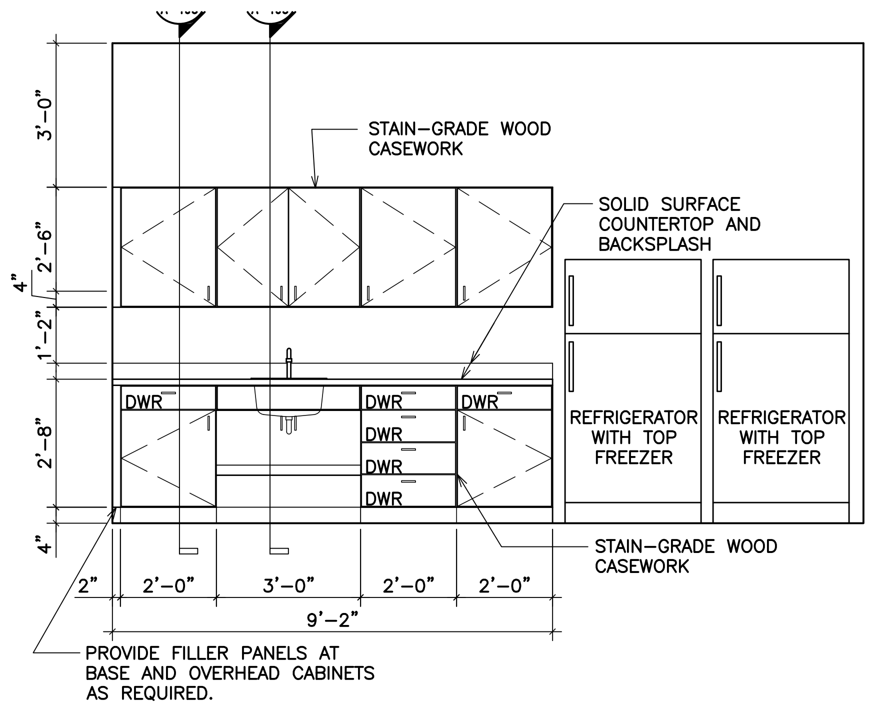
SUPPORT AREA REFLECTED CEILING PLAN

SHEET ID
A-403

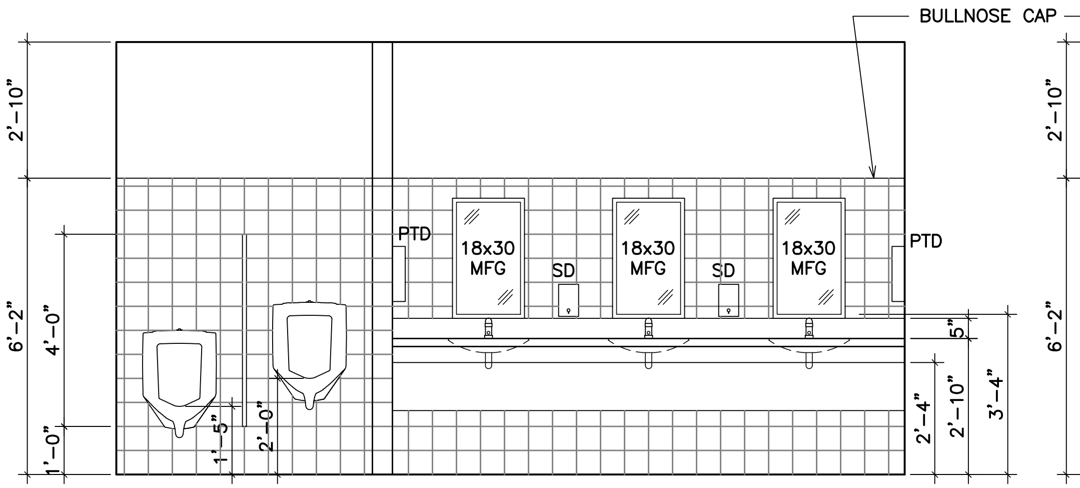
RTA SUBMITTAL


FUR OUT GYPSUM WALLBOARD ABOVE LOCKERS TO THE CEILING
FUR OUT GYPSUM WALLBOARD ABOVE LOCKERS TO THE CEILING
2'-6"
6'-0"
6"
3" FILLER PANEL
14 LOCKERS @ 1'=0" EA.
14'-0"
18
15 LOCKERS @ 1'=0" EA.
15'-0"
SET LOCKERS ON 6" CONCRETE CURB
CONTINUE SCHEDULED BASE ACROSS FACE OF CONCRETE CURB
SET LOCKERS ON 6" CONCRETE CURB

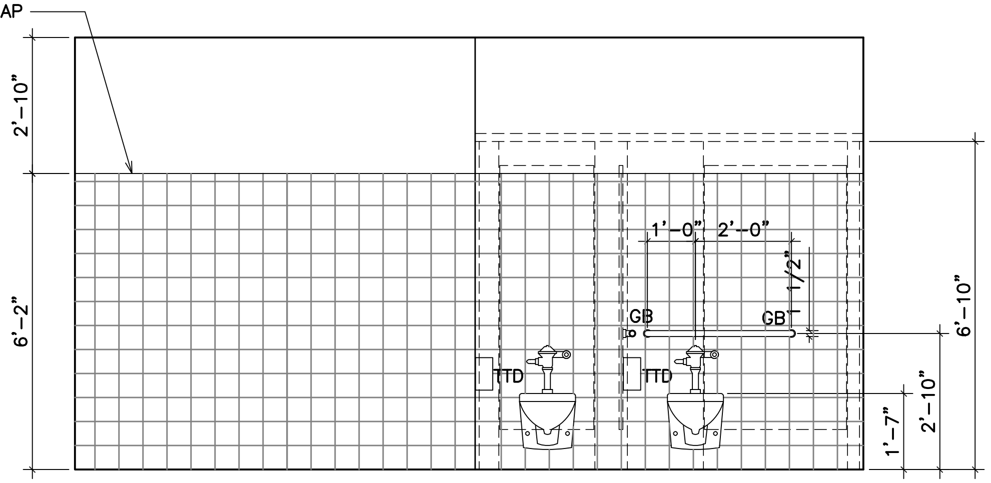
A A-404 INTERIOR ELEVATION LOCKERS
SCALE: 1/2" = 1'-0"


3'-0"
STAIN-GRADE WOOD CASEWORK
SOLID SURFACE COUNTERTOP AND BACKSPLASH
2'-6"
4"
1'-2"
2'-8"
4"
DWR
DWR
DWR
DWR
DWR
DWR
REFRIGERATOR WITH TOP FREEZER
REFRIGERATOR WITH TOP FREEZER
STAIN-GRADE WOOD CASEWORK
2"
2'-0"
3'-0"
2'-0"
2'-0"
9'-2"
PROVIDE FILLER PANELS AT BASE AND OVERHEAD CABINETS AS REQUIRED.

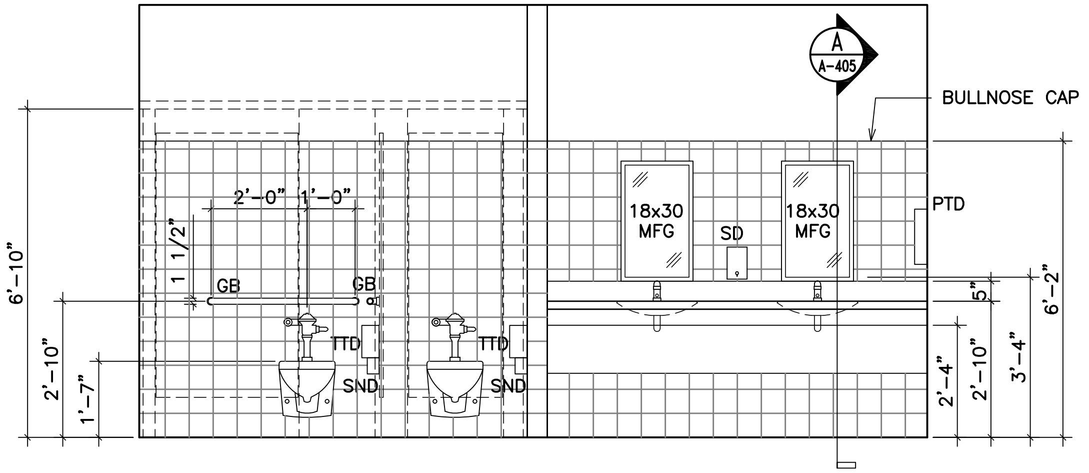
B A-404 INTERIOR ELEVATION WORKROOM CASEWORK
SCALE: 1/2" = 1'-0"



C A-404 INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"



D A-404 INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"



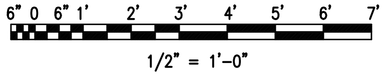
E A-404 INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"

ACCESSORY ABBREVIATIONS

DWR	DRAWER
FS	FOLDING SHOWER SEAT
GB	GRAB BAR
MFG	MIRROR, FRAMED GLASS
PTD*	PAPER TOWEL DISPENSER
SD*	SOAP DISPENSER
SND	SANITARY NAPKIN DISPOSAL
TTD*	TOILET TISSUE DISPENSER

NOTE:
ITEMS MARKED WITH * ARE GOVERNMENT FURNISHED/CONTRACTOR INSTALLED

GRAPHIC SCALE
IMPERIAL



1/2" = 1'-0"

US Army Corps
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MARK | DESCRIPTION | DATE

DESIGNED BY: JGR	ISSUE DATE: JUNE 2024
DRAWN BY: JGR	SOLICITATION NO.: -
CHECKED BY: CLR	CONTRACT NO.: -
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005A-404.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

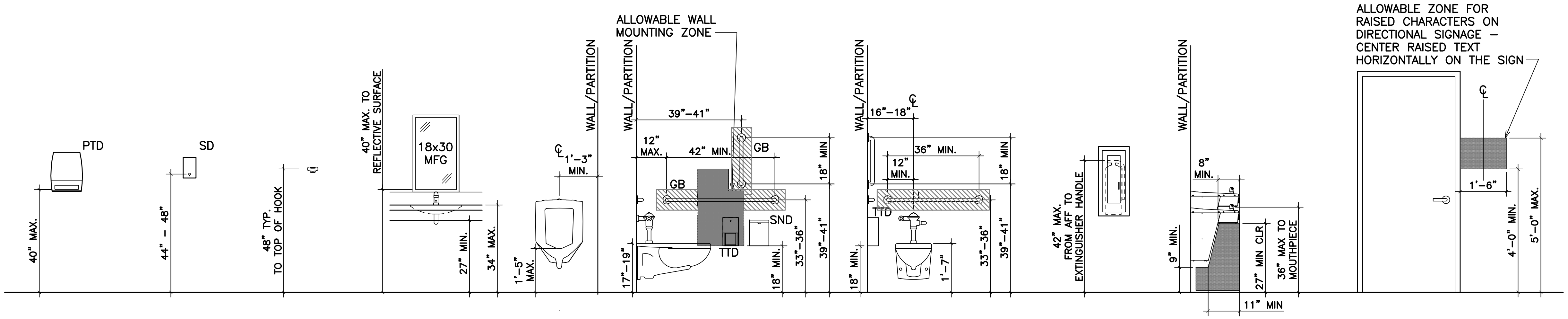
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

LARGE SCALE INTERIOR ELEVATIONS

SHEET ID
A-404

RTA SUBMITTAL



PAPER TOWEL DISPENSER (GFCI)

SOAP DISPENSER (GFCI)

TOWEL PIN/ COAT HOOK

LAVATORY COUNTERS & MIRROR AT LAV. (PROVIDE INSULATION KIT WHERE PIPES IN KNEE SPACE ARE EXPOSED)

ADA URINAL

ADA TOILET, SIDE VIEW
GRAB BARS (BLOCKING WHERE REQUIRED IN STUD WALLS)
TOILET TISSUE DISPESER (GFCI) & SANITARY NAPKIN DISPOSAL

ADA TOILET, FRONT VIEW
GRAB BARS (BLOCKING WHERE REQUIRED IN STUD WALLS)
TOILET TISSUE DISPESER (GFCI)

FIRE EXTINGUISHER CABINET OR HOOK

ELECTRIC WATER COOLER

INFORMATION SIGNAGE WITH RAISED CHARACTERS

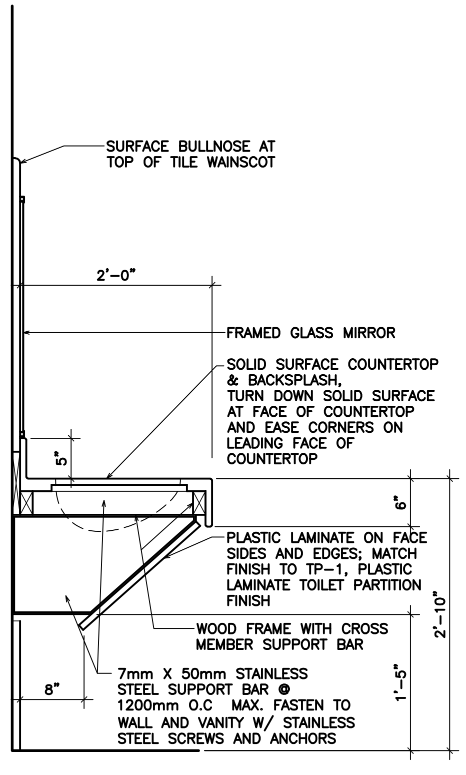
TYPICAL ADA MOUNTING HEIGHTS

SCALE: 1/2" = 1'–0"

NOTES:

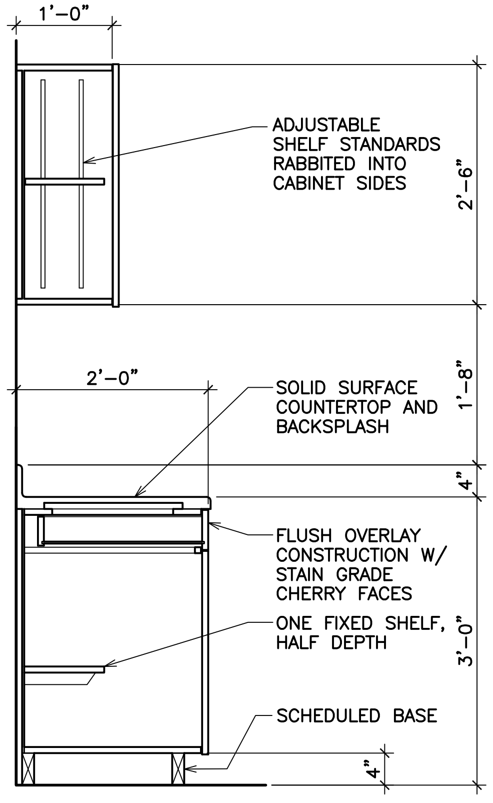
1. GFCI = GOVERNMENT FURNISHED, CONTRACTOR INSTALLED
2. MAXIMUM DIMENSIONS ABOVE FINISH FLOOR INDICATE THE OPERABLE OR FUNCTIONAL COMPONENT OF THE ACCESSORY.
3. ADA STANDARDS FOR ACCESSIBLE DESIGN ICC/ANSI A117.1 CONSTITUTE THE PROJECT ACCESSIBILITY REQUIREMENTS. THE MOST STRIDENT PROVISION PREVAILS.
4. COORDINATE ADA REQUIREMENTS WITH ALL REQUIRED IN-WALL BLOCKING.

▨ BLOCKING AREA


SURFACE BULLNOSE AT TOP OF TILE WAINSCOT
2'–0"
FRAMED GLASS MIRROR
SOLID SURFACE COUNTERTOP & BACKSPLASH, TURN DOWN SOLID SURFACE AT FACE OF COUNTERTOP AND EASE CORNERS ON LEADING FACE OF COUNTERTOP
5"
6"
PLASTIC LAMINATE ON FACE SIDES AND EDGES; MATCH FINISH TO TP–1, PLASTIC LAMINATE TOILET PARTITION FINISH
WOOD FRAME WITH CROSS MEMBER SUPPORT BAR
2'–10"
1'–5"
8"
7mm X 50mm STAINLESS STEEL SUPPORT BAR @ 1200mm O.C MAX. FASTEN TO WALL AND VANITY W/ STAINLESS STEEL SCREWS AND ANCHORS

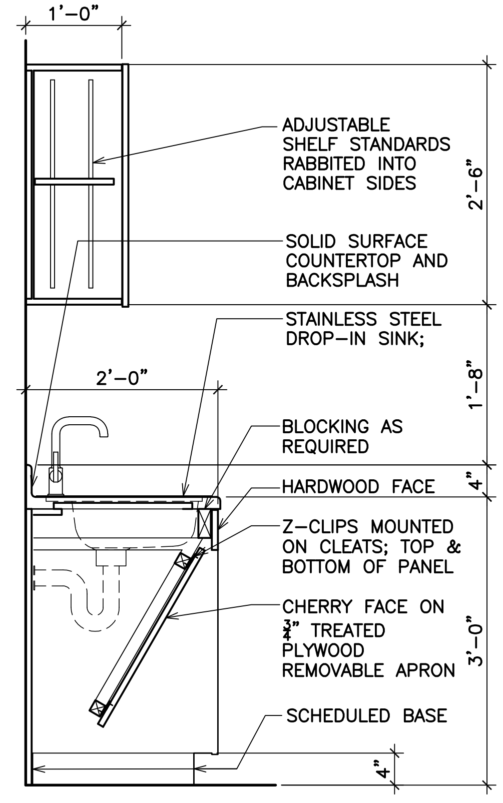
A/A-405 VANITY SECTION

SCALE: 1" = 1'–0"


1'–0"
ADJUSTABLE SHELF STANDARDS RABBITED INTO CABINET SIDES
2'–6"
2'–0"
SOLID SURFACE COUNTERTOP AND BACKSPLASH
1'–8"
4"
FLUSH OVERLAY CONSTRUCTION W/ STAIN GRADE CHERRY FACES
ONE FIXED SHELF, HALF DEPTH
3'–0"
SCHEDULED BASE
4"

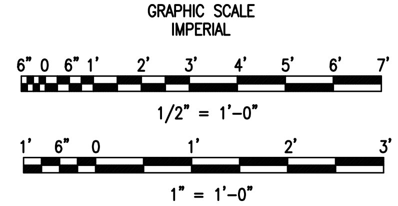
B/A-405 CABINET SECTION

SCALE: 1" = 1'–0"


1'–0"
ADJUSTABLE SHELF STANDARDS RABBITED INTO CABINET SIDES
2'–6"
SOLID SURFACE COUNTERTOP AND BACKSPLASH
STAINLESS STEEL DROP–IN SINK;
2'–0"
1'–8"
BLOCKING AS REQUIRED
HARDWOOD FACE
4"
Z–CLIPS MOUNTED ON CLEATS; TOP & BOTTOM OF PANEL
CHERRY FACE ON ¾" TREATED PLYWOOD REMOVABLE APRON
3'–0"
SCHEDULED BASE
4"

C/A-405 CABINET SECTION

SCALE: 1" = 1'–0"



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: CLR
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
FILE NAME: MEF24005A-405.DWG
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

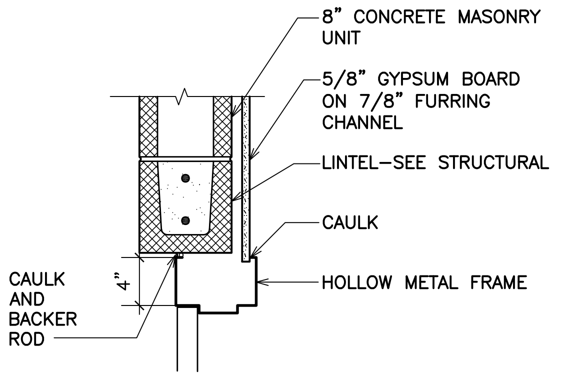
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

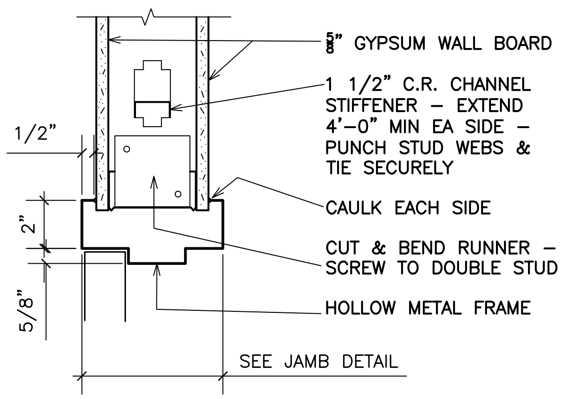
CASEWORK SECTION AND MOUNTING HEIGHTS

SHEET ID
A-405

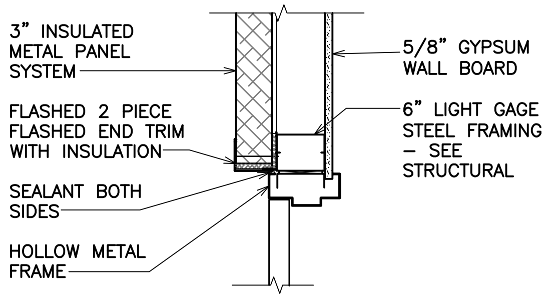
RTA SUBMITTAL



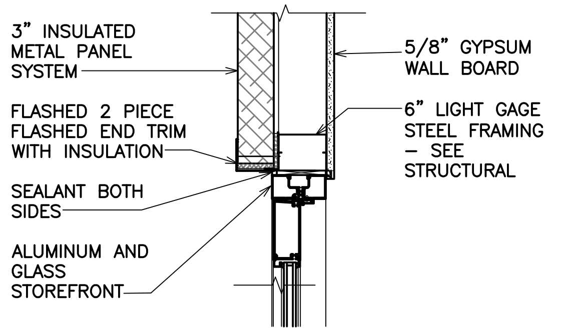
① A-501 **HEAD**
1.1/2"=1'-0"


5/8" GYPSUM WALL BOARD
1 1/2" C.R. CHANNEL STIFFENER - EXTEND 4'-0" MIN EA SIDE - PUNCH STUD WEBS & TIE SECURELY
CAULK EACH SIDE
CUT & BEND RUNNER - SCREW TO DOUBLE STUD
HOLLOW METAL FRAME
SEE JAMB DETAIL
1/2"
2"
5/8"

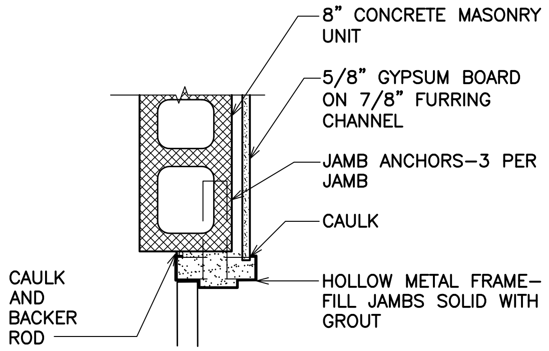
④ A-501 **HEAD**
SCALE: 3" = 1'-0"


3" INSULATED METAL PANEL SYSTEM
FLASHED 2 PIECE FLASHED END TRIM WITH INSULATION
SEALANT BOTH SIDES
HOLLOW METAL FRAME
5/8" GYPSUM WALL BOARD
6" LIGHT GAGE STEEL FRAMING - SEE STRUCTURAL

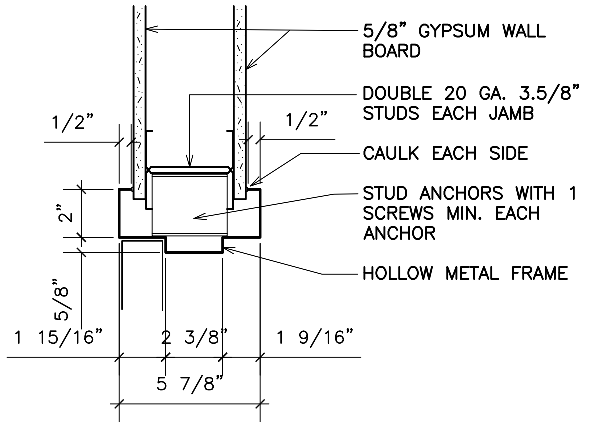
⑦ A-501 **HEAD**
1.1/2"=1'-0"


3" INSULATED METAL PANEL SYSTEM
FLASHED 2 PIECE FLASHED END TRIM WITH INSULATION
SEALANT BOTH SIDES
ALUMINUM AND GLASS STOREFRONT
5/8" GYPSUM WALL BOARD
6" LIGHT GAGE STEEL FRAMING - SEE STRUCTURAL

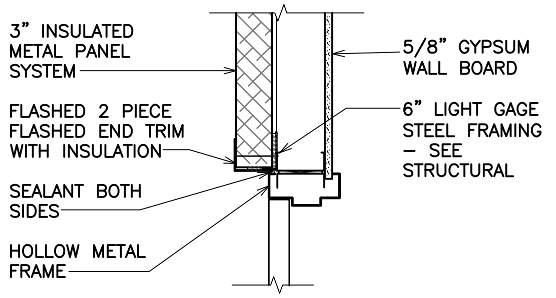
⑩ A-501 **HEAD** JAMB SIMILAR
1.1/2"=1'-0"


8" CONCRETE MASONRY UNIT
5/8" GYPSUM BOARD ON 7/8" FURRING CHANNEL
JAMB ANCHORS-3 PER JAMB
CAULK
HOLLOW METAL FRAME-FILL JAMBS SOLID WITH GROUT
CAULK AND BACKER ROD

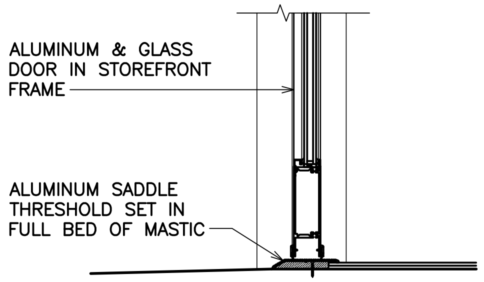
② A-501 **JAMB**
1.1/2"=1'-0"



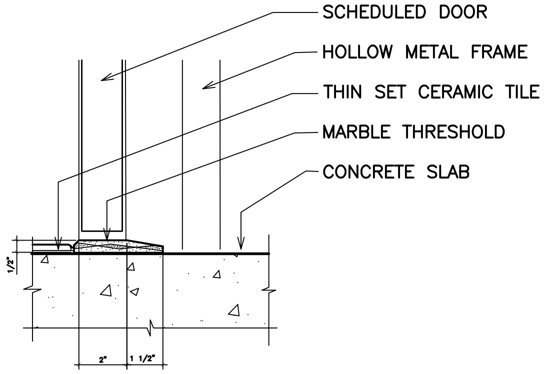
⑤ A-501 **JAMB**
SCALE: 3" = 1'-0"


3" INSULATED METAL PANEL SYSTEM
FLASHED 2 PIECE FLASHED END TRIM WITH INSULATION
SEALANT BOTH SIDES
HOLLOW METAL FRAME
5/8" GYPSUM WALL BOARD
6" LIGHT GAGE STEEL FRAMING - SEE STRUCTURAL

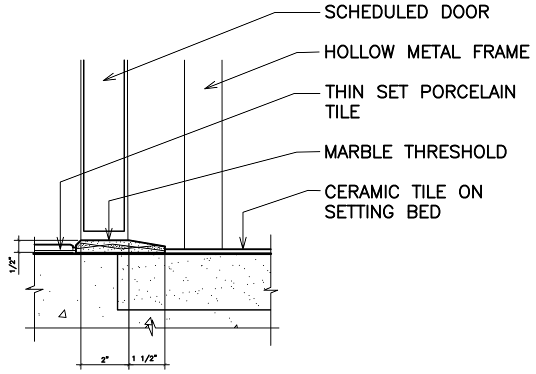
⑧ A-501 **JAMB**
1.1/2"=1'-0"


ALUMINUM & GLASS DOOR IN STOREFRONT FRAME
ALUMINUM SADDLE THRESHOLD SET IN FULL BED OF MASTIC

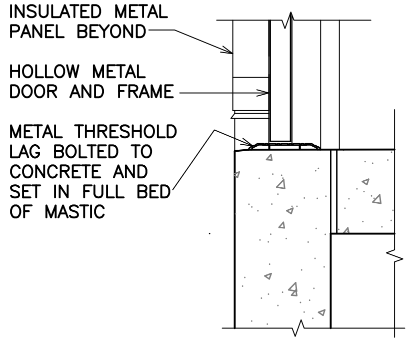
⑪ A-501 **SILL**
1.1/2"=1'-0"



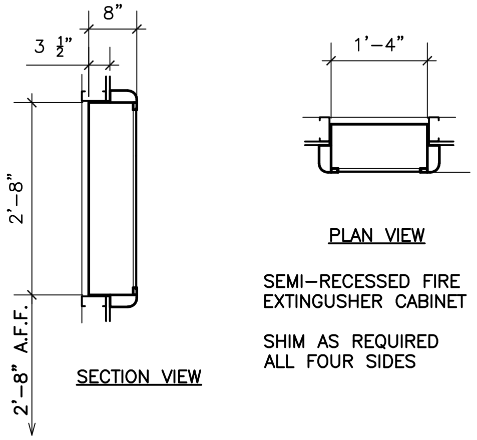
③ A-501 **SILL**
SCALE 3"=1'-0"



⑥ A-501 **SILL**
SCALE: 3" = 1'-0"

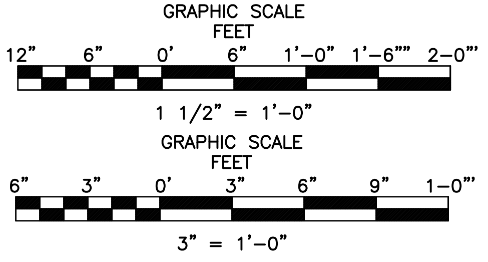

INSULATED METAL PANEL BEYOND
HOLLOW METAL DOOR AND FRAME
METAL THRESHOLD LAG BOLTED TO CONCRETE AND SET IN FULL BED OF MASTIC

⑨ A-501 **SILL**
1.1/2"=1'-0"


8"
3 1/2"
2'-8"
2'-8" A.F.F.
SECTION VIEW
1'-4"
PLAN VIEW
SEMI-RECESSED FIRE EXTINGUSHER CABINET
SHIM AS REQUIRED ALL FOUR SIDES

⑫ A-501 **FIRE EXT. CABINET**
SCALE: 3/4" = 1'-0"

10520-02



US Army Corps of Engineers®

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DESIGNED BY: JGR
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FILE NAME: MEF24005A-501.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

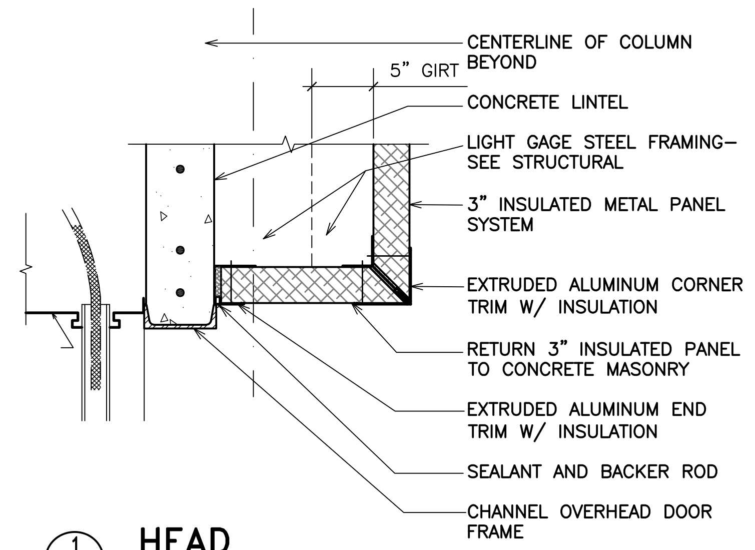
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

DETAILS

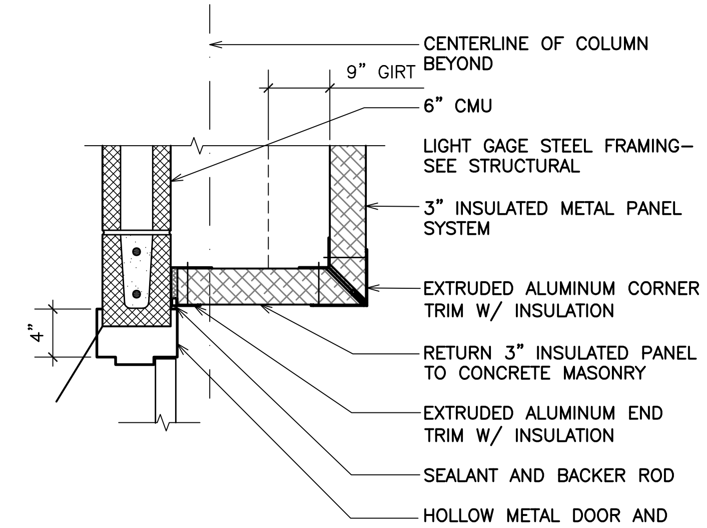
SHEET ID
A-501

RTA SUBMITTAL

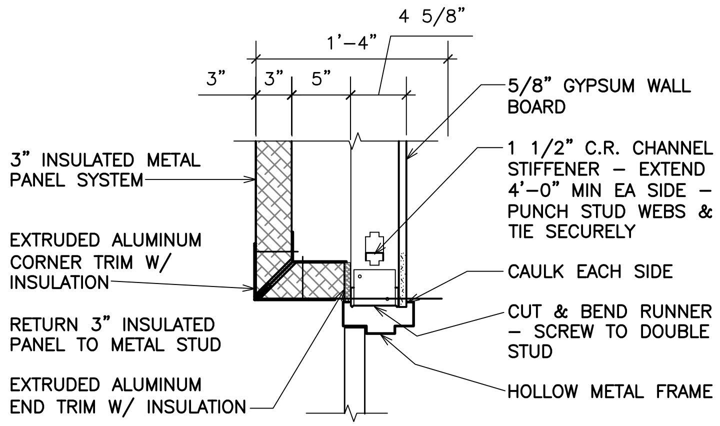
CESAM v20181203


CENTERLINE OF COLUMN BEYOND
5" GIRT
CONCRETE LINTEL
LIGHT GAGE STEEL FRAMING– SEE STRUCTURAL
3" INSULATED METAL PANEL SYSTEM
EXTRUDED ALUMINUM CORNER TRIM W/ INSULATION
RETURN 3" INSULATED PANEL TO CONCRETE MASONRY
EXTRUDED ALUMINUM END TRIM W/ INSULATION
SEALANT AND BACKER ROD
CHANNEL OVERHEAD DOOR FRAME

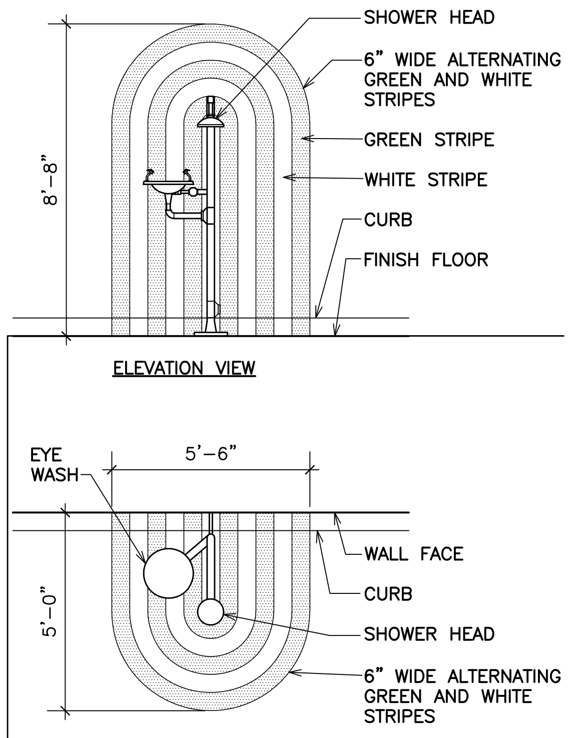
① A-502 **HEAD**
1.1/2"=1'-0"


CENTERLINE OF COLUMN BEYOND
9" GIRT
6" CMU
4"
LIGHT GAGE STEEL FRAMING– SEE STRUCTURAL
3" INSULATED METAL PANEL SYSTEM
EXTRUDED ALUMINUM CORNER TRIM W/ INSULATION
RETURN 3" INSULATED PANEL TO CONCRETE MASONRY
EXTRUDED ALUMINUM END TRIM W/ INSULATION
SEALANT AND BACKER ROD
HOLLOW METAL DOOR AND FRAME

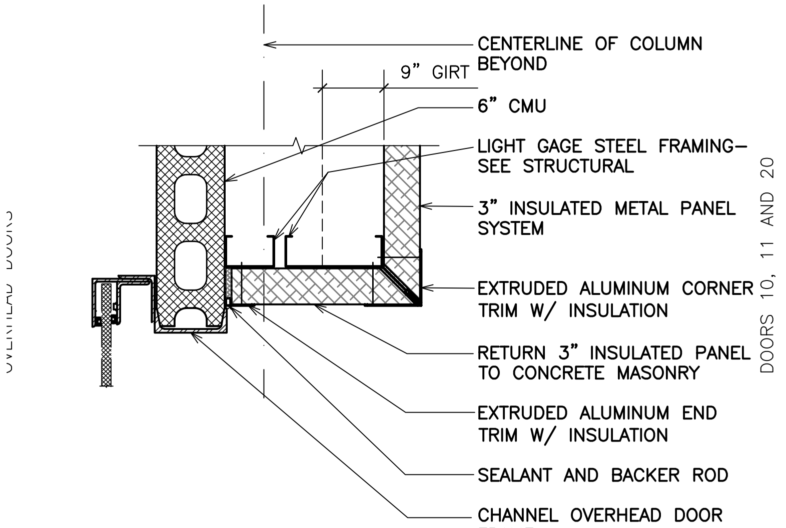
④ A-502 **HEAD**
1.1/2"=1'-0"


4 5/8"
1'-4"
3"
3"
5"
3" INSULATED METAL PANEL SYSTEM
EXTRUDED ALUMINUM CORNER TRIM W/ INSULATION
RETURN 3" INSULATED PANEL TO METAL STUD
EXTRUDED ALUMINUM END TRIM W/ INSULATION
5/8" GYPSUM WALL BOARD
1 1/2" C.R. CHANNEL STIFFENER – EXTEND 4'-0" MIN EA SIDE – PUNCH STUD WEBS & TIE SECURELY
CAULK EACH SIDE
CUT & BEND RUNNER – SCREW TO DOUBLE STUD
HOLLOW METAL FRAME

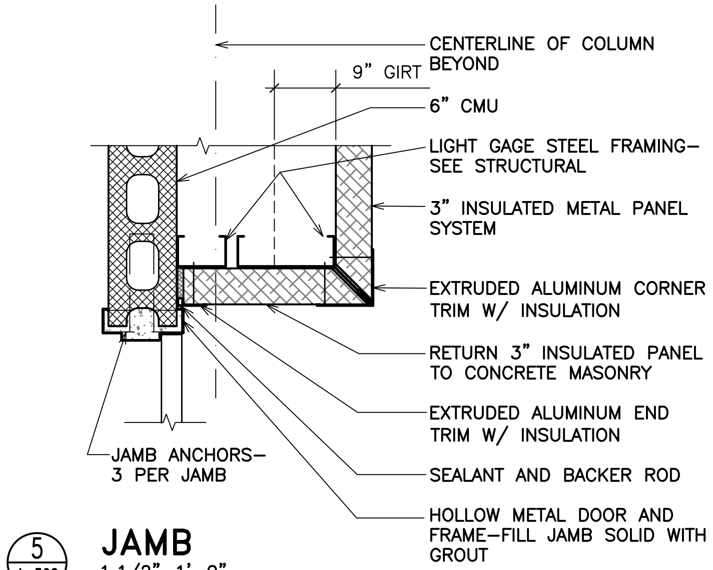
⑦ A-502 **HEAD**
1.1/2"=1'-0"



⑩ A-502 **EYEWASH STATION STRIPING**
SCALE: 3/8 = 1'-0"

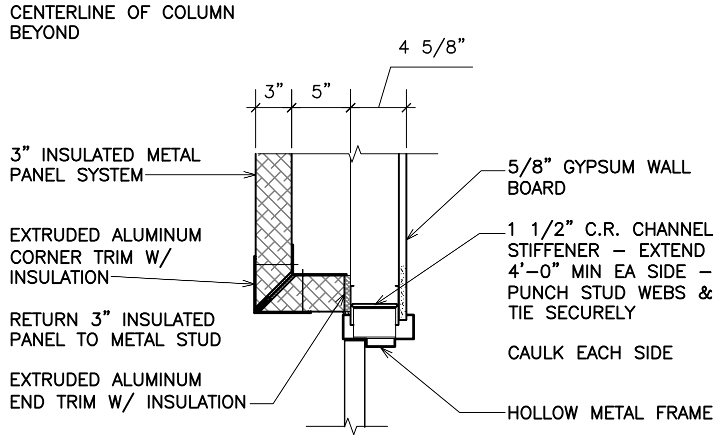

OVERHEAD DOORS
CENTERLINE OF COLUMN BEYOND
9" GIRT
6" CMU
LIGHT GAGE STEEL FRAMING– SEE STRUCTURAL
3" INSULATED METAL PANEL SYSTEM
EXTRUDED ALUMINUM CORNER TRIM W/ INSULATION
RETURN 3" INSULATED PANEL TO CONCRETE MASONRY
EXTRUDED ALUMINUM END TRIM W/ INSULATION
SEALANT AND BACKER ROD
CHANNEL OVERHEAD DOOR FRAME
DOORS 10, 11 AND 20

② A-502 **JAMB**
1.1/2"=1'-0"

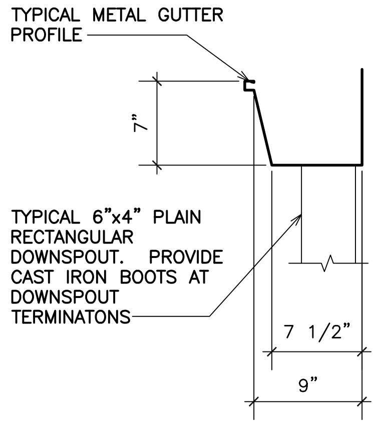

CENTERLINE OF COLUMN BEYOND
9" GIRT
6" CMU
LIGHT GAGE STEEL FRAMING– SEE STRUCTURAL
3" INSULATED METAL PANEL SYSTEM
EXTRUDED ALUMINUM CORNER TRIM W/ INSULATION
RETURN 3" INSULATED PANEL TO CONCRETE MASONRY
EXTRUDED ALUMINUM END TRIM W/ INSULATION
SEALANT AND BACKER ROD
HOLLOW METAL DOOR AND FRAME–FILL JAMB SOLID WITH GROUT
JAMB ANCHORS– 3 PER JAMB

⑤ A-502 **JAMB**
1.1/2"=1'-0"

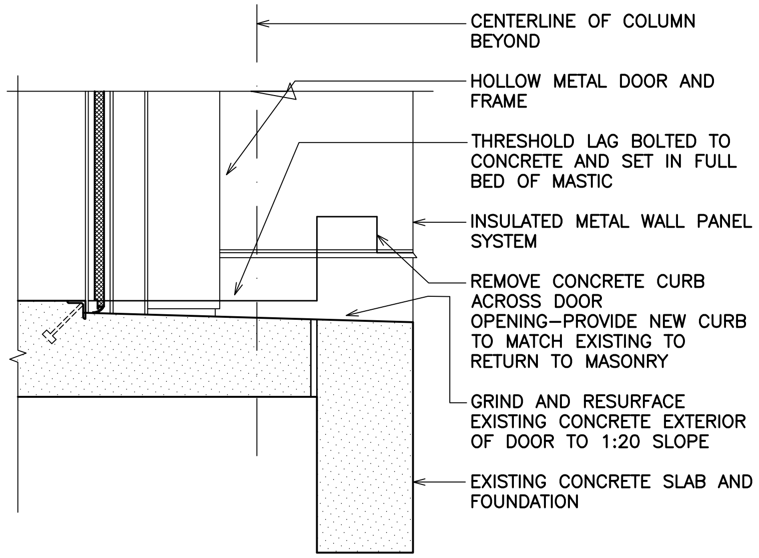
needs curb build up
on 08


CENTERLINE OF COLUMN BEYOND
4 5/8"
3"
5"
3" INSULATED METAL PANEL SYSTEM
EXTRUDED ALUMINUM CORNER TRIM W/ INSULATION
RETURN 3" INSULATED PANEL TO METAL STUD
EXTRUDED ALUMINUM END TRIM W/ INSULATION
5/8" GYPSUM WALL BOARD
1 1/2" C.R. CHANNEL STIFFENER – EXTEND 4'-0" MIN EA SIDE – PUNCH STUD WEBS & TIE SECURELY
CAULK EACH SIDE
HOLLOW METAL FRAME

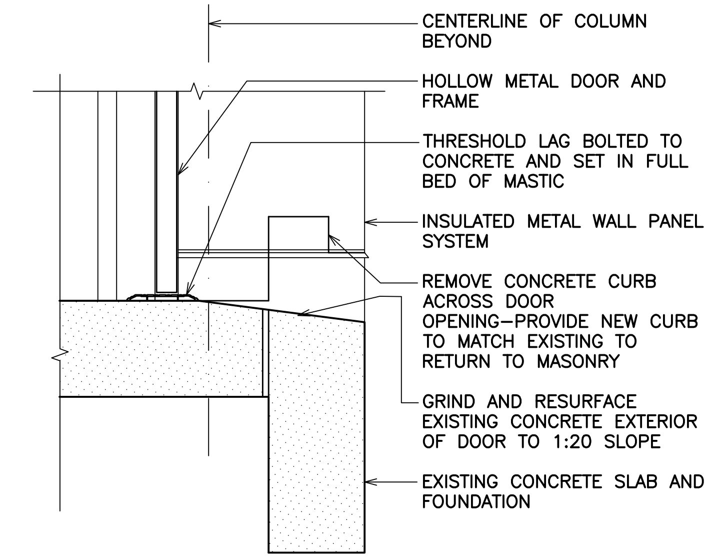
⑧ A-502 **JAMB**
1.1/2"=1'-0"


TYPICAL METAL GUTTER PROFILE
7"
TYPICAL 6"x4" PLAIN RECTANGULAR DOWNSPOUT. PROVIDE CAST IRON BOOTS AT DOWNSPOUT TERMINATONS
7 1/2"
9"

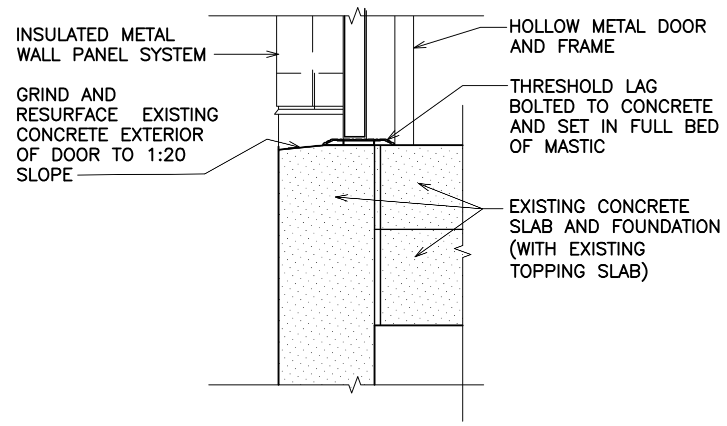
⑪ A-502 **GUTTER & DOWNSPOUT**
1.1/2"=1'-0"


CENTERLINE OF COLUMN BEYOND
HOLLOW METAL DOOR AND FRAME
THRESHOLD LAG BOLTED TO CONCRETE AND SET IN FULL BED OF MASTIC
INSULATED METAL WALL PANEL SYSTEM
REMOVE CONCRETE CURB ACROSS DOOR OPENING–PROVIDE NEW CURB TO MATCH EXISTING TO RETURN TO MASONRY
GRIND AND RESURFACE EXISTING CONCRETE EXTERIOR OF DOOR TO 1:20 SLOPE
EXISTING CONCRETE SLAB AND FOUNDATION

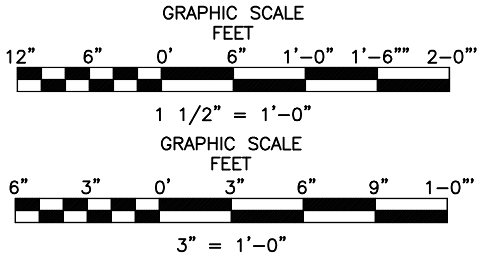
③ A-502 **SILL**
1.1/2"=1'-0"


CENTERLINE OF COLUMN BEYOND
HOLLOW METAL DOOR AND FRAME
THRESHOLD LAG BOLTED TO CONCRETE AND SET IN FULL BED OF MASTIC
INSULATED METAL WALL PANEL SYSTEM
REMOVE CONCRETE CURB ACROSS DOOR OPENING–PROVIDE NEW CURB TO MATCH EXISTING TO RETURN TO MASONRY
GRIND AND RESURFACE EXISTING CONCRETE EXTERIOR OF DOOR TO 1:20 SLOPE
EXISTING CONCRETE SLAB AND FOUNDATION

⑥ A-502 **SILL**
1.1/2"=1'-0"


INSULATED METAL WALL PANEL SYSTEM
GRIND AND RESURFACE EXISTING CONCRETE EXTERIOR OF DOOR TO 1:20 SLOPE
HOLLOW METAL DOOR AND FRAME
THRESHOLD LAG BOLTED TO CONCRETE AND SET IN FULL BED OF MASTIC
EXISTING CONCRETE SLAB AND FOUNDATION (WITH EXISTING TOPPING SLAB)

⑨ A-502 **SILL**
1.1/2"=1'-0"



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
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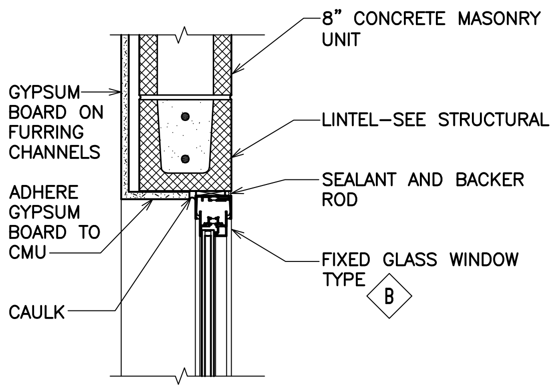
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

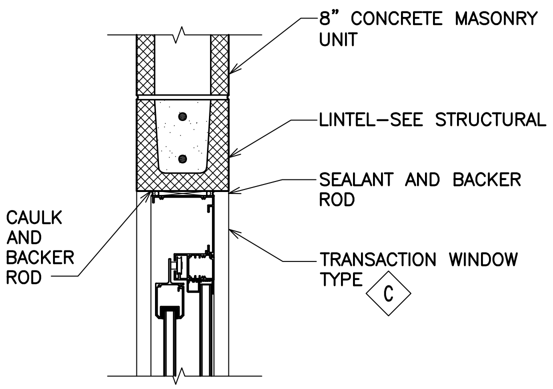
DETAILS

SHEET ID
A-502

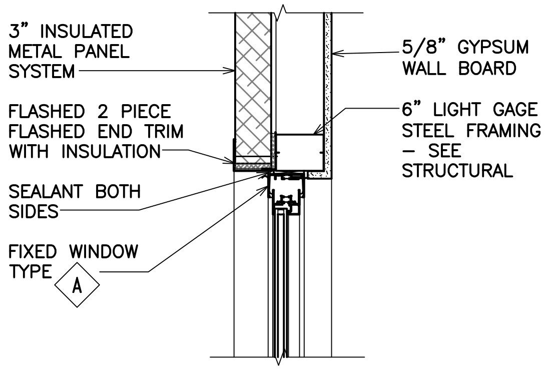
RTA SUBMITTAL


8" CONCRETE MASONRY UNIT
GYPSUM BOARD ON FURRING CHANNELS
LINTEL–SEE STRUCTURAL
ADHERE GYPSUM BOARD TO CMU
SEALANT AND BACKER ROD
FIXED GLASS WINDOW TYPE B
CAULK

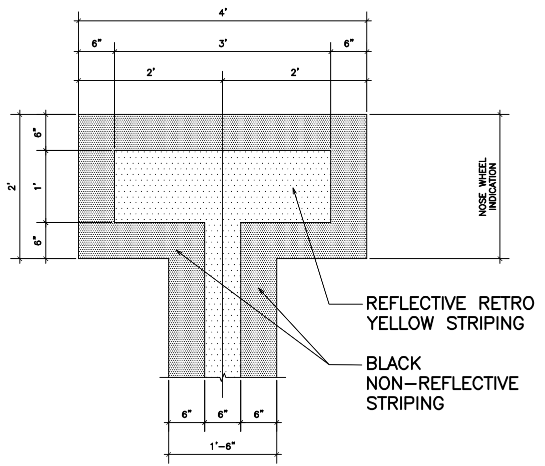
1 A-503 HEAD
1.1/2"=1'–0"



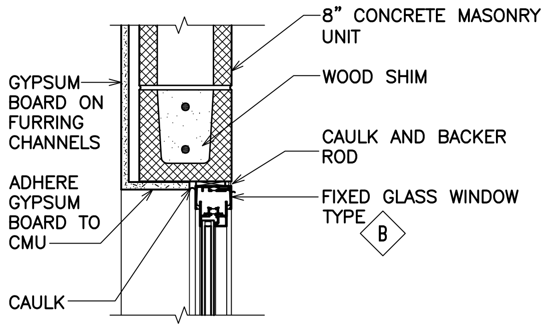
4 A-503 HEAD
1.1/2"=1'–0"


3" INSULATED METAL PANEL SYSTEM
5/8" GYPSUM WALL BOARD
FLASHED 2 PIECE FLASHED END TRIM WITH INSULATION
6" LIGHT GAGE STEEL FRAMING – SEE STRUCTURAL
SEALANT BOTH SIDES
FIXED WINDOW TYPE A

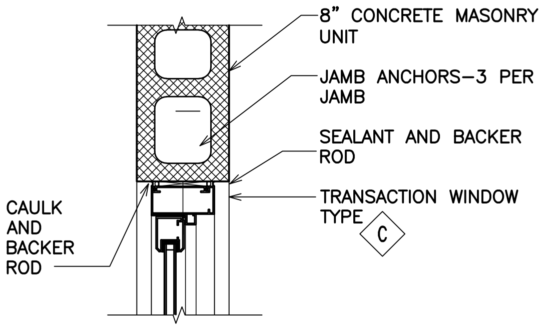
7 A-503 HEAD
1.1/2"=1'–0"


4'
6"
3'
6"
2'
2'
6"
2'
1'
6"
NOSE WHEEL INDICATION
REFLECTIVE RETRO YELLOW STRIPING
BLACK NON–REFLECTIVE STRIPING
6"
6"
6"
1'–6"

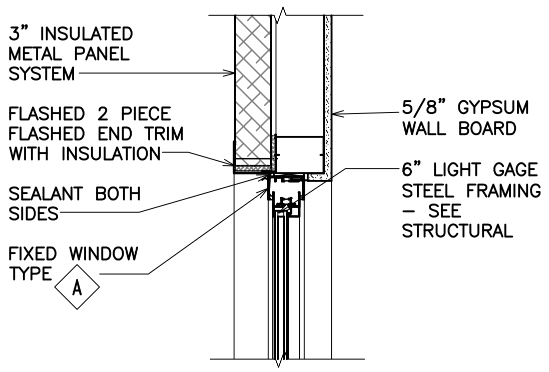
10 A-503 TOW LANE/NOSE MARKING
SCALE: 3/4" = 1'–0"


8" CONCRETE MASONRY UNIT
GYPSUM BOARD ON FURRING CHANNELS
WOOD SHIM
CAULK AND BACKER ROD
ADHERE GYPSUM BOARD TO CMU
FIXED GLASS WINDOW TYPE B
CAULK

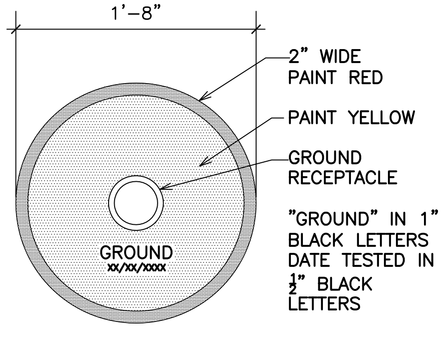
2 A-503 JAMB
1.1/2"=1'–0"



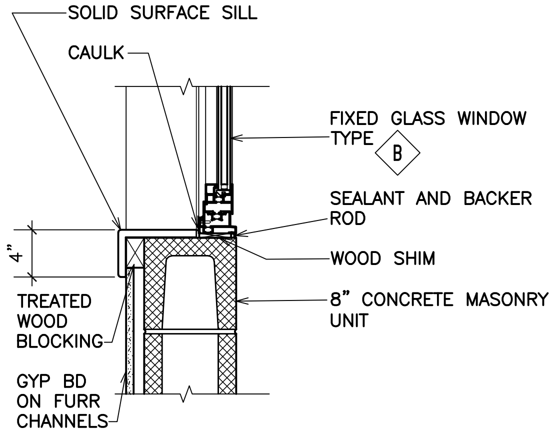
5 A-502 JAMB
1.1/2"=1'–0"


3" INSULATED METAL PANEL SYSTEM
FLASHED 2 PIECE FLASHED END TRIM WITH INSULATION
5/8" GYPSUM WALL BOARD
6" LIGHT GAGE STEEL FRAMING – SEE STRUCTURAL
SEALANT BOTH SIDES
FIXED WINDOW TYPE A

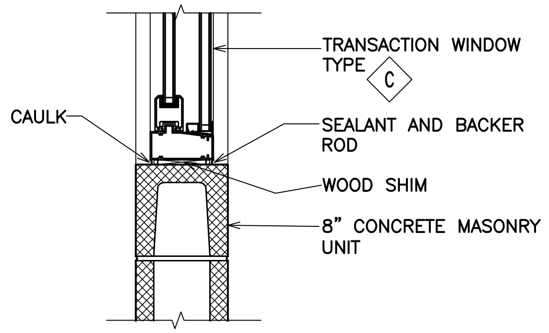
8 A-503 JAMB
1.1/2"=1'–0"



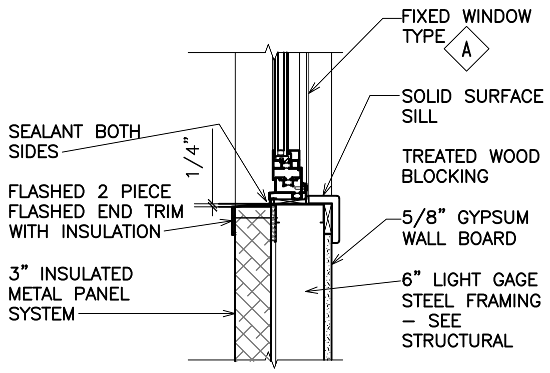
11 A-503 GROUNDING STRIPING
1.1/2"=1'–0"



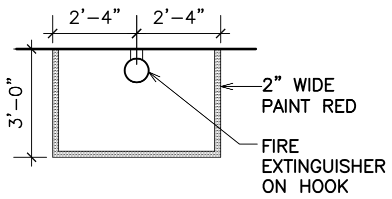
3 A-503 SILL
1.1/2"=1'–0"



6 A-503 SILL
1.1/2"=1'–0"


FIXED WINDOW TYPE A
SOLID SURFACE SILL
SEALANT BOTH SIDES
1/4"
TREATED WOOD BLOCKING
FLASHED 2 PIECE FLASHED END TRIM WITH INSULATION
5/8" GYPSUM WALL BOARD
3" INSULATED METAL PANEL SYSTEM
6" LIGHT GAGE STEEL FRAMING – SEE STRUCTURAL

9 A-503 JAMB
1.1/2"=1'–0"

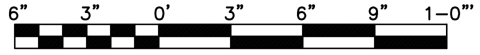


12 A-503 FIRE EXTINGUISHER STRIPING
3/8"=1'–0"

GRAPHIC SCALE
FEET

1 1/2" = 1'–0"

GRAPHIC SCALE
FEET



3" = 1'–0"

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MARK	DESCRIPTION	DATE

DESIGNED BY:
JGR
DRAWN BY:
JGR
CHECKED BY:
CLR
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D
FILE NAME:
MEF24005A-503.DWG
ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

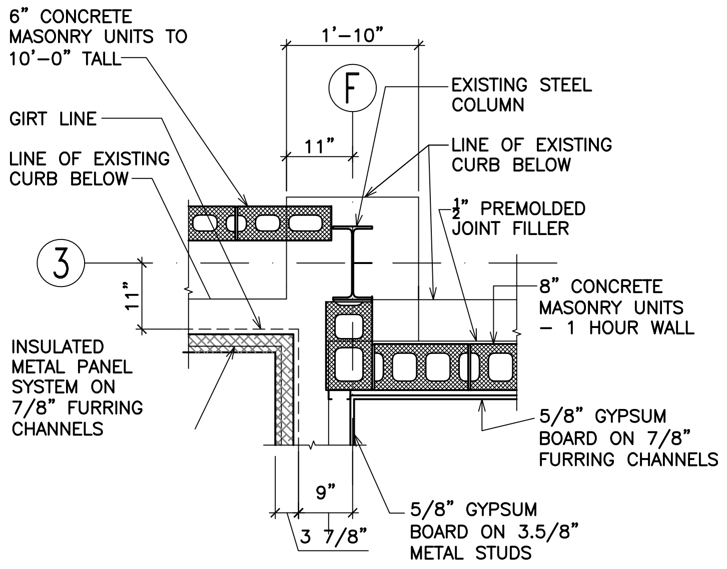
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

DETAILS

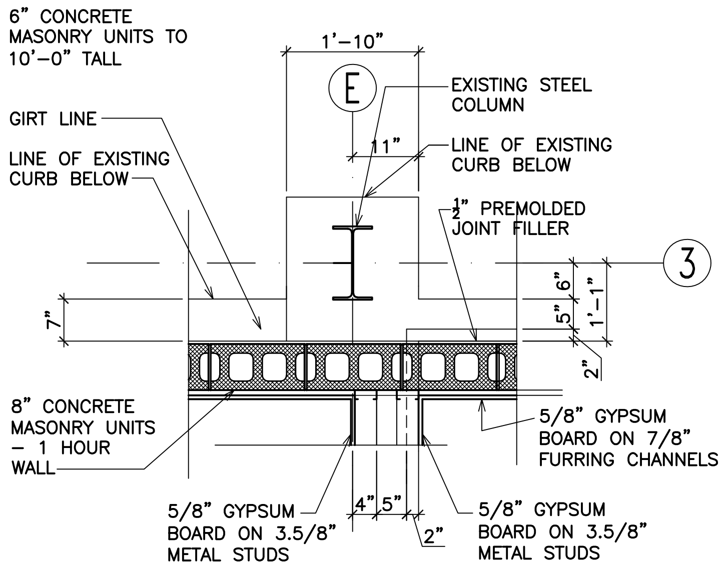
SHEET ID
A-503

RTA SUBMITTAL

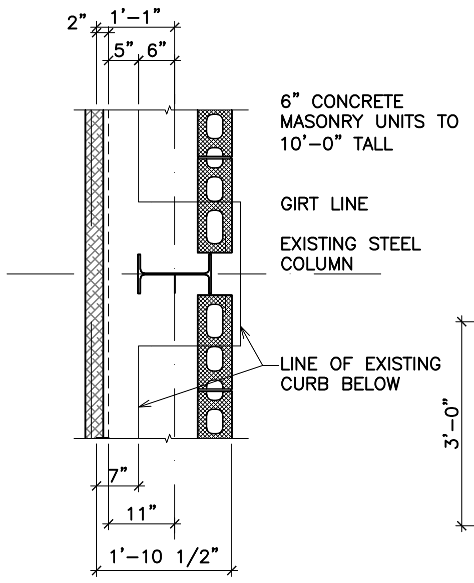
CESAM v20181203


6" CONCRETE MASONRY UNITS TO 10'-0" TALL
1'-10"
F
EXISTING STEEL COLUMN
GIRT LINE
11"
LINE OF EXISTING CURB BELOW
LINE OF EXISTING CURB BELOW
1/2" PREMOLDED JOINT FILLER
3
11"
8" CONCRETE MASONRY UNITS – 1 HOUR WALL
INSULATED METAL PANEL SYSTEM ON 7/8" FURRING CHANNELS
5/8" GYPSUM BOARD ON 7/8" FURRING CHANNELS
9"
3 7/8"
5/8" GYPSUM BOARD ON 3.5/8" METAL STUDS

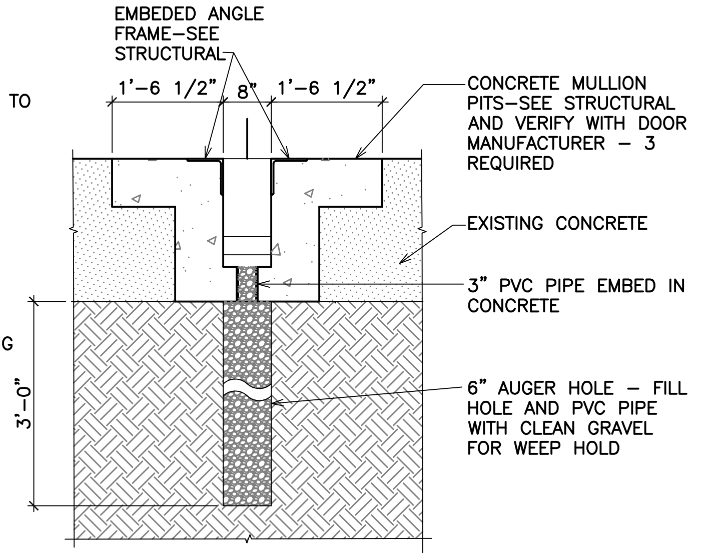
1 A504 PLAN DETAIL
SCALE: 3/4" = 1'-0"


6" CONCRETE MASONRY UNITS TO 10'-0" TALL
1'-10"
E
EXISTING STEEL COLUMN
GIRT LINE
11"
LINE OF EXISTING CURB BELOW
LINE OF EXISTING CURB BELOW
1/2" PREMOLDED JOINT FILLER
3
7"
5"
6"
1'-1"
2"
8" CONCRETE MASONRY UNITS – 1 HOUR WALL
5/8" GYPSUM BOARD ON 7/8" FURRING CHANNELS
5/8" GYPSUM BOARD ON 3.5/8" METAL STUDS
4"
5"
2"
5/8" GYPSUM BOARD ON 3.5/8" METAL STUDS

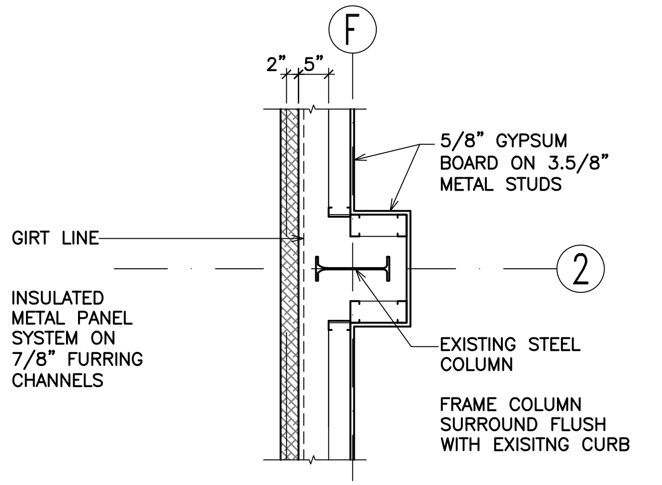
4 A504 PLAN DETAIL
SCALE: 3/4" = 1'-0"


2"
1'-1"
5"
6"
6" CONCRETE MASONRY UNITS TO 10'-0" TALL
GIRT LINE
EXISTING STEEL COLUMN
LINE OF EXISTING CURB BELOW
7"
11"
1'-10 1/2"

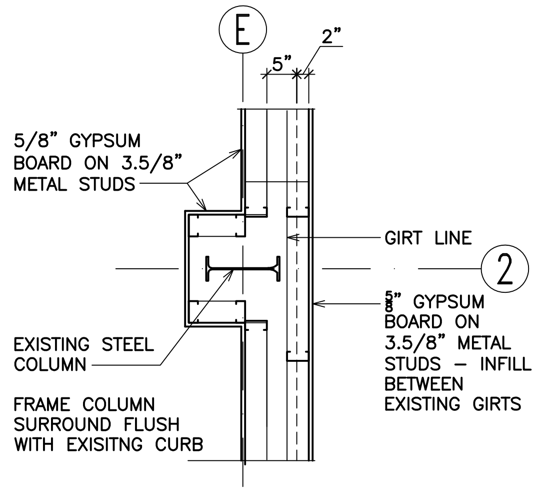
7 A504 PLAN DETAIL
SCALE: 3/4" = 1'-0"


EMBEDED ANGLE FRAME–SEE STRUCTURAL
1'-6 1/2"
8"
1'-6 1/2"
CONCRETE MULLION PITS–SEE STRUCTURAL AND VERIFY WITH DOOR MANUFACTURER – 3 REQUIRED
EXISTING CONCRETE
3" PVC PIPE EMBED IN CONCRETE
3'-0"
6" AUGER HOLE – FILL HOLE AND PVC PIPE WITH CLEAN GRAVEL FOR WEEP HOLD

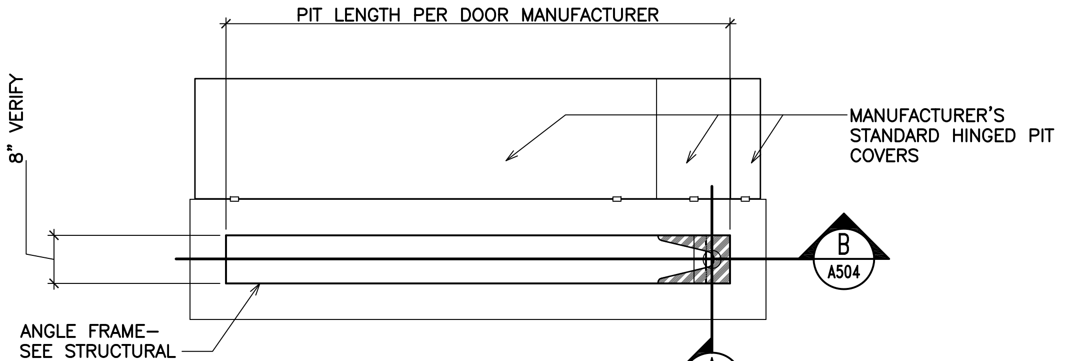
A A504 MULLION PIT–SECTION
SCALE: 3/4" = 1'-0"


F
2"
5"
5/8" GYPSUM BOARD ON 3.5/8" METAL STUDS
GIRT LINE
2
INSULATED METAL PANEL SYSTEM ON 7/8" FURRING CHANNELS
EXISTING STEEL COLUMN
FRAME COLUMN SURROUND FLUSH WITH EXISITNG CURB

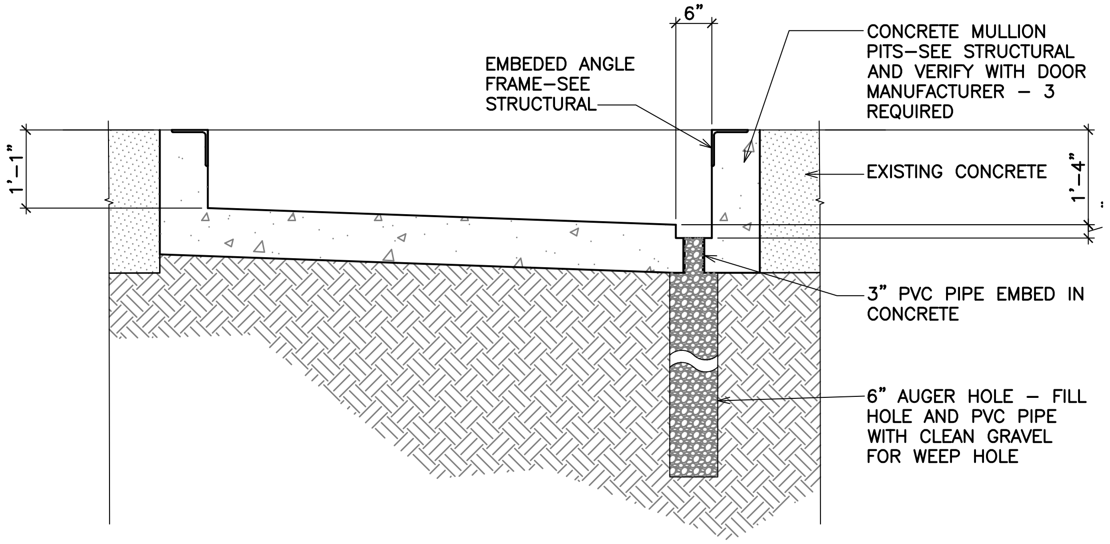
2 A504 PLAN DETAIL
SCALE: 3/4" = 1'-0"


E
2"
5"
5/8" GYPSUM BOARD ON 3.5/8" METAL STUDS
GIRT LINE
2
5/8" GYPSUM BOARD ON 3.5/8" METAL STUDS – INFILL BETWEEN EXISTING GIRTS
EXISTING STEEL COLUMN
FRAME COLUMN SURROUND FLUSH WITH EXISITNG CURB

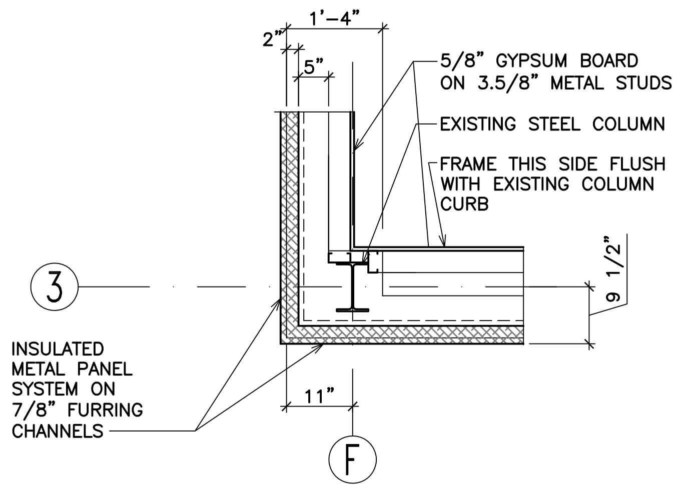
5 A504 PLAN DETAIL
SCALE: 3/4" = 1'-0"


PIT LENGTH PER DOOR MANUFACTURER
8" VERIFY
MANUFACTURER'S STANDARD HINGED PIT COVERS
B
A504
ANGLE FRAME– SEE STRUCTURAL
A
A504

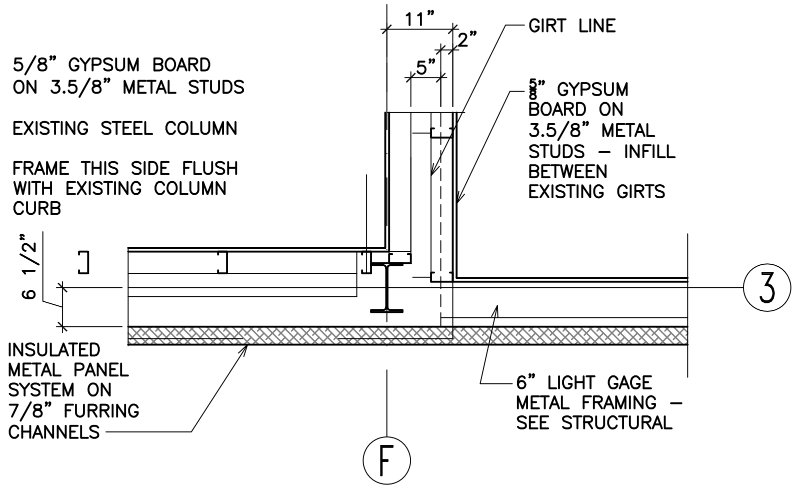
8 A504 MULLION PIT – PLAN
SCALE: 3/4" = 1'-0"


6"
EMBEDED ANGLE FRAME–SEE STRUCTURAL
CONCRETE MULLION PITS–SEE STRUCTURAL AND VERIFY WITH DOOR MANUFACTURER – 3 REQUIRED
1'-1"
EXISTING CONCRETE
1'-4"
3" PVC PIPE EMBED IN CONCRETE
6" AUGER HOLE – FILL HOLE AND PVC PIPE WITH CLEAN GRAVEL FOR WEEP HOLE

B A504 MULLION PIT–SECTION
SCALE: 3/4" = 1'-0"


1'-4"
2"
5"
5/8" GYPSUM BOARD ON 3.5/8" METAL STUDS
EXISTING STEEL COLUMN
FRAME THIS SIDE FLUSH WITH EXISTING COLUMN CURB
9 1/2"
3
INSULATED METAL PANEL SYSTEM ON 7/8" FURRING CHANNELS
11"
F

3 A504 PLAN DETAIL
SCALE: 3/4" = 1'-0"


5/8" GYPSUM BOARD ON 3.5/8" METAL STUDS
EXISTING STEEL COLUMN
FRAME THIS SIDE FLUSH WITH EXISTING COLUMN CURB
11"
2"
5"
GIRT LINE
5/8" GYPSUM BOARD ON 3.5/8" METAL STUDS – INFILL BETWEEN EXISTING GIRTS
6 1/2"
3
INSULATED METAL PANEL SYSTEM ON 7/8" FURRING CHANNELS
6" LIGHT GAGE METAL FRAMING – SEE STRUCTURAL
F

6 A504 PLAN DETAIL
SCALE: 3/4" = 1'-0"

SCALE: 3/4"=1'-0"
12" 0 1 2 3FT

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
DESIGNED BY: JGR
DRAWN BY: JGR
CHECKED BY: CLR
SUBMITTED BY: T. HYMAN
SIZE: ANSI D
FILE NAME: MEF24005A-504.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
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MOBILE, ALABAMA

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLAN DETAILS

SHEET ID
A-504

RTA SUBMITTAL

ROOM and FINISH SCHEDULE

ROOM #	ROOM NAME	FLOOR		BASE		WALLS		WAINSCOT			CEILING		CEILING HEIGHT	REMARKS
		MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	HEIGHT	MATERIAL	FINISH		
FIRST FLOOR														
101	MAINTENANCE HANGAR	EPOXY/URETHANE	EPU–1	EPOXY/URETHANE	EPU–1	CMU–PT	PT–2	–	–	–	EXPOSED–PT	PT–1	VARIES	
102	TOOL ROOM	EPOXY/URETHANE	EPU–1	EPOXY/URETHANE	EPU–1	CMU–PT	PT–2	–	–	–	ACOUS LAY–IN	ACT–1	12'–0"	
103	OFFICE	PORCELAIN	CTF–1	RESILIENT	RB–1	GYP BD–PT	PT–3	–	–	–	ACOUS LAY–IN	ACT–1	9'–0"	
104	LOCKERS	PORCELAIN	CTF–1	RESILIENT	RB–1	GYP BD–PT	PT–3	–	–	–	ACOUS LAY–IN	ACT–1	9'–0"	
105	CORRIDOR	PORCELAIN	CTF–1	RESILIENT	RB–1	GYP BD–PT	PT–3	–	–	–	ACOUS LAY–IN	ACT–1	9'–0"	
106	MEN'S TOILET	CERAMIC	CTF–2	CERAMIC	CTB–1	WR GYP BD–PT	PT–3	CERAMIC	CTW–1	6'–6"	WR GYP BD–PT	PT–5	9'–0"	
107	JANITOR	CERAMIC	CTF–2	CERAMIC	CTB–1	WR GYP BD–PT	PT–3	–	–	–	WR GYP BD–PT	PT–5	9'–0"	
108	WOMEN'S TOILET	CERAMIC	CTF–2	CERAMIC	CTB–1	WR GYP BD–PT	PT–3	CERAMIC	CTW–1	6'–6"	WR GYP BD–PT	PT–5	9'–0"	
109	CLOSET	PORCELAIN	CTF–1	RESILIENT	RB–1	GYP BD–PT	PT–3	–	–	–	ACOUS LAY–IN	ACT–1	9'–0"	
110	WORK ROOM	PORCELAIN	CTF–1	RESILIENT	RB–1	GYP BD–PT	PT–3	–	–	–	ACOUS LAY–IN	ACT–1	10'–0"	
111	ELECTRICAL	EXP. CONCRETE	SEALED	RESILIENT	RB–1	GYP BD–PT	PT–3	–	–	–	EXPOSED–PT	PT–1	VARIES	
112	FIRE PROTECTION	EXP. CONCRETE	SEALED	RESILIENT	RB–1	GYP BD–PT	PT–3	–	–	–	EXPOSED–PT	PT–1	VARIES	
113	MECHANICAL	EXP. CONCRETE	SEALED	RESILIENT	RB–1	GYP BD–PT	PT–3	–	–	–	EXPOSED–PT	PT–1	VARIES	
114	COMM	EXP. CONCRETE	SEALED	RESILIENT	RB–1	GYP BD–PT	PT–3	–	–	–	ACOUS LAY–IN	ACT–1	10'–0"	
115	COMPRESSOR	EXP. CONCRETE	SEALED	RESILIENT	RB–1	GYP BD–PT	PT–3	–	–	–	EXPOSED–PT	PT–1	VARIES	

ABBREVIATIONS

ACOUS LAY–IN	ACOUSTICAL LAY–IN CEILING GRID
EXP.	EXPOSED
GYP BD	GYPSUM BOARD
H.M	HOLLOW METAL
PR	PAIR
PT	PAINT
S.C.	SOLID CORE
SIM	SIMILAR
WR GYP BD	WATER RESISTIVE GYPSUM BOARD

GENERAL FINISH NOTE

ALL EXISTING AND NEW STRUCTURAL STEEL SHALL BE PROVIDED WITH A HIGH PERFORMANCE COATING AS SPECIFIED IN SECTION 09 96 00 HIGH PERFORMANCE COATING FOR STEEL STRUCTURES AFTER STEEL IS CLEANED AS INDICATED ON SHEET A–101 DEMOLITION PLAN

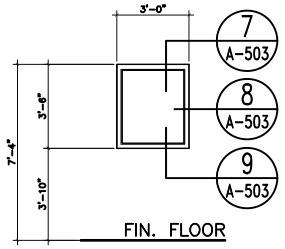
DOOR & STOREFRONT SCHEDULE

DOOR #	DOOR WIDTH	DOOR HEIGHT	DOOR THICK	DOOR TYPE	DOOR MATERIAL	FRAME MATERIAL	DOOR DETAILS			HARDWARE SET	FIRE RATING	REMARKS
							HEAD	JAMB	SILL			
FIRST FLOOR												
01	200'–0"	22'–8"	–	A	FABRIC	–	–	–	–	013	–	SEE KEYED NOTE ⟨1⟩
02	3'–0"	7'–0"	1 3/4"	E	H.M.	H.M.	4/A502	5/A502	6/A502	004	–	
03	3'–0"	7'–0"	1 3/4"	E	H.M.	H.M.	4/A502	5/A502	6/A502	004	–	
04	10'–0"	10'–0"	–	G	STEEL	STEEL	1/A502	2/A502	3/A502	012	–	
05	PR 3'–0"	7'–0"	1 3/4"	F	H.M.	H.M.	7/A501	8/A501	9/A501	001	–	
06	PR 3'–0"	7'–0"	1 3/4"	F	H.M.	H.M.	7/A501	8/A501	9/A501	001	–	
07	3'–0"	7'–0"	1 3/4"	E	H.M.	H.M.	10/A501	10/A501 sim	11/A501	004	–	
08	3'–0"	7'–0"	1 3/4"	E	H.M.	H.M.	7/A501	8/A501	9/A501	004	–	
09	3'–0"	7'–0"	1 3/4"	D	H.M.	H.M.	7/A502	8/A502	9/A502	003	–	
10	3'–0"	7'–0"	1 3/4"	D	H.M.	H.M.	4/A502	5/A502	6/A502	004	–	
11	10'–0"	10'–0"	–	G	STEEL	STEEL	1/A502	2/A502	3/A502	012	–	
12	3'–0"	7'–0"	1 3/4"	E	H.M.	H.M.	4/A502	5/A502	6/A502	004	–	
13	3'–0"	7'–0"	1 3/4"	E	H.M.	H.M.	4/A502	5/A502	6/A502	004	–	
14	3'–0"	7'–0"	1 3/4"	E	H.M.	H.M.	1/A501	2/A501	3/A501	005	C–LABEL	
15	3'–0"	7'–0"	1 3/4"	E	H.M.	H.M.	1/A501	2/A501	3/A501	005	C–LABEL	
16	3'–0"	7'–0"	1 3/4"	E	H.M.	H.M.	1/A501	2/A501	3/A501	006	C–LABEL	
17	PR 3'–0"	7'–0"	1 3/4"	F	H.M.	H.M.	7/A501	8/A501	9/A501	002	–	
18	3'–0"	7'–0"	1 3/4"	J	S.C. WOOD	H.M.	4/A501	5/A501	–	007	–	
19	3'–0"	7'–0"	1 3/4"	B	S.C. WOOD	H.M.	4/A501	5/A501	6/A501	009	–	
20	3'–0"	7'–0"	1 3/4"	B	S.C. WOOD	H.M.	4/A501	5/A501	6/A501	011	–	
21	3'–0"	7'–0"	1 3/4"	B	S.C. WOOD	H.M.	4/A501	5/A501	6/A501	009	–	
22	3'–0"	7'–0"	1 3/4"	C	S.C. WOOD	H.M.	4/A501	5/A501	–	008	–	
23	3'–0"	7'–0"	1 3/4"	B	S.C. WOOD	H.M.	4/A501	5/A501	–	008	–	
24	3'–0"	7'–0"	1 3/4"	C	S.C. WOOD	H.M.	–	–	–	010	–	
25	PR 3'–0"	7'–0"	1 3/4"	K	H.M.	H.M.	7/A502	8/A502	9/A502	001	–	

DOOR SCHEDULE NOTES

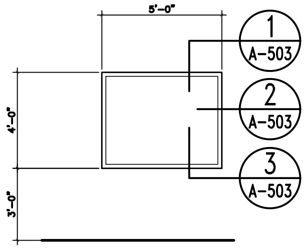
KEYED NOTES

⟨1⟩ 4– BAY POWER OPERATED VERTICAL LIFT FABRIC HANGAR DOOR WITH RETRACTABLE MULLIONS BETWEEN DOOR BAYS



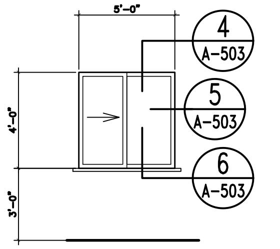
A

FIXED ALUMINUM FRAME WINDOW INSULATED TINTED GLASS



B

45 MINUTE RATED HOLLOW METAL & CLEAR TEMPERED GLASS FIXED WINDOW



C

45 MINUTE RATED CLEAR TEMPERED ALUMINUM FRAME SLIDING TRANSACTION WINDOW, LOCKING

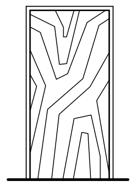
WINDOW SCHEDULE

NO SCALE

SEE EXTERIOR ELEVATION AND FLOOR PLAN

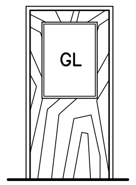
A

ROLLING HANGAR DOOR



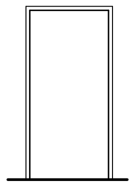
B

SOLID CORE WOOD DOOR STAIN GRADE IN HOLLOW METAL FRAME



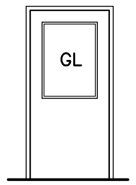
C

SOLID CORE WOOD DOOR STAIN GRADE WITH TEMPERED HALF LIGHT IN HOLLOW METAL FRAME



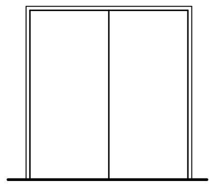
D

HOLLOW METAL DOOR IN HOLLOW METAL FRAME, BOTH GALVANIZED



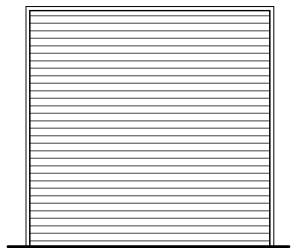
E

HOLLOW METAL DOOR WITH TEMPERED HALF LIGHT IN HOLLOW METAL FRAME, BOTH GALVANIZED



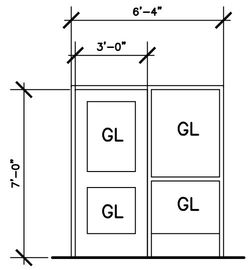
F

PAIR HOLLOW METAL DOOR IN HOLLOW METAL FRAME, BOTH GALVANIZED



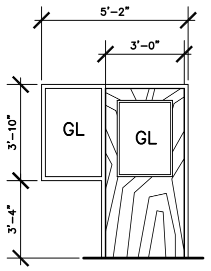
G

OVERHEAD COILING DOOR,



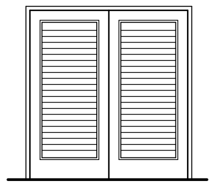
H

400 TYPE ALUMINUM & GLASS STOREFRONT WITH 350 ALUMINUM & GLASS DOOR



J

SOLID CORE WOOD DOOR STAIN GRADE WITH TEMPERED HALF LIGHT IN HOLLOW METAL FRAME AND TEMPERED SIDELIGHT



K

PAIR HOLLOW METAL FULL LOUVER DOORS IN HOLLOW METAL FRAME, BOTH GALVANIZED

DOOR TYPES

NO SCALE

US Army Corps of Engineers®

DATE

MARK DESCRIPTION

DESIGNED BY: JGR	ISSUE DATE: JUNE 2024	
DRAWN BY: JGR	SOLICITATION NO.: -	
CHECKED BY: CLR	CONTRACT NO.: -	
SUBMITTED BY: T. HYMAN	PROJECT NUMBER: MEF24005	
SIZE: ANSI D	FILE NAME: MEF24005A-601.DWG	

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MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

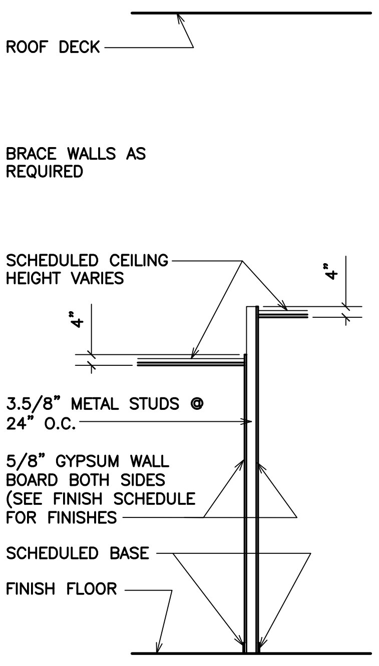
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SCHEDULES

SHEET ID
A-601

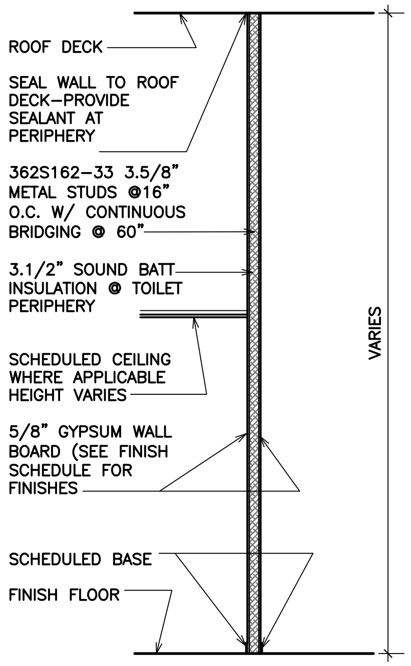
RTA SUBMITTAL

CESAM v20181203


ROOF DECK
BRACE WALLS AS REQUIRED
SCHEDULED CEILING HEIGHT VARIES
4"
4"
3.5/8" METAL STUDS @ 24" O.C.
5/8" GYPSUM WALL BOARD BOTH SIDES (SEE FINISH SCHEDULE FOR FINISHES
SCHEDULED BASE
FINISH FLOOR

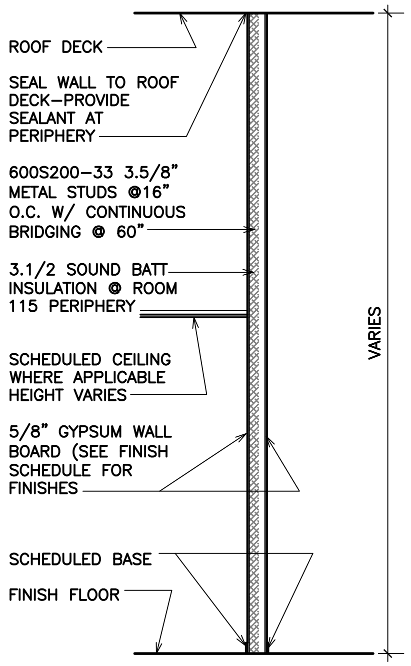
A

GYPSUM BOARD ON
METAL STUD
PARTITION


ROOF DECK
SEAL WALL TO ROOF DECK–PROVIDE SEALANT AT PERIPHERY
362S162–33 3.5/8" METAL STUDS @16" O.C. W/ CONTINUOUS BRIDGING @ 60"
3.1/2" SOUND BATT INSULATION @ TOILET PERIPHERY
SCHEDULED CEILING WHERE APPLICABLE HEIGHT VARIES
5/8" GYPSUM WALL BOARD (SEE FINISH SCHEDULE FOR FINISHES
SCHEDULED BASE
FINISH FLOOR
VARIES

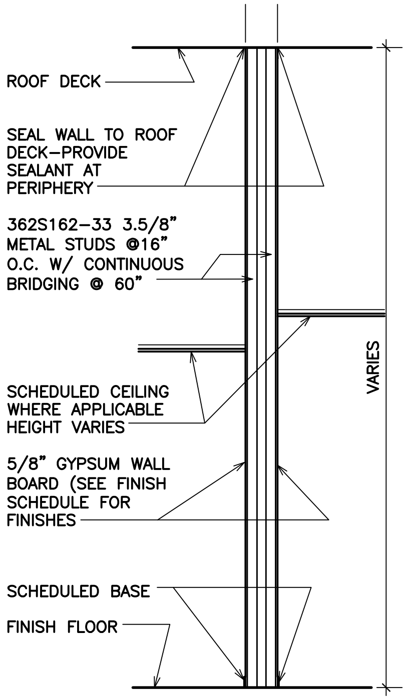
B

GYPSUM BOARD ON
METAL STUD
PARTITION


ROOF DECK
SEAL WALL TO ROOF DECK–PROVIDE SEALANT AT PERIPHERY
600S200–33 3.5/8" METAL STUDS @16" O.C. W/ CONTINUOUS BRIDGING @ 60"
3.1/2 SOUND BATT INSULATION @ ROOM 115 PERIPHERY
SCHEDULED CEILING WHERE APPLICABLE HEIGHT VARIES
5/8" GYPSUM WALL BOARD (SEE FINISH SCHEDULE FOR FINISHES
SCHEDULED BASE
FINISH FLOOR
VARIES

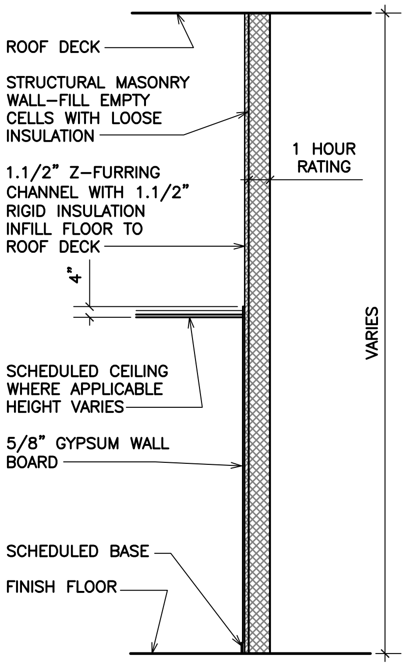
C

GYPSUM BOARD ON
METAL STUD
PARTITION WITH
SOUND BATTS


ROOF DECK
SEAL WALL TO ROOF DECK–PROVIDE SEALANT AT PERIPHERY
362S162–33 3.5/8" METAL STUDS @16" O.C. W/ CONTINUOUS BRIDGING @ 60"
SCHEDULED CEILING WHERE APPLICABLE HEIGHT VARIES
5/8" GYPSUM WALL BOARD (SEE FINISH SCHEDULE FOR FINISHES
SCHEDULED BASE
FINISH FLOOR
VARIES

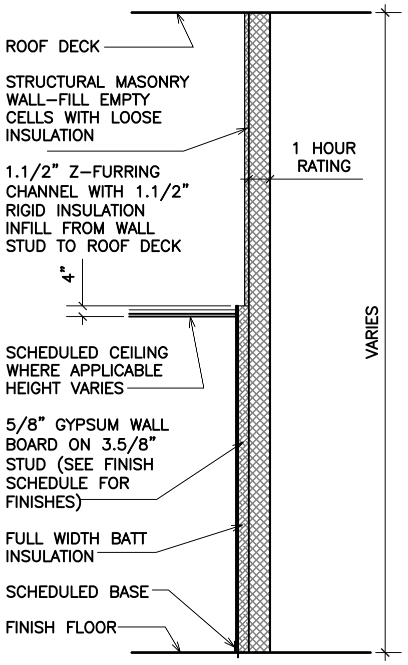
D

GYPSUM BOARD ON
METAL STUD
PARTITION


ROOF DECK
STRUCTURAL MASONRY WALL–FILL EMPTY CELLS WITH LOOSE INSULATION
1 HOUR RATING
1.1/2" Z–FURRING CHANNEL WITH 1.1/2" RIGID INSULATION INFILL FLOOR TO ROOF DECK
4"
SCHEDULED CEILING WHERE APPLICABLE HEIGHT VARIES
5/8" GYPSUM WALL BOARD
SCHEDULED BASE
FINISH FLOOR
VARIES

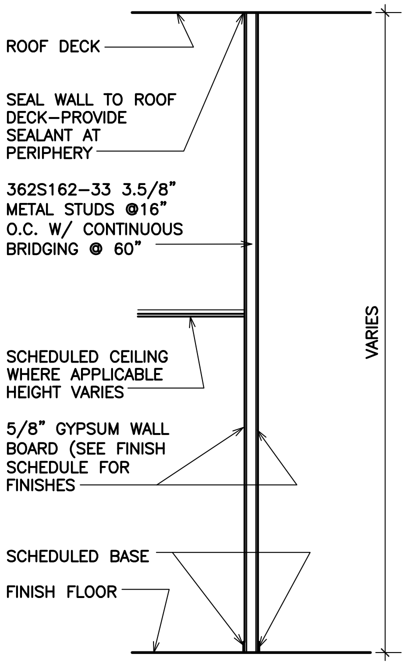
E

GYPSUM BOARD
FURRING ON CONCRETE
MASONRY WALL


ROOF DECK
STRUCTURAL MASONRY WALL–FILL EMPTY CELLS WITH LOOSE INSULATION
1 HOUR RATING
1.1/2" Z–FURRING CHANNEL WITH 1.1/2" RIGID INSULATION INFILL FROM WALL STUD TO ROOF DECK
4"
SCHEDULED CEILING WHERE APPLICABLE HEIGHT VARIES
5/8" GYPSUM WALL BOARD ON 3.5/8" STUD (SEE FINISH SCHEDULE FOR FINISHES)
FULL WIDTH BATT INSULATION
SCHEDULED BASE
FINISH FLOOR
VARIES

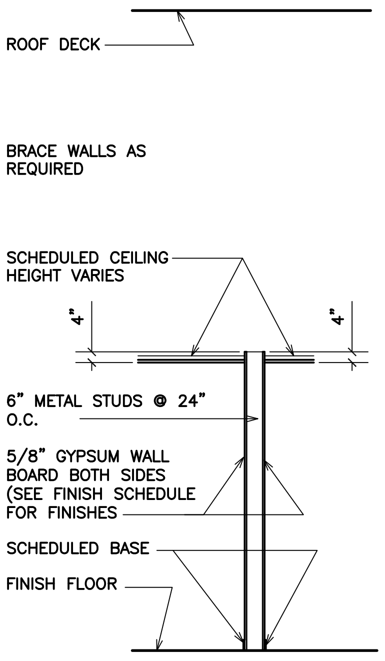
F

GYPSUM BOARD
FURRING ON CONCRETE
MASONRY WALL


ROOF DECK
SEAL WALL TO ROOF DECK–PROVIDE SEALANT AT PERIPHERY
362S162–33 3.5/8" METAL STUDS @16" O.C. W/ CONTINUOUS BRIDGING @ 60"
SCHEDULED CEILING WHERE APPLICABLE HEIGHT VARIES
5/8" GYPSUM WALL BOARD (SEE FINISH SCHEDULE FOR FINISHES
SCHEDULED BASE
FINISH FLOOR
VARIES

G

GYPSUM BOARD ON
METAL STUD
PARTITION


ROOF DECK
BRACE WALLS AS REQUIRED
SCHEDULED CEILING HEIGHT VARIES
4"
4"
6" METAL STUDS @ 24" O.C.
5/8" GYPSUM WALL BOARD BOTH SIDES (SEE FINISH SCHEDULE FOR FINISHES
SCHEDULED BASE
FINISH FLOOR

H

GYPSUM BOARD ON
METAL STUD
CHASE PARTITION

PARTITION TYPES

NO SCALE

US Army Corps
of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

DESIGNED BY:
JGR
DRAWN BY:
JGR
CHECKED BY:
CLR
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D
FILE NAME:
MEF24005A-602.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

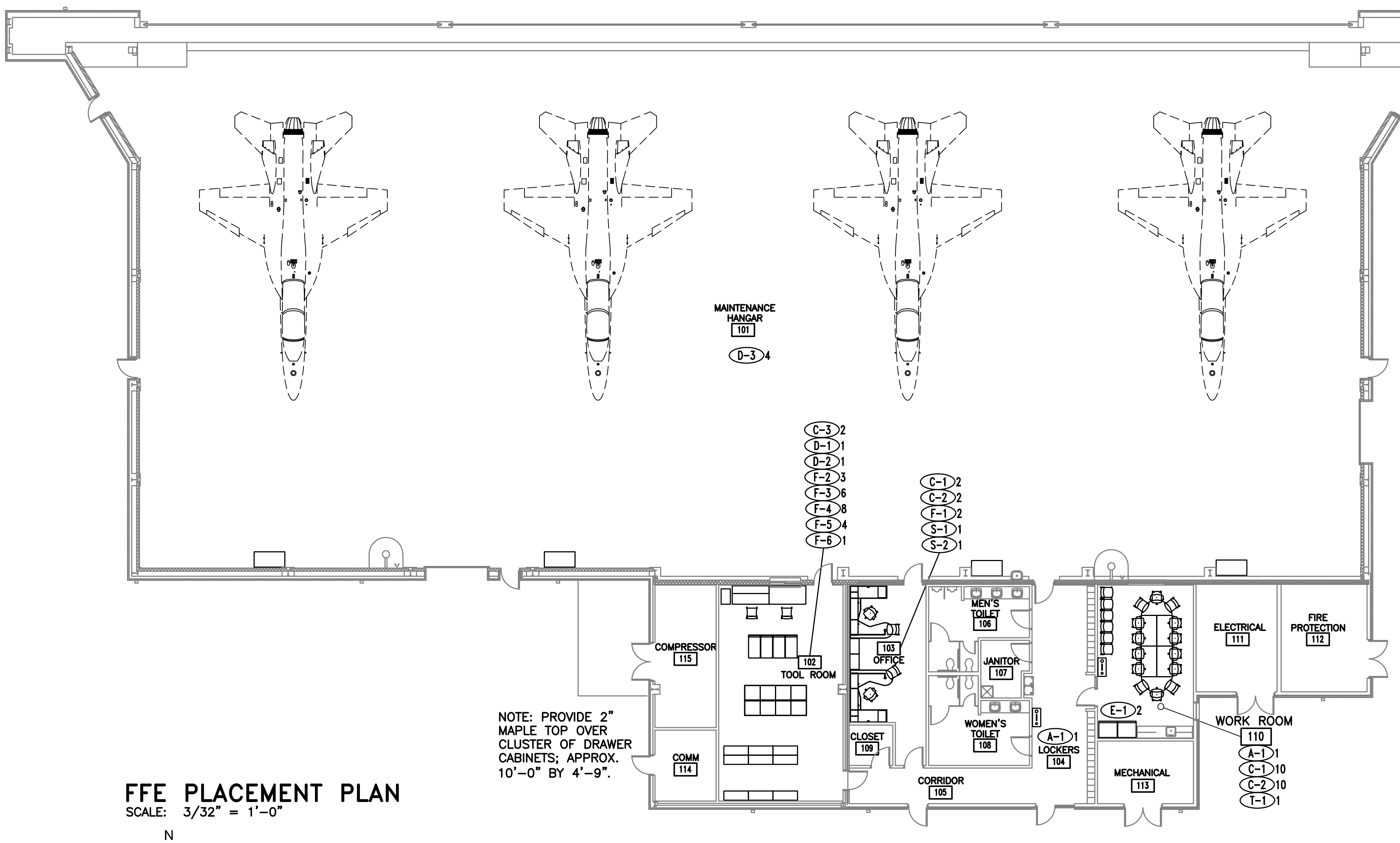
PARTITION TYPES

SHEET ID

A-602

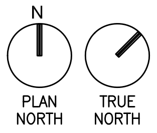
RTA SUBMITTAL

CESAM v20181203



NOTE: PROVIDE 2" MAPLE TOP OVER CLUSTER OF DRAWER CABINETS; APPROX. 10'-0" BY 4'-9".

FFE PLACEMENT PLAN
SCALE: 3/32" = 1'-0"

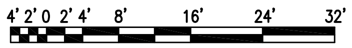


FURNITURE LAYOUT LEGEND

203	ROOM NUMBER
– – – –	USER PROVIDED AND INSTALLED EQUIPMENT
ITEM OR GROUP ID T-11 2 QUANTITY	FURNITURE AND/OR FURNITURE GROUP TAG

NOTE: AIRCRAFTS ARE SHOWN FOR INFORMATION ONLY AND ARE NOT INCLUDED IN THE SCOPE OF THE FFE PACKAGE.

GRAPHIC SCALE
IMPERIAL



3/32" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY:
CLR
DRAWN BY:
CLR
CHECKED BY:
VMR
SUBMITTED BY:
T. HYMAN
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005I-101.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FFE PLACEMENT PLAN

SHEET ID
I-101

RTA SUBMITTAL

DESIGN CRITERIA AND REFERENCES

- UNIFIED FACILITIES CRITERIA (UFC): 1-200-01, GENERAL BUILDING REQUIREMENTS, 1 SEPTEMBER 2022
- UNIFIED FACILITIES CRITERIA (UFC): 3-600-01, DESIGN: FIRE PROTECTION ENGINEERING FOR FACILITIES, 8 AUGUST 2016, CHANGE 6, 6 MAY 2021
- UNIFIED FACILITIES CRITERIA (UFC): 4-010-01, DOD MINIMUM STANDARDS FOR BUILDINGS, 12 DECEMBER 2018, CHANGE 1, 19 AUGUST 2020
- UNIFIED FACILITIES CRITERIA (UFC): 4-021-01, DESIGN AND O&M: MASS NOTIFICATION SYSTEMS, 9 APRIL 2008, CHANGE 1, 1 JANUARY 2010, AS MODIFIED BY ECB 2018-17
- UNIFIED FACILITIES CRITERIA (UFC): 4-211-01, AIRCRAFT MAINTENANCE HANGARS, 13 APRIL 2017, CHANGE 3 (APRIL 2021)
- U.S. ARMY CORPS OF ENGINEERS ENGINEERING AND CONSTRUCTION BULLETIN 2018-17, 25 OCTOBER 2018, CHANGE 3, 31 AUGUST 2023
- INTERNATIONAL BUILDING CODE® (IBC) 2021 FOR CONSTRUCTION TYPE AND FIRE RESISTANCE RATING, OCCUPANCY SEPARATION, ALLOWABLE FLOOR AREA, BUILDING HEIGHT LIMITATIONS AND BUILDING SEPARATION DISTANCE REQUIREMENTS, EXCEPT AS MODIFIED BY UFC 3-600-01
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 1, FIRE CODE, 2021
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 10, STANDARD FOR PORTABLE FIRE EXTINGUISHERS, 2022
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, 2022
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 20, STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION, 2022
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70, NATIONAL ELECTRICAL CODE®, 2020 EDITION
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 72, NATIONAL FIRE ALARM CODE®, 2022
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 90A, STANDARD FOR THE INSTALLATION OF AIR-CONDITIONING AND VENTILATING SYSTEMS, 2024
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 101, LIFE SAFETY CODE®, 2021 FOR SEPARATION FROM HAZARDS, BUILDING EGRESS AND LIFE SAFETY, EXCEPT AS MODIFIED BY UFC 3-600-01.
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 409, STANDARD ON AIRCRAFT HANGARS, 2022 EDITION (AS SPECIFICALLY REQUIRED BY UFC 4-211-01)
- ADA AND ABA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES, AMENDED 2015, REPLACES UFAS AND ADAAG CRITERIA. [AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL BARRIERS ACT (ABA)]
- SUNDOWN POLICY FOR FOAM FIRE SUPPRESSION SYSTEMS, 16 NOVEMBER 2021, CHANGE, DECEMBER 29,2022

IBC OCCUPANCY CLASSIFICATION:

BUSINESS, GROUP B (IBC, SECTION 304)
MODERATE-HAZARD STORAGE, GROUP S-1 (IBC, SECTION 311)

NFPA 101 OCCUPANCY CLASSIFICATION

INDUSTRIAL (NFPA 101, PARAGRAPH 6.1.12)
BUSINESS (NFPA 101, PARAGRAPH 6.1.11)

CONSTRUCTION TYPE (IBC TABLE 601):

TYPE IIB

ALLOWABLE HEIGHT AND AREA (IBC TABLES 504.3, 504.4, AND 506.2):

PERMITTED:	3 STORIES, UNLIMITED AREA
PROVIDED:	1 STORY, 23,209 SF

OCCUPANCY SEPARATION REQUIREMENTS (IBC TABLE 508.4):

B TO S-1:	0-HOUR FIRE RESISTANCE RATING

FIRE RESISTANCE REQUIREMENTS (IBC TABLE 601):

STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES:

REQUIRED:	0-HOUR FIRE RESISTANCE RATING
PROVIDED:	0-HOUR FIRE RESISTANCE RATING

FLOORS, INCLUDING SUPPORT BEAMS, JOISTS:

REQUIRED:	0-HOUR FIRE RESISTANCE RATING
PROVIDED:	0-HOUR FIRE RESISTANCE RATING

ROOF, INCLUDING SUPPORT BEAMS, JOISTS:

REQUIRED:	0-HOUR FIRE RESISTANCE RATING
PROVIDED:	0-HOUR FIRE RESISTANCE RATING

INTERIOR FIRE RESISTANCE SEPARATION:

FIRE PROTECTION EQUIPMENT ROOMS (UFC 4-211-01, SECTION 3-6.7):

REQUIRED:	1-HOUR FIRE RESISTANCE RATING
PROVIDED:	1-HOUR FIRE RESISTANCE RATING

HANGAR SPECIFIC SEPARATIONS (UFC 4-211-01):

BETWEEN HANGAR BAY AND SUPPORT AREAS (UFC 4-211-01, SECTION 3-3.1.3):

REQUIRED:	1-HOUR FIRE RESISTANCE RATING
PROVIDED:	1-HOUR FIRE RESISTANCE RATING

MEANS OF EGRESS:

OCCUPANT LOAD (NFPA 101 SECTION 7.3.1 AND UFC 3-600-01 SECTION 10-3.1):

BUSINESS- UNCONCENTRATED:	1 PERSON PER 150 GROSS SQFT
BUSINESS - CONCENTRATED:	1 PERSON PER 50 GROSS SQFT
STORAGE/MECHANICAL/ELECTRICAL:	1 PERSON PER 500 GROSS SQFT
HANGAR BAY - STORAGE:	1 PERSON PER 500 GROSS SQFT
INDUSTRIAL:	1 PERSON PER 100 GROSS SQFT

NUMBER OF EXITS: FROM FLOOR (NFPA 101, SECTIONS 7.4.1.1, 38.2.4 AND UFC 4-211-01, SECTION 3-3.1.9):

SUPPORT AREAS

REQUIRED:	2
PROVIDED:	6

HANGAR BAY

REQUIRED:	LOCATED LINEARLY EVERY 150 FT ALONG THE PERIMETER

EXIT CAPACITY (NFPA 101, SECTIONS 7.3.3.1, 38.2.3):

EGRESS CORRIDOR (0.2 INCHES/PERSON):

REQUIRED:	36 INCHES

TRAVEL DISTANCE (NFPA 101, SECTIONS 38.2.5.2.1, 40.2.5 AND UFC 4-211-01 SECTION 3-3.1.9):

HANGAR BAY (INDUSTRIAL)

MAXIMUM PERMITTED:	NO LIMIT

BUSINESS

MAXIMUM PERMITTED:	300 FEET

COMMON PATH OF TRAVEL (NFPA 101, SECTIONS 38.2.5.3.1, AND 40.2.5):

BUSINESS AND INDUSTRIAL

MAXIMUM PERMITTED:	100 FEET

DEAD-END CORRIDORS (NFPA 101, SECTIONS 38.2.5.2.1, AND 40.2.5):

BUSINESS AND INDUSTRIAL

MAXIMUM PERMITTED:	50 FEET

DISCHARGE FROM EXITS (NFPA 101, SECTIONS 38.2.7, AND 7.7):

ALL EXITS WILL CONNECT TO AN EXIT DISCHARGE PATH THAT WILL TERMINATE AT A PUBLIC WAY

INTERIOR FINISHES (NFPA 101, SECTIONS 38.3.3, 40.3.3 AND 10.3):

BUSINESS

EXIT ENCLOSURES:	CLASS A OR B
EXIT ACCESS CORRIDORS:	CLASS A OR B
ROOMS AND ENCLOSED SPACES:	CLASS A, B, OR C
FLOOR FINISH:	CLASS I OR II

INDUSTRIAL

EXIT ENCLOSURES:	CLASS A OR B
EXIT ACCESS CORRIDORS:	CLASS A OR B
ROOMS AND ENCLOSED SPACES:	CLASS A, B, OR C
FLOOR FINISH:	CLASS I OR II

EMERGENCY LIGHTING:

ALL MEANS OF EGRESS, INCLUDING EXIT ACCESS CORRIDORS AND EXIT DISCHARGE WILL BE PROVIDED WITH EMERGENCY LIGHTING VIA BATTERY BACKUP. EMERGENCY LIGHTING WILL ALSO BE PROVIDED IN THE MECHANICAL ROOM VIA BATTERY BACKUP. EMERGENCY LIGHTING WILL BE PROVIDED FOR A MINIMUM OF 1.5 HOURS IN THE EVENT OF INTERNAL POWER FAILURE. EMERGENCY LIGHTING WILL BE IN ACCORDANCE WITH NFPA 101.

MARKING OF MEANS OF EGRESS:

EXIT SIGNS SHALL BE LED TYPE WITH BATTERY BACKUP AND SHALL BE PROVIDED AT ALL EXITS. EXIT SIGNS SHALL ALSO BE PROVIDED WHEREVER THE LOCATION OF THE EXIT IS NOT READILY APPARENT. EXIT SIGN ILLUMINATION WILL BE PROVIDED FOR A MINIMUM OF 1.5 HOURS IN THE EVEN OF AN INTERNAL POWER FAILURE. ALL MARKING OF EXITS WILL BE IN ACCORDANCE WITH NFPA 101 EXCEPT AS MODIFIED BY UFC 3-600-01 SECTION 10.2. EXIT SIGNS WILL BE PROVIDED WITH RED LETTERING.

FIRE PROTECTION SYSTEMS

THE HANGAR FACILITY WILL BE PROTECTED THROUGHOUT WITH AUTOMATIC FIRE SUPPRESSION SYSTEMS IN ACCORDANCE WITH UFC 3-600-01 AND UFC 4-211-01 (AS REVISED BY THE SUNDOWN POLICY). THE NEW HANGAR FACILITY IS DESIGNATED AS A TIER 2 HANGAR PER THE NEW SUNDOWN POLICY. THEREFORE, A LOW-LEVEL, HIGH-EXPANSION FOAM FIRE SUPPRESSION SYSTEM IS NOT REQUIRED.

THE AIRCRAFT HANGAR BAY WET PIPE SPRINKLER SYSTEMS WILL BE DESIGNED TO DELIVER A MINIMUM OF 0.20 GALLONS PER MINUTE OVER THE HYDRAULICALLY MOST REMOTE 5,000 SQUARE FEET. SPRINKLERS WILL BE UPRIGHT, NOMINAL 175 DEGREES F, QUICK-RESPONSE TYPE WITH ROUGH BRASS FINISH. AN OUTSIDE HOSE STREAM ALLOWANCE OF 500 GALLONS PER MINUTE, TAKEN AT THE FIRE HYDRANT CLOSEST TO THE BUILDING, WILL BE INCLUDED IN THE SYSTEM DESIGN.

ELECTRICAL, MECHANICAL, SUPPLY, JANITORS' ROOMS WILL BE DESIGNED AS ORDINARY HAZARD OCCUPANCIES. THE SYSTEMS WILL BE DESIGNED TO PROVIDE A DISCHARGE DENSITY OF 0.20 GALLONS PER MINUTE PER SQUARE FOOT OVER THE HYDRAULICALLY MOST REMOTE 2,500 SQUARE FEET OF FLOOR AREA. SPRINKLERS IN THESE AREAS WILL BE ORDINARY TEMPERATURE (UNLESS AMBIENT CONDITIONS OR PROXIMITY TO HEAT-PRODUCING EQUIPMENT REQUIRE HIGHER TEMPERATURE RATED SPRINKLERS), QUICK-RESPONSE TYPE. IN AREAS WITH CEILINGS 30 FEET OR LESS (NO AREAS HAVE CEILING HEIGHTS MORE THAN 30 FEET): PENDENT, CHROME FINISH, RECESSED, MINIMUM K-8.0 SPRINKLERS WILL BE PROVIDED IN AREAS WITH FINISHED CEILINGS, AND UPRIGHT, ROUGH BRASS, MINIMUM K-8.0 SPRINKLERS WILL BE PROVIDED IN AREAS WITHOUT FINISHED CEILINGS. THE MAXIMUM PROTECTION AREA PER SPRINKLER WILL BE 130 SQUARE FEET, WITH A MAXIMUM SPACING OF 12 FEET. AN OUTSIDE HOSE STREAM ALLOWANCE OF 250 GALLONS PER MINUTE, TAKEN AT THE FIRE HYDRANT CLOSEST TO THE BUILDING, WILL BE INCLUDED IN THE SYSTEM DESIGN.

ALL OTHER AREAS OF THE FACILITIES WILL BE CLASSIFIED AS LIGHT HAZARD OCCUPANCIES. THE SYSTEMS WILL BE DESIGNED TO PROVIDE A DISCHARGE DENSITY OF 0.10 GALLONS PER MINUTE PER SQUARE FOOT OVER THE HYDRAULICALLY MOST REMOTE 1,500 SQUARE FEET OF FLOOR AREA; NO AREAS HAVE CEILINGS HEIGHTS MORE THAN 30 FEET. SPRINKLERS IN THESE AREAS WILL BE ORDINARY TEMPERATURE (UNLESS AMBIENT CONDITIONS REQUIRE HIGHER TEMPERATURE RATED SPRINKLERS), QUICK-RESPONSE TYPE. PENDENT, CHROME FINISH, RECESSED, MINIMUM K-5.6 SPRINKLERS WILL BE PROVIDED IN AREAS WITH FINISHED CEILINGS; AND UPRIGHT, ROUGH BRASS, MINIMUM K-5.6 SPRINKLERS WILL BE PROVIDED IN AREAS WITHOUT FINISHED CEILINGS. THE MAXIMUM PROTECTION AREA PER SPRINKLER WILL BE 225 SQUARE FEET WITH A MAXIMUM SPACING OF 15 FEET. AN OUTSIDE HOSE STREAM ALLOWANCE OF 250 GALLONS PER MINUTE, TAKEN AT THE FIRE HYDRANT CLOSEST TO THE BUILDING, WILL BE INCLUDED IN THE SYSTEM DESIGN.

ALL NEW FIRE SPRINKLER SYSTEMS WILL BE PROVIDED WITH SEISMIC BRACING/PROTECTION DESIGNED IN ACCORDANCE WITH NFPA 13. ALL SPRINKLER SYSTEM CONTROL VALVES WILL BE PROVIDED WITH SIGNAGE INDICATING THEIR FUNCTION AND WHAT IT CONTROLS IN ACCORDANCE WITH NFPA 13. ALL FIRE SERVICE MAINS AND BRANCH PIPING WILL BE INSTALLED TO COMPLY WITH ALL CURRENT NFPA STANDARDS AND LOCAL CODES.

AUTOMATIC AIR RELIEF VALVES WILL BE INSTALLED AT THE HIGH POINT OF ALL AUTOMATIC SPRINKLER SYSTEMS IN THE HANGAR BAY TO VENT AT LEAST 95% OF THE VOLUMETRIC CAPACITY OF THE SYSTEM DURING FILLING. THE VALVES WILL BE PIPED DIRECTLY TO THE EXTERIOR OF THE BUILDING.

FIRE PROTECTION WATER SUPPLY

WATER SUPPLY TO THE NEW FIRE SUPPRESSION SYSTEMS WILL BE VIA THE EXISTING BASE WATER DISTRIBUTION SYSTEM.

A FIRE HYDRANT FLOW TEST PERFORMED ALONG BRADT STREET ON NOVEMBER 30, 2022, INDICATED A STATIC PRESSURE OF 63 POUNDS PER SQUARE INCH, REDUCED TO 59 POUNDS PER SQUARE INCH WHILE FLOWING 1,130 GALLONS PER MINUTE. BASED ON THIS INFORMATION, A FIRE PUMP IS ANTICIPATED FOR THIS BUILDING. A NEW HORIZONTAL, SPLIT-CASE, ELECTRIC MOTOR DRIVEN FIRE PUMP ASSEMBLY WILL BE PROVIDED, PRELIMINARILY SIZED FOR 1,500 GALLONS PER MINUTE AT 65 POUNDS PER SQUARE INCH. A NEW DOUBLE-CHECK BACKFLOW PREVENTION DEVICE WILL BE PROVIDED INSIDE THE BUILDING AT THE NEW FIRE SERVICE LEAD-IN.

NEW FIRE HYDRANTS WILL BE PROVIDED AND SPACED IN ACCORDANCE WITH UFC 3-600-01, WITH ONE PROVIDED WITHIN 150 FEET OF THE FIRE DEPARTMENT CONNECTION. AN EXTERIOR PIV WILL BE PROVIDED AT THE CONNECTION TO THE EXISTING BASE WATER DISTRIBUTION SYSTEM TO SHUT OFF WATER TO THE BUILDING.

PORTABLE FIRE EXTINGUISHERS

PORTABLE FIRE EXTINGUISHERS WILL BE SIZED AND SPACED AS REQUIRED BY NFPA 10, NFPA 409 AND UFC 4-211-01. AT LEAST ONE CLASS 4A:80B:C RATED DRY CHEMICAL PORTABLE FIRE EXTINGUISHER WILL BE PROVIDED FOR EVERY 11,250 SQUARE FEET OF FLOOR AREA AND SUCH THAT AN OCCUPANT TRAVELS NO MORE THAN 75 FEET BEFORE REACHING A PORTABLE FIRE EXTINGUISHER IN ALL AREAS OF THE BUILDINGS. ONE CLASS 4A:80B:C RATED PORTABLE FIRE EXTINGUISHER WILL BE LOCATED WITHIN 30 FEET OF THE APPROPRIATE HAZARD, SUCH AS THE MAIN ELECTRICAL PANEL.

FIRE ALARM AND MASS NOTIFICATION SYSTEM

A NEW COMBINATION FIRE ALARM AND MASS NOTIFICATION SYSTEM WILL BE PROVIDED IN ACCORDANCE WITH NFPA 72 AND UFC 4-021-01. PER CAFB FIRE DEPARTMENT: THE FIRE ALARM SYSTEM WILL BE NOTIFIER MODEL 320 WITH A SINGLE MODE FIBER CARD. THERE WILL BE NO FIRE ALARM TRANSMITTER. THE BASE HAS SWITCHED OVER TO THE NOTIFIER CAMPUS STYLE SINGLE-MODE FIBER NETWORK. THE FIRE ALARM AND MASS NOTIFICATION CONTROL PANEL (FMCU) WILL BE LOCATED A NORMALLY OCCUPIED, CONDITIONED AREA APPROVED BY THE BASE FIRE DEPARTMENT AND AFCEC. INITIATING DEVICES WILL CONSIST OF SPOT-TYPE SMOKE DETECTION (ABOVE THE FMCU AND OTHER FIRE ALARM CONTROL UNITS), CARBON MONOXIDE DETECTION IN ROOMS OR AREAS WHERE FUEL-FIRED EQUIPMENT IS INSTALLED (EXCEPT FOR THE HANGAR BAYS AS DIRECTED BY THE AFCEC FPE), MANUAL PULL STATIONS AND SPRINKLER WATERFLOW SWITCHES. PHOTOELECTRIC DUCT DETECTORS WILL BE PROVIDED IN AIR HANDLING UNITS GREATER THAN 2,000 CFM AND REMOTE TEST STATIONS WILL BE PROVIDED AS REQUIRED BY UFC 3-600-01. SPRINKLER SYSTEM TAMPER SWITCHES WILL BE MONITORED AS SUPERVISORY CONDITIONS BY THE FIRE ALARM SYSTEM. ADDITIONALLY, CEILING LEVEL TEMPERATURE SENSORS WILL BE PROVIDED IN THE HANGAR BAY AND IN THE FIRE RISER ROOM, SET TO 32 DEGREES FAHRENHEIT, AND WILL BE MONITORED BY THE FIRE ALARM SYSTEM AS SUPERVISORY CONDITIONS AND THE ENERGY MANAGEMENT CONTROL SYSTEM. TEMPERATURE SENSORS WILL BE LOCATED AT THE SAME LEVEL AS THE ADJACENT SPRINKLER BRANCH LINE, PROVIDED WITH CENTER-TO-CENTER SPACING NOT EXCEEDING 200 FEET OR SPACING FROM THE WALL NOT EXCEEDING 100 FEET. THE FMCU WILL MONITOR THE FIRE PUMP SYSTEM FOR THE FOLLOWING CONDITIONS: PUMP RUNNING, LOSS OF POWER AND PHASE REVERSAL. AN INTERLOCK WILL BE PROVIDED TO AUTOMATICALLY CLOSE THE TRENCH DRAIN DIVERTER VALVE(S) IN THE EVENT OF A HANGAR BAY SPRINKLER SYSTEM ACTIVATION. ALL SLC, IDC AND NAC WIRING WILL BE CLASS B AND IN RED CONDUIT. A FIRE ALARM REMOTE ANNUNCIATOR WILL BE PROVIDED IN A LOCATION APPROVED BY THE BASE FIRE DEPARTMENT. ALARM, TROUBLE AND SUPERVISORY SIGNALS WILL BE TRANSMITTED TO THE BASE FIRE DEPARTMENT VIA THE SINGLE MODE FIBER CARD INTEGRAL TO THE FMCU. SURGE PROTECTIVE DEVICES WILL BE PROVIDED FOR EACH CONTROL PANEL AND AUXILIARY PANEL.

COMBINATION SPEAKER/STROBES, SPEAKERS AND STROBES WILL BE PROVIDED IN ACCORDANCE WITH NFPA 72. THE FIRE ALARM AND MASS NOTIFICATION WILL UTILIZE THE SAME CLEAR-LENS STROBES, LABELED “ALERT”, FOR OCCUPANT NOTIFICATION AND SCROLLING LCD SIGNS WILL BE PROVIDED ABOVE EACH EXIT FROM THE FACILITY. THE SYSTEM WILL BE DESIGNED IN ACCORDANCE WITH UFC 04-021-01 AND ECB 2018-17, INCLUDING LIVE VOICE MESSAGING AND PLAYBACK OF PRERECORDED MESSAGES. WEATHERPROOF EXTERIOR SPEAKERS WILL BE PROVIDED AT EXTERIOR GATHERING LOCATIONS AND ENTRANCES/EXITS TO THE BUILDINGS. LOCAL OPERATOR CONSOLES (LOC) WILL BE PROVIDED THROUGHOUT THE BUILDING SUCH THAT AN OCCUPANT DOES NOT HAVE TO TRAVEL MORE THAN 200 FEET TO GET TO A LOC. A GLOBAL EMERGENCY HVAC SHUTDOWN BUTTON WILL BE PROVIDED INSIDE OF, OR ADJACENT TO, EACH LOC. AN INTERFACE WITH THE FIRE ALARM SYSTEM WILL BE PROVIDED TO SILENCE THE FIRE ALARM VOICE MESSAGES DURING BROADCAST OF MASS NOTIFICATION MESSAGES. THE MASS NOTIFICATION SYSTEM WILL UTILIZE THE SINGLE MODE FIBER CARD FOR CONNECTION TO THE BASE-WIDE MASS NOTIFICATION SYSTEM.

ALL FIRE ALARM AND MASS NOTIFICATION SYSTEM BACKBOXES, INITIATING DEVICES AND NOTIFICATION APPLIANCES LOCATED INSIDE THE HANGAR BAY AND FIRE RISER ROOM WILL BE NEMA 4 RATED (MINIMUM) OR PROVIDED WITH NEMA 4 (MINIMUM) ENCLOSURES. CONDUITS INSIDE THE HANGAR BAY AND FIRE RISER ROOM WILL BE WEATHERPROOF, THREADED, RIDGED METAL. CONDUITS THE WILL ENTER THE DEVICE BACKBOXES FROM THE BOTTOM AND THE LOW POINT OF THE CONDUIT WILL BE PROVIDED WITH A DRAIN. WHERE THE CONDUIT IS IN A HAZARDOUSLY CLASSIFIED AREA, PROVIDE ADDITIONAL BREATHERS IN ISOLATED PORTIONS OF THE CONDUIT (E.G. SEALED OFF FROM THE REMAINING CONDUIT SYSTEM). DRAINS AND BREATHERS WILL BE RATED FOR THE HAZARDOUS CLASSIFICATION IN WHICH THEY ARE INSTALLED, BUT NOT BE LESS THAN NEMA 4. ADDITIONALLY, ALL MANUAL PULL STATIONS LOCATED IN THE HANGAR BAYS WILL BE PROVIDED WITH CLEAR, WEATHER-RESISTANT TAMPER COVERS (STOPPER II OR EQUIVALENT).

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MARK	DESCRIPTION	DATE

DESIGNED BY: J. JOHN	ISSUE DATE: JUNE 2024
DRAWN BY: H. SIMPSON	SOLICITATION NO.: -
CHECKED BY: FEI	CONTRACT NO.: -
SUBMITTED BY: FEI	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005LS001.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

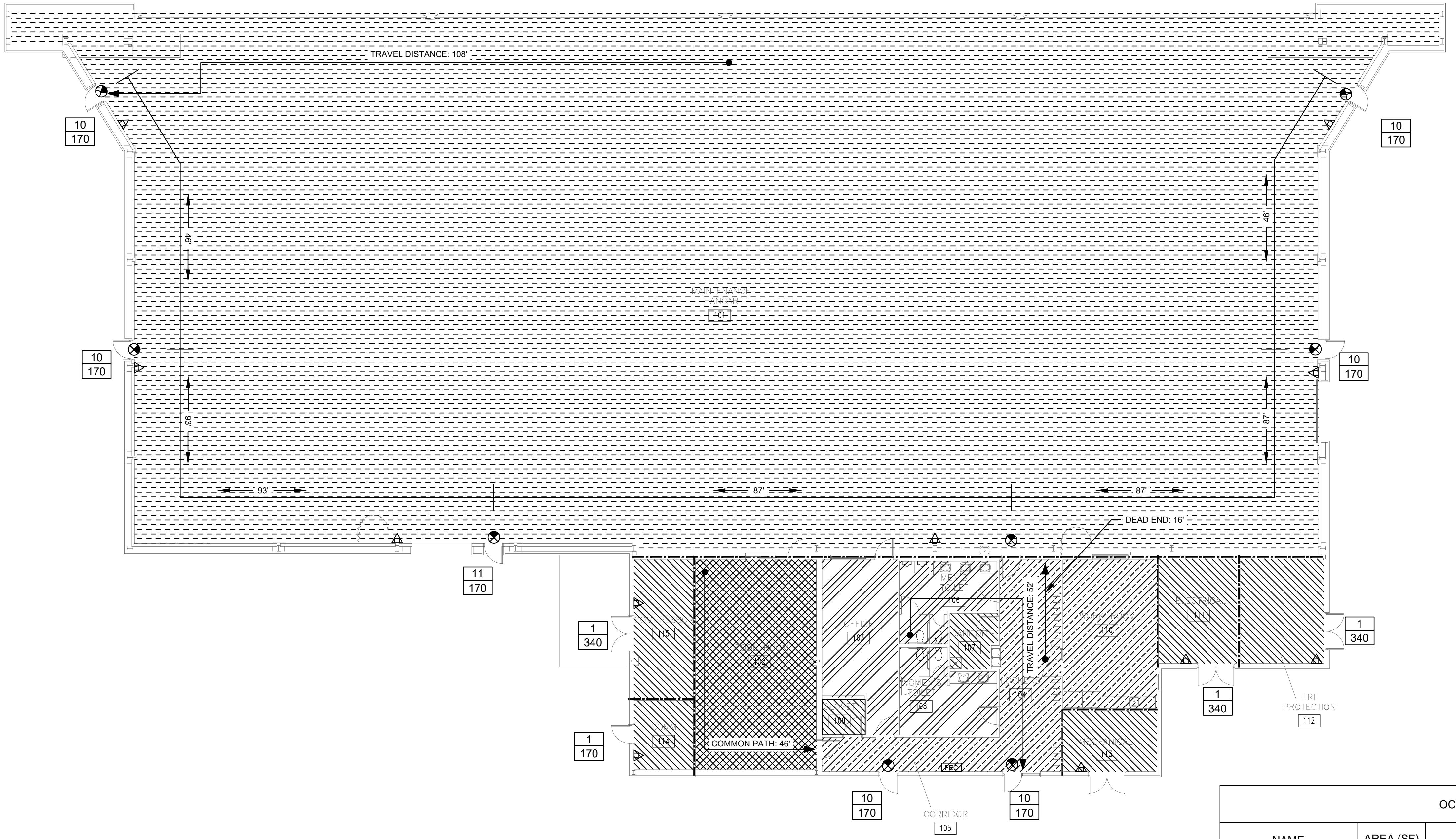
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

CODE SUMMARY

SHEET ID

LS001

RTA SUBMITTAL

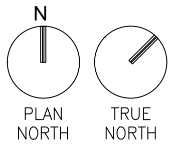


LIFE SAFETY LEGEND

▨	- BUSINESS USE (50 SQ.FT./PERSON)
▨	- UNCONCENTRATED BUSINESS USE (150 SQ.FT./PERSON)
▨	- MECHANICAL/ELECTRICAL/STORAGE USE (500 SQ.FT./PERSON)
▩	- INDUSTRIAL (100 SQ.FT./PERSON)
▤	- HANGAR (500 SQ.FT./PERSON)
XX	- NUMBER OF OCCUPANTS USING EXIT
XXX	- EXIT CAPACITY
●→	- TRAVEL DISTANCE
⊗	- EXIT SIGN
FEC	- FIRE EXTINGUISHER CABINET
△	- FIRE EXTINGUISHER BRACKET
▬ · ▬	- 1-HR FIRE RESISTANCE RATED BARRIER

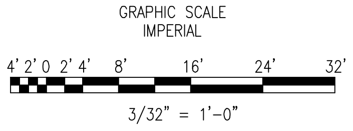
1 FIRST FLOOR PLAN – LIFE SAFETY
LS101

SCALE: 3/32" = 1'-0"



OCCUPANCY LOAD CALCULATION

NAME	AREA (SF)	OCCUPANCY USE	LOAD FACTOR	OCCUPANTS
MISC BUSINESS AREAS	411	BUSINESS	50 GROSS SF	9
BREAK ROOM	956	UNCONCENTRATED BUSINESS	150 GROSS SF	7
UTILITY SPACES	1,104	MECHANICAL/ ELECTRICAL/ STORAGE	500 GROSS SF	3
TOOL SHOP	754	INDUSTRIAL	100 GROSS SF	8
HANGAR BAY	18,823	HANGAR	500 GROSS SF	38
			TOTAL	65



US Army Corps of Engineers ®

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FIRST FLOOR PLAN - LIFE SAFETY

SHEET ID
LS101

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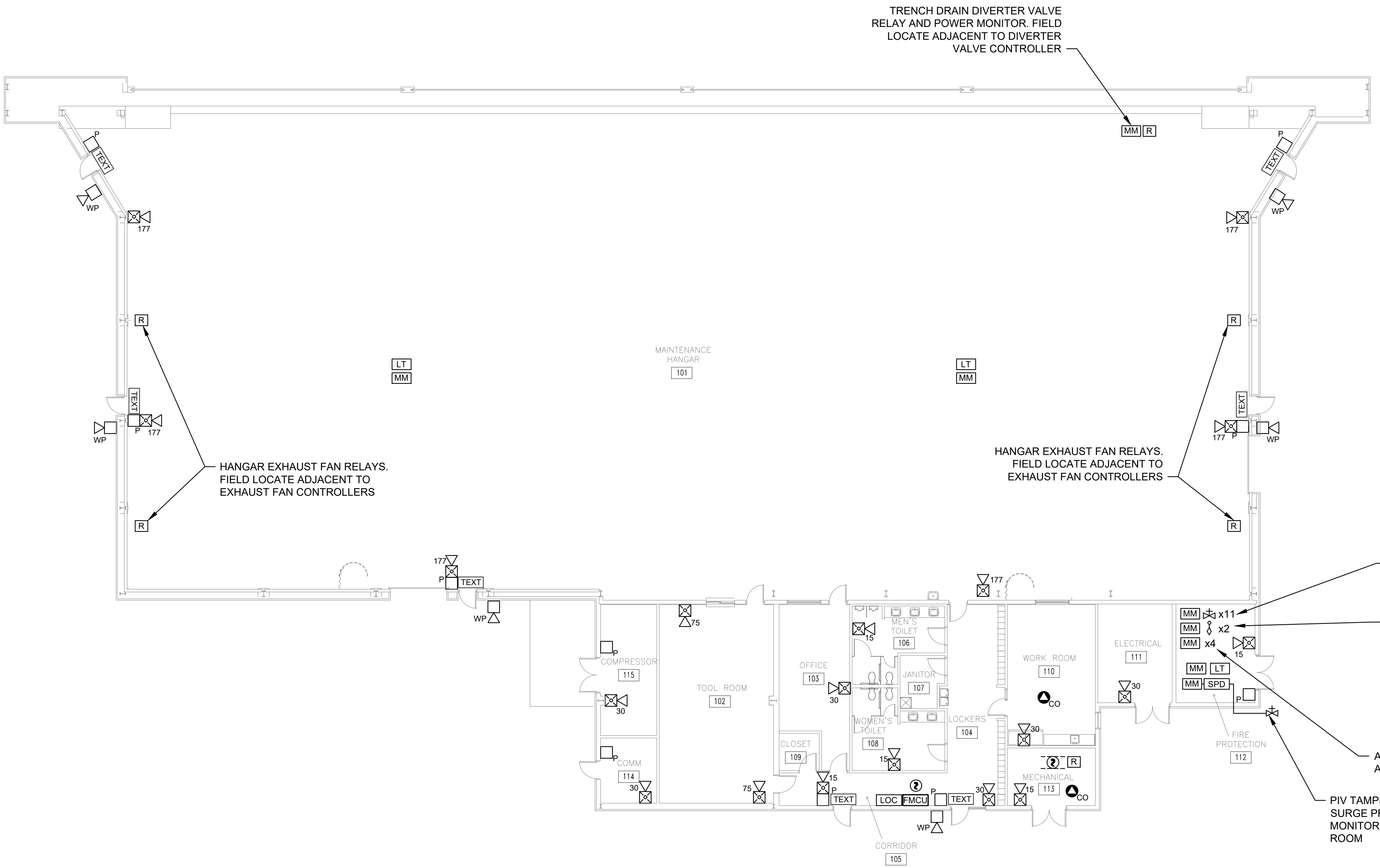
CESAM v20181203



TRENCH DRAIN DIVERTER VALVE RELAY AND POWER MONITOR. FIELD LOCATE ADJACENT TO DIVERTER VALVE CONTROLLER

HANGAR EXHAUST FAN RELAYS. FIELD LOCATE ADJACENT TO EXHAUST FAN CONTROLLERS

HANGAR EXHAUST FAN RELAYS. FIELD LOCATE ADJACENT TO EXHAUST FAN CONTROLLERS

MONITOR FIRE PUMP FOR FIRE PUMP RUNNING, FIRE PUMP CONTROLLER TROUBLE, FIRE PUMP LOSS OF POWER, FIRE PUMP PHASE REVERSAL

PROVIDE TAMPER SWITCHES FOR THE FOLLOWING: BACKFLOW PREVENTOR CONTROL VALVES (x2), FIRE PUMP SUCTION CONTROL VALVE, FIRE PUMP DISCHARGE CONTROL VALVE, JOCKEY PUMP SUCTION CONTROL VALVE, JOCKEY PUMP DISCHARGE CONTROL VALVE, PUMP BYPASS CONTROL VALVES (x2), ADMIN SPACE SPRINKLER RISER CONTROL VALVE, HANGAR BAY SPRINKLER RISER CONTROL VALVE, FIRE PUMP TEST HEADER CONTROL VALVE (NORMALLY CLOSED).

ADMIN SPACE SPRINKLER RISER WATERFLOW SWITCH AND HANGAR BAY WATERFLOW SWITCH

PIV TAMPER SWITCH. LOCATE SURGE PROTECTIVE DEVICE AND MONITOR MODULE IN FIRE PUMP ROOM

FIRE ALARM NOTES

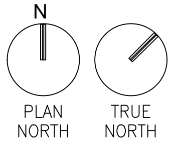
1. SEE SHEET FA501 FOR NOTES AND DETAILS.

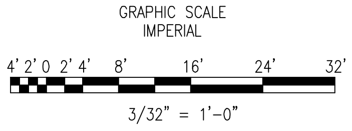
FIRE ALARM LEGEND

☐P	- MANUAL PULL STATION
☒	- FIRE ALARM STROBE (WALL-MOUNTED)
▽☒	- FIRE ALARM SPEAKER/STROBE (WALL-MOUNTED)
▽☐	- FIRE ALARM SPEAKER (WALL-MOUNTED)
ⓢ	- PHOTOELECTRIC SMOKE DETECTOR
▲CO	- CARBON MONOXIDE DETECTOR
-ⓢ-	- DUCT SMOKE DETECTOR
FMCU	- FIRE ALARM CONTROL UNIT WITH INTERGRAL FIBER CARD (COORDINATE WITH BASE FIRE DEPARTMENT FOR NUMBER OF STRANDS REQUIRED)
LOC	- LOCAL OPERATOR CONSOLE
TEXT	- TEXT SIGN
MM	- MONITOR MODULE
R	- RELAY MODULE
⋈	- VALVE TAMPER SWITCH
◊	- WATERFLOW SWITCH
LT	- LOW TEMPERATURE SENSOR
XX	- INDICATES CANDELA RATING
WP	- INDICATES WEATHERPROOF
SPD	- SURGE PROTECTIVE DEVICE

1 FA101 FIRST FLOOR PLAN - FIRE ALARM

SCALE: 3/32" = 1'-0"





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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

FIRST FLOOR PLAN - FIRE ALARM

SHEET ID
FA101

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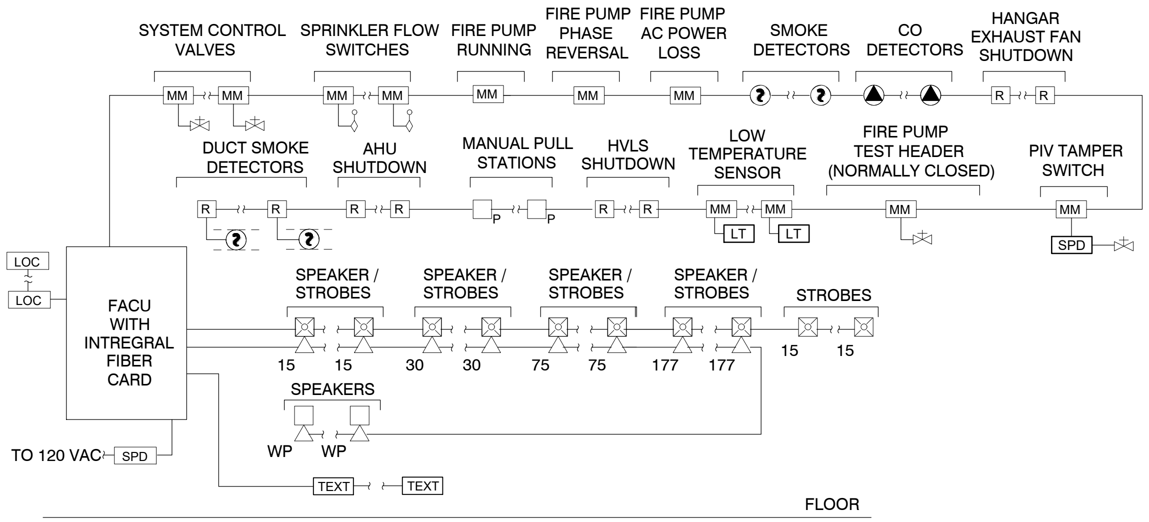
FIRE ALARM SYSTEM SEQUENCE OF OPERATION MATRIX

	ALARM AT FMCU	SUPERVISORY AT FMCU	TROUBLE AT FMCU	ALARM AT RECEIVING STATION	SUPERVISORY AT RECEIVING STATION	TROUBLE AT RECEIVING STATION	ACTIVATE FIRE ALARM MESSAGE AND STROBES, EVACUATE ON TEXT SIGNS	SILENCE SPEAKERS & DISABLE STROBES	SHUTDOWN RESPECTIVE AHU/ ERV/ RTU	OVERRIDE FA MESSAGE & EVACUATE ON TEXT SIGNS	ACTIVATE MNS MESSAGE AND ANNOUNCEMENT ON TEXT SIGNS	ACTIVATE CORRESPONDING MESSAGE	SHUTDOWN ALL HVAC, RTU, EVU HLVS EQUIPMENT	CLOSE TRENCH DRAIN DIVERTER VALVES	ACTIVATE CO TEMPORAL 4 ALARM, STROBES AND CO MESSAGES	SHUTDOWN HVLS FANS	SHUT DOWN HANGAR EXHAUST FANS
MANUAL PULL STATION	●			●			●							●		●	
SMOKE DETECTOR	●			●			●							●		●	
HANGAR BAY WATERFLOW FROM SPRINKLER SYSTEM	●			●			●						●	●		●	
NON-HANGAR BAY WATERFLOW FROM SPRINKLER SYSTEM	●			●			●							●		●	
DUCT SMOKE DETECTOR		●			●				●								
LOC/ACU MICROPHONE		●			●					●	●						
LOC/ACU PRESET MESSAGE		●			●					●	●	●					
AC POWER FAIL			●			●											
LOW BATTERY			●			●											
ALARM SILENCE AT FMCU OR FSA			●			●		●									
FIRE ALARM TROUBLE CONDITION (OPNES, SHORTS AND GROUNDS)			●			●											
CARBON MONOXIDE DETECTOR	●			●											●		
FIRE PUMP RUNNING		●			●												
FIRE PUMP LOSS OF POWER		●			●												
FIRE PUMP PHASE REVERAL		●			●												
LOW TEMPERATURE SENSORS		●			●												●

1 FA501 SEQUENCE OF OPERATION – FIRE ALARM

SCALE: NONE

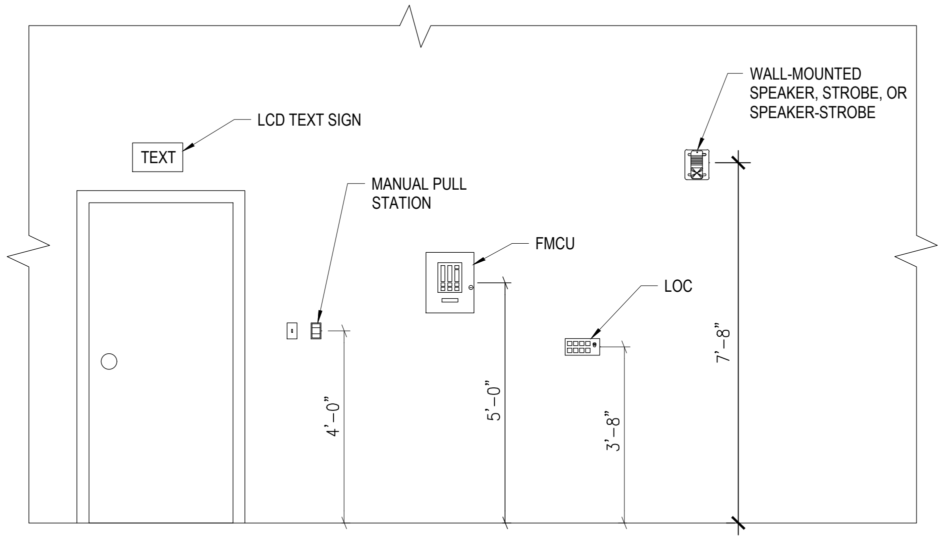


2 FA501 RISER DIAGRAM – FIRE ALARM

SCALE: NONE

FIRE ALARM NOTES

1. PROVIDE A NEW ADDRESSABLE COMBINATION FIRE ALARM/MASS NOTIFICATION SYSTEM IN ACCORDANCE WITH NFPA 72, NFPA 101, UFC 3-600-01, UFC 4-021-01, ECB 2018-17, UFC 4-211-01, THE SPECIFICATION AND THE SCOPE OF WORK DOCUMENTS. THE FIRE ALARM SYSTEM MUST BE COMPATIBLE WITH THE MASS NOTIFICATION SYSTEM RECEIVER AND BE ABLE TO RELAY OUTPUTS FROM THE RECEIVER OVER THE VOICE EVACUATION SYSTEM TO THE SPEAKERS. PER THE CAFB FIRE DEPARTMENT: THE FIRE ALARM SYSTEM WILL BE NOTIFIER MODEL 320 WITH A SINGLE-MODE FIBER CARD. THERE WILL BE NO FIRE ALARM TRANSMITTER, THE BASE HAS SWITCHED OVER TO A NOTIFIER CAMPUS-STYLE SINGLE-MODE FIBER NETWORK. MASS NOTIFICATION SIGNALS MUST TAKE PRECEDENCE OVER FIRE ALARM SIGNALS.
2. THE FIRE ALARM SYSTEM MUST MONITOR ALL SPRINKLER SYSTEM ALARM, SUPERVISORY AND TROUBLE CONDITIONS.
3. THE FIRE ALARM SYSTEM MUST MONITOR THE NEW FIRE PUMP SYSTEM FOR THE FOLLOWING CONDITIONS: PUMP RUNNING, LOSS OF POWER AND PHASE REVERSAL.
4. AIR HANDLING UNITS OVER 2000 CFM, MUST HAVE DUCT SMOKE DETECTORS INSTALLED ON THE SUPPLY DUCTS.
5. ALL SOFTWARE, HARDWARE, PASSWORDS, ETC REQUIRED FOR THE MAINTENANCE, TESTING, AND REPROGRAMMING OF THE FIRE ALARM SYSTEM MUST BE UNCONDITIONALLY TURNED OVER TO THE GOVERNMENT, AND THE ABOVE NOTED SOFTWARE, HARDWARE, PASSWORDS, ETC WILL BECOME THE UNCONDITIONAL PROPERTY OF THE GOVERNMENT. SOFTWARE TURNED OVER TO GOVERNMENT MUST BE ORIGINAL SOFTWARE ON COMPACT DISK (CD) WITH JEWELED CASE. COPIES OF SOFTWARE MUST NOT BE ACCEPTABLE. SOFTWARE AND CD MUST BE BRAND NEW AND UNUSED. PROVIDE AN 8-HOUR BLOCK OF TRAINING ON SOFTWARE, REGARDING MAINTENANCE, TESTING, AND REPROGRAMMING OF FIRE ALARM SYSTEM FOR 6 PERSONNEL.
6. THE FIRE ALARM AND MNS LAYOUT IS DIAGRAMMATIC IN NATURE ONLY. THE ACTUAL BUILDING LAYOUT MAY VARY FROM THE DRAWINGS. THE CONTRACTOR MUST VERIFY CEILING HEIGHTS, WALL AND PARTITION LOCATIONS AND DOOR LOCATIONS PRIOR TO INSTALLATION.
7. ALL INTERIOR AND EXTERIOR WALLS, CEILINGS AND FLOORS THAT ARE DAMAGED OR ALTERED BY THE CONTRACTOR MUST BE REPAIRED TO ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CONTRACTING OFFICER.
8. ALL FIRE ALARM AND MNS CONDUCTORS MUST BE SOLID COPPER AND MUST BE INSTALLED IN CONDUIT. ALL CONDUIT MUST BE FACTORY PAINTED RED.
9. ALL FIRE ALARM DEVICES LOCATED IN THE HANGAR BAY AND FIRE PROTECTION ROOM MUST BE NEMA 4 RATED (MINIMUM) DEVICES, CONDUIT MUST BE THREADED, RIGID METAL CONDUIT AND ANY CONDUIT PENETRATIONS INTO DEVICE BACKBOXES MUST BE THROUGH THE BOTTOM OF THE BACKBOX.



3 FA501 ELEVATION VIEW – FIRE ALARM

SCALE: NONE

FIRE ALARM LEGEND

- MANUAL PULL STATION
- FIRE ALARM STROBE (WALL-MOUNTED)
- FIRE ALARM SPEAKER/STROBE (WALL-MOUNTED)
- FIRE ALARM SPEAKER (WALL-MOUNTED)
- PHOTOELECTRIC SMOKE DETECTOR
- CARBON MONOXIDE DETECTOR
- DUCT SMOKE DETECTOR

FMCU - FIRE ALARM CONTROL UNIT WITH INTERGRAL FIBER CARD (COORDINATE WITH BASE FIRE DEPARTMENT FOR NUMBER OF STRANDS REQUIRED)
LOC - LOCAL OPERATOR CONSOLE
TEXT - TEXT SIGN
MM - MONITOR MODULE
R - RELAY MODULE
- VALVE TAMPER SWITCH
- WATERFLOW SWITCH
LT - LOW TEMPERATURE SENSOR
XX - INDICATES CANDELA RATING
WP - INDICATES WEATHERPROOF
SPD - SURGE PROTECTIVE DEVICE

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U.S. ARMY CORPS OF ENGINEERS
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109 SAINT JOSEPH STREET
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

DETAILS - FIRE ALARM

SHEET ID
FA501

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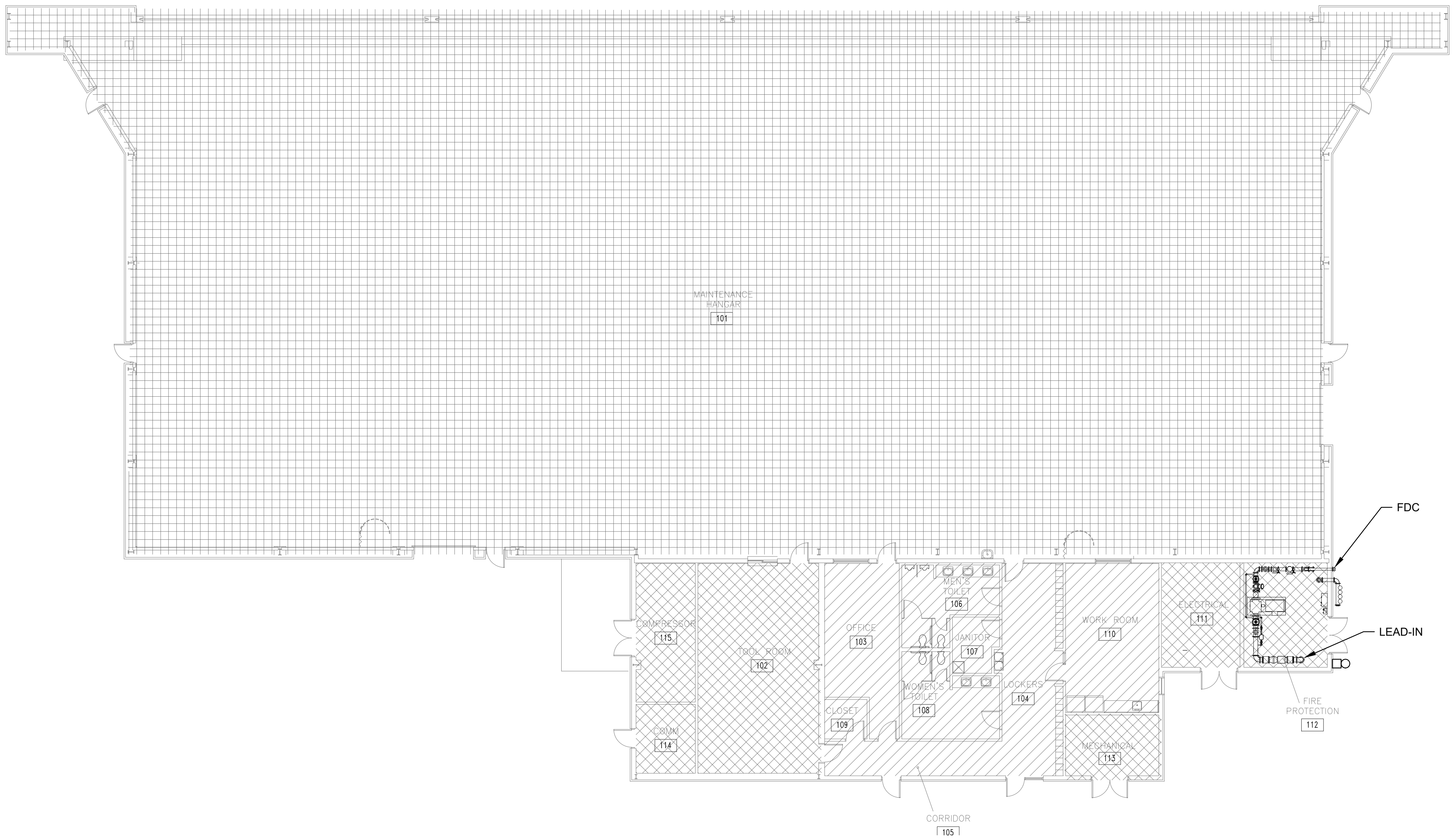
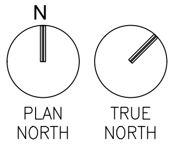


FIRST FLOOR PLAN – FIRE PROTECTION

1
FX101
SCALE: 3/32" = 1'–0"

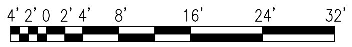


FIRE PROTECTION LEGEND

▨	LIGHT HAZARD WET PIPE SPRINKLER SYSTEM 0.10 GPM/SQFT OVER HYDRAULICALLY MOST REMOTE 1,500 SQFT
▩	ORDINARY HAZARD WET PIPE SPRINKLER SYSTEM 0.20 GPM/SQFT OVER HYDRAULICALLY MOST REMOTE 2,500 SQFT
▦	HANGAR BAY SUPPRESSION SYSTEM WET PIPE SPRINKLER SYSTEM 0.20 GPM/SQFT OVER HYDRAULICALLY MOST REMOTE 5,000 SQFT
○	24 VDC ELECTRIC BELL

A FIRE HYDRANT FLOW TEST PERFORMED ALONG BRADT STREET ON NOVEMBER 30, 2022, INDICATED A STATIC PRESSURE OF 63 POUNDS PER SQUARE INCH, REDUCED TO 59 POUNDS PER SQUARE INCH WHILE FLOWING 1,130 GALLONS PER MINUTE.

GRAPHIC SCALE
IMPERIAL



3/32" = 1'–0"

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FIRST FLOOR PLAN - FIRE PROTECTION

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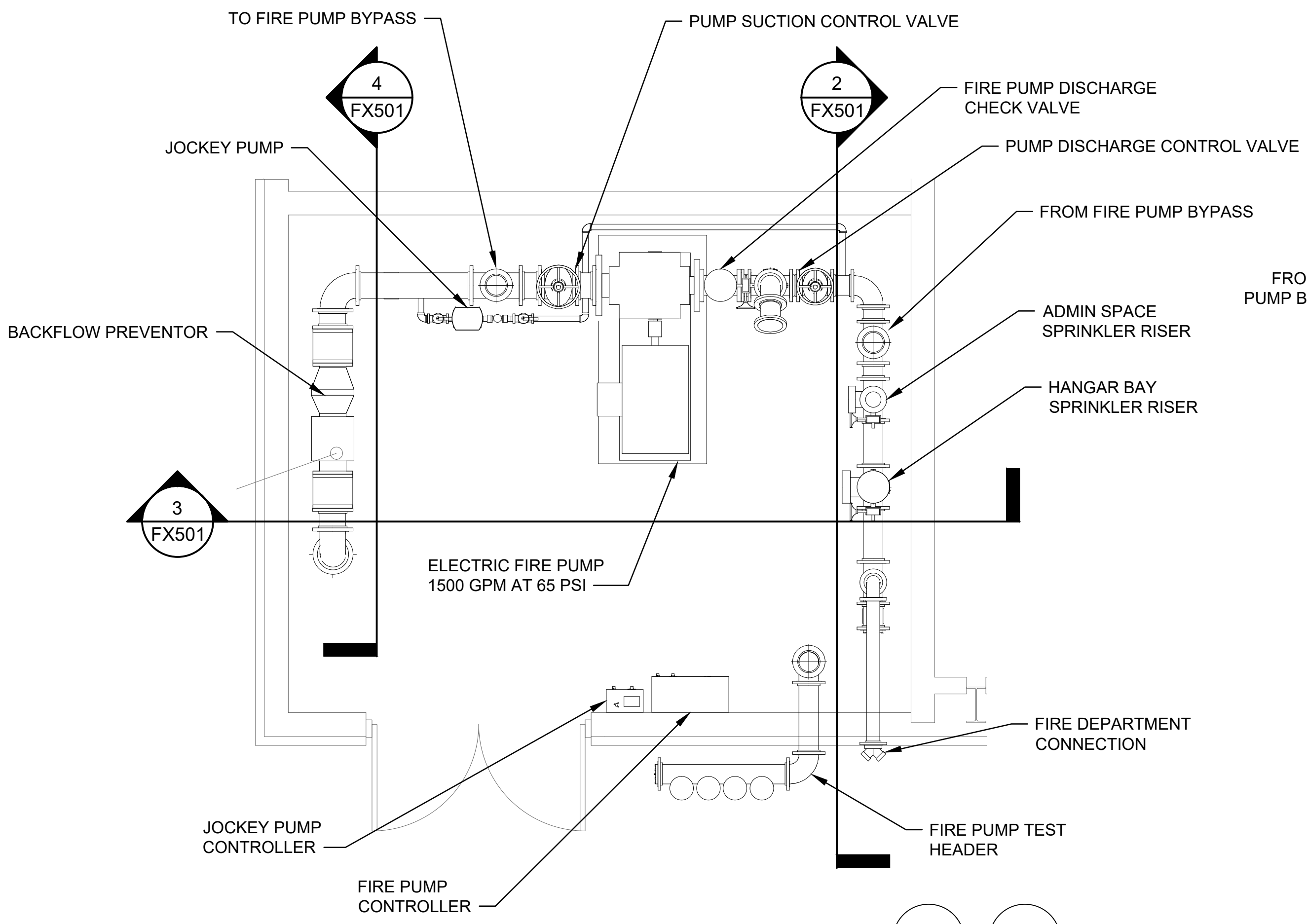
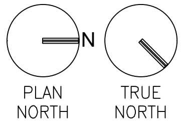
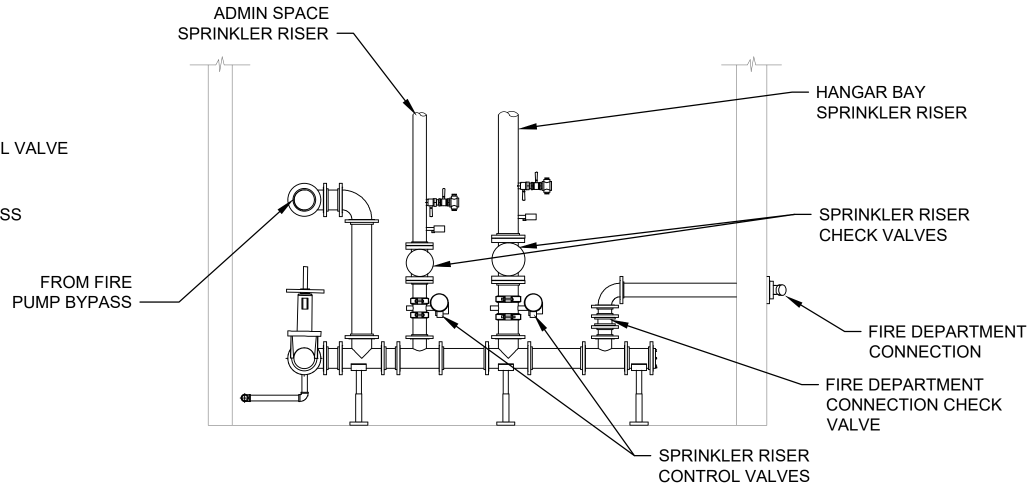
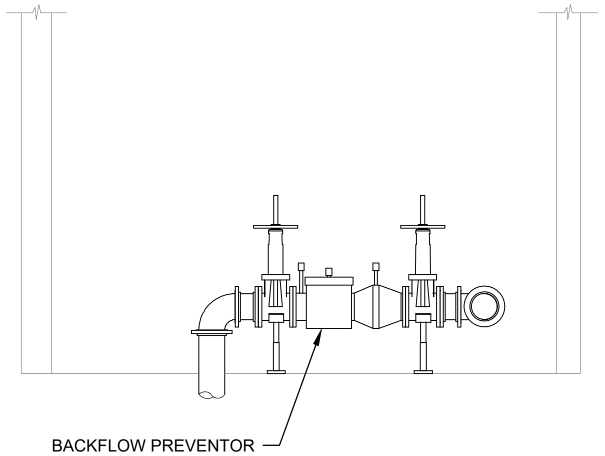

TO FIRE PUMP BYPASS
PUMP SUCTION CONTROL VALVE
4
FX501
2
FX501
FIRE PUMP DISCHARGE CHECK VALVE
JOCKEY PUMP
PUMP DISCHARGE CONTROL VALVE
FROM FIRE PUMP BYPASS
BACKFLOW PREVENTOR
ADMIN SPACE SPRINKLER RISER
HANGAR BAY SPRINKLER RISER
3
FX501
ELECTRIC FIRE PUMP 1500 GPM AT 65 PSI
FIRE DEPARTMENT CONNECTION
JOCKEY PUMP CONTROLLER
FIRE PUMP TEST HEADER
FIRE PUMP CONTROLLER



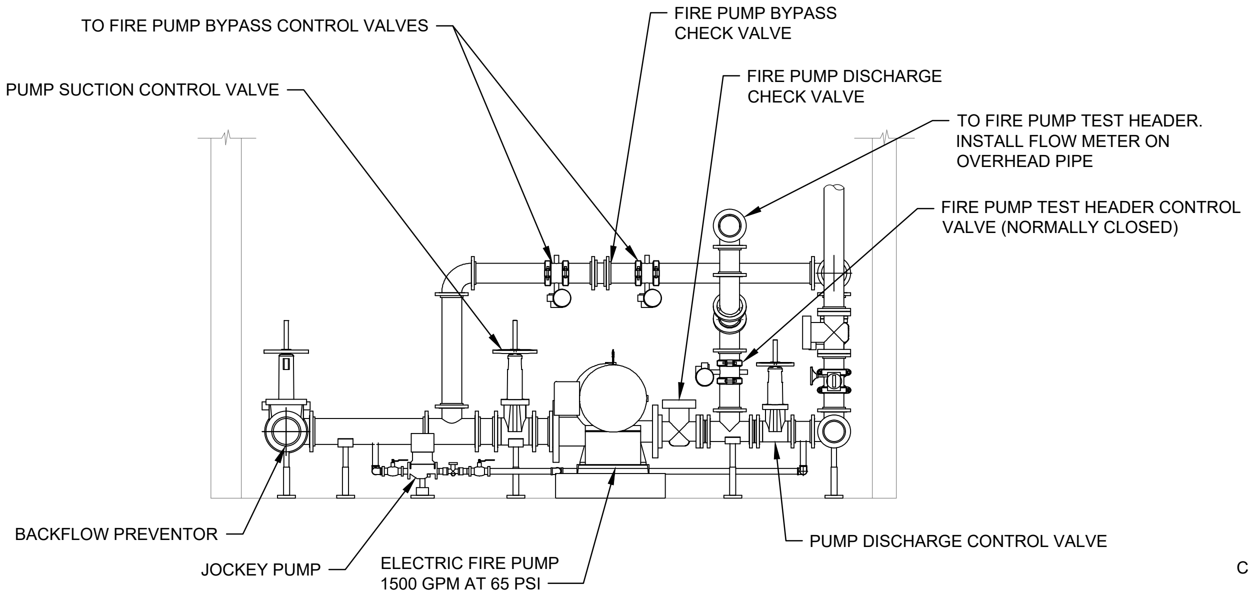
1 FIRE PUMP ROOM ENLARGED PLAN
FX501 SCALE: 3/8" = 1'-0"


ADMIN SPACE SPRINKLER RISER
HANGAR BAY SPRINKLER RISER
SPRINKLER RISER CHECK VALVES
FROM FIRE PUMP BYPASS
FIRE DEPARTMENT CONNECTION
FIRE DEPARTMENT CONNECTION CHECK VALVE
SPRINKLER RISER CONTROL VALVES

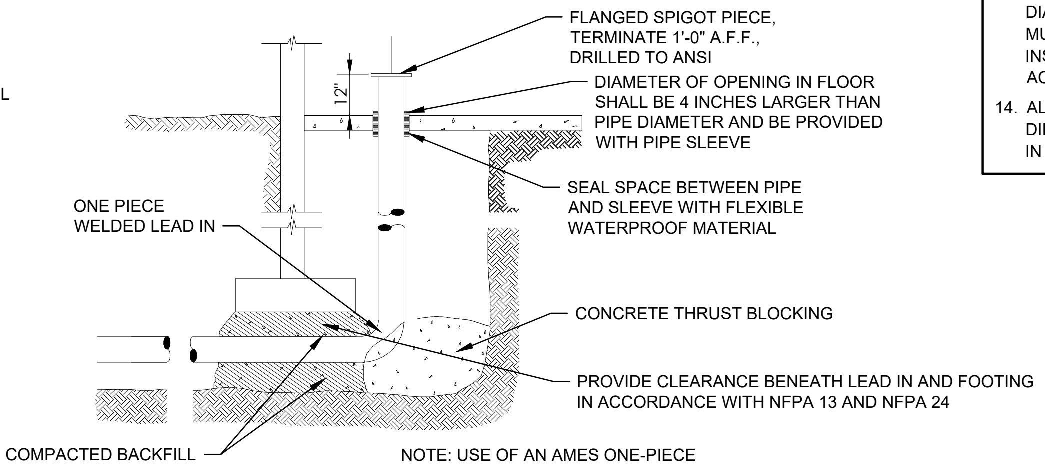
2 NORTH FIRE PUMP ROOM SECTION
FX501 SCALE: 3/8" = 1'-0"



3 SOUTH FIRE PUMP ROOM SECTION
FX501 SCALE: 3/8" = 1'-0"


TO FIRE PUMP BYPASS CONTROL VALVES
FIRE PUMP BYPASS CHECK VALVE
FIRE PUMP DISCHARGE CHECK VALVE
PUMP SUCTION CONTROL VALVE
TO FIRE PUMP TEST HEADER. INSTALL FLOW METER ON OVERHEAD PIPE
FIRE PUMP TEST HEADER CONTROL VALVE (NORMALLY CLOSED)
BACKFLOW PREVENTOR
JOCKEY PUMP
ELECTRIC FIRE PUMP 1500 GPM AT 65 PSI
PUMP DISCHARGE CONTROL VALVE

4 WEST FIRE PUMP ROOM SECTION
FX501 SCALE: 3/8" = 1'-0"


FLANGED SPIGOT PIECE, TERMINATE 1'-0" A.F.F., DRILLED TO ANSI
12"
DIAMETER OF OPENING IN FLOOR SHALL BE 4 INCHES LARGER THAN PIPE DIAMETER AND BE PROVIDED WITH PIPE SLEEVE
SEAL SPACE BETWEEN PIPE AND SLEEVE WITH FLEXIBLE WATERPROOF MATERIAL
ONE PIECE WELDED LEAD IN
CONCRETE THRUST BLOCKING
PROVIDE CLEARANCE BENEATH LEAD IN AND FOOTING IN ACCORDANCE WITH NFPA 13 AND NFPA 24
COMPACTED BACKFILL

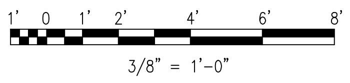
NOTE: USE OF AN AMES ONE-PIECE IN-BUILDING RISER ASSEMBLY, OR APPROVED EQUAL, IS PERMITTED

5 LEAD-IN DETAIL
FX501 SCALE: NTS

FIRE PROTECTION NOTES

1. THE AIRCRAFT HANGAR BAY MUST BE PROTECTED BY AUTOMATIC WET PIPE SPRINKLER SYSTEMS. THE SYSTEMS MUST BE DESIGNED AND INSTALLED FOR FUELED AIRCRAFT IN ACCORDANCE WITH THE SPECIFICATION, UFC 3-600-01, UFC 4-211-01, THE SUNDOWN POLICY, AND THE SCOPE OF WORK DOCUMENTS.
2. THE REMAINDER OF THE FACILITY MUST BE PROTECTED BY AUTOMATIC, WET PIPE SPRINKLER SYSTEMS.
3. THE SPRINKLER SYSTEMS MUST BE MONITORED BY THE FIRE ALARM SYSTEM FOR ALARM, SUPERVISORY, AND TROUBLE CONDITIONS.
4. ALL VALVE TAMPER SWITCHES AND SPRINKLER WATERFLOW SWITCHES MUST BE MONITORED BY THE FIRE ALARM SYSTEM.
5. AUTOMATIC AIR RELIEF VALVES MUST BE INSTALLED AT THE HIGH POINTS OF ALL SPRINKLER SYSTEMS IN THE HANGAR BAY TO EXHAUST ANY TRAPPED AIR IN THE SYSTEM DURING FILLING OF THE SYSTEM. VALVES MUST BE PIPED TO A SAFE LOCATION APPROVED BY THE CONTRACTING OFFICER.
6. CONTRACTOR MUST FURNISH AND INSTALL ALL PIPE, FITTINGS, TEST CONNECTIONS, DRAINS, HANGERS, PIPE SUPPORTS AND ALL OTHER ASSOCIATED EQUIPMENT NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.
7. ALL HOLES IN WALLS MUST BE CORE DRILLED AND HAVE METALLIC PIPE SLEEVES INSTALLED.
8. ALL PENETRATIONS THROUGH FIRE-RESISTANT ASSEMBLIES MUST BE PROTECTED BY A UL-CLASSIFIED THROUGH PENETRATION FIRESTOP SYSTEM.
9. THE CONTRACTOR MUST BE RESPONSIBLE FOR AVOIDING ALL CONFLICTS WITH LIGHTING FIXTURES, DIFFUSERS, GRILLS, DUCTS, CABLE TRAYS, CABLE BUNDLES, CONDUIT, UTILITY PIPING, AND ALL OTHER OBSTRUCTIONS ENCOUNTERED.
10. THE CONTRACTOR MUST VERIFY ELEVATIONS AND LOCATIONS OF ALL PIPING AND EQUIPMENT PRIOR TO INSTALLATION.
11. THE CONTRACTOR MUST TAKE NECESSARY MEASURES TO KEEP THE PREMISE DRY AT ALL TIMES AND TO PREVENT WATER DAMAGE. CONTRACTOR MUST REPAIR WATER DAMAGE RESULTING FROM THE WORK, WHETHER INTENTIONAL OR NOT, AT NO COST TO, AND TO THE SATISFACTION OF THE GOVERNMENT.
12. NEITHER THE GOVERNMENT NOR THE ENGINEER MUST BE RESPONSIBLE FOR PROVIDING A SAFE WORK PLACE FOR THE CONTRACTOR, SUBCONTRACTORS, OR THEIR EMPLOYEES, OR ANY INDIVIDUAL RESPONSIBLE TO THEM FOR THE WORK. THIS RESPONSIBILITY RESTS SOLELY ON THE CONTRACTOR'S PROJECT SUPERINTENDENT.
13. PIPE AND DEVICE LAYOUTS, SIZES, AND ROUTING ARE DIAGRAMMATICAL IN NATURE ONLY. THE CONTRACTOR MUST VERIFY ALL DEVICE LOCATIONS PRIOR TO INSTALLATION. THE CONTRACTOR MUST SIZE ALL PIPING ACCORDING TO THE AVAILABLE WATER SUPPLY.
14. ALL DRAINS AND TEST CONNECTIONS MUST DISCHARGE DIRECTLY TO THE EXTERIOR OF THE BUILDING AS NOTED IN SECTION 21 13 13.

GRAPHIC SCALE
IMPERIAL



3/8" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
J. JOHN
DRAWN BY:
H. SIMPSON
CHECKED BY:
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SUBMITTED BY:
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SIZE:
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FILE NAME:
MEF24005FX501.dwg
ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
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CONTRACT NO.:
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PROJECT NUMBER:
MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

DETAILS - FIRE PROTECTION

SHEET ID
FX501

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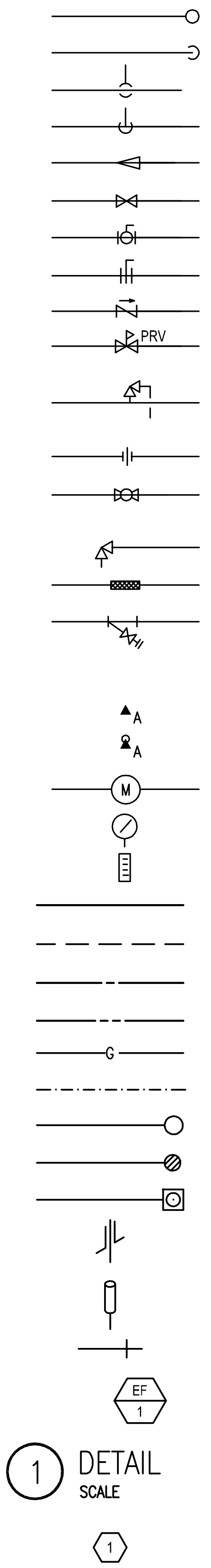
PLUMBING LEGEND



- ELBOW TURN UP
- ELBOW TURN DOWN
- CONNECTION, BOTTOM
- CONNECTION, TOP
- PIPE SIZE TRANSITION
- GATE VALVE
- BALL VALVE
- BUTTERFLY VALVE
- SWING CHECK VALVE
- PRESSURE REDUCING VALVE
- PRESSURE RELIEF VALVE. PIPE FULL SIZE DISCHARGE TO FLOOR DRAIN.
- UNION
- GLOBE VALVE
- ANGLE VALVE
- FLEXIBLE PIPE CONNECTOR
- STRAINER WITH BLOW DOWN GATE VALVE FULL SIZE OF STRAINER AND 3/4" HOSE END CONNECTION WITH CAP
- COMPRESSED AIR DROP
- COMPRESSED AIR DROP WITH REEL
- WATER METER
- PRESSURE GAUGE
- TEMPERATURE GAUGE
- SANITARY PIPING
- VENT PIPING
- COLD WATER SUPPLY PIPING
- HOT WATER SUPPLY PIPING
- NATURAL GAS PIPING
- COMPRESSED AIR PIPING
- CLEANOUT TO FLOOR
- FLOOR DRAIN
- CLEANOUT TO GRADE
- VENT THRU ROOF
- WATER HAMMER ARRESTOR
- WALL HYDRANT
- EQUIPMENT TAG
- DRAWING DESCRIPTION
- SHEET NOTE

ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE
ABA	ARCHITECTURAL BARRIERS ACT
AFF	ABOVE FINISH FLOOR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASSE	AMERICAN SOCIETY OF SANITARY ENGINEERING
CA	COMPRESSED AIR
CFM	CUBIC FEET PER MINUTE
CFU	COLD WATER FIXTURE UNITS
CO	CLEANOUT
CONC	CONCRETE
CW	COLD WATER
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNITS
DIA	DIAMETER
DN	DOWN
EL OR ELEV	ELEVATION
EWC	ELECTRIC WATER COOLER
EPA	ENVIRONMENTAL PROTECTION AGENCY
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FS	FLOW SWITCH
FT	FOOT OR FEET
FV	FLUSH VALVE
GALV	GALVANIZED
GCO	GRADE CLEANOUT
GPF	GALLONS PER FLUSH
GPM	GALLONS PER MINUTE
GWH	GAS WATER HEATER
HB	HOSE BIBB
HC	HANDICAPPED
HFU	HOT WATER FIXTURE UNITS
HW	HOT WATER
ID	INSIDE DIAMETER
INV	INVERT
IWH	INSTANTANEOUS WATER HEATER
MECH	MECHANICAL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OD	OUTSIDE DIAMETER
PSI	POUNDS PER SQUARE INCH
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
S	SANITARY
SA	SHOCK ABSORBER
SH	SHOWER
SK	SINK
SS	SOIL STACK OR STAINLESS STEEL
TLT	TOILET
TW	TEMPERED WATER
TYP	TYPICAL
T&P	TEMPERATURE AND PRESSURE
U	URINAL
V	VENT
VB	VACUUM BREAKER
VS	VENT STACK
VTR	VENT THROUGH ROOF
W	WASTE
W/	WITH
WC	WATER CLOSET (TOILET)
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR

PLUMBING NOTES

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, SIZES, AND CONNECTION LOCATIONS BEFORE ANY PIPE CUTTING IS COMMENCED.
2. THE PIPING SHOWN ON THESE DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR MUST ARRANGE WORK IN A NEAT AND ORDERLY MANNER. THE CONTRACTOR MUST MAKE ANY OFFSETS, TRANSITIONS, AND OTHER MINOR ADJUSTMENTS AS REQUIRED FOR A COMPLETE AND WORKING SYSTEM INSTALLATION. COORDINATE ALL PIPING WITH DUCTWORK SHOP DRAWINGS. ROUTE PIPING AS REQUIRED TO AVOID CONFLICTS.
3. PRIOR TO START OF ANY WORK, COORDINATE SANITARY SEWER AND POTABLE WATER PIPING WITH CIVIL DRAWINGS. FIELD VERIFY PIPE INVERTS PRIOR TO LAYING OUT SANITARY SEWER PIPING.
4. CONTRACTOR MUST PROVIDE ALL TEMPORARY OR PERMANENT CAPS FOR PIPING. CONTRACTOR MUST NOT LEAVE PIPING OPEN ENDED.
5. DRAWINGS SHOW GENERAL SIZE AND APPROXIMATE LOCATIONS. THE DRAWINGS ARE INTENDED TO SHOW THE GENERAL ARRANGEMENT OF THE UTILITY SYSTEM. THE CONTRACTOR MUST FIELD VERIFY ALL UTILITY CONNECTIONS SIZE, LOCATION, DEPTH. THE CONTRACTOR MUST INSTALL ALL SYSTEMS ACCORDING TO THE ACTUAL FIELD CONDITIONS FOUND. ANY PLUMBING SYSTEM COMPONENT INSTALLED INCORRECTLY DUE TO FIELD CONDITIONS MUST BE REMOVED AND INSTALLED CORRECTLY AT THE EXPENSE OF THE CONTRACTOR.
6. REFER TO RISERS FOR SIZES NOT INDICATED ON PLAN VIEWS. RISERS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE ALL OFFSETS, BENDS, FITTINGS, ETC.
7. CONTRACTOR MUST PROVIDE ALL CONNECTIONS, FITTINGS, APPURTENANCES, ETC. AS NECESSARY FOR INSTALLATION AND OPERATION OF GOVERNMENT FURNISHED EQUIPMENT.
8. INSTALL ALL EQUIPMENT AND PIPING PER MANUFACTURERS REQUIREMENTS AND TO MANUFACTURERS RECOMMENDED CLEARANCES.
9. ALL DOMESTIC WATER ISOLATION VALVES MUST BE ACCESSIBLE. ISOLATION VALVES MUST BE OF THE QUARTER TURN BALL TYPE.
10. PROVIDE ACCESS DOORS/PANELS IN NON ACCESSIBLE WALLS AND CEILINGS FOR ALL VALVES, SHOCK ABSORBERS, AND ALL OTHER ITEMS THAT REQUIRE ACCESS FOR PROPER MAINTENANCE. COORDINATE COLOR AND INSTALLATION OF ACCESS DOORS WITH ARCHITECTURAL.
11. BALL VALVES MUST BE PROVIDED ON ALL WATER BRANCH LINES TO ALL EQUIPMENT, FIXTURES, HOSE BIBBS, AND RISER TAKE-OFFS.
12. THE CONTRACTOR MUST NOT CUT ANY STRUCTURAL MEMBERS OF BUILDING.
13. DO NOT MOUNT DISCONNECT SWITCHES ON PLUMBING EQUIPMENT EXCEPT AS RECOMMENDED BY MANUFACTURER.
14. CONTRACTOR TO COORDINATE WITH OTHER TRADES AS REQUIRED FOR INSTALLATION OF EQUIPMENT AND ANY OTHER PLUMBING ITEMS.
15. ALL PENETRATIONS OF FIREWALLS, CEILINGS, FLOORS, ETC. FOR PIPING MUST BE UL LISTED FIRESTOPS AND MUST BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION. CONTRACTOR TO MUST OBTAIN MANUFACTURER SHOP DRAWINGS AT JOBSITE FOR ALL PENETRATIONS.
16. ALL (VTR'S) VENT THRU ROOF PENETRATIONS INDICATED ON PLANS ARE PRELIMINARY. FINAL LOCATIONS MUST BE COORDINATED WITH ALL TRADES. ALL VTR'S MUST BE A MINIMUM OF 10'-0" FROM ALL FRESH AIR INTAKE OPENINGS
17. CONTRACTOR MUST PROVIDE GENERAL WARRANTY FOR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL COMPLETION.
18. PROVIDE ALL EQUIPMENT AND VALVES WITH 2 1/2"x4" ENGRAVED, LAMINATED PLASTIC EQUIPMENT MARKER FOR IDENTIFICATION PURPOSES.
19. PROVIDE ESCUTCHEON PLATES FOR ALL WALL PIPING PENETRATIONS.
20. CONTRACTOR MUST PROVIDE ALL CONNECTIONS, FITTINGS, APPURTENANCES, ETC. AS NECESSARY FOR INSTALLATION AND OPERATION OF GOVERNMENT FURNISHED EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
21. COMPLY WITH SPECIFICATIONS FOR PIPE SLEEVES, HANGER SELECTIONS, AND APPLICATIONS.
22. ENGAGE A FACTORY AUTHORIZED SERVICE REPRESENTATIVE TO PERFORM START-UP SERVICES AND TO TRAIN GOVERNMENT'S MAINTENANCE PERSONNEL TO ADJUST, OPERATE AND MAINTAIN EQUIPMENT.
23. ALL ITEMS PROJECTING THROUGH ROOF MUST BE FLASHED AND COUNTER-FLASHED A MINIMUM OF 12" AND MUST BE PAINTED TO MATCH ROOF COLOR. PROVIDE APPROVED SEALS AT ALL ROOF PENETRATIONS.
24. PROVIDE PREFABRICATED WATER HAMMER ARRESTOR AT EACH NEW BATHROOM GROUP ON HOT AND COLD WATER PIPING.
25. PROVIDE VACUUM BREAKERS AT FIXTURES WITH HOSE THREAD CONNECTIONS.
26. PROVIDE DIELECTRIC UNIONS AT ALL DISSIMILAR METAL PIPE CONNECTIONS.
27. UNDER SLAB SOIL, WASTE AND VENT PIPING PASSING TO UNDERSIDE OR THROUGH FOUNDATION FOOTING, WALL OR GRADE BEAM MUST BE PROVIDED WITH A RELIEVING ARCH OR PIPE SLEEVE 2 (TWO) PIPE SIZES GREATER THAN PIPE SIZE INDICATED ON PLANS. COORDINATE FINAL PIPE ROUTING AND LAYOUT WITH STRUCTURAL DRAWINGS.
28. SEE TOILET ROOM ELEVATIONS ON ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE MOUNTING HEIGHT.
29. COORDINATE EXACT LOCATION OF ALL EXTERIOR WALL HYDRANTS WITH ARCHITECTURAL DRAWINGS.
30. PRIOR TO SUBSTANTIAL COMPLETION OF NEW WORK AREAS, CONTRACTOR MUST HAVE SANITARY PLUMBING SYSTEM CLEARED OF DEBRIS OR ANY MATTER THAT WOULD INTERFERE OR PREVENT ADEQUATE CONVEYANCE OF MATERIALS FROM MOVING THROUGH AND TERMINATING INTO BUILDING OR PUBLIC DISPOSAL FACILITIES.
31. COORDINATE FLOOR DRAIN LOCATIONS IN TOILET ROOMS WITH ARCHITECTURAL PLANS.
32. ALL COMPONENTS OF PLUMBING SYSTEMS ARE TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
33. WATER LINES FOR ICE MAKERS AND REFRIGERATORS MUST BE BRAIDED STAINLESS STEEL.
34. CONTRACTOR MUST DEVELOP AND SUBMIT COORDINATION DRAWINGS WHICH IDENTIFY AND RESOLVE POTENTIAL CONFLICTS BETWEEN PLUMBING WORK, STRUCTURAL, FIRE SPRINKLER, HVAC DUCTWORK, AND ELECTRICAL SYSTEMS.
35. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION. WHERE INFORMATION BETWEEN THE SPECIFICATIONS AND THE DRAWINGS DIFFERS, THE MOST STRINGENT MUST APPLY.
36. WORK MUST COMPLY WITH THE FOLLOWING AGENCIES
    - 2021 INTERNATIONAL BUILDING CODE
    - 2021 INTERNATIONAL PLUMBING CODE
    - NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
        - NFPA 54 – NATIONAL FUEL GAS CODE
    - ARCHITECTURAL BARRIERS ACT (ABA)
    - AMERICAN SOCIETY OF HEATING AND REFRIGERATION ENGINEERS (ASHRAE)
    - UNITED FACILITIES CRITERIA (UFC) 3-420-01 PLUMBING SYSTEMS
    - ALL APPLICABLE LOCAL CODES, ORDINANCES, AND THE AUTHORITY HAVING JURISDICTION

GENERAL PLUMBING DEMOLITION NOTES

1. PLUMBING ASSOCIATED ITEMS REMOVED MUST BECOME THE PROPERTY OF THE CONTRACTOR AND MUST BE TRANSFERRED FROM JOB SITE, EXCEPT ITEMS SELECTED BY GOVERNMENT AND THESE ITEMS MUST BE RELOCATED TO STORAGE AREA DESIGNATED BY THE SAME GOVERNMENT.
2. PIPING CONNECTED TO ASSOCIATED PLUMBING ITEMS AND EQUIPMENT THAT IS TO BE REMOVED MUST BE CAPPED SO AS NOT TO INTERFERE WITH REVISED OR NEW CONDITIONS.
3. WHERE INDICATED, CAP AND ABANDON PIPING IN STRUCTURE WALLS, FLOORS, AND CEILING.
4. EXTEND ALL NEW PIPING TO EXISTING UTILITY SERVICES IN CHASE, CEILINGS, UNDER FLOORS AND UNDERGROUND TO ACCOMMODATE REVISED CONDITIONS.
5. CONTRACTOR MUST NOT DISRUPT EXISTING UTILITY SERVICES WITHOUT ASCERTAINING WRITTEN PERMISSION FROM GOVERNMENT. REQUIRED OUTAGES OR SHUTDOWNS MUST BE KEPT TO A MINIMUM AND MUST BE PERFORMED WITHIN A PREDETERMINED TIME FOR DURATION OF SHUTDOWN.
6. UNLESS NOTED OR SHOWN OTHERWISE, ALL EXISTING UTILITY SERVICES MUST REMAIN INTACT AND ACTIVE TO FACILITATE REVISED CONDITIONS.
7. PRIOR TO COMMENCEMENT OF CONCRETE DEMOLITION AND REMOVAL, CONTRACTOR MUST FIELD DETERMINE EXACT LOCATION AND LIMITS OF DEMOLITION. VERIFY WITH ARCHITECT ALL REQUIREMENTS, METHODS, PROCEDURES AND HANDLING OF EXISTING CONCRETE REINFORCEMENT AND THE REPLACEMENT OR REUSE OF SAME. COORDINATE DEMOLITION WORK, WITH SPREAD FOOTINGS, GRADE BEAMS, OTHER STRUCTURAL MEMBERS, UTILITY AUTHORITIES AND ALL OTHER TRADES.

SCHMIDT
CONSULTING· GROUP, INC.
FLORIDA LICENSE NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

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SUBMITTED BY:
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SIZE:
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ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
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CONTRACT NO.:
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PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005P-001.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLUMBING LEGEND, NOTES
AND ABBREVIATIONS

SHEET ID
P-001

RTA SUBMITTAL

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE			CONNECTIONS			
	FIXTURE NAME	TYPE	DESCRIPTION	WASTE IN	VENT IN	CW IN	HW IN
P-1	WATER CLOSET	FLOOR MOUNT	ELONGATED RIM, VITREOUS CHINA, FLUSH VALVE, TOP SPUD, 15" RIM HEIGHT, WHITE OPEN FRONT TOILET SEAT COVER WITH STAINLESS STEEL CHECK HINGES. 1.28 GPF, MANUAL FLUSH VALVE, NON-HOLD OPEN NO LEAK HANDLE, ADJUSTABLE TAIL PIECE, INTERNAL SIPHON GUARD PROTECTION, SELF CLEANING, CHROME PLATED.	3	1 1/2	1	–
P-1A	WATER CLOSET	(ABA) FLOOR MOUNT	ELONGATED RIM, VITREOUS CHINA, FLUSH VALVE, TOP SPUD, ABA RIM HEIGHT, WHITE OPEN FRONT TOILET SEAT COVER WITH STAINLESS STEEL CHECK HINGES. 1.28 GPF, MANUAL FLUSH VALVE, NON-HOLD OPEN NO LEAK HANDLE, ADJUSTABLE TAIL PIECE, INTERNAL SIPHON GUARD PROTECTION, SELF CLEANING, CHROME PLATED.	3	1 1/2	1	–
P-2	URINAL	(ABA) WALL MOUNT	TOP SPUD, VITREOUS CHINA, ELONGATED RIM, WITH STRAINER. PROVIDE WITH CONCEALED WALL SUPPORTS. 0.125 GPF, MANUAL FLUSH VALVE, NON-HOLD OPEN NO LEAK HANDLE, ADJUSTABLE TAIL PIECE, INTERNAL SIPHON GUARD PROTECTION, SELF CLEANING, CHROME PLATED.	2	1 1/4	3/4	–
P-3	LAVATORY	UNDERMOUNT	19"x16", RIMLESS OVAL, VITREOUS CHINA, FRONT OVERFLOW, 4" CENTER FAUCET HOLES IN COUNTERTOP. 0.5 GPM, CHROME PLATED, FAUCET WITH INTEGRAL SHANKS, QUARTER TURN DISC CARTRIDGES, 4" SPOUT, VANDAL RESISTANT, COLOR CODED METAL LEVER HANDLES. PROVIDE WITH POINT OF USE MIXING VALVE.	2	1 1/4	1/2	1/2
P-4	SINK	COUNTERMOUNT	19"X17" SINGLE BOWL, 304 STAINLESS STEEL, SATIN FINISH, FULLY UNDERCOATED UNDERSIDE FOR SOUND DEADENING, 6" BOWL DEPTH, 4" CENTER FAUCET HOLES. 1.5 GPM, TOP MOUNT, 8" SWIVEL SPOUT, VANDAL RESISTANT COLOR CODED METAL LEVER HANDLES, CHROME PLATED, LESS SPRAY.	2	1 1/4	1/2	1/2
P-5	MOP SINK	–	24"x24"x12" PRECAST TERAZZO, SINGLE PIECE MADE OF BLACK AND WHITE MARBLE CHIPS CAST IN GREY PORTLAND CEMENT WITH A COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI, S.S. STRAINER, S.S. BUMPER GUARD ON ALL CURBS AND THRESHOLD. CHROME PLATED, ADJUSTABLE WALL BRACE, PAIL HOOK, FOUR ARM HANDLES, HOSE THREADED SPOUT.	3	1 1/2	1/2	1/2
P-6	SERVICE SINK	WALL MOUNT	SINGLE COMPARTMENT 22 1/4"X18 1/4" ENAMELED CAST IRON, DRAIN WITH STRAINER, BACK DECK FOR FAUCET MOUNTING. 1.5 GPM, 8" CENTERSET, CHROME PLATED, SINGLE HANDLE CONTROL, VANDAL RESISTANT AERATOR.	3	1 1/2	1/2	1/2
P-7	DRINKING FOUNTAIN	–	DOUBLE, WALL HUNG, ELECTRIC REFRIGERATED WATER COOLER WITH BOTTLE FILLING STATION, CHILLING CAPACITY OF 50°F BASED UPON 80°F INLET WATER AND 90 °F AMBIENT, 115/1/60, FLA: 4 AMPS, ANTI-MICROBIAL BUBBLER, PUSH BUTTON ACTIVATED, PROVIDE WITH MANUFACTURERS WALL MOUNTING BRACKET.	1 1/2	1 1/4	1/2	–
P-8	EMERGENCY SHOWER/EYEWASH		COMBINATION EYE & FACE WASH/SHOWER SAFETY STATION WITH STAINLESS STEEL SHOWER HEAD, STAINLESS STEEL BOWL, POWER COATED CAST ALUMINUM FLAG HANDLE AND DOOR FLANGE, 1-1/4" IPS SCHEDULE 40 GALVANIZED PIPE AND FITTINGS, U.S. 11-1/2" STAINLESS STEEL EYEWASH BOWL. MADE CHROME PLATED BRASS STAY OPEN BALL VALVES, AND POLISHED STAINLESS STEEL PULL ROD. REGULATE FLOW TO 20 GPM. PROVIDE TWO (2) POLYPROPYLENE SPRAY HEADS WITH INTEGRAL "FLIP-TOP" DUST COVERS, FILTERS, AND 1.8-GPM FLOW CONTROL ORFICES MOUNTED ON A CHROME PLATED BRASS EYEWASH ASSEMBLY. ALL PIPING SHALL BE FINISHED WITH A RED POWDER COAT. PROVIDE WITH PRIVACY CURTAIN. PROVIDE HEAT TRACE ON ALL WATER CONNECTION PIPING. COORDINATE WITH ELECTRICAL.	–	–	1 1/4	–
P-9	ICE MAKER BOX	–	STEEL BOX AND FACE PLATE, QUARTER TURN BALL VALVE, COPPER SWEAT	–	–	1/2	–
FD	FLOOR DRAIN	–	CAST IRON BODY, BOTTOM OUTLET, INVERTIBLE MEMBRANE CLAMP, ADJUSTABLE COLLAR, NICKEL BRONZE STRAINER, PROVIDE WITH TRAP GUARD.	3	1 1/2	1/2	–
WH	WALL HYDRANT	–	AUTOMATIC DRAINING, FREEZELESS, WITH HOSE CONNECTION, ANTI SIPHON VACUUM BREAKER, FLUSH MOUNTED BOX AND DOOR, LOOSE KEY OPERATED, CHROME FINISH.	–	–	3/4	–
BFP-1	BACKFLOW PREVENTER	–	LEAD FREE PRESSURE VALVE ASSEMBLY, WITH QUARTER TURN BALL VALVES, WITH STRAINER, THREADED END CONNECTIONS, FDA APPROVED, UL CLASSIFIED, 175 PSI MAX. WORKING PRESSURE.	–	–	3	–
BFP-2	BACKFLOW PREVENTER	–	REDUCED PRESSURE ASSEMBLY, WITH QUARTER TURN BALL VALVES, WITH STRAINER, THREADED END CONNECTIONS, FDA APPROVED, UL CLASSIFIED, 175 PSI MAX. WORKING PRESSURE.	–	–	3/4	–
MV	MIXING VALVE	–	THERMOSTATIC MIXING VALVE, 1 GPM MIN. FLOW, REGULATOR KNOB, ADJUSTABLE HIGH TEMPERATURE LIMIT, 125 PSI OPERATING PRESSURE. PROVIDE WITH BALL VALVE WITH DIAL THERMOMETER. SYSTEM PRESSURE DROP SHALL BE 5 PSI @ 30 GPM MAX.	–	–	2	2

NOTES:

1. WATER SUPPLY TAPPING TO EACH FIXTURE MUST BE FULL SIZE.
2. PROVIDE WATER HAMMER ARRESTORS ON HOT & COLD WATER SUPPLY BRANCHES SERVING SINGULAR, MULTIPLE OR GROUPS OF PLUMBING FIXTURES. ADHERENCE TO THE PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I.-WH201 (PER SPECIFICATIONS) MUST BE EMPLOYED IN DETERMINING PROPER SIZE, SELECTION, PLACEMENT, LOCATION AND INSTALLATION OF ARRESTORS.
3. MOUNT PLUMBING FIXTURES LABELED "ABA" IN ACCORDANCE WITH ABA REQUIREMENTS. COORDINATE WITH ARCHITECTURAL DRAWINGS.
4. SEE ARCHITECTURAL FOR FIXTURE MOUNTING HEIGHTS.
5. PROVIDE FIXTURES WITH ALL APPURTENANCES AS NECESSARY FOR A COMPLETE INSTALLATION. (I.E. STOPS, FLEXIBLE CONNECTORS, ETC.)
6. VENT SIZE INDICATED IN SCHEDULE IS FOR INDIVIDUAL FIXTURE VENTING. SEE PLANS FOR VENT PIPE SIZES.

WATER HAMMER ARRESTOR SCHEDULE

P.D.I. SIZE	FIXTURE UNITS	SIZE	TYPE/MODEL NUMBER (WROUGHT COPPER SHELL)	NOTES
A	1-11	1/2"	75001-S	1,2
B	12-32	3/4"	75002-S	1,2
C	33-60	1"	75003-S	1,2

NOTES:

1. REPRESENTS PLUMBING AND DRAINAGE INSTITUTE "STANDARD P.D.I.-WH201".
2. REPRESENTS ARRESTOR TYPE AND ASSOCIATED MODEL NUMBER DERIVED FROM JOSAM CO. (SHOCK ABSORBERS, WROUGHT COPPER SHELL) AND IS USED AS A STANDARD FOR HELPING DETERMINE PROPER SELECTION FROM OTHER MANUFACTURERS EQUALLY COMPETENT IN THE FABRICATION OF AND USING THE SIZING METHOD ESTABLISHED IN ACCORDANCE WITH PLUMBING DRAINAGE INSTITUTE (P.D.I.).

SCHMIDT
CONSULTING· GROUP, INC.
FLORIDA LICENSE NUMBER 05371
901 W. Garden St. • Pensacola, FL 32502
P: 850-438-0050 • F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: CAP
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SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005P-002.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLUMBING SCHEDULES

SHEET ID
P-002

RTA SUBMITTAL

INSTANTANEOUS WATER HEATER SCHEDULE

	WATER HEATER RATINGS								ELECTRICAL DATA		
	MIN. GAS CONSUMPTION INPUT(MBH)	MAX. GAS CONSUMPTION INPUT (MBH)	MINIMUM UEF	MIN. TEMPERATURE RISE	MIN. INLET GAS PRESSURE (W.C.)	MAX. INLET GAS PRESSURE (W.C.)	FUEL TYPE	COMBUSTION CONTROL	VOLTS	PHASE	Hz
GWH-1	15.0	199.0	0.95	60°F @ 6 GPM	4.0	10.5	NATURAL GAS	MODULATING	120	1	60
GWH-2	15.0	199.0	0.95	18°F @ 20 GPM	4.0	10.5	NATURAL GAS	MODULATING	120	1	60
GWH-3	15.0	199.0	0.95	18°F @ 20 GPM	4.0	10.5	NATURAL GAS	MODULATING	120	1	60

NOTES:

1. PROVIDE GAS FIRED INSTANTANEOUS WATER HEATER WITH HEAT EXCHANGER.
2. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
3. ROUTE CONDENSATE TO THE NEAREST FLOOR DRAIN.
4. PROVIDE EACH WATER HEATER WITH CONDENSATE NEUTRALIZATION KIT AND GAS REGULATOR FOR FINAL PRESSURE ADJUSTMENT.
5. INSTALL UNIT AND ITS ACCESSORIES AS PER MFG RECOMMENDATIONS.
6. PROVIDE WITH CONCENTRIC VENT KIT.

AIR COMPRESSOR SCHEDULE

MARK	TYPE	OPERATING PRESSURE (PSIG)	RECEIVER TANK CAPACITY (GALLONS)	MOTOR HP (MIN)	FREE AIR (SCFM)	ELECTRICAL REQUIREMENTS
AC-1	ROTARY SCREW OIL-LESS	125	660	50	128	460/3/60

NOTES:

1. PROVIDE COALESCING FILTER FOR RATED FLOW AT 128 SCFM AT 125 PSIG.
2. PROVIDE REFRIGERATED AIR DRYER RATED AT 128.0 SCFM AT PSIG FULL LOAD DISCHARGE PRESSURE
3. PROVIDE 660 GALLON VERTICAL RECEIVER TANK AT 150 PSIG WORKING PRESSURE
4. PROVIDE PARTICULATE FILTER RATED AT 128 SCFM AT 125 PSIG.

RECIRCULATION PUMP SCHEDULE

			PERFORMANCE DATA				ELECTRICAL DATA			
MARK	SERVICE	TYPE	CAPACITY – GPM	PUMP HEAD (FT. W.C.)	MIN. EFF (%)	MAX. SPEED (RPM)	MIN. POWER (HP)	VOLTS	PHASE	Hz
CP-1	HOT WATER RECIRC.	IL	3.0	8.0	50%	4,830	1/6	120	1	60

NOTES:

1. IL – INLINE
2. PUMP MUST HAVE 150 PSI MAX. WORKING PRESSURE.
3. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
4. MATERIAL OF CONSTRUCTION SHALL BE STAINLESS STEEL CASING WITH ALUMINUM HOUSING AND STAINLESS STEEL SHAFT.
5. RECIRCULATION PUMP MUST BE HIGH EFFICIENCY TYPE.

GAS DEMAND SCHEDULE

EQUIPMENT	DEMAND (CFH)	QUANTITY	DEMAND (CFH)	PRESSURE (IN. WG)
AHU-1 GAS HEATER	150	1	150	10.5
RTH-1 THRU 6	155	6	930	5
GWH-1	199	1	199	4.0-10.5
GWH-2	199	1	199	4.0-10.5
GWH-3	199	1	199	4.0-10.5
MAU-1&2	125	2	250	4.0-10.5
		TOTAL	1927	

* PROVIDE EACH PIECE OF EQUIPMENT WITH A GAS REGULATOR SIZED FOR INLET PRESSURE REQUIREMENTS.

ABOVE GROUND GAS PIPING NOTES

FABRICATE AND INSTALL GAS SYSTEMS IN ACCORDANCE WITH NFPA 54, "NATIONAL FUEL GAS CODE" AND WITH LOCAL GAS UTILITY COMPANY REQUIREMENTS AND STANDARDS. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.

PROVIDE PIPING MATERIALS AND FACTORY-FABRICATED PIPING PRODUCTS OF SIZES, TYPES, PRESSURE RATINGS, AND CAPACITIES AS INDICATED. WHERE NOT INDICATED, PROVIDE PROPER SELECTION AS DETERMINED BY INSTALLER TO COMPLY WITH INSTALLATION REQUIREMENTS. PROVIDE MATERIALS AND PRODUCTS COMPLYING WITH NFPA 54 WHERE APPLICABLE; BASE PRESSURE RATING ON GAS PIPING SYSTEM MAXIMUM DESIGN PRESSURES. PROVIDE SIZES AND TYPES MATCHING PIPING AND EQUIPMENT CONNECTIONS; PROVIDE FITTINGS OF MATERIALS WHICH MATCH PIPE MATERIALS USED IN NATURAL GAS SYSTEMS. PROVIDE IDENTIFICATION AND PAINT GAS PIPING YELLOW.

PROVIDE AGA APPROVED SPECIAL VALVES REQUIRED FOR GAS SYSTEMS INCLUDING THE FOLLOWING TYPES:

1. GAS COCKS 2" AND SMALLER: 150 PSI NON-SHOCK WOG, BRONZE STRAIGHTWAY COCK, FLAT OR SQUARE HEAD, THREADED ENDS.
2. BALL VALVES: AGA APPROVED, UL-LISTED BALL VALVES MAY BE USED FOR SHUTOFF VALVES AT CONTRACTOR'S OPTION.
3. MASTER GAS CONTROL VALVE: BRONZE OR ALUMINUM BODY, PACKLESS, SINGLE SEAT, SUITABLE FOR FUEL GAS, SOLENOID OPERATED, NORMALLY OPEN, UL-APPROVED, MANUAL RESET, 24 VOLT DC. THE VALVE TO CLOSE WHEN DE-ENERGIZED BY THE FACP.

GAS REGULATORS

1. FIRST STAGE REGULATORS: PROVIDE UL LISTED FIRST STAGE (HIGH PRESSURE) REGULATORS. SEE PLANS FOR PRESSURE REQUIREMENTS.
2. SECOND STAGE REGULATORS: PROVIDE UL LISTED SECOND STAGE ADJUSTABLE REGULATORS WITH INTEGRAL RELIEF VALVES. SEE PLANS AND MANUFACTURER REQUIREMENTS FOR PRESSURE REQUIREMENTS.
3. GAS METER AND REGULATOR: AS SPECIFIED.
4. EXAMINE AREAS AND CONDITIONS UNDER WHICH GAS SYSTEMS, MATERIALS, AND PRODUCTS ARE TO BE INSTALLED. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN MANNER ACCEPTABLE TO INSTALLER. COORDINATE PRIOR TO STARTING WORK.

INSTALL GAS PIPING IN ACCORDANCE WITH DIVISION-23 FACILITY GAS PIPING.

1. USE SEALANTS ON METAL GAS PIPING THREADS WHICH ARE CHEMICALLY RESISTANT TO GAS. USE SEALANTS SPARINGLY, AND APPLY TO ONLY MALE THREADS OF METAL JOINTS.
2. REMOVE CUTTING AND THREADING BURRS BEFORE ASSEMBLING PIPING.
3. DO NOT INSTALL DEFECTIVE PIPING OR FITTINGS. DO NOT USE PIPE WITH THREADS WHICH ARE CHIPPED, STRIPPED OR DAMAGED. DO NOT USE BUSHINGS IN THE GAS SYSTEM.
4. PLUG EACH GAS OUTLET, INCLUDING VALVES, WITH THREADED PLUG OR CAP IMMEDIATELY AFTER INSTALLATION AND RETAIN UNTIL CONTINUING PIPING, OR EQUIPMENT CONNECTIONS ARE COMPLETED.
5. GROUND GAS PIPING ELECTRICALLY AND CONTINUOUSLY WITHIN PROJECT, AND BOND TIGHTLY TO GROUNDING CONNECTION.
6. INSTALL DIRT LEGS IN GAS PIPING WHERE INDICATED, AND WHERE REQUIRED BY CODE OR REGULATION.
7. INSTALL "TEE" FITTING WITH BOTTOM OUTLET PLUGGED OR CAPPED, AT BOTTOM OF PIPE RISERS.
8. USE DIELECTRIC UNIONS WHERE DISSIMILAR METALS ARE JOINED TOGETHER.
9. INSTALL PIPING WITH 1/64" PER FOOT (1/8%) DOWNWARD SLOPE IN DIRECTION OF FLOW.
10. INSTALL PIPING PARALLEL TO OTHER PIPING.

VALVES INSTALLATION:

- GAS COCKS: PROVIDE AT CONNECTION TO GAS TRAIN FOR EACH GAS-FIRED EQUIPMENT ITEM; AND ON RISERS AND BRANCHES WHERE INDICATED.
- LOCATE GAS COCKS WHERE EASILY ACCESSIBLE, AND WHERE THEY WILL BE PROTECTED FROM POSSIBLE INJURY.
- CONNECT GAS PIPING TO EACH GAS-FIRED EQUIPMENT ITEM, WITH DRIP LEG AND SHUTOFF GAS COCK. COMPLY WITH EQUIPMENT MANUFACTURER'S INSTRUCTIONS.

GAS VENT INSTALLATION:

- INSTALL GAS VENTS FOR ALL DRAFT GAS-FIRED APPLIANCES IN ACCORDANCE WITH NFPA 54 AND THE MANUFACTURER'S INSTRUCTIONS.
- GAS VENTS MUST TERMINATE AT LEAST 3 FEET ABOVE THE ROOF AND 2 FEET HIGHER THAN ANY PORTION OF A BUILDING WITHIN A HORIZONTAL DISTANCE OF 10 FEET.
- MINIMUM VERTICAL GAS VENT LENGTH IS 5 FEET.
- SLOPE HORIZONTAL GAS VENT CONNECTORS UPWARD AT LEAST 1/4 INCH PER FOOT.
- INSPECT, TEST, AND PURGE GAS SYSTEMS IN ACCORDANCE WITH NFPA 54, LOCAL UTILITY REQUIREMENTS, AND AS PER SPECIFICATIONS.

SCHMIDT
CONSULTING· GROUP, INC.
FLORIDA LICENSE NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
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FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

US Army Corps of Engineers®

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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

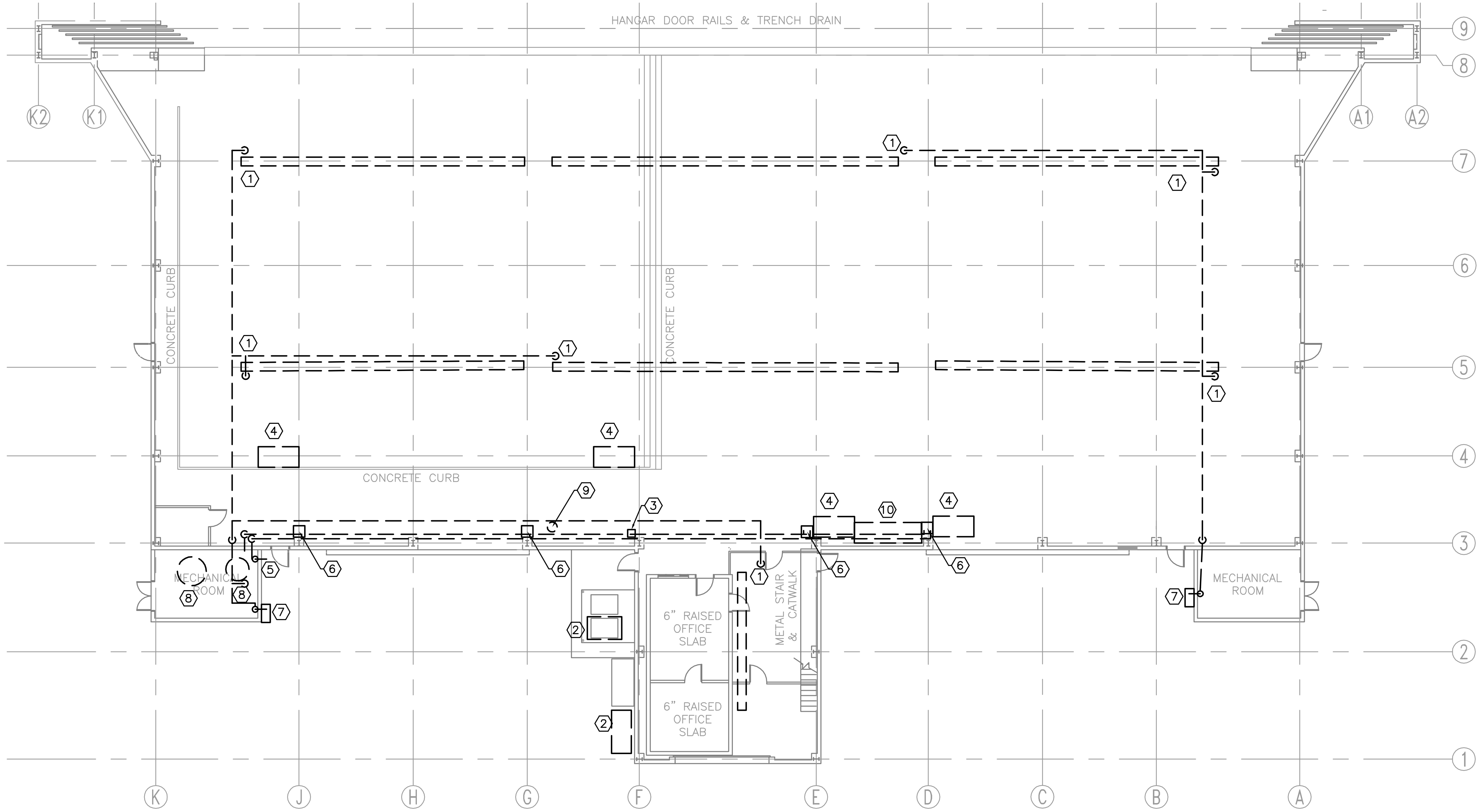
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLUMBING SCHEDULES AND NOTES

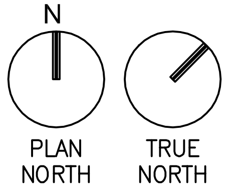
SHEET ID
P-003

RTA SUBMITTAL



1 PLUMBING DEMOLITION PLAN

SCALE: 3/32" = 1'–0"



3/32"=1'–0" 0' 10' 20' 30' 40'

GENERAL NOTE

1. EXISTING DOMESTIC COLD WATER PIPING IS ROUTED AROUND THE PERIMETER OF THE BUILDING UNDERGROUND. ALL DOMESTIC COLD WATER PIPING WITHIN THE BUILDING IS TO BE DEMOLISHED TO THE FURTHEST EXTENTS POSSIBLE. EXISTING UNDERGROUND DOMESTIC COLD WATER PIPING TO BE ABANDONED IN PLACE.
2. EXISTING COMPRESSED AIR PIPING IS ROUTED AROUND THE PERIMETER OF THE BUILDING UNDERGROUND. ALL COMPRESSED AIR PIPING WITHIN THE BUILDING IS TO BE DEMOLISHED TO THE FURTHEST EXTENTS POSSIBLE. EXISTING UNDERGROUND COMPRESSED AIR PIPING TO BE ABANDONED IN PLACE.

SHEET NOTES

① EXISTING NATURAL GAS PIPING TO RADIANT TUBE HEATER TO BE DEMOLISHED COMPLETE. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.

② EXISTING AIR COMPRESSOR AND RECEIVER TANK TO BE DEMOLISHED COMPLETE. ALL ASSOCIATED COMPRESSED AIR PIPING TO BE DEMOLISHED COMPLETE.

③ EXISTING COMPRESSED AIR DROP AND ASSOCIATED COMPRESSED AIR PIPING TO BE DEMOLISHED COMPLETE.

④ EXISTING HOSE REELS TO BE REMOVED AND TURNED OVER TO THE GOVERNMENT.

⑤ EXISTING DOMESTIC WATER ENTRANCE. ALL DOMESTIC WATER PIPING IN THE BUILDING TO BE DEMOLISHED COMPLETE.

⑥ EXISTING DOMESTIC COLD AND HOT WATER MIXING STATION AND HOSE REEL CONNECTION POINT TO BE DEMOLISHED COMPLETE. ALL ASSOCIATED PIPING TO BE DEMOLISHED COMPLETE.

⑦ EXISTING NATURAL GAS METER AND REGULATOR TO BE DEMOLISHED COMPLETE. EXISTING NATURAL GAS PIPING THROUGHOUT BUILDING TO BE DEMOLISHED COMPLETE. SEE CIVIL FOR SITE PIPING DEMOLITION.

⑧ EXISTING GAS WATER HEATER AND STORAGE TANK TO BE DEMOLISHED COMPLETE. DEMOLISH ALL ASSOCIATED PIPING, FLUE DUCTWORK, AND ALL APPURTENANCES COMPLETE.

⑨ EXISTING EMERGENCY EYE WASH TO BE DEMOLISHED COMPLETE.

⑩ EXISTING HANDWASHING SINK, DRINKING FOUNTAIN, AND ELECTRIC WATER HEATER MUST BE DEMOLISHED COMPLETE. ALL ASSOCIATED PIPING AND APPURTENANCES MUST BE DEMOLISHED COMPLETE.

SCHMIDT
CONSULTING· GROUP, INC.
FLORIDA LICENSE·NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
FLORIDA LICENSE NUMBER 94207
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US Army Corps of Engineers®

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SUBMITTED BY: CAP	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005PD-101.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

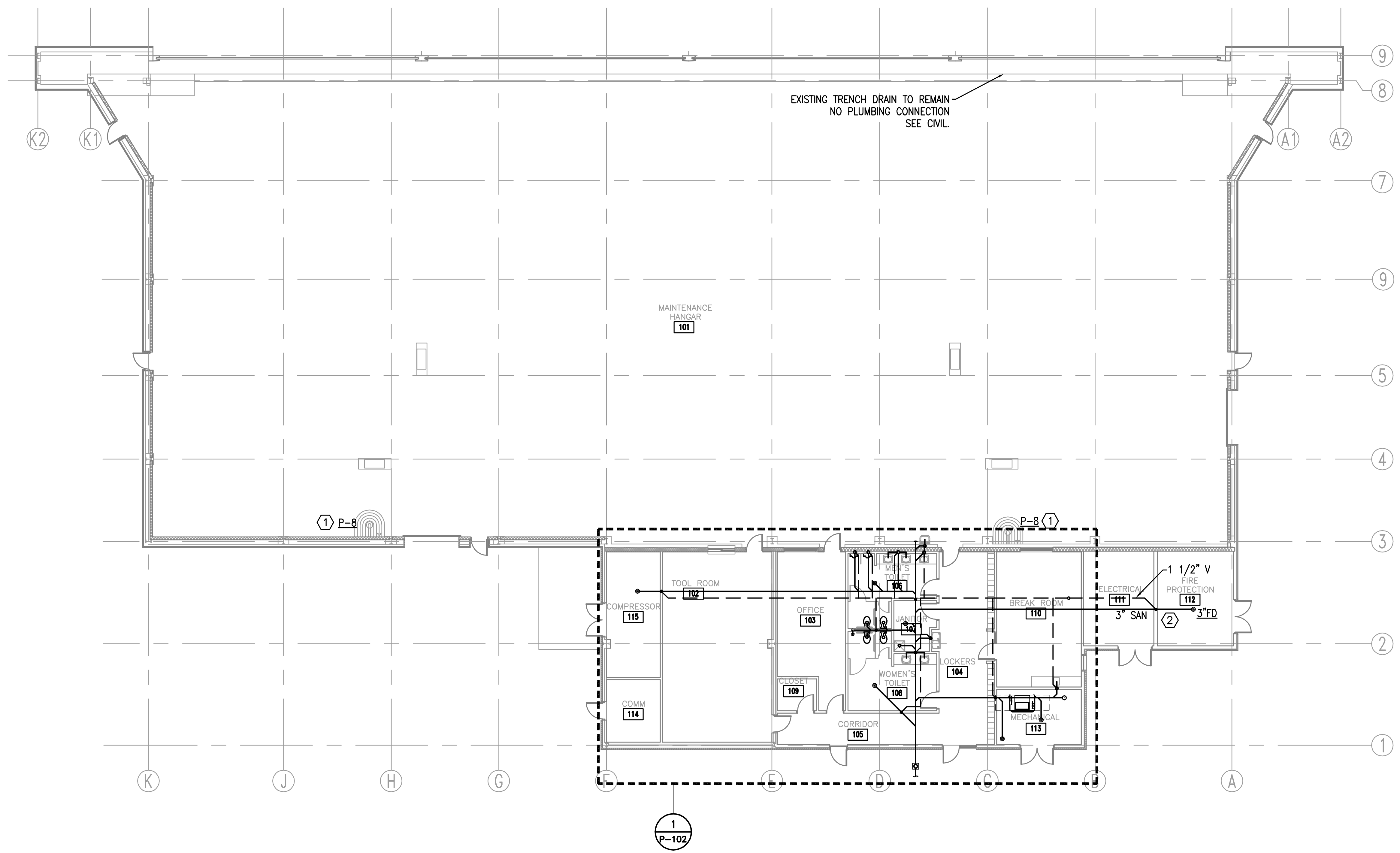
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLUMBING DEMOLITION
PLAN

SHEET ID
PD-101

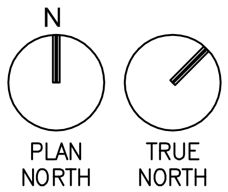
RTA SUBMITTAL

CESAM v20181203



① SANITARY & VENT OVERALL FLOOR PLAN

SCALE: 3/32" = 1'-0"



3/32"=1'-0" 0' 10' 20' 30' 40'

SHEET NOTES

1. NO FLOOR DRAIN PROVIDED. SPILL DRAINAGE TO HANGAR FLOOR.
2. ROUTE VENT PIPING OFF TOP OF SANITARY PIPING AND UP WITHIN WALL.

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SANITARY & VENT OVERALL
FLOOR PLAN

SHEET ID
P-101

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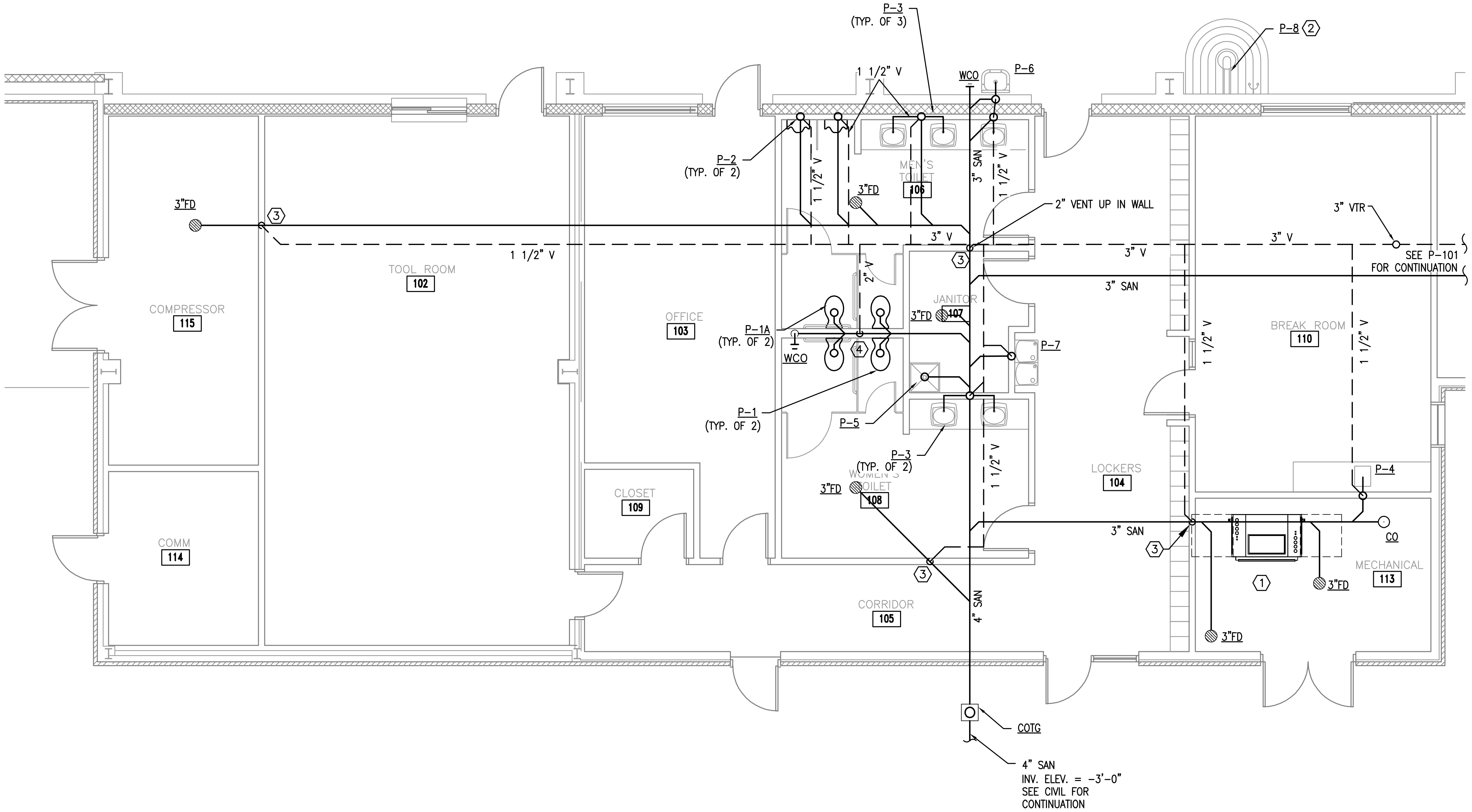


SHEET NOTES

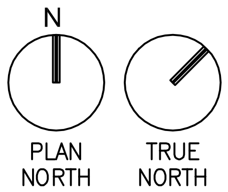
① MECHANICAL EQUIPMENT SHOWN FOR COORDINATION ONLY.

② NO FLOOR DRAIN PROVIDED. SPILL DRAINAGE TO HANGAR FLOOR.

③ ROUTE VENT PIPING OFF TOP OF SANITARY PIPING AND UP WITHIN WALL.

① SANITARY & VENT ENLARGED FLOOR PLAN

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



1/4"=1'-0" 1' 0' 1' 5' 10' 15'

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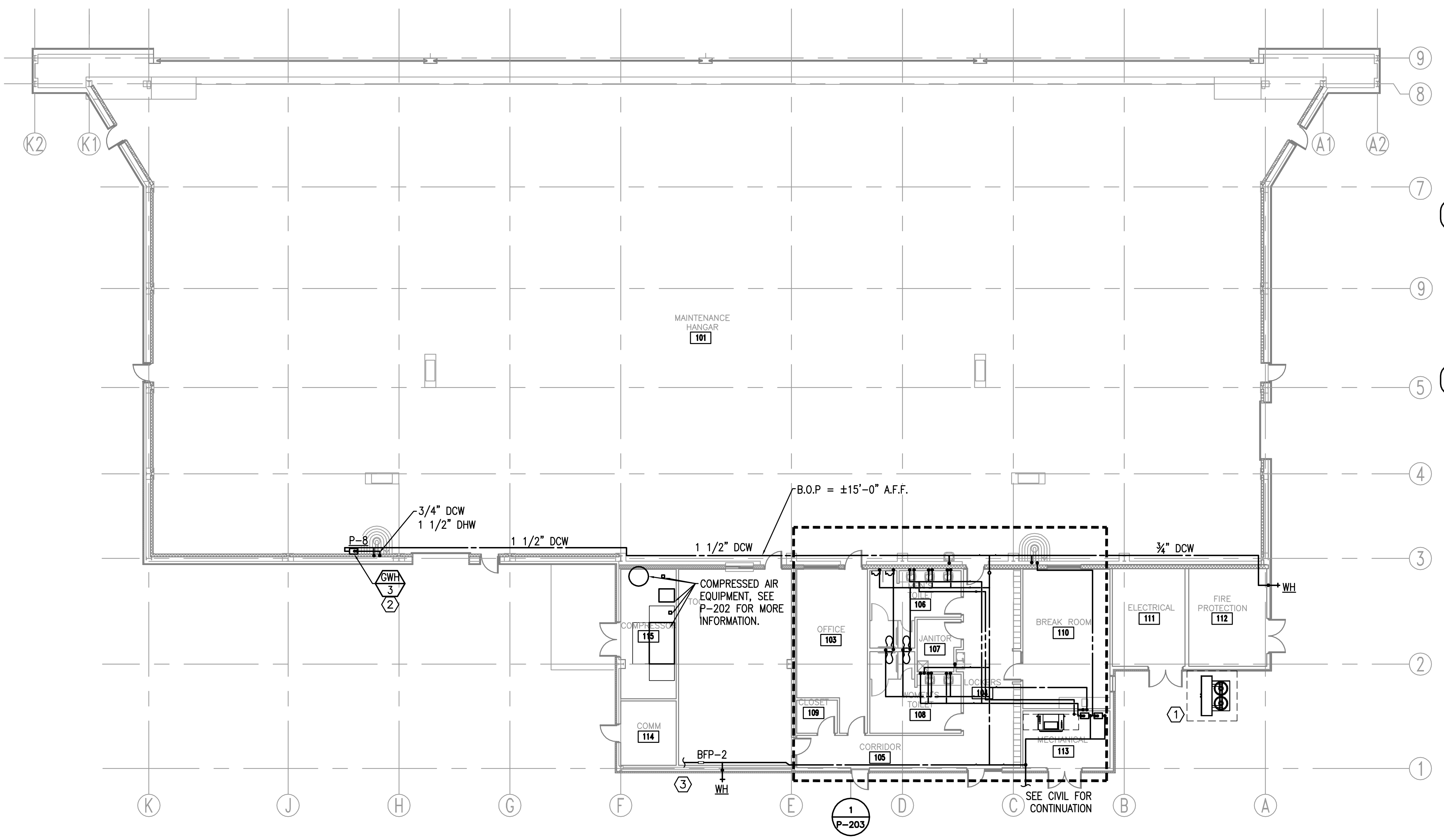
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SANITARY & VENT ENLARGED FLOOR PLAN

SHEET ID
P-102

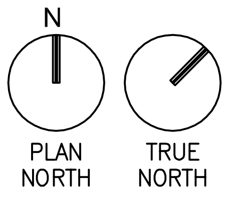
RTA SUBMITTAL

CESAM v20181203



1 DOMESTIC WATER OVERALL FLOOR PLAN

SCALE: 3/32" = 1'-0"



SHEET NOTES

1. MECHANICAL EQUIPMENT SHOWN FOR COORDINATION ONLY.
2. ROUTE 3" INTAKE AND 3" FLUE EXHAUST UP TO MFR. CONCENTRIC VENT KIT THROUGH WALL @ +10'-0" AFF. MOUNT GWH AT +10'-0" AFF, PROVIDE WITH PROTECTIVE METAL CAGE AROUND UNIT.
3. ROUTE ¾" DCW MAKEUP TO CRU HUMIDIFIER. PIPING MUST NOT BE ROUTED OVER COMM EQUIPMENT.

GENERAL NOTES

1. ALL EXPOSED PIPING AND PIPING IN THE HANGAR MUST BE HEAT TRACED AT 5 W/LINEAR FOOT. COORDINATE WITH ELECTRICAL.

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SIZE: ANSI D	FILE NAME: MEF24005P-201.DWG

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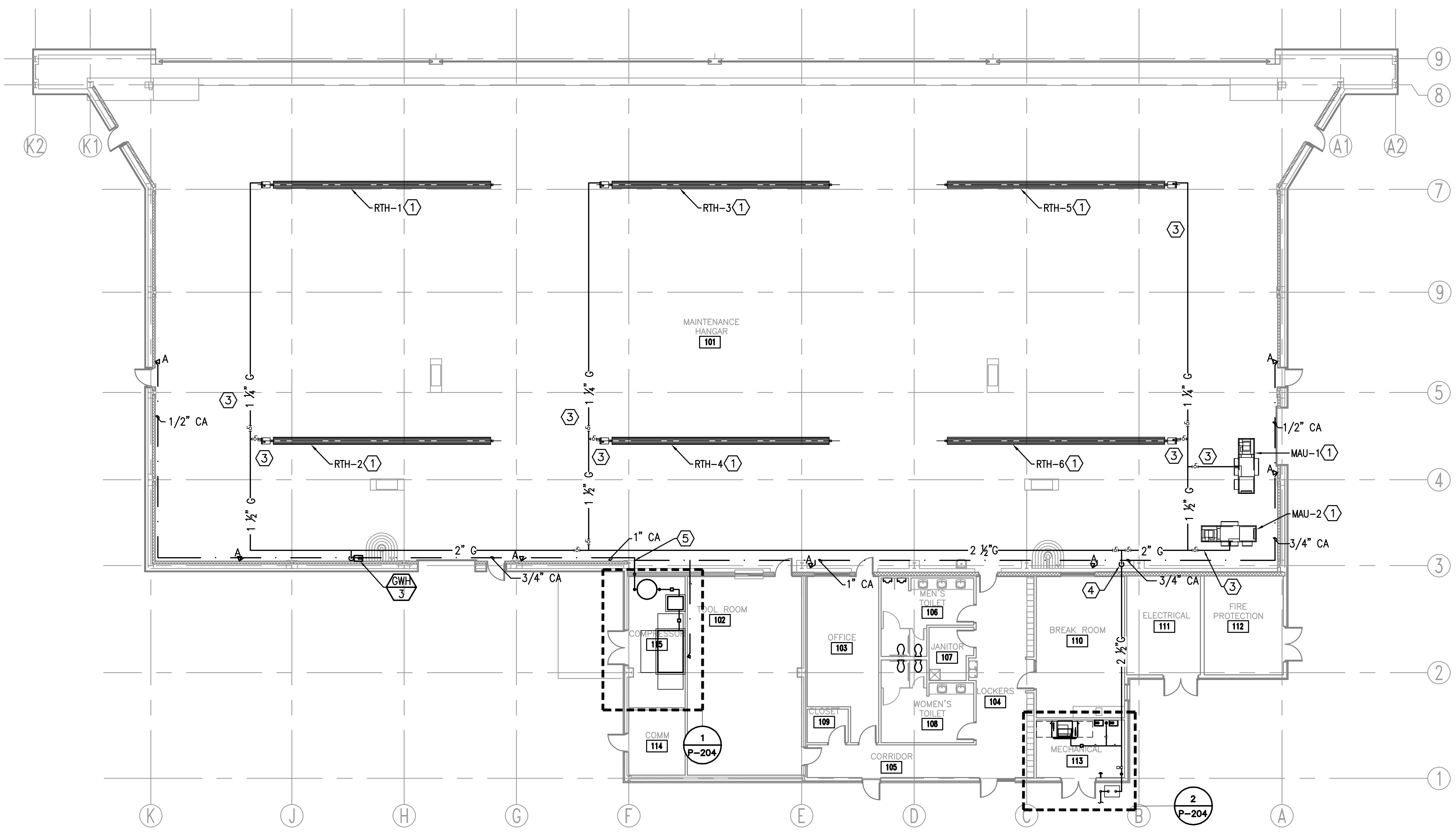
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

DOMESTIC WATER OVERALL
FLOOR PLAN

SHEET ID
P-201

3/32"=1'-0"
0' 10' 20' 30' 40'

RTA SUBMITTAL



SHEET NOTES

① MECHANICAL EQUIPMENT SHOWN FOR COORDINATION ONLY.

② DHWR BALANCING VALVE, BALANCE TO 3 GPM.

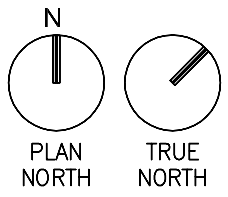
③ PROVIDE GAS REGULATOR DOWNSTREAM OF ISOLATION VALVE FOR FINAL PRESSURE ADJUSTMENT.

④ ROUTE GAS PIPING UP WITHIN STRUCTURE. COORDINATE WITH HVLS AND FIRE SPRINKLER PIPING.

⑤ ROUTE COMPRESSED AIR PIPING AROUND HANGAR PERIMETER @15'-0" A.F.F.

① COMPRESSED AIR & GAS OVERALL FLOOR PLAN

SCALE: 3/32" = 1'-0"



3/32"=1'-0" 0' 10' 20' 30' 40'

SCHMIDT
CONSULTING· GROUP, INC.
FLORIDA LICENSE·NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

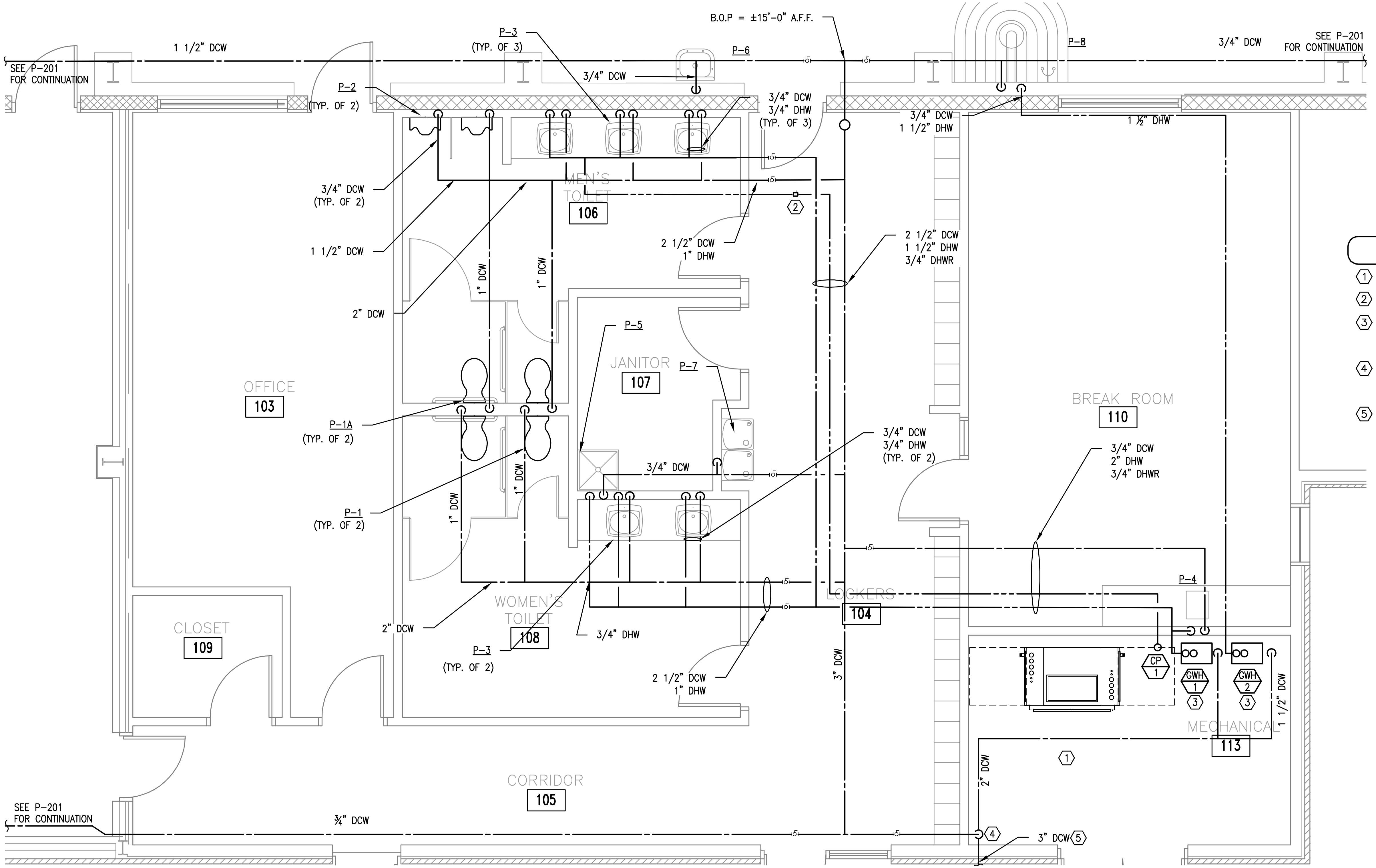
DESIGNED BY: CAP	ISSUE DATE: JUNE 2024
DRAWN BY: CAP	SOLICITATION NO.: -
CHECKED BY: CAP	CONTRACT NO.: -
SUBMITTED BY: CAP	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005P-202.DWG

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

COMPRESSED AIR & GAS OVERALL
FLOOR PLAN

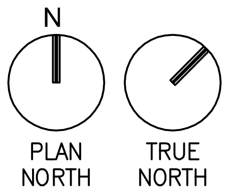
SHEET ID
P-202

RTA SUBMITTAL



① DOMESTIC WATER ENLARGED FLOOR PLAN

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



SHEET NOTES

1. MECHANICAL EQUIPMENT SHOWN FOR COORDINATION ONLY.
2. DHWR BALANCING VALVE, BALANCE TO 3 GPM.
3. ROUTE 3" INTAKE AND 3" FLUE EXHAUST UP TO MFR. CONCENTRIC VENT KIT THROUGH ROOF. REFER TO DETAIL 3 ON P-503.
4. MOUNT BFP-1, ISOLATION VALVE, AND WATER METER IN RISER. PROVIDE CLEARANCE IN FRONT OF DOMESTIC RISER SUFFICIENT FOR GATE VALVE OPERATION.
5. SEE CIVIL FOR CONTINUATION.

3/8"=1'-0" 1' 0 1' 5' 10'

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US Army Corps
of Engineers ®

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SUBMITTED BY: CAP	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005P-203.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

DOMESTIC WATER ENLARGED
FLOOR PLAN

SHEET ID
P-203

RTA SUBMITTAL

SHEET NOTES

1. SEE CIVIL FOR CONTINUATION.
2. GAS SHUTOFF SOLENOID VALVE. COORDINATE WITH ELECTRICAL. SEE MECHANICAL FOR CARBON MONOXIDE INTERLOCK.
3. EMERGENCY GAS SHUTOFF MUSHROOM TYPE PUSH BUTTON. INTERLOCK WITH SOLENOID VALVE. COORDINATE WITH ELECTRICAL.
4. PROVIDE GAS REGULATOR FOR FINAL PRESSURE ADJUSTMENT.
5. ROUTE COMPRESSED AIR PIPING AROUND HANGAR PERIMETER @15'-0" A.F.F.
6. MOUNT ON 4" CONCRETE PAD.
7. MECHANICAL EQUIPMENT SHOWN FOR COORDINATION ONLY.

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CONSULTING· GROUP, INC.
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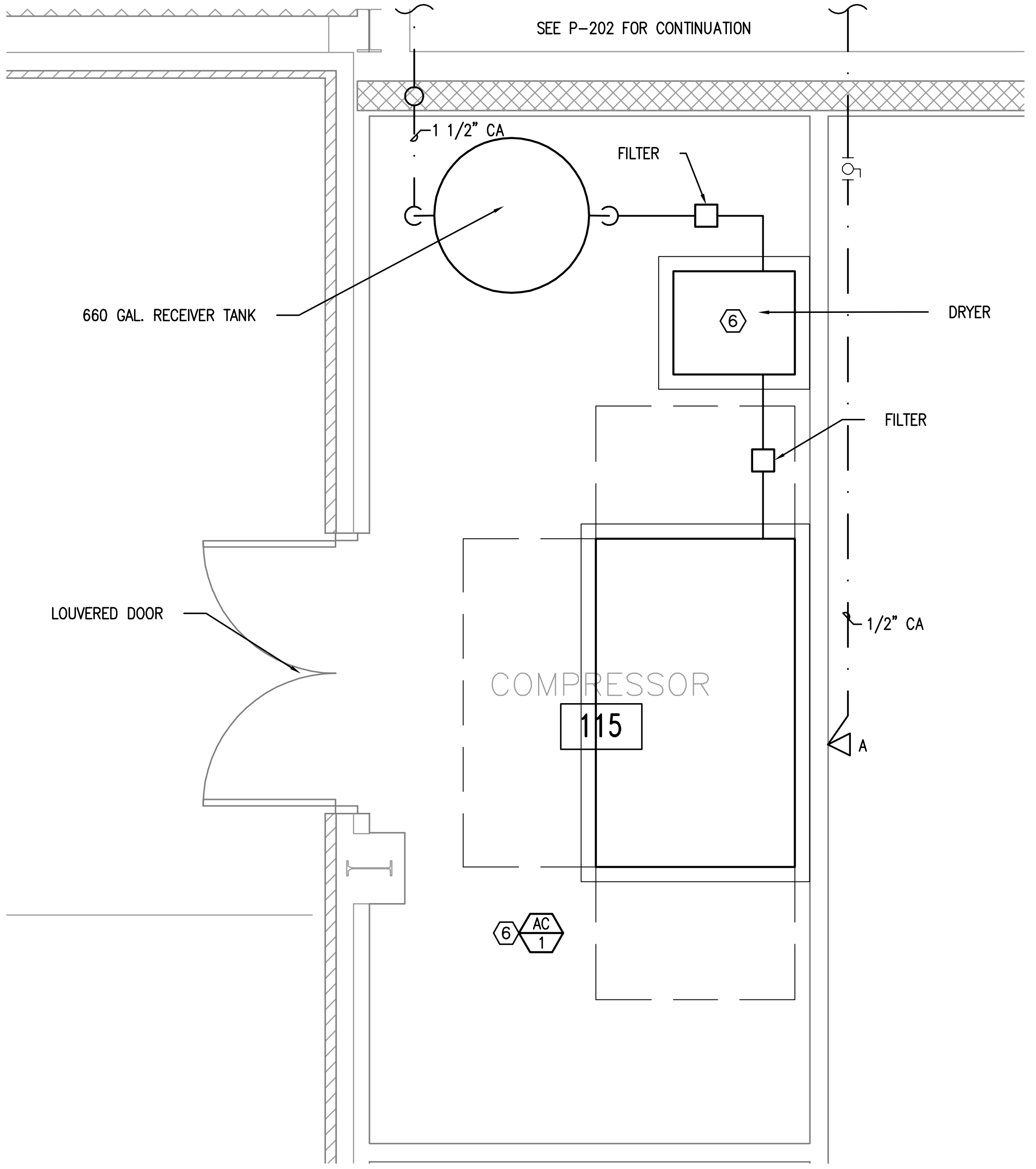
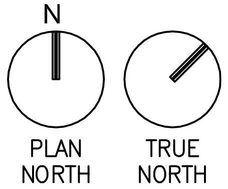
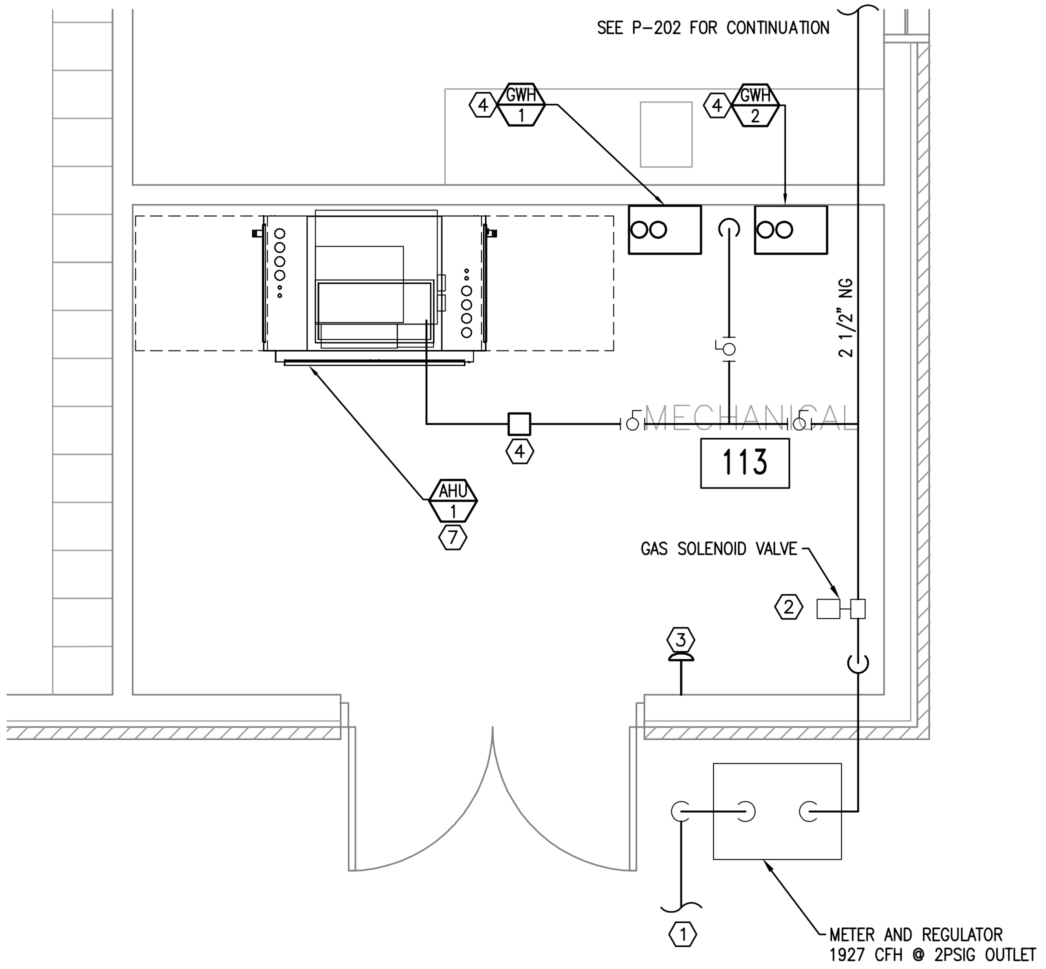


① COMPRESSED AIR & GAS ENLARGED FLOOR PLAN

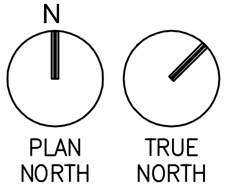
SCALE: 1/2" = 1'-0"





② MECHANICAL ROOM ENLARGED FLOOR PLAN

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



1/2"=1'-0"   1' 0' 1' 2' 3' 4' 5'

MARK	
DESCRIPTION	
DATE	

DESIGNED BY: CAP
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CHECKED BY: CAP
SUBMITTED BY: CAP
SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005P-204.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

US Army Corps of Engineers®

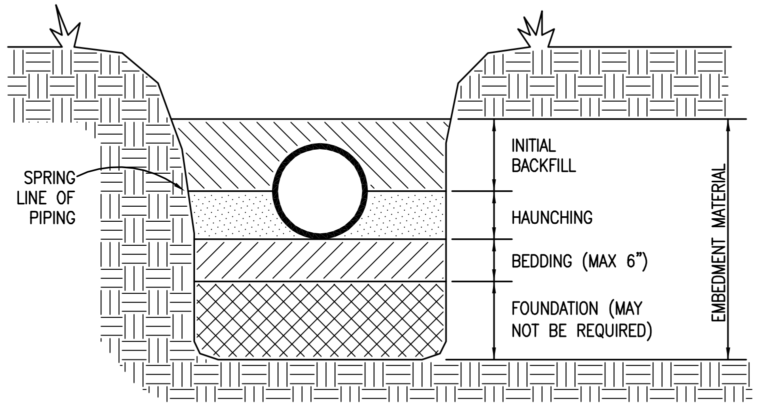
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

COMPRESSED AIR & GAS ENLARGED
FLOOR PLAN

SHEET ID
P-204

RTA SUBMITTAL

CESAM v20181203

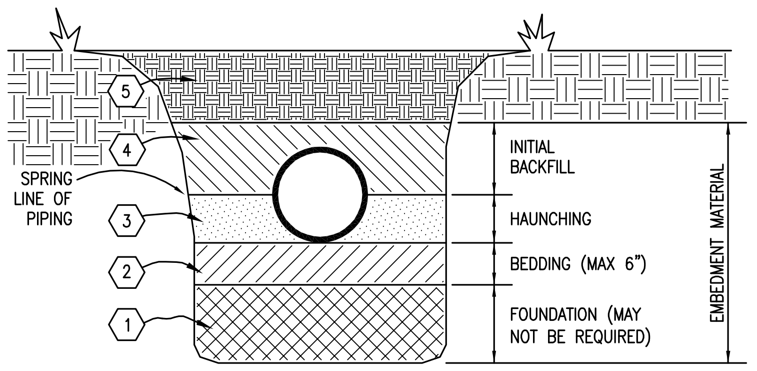


EMBEDMENT MATERIALS

CLASS I:	ANGULAR, ¼'–1 ½", GRADED STONE, INCLUDING A NUMBER OF FILL MATERIALS THAT HAVE REGIONAL SIGNIFICANCE SUCH AS CORAL, SLAG, CINDERS, CRUSHED STONE AND CRUSHED SHELLS.
CLASS II:	COARSE SANDS AND GRAVELS WITH MAXIMUM PARTICLE SIZE OF 1i" INCLUDING VARIOUS GRADED SANDS AND GRAVELS CONTAINING SMALL PERCENTAGES OF FINES, GENERALLY GRANULAR AND NON–COHESIVE, EITHER WET OR DRY. SOIL TYPES GW, GP, SW, AND SP ARE INCLUDED IN THIS CLASS.
CLASS III:	FINE SAND AND CLAY GRAVELS, INCLUDING FINE SANDS, SANDCLAY MIXTURES AND GRAVEL–CLAY MIXTURES. SOIL TYPES GM, GC, SM, AND SC ARE INCLUDED IN THIS CLASS.
CLASS IV:	SILT, SILTY CLAYS, AND CLAYS, INCLUDING INORGANIC CLAYS AND SILT OF MEDIUM TO HIGH PLASTICITY AND LIQUID LIMITS. SOIL TYPES MH, ML, CH, AND CL ARE INCLUDED IN THIS CLASS. THESE MATERIALS ARE NOT TO BE USED FOR BEDDING, HAUNCHING, OR INITIAL BACKFILL.
CLASS V:	THIS CLASS INCLUDES THE ORGANIC SOILS, AS WELL AS SOILS CONTAINING FROZEN EARTH, DEBRIS, ROCKS LARGER THAN 1 ½" IN DIAMETER AND OTHER FOREIGN. MATERIALS. THESE MATERIALS ARE NOT TO BE USED FOR BEDDING, HAUNCHING, OR INITIAL BACKFILL.

1 GENERAL DATA SOIL CLASSIFICATION

NOT TO SCALE

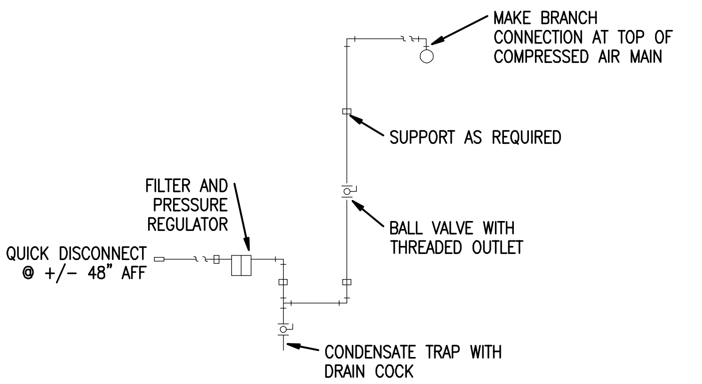


1. A FOUNDATION MAY BE REQUIRED IN VERY POOR SOIL CONDITIONS.
2. BEDDING IS REQUIRED PRIMARILY TO BRING THE TRENCH BOTTOM UP TO GRADE. BEDDING MATERIALS MUST PROVIDE A UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE. IN DRY SOIL CONDITIONS, CLASS II OR III MATERIAL MUST BE HAND PLACED IN 4–6", LIGHTLY COMPACTED UNIFORM AND NOT FINER THAN THE FOUNDATION MATERIAL. IN WET CONDITIONS, CLASS I, II OR III MATERIAL MUST BE HAND PLACED, 4–6", UNIFORM AND NOT FINER THAN THE FOUNDATION MATERIAL. WHEN UTILIZING CLASS I MATERIAL, SUFFICIENT AMOUNTS OF CLASS II OR III MATERIAL MUST BE ADDED TO FILL ALL VOIDS CREATED BY THE USE OF CLASS I MATERIAL.
3. HAUNCHING MATERIAL MUST BE HAND PLACED TO THE SPRINGLINE OF THE PIPE. CLASS II OR III MATERIAL MUST BE CONSOLIDATED UNDER THE PIPE AND HAND TAMPED TO PROVIDE ADEQUATE SIDE SUPPORT.
4. INITIAL BACKFILL MATERIAL MUST BE CLASS II OR III. IT MUST BE PLACED WITHIN 24–30" ABOVE THE TOP OF THE PIPE AND TAMPED BY A PORTABLE VIBRATOR.
5. FINAL BACKFILL MATERIAL MAY BE MACHINE PLACED. THE MATERIAL MUST BE CLASS II OR III MATERIAL. CLASS IV MATERIAL MAY BE INSTALLED OUTSIDE OF ROADWAY. FINAL BACKFILL UNDER ROADWAYS MAY REQUIRE SPECIAL COMPACTION AND DENSITY TESTS. A MINIMUM OF 30" OF COVER OVER THE TOP OF THE PIPE MUST BE PROVIDED BEFORE THE TRENCH IS WHEEL– LOADED.

NOTE:
ALL EMBEDMENT MATERIALS MUST BE NO LESS THAN 95% OF MAXIMUM DENSITY. LABORATORY TESTING OF THE SOIL WILL BE REQUIRED. THIS PROCEDURE MUST BE REQUIRED ON ALL INSTALLATIONS.

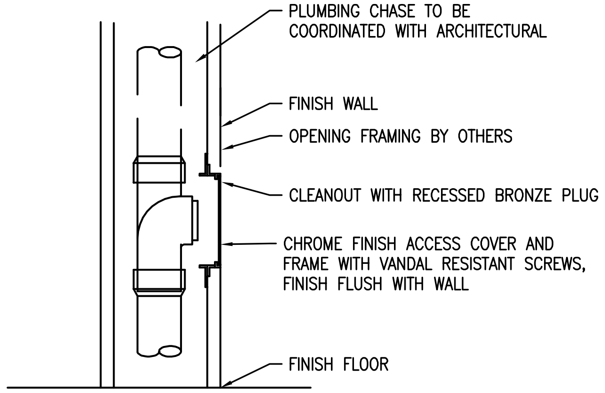
2 GENERAL DATA BACKFILLING REQ.

NOT TO SCALE


MAKE BRANCH CONNECTION AT TOP OF COMPRESSED AIR MAIN
SUPPORT AS REQUIRED
FILTER AND PRESSURE REGULATOR
BALL VALVE WITH THREADED OUTLET
QUICK DISCONNECT @ +/- 48" AFF
CONDENSATE TRAP WITH DRAIN COCK

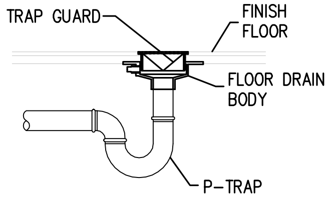
3 TYPICAL COMPRESSED AIR DROP DETAIL

NOT TO SCALE


PLUMBING CHASE TO BE COORDINATED WITH ARCHITECTURAL
FINISH WALL
OPENING FRAMING BY OTHERS
CLEANOUT WITH RECESSED BRONZE PLUG
CHROME FINISH ACCESS COVER AND FRAME WITH VANDAL RESISTANT SCREWS, FINISH FLUSH WITH WALL
FINISH FLOOR

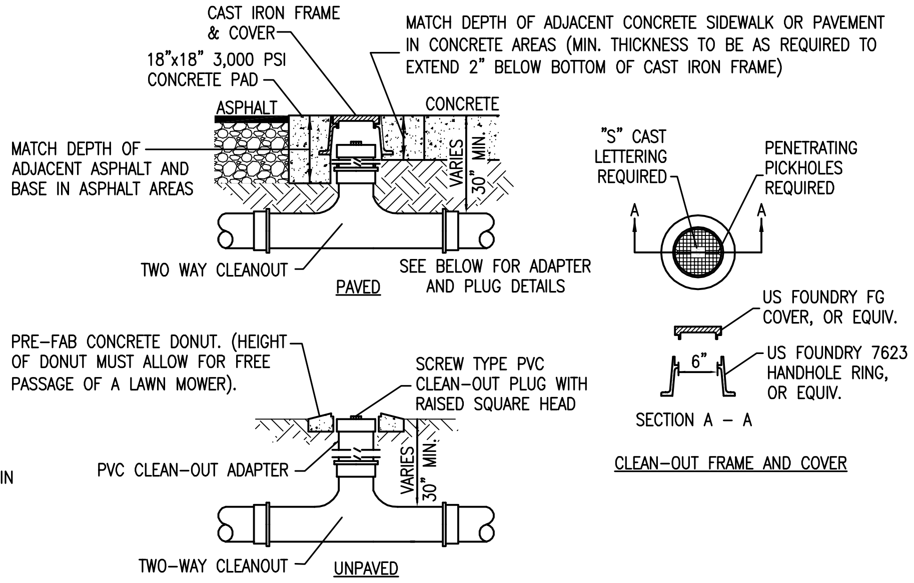
4 WALL CLEANOUT (WCO) DETAIL

NOT TO SCALE



5 FLOOR DRAIN WITH TRAP GUARD DETAIL

NOT TO SCALE

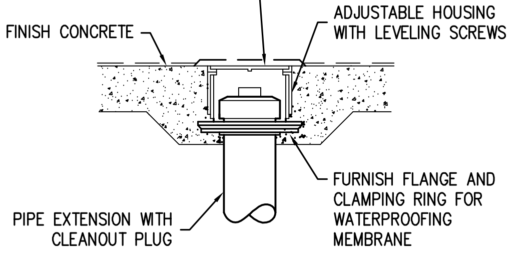

CAST IRON FRAME & COVER
18"x18" 3,000 PSI CONCRETE PAD
MATCH DEPTH OF ADJACENT CONCRETE SIDEWALK OR PAVEMENT IN CONCRETE AREAS (MIN. THICKNESS TO BE AS REQUIRED TO EXTEND 2" BELOW BOTTOM OF CAST IRON FRAME)
ASPHALT
CONCRETE
MATCH DEPTH OF ADJACENT ASPHALT AND BASE IN ASPHALT AREAS
VARIES
30" MIN.
TWO WAY CLEANOUT
PAVED
SEE BELOW FOR ADAPTER AND PLUG DETAILS
"S" CAST LETTERING REQUIRED
PENETRATING PICKHOLES REQUIRED
A
A
US FOUNDRY FG COVER, OR EQUIV.
6"
US FOUNDRY 7623 HANDHOLE RING, OR EQUIV.
SECTION A – A
CLEAN–OUT FRAME AND COVER
PRE–FAB CONCRETE DONUT. (HEIGHT OF DONUT MUST ALLOW FOR FREE PASSAGE OF A LAWN MOWER).
SCREW TYPE PVC CLEAN–OUT PLUG WITH RAISED SQUARE HEAD
PVC CLEAN–OUT ADAPTER
VARIES
30" MIN.
TWO–WAY CLEANOUT
UNPAVED

NOTE: CLEAN–OUT PIPE AND FITTINGS TO MATCH SIZE OF LINE INTO WHICH ACCESS IS BEING PROVIDED.

6 CLEANOUT TO GRADE DETAIL

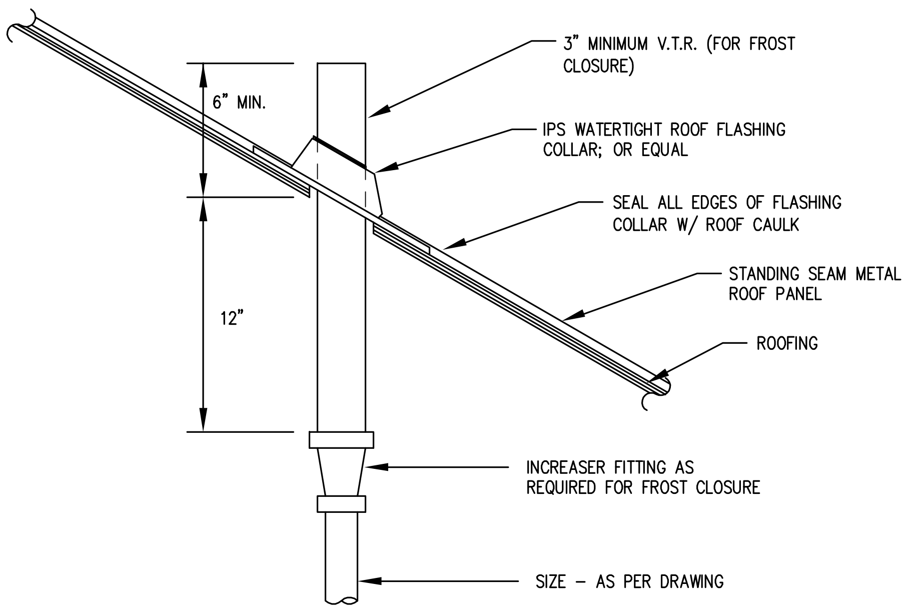
NOT TO SCALE

NOTE:
PROVIDE NICKEL BRONZE ADJUSTABLE CARPET FRAME COVER IN AREAS WHERE FINAL FLOOR FINISH CONSISTS OF CARPETING. COORDINATE WITH DWG'S FOR FINAL FLOOR FINISH.


FINISH CONCRETE
ADJUSTABLE HOUSING WITH LEVELING SCREWS
FURNISH FLANGE AND CLAMPING RING FOR WATERPROOFING MEMBRANE
PIPE EXTENSION WITH CLEANOUT PLUG

7 FLOOR CLEANOUT DETAIL

NOT TO SCALE


3" MINIMUM V.T.R. (FOR FROST CLOSURE)
6" MIN.
IPS WATERTIGHT ROOF FLASHING COLLAR; OR EQUAL
SEAL ALL EDGES OF FLASHING COLLAR W/ ROOF CAULK
STANDING SEAM METAL ROOF PANEL
12"
ROOFING
INCREASER FITTING AS REQUIRED FOR FROST CLOSURE
SIZE – AS PER DRAWING

8 VENT THROUGH METAL ROOF DETAIL

NOT TO SCALE

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SCG project: 2022-134

US Army Corps of Engineers ®

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SIZE: ANSI D	FILE NAME: MEF24005P-501.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

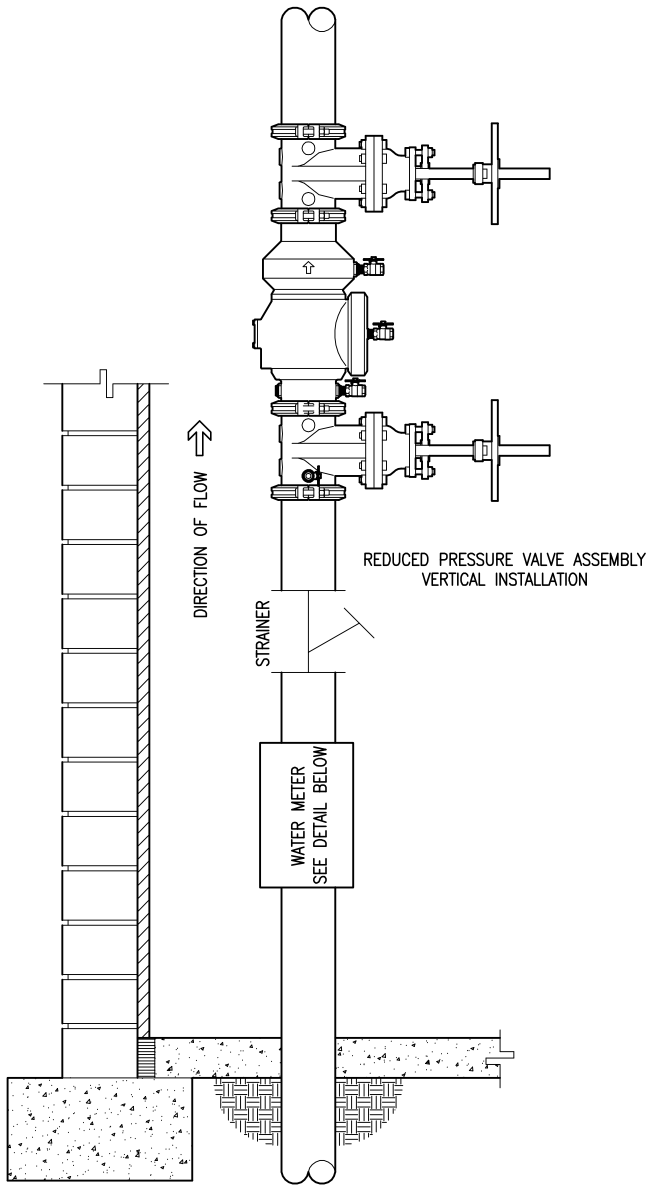
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLUMBING DETAILS

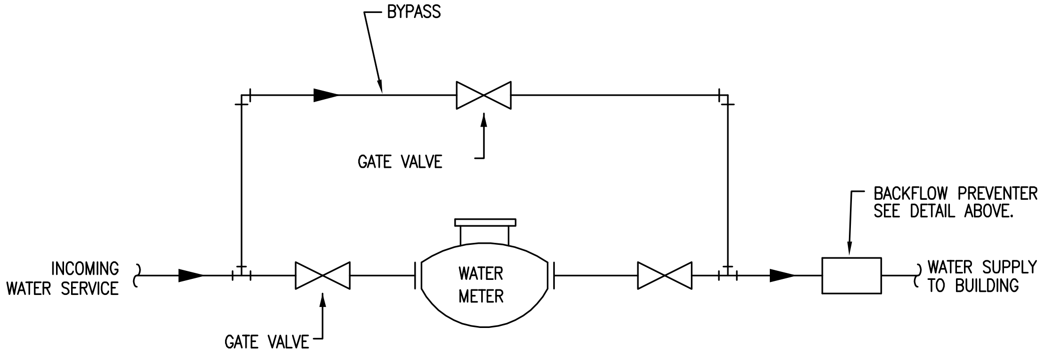
SHEET ID
P-501

RTA SUBMITTAL



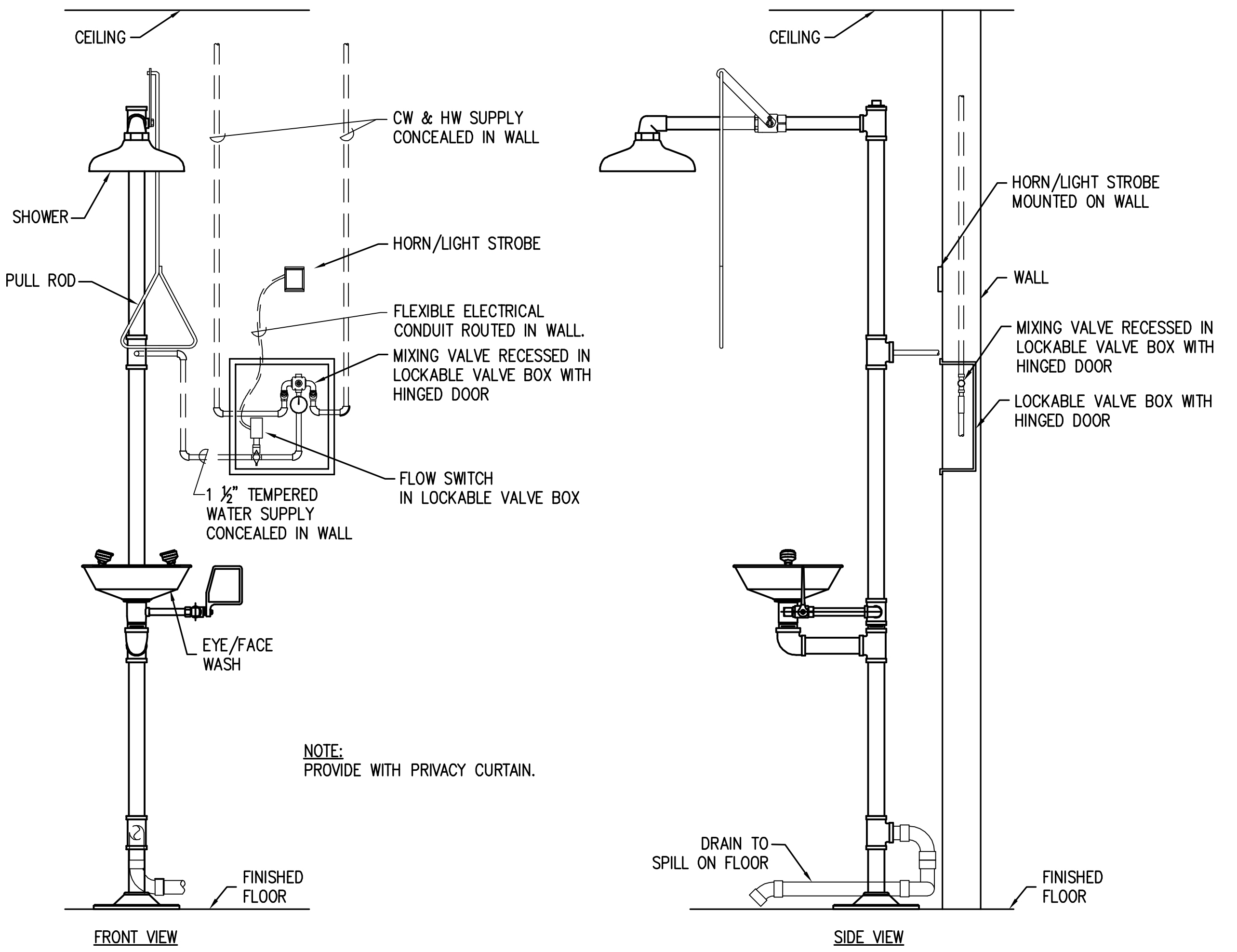
① BACKFLOW PREVENTER DETAIL

NOT TO SCALE



④ WATER METER INSTALLATION

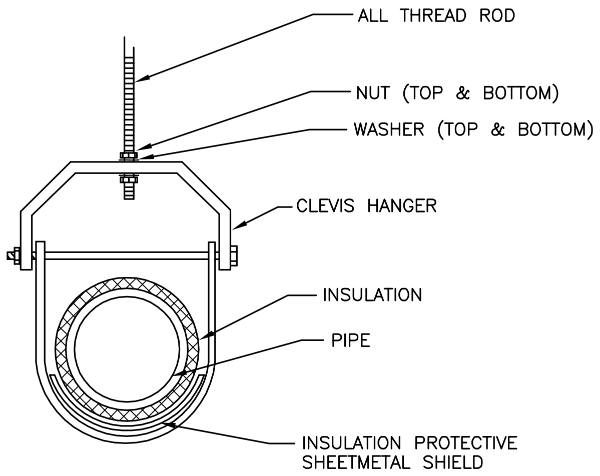
NOT TO SCALE



NOTE:
PROVIDE WITH PRIVACY CURTAIN.

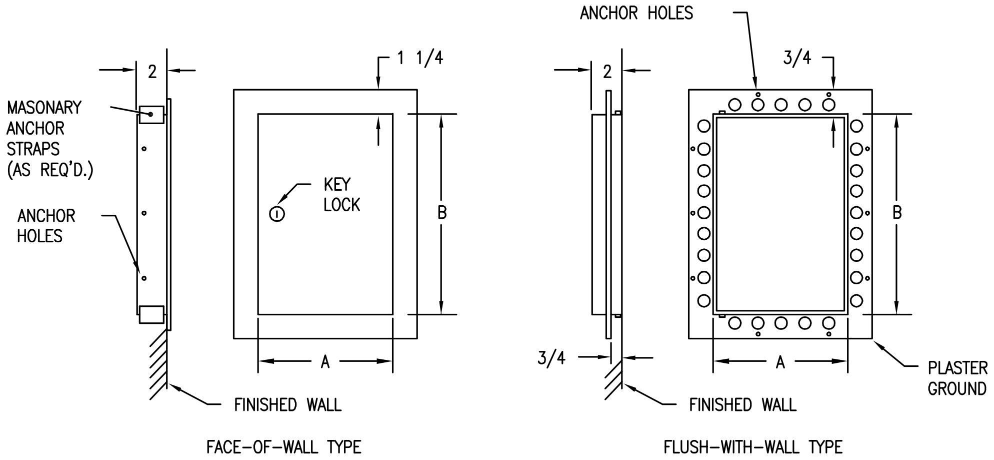
② EMERGENCY EYEWASH AND SHOWER DETAIL

NOT TO SCALE



③ TYPICAL CLEVIS HANGER DETAIL

NOT TO SCALE

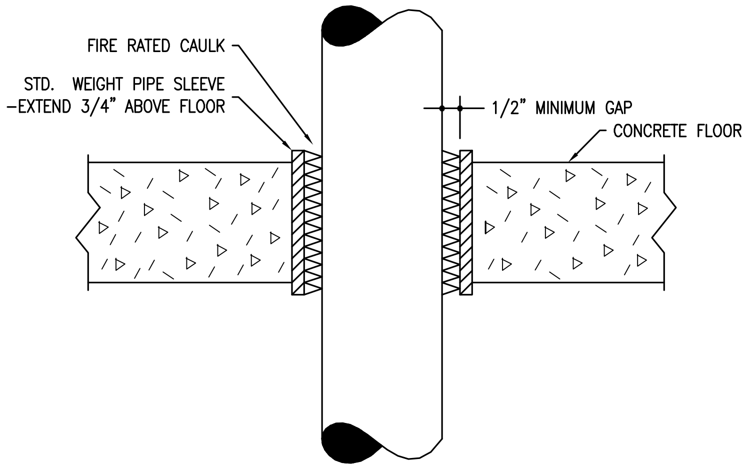


NOTES:

1. MINIMUM SIZE FOR WASTE PIPE CLEANOUT ACCESS DOOR = 12 X 16 ("A" X "B").
2. MINIMUM SIZE FOR DOMESTIC WATER VALVE ACCESS DOOR = 10 X 10 ("A" X "B").
3. ACCESS DOOR TO BE OF PRIME COATED STEEL, UNLESS OTHER WISE NOTED.

⑤ ACCESS DOOR DETAIL

NOT TO SCALE



⑥ PIPE SLEEVE THROUGH FLOOR DETAIL

NOT TO SCALE

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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

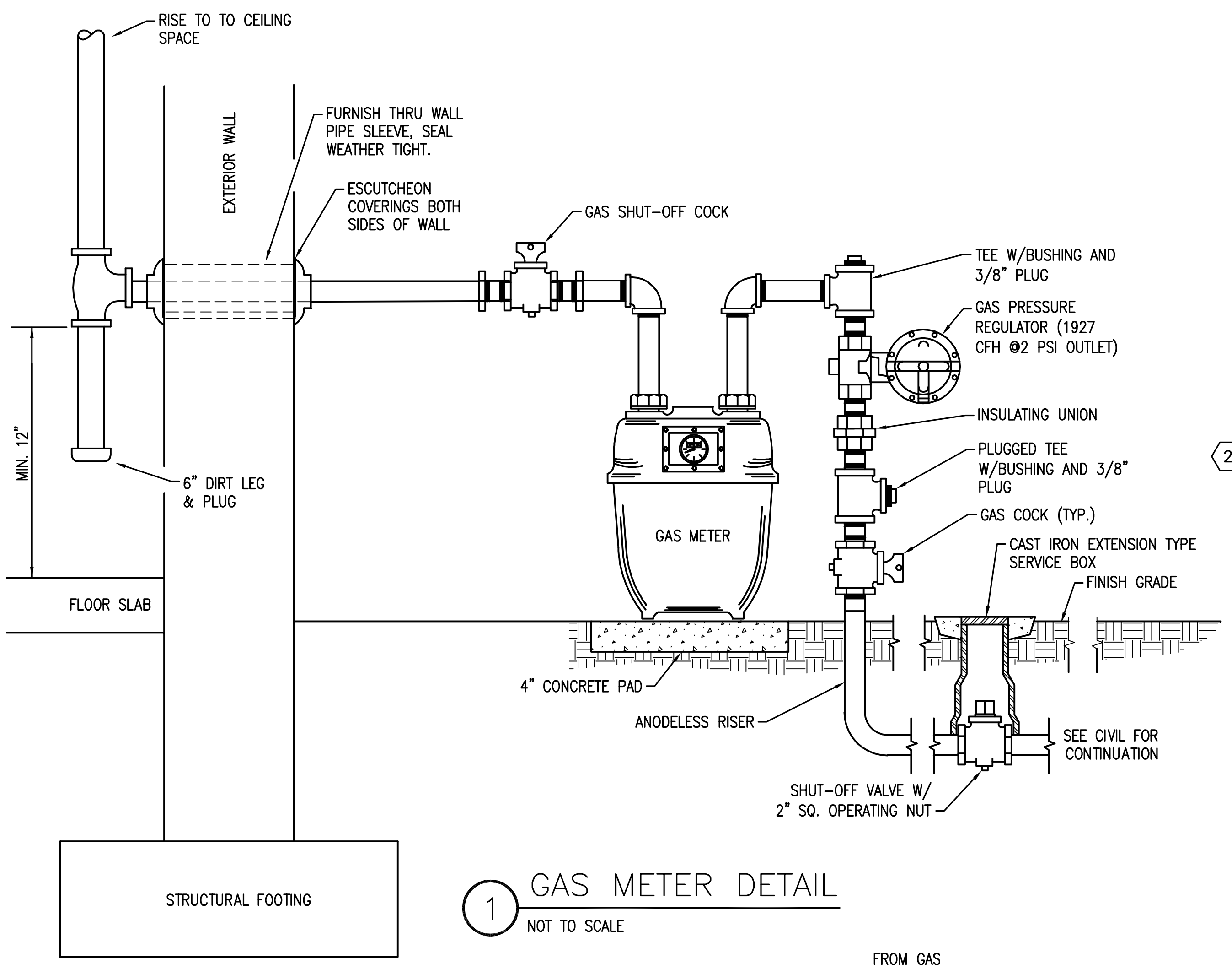
PLUMBING DETAILS

SHEET ID

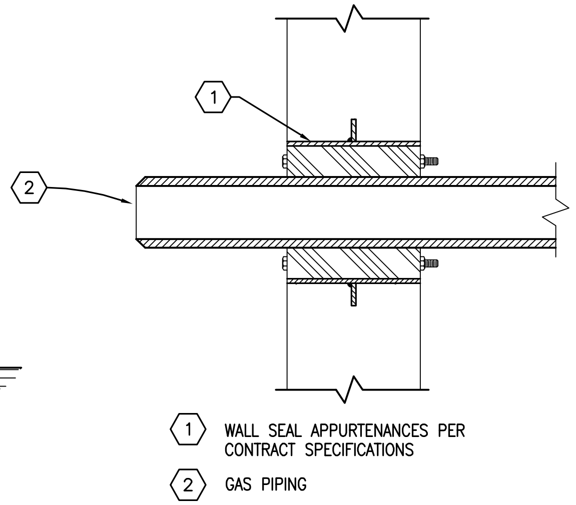
P-502

RTA SUBMITTAL

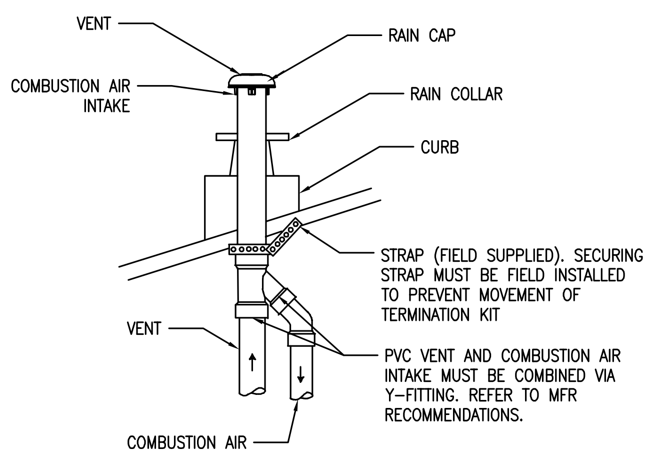
CESAM v20181203


RISE TO TO CEILING SPACE
EXTERIOR WALL
FURNISH THRU WALL PIPE SLEEVE, SEAL WEATHER TIGHT.
ESCUTCHEON COVERINGS BOTH SIDES OF WALL
GAS SHUT-OFF COCK
TEE W/BUSHING AND 3/8" PLUG
GAS PRESSURE REGULATOR (1927 CFH @2 PSI OUTLET)
INSULATING UNION
PLUGGED TEE W/BUSHING AND 3/8" PLUG
GAS COCK (TYP.)
CAST IRON EXTENSION TYPE SERVICE BOX
FINISH GRADE
MIN. 12"
6" DIRT LEG & PLUG
GAS METER
FLOOR SLAB
4" CONCRETE PAD
ANODELESS RISER
SEE CIVIL FOR CONTINUATION
SHUT-OFF VALVE W/ 2" SQ. OPERATING NUT
STRUCTURAL FOOTING

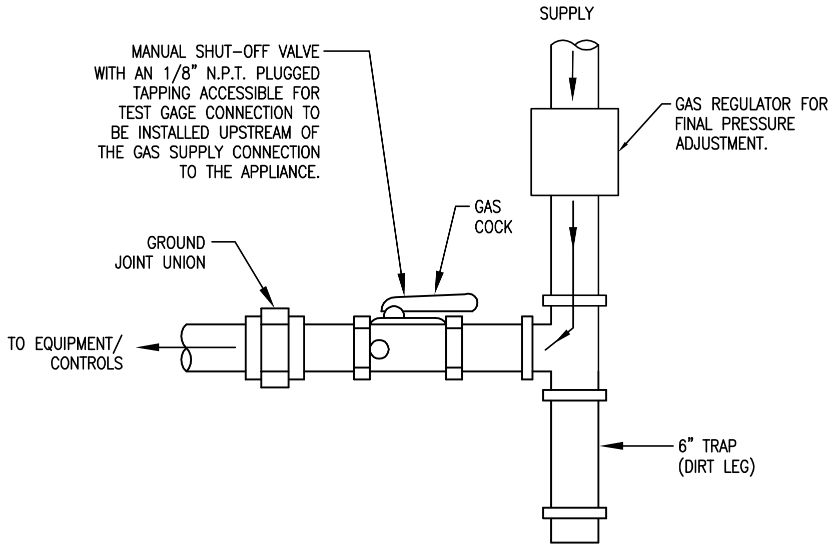
① GAS METER DETAIL
NOT TO SCALE



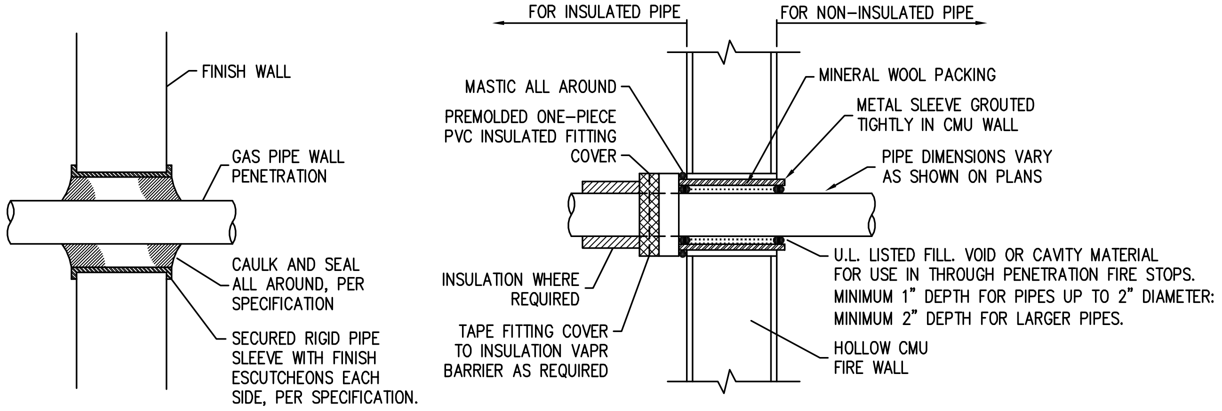
② TYPICAL GAS PIPE WALL PENETRATION DETAIL
NOT TO SCALE


VENT
COMBUSTION AIR INTAKE
RAIN CAP
RAIN COLLAR
CURB
STRAP (FIELD SUPPLIED). SECURING STRAP MUST BE FIELD INSTALLED TO PREVENT MOVEMENT OF TERMINATION KIT
VENT
PVC VENT AND COMBUSTION AIR INTAKE MUST BE COMBINED VIA Y-FITTING. REFER TO MFR RECOMMENDATIONS.
COMBUSTION AIR

③ CONCENTRIC VENT KIT DETAIL
NOT TO SCALE


FROM GAS SUPPLY
MANUAL SHUT-OFF VALVE WITH AN 1/8" N.P.T. PLUGGED TAPPING ACCESSIBLE FOR TEST GAGE CONNECTION TO BE INSTALLED UPSTREAM OF THE GAS SUPPLY CONNECTION TO THE APPLIANCE.
GAS REGULATOR FOR FINAL PRESSURE ADJUSTMENT.
GAS COCK
GROUND JOINT UNION
TO EQUIPMENT/ CONTROLS
6" TRAP (DIRT LEG)

④ GAS CONNECTION TO EQUIPMENT DETAIL
NOT TO SCALE


FINISH WALL
GAS PIPE WALL PENETRATION
CAULK AND SEAL ALL AROUND, PER SPECIFICATION
SECURED RIGID PIPE SLEEVE WITH FINISH ESCUTCHEONS EACH SIDE, PER SPECIFICATION.
FOR INSULATED PIPE
FOR NON-INSULATED PIPE
MASTIC ALL AROUND
PREMOLDED ONE-PIECE PVC INSULATED FITTING COVER
INSULATION WHERE REQUIRED
TAPE FITTING COVER TO INSULATION VAPR BARRIER AS REQUIRED
MINERAL WOOL PACKING
METAL SLEEVE GROUTED TIGHTLY IN CMU WALL
PIPE DIMENSIONS VARY AS SHOWN ON PLANS
U.L. LISTED FILL. VOID OR CAVITY MATERIAL FOR USE IN THROUGH PENETRATION FIRE STOPS. MINIMUM 1" DEPTH FOR PIPES UP TO 2" DIAMETER: MINIMUM 2" DEPTH FOR LARGER PIPES.
HOLLOW CMU FIRE WALL

⑤ FIRE PENETRATION DETAILS
NOT TO SCALE

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FLORIDA LICENSE NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

US Army Corps of Engineers®

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DESIGNED BY: CAP
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SUBMITTED BY: CAP
SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
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PROJECT NUMBER: MEF24005
FILE NAME: MEF24005P-503.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

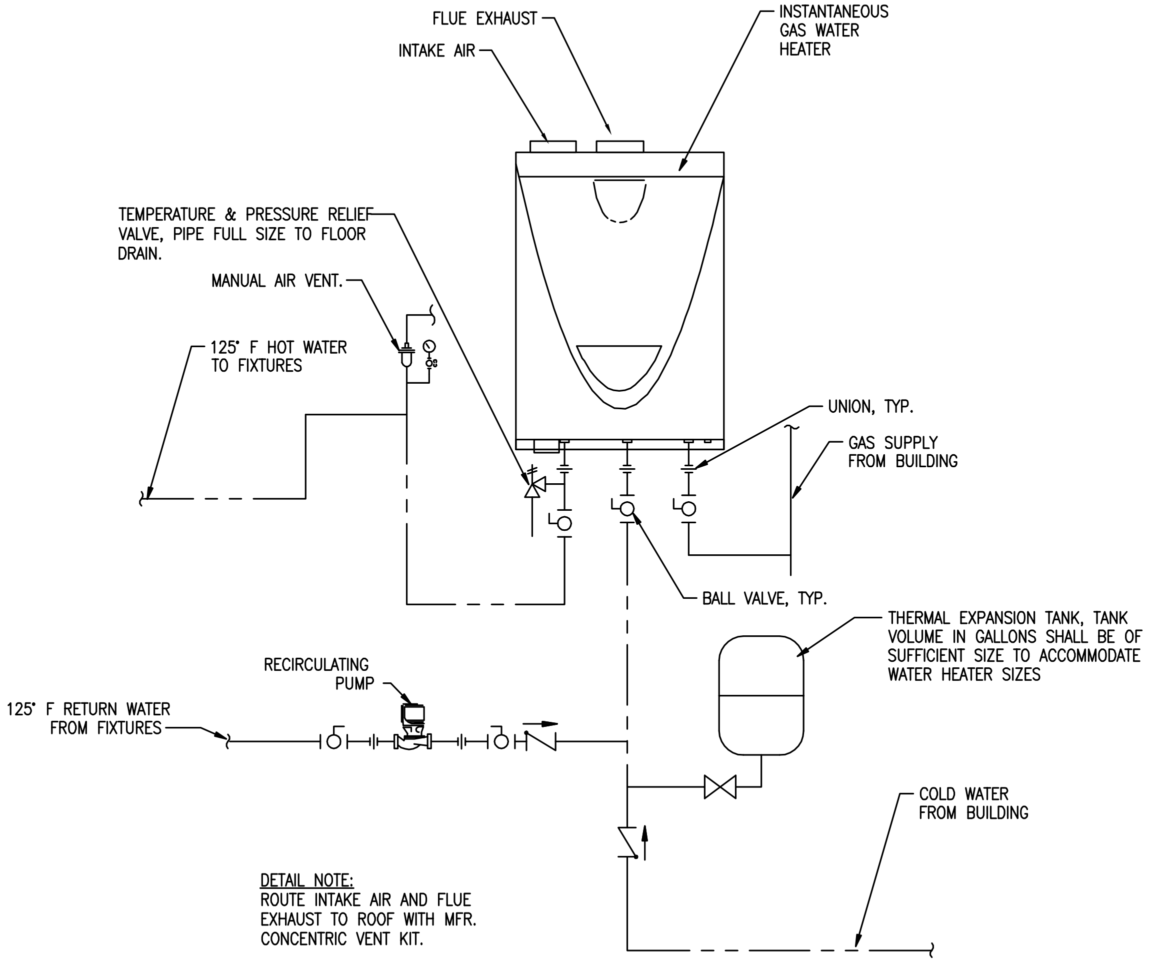
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLUMBING DETAILS

SHEET ID
P-503

RTA SUBMITTAL

CESAM v20181203

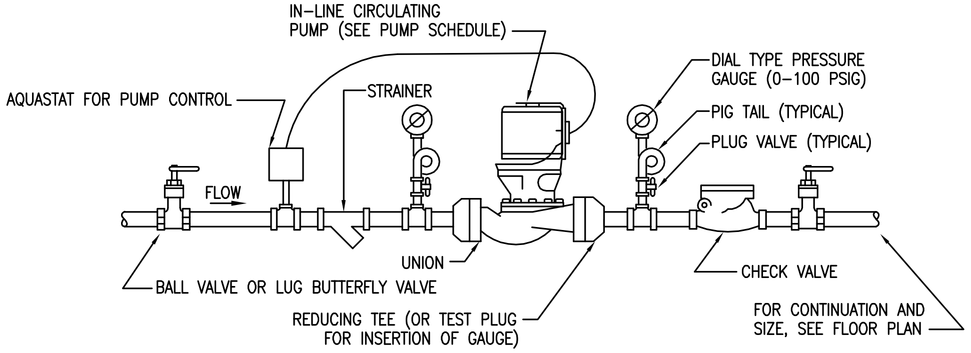


FLUE EXHAUST
INTAKE AIR
INSTANTANEOUS GAS WATER HEATER
TEMPERATURE & PRESSURE RELIEF VALVE, PIPE FULL SIZE TO FLOOR DRAIN.
MANUAL AIR VENT.
125° F HOT WATER TO FIXTURES
UNION, TYP.
GAS SUPPLY FROM BUILDING
BALL VALVE, TYP.
THERMAL EXPANSION TANK, TANK VOLUME IN GALLONS SHALL BE OF SUFFICIENT SIZE TO ACCOMMODATE WATER HEATER SIZES
RECIRCULATING PUMP
125° F RETURN WATER FROM FIXTURES
COLD WATER FROM BUILDING

DETAIL NOTE:
ROUTE INTAKE AIR AND FLUE EXHAUST TO ROOF WITH MFR. CONCENTRIC VENT KIT.

1 INSTANTANEOUS GAS WATER HEATER DETAIL

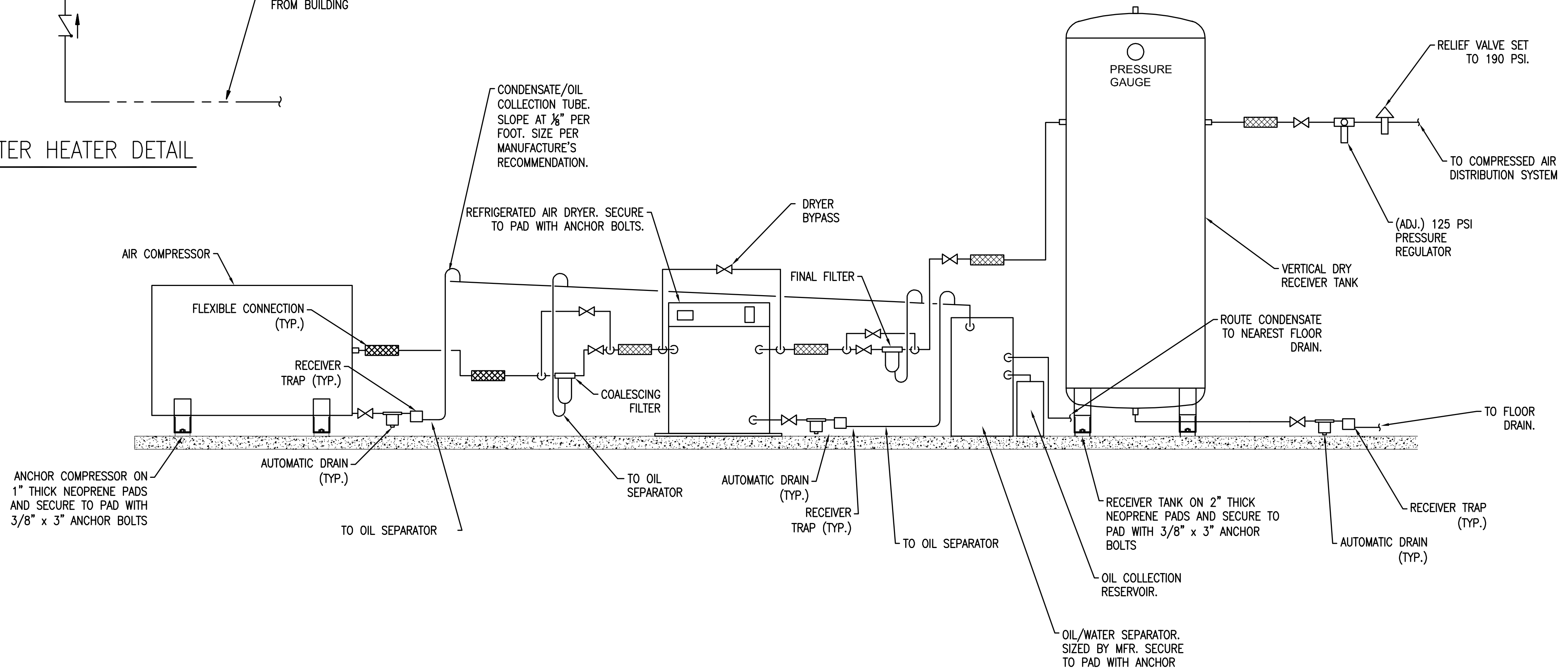
NOT TO SCALE



IN-LINE CIRCULATING PUMP (SEE PUMP SCHEDULE)
AQUASTAT FOR PUMP CONTROL
STRAINER
DIAL TYPE PRESSURE GAUGE (0-100 PSIG)
PIG TAIL (TYPICAL)
PLUG VALVE (TYPICAL)
FLOW
UNION
BALL VALVE OR LUG BUTTERFLY VALVE
CHECK VALVE
REDUCING TEE (OR TEST PLUG FOR INSERTION OF GAUGE)
FOR CONTINUATION AND SIZE, SEE FLOOR PLAN

2 IN-LINE CIRCULATING PUMP DETAIL

NOT TO SCALE



CONDENSATE/OIL COLLECTION TUBE. SLOPE AT ⅛" PER FOOT. SIZE PER MANUFACTURE'S RECOMMENDATION.
PRESSURE GAUGE
RELIEF VALVE SET TO 190 PSI.
TO COMPRESSED AIR DISTRIBUTION SYSTEM
REFRIGERATED AIR DRYER. SECURE TO PAD WITH ANCHOR BOLTS.
DRYER BYPASS
AIR COMPRESSOR
(ADJ.) 125 PSI PRESSURE REGULATOR
FINAL FILTER
VERTICAL DRY RECEIVER TANK
FLEXIBLE CONNECTION (TYP.)
ROUTE CONDENSATE TO NEAREST FLOOR DRAIN.
RECEIVER TRAP (TYP.)
COALESCING FILTER
TO FLOOR DRAIN.
ANCHOR COMPRESSOR ON 1" THICK NEOPRENE PADS AND SECURE TO PAD WITH 3/8" x 3" ANCHOR BOLTS
AUTOMATIC DRAIN (TYP.)
TO OIL SEPARATOR
AUTOMATIC DRAIN (TYP.)
RECEIVER TRAP (TYP.)
TO OIL SEPARATOR
RECEIVER TANK ON 2" THICK NEOPRENE PADS AND SECURE TO PAD WITH 3/8" x 3" ANCHOR BOLTS
RECEIVER TRAP (TYP.)
AUTOMATIC DRAIN (TYP.)
TO OIL SEPARATOR
OIL COLLECTION RESERVOIR.
OIL/WATER SEPARATOR. SIZED BY MFR. SECURE TO PAD WITH ANCHOR BOLTS.

3 COMPRESSED AIR EQUIPMENT SCHEMATIC

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US Army Corps of Engineers®

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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: CAP	ISSUE DATE: JUNE 2024
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLUMBING DETAILS

SHEET ID
P-504

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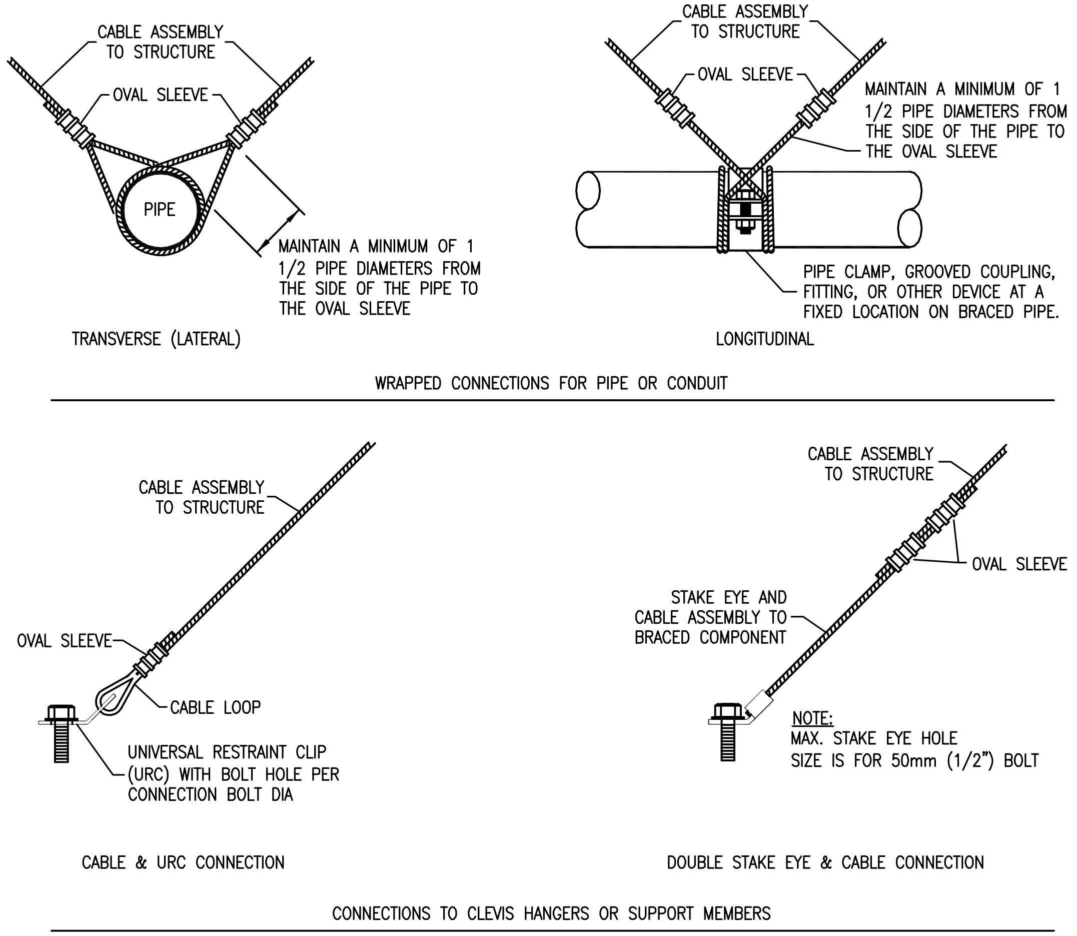
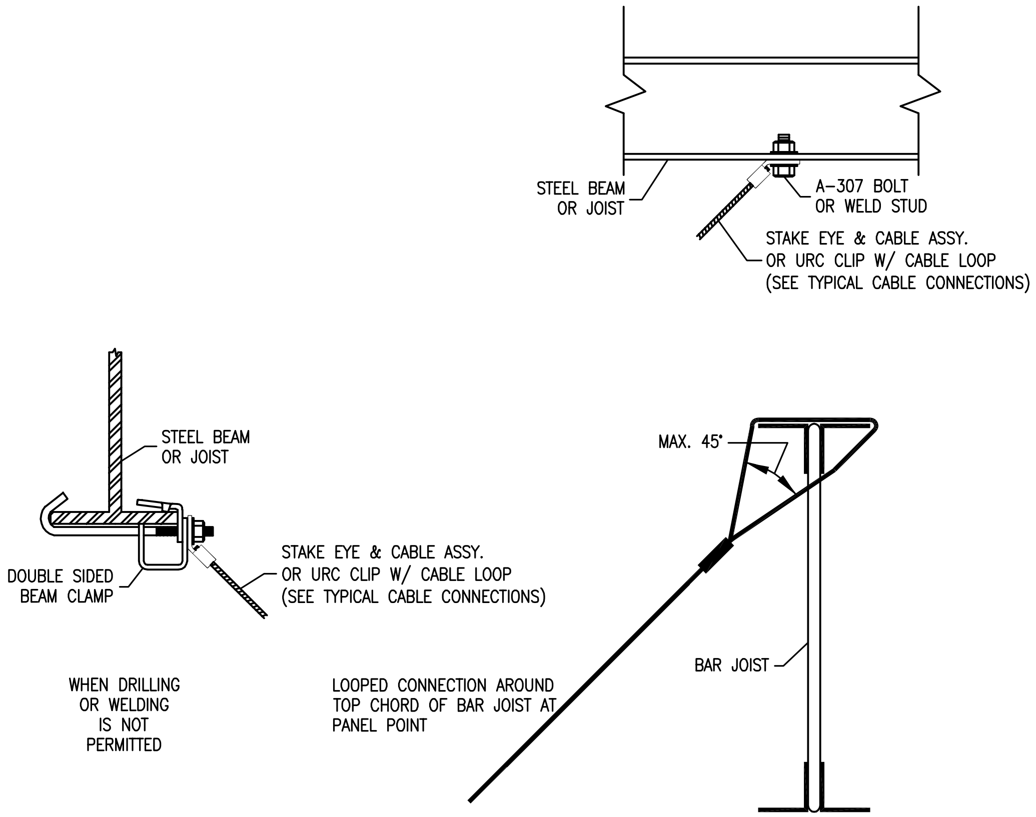

CABLE ASSEMBLY TO STRUCTURE
OVAL SLEEVE
PIPE
MAINTAIN A MINIMUM OF 1 1/2 PIPE DIAMETERS FROM THE SIDE OF THE PIPE TO THE OVAL SLEEVE
TRANSVERSE (LATERAL)
CABLE ASSEMBLY TO STRUCTURE
OVAL SLEEVE
MAINTAIN A MINIMUM OF 1 1/2 PIPE DIAMETERS FROM THE SIDE OF THE PIPE TO THE OVAL SLEEVE
PIPE CLAMP, GROOVED COUPLING, FITTING, OR OTHER DEVICE AT A FIXED LOCATION ON BRACED PIPE.
LONGITUDINAL
WRAPPED CONNECTIONS FOR PIPE OR CONDUIT
CABLE ASSEMBLY TO STRUCTURE
OVAL SLEEVE
CABLE LOOP
UNIVERSAL RESTRAINT CLIP (URC) WITH BOLT HOLE PER CONNECTION BOLT DIA
CABLE & URC CONNECTION
CABLE ASSEMBLY TO STRUCTURE
OVAL SLEEVE
STAKE EYE AND CABLE ASSEMBLY TO BRACED COMPONENT
NOTE:
MAX. STAKE EYE HOLE SIZE IS FOR 50mm (1/2") BOLT
DOUBLE STAKE EYE & CABLE CONNECTION
CONNECTIONS TO CLEVIS HANGERS OR SUPPORT MEMBERS

① TYPICAL CABLE CONNECTION TO BRACED COMPONENTS DETAIL

NOT TO SCALE


STEEL BEAM OR JOIST
A-307 BOLT OR WELD STUD
STAKE EYE & CABLE ASSY. OR URC CLIP W/ CABLE LOOP (SEE TYPICAL CABLE CONNECTIONS)
STEEL BEAM OR JOIST
DOUBLE SIDED BEAM CLAMP
STAKE EYE & CABLE ASSY. OR URC CLIP W/ CABLE LOOP (SEE TYPICAL CABLE CONNECTIONS)
WHEN DRILLING OR WELDING IS NOT PERMITTED
MAX. 45°
BAR JOIST
LOOPED CONNECTION AROUND TOP CHORD OF BAR JOIST AT PANEL POINT

② SEISMIC WIRE ROPE/CABLE BRACING TYPICAL CABLE CONNECTIONS TO STRUCTURE

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FILE NAME: MEF24005P-505.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
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ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

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CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLUMBING DETAILS

SHEET ID
P-505

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GENERAL NOTES

1. PROVIDE TRAP GUARDS FOR ALL FLOOR DRAINS AND INDIRECT WASTE RECEPTORS.

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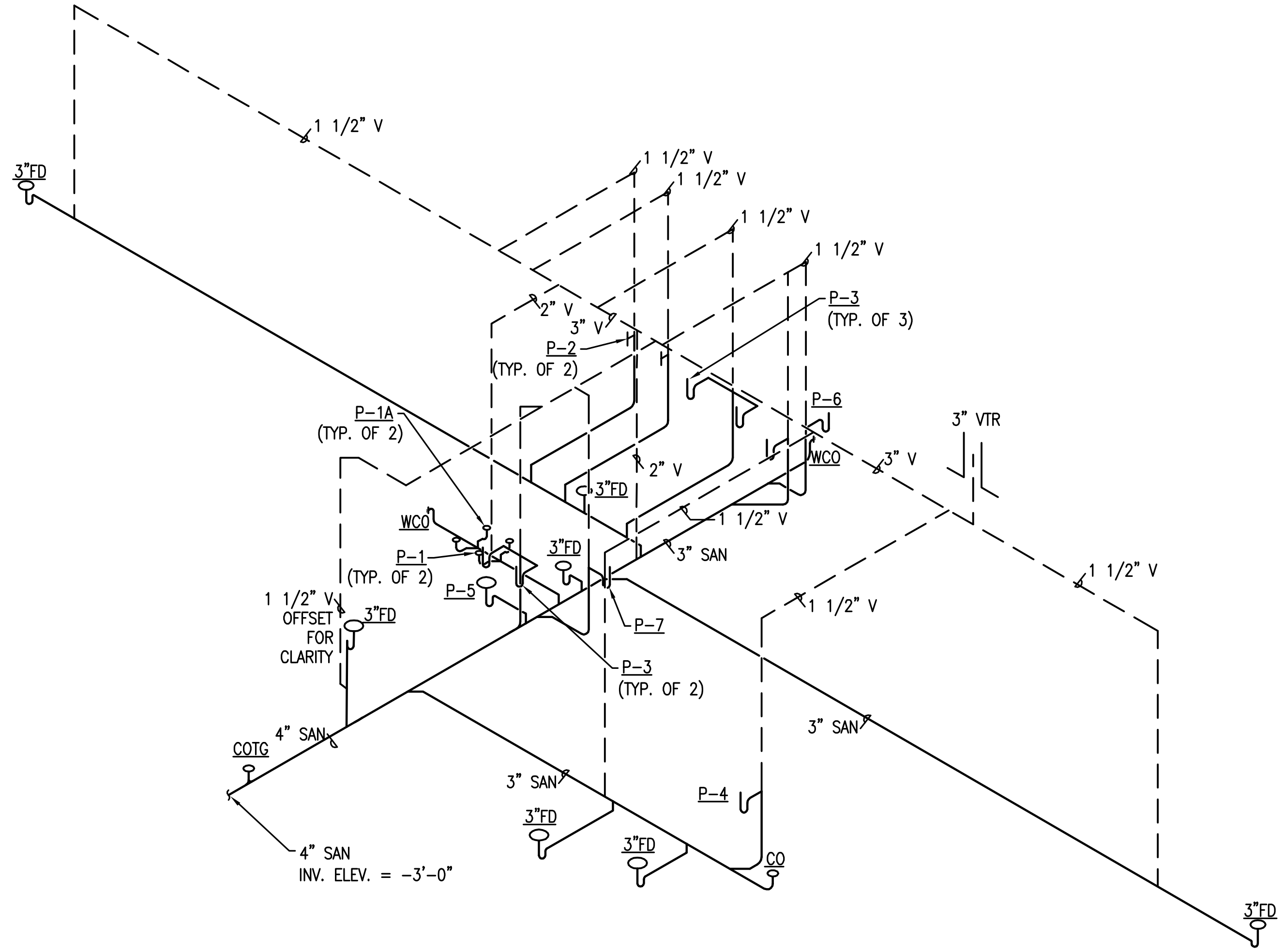

① SANITARY AND VENT RISER DIAGRAM

NOT TO SCALE

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PROJECT NUMBER:
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U.S. ARMY CORPS OF ENGINEERS
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLUMBING RISERS

SHEET ID
P-601

RTA SUBMITTAL

GENERAL NOTES

1. PROVIDE WATER HAMMER ARRESTORS ON HOT & COLD WATER SUPPLY BRANCHES SERVING SINGULAR, MULTIPLE OR GROUPS OF PLUMBING FIXTURES. ADHERENCE TO THE PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I.–WH201 (PER SPECIFICATIONS) MUST BE EMPLOYED IN DETERMINING PROPER SIZE, SELECTION, PLACEMENT, LOCATION AND INSTALLATION OF ARRESTORS.

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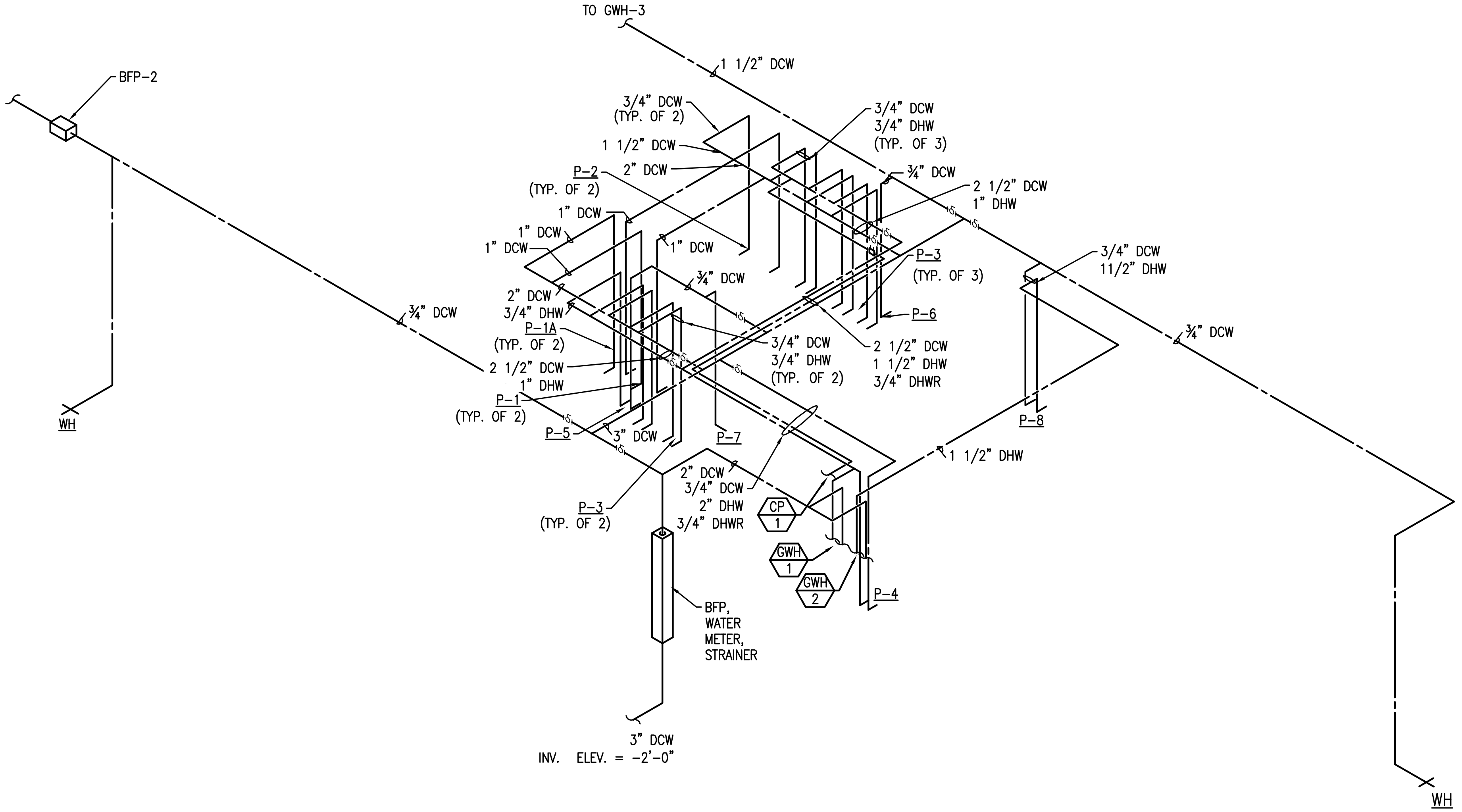

① DOMESTIC WATER RISER

NOT TO SCALE

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLUMBING RISERS

SHEET ID
P-602

RTA SUBMITTAL

CESAM v20181203

GENERAL NOTES

1. EACH NATURAL GAS APPLIANCE MUST BE PROVIDED WITH FINAL GAS PRESSURE REGULATOR. SEE PLAN FOR LOCATION. NOT SHOWN FOR CLARITY.

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FLORIDA LICENSE NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
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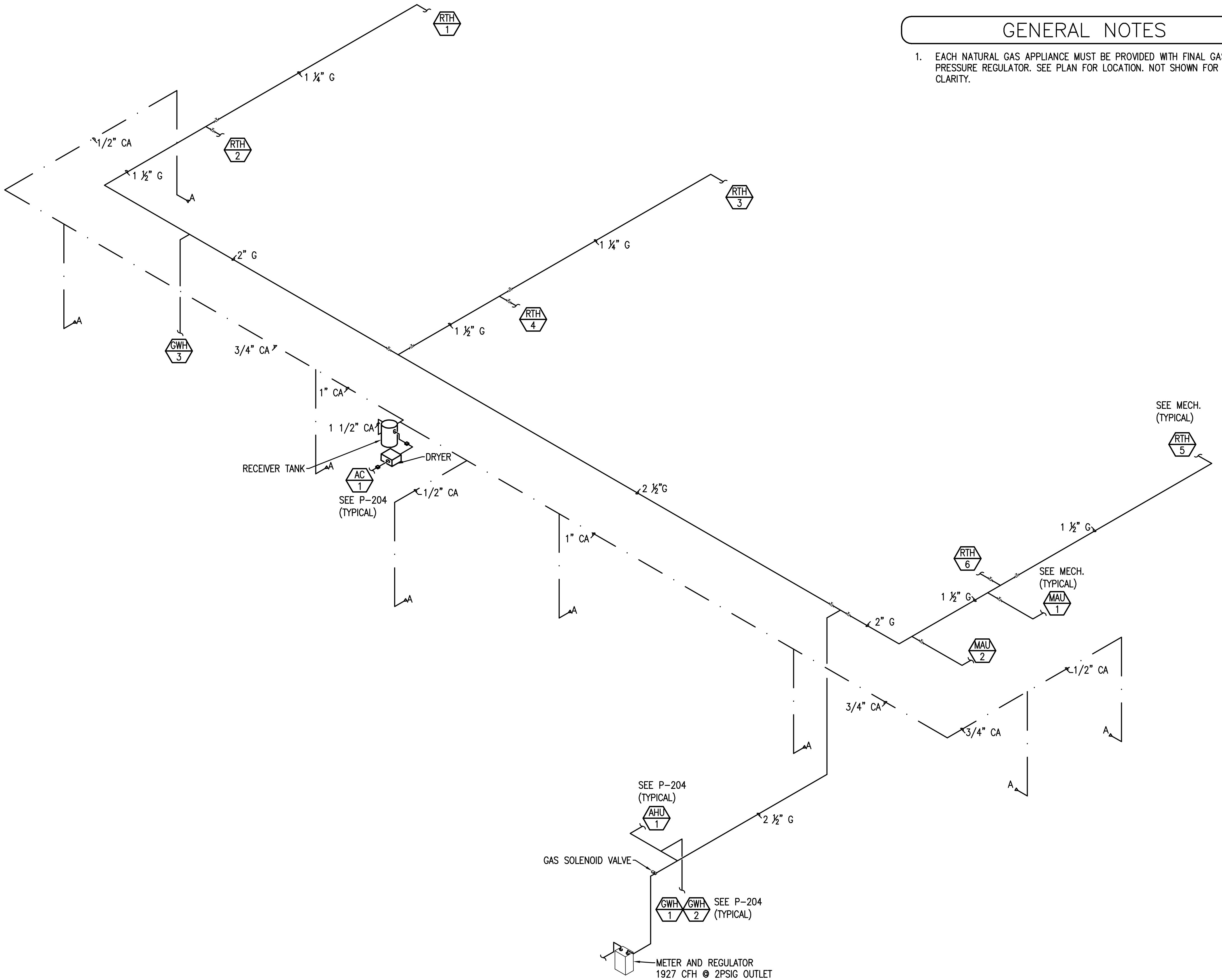

① COMPRESSED AIR AND GAS RISER

NOT TO SCALE

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PLUMBING RISERS

SHEET ID
P-603

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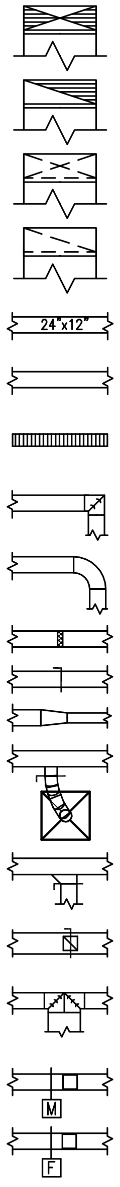
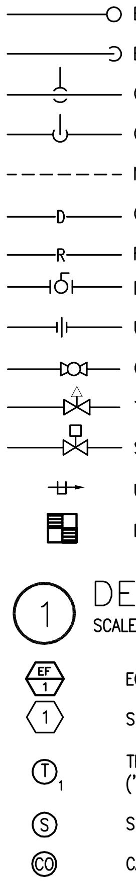
LEGEND



- POSITIVE PRESSURE SUPPLY DUCT TURNING UP
- NEGATIVE PRESSURE RETURN OR EXHAUST DUCT TURNING UP
- POSITIVE PRESSURE SUPPLY DUCT TURNING DOWN
- NEGATIVE PRESSURE RETURN OR EXHAUST DUCT TURNING DOWN
- 24"x12" RECTANGULAR DUCT SIZE. FIRST SIZE LISTED IS SIDE SHOWN IN PLANS.
- EXTERNALLY INSULATED DUCTWORK
- EXTERNALLY INSULATED ROUND FLEXIBLE DUCTWORK
- DUCT ELBOW WITH TURNING VANES
- RADIUSED DUCT ELBOW
- FLEXIBLE DUCT CONNECTION
- MANUAL VOLUME BALANCING DAMPER
- TRANSITION
- FLEX DUCT TAKE OFF WITH MVD
- BRANCH DUCT TAKEOFF WITH MVD
- RETURN OR SUPPLY DEVICE WITH MVD DIRECTLY BELOW MAIN TRUNK DUCT
- TEE WITH TURNING VANES
- M MOTORIZED DAMPER
- F FIRE DAMPER



- ELBOW TURN UP
- ELBOW TURN DOWN
- CONNECTION, BOTTOM
- CONNECTION, TOP
- NEW UNDERGROUND PIPING
- D CONDENSATE DRAIN PIPING
- R REFRIGERANT PIPING
- BALL VALVE
- UNION
- GLOBE VALVE
- THERMAL EXPANSION VALVE
- SOLENOID VALVE
- UNDER CUT DOOR 3/4"
- POINT OF CONNECTION TO EXISTING

1 DETAIL
SCALE

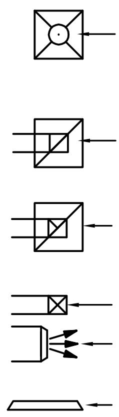
- EF 1 EQUIPMENT TAG
- 1 SHEET NOTE
- T_1 THERMOSTAT MOUNTED AT 54" AFF. ('1' INDICATES AHU CONTROLLED)
- S SMOKE DETECTOR
- CO CARBON MONOXIDE DETECTOR

ABBREVIATIONS

@	AT
ACD	AUTOMATIC CONTROL DAMPER
AD	ACCESS DOOR
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISHED FLOOR
AFMS	AIRFLOW MEASURING STATION
AHJ	AUTHORITY HAVING JURISDICTION
AHRI	AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE
AHU	AIR HANDLING UNIT
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS
AI	ANALOG INPUT
AO	ANALOG OUTPUT
BAS	BUILDING AUTOMATION SYSTEM
BMS	BUILDING MANAGEMENT SYSTEM
CFM	CUBIC FEET PER MINUTE
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
CONT.	CONTINUOUS
COP	COEFFICIENT OF PERFORMANCE
DB	DRY BULB TEMPERATURE
DD	DIRECT DRIVE
DDC	DIRECT DIGITAL CONTROL
DN	DOWN
DPS	DIFFERENTIAL PRESSURE SENSOR
DWGS	DRAWINGS
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAL	EXHAUST AIR LOUVER
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EMCS	ENERGY MANAGEMENT AND CONTROL SYSTEM
ENT	ENTERING
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
FPM	FEET PER MINUTE
HGRH	HOT GAS REHEAT
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HPU	HEAT PUMP UNIT
HVAC	HEATING, VENTILATING, AND AIR-CONDITIONING
LAT	LEAVING AIR TEMPERATURE
MAX.	MAXIMUM
MIN.	MINIMUM
MVD	MANUAL VOLUME DAMPER
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
OA	OUTSIDE AIR
OAL	OUTSIDE AIR LOUVER
O.C.	ON CENTER
PD	PRESSURE DROP
P/T	PRESSURE/TEMPERATURE
RA	RETURN AIR
RH	RELATIVE HUMIDITY
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SUPPLY FAN
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION
TAB	TEST AND BALANCE
T/H	TEMPERATURE AND HUMIDITY
TT	TEMPERATURE TRANSMITTER
TSP	TOTAL STATIC PRESSURE
TYP.	TYPICAL
VDT	VERTICAL DRAW-THROUGH
WB	WET BULB TEMPERATURE
IN W.G.	INCH WATER COLUMN
(E)	EXISTING
A/C	ABOVE CEILING
U/G	UNDERGROUND

DIFFUSER/GRILLE LEGEND

GENERAL NOTE: ALL DIFFUSERS/REGISTERS/GRILLES MUST BE SIZED AS NECESSARY TO MAINTAIN A NOISE CRITERIA (NC) <20.



CEILING DIFFUSER (CD)	ALUMINUM CEILING DIFFUSER SUITABLE FOR INSTALLATION IN GYPSUM BOARD CEILINGS OR LAY-IN INSTALLATION IN TILE CEILINGS. SIZE AND AIRFLOW AS INDICATED. PROVIDE WITH SQUARE-TO-ROUND NECK TRANSITION AS REQUIRED. AIR DEVICES MUST BE SIZED FOR A NOISE CRITERIA (NC) OF 20 OR LESS.
RETURN REGISTER (RAR) OR TRANSFER GRILLE (TAG) OR EXHAUST REGISTER (EAR)	ALUMINUM REGISTER WITH 0° DEFLECTION AND 19mm (3/4") SPACING SUITABLE FOR SURFACE MOUNTING TO SIDEWALL GYPSUM BOARD CEILINGS OR LAY-IN INSTALLATION IN TILE CEILING. REGISTER DESIGNATION INDICATES GRILLE TO BE PROVIDED WITH OPPOSED BLADE DAMPER. SIZE AS INDICATED. FOR LAY-IN INSTALLATION, PROVIDE LAY-IN BORDER FRAME AND PROVIDE FILLER PANEL FOR CEILING TILE LOCATION. AIR DEVICES MUST BE SIZED FOR A NOISE CRITERIA (NC) OF 20 OR LESS.
SUPPLY REGISTER (SAR) OR SIDEWALL SUPPLY REGISTER (SWR)	ALUMINUM SUPPLY GRILLE. PROVIDE WITH OPPOSED BLADE DAMPER. SIZE AND AIRFLOW AS INDICATED. FOR LAY-IN INSTALLATION, PROVIDE LAY-IN BORDER FRAME AND PROVIDE FILLER PANEL FOR CEILING TILE LOCATION. AIR DEVICES MUST BE SIZED FOR A NOISE CRITERIA (NC) OF 20 OR LESS.
OUTSIDE AIR LOUVER (OAL) OR EXHAUST AIR LOUVER (EAL)	WALL LOUVER MUST COMPLY WITH AMCA 511. STATIONARY DRAINABLE BLADE EXTRUDED ALUMINUM LOUVER. PROVIDE WITH CLEAR ANODIZED FINISH AND BIRD SCREEN. LOUVER SIZE AS INDICATED (FACE AREA) WITH A MINIMUM OF 52% FREE AREA. COORDINATE EXACT WALL OPENING WITH STRUCTURAL.

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL LEGEND
AND ABBREVIATIONS

SHEET ID
M-001

RTA SUBMITTAL

GENERAL MECHANICAL NOTES

1. CONTRACTOR MUST COORDINATE WITH ALL TRADES AS REQUIRED FOR ALL OPENINGS IN WALLS, FOUNDATIONS, FLOORS, AND ROOFS.
2. FIELD VERIFY ALL DIMENSIONS, SIZES, AND CONNECTION LOCATIONS BEFORE ANY DUCTWORK FABRICATION OR PIPE CUTTING IS COMMENCED.
3. PROVIDE ANY OFFSETS, TRANSITIONS, AND OTHER MINOR ADJUSTMENTS AS REQUIRED FOR A COMPLETE AND WORKING SYSTEM INSTALLATION.
4. COORDINATE FLOOR DRAIN LOCATIONS IN MECHANICAL ROOMS WITH ANY EQUIPMENT LOCATED IN THE MECHANICAL ROOM. ROUTE CONDENSATE DRAIN PIPING OUT OF WALKWAY PATHS. CONDENSATE DRAIN PIPING MUST BE COPPER TYPE L WITH A MIN. OF 1" FLEXIBLE ELASTOMERIC CELLULAR INSULATION AND VAPOR BARRIER.
5. VERIFY MECHANICAL EQUIPMENT LOCATIONS AND PROVIDE ADEQUATE MAINTENANCE CLEARANCE AROUND EACH PIECE OF EQUIPMENT PER THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE CLEARANCE IN FRONT OF ELECTRICAL PANELS AND OTHER ELECTRICAL EQUIPMENT PER THE NATIONAL ELECTRICAL CODE REQUIREMENTS. COORDINATE WITH OTHER TRADES.
6. HVAC REGISTERS, GRILLES, DIFFUSERS, PIPING, ETC. ARE SHOWN IN APPROXIMATE LOCATIONS. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD, FULLY COORDINATED AND IN COMPLIANCE WITH CONTRACT DOCUMENTS. IN NO INSTANCE MUST THE LOCATION VIOLATE STANDARDS, CODES, GOOD HVAC PRINCIPLES, AND THE INTENT OF THE HVAC DESIGN. CONSULT ENGINEER PRIOR TO RELOCATION. MECHANICAL DRAWINGS, IN SOME RESPECTS, ARE DIAGRAMMATIC. COORDINATION, LAYOUT OF SECTIONS, OR FIELD MEASUREMENTS MAY BE REQUIRED PRIOR TO FABRICATION OF DUCTWORK OR PIPING. MODIFY SIZES ONLY AS DIRECTED BY ENGINEER. ARRANGE ALL DUCTWORK AND PIPING IN A NEAT AND ORDERLY MANNER. COORDINATE WITH OTHER TRADES.
7. CONTRACTOR MUST NOT CUT ANY STRUCTURAL MEMBERS OF BUILDING.
8. OUTSIDE AIR INLETS TO BE LOCATED A MINIMUM OF 15 FT FROM ANY EXHAUST AIR OUTLET OR PLUMBING VENT STACK. COORDINATE IN THE FIELD. OUTSIDE AIR INTAKES FOR BUILDING VENTILATION MUST BE LOCATED A MINIMUM OF 10 FT ABOVE GRADE.
9. PROVIDE WATER PROOF SEALING OF PIPE AND DUCT PENETRATIONS OF EXTERIOR WALLS, FLOORS, AND/OR ROOF.
10. ALL PIPING SYSTEM MUST BE FLUSHED UNTIL CLEAN BEFORE EQUIPMENT CONNECTION.
11. PENETRATIONS THROUGH FIRE RATED FLOORS AND WALLS ARE TO BE FIRE SEALED SO AS TO MAINTAIN FLOOR OR WALL INTEGRITY IN THE EVENT OF A FIRE. ALL PENETRATIONS OF FIREWALLS, CEILINGS, FLOORS, ETC. FOR PIPING MUST BE UL LISTED FIRESTOPS AND MUST BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION. CONTRACTOR MUST OBTAIN MANUFACTURER'S SHOP DRAWINGS FOR ALL JOBSITE PENETRATIONS.
12. SUPPLY AIR DUCTWORK (EXCEPT TAKEOFFS TO SUPPLY AIR DIFFUSERS) TO BE SINGLE WALL LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED WITH 2" THICK FIBERGLASS WRAP. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
13. RETURN AIR, OUTSIDE AIR, AND EXHAUST AIR DUCTWORK TO BE SINGLE WALL LOW PRESSURE RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED WITH 2" THICK FIBERGLASS WRAP. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
14. ALL ROUND FLEXIBLE DUCT MUST BE FACTORY PRE-INSULATED WITH CORRUGATED ALUMINUM LINER. MAXIMUM LENGTH OF ANY FLEXIBLE DUCT RUNOUT MUST BE 5'.
15. PROVIDE SPIN-IN FITTINGS WITH EXTENDED SPIN-IN DAMPER OPERATOR HANDLE FOR ALL DIFFUSER RUNOUTS.
16. ALL DUCTWORK CONSTRUCTION, DUCT HANGERS, AND SUPPORTS MUST COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE" FOR METAL THICKNESS, REINFORCING TYPES AND INTERVALS, TIE-ROD APPLICATIONS, AND JOINT TYPES AND INTERVALS. SUPPORT HORIZONTAL DUCTS WITHIN 24" OF EACH ELBOW AND WITHIN 48" OF EACH BRANCH. SEE DUCT HANGER DETAILS.
17. ALL DUCT ELBOWS MUST BE LONG RADIUS TYPE OR, WHERE INDICATED, SQUARE ELBOW WITH TURNING VANES. PROVIDE TURNING VANES IN ALL SQUARE ELBOWS IN TRUNK DUCTWORK AND DIFFUSER CONNECTIONS.
18. TRANSFER DUCTS TO BE INTERNALLY INSULATED WITH 1" THICK ACOUSTICAL DUCT LINER. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
19. ALL EXPOSED LOW PRESSURE DUCTWORK OUTSIDE OF MECHANICAL ROOMS MUST BE DOUBLE-WALL WITH MINIMUM 2" THICK INTERNAL INSULATION. PAINT ALL EXPOSED DUCTWORK. COORDINATE COLOR WITH ARCHITECT.
20. VERIFY COLLAR SIZES ON ALL EQUIPMENT INLETS AND OUTLETS. TRANSITION DUCTWORK AS NECESSARY. EXTERNALLY INSULATE ALL TRANSITIONS AT EQUIPMENT CONNECTIONS.
21. PROVIDE FLEXIBLE CONNECTIONS, AND VIBRATION ISOLATORS FOR INTERNALLY ISOLATED UNITS. PROVIDE FLEXIBLE DUCT CONNECTORS AT ALL HVAC EQUIPMENT CONNECTIONS COMPLYING WITH UL-181, NFPA 90A, AND NFPA 90B.
22. DO NOT MOUNT DISCONNECT SWITCHES ON HVAC EQUIPMENT EXCEPT AS RECOMMENDED BY MANUFACTURER.
23. MOUNT ALL DUCTWORK AS HIGH AS POSSIBLE, BETWEEN FRAMING IF NECESSARY. AVOID ROUTING DUCTWORK OVER LIGHTS WHEREVER POSSIBLE. WHERE DUCTWORK MUST RUN OVER LIGHTS MAINTAIN MINIMUM 4" CLEARANCE BETWEEN DUCT INSULATION AND TOP OF LIGHTS. COORDINATE WITH STRUCTURAL.
24. ABOVE CEILING MECHANICAL EQUIPMENT TO BE INSTALLED NO MORE THAN 2'-6" ABOVE SUSPENDED CEILINGS. AVOID INSTALLATION ABOVE LIGHTS AND MAINTAIN ACCESS TO AND CLEARANCE AROUND MECHANICAL EQUIPMENT AS REQUIRED FOR MAINTENANCE OF UNIT AND CONTROLS. IF A MECHANICAL EQUIPMENT MUST BE INSTALLED ABOVE A LIGHT, MAINTAIN MINIMUM 6" CLEAR BETWEEN BOTTOM OF UNIT AND TOP OF LIGHT.
25. PROVIDE SUBMITTAL DRAWINGS FOR INTER-TRADE COORDINATION PURPOSES. SUBMITTALS MUST INCLUDE PRODUCT DATA (INCLUDING PHYSICAL AND ELECTRICAL CHARACTERISTICS) AND SHOP DRAWINGS AS REQUIRED TO COORDINATE EQUIPMENT AND SYSTEM INSTALLATIONS.
26. EQUIPMENT OF DIFFERING ELECTRICAL CHARACTERISTICS, PHYSICAL DIMENSIONS, CAPACITIES, AND RATINGS MAY BE FURNISHED PROVIDED SUCH PROPOSED EQUIPMENT IS APPROVED BY THE ENGINEER IN WRITING AND CONNECTING MECHANICAL SERVICES, CIRCUIT BREAKERS, CONDUIT, MOTORS, BASES, EQUIPMENT SPACES, ETC. ARE INCREASED AS NECESSARY. ADDITIONAL COSTS MUST BE THE RESPONSIBILITY OF THE CONTRACTOR PROVIDING THE DIFFERING EQUIPMENT.
27. PROVIDE ALL EQUIPMENT, VALVES, ETC. WITH MARKERS AS SPECIFIED FOR IDENTIFICATION PURPOSES. SEE SPECIFICATION.
28. PROVIDE GENERAL WARRANTY FOR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL COMPLETION. CONTRACTOR MUST PROVIDE A SPECIAL WARRANTY FOR A PERIOD OF FIVE YEARS FROM DATE OF FINAL COMPLETION ON ALL COMPRESSORS AND COILS. SEE SPECIFICATIONS.
29. ENGAGE A FACTORY AUTHORIZED SERVICE REPRESENTATIVE TO PERFORM START-UP SERVICES AND TO TRAIN GOVERNMENT'S MAINTENANCE PERSONNEL TO ADJUST, OPERATE, AND MAINTAIN EQUIPMENT. SEE SPECIFICATION.
30. PROVIDE OPERATION AND MAINTENANCE MANUALS TO GOVERNMENT FOR ALL INSTALLED EQUIPMENT. SEE SPECIFICATION.
31. THERMOSTATS MUST BE GENERALLY LOCATED AS SHOWN. THE EXACT LOCATION MUST BE FIELD COORDINATED TO AVOID INTERFERENCE WITH WALL MOUNTED WORK AND/OR FURNITURE. PROVIDE THERMOSTAT'S LOCKABLE COVER WITH USER OVERRIDE ACCESS.
32. ALL ROOF PENETRATIONS AND ROOF MOUNTED EQUIPMENT THRU AND /OR LOCATED ON THE SLOPED PORTION OF THE ROOF MUST BE PAINTED. COORDINATE COLOR WITH ARCHITECT.
33. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION. WHERE INFORMATION BETWEEN THE SPECIFICATIONS AND THE DRAWINGS DIFFERS, THE MOST STRINGENT MUST APPLY.
34. WORK MUST COMPLY WITH THE FOLLOWING AGENCIES:
    - 2021 INTERNATIONAL BUILDING CODE
    - 2021 INTERNATIONAL MECHANICAL CODE
    - 2021 INTERNATIONAL PLUMBING CODE
    - NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
        - NFPA 54 – NATIONAL FUEL GAS CODE
    - AMERICAN SOCIETY OF HEATING AND REFRIGERATION ENGINEERS (ASHRAE)
    - UNITED FACILITIES CRITERIA (UFC) 1-200-02 HIGH PERFORMANCE AND SUSTAINABLE BUILDING REQUIREMENTS
    - UNITED FACILITIES CRITERIA (UFC) 3-410-01 HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS
    - UNITED FACILITIES CRITERIA (UFC) 3-420-01 PLUMBING SYSTEMS
    - UNITED FACILITIES CRITERIA (UFC) 4-010-01 DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS
    - ALL APPLICABLE LOCAL CODES, ORDINANCES, AND THE AUTHORITY HAVING JURISDICTION

GENERAL DEMOLITION NOTES

1. INFORMATION INDICATING LOCATION OF EXISTING DUCTWORK, PIPING, CEILING DIFFUSERS AND RETURN REGISTERS WAS OBTAINED FROM EXISTING AS BUILT DRAWINGS AND SITE VISITS AND ARE REPRESENTATIVE OF THE BEST AVAILABLE SOURCE TO DATE.

2. PRIOR TO CONSTRUCTION, CONTRACTOR MUST VISIT SITE TO VERIFY DUCTWORK LOCATION AND SIZE. ALERT ENGINEER OF CONFLICTS THAT MAY AFFECT COST AND COMPLETION OF JOB.

3. CONTRACTOR MUST CUT AND PATCH ANY AREAS NECESSARY TO PERFORM WORK. COORDINATE WALL OR FLOOR FINISH WITH ARCHITECTURAL.

4. PRIOR TO SUBSTANTIAL, CONTRACTOR MUST PATCH OR REPLACE ALL DAMAGED WALL, CEILING, AND FLOOR DURING CONSTRUCTION TO MATCH NEW WORK. COORDINATE WITH ARCHITECTURAL.

5. ALL DEMOLISHED MECHANICAL-ASSOCIATED ITEMS REMOVED MUST BECOME THE PROPERTY OF THE CONTRACTOR AND MUST BE TRANSFERRED FROM JOB SITE, EXCEPT ITEMS SELECTED BY GOVERNMENT, THESE ITEMS MUST BE RELOCATED TO STORAGE AREA DESIGNATED BY THE GOVERNMENT.

6. PIPING CONNECTED TO ASSOCIATED HVAC ITEMS AND EQUIPMENT THAT IS TO BE REMOVED MUST BE CAPPED SO AS NOT TO INTERFERE WITH REVISED OR NEW CONDITIONS.

7. CONTRACTOR MUST NOT DISRUPT EXISTING UTILITY SERVICES WITHOUT ASCERTAINING WRITTEN PERMISSION FROM GOVERNMENT. REQUIRED OUTAGES OR SHUTDOWNS MUST BE KEPT TO A MINIMUM AND MUST BE PERFORMED WITHIN A PREDETERMINED TIME FOR DURATION OF SHUTDOWN.

8. UNLESS NOTED OR SHOWN OTHERWISE, ALL EXISTING UTILITY SERVICES MUST REMAIN INTACT AND ACTIVE TO FACILITATE REVISED CONDITIONS.

9. CONTRACTOR MUST PROVIDE MODIFICATIONS TO EXISTING UTILITY SERVICES TO ACCOMMODATE REVISED CONDITIONS.

10. ALL DEMOLISHED MATERIALS AND EQUIPMENT NOT SPECIFICALLY INDICATED TO BE REUSED MUST BE REMOVED FROM THE GOVERNMENT'S PROPERTY AND LEGALLY DISPOSED OF BY THE CONTRACTOR AS PART OF WORK UNDER THIS CONTRACT.

11. THE CONTRACTOR MUST BE RESPONSIBLE FOR TEMPORARILY AND PERMANENT WEATHERPROOFING OF THE INSTALLATION. THE CONTRACTOR MUST BE FULLY LIABLE FOR ANY WATER DAMAGE OR OTHER DAMAGE FROM THE ELEMENTS CAUSED TO THE GOVERNMENT'S PROPERTY AS A RESULT OF THE CONTRACTOR'S FAILURE TO PROVIDE THE NECESSARY WEATHERPROOFING DURING THE COURSE OF WORK UNDER THIS CONTRACT.

12. DRAWINGS SHOWING EXISTING ROOF CURBS, DUCTWORK CONNECTIONS, ELECTRICAL CONNECTIONS, AND FUEL GAS PIPING CONNECTIONS ARE DIAGRAMMATIC AND ARE INTENDED ONLY TO DEPICT THE GENERAL ARRANGEMENT, APPROXIMATE SIZE, AND OVERALL PROXIMITY OF THE EXISTING SYSTEM ELEMENTS. EACH CONTRACTOR AND SUBCONTRACTOR MUST BE RESPONSIBLE FOR VISITING THE SITE OF WORK TO VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING THE CONSTRUCTION.

13. THE CONTRACTOR MUST ADDITIONALLY BE RESPONSIBLE FOR MAKING ACCURATE FIELD MEASUREMENTS OF ALL EXISTING CONDITIONS RELATING TO THE DESIGN AND INSTALLATION OF NEW MECHANICAL EQUIPMENT, PIPING, DUCTWORK, ETC. PRIOR TO COMMENCING WORK. PROPER SIZING OF THE PHYSICAL ASPECTS OF NEW EQUIPMENT TO MATCH EXISTING SITE CONDITIONS MUST BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

14. UNLESS NOTED OTHERWISE, ANY AND ALL DAMAGE TO THE EXISTING BUILDING SITE, EXTERIOR BUILDING FINISHES, BUILDING STRUCTURE, BUILDING SYSTEMS (MECHANICAL, ELECTRICAL, ETC.), INTERIOR BUILDING FINISHES, OR BUILDING FURNISHINGS CAUSED BY THE CONTRACTOR DURING THE COURSE OF WORK UNDER THIS CONTRACT MUST BE REPLACED AND/OR REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE GOVERNMENT. REPLACEMENT AND/OR REPAIR OF DAMAGED ITEMS MUST BE MADE TO THE COMPLETE SATISFACTION OF THE GOVERNMENT, AND AS A MINIMUM MUST RETURN THE DAMAGED ITEMS TO THE CONDITION IN WHICH THEY WERE FOUND PRIOR TO THE COMMENCEMENT OF THIS WORK.

15. PLACEMENT OF EQUIPMENT AND MATERIALS REQUIRED FOR THIS WORK MUST BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

16. ACCORDINGLY, THE CONTRACTOR MUST INCLUDE IN HIS BID THE COST OF PROPER PLACEMENT MACHINERY AND EQUIPMENT. THE CONTRACTOR MUST BE FULLY LIABLE FOR ANY DAMAGE CAUSED TO THE BUILDING OR BUILDING SITE (AS NOTED ABOVE) DURING EQUIPMENT PLACEMENT OPERATIONS. THIS INCLUDES BUT IS NOT LIMITED TO DAMAGE TO SITE ITEMS SUCH AS LANDSCAPING, GRASSING, SIDEWALKS, AND EXTERIOR LIGHTING.

17. THE CONTRACTOR MUST SUBMIT A WRITTEN REQUEST FOR OUTAGES OF ELECTRICAL POWER, AIR CONDITIONING/HEATING, ETC. TO THE GOVERNMENT NOT LESS THAN 10 WORKING DAYS PRIOR TO THE DATE PLANNED FOR SUCH OUTAGES. ALL OUTAGES MUST REQUIRE THE PRIOR WRITTEN APPROVAL OF THE GOVERNMENT'S AUTHORIZED REPRESENTATIVE.

SCHMIDT
CONSULTING· GROUP, INC.
FLORIDA LICENSE NUMBER 05371
901 W. Garden St. • Pensacola, FL 32502
P: 850-438-0050 • F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

US Army Corps
of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY:
CAP
DRAWN BY:
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CHECKED BY:
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SUBMITTED BY:
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SIZE:
ANSI D
ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
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CONTRACT NO.:
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PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005M-002.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL NOTE

SHEET ID
M-002

RTA SUBMITTAL

DESIGN CONDITIONS

	OUTSIDE		INSIDE (OCCUPIED)		INSIDE (UNOCCUPIED)	
	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	RH	DB (DEG. F)	RH
SUMMER	94.2	76.7	78	50%	80	55%
WINTER	24.6	–	68	–	65	–
DEHUMIDIFICATION CONDITIONS	85.7 MCDB	80.7 WB	–	–	–	–

NOTES:

1. INSIDE SUMMER DESIGN TEMPERATURE IS +0/–2 DEG. F.
2. INSIDE SUMMER DESIGN RELATIVE HUMIDITY IS +10%.
3. INSIDE WINTER DESIGN TEMPERATURE IS +2/–0 DEG. F.
4. COMFORT COOLING DESIGN CONDITIONS ARE BASED OFF 1% ASHRAE WEATHER DATA.
5. COMFORT HEATING DESIGN CONDITIONS ARE BASED OFF 99% ASHRAE WEATHER DATA.
6. DEHUMIDIFICATION DESIGN CONDITIONS ARE BASED OFF 0.4% ASHRAE WEATHER DATA.

COMMUNICATIONS ROOMS

	OUTSIDE		INSIDE	
	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	RH
SUMMER	94.2	76.7	72	50%
WINTER	24.6	–	68	–

NOTES:

1. INSIDE SUMMER DESIGN TEMPERATURE IS +0/–1 DEG. F.
2. INSIDE SUMMER DESIGN RELATIVE HUMIDITY IS +/– 5%.
3. INSIDE WINTER DESIGN TEMPERATURE IS +1/–0 DEG. F.
4. COMFORT COOLING DESIGN CONDITIONS ARE BASED OFF 1% ASHRAE WEATHER DATA.
5. COMFORT HEATING DESIGN CONDITIONS ARE BASED OFF 99% ASHRAE WEATHER DATA.

HEATING AND VENTILATING

	OUTSIDE		INSIDE	
	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	RH
SUMMER	94.2	76.7	NOTE 1	–
WINTER	24.6	–	55	–

NOTES:

1. INSIDE SUMMER DESIGN TEMPERATURE IS 10Δ W/ AMBIENT.

ELECTRIC UNIT HEATER SCHEDULE

					ELECTRICAL DATA		
MARK	HEAT kW	FAN CFM	MOTOR HP	MOTOR RPM	VOLTS	PHASE	Hz
EUH – 1	3.0	350	1/100	1,600	208	1	60
EUH – 2	3.0	350	1/100	1,600	208	1	60
EUH – 3	5.0	350	1/100	1,600	208	1	60

UNIT HEATER NOTES:

1. PROVIDE WITH MANUFACTURER'S MOUNTING BRACKET AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE WITH INTEGRAL THERMOSTAT, DISCONNECT, BIRDSCREEN AND LOW VOLTAGE CONTROLS TRANSFORMER.
3. SEE DETAIL 2 ON SHEET M-503.

GAS-FIRED MAKE-UP AIR UNIT SCHEDULE

	HEATING CAPACITY						ELECTRICAL DATA		
MARK	MINIMUM GAS INPUT (CFH)	MINIMUM GAS OUTPUT (CFH)	MIN. EFFICIENCY	EAT (DB)	MIN. LAT (DB)	FAN CFM	FAN MOTOR (HP)	VOLT	PHASE	HERTZ
MAU-1	125	100	80%	24.6	45	3900	3	208	1	60
MAU-2	125	100	80%	24.6	45	3900	3	208	1	60

NOTES:

1. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
2. PROVIDE WITH INDOOR FILTER CABINET.
3. PROVIDE WITH 2" MERV 13 FILTER.
4. PROVIDE GAS REGULATOR FOR EACH MAKEUP AIR UNIT FOR FINAL PRESSURE ADJUSTMENT.

FAN SCHEDULE

				PERFORMANCE DATA					ELECTRICAL DATA		
MARK	LOCATION	TYPE	DRIVE	CFM	E.S.P. (IN. W.C.)	MAX. RPM	MAX. SONES	MIN. HP (W)	VOLTS	PHASE	Hz
EF-1	112	IL	DD	240	0.25	1,025	1.1	34 W	115	1	60
EF-2	111	IL	DD	240	0.25	1,025	1.1	34 W	115	1	60
EF-3	115	IL	DD	240	0.25	1,025	1.1	34 W	115	1	60
EF-4	103	IL	DD	370	0.50	1,211	1.3	90 W	115	1	60
EF-5	HANGAR BAY	SP	DD	4,050	0.15	1,750	15.3	3/4	460	3	60
EF-6	HANGAR BAY	SP	DD	4,050	0.15	1,750	15.3	3/4	460	3	60
HVLS-1 TO 2	HANGAR BAY	HVLS	DD	–	0.00	76	–	2	460	3	60

NOTES:

1. IL – INLINE FAN; SP – SIDEWALL PROPELLER; HVLS – HIGH VOLUME LOW SPEED; DD – DIRECT DRIVE
2. PROVIDE FANS WITH SPEED CONTROLLER FOR AIR FLOW BALANCING. MOUNT CONTROLLER WITHIN FAN HOUSING.
3. PROVIDE EF-1, EF-2, AND EF-3 WITH WALL THERMOSTAT SET TO 78 DEG. F (ADJ.) FOR FAN OPERATION.
4. PROVIDE FAN WITH AN INTEGRAL DISCONNECT.
5. PROVIDE WITH GRAVITY BACKDRAFT DAMPER.
6. REFER TO FIRE ALARM DRAWINGS FOR FIRE ALARM SHUTDOWN RELAYS.
7. INTERLOCK EF-4 WITH AHU-1. INTERLOCK EF-1, 2, AND 3 WITH THERMOSTAT.
8. SEE DETAIL 5 ON SHEET M-503.
9. HVLS FANS MUST BE 24' DIAMETER. PROVIDE FANS WITH MANUFACTURER MULTI-FAN CONTROLLER TO CONTROL ALL FANS TO ONE CONTROLLER. MOUNT AT 30'-0" A.F.F.
10. EF-5 & 6 MUST RUN CONTINUOUSLY.

INFRA-RED GAS RADIANT HEATER SCHEDULE

			CONTROLS				ELECTRICAL DATA			
MARK	OUTPUT (BTUH)	LOCATION	CONTROLS	SHUT OFF	IGNITION	PILOT	MAX. POWER (A)	VOLTS	PHASE	Hz
RH-1 THRU 6	155,000	HANGAR	T'STAT	100%	DIRECT	NONE	1..5	115	1	60

INFRA-RED RADIANT HEATER NOTES:

1. CONTRACTOR MUST PROVIDE ADJUSTABLE MOUNTING HARDWARE AND INSTALL PER MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE WITH TOTALLY ENCLOSED COMBUSTION CHAMBER.
3. ONE THERMOSTAT MUST CONTROL ALL HEATERS.
4. PROVIDE TWO STAGE CONTROL.
5. PROVIDE WITH PERMANENTLY LUBRICATED, TOTALLY ENCOSED DRAFT INDUCER.
6. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
7. PROVIDE WITH 30' TUBE LENGTH.
8. PROVIDE GAS PRESSURE REGULATOR FOR EACH RADIANT HEATER FOR FINAL PRESSURE ADJUSTMENT.
9. MOUNT HEATERS AT 28'-0" ±A.F.F.

SCHMIDT
CONSULTING· GROUP, INC.
FLORIDA LICENSE NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
DESIGNED BY: CAP
DRAWN BY: CAP
CHECKED BY: CAP
SUBMITTED BY: CAP
SIZE: ANSI D
FILE NAME: MEF24005M-011.DWG

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MECHANICAL SCHEDULES

SHEET ID
M-011

RTA SUBMITTAL

DX SPLIT SYSTEM COMPUTER ROOM UNIT SCHEDULE

INDOOR UNIT																		OUTDOOR UNIT								
			COIL COOLING PERFORMANCE								HEATING PERFORMANCE			ELECTRICAL					AMBIENT TEMP.			ELECTRICAL				
			EAT		LAT						EAT	LAT							SUMMER		WINTER					
MARK	AIRFLOW (CFM)	ESP (IN W.G.)	DB (DEG F)	WB (DEG F)	DB (DEG F)	WB (DEG F)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	MAX. FACE VELOCITY (FPM)	EER	DB (DEG F)	DB (DEG F)	MIN. STRIP HEAT (KW)	FAN MOTOR (HP)	V/PH/Hz	MCA	MOCP	MARK	DB (DEG F)	WB (DEG F)	DB (DEG F)	V/PH/Hz	MCA	MOCP	COMPRESSOR QTY	CONDENSER FAN QTY
CRU–1	275	0.30	78.3	61.2	55	51.7	7.4	7.1	500	11.2	67	85	1.6	1/3	208/1/60	22.2	30	CU–1	95.0	82.0	13.0	208/1/60	3.6	15	1	1

NOTES:

1. UNIT MUST BE HORIZONTAL CONFIGURATION WITH BOTTOM SUPPLY AND RETURN.
2. PROVIDE UNIT WITH INFRARED OR CANISTER HUMIDIFIER.
3. REFRIGERANT PIPING SIZE, ROUTING, AND CONFIGURATION MUST BE AS RECOMMENDED BY MANUFACTURER OF AIR CONDITIONING UNIT. INSULATE ENTIRE SUCTION LINE WITH MINIMUM 3/4" THICK UNICELLULAR INSULATION.
4. PROVIDE SCROLL COMPRESSOR WITH ANTI–SHORT CYCLE CONTROLS, MULTIPLE STAGE CAPACITY CONTROLS AND TIME DELAY ON COMPRESSOR RESTART.
5. PROVIDE UNIT WITH LOW AMBIENT CONTROLS FOR OPERATION DOWN TO 20 DEG F.
6. PROVIDE OUTDOOR UNIT WITH CORROSION PROTECTION FOR COILS AND CASINGS.
7. PROVIDE UNIT WITH FACTORY MOUNT CONDENSATE PUMP WITH INTEGRAL FLOAT SWITCHES, MOTOR ASSEMBLY AND RESERVOIR. INTERLOCK WITH SHUTDOWN RELAY.
8. PROVIDE UNIT WITH R–410A REFRIGERANT.
9. PROVIDE UNIT WITH STAINLESS STEEL CONDENSATE DRAIN PAN.
10. PROVIDE WITH LEAK DETECTOR SYSTEM AND FACTORY INSTALLED INTERNAL CONDENSATE TRAP.
11. PROVIDE SINGLE POWER POINT CONNECTION. COORDINATE WITH ELECTRICAL.
12. PROVIDE WITH MFR STANDALONE CONTROLS SYSTEM, WITH BACNET INTERFACE COMPATIBILITY.
13. PROVIDE UNIT WITH TEMPERATURE AND HUMIDITY SENSORS.
14. PROVIDE UNIT WITH FACTORY INSTALLED SMOKE DETECTOR.

DX HIGH OA SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE

EVAPORATOR																										CONDENSING						ELECTRICAL		
				COIL COOLING PERFORMANCE									COIL HEATING PERFORMANCE				DUCT GAS HEATING PERFORMANCE					ELECTRICAL					AMBIENT TEMP.			COMP.	FAN			
				EAT		LAT							EAT	LAT			EAT	LAT									SUMMER		WINTER					
MARK	ARIFLOW (CFM)	OA (CFM)	ESP (IN W.C)	DB (DEG F)	WB (DEG F)	DB (DEG F)	WB (DEG F)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	LATENT CAPACITY (MBH)	MAX. FACE VEL. (FPM)	IEER (MIN.)	DB (DEG F)	DB (DEG F)	TOTAL CAPACITY (MBH)	COP (MIN.)	DB (DEG F)	DB (DEG F)	TOTAL CAPACITY (MBH)	INPUT (CFH)	EFFICIENCY (MIN.)	V/PH/Hz	MCA	MOCP	BLOWER MOTOR (HP)	MARK	DB (DEG F)	WB (DEG F)	DB (DEG F)	QTY.	QTY.	V/PH/Hz	MCA	MOCP
AHU–1	1,600	605	1.0	83.8	70.2	54.2	54.2	80.2	46.7	33.5	500	15.3	51.4	85.0	60.1	3	51.4	85.0	60.1	75.2	80%	208/3/60	11.5	20	5.0	HP–1	95.0	82.0	13.0	2	2	208/3/60	36.2	45

AHU NOTES:

1. EXTERNAL STATIC PRESSURE (ESP) DOES NOT INCLUDE PRESURE DROP THROUGH COILS, DUCT HEATER OR FILTERS.
2. INSTALL UNIT IN STRICT ACCORDANCE WITH THE MFR'S PRINTED INSTRUCTIONS AND APPLICABLE CODES AND STANDARDS.
3. PROVIDE 5–YEAR MANUFACTURER'S WARRANTY.
4. PROVIDE FACTORY MOUNTED FIRE STATS TO SHUT UNIT DOWN UPON DETECTION OF EXCESSIVE HEAT IN THE SUPPLY SIDE DISCHARGE OF UNIT.
5. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
6. PROVIDE 2" PLEATED FILTER. MAXIMUM FILTER VELOCITY EQUAL TO 360 FPM.
7. PROVIDE AHU WITH HOT GAS REHEAT AND COMPLETE DEHUMIDIFICATION MODE SEQUENCE.
8. SIZE REFRIGERANT LINES AS PER MANUFACTURER'S RECOMMENDATION.
9. PROVIDE WITH MULTI–STAGE SCROLL COMPRESSOR AND LONG LINE KIT.
10. PROVIDE CORROSION PROTECTION COATING ON COILS FOR SEACOAST OPERATION.
11. PROVIDE CONCRETE PAD FOR CONDENSING UNIT MOUNTING.
12. PROVIDE UNIT WITH CONDENSER COIL GUARDS, TIME DELAY ON RESTART CONTROL, FILTER DRYER, REFRIGERANT SIGHT GLASS, AUTOMATIC DEFROST CYCLE, THERMOSTAT, AND ADJUSTABLE EXPANSION VALVE.
13. PROVIDE UNIT WITH R–454B OR R–32 REFRIGERANT.
14. PROVIDE GAS REGULATOR FOR DUCT HEATER FOR FINAL PRESSURE ADJUSTMENT.
15. DUCT GAS HEATER MUST BE SEPARATE 120/1/60 CONNECTION.
16. SEE CONTROLS DRAWINGS FOR MORE INFORMATION ON REFRIGERANT DETECTION SYSTEM AND REQUIRED COMPONENTS.

SCHMIDT
CONSULTING· GROUP, INC.
FLORIDA LICENSE NUMBER 05371
901 W. Garden St. • Pensacola, FL 32502
P: 850-438-0050 • F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

US Army Corps
of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

DESIGNED BY:
CAP
DRAWN BY:
CAP
CHECKED BY:
CAP
SUBMITTED BY:
CAP
SIZE:
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FILE NAME:
MEF24005M-012.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

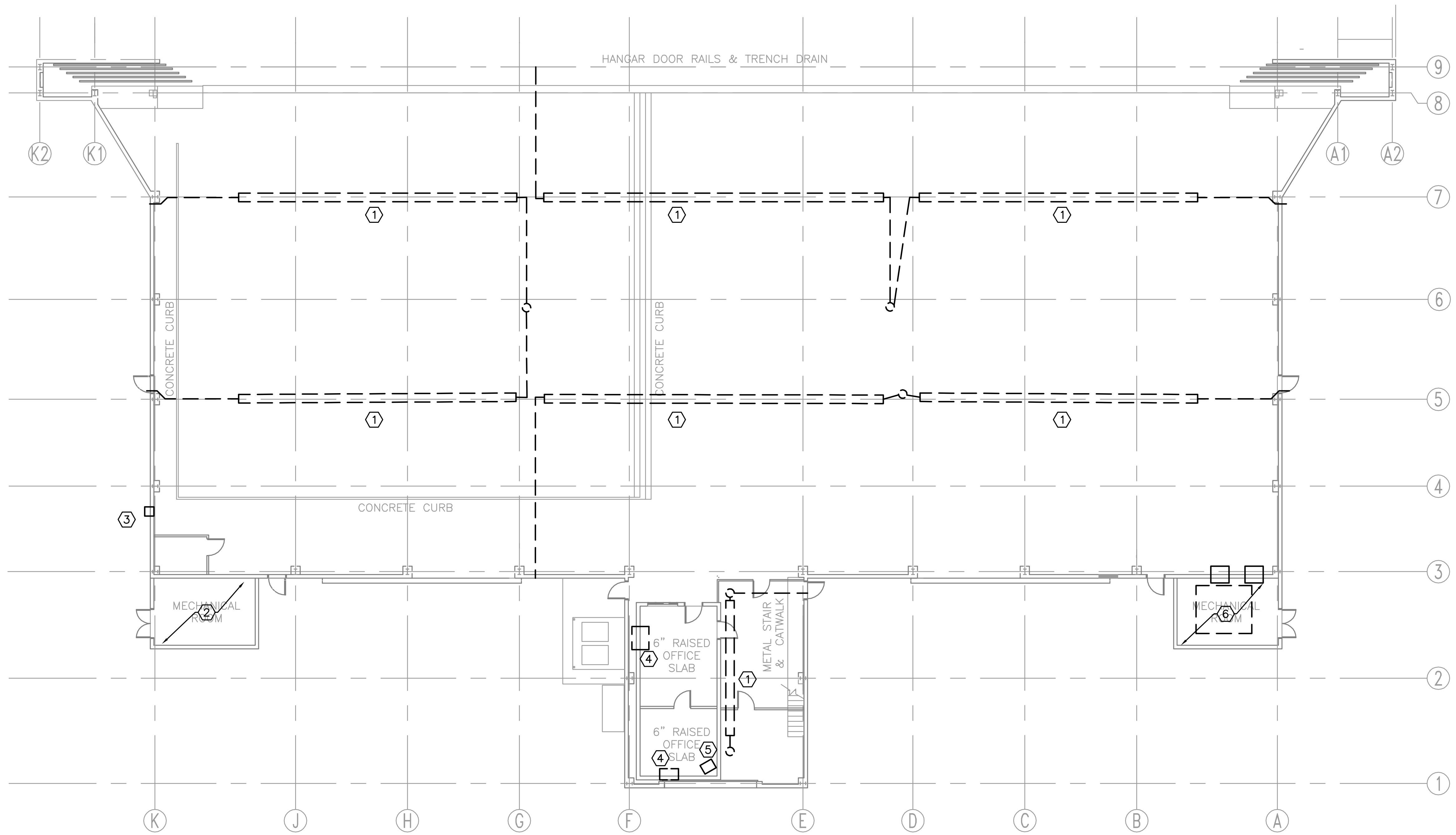
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL SCHEDULES

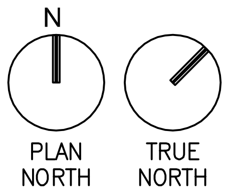
SHEET ID
M-012

RTA SUBMITTAL



① MECHANICAL DEMOLITION FLOOR PLAN

SCALE: 3/32" = 1'-0"



3/32"=1'-0" 0' 10' 20' 30' 40'

SHEET NOTES

① EXISTING NATURAL GAS RADIANT TUBE HEATER AND ASSOCIATED COMBUSTION AIR AND FLUE EXHAUST DUCTWORK TO BE DEMOLISHED COMPLETE. SEE PLUMBING DRAWINGS FOR NATURAL GAS PIPING DEMOLITION NOTES.

② EXISTING ABANDONED DUCTWORK AND ALL OTHER MECHANICAL APPURTENANCES TO BE DEMOLISHED COMPLETE. SEE PLUMBING DRAWINGS FOR PLUMBING RELATED DEMOLITION.

③ EXISTING WALL LOUVER TO BE DEMOLISHED COMPLETE.

④ EXISTING WINDOW AIR CONDITIONING TYPE UNIT TO BE DEMOLISHED COMPLETE.

⑤ EXISTING ELECTRIC UNIT HEATER TO BE DEMOLISHED COMPLETE.

⑥ EXISTING ABANDONED HVAC UNIT TO BE DEMOLISHED COMPLETE. ALL ASSOCIATED DUCTWORK, PIPING, ETC. TO BE DEMOLISHED COMPLETE. SEE PLUMBING DRAWINGS FOR PLUMBING RELATED DEMOLITION.

SCHMIDT
CONSULTING· GROUP, INC.
FLORIDA LICENSE·NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
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FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

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MARK	DESCRIPTION	DATE

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SUBMITTED BY: CAP
SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005MD-101.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL DEMOLITION
FLOOR PLAN

SHEET ID
MD-101

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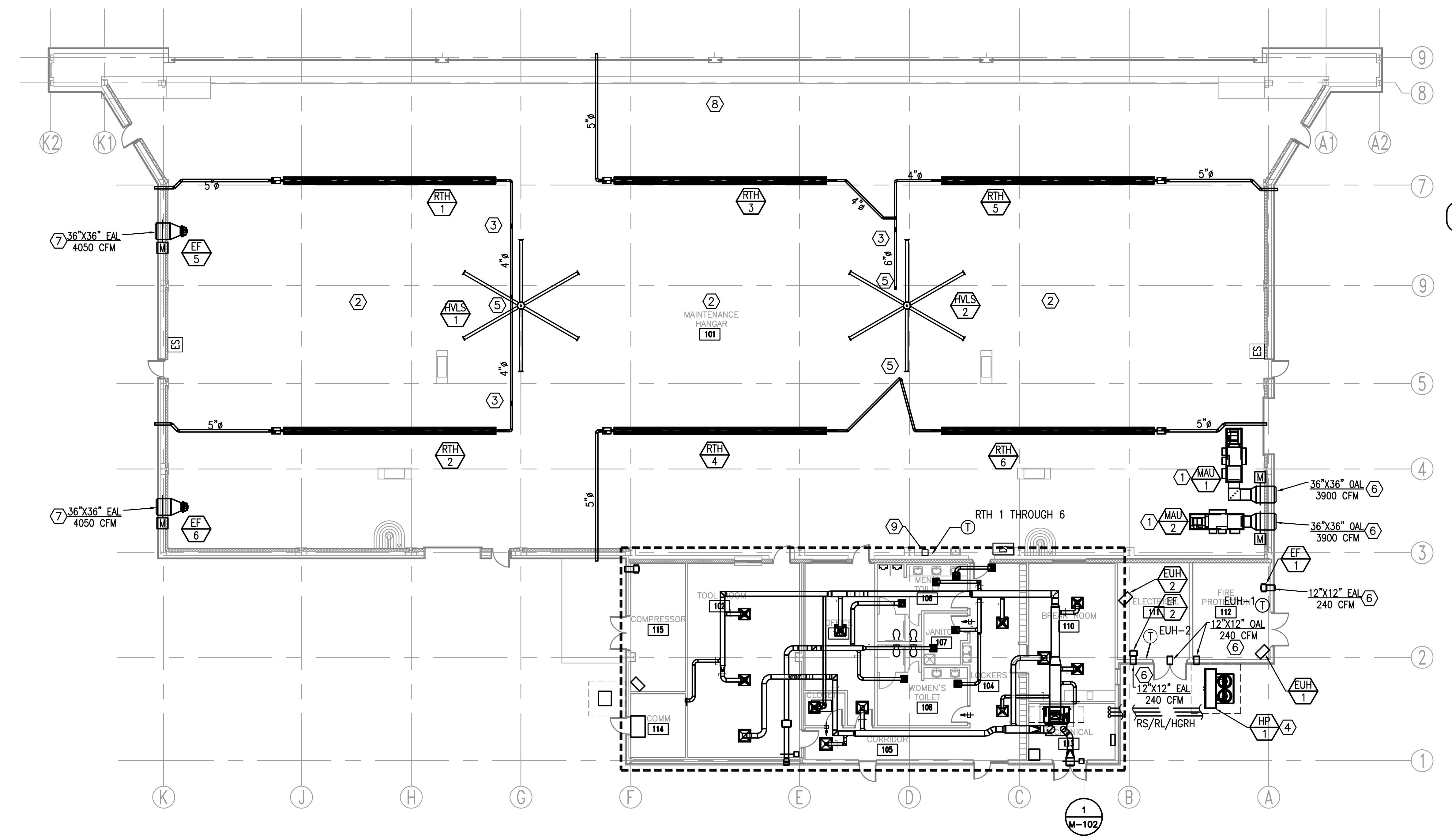
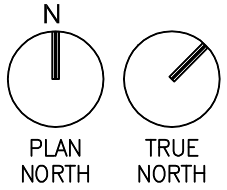
CESAM v20181203



1 MECHANICAL NEW WORK FLOOR PLAN

SCALE: 3/32" = 1'-0"



3/32"=1'-0" 0' 10' 20' 30' 40'

SHEET NOTES

1. MOUNT UNIT ON UNISTRUT FRAMING SUPPORTED FROM STRUCTURE ABOVE. MOUNT UNIT AT THE SAME LEVEL AS THE LOUVER. COORDINATE WITH ALL OTHER DISCIPLINES FOR FINAL LOCATION. ROUTE COMBUSTION AIR AND FLUE EXHAUST TO ROOF. CONCENTRIC VENT KIT.
2. MOUNT CO DETECTOR UNDER ROOF, INTERLOCK WITH CARBON MONOXIDE DETECTION SYSTEM. SEE M-601 FOR MORE INFORMATION.
3. ROUTE RTH EXHAUST DUCTS ABOVE HVLS FAN.
4. MOUNT ON 6" CONCRETE PAD.
5. UPSIZE EXHAUST DUCT TO 6ø". ROUTE EXHAUST DUCT TO ROOF. RE-USE EXISTING ROOF PENETRATIONS WHERE POSSIBLE.
6. MOUNT LOUVER WITH BOTTOM @ 10'-0" A.F.F.
7. MOUNT LOUVER WITH BOTTOM @ 26'-6" A.F.F.
8. PROVIDE DOOR POSITION SENSOR FOR INTERLOCK WITH RTH 1 THROUGH 6.
9. HVLS CONTROLLER LOCATION.

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FLORIDA LICENSE·NUMBER 05371
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CHECKED BY: CAP	CONTRACT NO.: -	
SUBMITTED BY: CAP	PROJECT NUMBER: MEF24005	
SIZE: ANSI D	FILE NAME: MEF24005M-101.DWG	

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL NEW WORK
FLOOR PLAN

SHEET ID
M-101

RTA SUBMITTAL

SHEET NOTES

1. ① MOUNT CONDENSING UNIT ON 6" CONCRETE PAD. UNIT MUST BE SPACED A MINIMUM OF 2'-6" FROM THE WALL FACE (OR AS SPECIFIED BY MANUFACTURER IF GREATER). SEE DETAIL 4/M-503.
2. ② MOUNT CO DETECTOR ON WALL, INTERLOCK WITH CARBON MONOXIDE DETECTION SYSTEM. SEE M-601 FOR MORE INFORMATION.
3. ③ ROUTE COMBUSTION INTAKE AND FLUE EXHAUST TO GAS DUCT HEATER MFR. CONCENTRIC VENT KIT AND TERMINATE AT ROOF LEVEL. COORDINATE DUCT ROUTING WITH ALL OTHER DISCIPLINES AND OFFSET DUCTWORK AS NECESSARY. REFER TO DETAIL 2 ON M-504.
4. ④ ROUTE CONDENSATE TO FLOOR DRAIN IN COMPRESSOR ROOM.
5. ⑤ ROUTE CONDENSATE TO FLOOR DRAIN IN MECHANICAL ROOM.
6. ⑥ MOUNT LOUVER WITH BOTTOM @ 10'-0" A.F.F.
7. ⑦ MOUNT LOUVER WITH BOTTOM @ 13'-6" A.F.F.
8. ⑧ DDC PANEL LOCATION. COORDINATE WITH ELECTRICAL AND TELECOM FOR DROP LOCATIONS.

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CONSULTING· GROUP,INC.
FLORIDA LICENSE NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
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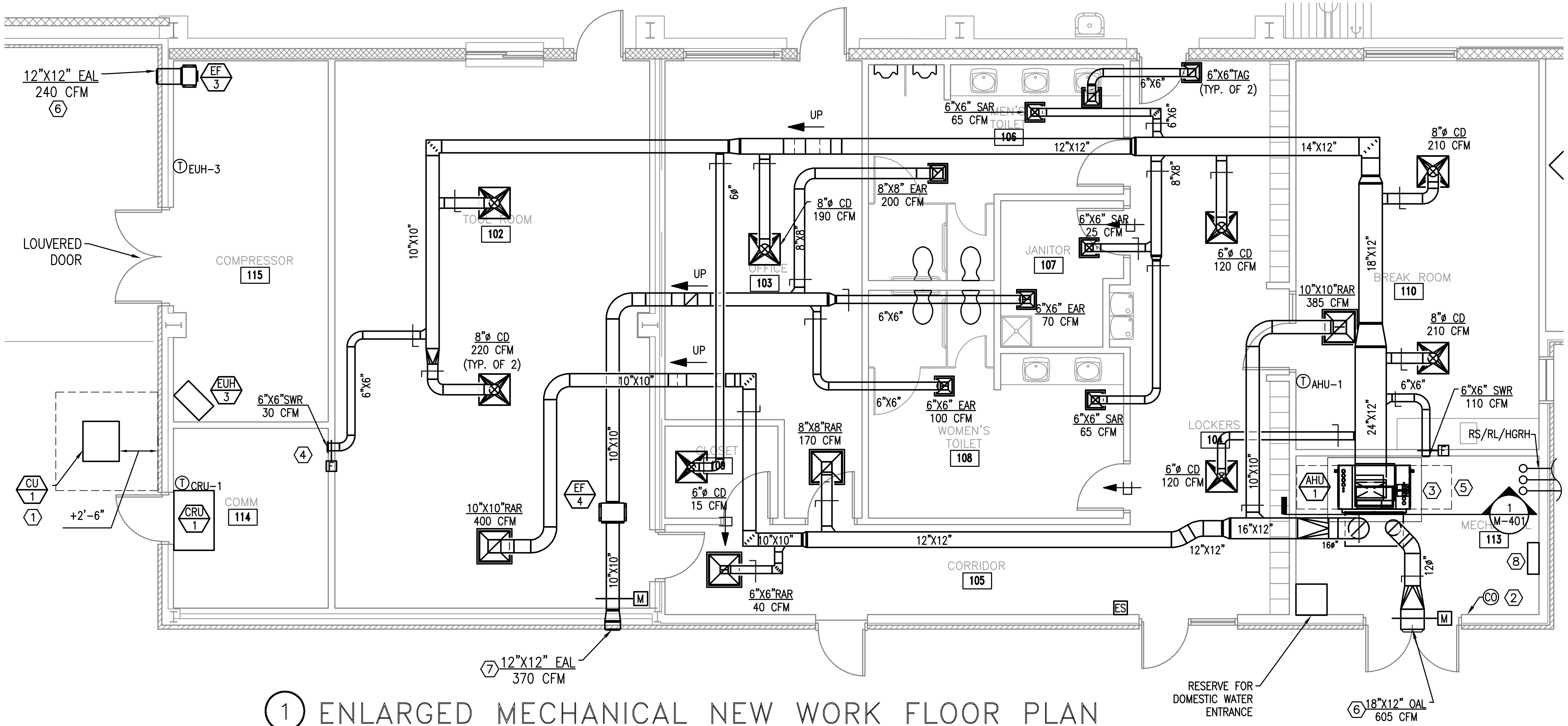
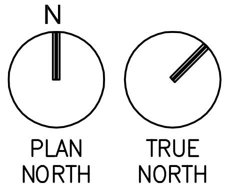


① ENLARGED MECHANICAL NEW WORK FLOOR PLAN

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



1/4"=1'-0" 1' 0' 1' 5' 10' 15'

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

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SIZE: ANSI D	FILE NAME: MEF24005M-102.DWG

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

ENLARGED MECHANICAL NEW WORK
FLOOR PLAN

SHEET ID
M-102

RTA SUBMITTAL

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CONSULTING· GROUP, INC.
FLORIDA LICENSE NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
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FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

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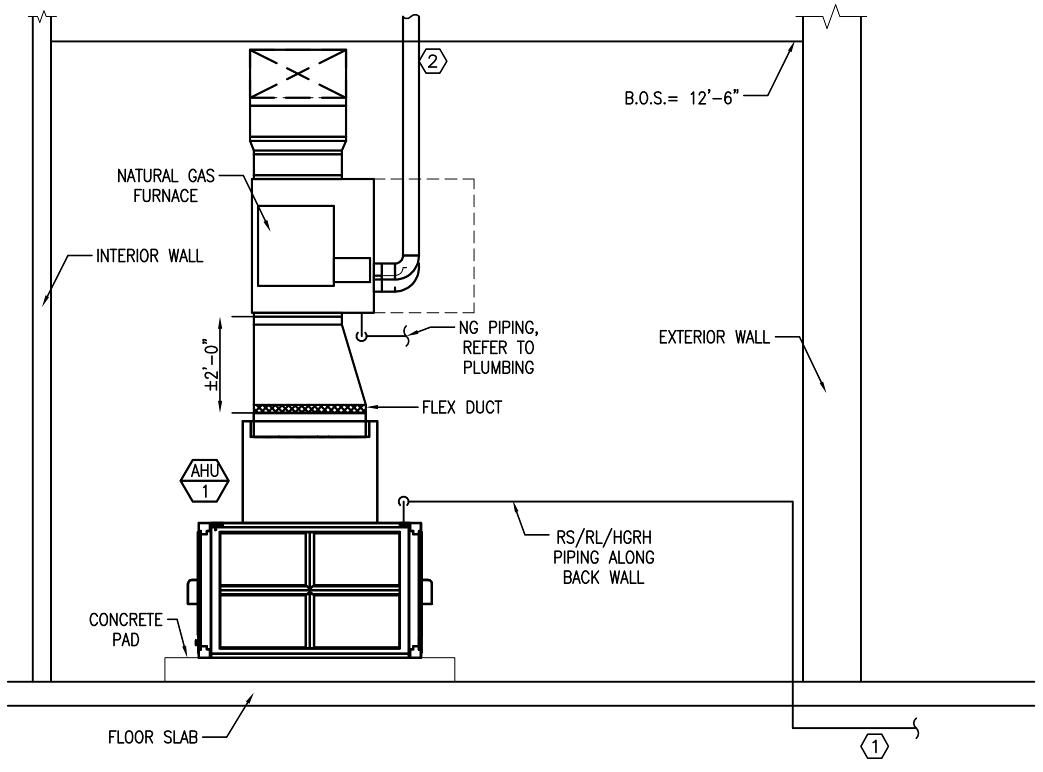
SHEET NOTES

① ROUTE REFRIGERANT LIQUID, SUCTION, AND HGRH LINES FROM INDOOR UNIT TO OUTDOOR UNIT. SEE DETAIL 5 ON M-502.

② ROUTE COMBUSTION INTAKE AND FLUE EXHAUST TO GAS DUCT HEATER MFR. CONCENTRIC VENT KIT AND TERMINATE AT ROOF LEVEL. COORDINATE DUCT ROUTING WITH ALL OTHER DISCIPLINES AND OFFSET DUCTWORK AS NECESSARY. REFER TO DETAIL 7 ON M-503.



1 MECHANICAL SECTION

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

1/2"=1'-0" 1' 0' 1' 2' 3' 4' 5'

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MEF24005
FILE NAME:
MEF24005M-401.DWG

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MOBILE DISTRICT
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MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL
SECTION

SHEET ID
M-401

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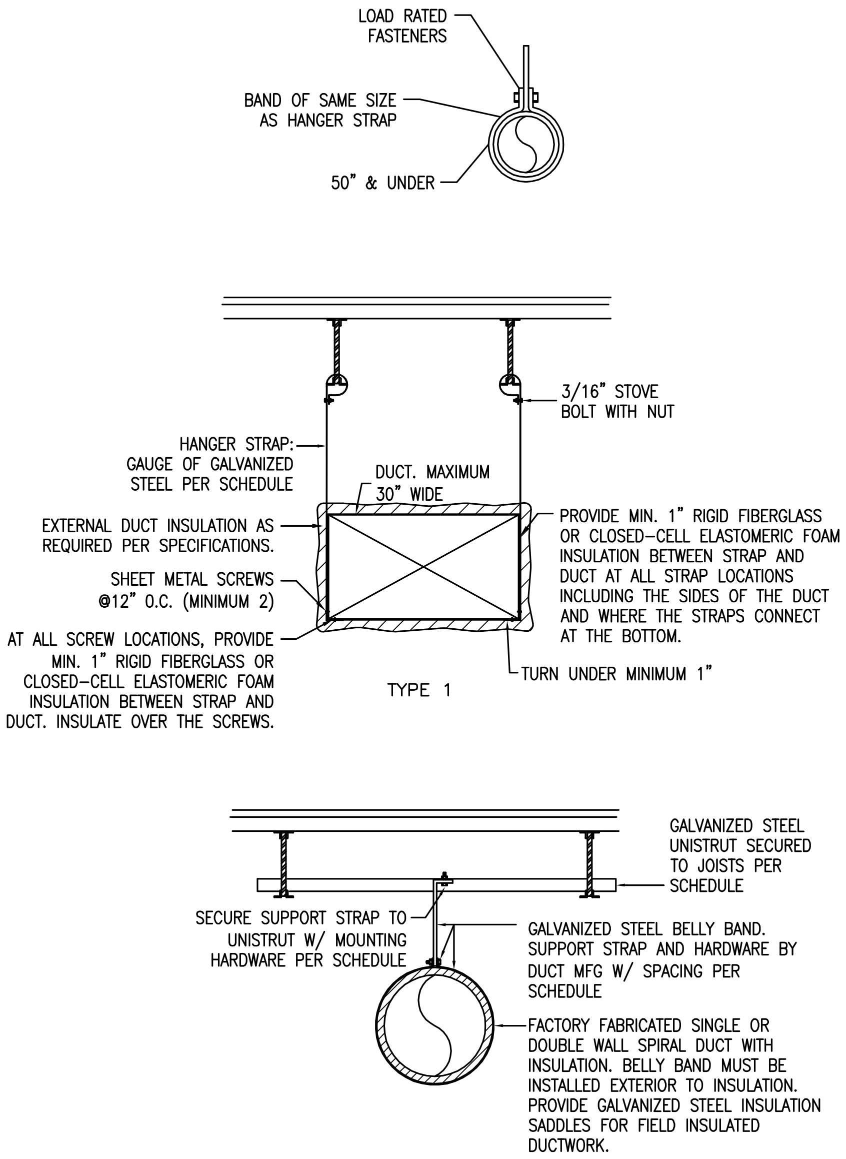

LOAD RATED FASTENERS
BAND OF SAME SIZE AS HANGER STRAP
50" & UNDER
3/16" STOVE BOLT WITH NUT
HANGER STRAP: GAUGE OF GALVANIZED STEEL PER SCHEDULE
DUCT. MAXIMUM 30" WIDE
EXTERNAL DUCT INSULATION AS REQUIRED PER SPECIFICATIONS.
SHEET METAL SCREWS @12" O.C. (MINIMUM 2)
AT ALL SCREW LOCATIONS, PROVIDE MIN. 1" RIGID FIBERGLASS OR CLOSED-CELL ELASTOMERIC FOAM INSULATION BETWEEN STRAP AND DUCT. INSULATE OVER THE SCREWS.
PROVIDE MIN. 1" RIGID FIBERGLASS OR CLOSED-CELL ELASTOMERIC FOAM INSULATION BETWEEN STRAP AND DUCT AT ALL STRAP LOCATIONS INCLUDING THE SIDES OF THE DUCT AND WHERE THE STRAPS CONNECT AT THE BOTTOM.
TURN UNDER MINIMUM 1"
TYPE 1
GALVANIZED STEEL UNISTRUT SECURED TO JOISTS PER SCHEDULE
SECURE SUPPORT STRAP TO UNISTRUT W/ MOUNTING HARDWARE PER SCHEDULE
GALVANIZED STEEL BELLY BAND. SUPPORT STRAP AND HARDWARE BY DUCT MFG W/ SPACING PER SCHEDULE
FACTORY FABRICATED SINGLE OR DOUBLE WALL SPIRAL DUCT WITH INSULATION. BELLY BAND MUST BE INSTALLED EXTERIOR TO INSULATION. PROVIDE GALVANIZED STEEL INSULATION SADDLES FOR FIELD INSULATED DUCTWORK.

HANGER STRAPS OR RODS

MAX. DUCT ø (IN)	QUANTITY/SIZE (IN)	MAX. LOAD (LBS)	MAX. SPACING (IN)
26	ONE 1 x 22 GA STRAP	260	120
36	ONE 1 x 18 GA STRAP	420	120

HANGER STRAPS OR RODS NOTE:
TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.

ANGLE IRON SCHEDULE

WIDTH	ANGLE SIZE
31" THRU 42"	1-1/2" x 1-1/2" x 1/8"

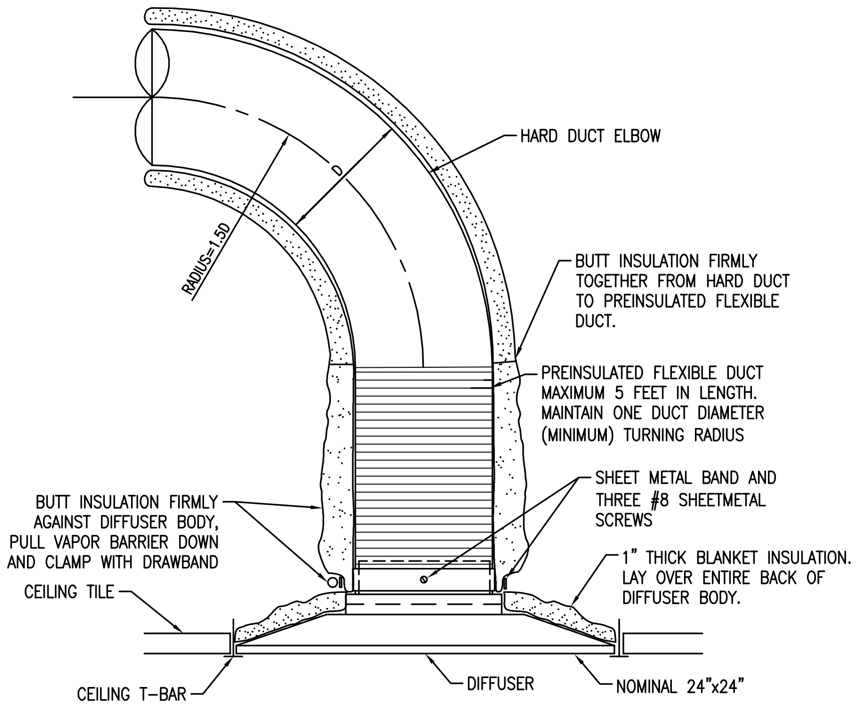
DUCT SCHEDULE

1/2 DUCT PERIMETER (P/2)	GAUGE	HANGERS	MAXIMUM HANGER SPACING	JOINTS
30"	26	1"-22 GAUGE	10'-0" (TYPE 1)	FLAT "S" & DRIVE SLIP
72"	24	1"-18 GAUGE	10'-0" (TYPE 1)	STANDING "S"

DETAIL NOTES:
1. WHERE SCHEDULE CONFLICTS WITH MORE STRINGENT SMACNA DUCT CONSTRUCTION STANDARD, SMACNA MUST BE USED.
2. UTILIZE RECTANGULAR DUCT INSTALLATION INSTRUCTIONS FOR FLAT OVAL DUCTWORK.
3. FOR DOUBLE WALL DUCTWORK 30" WIDE OR LESS, STRAPS MAY BE SECURED TO OUTER WALL OF DOUBLE WALL DUCT. INSULATION BETWEEN STRAP AND DUCT IS NOT REQUIRED.
4. FOR DOUBLE WALL DUCTWORK WIDER THAN 30", OUTER WALL OF DOUBLE WALL FLAT OVAL DUCT MAY REST ON ANGLE IRON. INSULATION BETWEEN ANGLE IRON AND DUCT IS NOT REQUIRED.

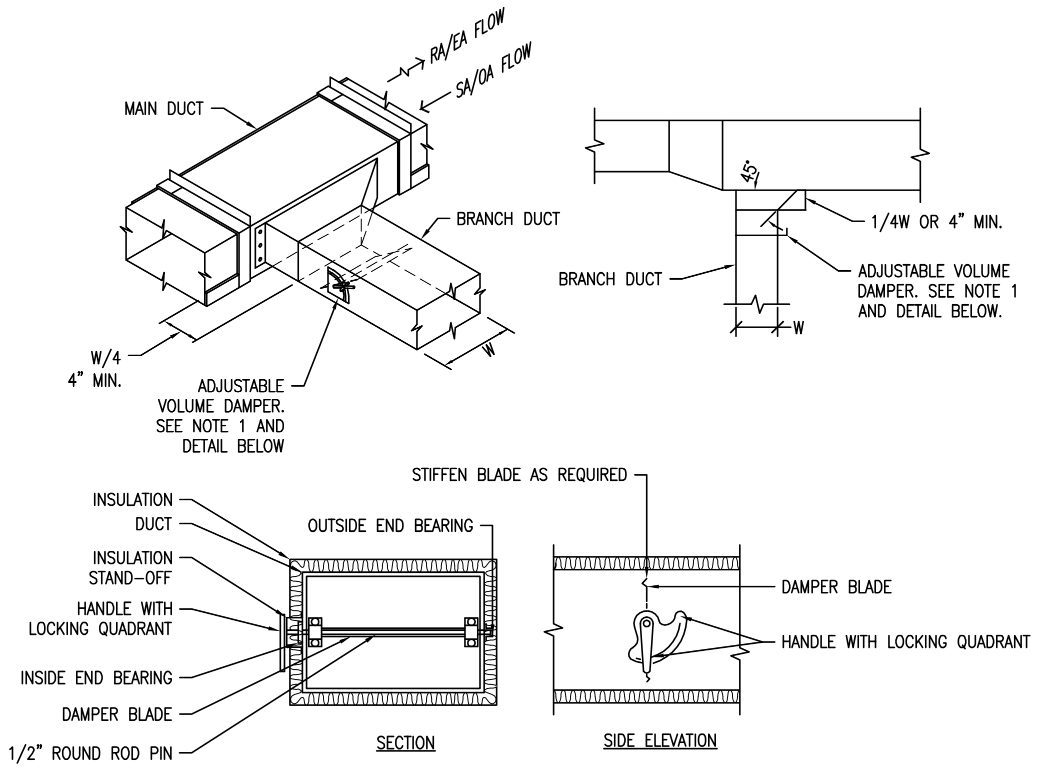
1 DUCT SUPPORT DETAILS

NOT TO SCALE


D
RADIUS=1.5D
HARD DUCT ELBOW
BUTT INSULATION FIRMLY TOGETHER FROM HARD DUCT TO PREINSULATED FLEXIBLE DUCT.
PREINSULATED FLEXIBLE DUCT MAXIMUM 5 FEET IN LENGTH. MAINTAIN ONE DUCT DIAMETER (MINIMUM) TURNING RADIUS
BUTT INSULATION FIRMLY AGAINST DIFFUSER BODY, PULL VAPOR BARRIER DOWN AND CLAMP WITH DRAWBAND
SHEET METAL BAND AND THREE #8 SHEETMETAL SCREWS
1" THICK BLANKET INSULATION. LAY OVER ENTIRE BACK OF DIFFUSER BODY.
CEILING TILE
CEILING T-BAR
DIFFUSER
NOMINAL 24"x24"

2 CEILING DIFFUSER DETAIL

NOT TO SCALE



NOTES:
1. PROVIDE ADJUSTABLE VOLUME DAMPER WITH POSITIONING LEVER, EXTENSION SECTION (INSULATED DUCT ONLY), AND LOCKING WING NUT. VOLUME DAMPER MUST BE SINGLE BLADE OR MULTI-BLADE DEPENDING ON DUCT SIZE.
2. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
3. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION MUST BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

3 BRANCH DUCT TAKEOFF AND VOLUME DAMPER DETAIL

NOT TO SCALE

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CONSULTING· GROUP, INC.
FLORIDA LICENSE·NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
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PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005M-501.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL DETAILS

SHEET ID
M-501

RTA SUBMITTAL

CESAM v20181203

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901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
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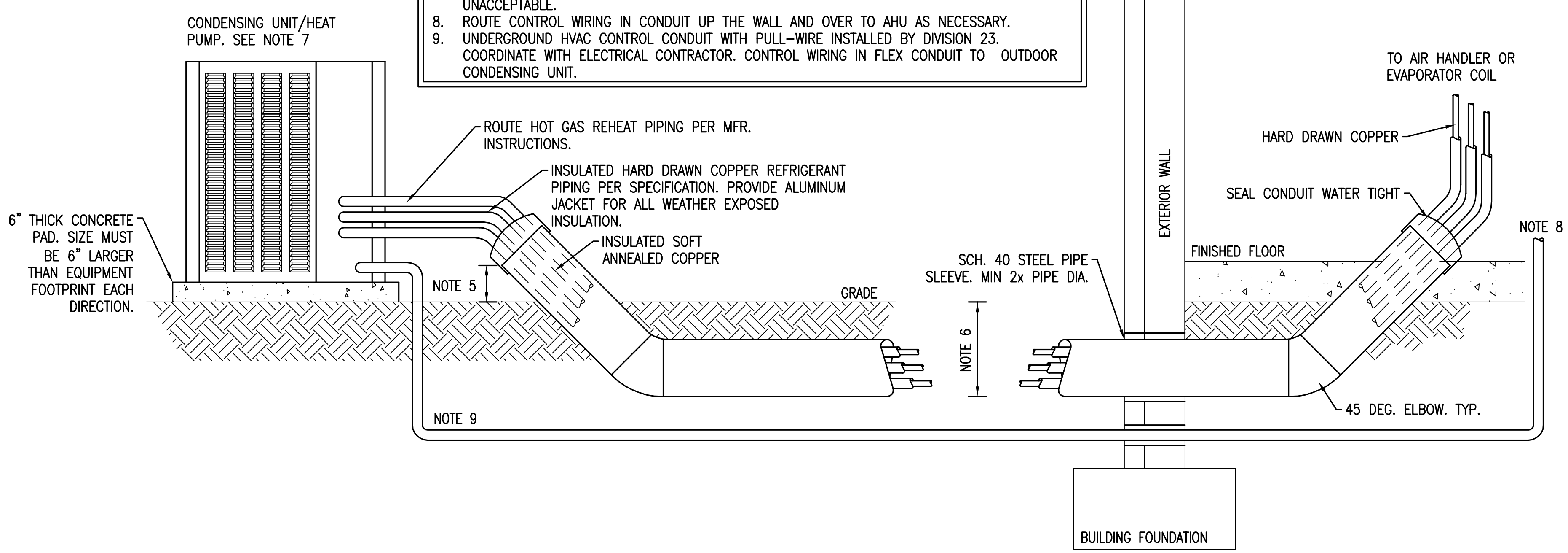
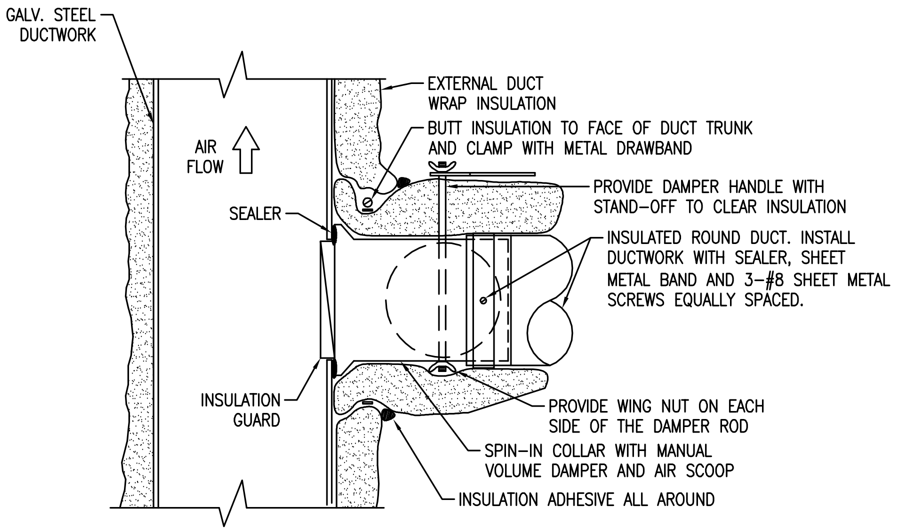
UNDERGROUND REFRIGERANT PIPING NOTES:
1. ONCE CHASE IS INSTALLED TEMPORARILY COVER WITH CAPS UNDERGROUND PIPE CHASE MUST REMAIN CLEAR OF DIRT, WATER AND CONSTUCTION DEBRIS.
2. PULL SWAB THROUGH CHASE TO CLEAN AND DRY BEFORE PULLING REFRIGERANT PIPE.
3. CONVERT TO HARD DRAWN COPPER UPON EXITING CHASE. FILL END OF CHASE WITH EXPANDED FOAM AND COVER WITH CAP.
4. SEAL PENETRATIONS TO PREVENT DIRT AND MOISTURE FROM ENTERING CHASE.
5. SEAL CONDUIT WEATHER TIGHT RISE WITHIN 6 INCHES OF UNIT AND CAP WITH PVC. NOTCH CAP TO FIT AROUND REFRIGERANT PIPE.
6. CONDUIT MAY VARY DEPTH AS REQUIRED TO PREVENT CONFLICT. COORDINATE WITH OTHER TRADES.
7. ANCHOR CONDENSING UNIT TO THE HOUSEKEEPING PAD WITH AT WITH GASKETED WASHERS THRU MANUFACTURER'S PROVIDED HOLES IN THE BASE OF THE UNIT. EXTERNAL CLIPS ARE UNACCEPTABLE.
8. ROUTE CONTROL WIRING IN CONDUIT UP THE WALL AND OVER TO AHU AS NECESSARY.
9. UNDERGROUND HVAC CONTROL CONDUIT WITH PULL-WIRE INSTALLED BY DIVISION 23. COORDINATE WITH ELECTRICAL CONTRACTOR. CONTROL WIRING IN FLEX CONDUIT TO OUTDOOR CONDENSING UNIT.


CONDENSING UNIT/HEAT PUMP. SEE NOTE 7
ROUTE HOT GAS REHEAT PIPING PER MFR. INSTRUCTIONS.
INSULATED HARD DRAWN COPPER REFRIGERANT PIPING PER SPECIFICATION. PROVIDE ALUMINUM JACKET FOR ALL WEATHER EXPOSED INSULATION.
INSULATED SOFT ANNEALED COPPER
6" THICK CONCRETE PAD. SIZE MUST BE 6" LARGER THAN EQUIPMENT FOOTPRINT EACH DIRECTION.
NOTE 5
GRADE
NOTE 6
NOTE 9
EXTERIOR WALL
SCH. 40 STEEL PIPE SLEEVE. MIN 2x PIPE DIA.
FINISHED FLOOR
TO AIR HANDLER OR EVAPORATOR COIL
HARD DRAWN COPPER
SEAL CONDUIT WATER TIGHT
NOTE 8
45 DEG. ELBOW. TYP.
BUILDING FOUNDATION

1 UNDERGROUND REFRIGERANT LINE CONDUIT ROUTING DETAIL

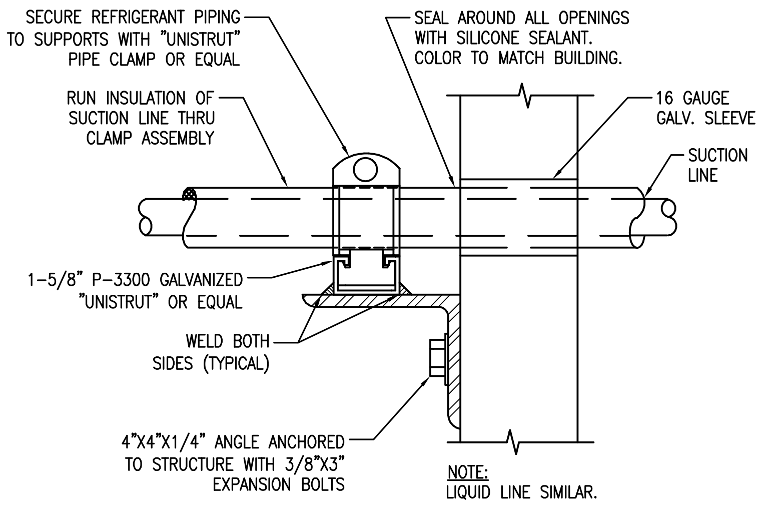
NOT TO SCALE


GALV. STEEL DUCTWORK
AIR FLOW
SEALER
INSULATION GUARD
EXTERNAL DUCT WRAP INSULATION
BUTT INSULATION TO FACE OF DUCT TRUNK AND CLAMP WITH METAL DRAWBAND
PROVIDE DAMPER HANDLE WITH STAND-OFF TO CLEAR INSULATION
INSULATED ROUND DUCT. INSTALL DUCTWORK WITH SEALER, SHEET METAL BAND AND 3-#8 SHEET METAL SCREWS EQUALLY SPACED.
PROVIDE WING NUT ON EACH SIDE OF THE DAMPER ROD
SPIN-IN COLLAR WITH MANUAL VOLUME DAMPER AND AIR SCOOP
INSULATION ADHESIVE ALL AROUND

NOTE:
1. HARD DUCT RUNOUTS SHOULD START WITH SPIN-IN FITTINGS SIMILAR TO THIS DETAIL.

2 ROUND DUCT TAP-IN MOUNTING DETAIL

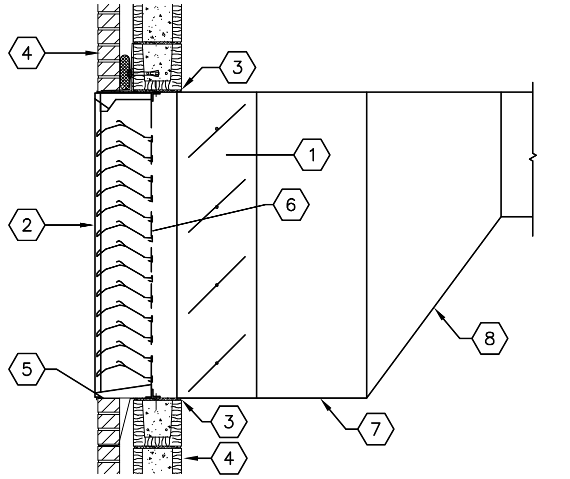
NOT TO SCALE


SECURE REFRIGERANT PIPING TO SUPPORTS WITH "UNISTRUT" PIPE CLAMP OR EQUAL
RUN INSULATION OF SUCTION LINE THRU CLAMP ASSEMBLY
1-5/8" P-3300 GALVANIZED "UNISTRUT" OR EQUAL
WELD BOTH SIDES (TYPICAL)
4"X4"X1/4" ANGLE ANCHORED TO STRUCTURE WITH 3/8"X3" EXPANSION BOLTS
SEAL AROUND ALL OPENINGS WITH SILICONE SEALANT. COLOR TO MATCH BUILDING.
16 GAUGE GALV. SLEEVE
SUCTION LINE

NOTE:
LIQUID LINE SIMILAR.

3 REFRIGERANT PIPE SUPPORT AT WALL DETAIL

NOT TO SCALE



KEYNOTES:

①	MOTORIZED DAMPER WHERE INDICATED ON PLANS.	⑤	SEAL WEATHER PROOF
②	LOUVER SIZE AS INDICATED ON PLANS AND SCHEDULES.	⑥	BIRD SCREEN
③	SECURE TO STRUCTURE PER MANUFACTURER.	⑦	PLENUM FOR TRANSITION TO DUCT, OR SLEEVE FOR TRANSITION TO UNIT. EXTERNALLY INSULATE.
④	FACE OF WALL.	⑧	PROVIDE SLOPE TRANSITION FROM DUCTWORK CONNECTION TO BOTTOM OF LOUVER FOR DRAINING OF ANY WATER INTRUSION.

NOTE:
1. REFER TO TYPICAL LOUVER TO VENEER INSTALLATION DETAIL ON ARCHITECTURAL DRAWINGS FOR FURTHER INSTALLATION REQUIREMENTS.

4 TYPICAL LOUVER MOUNTING DETAIL

NOT TO SCALE

US Army Corps of Engineers ®

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109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: CAP	ISSUE DATE: JUNE 2024
DRAWN BY: CAP	SOLICITATION NO.: -
CHECKED BY: CAP	CONTRACT NO.: -
SUBMITTED BY: CAP	PROJECT NUMBER: MEF24005
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL DETAILS

SHEET ID
M-502

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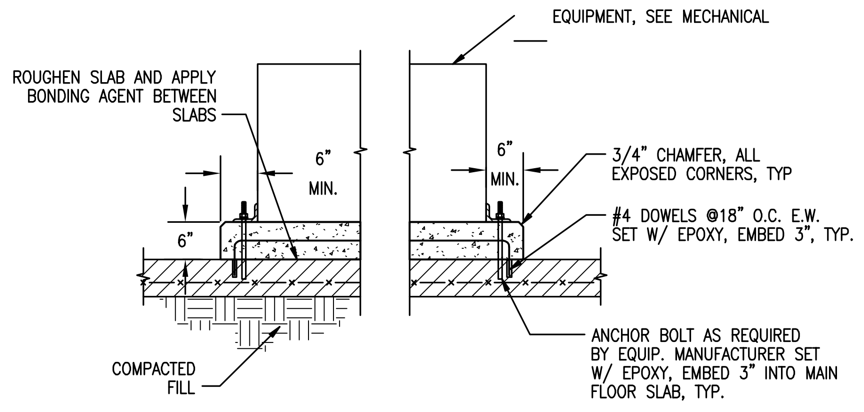
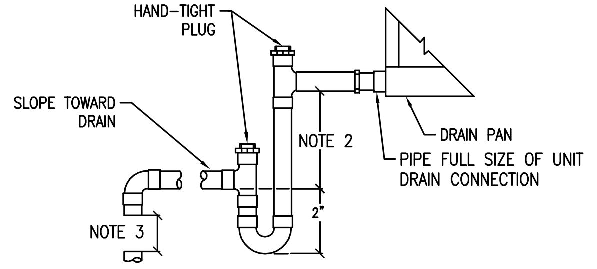

EQUIPMENT, SEE MECHANICAL
ROUGHEN SLAB AND APPLY BONDING AGENT BETWEEN SLABS
6" MIN.
6" MIN.
6"
3/4" CHAMFER, ALL EXPOSED CORNERS, TYP
#4 DOWELS @18" O.C. E.W. SET W/ EPOXY, EMBED 3", TYP.
COMPACTED FILL
ANCHOR BOLT AS REQUIRED BY EQUIP. MANUFACTURER SET W/ EPOXY, EMBED 3" INTO MAIN FLOOR SLAB, TYP.

1 INTERIOR EQUIPMENT PAD DETAIL

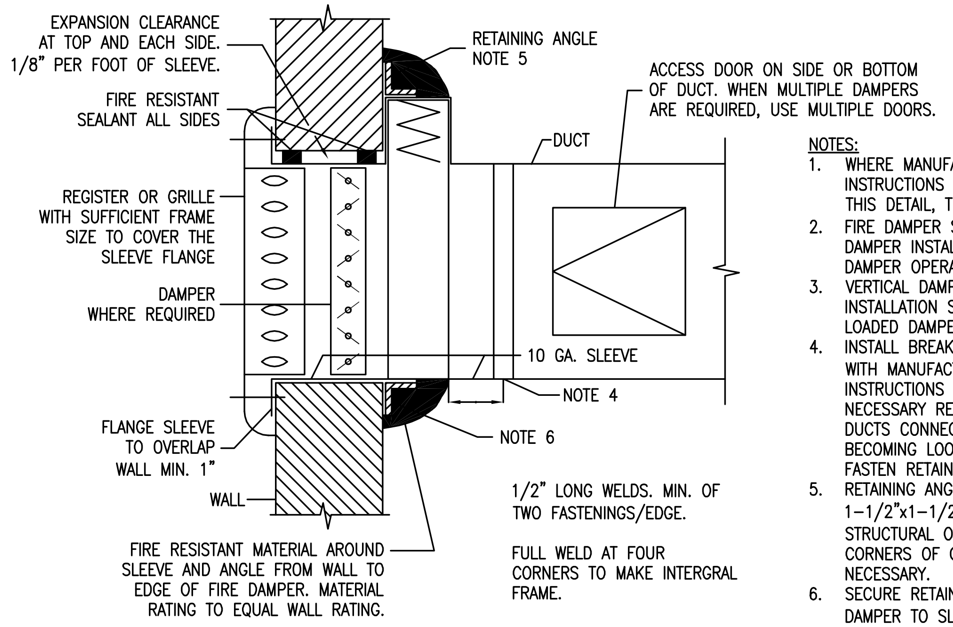
NOT TO SCALE



NOTE:
1. LOCATE TRAPS AND DRAIN SO AS TO BE ACCESSIBLE FOR CLEANING.
2. HEIGHT MUST BE EQUAL TO AIR UNIT TOTAL STATIC PRESSURE IN INCHES WATER COLUMN PLUS ONE INCH. (TSP+1 IN W.G.)
3. PROVIDE AIR GAP BETWEEN FLOOR DRAIN AND CONDENSATE DRAIN EQUAL TO TWO TIMES THE DRAIN DIAMETER.

2 CONDENSATE DRAIN TRAP DETAIL

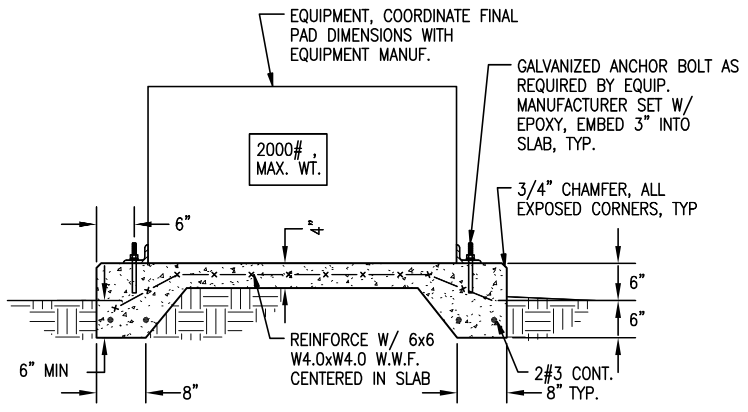
NOT TO SCALE


EXPANSION CLEARANCE AT TOP AND EACH SIDE. 1/8" PER FOOT OF SLEEVE.
FIRE RESISTANT SEALANT ALL SIDES
RETAINING ANGLE NOTE 5
ACCESS DOOR ON SIDE OR BOTTOM OF DUCT. WHEN MULTIPLE DAMPERS ARE REQUIRED, USE MULTIPLE DOORS.
DUCT
REGISTER OR GRILLE WITH SUFFICIENT FRAME SIZE TO COVER THE SLEEVE FLANGE
DAMPER WHERE REQUIRED
10 GA. SLEEVE
NOTE 4
FLANGE SLEEVE TO OVERLAP WALL MIN. 1"
NOTE 6
WALL
1/2" LONG WELDS. MIN. OF TWO FASTENINGS/EDGE.
FULL WELD AT FOUR CORNERS TO MAKE INTERGRAL FRAME.
FIRE RESISTANT MATERIAL AROUND SLEEVE AND ANGLE FROM WALL TO EDGE OF FIRE DAMPER. MATERIAL RATING TO EQUAL WALL RATING.

NOTES:
1. WHERE MANUFACTURERS INSTALLATION INSTRUCTIONS EXCEED THE REQUIREMENTS OF THIS DETAIL, THEY SHALL BE FOLLOWED.
2. FIRE DAMPER SHOWN-COMB. FIRE/SMOKE DAMPER INSTALLATION IDENTICAL EXCEPT FOR DAMPER OPERATOR MECHANISM.
3. VERTICAL DAMPER SHOWN-HORIZONTAL INSTALLATION SIMILAR EXCEPT FOR SPRING LOADED DAMPER.
4. INSTALL BREAKAWAY CONNECTION IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SMACNA STANDARDS. PROVIDE NECESSARY RETAINING SUPPORTS TO PREVENT DUCTS CONNECTED TO BREAKAWAY JOINTS FROM BECOMING LOOSE UNDER NORMAL OPERATION. FASTEN RETAINING SUPPORT TO WALL.
5. RETAINING ANGLE TO MINIMUM 1-1/2"x1-1/2"x1/8". ANGLES MUST LAP STRUCTURAL OPENINGS 1" MINIMUM AND COVER CORNERS OF OPENING. INCREASE ANGLE SIZE IF NECESSARY.
6. SECURE RETAINING ANGLE TO DAMPER AND DAMPER TO SLEEVE ON 8" CENTERS WITH MINIMUM 1/2" LONG WELDS.

3 FIRE DAMPER ADJACENT TO WALL DETAIL

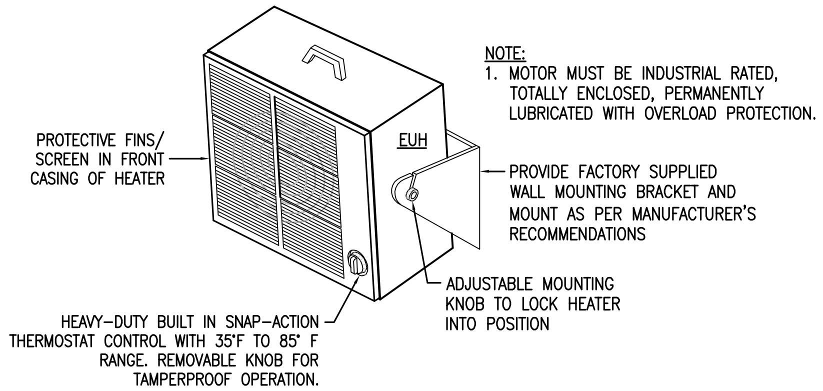
NOT TO SCALE


EQUIPMENT, COORDINATE FINAL PAD DIMENSIONS WITH EQUIPMENT MANUF.
GALVANIZED ANCHOR BOLT AS REQUIRED BY EQUIP. MANUFACTURER SET W/ EPOXY, EMBED 3" INTO SLAB, TYP.
2000# , MAX. WT.
3/4" CHAMFER, ALL EXPOSED CORNERS, TYP
6"
4"
6"
6"
REINFORCE W/ 6x6 W4.0xW4.0 W.W.F. CENTERED IN SLAB
6" MIN
8"
2#3 CONT.
8" TYP.

FOR MECHANICAL EQUIPMENT WEIGHING LESS THAN 300LBS

4 SITE SMALL EQUIPMENT PAD DETAIL

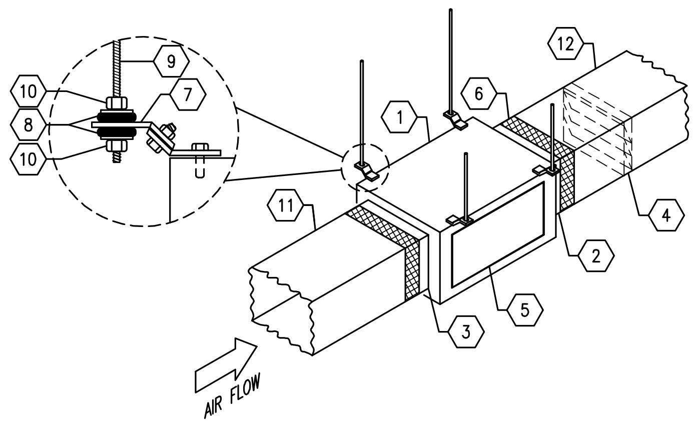
NOT TO SCALE


PROTECTIVE FINS/ SCREEN IN FRONT CASING OF HEATER
EUH
PROVIDE FACTORY SUPPLIED WALL MOUNTING BRACKET AND MOUNT AS PER MANUFACTURER'S RECOMMENDATIONS
ADJUSTABLE MOUNTING KNOB TO LOCK HEATER INTO POSITION
HEAVY-DUTY BUILT IN SNAP-ACTION THERMOSTAT CONTROL WITH 35°F TO 85° F RANGE. REMOVABLE KNOB FOR TAMPERPROOF OPERATION.

NOTE:
1. MOTOR MUST BE INDUSTRIAL RATED, TOTALLY ENCLOSED, PERMANENTLY LUBRICATED WITH OVERLOAD PROTECTION.

5 ELECTRIC UNIT HEATER INSTALLATION DETAIL

NOT TO SCALE



DETAIL NOTES:

1. GALVANIZED STEEL HOUSING
2. HORIZONTAL DISCHARGE COLLAR
3. HORIZONTAL INLET COLLAR
4. GRAVITY BACKDRAFT DAMPER
5. ACCESS PANEL (BOTH SIDES)
6. FLEXIBLE DUCT CONNECTOR
7. MOUNTING ANGLE BRACKET
8. VIBRATION ISOLATOR - TOP & BOTTOM
9. ALL THREADED HANGER ROD (TOTAL OF FOUR). SUPPORT FROM BUILDING PER FAN MANUFACTURER'S RECOMMENDATIONS.
10. NUT AND WASHER
11. INLET DUCT
12. DISCHARGE DUCT

NOTE:
FOR ALL EQUIPMENT WEIGHING MORE THAN 31 POUNDS. PROVIDE SWAY BRACING OF 0.5 X WEIGHT HORIZONTALLY AND 1.5 X WEIGHT VERTICALLY. REFER TO DETAIL 2 ON M-504.

6 INLINE CABINET FAN DETAIL

NOT TO SCALE

SCHMIDT
CONSULTING· GROUP,INC.
FLORIDA LICENSE·NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

US Army Corps of Engineers®

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SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005M-503.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
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Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL DETAILS

SHEET ID
M-503

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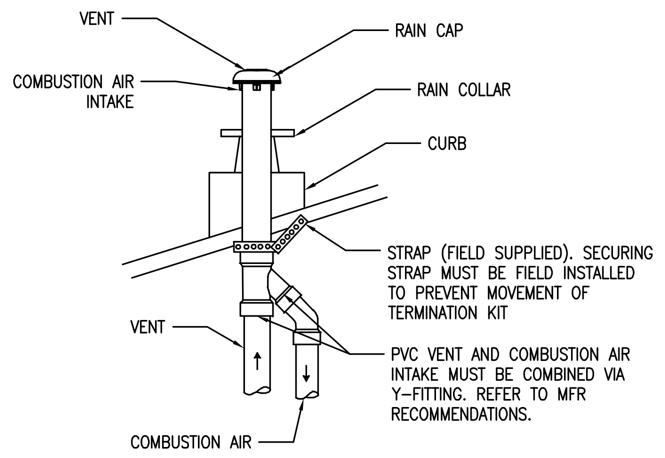
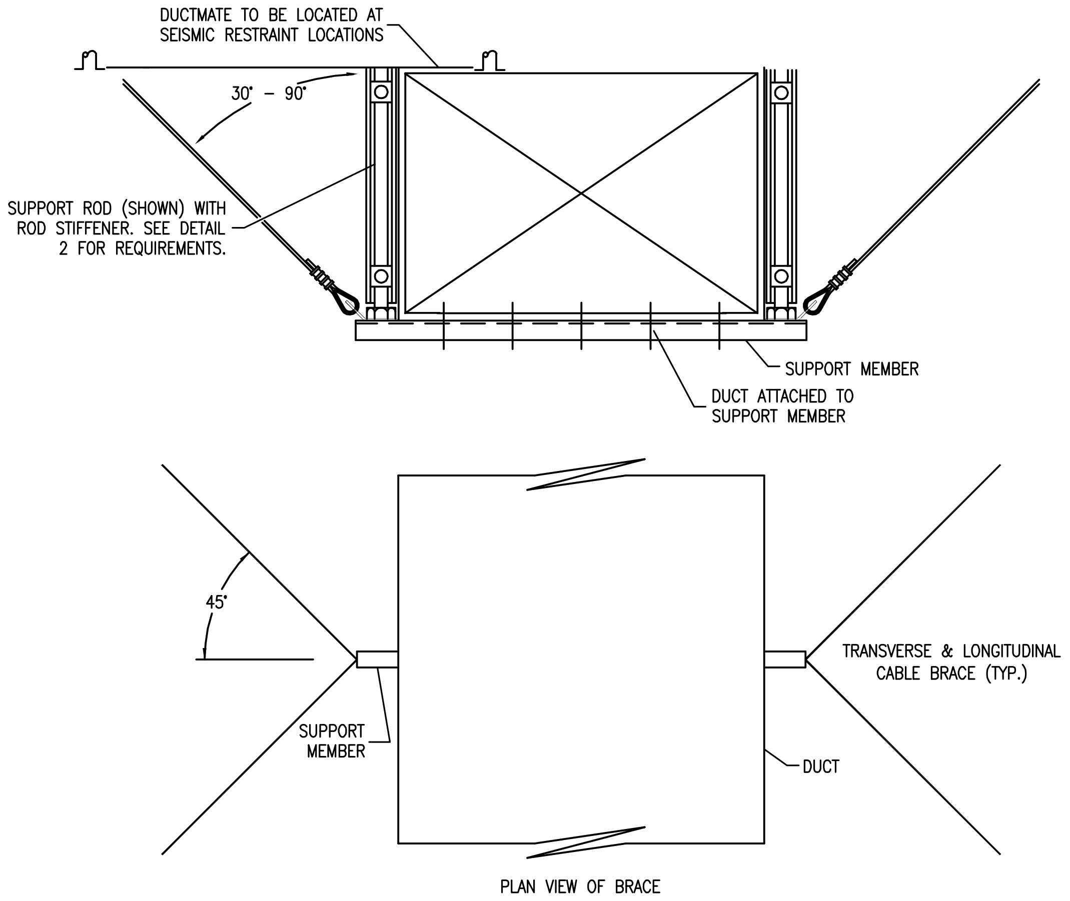

VENT
RAIN CAP
COMBUSTION AIR INTAKE
RAIN COLLAR
CURB
STRAP (FIELD SUPPLIED). SECURING STRAP MUST BE FIELD INSTALLED TO PREVENT MOVEMENT OF TERMINATION KIT
VENT
PVC VENT AND COMBUSTION AIR INTAKE MUST BE COMBINED VIA Y-FITTING. REFER TO MFR RECOMMENDATIONS.
COMBUSTION AIR

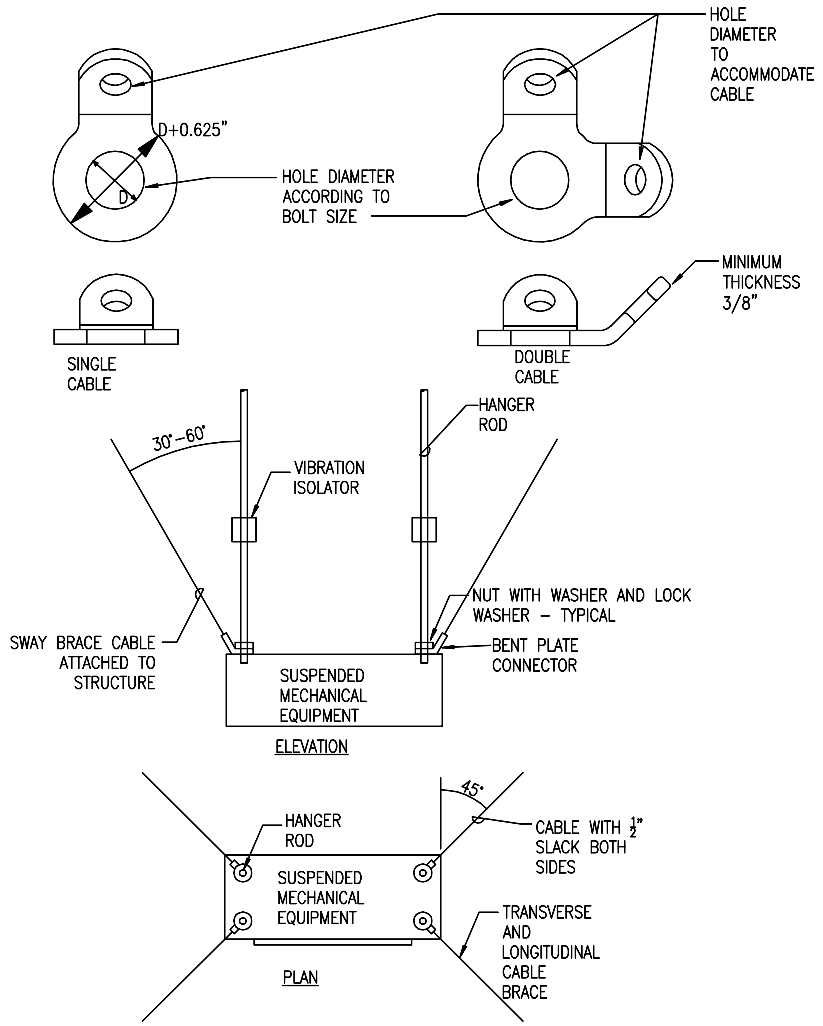
2 CONCENTRIC VENT KIT DETAIL

NOT TO SCALE


DUCTMATE TO BE LOCATED AT SEISMIC RESTRAINT LOCATIONS
30° – 90°
SUPPORT ROD (SHOWN) WITH ROD STIFFENER. SEE DETAIL 2 FOR REQUIREMENTS.
SUPPORT MEMBER
DUCT ATTACHED TO SUPPORT MEMBER
45°
TRANSVERSE & LONGITUDINAL CABLE BRACE (TYP.)
SUPPORT MEMBER
DUCT
PLAN VIEW OF BRACE

1 SEISMIC WIRE ROPE/CABLE BRACING TRANSVERSE AND LONGITUDINAL (4-WAY) BRACE FOR DUCTWORK

NOT TO SCALE


HOLE DIAMETER TO ACCOMMODATE CABLE
D+0.625"
D
HOLE DIAMETER ACCORDING TO BOLT SIZE
SINGLE CABLE
DOUBLE CABLE
MINIMUM THICKNESS 3/8"
30°-60°
HANGER ROD
VIBRATION ISOLATOR
NUT WITH WASHER AND LOCK WASHER – TYPICAL
SWAY BRACE CABLE ATTACHED TO STRUCTURE
BENT PLATE CONNECTOR
SUSPENDED MECHANICAL EQUIPMENT
ELEVATION
HANGER ROD
45°
CABLE WITH ½" SLACK BOTH SIDES
SUSPENDED MECHANICAL EQUIPMENT
TRANSVERSE AND LONGITUDINAL CABLE BRACE
PLAN

3 SUSPENDED EQUIPMENT SWAY BRACING DETAIL

NOT TO SCALE

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CONSULTING· GROUP, INC.
FLORIDA LICENSE·NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
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FILE NAME: MEF24005M-504.DWG

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL DETAILS

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M-504

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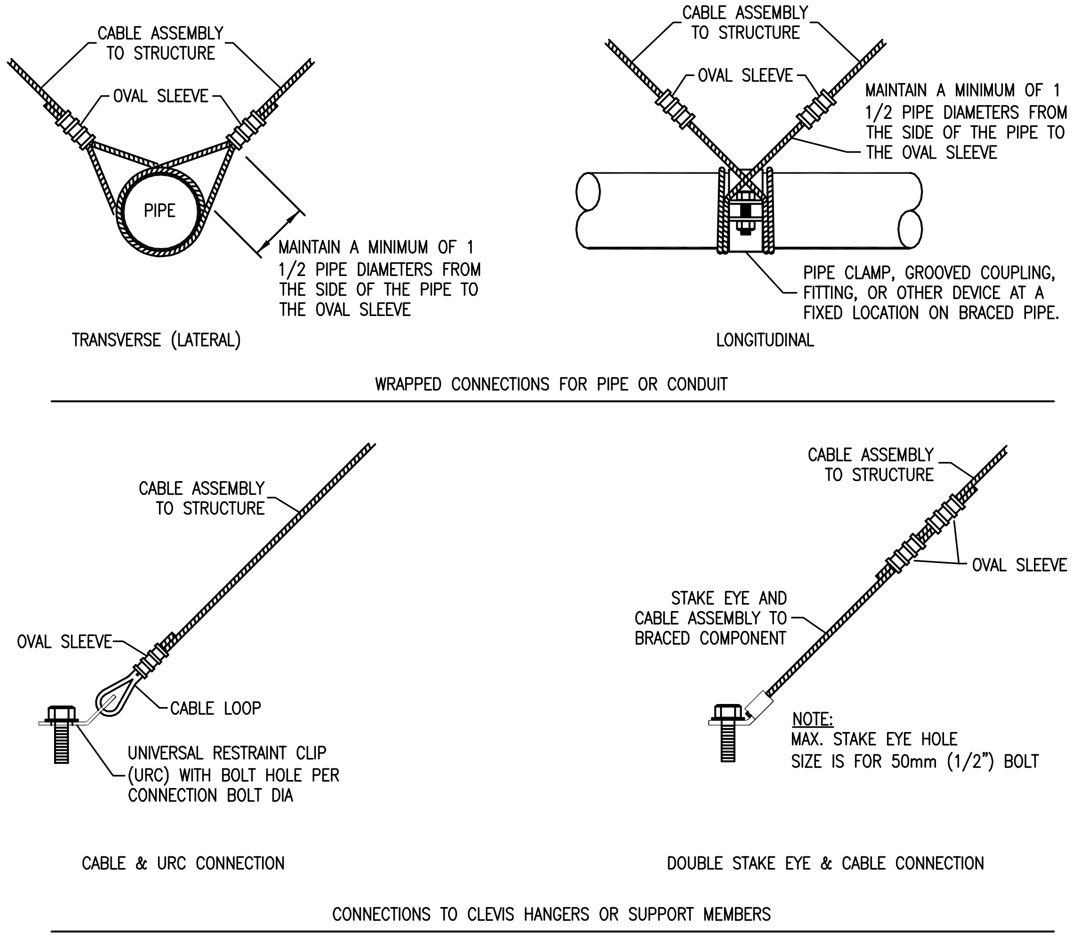
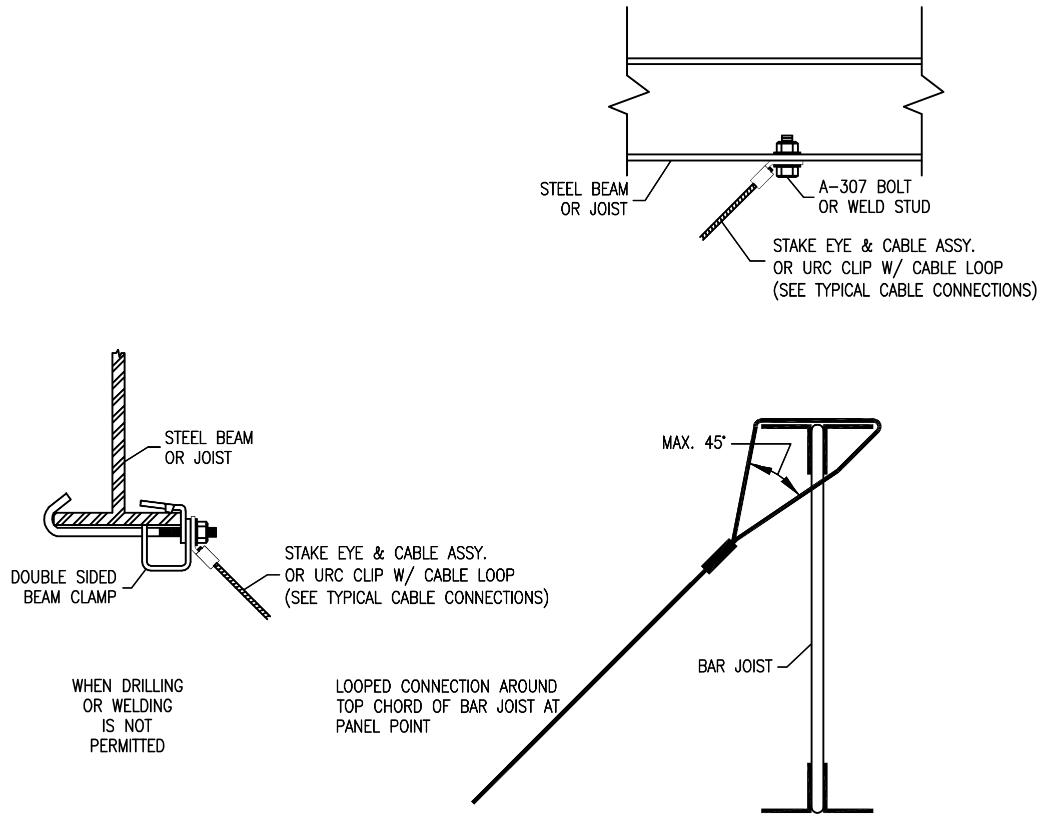

CABLE ASSEMBLY TO STRUCTURE
OVAL SLEEVE
PIPE
MAINTAIN A MINIMUM OF 1 1/2 PIPE DIAMETERS FROM THE SIDE OF THE PIPE TO THE OVAL SLEEVE
TRANSVERSE (LATERAL)
CABLE ASSEMBLY TO STRUCTURE
OVAL SLEEVE
MAINTAIN A MINIMUM OF 1 1/2 PIPE DIAMETERS FROM THE SIDE OF THE PIPE TO THE OVAL SLEEVE
PIPE CLAMP, GROOVED COUPLING, FITTING, OR OTHER DEVICE AT A FIXED LOCATION ON BRACED PIPE.
LONGITUDINAL
WRAPPED CONNECTIONS FOR PIPE OR CONDUIT
CABLE ASSEMBLY TO STRUCTURE
OVAL SLEEVE
CABLE LOOP
UNIVERSAL RESTRAINT CLIP (URC) WITH BOLT HOLE PER CONNECTION BOLT DIA
CABLE & URC CONNECTION
CABLE ASSEMBLY TO STRUCTURE
OVAL SLEEVE
STAKE EYE AND CABLE ASSEMBLY TO BRACED COMPONENT
NOTE:
MAX. STAKE EYE HOLE SIZE IS FOR 50mm (1/2") BOLT
DOUBLE STAKE EYE & CABLE CONNECTION
CONNECTIONS TO CLEVIS HANGERS OR SUPPORT MEMBERS

1 TYPICAL CABLE CONNECTION TO BRACED COMPONENTS DETAIL

NOT TO SCALE


STEEL BEAM OR JOIST
A-307 BOLT OR WELD STUD
STAKE EYE & CABLE ASSY. OR URC CLIP W/ CABLE LOOP (SEE TYPICAL CABLE CONNECTIONS)
STEEL BEAM OR JOIST
DOUBLE SIDED BEAM CLAMP
STAKE EYE & CABLE ASSY. OR URC CLIP W/ CABLE LOOP (SEE TYPICAL CABLE CONNECTIONS)
WHEN DRILLING OR WELDING IS NOT PERMITTED
MAX. 45°
BAR JOIST
LOOPED CONNECTION AROUND TOP CHORD OF BAR JOIST AT PANEL POINT

2 SEISMIC WIRE ROPE/CABLE BRACING TYPICAL CABLE CONNECTIONS TO STRUCTURE

NOT TO SCALE

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CONSULTING· GROUP,INC.
FLORIDA LICENSE NUMBER 05371
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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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DDC SYSTEM GENERAL NOTES

1. PROVIDE DDC PROGRAMMING AND GRAPHICS AS REQUIRED TO PROVIDE THE CAPABILITY TO VIEW, COMMAND, AND CONTROL ALL EQUIPMENT AS NOTED IN THIS PROJECT.
2. PROVIDE CONTROLS FOR EQUIPMENT AS SCHEDULED, WITH THERMOSTAT WITH LOCKABLE COVER FOR USER OVERRIDE, AND ALL RELATED CONTROL ACCESSORIES AS SPECIFIED
3. THE CONTRACTOR MUST PROVIDE A COMPLETE NEW DDC SYSTEM TO PERFORM THE INDICATED SEQUENCES, ALL OTHER FUNCTIONS REQUIRED BY THE CONTRACT DOCUMENTS, AND ALL OTHER FUNCTIONS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
4. ALL SEQUENCES ARE SUBJECT TO SAFETIES. CONTRACTOR MUST PROVIDE ALL NECESSARY AND CUSTOMARY SAFETIES.
5. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL WIRING. ALL WIRING MUST BE IN CONDUIT. ALL CONDUIT MUST BE INSTALLED IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS, REQUIREMENTS FOR 120 VAC CIRCUITS.
6. CONTRACTOR IS RESPONSIBLE FOR PROVIDING CONTROL VOLTAGE TRANSFORMERS AND POWER TO ALL CABINETS, PANELS, ETC. AS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM. CONTRACTOR MUST COORDINATE ALL POWER REQUIREMENTS WITH THE CONTROL VENDOR'S DESIGN REQUIREMENTS AND ELECTRICAL REQUIREMENTS.
7. THE CONTROLS CONTRACTOR MUST PROVIDE ALL LOW VOLTAGE FIELD CONTROL WIRING/INTERLOCK (E.G. TEMPERATURE SENSORS TO MFR CONTROLS, MFR FIELD MOUNTED SENSORS, ETC). COORDINATE WITH EQUIPMENT PROVIDER AND OTHER TRADES.
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE PROPER INSTALLATION OF WELLS, PRESSURE TAPS, AND P/T TAPS IN ALL LOCATIONS INDICATED AND OTHERWISE AS REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.
9. CONDUIT MUST BE RUN PERPENDICULAR AND PARALLEL TO BUILDING LINES IN A FIRST CLASS WORKMANSHIP LIKE MANNER.
10. THE CONTRACTOR MUST PROVIDE ALL CONTROL VOLTAGE TRANSFORMERS AS REQUIRED FOR FULLY FUNCTIONAL SYSTEM. PROVIDE ELECTRICAL SERVICE AT TRANSFORMER LOCATIONS.
11. ALL MOTORIZED CONTROL DAMPERS MUST BE 24V. COORDINATE DAMPER INSTALLATION WITH ALL TRADES FOR A FULLY FUNCTIONAL SYSTEM.
12. CONTRACTOR MUST FURNISH SMOKE DETECTORS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL REQUIRED DISCIPLINES FOR INSTALLATION AND WIRING OF SMOKE DETECTORS.
13. PROVIDE DETAILED CONTROL SUBMITTALS FOR EACH PIECE OF EQUIPMENT VERIFYING THE SEQUENCE OF OPERATION AND INCLUDING WIRING DIAGRAMS, CONTROL PANEL LAYOUT AND WIRING AND SUBMITTALS FOR ALL CONTROL EQUIPMENT (I.E., TEMPERATURE SENSORS, MOTORIZED DAMPERS, ETC.)
14. THE CONTRACTOR MUST UTILIZE P/T'S TO CALIBRATE INSTRUMENTS TO CERTIFIED PRESSURE GAGES, PRESSURE METERS AND THERMOMETERS.
15. THE DDC SYSTEM MUST PROVIDE FOR AUTOMATIC RESTART OF ALL AIR–SIDE SYSTEMS. IF ANY SYSTEM SHOULD FAIL TO RE–START AFTER 3 (ADJ) ATTEMPTS, AN ALARM MUST BE GENERATED AT THE OPERATOR WORKSTATION.
16. PROVIDE MOTORIZED SOLENOID GAS SHUTOFF VALVE. PROVIDE POWER AND PIPE TRANSITION AS REQUIRED. SEE PLUMBING PLANS FOR LOCATION.
17. THE DDC MUST INTERFACE TO THE LIGHTING CONTROL SYSTEM . INTEGRATE SCHEDULING FROM DDC.
18. THE DDC MUST MONITOR THE SPACE TEMPERATURES, SPACE HUMIDITY, AND AIR HANDLING UNIT AND LEAVING AIR TEMPERATURE, AND BE CAPABLE OF TRENDING THESE VALUES ON A MONTHLY AND ANNUAL BASIS FOR THE OWNER'S REVIEW AND USE.
19. OVERALL BUILDING WATER METER MUST BE PROVIDED BY THE CONTRACTOR. THE DDC MUST MONITOR THE OVERALL WATER USAGE. THE DDC CONTROL SYSTEM MUST BE CAPABLE OF TRENDING THESE VALUES BASED ON GALLONS ON BOTH A MONTHLY AND ANNUAL BASIS FOR THE OWNER'S REVIEW AND USE.
20. DDC SYSTEM GRAPHIC REQUIREMENTS:

    BUILDING GRAPHIC – THIS SCREEN MUST HAVE A 3D GRAPHIC OF THE FRONT OF THE BUILDING AND A BUILDING NUMBER.
    THE FOLLOWING LINKS ARE REQUIRED ON THIS PAGE: BACK TO MAIN MAP, FLOOR PLANS, ALARMS, REPORTS, SCHEDULES, HISTORY, AND USER SERVICE.

    FLOOR PLAN GRAPHIC
    - THE FLOOR PLAN MUST BE 3D WITH COLOR CODED ZONES, ROOM NUMBERS, AND AS– BUILT SENSOR AND EQUIPMENT LOCATIONS.
    - THE FOLLOWING POINTS ARE REQUIRED ON THIS PAGE: ROOM TEMP, ROOM HUMIDITY, OCCUPANCY STATUS.
    - THE FOLLOWING LINKS ARE REQUIRED ON THIS PAGE: BACK TO BUILDING GRAPHIC, ALL EQUIPMENT (CLICK ON SENSOR OR EQUIPMENT SHOWN ON THE FLOOR PLAN AND THE LINK MUST GO TO THE CORRESPONDING EQUIPMENT).

    TYPICAL EQUIPMENT GRAPHIC
    - INCLUDE A HEADER WITH EQUIPMENT TYPE AND NUMBER, ROOM NUMBERS AND AREA SERVED.
    - INCLUDE ALL POINTS ON THE EQUIPMENT GRAPHIC.
    - THE FOLLOWING POINTS MUST BE ANIMATED: FANS, DAMPERS, COILS, AND PUMPS.
    - ALL SET POINTS MUST HAVE THE CAPABILITY OF BEING CHANGED FROM THE GRAPHIC.

SEQUENCE OF OPERATION RADIANT TUBE HEATERS

THE RADIANT TUBE HEATERS MUST OPERATE SUBJECT TO THE MANUFACTURER'S ON–BOARD CONTROLS. THE HEATERS MUST OPERATE ANY TIME THE SPACE TEMPERATURE FALLS BELOW 55°F. IF THE HANGAR DOOR IS OPEN, AND THE OUTSIDE AIR TEMPERATURE IS ABOVE. 40°F, THE HEATERS MUST BE DISABLED. IF THE HANGAR DOOR IS OPEN AND THE OUTSIDE AIR TEMPERATURE IS BELOW 40°F THE HEATERS MUST REMAIN IN OPERATION.

HVLS FAN OPERATION

HVLS FANS MUST OPERATE ACCORDING TO MANUFACTURER'S CONTROLS. PROVIDE CONTROLLER AND MOUNT ON WALL AS INDICATED. INTERLOCK HVLS WITH FIRE ALARM SYSTEM AND SHUT DOWN FANS UPON ANY FIRE ALARM ACTIVATION. SEE FIRE ALARM DRAWINGS FOR MORE INFORMATION.

EMERGENCY AIR DISTRIBUTION SHUTOFF

EMERGENCY SHUTOFF SWITCH(S) MUST BE PROVIDED AS INDICATED ON SHEETS M–101 AND M–102 THAT MUST SHUTDOWN THE ALL AIR DISTRIBUTION (SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST) THROUGHOUT THE ENTIRE BUILDING. A PLASTIC LAMINATE SIGN MUST BE PROVIDED ADJACENT TO THE SWITCH WHICH READS – "BUILDING VENTILATION SYSTEM EMERGENCY SHUTOFF SWITCH".

SUPERVISE THE EMERGENCY SHUTOFF SWITCH BY ROUTING WIRE THROUGH THE FIRE ALARM CONTROL/MNS PANEL USING MONITOR MODULE AND CONTROL MODULES(S) TO ACTUATE TOTAL HVAC SHUTDOWN. COORDINATE CONTROLS INTERFACE WITH FIRE ALARM, AS REQUIRED, TO FACILITATE HVAC SHUTDOWN.

EXHAUST FANS SEQUENCE OF OPERATION

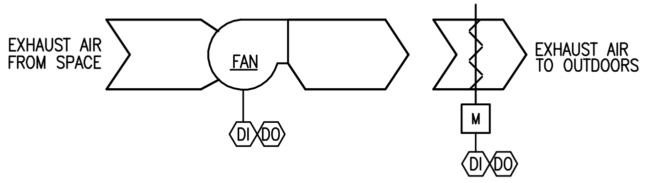
GENERAL CONTROLS:
ALL CONTROLS WIRING MUST BE RUN IN CONDUIT AND MUST COMPLY WITH DIVISION 26 REQUIREMENTS. WIRING DIAGRAMS FOR SEQUENCE OF OPERATION AS LISTED BELOW, INCLUDING ALL EQUIPMENT AND CONTROLLERS, MUST BE SUBMITTED.

FAN WITH INTERLOCKED WITH OCCUPANCY SCHEDULE
SEE FAN SCHEDULE FOR INTERLOCKED FANS. FANS MUST BE INTERLOCKED WITH THE UL LISTED INTERLOCKS. THE FANS MUST OPERATE SUCH THAT WHENEVER THE BUILDING IS "OCCUPIED" THE INTERLOCKED EF'S MUST BE OPERATING. WHEN THE BUILDING IS "UNOCCUPIED" THE FANS MUST BE DISABLED.

FANS CONTROLLED BY THERMOSTAT
WHEN THE SPACE TEMPERATURE RISES ABOVE SPACE TEMP SETPOINT (78°F, ADJ) THE MOTORIZED DAMPER MUST OPEN, THE DDC SYSTEM SHALL VERIFY THAT THE DAMPER IS OPEN, AND THE EXHAUST FAN MUST RUN.

ALL EXHAUST FANS MUST SHUTDOWN ON A SIGNAL FROM THE FIRE ALARM CONTROL PANEL.

POINTS LIST
FAN START/STOP
FAN STATUS
MOTORIZED DAMPER OPEN/CLOSE
MOTORIZED DAMPER POSITION FEEDBACK



1 EXHAUST FAN CONTROL DIAGRAM

SCHEMATIC

ENERGY MANAGEMENT AND CONTROL SYSTEM (EMCS)

THE DDC CONTROL SYSTEM MUST MONITOR THE OVERALL BUILDING ELECTRICITY CONSUMPTION, ELECTRICITY DEMAND, POTABLE WATER AND NATURAL GAS USAGE. THE DDC CONTROL SYSTEM MUST MONITOR AND RECORD THE ELECTRICITY USAGE OF THE BUILDING. THE DDC CONTROL SYSTEM MUST BE CAPABLE OF TRENDING THESE VALUES BASED ON COST AND KWH OR GALLONS ON BOTH A MONTHLY AND ANNUAL BASIS FOR THE OWNER'S REVIEW, AND INFORMATION MUST BE AVAILABLE OVER BASE EMCS. EMCS AND UTILITY MONITORING AND CONTROL SYSTEM ARE USED SYNONYMOUSLY AND ALL REQUIREMENTS WHERE EITHER IS REFERENCED MUST BE PROVIDED.

ADDITIONAL METERING POINTS:
FACILITY WATER METER
FACILITY GAS METER
FACILITY ELECTRIC METER

SEQUENCE OF OPERATION DX COMPUTER ROOM UNIT

GENERAL:
THE COMPUTER ROOM UNIT MUST OPERATE ACCORDING TO THE MANUFACTURER'S CONTROLS TO MAINTAIN SPACE TEMPERATURE AND HUMIDITY SET POINTS. THE SPACE TEMPERATURE SET POINT MUST BE SET TO 70°F (ADJ.) AND THE SPACE HUMIDITY SET POINT MUST BE SET TO 50% RH (ADJ.). THE DDC MUST GENERATE ALARMS WHEN THE SPACE TEMPERATURE EXCEEDS THE SET POINT BY 5°F (ADJ.)AND THE SPACE HUMIDITY EXCEEDS THE SET POINT BY 10% (ADJ.) VIA THE BACNET INTERFACE.

THE COMPUTER ROOM UNIT MUST BE PROVIDED WITH FACTORY INSTALLED MICROPROCESSOR CONTROLS. AS A MINIMUM, THE ADJUSTABLE SET POINTS MUST INCLUDE TEMPERATURE, TEMPERATURE SENSITIVITY, HUMIDITY AND HUMIDITY SENSITIVITY. THE CRU ONBOARD CONTROLLER MUST CYCLE THE STAGES OF DX COOLING AND ELECTRIC REHEAT TO MAINTAIN SPACE TEMPERATURE SET POINT. THE ONBOARD CONTROLLER MUST MODULATE THE HEATER TO MAINTAIN SPACE HUMIDITY SET POINT. THE CRU ONBOARD CONTROLLER MUST REPORT SYSTEM ALARM CONDITIONS ON THE INDIVIDUAL UNIT CONTROL PANEL AND THE DDC FRONT END. AS A MINIMUM, THESE ALARMS MUST INCLUDE RUN STATUS, CONTROL VALVE STATUS, PERCENT ELECTRIC HEAT OUTPUT, LOW/HI TEMPERATURE ALARM, LOW/HI HUMIDITY ALARM, FAN OVERLOAD, FILTER CHANGE, LOSS OF AIR FLOW, LOSS OF POWER AND LEAK DETECTION ALARM.

THE CRU ONBOARD CONTROLLER MUST BE CAPABLE OF SELF–DIAGNOSIS. IF A SELF–TEST DETECTS AN ONBOARD CRITICAL FAILURE, THE CONTROLLER MUST SIGNAL THE ON–BOARD CONTROLLER AND INITIATE SHUTDOWN. ON SHUTDOWN THE CRU CONTROLLER MUST DE–ENERGIZE THE HUMIDIFIER AND ELECTRIC REHEAT.

APART FROM THE MANUFACTURER THERMOSTAT, CONTRACTOR MUST FURNISH AN ADDITIONAL REMOTE TEMPERATURE SENSOR AT EACH COMPUTER ROOM UNIT LOCATION. PROVIDE AN ALARM TO THE DDC PANEL IF THE ROOM TEMPERATURE IS ABOVE 75 DEG F (ADJ.)

SEQUENCE OF OPERATION UNIT HEATERS

THE UNIT HEATERS MUST OPERATE SUBJECT TO THE MANUFACTURER'S STAND–ALONE CONTROLS.

CONTRACTOR MUST PROVIDE A DEDICATED ROOM TEMPERATURE SENSOR AND PROVIDE AN ALARM TO THE DDC WORKSTATION WHEN THE ROOM TEMPERATURE IS ABOVE 80°F (ADJ.) OR BELOW 40°F (ADJ.).

CARBON MONOXIDE DETECTION SYSTEM

GENERAL
A CARBON MONOXIDE DETECTION SYSTEM MUST BE PROVIDED IN COMPLIANCE WITH THE INTERNATIONAL MECHANICAL CODE, AND OTHER APPLICABLE CODES. CONTRACTOR MUST PROVIDE ALL SENSORS, SAFETIES, AND OTHER APPURTENANCES NECESSARY TO PROVIDE A WORKING SYSTEM. PROVIDE A MOTORIZED GAS VALVE WITH ELECTRIC ACTUATOR. SEE PLUMBING FOR LOCATION.

UPON A DETECTION OF CARBON MONOXIDE ABOVE 5 PPM, AN AUDIBLE ALARM MUST BE ENERGIZED SO AS TO NOTIFY MAINTENANCE PERSONNEL OF THE CONDITION. UPON ALARM ACTIVATION, THE FOLLOWING MUST OCCUR:
1. AN ALARM MUST BE POSTED TO THE DDC WORKSTATION.
2. MOTORIZED SOLENOID GAS VALVE MUST BE CLOSED.
3. ALL OF THE GAS EQUIPMENT MUST BE DE–ENERGIZED.

THE MOTORIZED GAS VALVE MUST BE CLOSED UNTIL THE SYSTEM IS MANUALLY DE–ACTIVATED BY THE DDC OPERATOR.

SCHMIDT
CONSULTING· GROUP, INC.
FLORIDA LICENSE NUMBER 05371
901 W. Garden St. · Pensacola, FL 32502
P: 850-438-0050 · F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

US Army Corps of Engineers ®

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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL CONTROLS

SHEET ID
M-601

RTA SUBMITTAL

SEQUENCE OF OPERATION – SPLIT SYSTEM AHU/HP

GENERAL:
THE UNIT MUST OPERATE ACCORDING TO THE MANUFACTURER'S CONTROLS TO MAINTAIN SPACE TEMPERATURE AND HUMIDITY SET POINTS.

FOR UNITS WITH A CAPACITY OF LESS THAN 2,000 CFM SERVING A MEANS OF EGRESS, PROVIDE AUTOMATIC FAN SHUTDOWN.

START/STOP CONTROL:
PROVIDE DDC SYSTEM FOR SCHEDULED START/STOP AND LOCAL OVERRIDE. STARTING AND STOPPING OF EQUIPMENT MUST BE BY A HAND-OFF-AUTO SWITCH. WITH THE HOA SWITCH IN THE AUTO POSITION, THE UNIT MUST BE STARTED AUTOMATICALLY BY THE ELECTRONIC CONTROL SYSTEM AND ALL CONTROLS ACTIVATED SUBJECT TO THE FIRE ALARM RELAY, SAFETIES AND OVERLOADS.

OCCUPIED MODE:
THE OUTSIDE AIR MOTORIZED DAMPER MUST OPEN TO THE BALANCED POSITION.

COOLING
WHEN THE SPACE TEMPERATURE RISES ABOVE THE COOLING SETPOINT DEAD BAND AS DETECTED BY THE SPACE THERMOSTAT, THE STAGES OF DX COOLING MUST BE CYCLED AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AT THE THERMOSTAT SETPOINT (78°F, ADJ.).

HEATING
WHEN THE SPACE TEMPERATURE DROPS BELOW THE HEATING SETPOINT DEAD BAND AS DETECTED BY THE THERMOSTAT, THE OUTDOOR UNIT REVERSING VALVE MUST REVERSE AND THE STAGES OF HEATING MUST BE CYCLED AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AT THERMOSTAT SETPOINT. IF REVERSE CYCLE HEATING IS INSUFFICIENT TO MAINTAIN SPACE TEMPERATURE, THE STAGES OF GAS SUPPLEMENTAL HEATING VIA DUCT HEATER MUST BE CYCLED AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AT THE THERMOSTAT SETPOINT (68°F, ADJ,.). IF THE UNIT DEFROST CYCLE ACTIVATES WHILE THE UNIT IS IN THE HEATING MODE, THE THERMOSTAT MUST CYCLE THE ELECTRIC HEAT TO SATISFY THE SPACE HEATING REQUIREMENTS.

UNOCCUPIED MODE:
THE AHU OUTSIDE AIR DAMPER MUST CLOSE AND THE AHU'S FAN AND COMPRESSOR MUST CYCLE TO MAINTAIN A HI/LOW LIMIT SETPOINT TEMPERATURE. THE SETPOINT FOR COOLING MUST BE 80°F ADJUSTABLE. THE SETPOINT FOR HEATING MUST BE 65°F ADJUSTABLE.

SPACE DEHUMIDIFICATION:
WHEN THE BUILDING IS IN "UNOCCUPIED" MODE AND THE RELATIVE HUMIDITY IN THE ZONE RISES ABOVE SETPOINT (50%RH, ADJ.), THEN THE CONTROLS MUST BE OVERRIDDEN, THE SYSTEM PLACED INTO "OCCUPIED" MODE, AND THE HPU'S MUST BE ENERGIZED. THE DX COOLING COIL MUST BE CYCLED AS REQUIRED TO MAINTAIN LEAVING AIR TEMPERATURE AS SCHEDULED. TO PREVENT SPACE OVERCOOLING, THE HOT GAS REHEAT COIL MUST MODULATE TO MAINTAIN NEUTRAL (68°F, ADJ.) LEAVING AIR TEMPERATURE UNTIL THE SPACE HUMIDITY SENSOR IS SATISFIED. IF THE SPACE TEMPERATURE CONTINUES TO DROP, THE GAS SUPPLEMENTAL HEATING VIA DUCT HEATER MUST MODULATE TO MAINTAIN NEUTRAL (68°F, ADJ.) LEAVING AIR TEMPERATURE UNTIL THE SPACE HUMIDITY SENSOR IS SATISFIED.

OVERRIDE MODE:
THE OVERRIDE TIMERS MUST PLACE THE HP AND IT'S ASSOCIATED AHU IN OCCUPIED MODE.

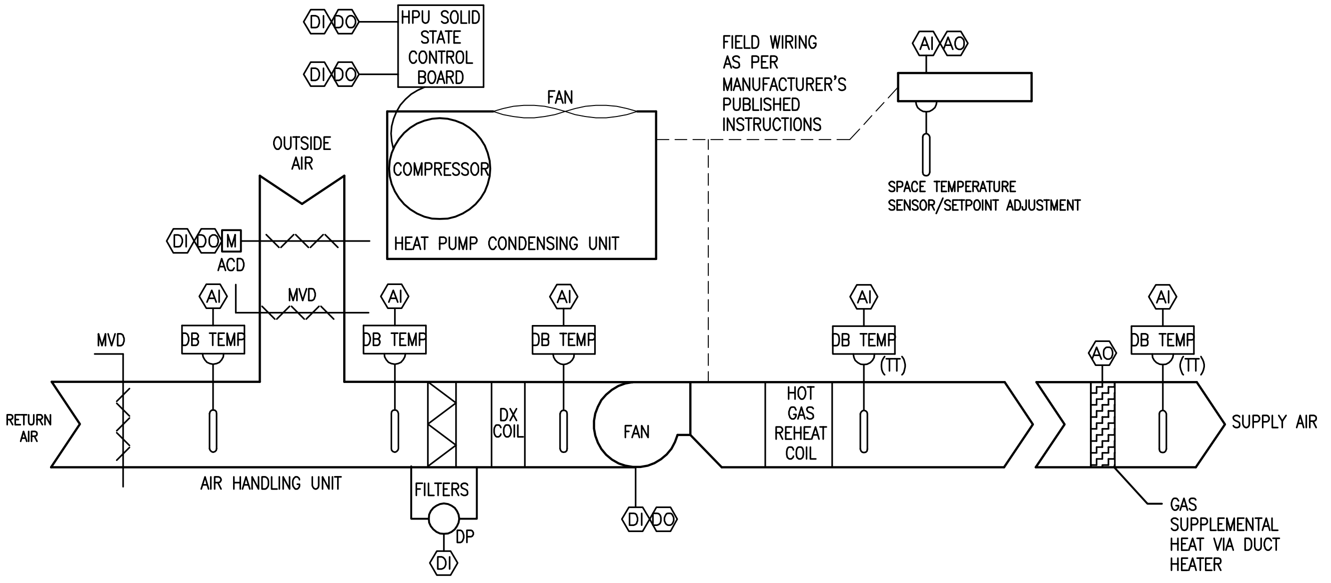
REFRIGERANT DETECTION SYSTEM:

PROVIDE INTEGRAL REFRIGERANT DETECTION SYSTEM PROVIDED BY THE MANUFACTURER AS REQUIRED PER ASHRAE STANDARD 15 SECTION 7.6.2. AND UL 60335-2-40. THE REFRIGERANT DETECTION SYSTEM SHALL COMPLY WITH ASHRAE STANDARD 15 SECTION 7.6.2.4 WHICH IS LISTED BELOW.

"7.6.2.4 THE REFRIGERANT DETECTION SYSTEM SHALL COMPLY WITH THE FOLLOWING:
- UTILIZE A SET POINT, NONADJUSTABLE IN THE FIELD, TO GENERATE AN OUTPUT SIGNAL TO INITIATE MITIGATION ACTIONS
- FIELD RECALIBRATION OF THE REFRIGERANT DETECTION SYSTEM SHALL NOT BE PERMITTED.
- BE CAPABLE OF DETECTING THE PRESENCE OF A SPECIFIED REFRIGERANT CORRESPONDING TO THE REFRIGERANT DESIGNATION OF THE REFRIGERANT CONTAINED IN THE REFRIGERATION SYSTEM.
- HAVE ACCESS FOR REPLACEMENT OF REFRIGERANT DETECTION SYSTEM COMPONENTS.
- HAVE SELF-DIAGNOSTICS TO DETERMINE OPERATIONAL STATUS OF THE SENSING ELEMENT.
- ENERGIZE AIR CIRCULATION FANS OF THE EQUIPMENT UPON FAILURE OF A SELF-DIAGNOSTIC CHECK.
- GENERATE AN OUTPUT SIGNAL IN NOT MORE THAN 30 SECONDS WHEN EXPOSED TO A REFRIGERANT CONCENTRATION OF 25% LFL(+0%,-1%)."

THE REFRIGERANT DETECTION SYSTEM SHALL PROVIDE ALL APPLICABLE MITIGATION ACTIONS AS REQUIRED PER ASHRAE STANDARD 15 SECTION 7.6.2.5.

POINTS LIST
FAN START/STOP
FAN STATUS
RETURN AIR TEMPERATURE
OA DAMPER OPEN/CLOSE
DUCT HEATER LEAVING AIR TEMPERATURE
DUCT HEATER STATUS
MIXED AIR TEMPERATURE
AHU LEAVING AIR TEMPERATURE
SPACE TEMPERATURE
SPACE RELATIVE HUMIDITY
DX COIL LEAVING AIR TEMPERATURE


DI
DO
HPU SOLID STATE CONTROL BOARD
DI
DO
FAN
FIELD WIRING AS PER MANUFACTURER'S PUBLISHED INSTRUCTIONS
AI
AO
OUTSIDE AIR
COMPRESSOR
HEAT PUMP CONDENSING UNIT
SPACE TEMPERATURE SENSOR/SETPOINT ADJUSTMENT
DI
DO
M
ACD
AI
MVD
AI
AI
AI
AI
MVD
DB TEMP
DB TEMP
DB TEMP
DB TEMP
(TT)
AO
DB TEMP
(TT)
RETURN AIR
DX COIL
FAN
HOT GAS REHEAT COIL
SUPPLY AIR
AIR HANDLING UNIT
FILTERS
DP
DI
DI
DO
GAS SUPPLEMENTAL HEAT VIA DUCT HEATER

1 SPLIT SYSTEM HEAT PUMP CONTROL DIAGRAM

SCHEMATIC

MAKEUP AIR UNIT SEQUENCE OF OPERATION

MAKEUP AIR UNIT NOTES

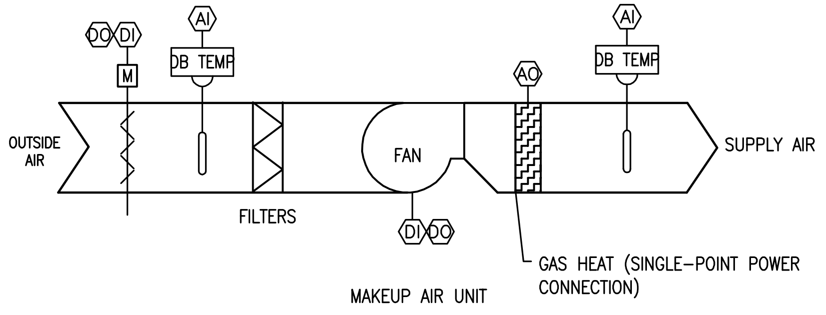
GENERAL CONTROLS:
ALL CONTROLS WIRING MUST BE RUN IN CONDUIT AND MUST COMPLY WITH DIVISION 26 REQUIREMENTS. WIRING DIAGRAMS FOR SEQUENCE OF OPERATION AS LISTED BELOW, INCLUDING ALL EQUIPMENT AND CONTROLLERS, MUST BE SUBMITTED WITH EQUIPMENT SUBMITTALS.

SEQUENCE OF OPERATION

VENTILATING
THE UNIT FAN MUST RUN CONTINUOUSLY.

HEATING
WHEN THE OUTSIDE TEMPERATURE DROPS BELOW (45°F, ADJ.) AS DETECTED BY THE DUCT SENSOR, THE GAS HEATING MUST BE MODULATED AS REQUIRED TO MAINTAIN DISCHARGE TEMPERATURE (45°F, ADJ.)

POINTS LIST
FAN START/STOP
FAN STATUS
OUTSIDE AIR TEMPERATURE
OA DAMPER OPEN/CLOSE
OA DAMPER POSITION FEEDBACK
HEATER LEAVING AIR TEMPERATURE
HEATER STATUS



2 MAKEUP AIR CONTROL DIAGRAM

SCHMIDT
CONSULTING· GROUP, INC.
FLORIDA LICENSE. NUMBER 05371
901 W. Garden St. • Pensacola, FL 32502
P: 850-438-0050 • F: 850-432-8631
CHRISTOPHER A. PETERSON P.E.
FLORIDA LICENSE NUMBER 94207
SCG project: 2022-134

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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CONTRACT NO.: -
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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

MECHANICAL CONTROLS

SHEET ID
M-602

RTA SUBMITTAL

ELECTRICAL SYMBOL LEGEND

WIRING AND MISCELLANEOUS DEVICES

○	CEILING OUTLET – ROUND RECESS LUMINAIRE
	CEILING OUTLET – SQUARE RECESS LUMINAIRE
	CEILING OUTLET – RECESS LUMINAIRE
	CEILING OUTLET – ROUND SURFACE LUMINAIRE
	CEILING OUTLET – SQUARE SURFACE LUMINAIRE
	CEILING OUTLET – SURFACE LUMINAIRE
	CEILING OUTLET – SURFACE OR PENDANT INDUSTRIAL LUMINAIRE
	CEILING OUTLET – SURFACE OR PENDANT INDUSTRIAL LUMINAIRE WITH EMERGENCY BACKUP
	CEILING OUTLET – TYPICAL LUMINAIRE WITH EMERGENCY BACKUP
⊗	CEILING OUTLET – EXIT LIGHT LUMINAIRE, SINGLE FACE
	CEILING OUTLET – EXIT LIGHT LUMINAIRE, DOUBLE FACE
	CEILING OUTLET – DUPLEX RECEPTACLE, NEMA 5-20R SHOWN (TYPICAL)
	CEILING OUTLET – PORCELAIN LAMPHOLDER
	CEILING OUTLET – PORCELAIN LAMPHOLDER WITH PULLCHAIN
	CEILING OUTLET – TRACK LIGHTING SYSTEM
	WALL OUTLET – WITH FLUORESCENT BRACKET LUMINAIRE
	WALL OUTLET – WITH BRACKET LUMINAIRE
	WALL OUTLET – WITH BRACKET LUMINAIRE, EMERGENCY
	WALL OUTLET – WITH EXIT LIGHT LUMINAIRE
	WALL OUTLET – DUPLEX RECEPTACLE, NEMA 5-20R
A	WALL OUTLET – SWITCHED DUPLEX RECEPTACLE, NEMA 5-20R
	WALL OUTLET – DUPLEX RECEPTACLE, NEMA 5-20R GFCI TYPE
	WALL OUTLET – DOUBLE DUPLEX RECEPTACLE, TWO NEMA 5-20R
	WALL OUTLET – SINGLE TWISTLOCK RECEPTACLE, NEMA L5-30, 125V, 30A
	WALL OUTLET – SINGLE TWISTLOCK RECEPTACLE, NEMA L6-30, 250V, 30A
COOL	WALL OUTLET – COOLING CART RECEPTACLE, SEE DETAIL A/E-509
PRES	WALL OUTLET – PRESSURIZED TESTER RECEPTACLE, SEE DETAIL A/E-509
	WALL OUTLET – 400HZ RECEPTACLE, SEE DETAIL B/E-513
	ADDITIONAL RECEPTACLE INFORMATION/SUFFIXES: AC= ABOVE COUNTER IG= ISOLATED GROUND TYPE S = 1/2 SWITCHED TL= TWIST LOCK TYPE WP= WEATHERPROOF
$	WALL SWITCH – TOGGLE TYPE, 20 AMPERE, SPST
$_2	WALL SWITCH – TOGGLE TYPE, 20 AMPERE, DPST
$_3	WALL SWITCH – TOGGLE TYPE, 20 AMPERE, 3-WAY
$_4	WALL SWITCH – TOGGLE TYPE, 20 AMPERE, 4-WAY
$	ADDITIONAL SWITCHES INFORMATION/SUFFIXES: D = DIMMER K = KEY OPERATED LV= LOW VOLTAGE L = LOCKABLE LM= LOW VOLTAGE MASTER P = WITH PILOT LIGHT RC= REMOTE CONTROL T = TIMER OPERATED M = MOTOR RATED SWITCH MO= OCCUPANCY SENSOR WP= WEATHER PROOF X = EXPLOSION PROOF
D	WALL SWITCH – DIMMER TYPE
J	JUNCTION BOX – SIZE NOTED OR REQUIRED
J	JUNCTION BOX – SIZE NOTED OR REQUIRED, WALL MTD
f	JUNCTION BOX – SIZE NOTED OR REQUIRED, FLUSH WALL MTD
J	JUNCTION BOX – SIZE NOTED OR REQUIRED WITH EQUIPMENT CONNECTION
J	JUNCTION BOX – SIZE NOTED OR REQUIRED PULL BOX
	FLOOR OUTLET – DUPLEX RECEPTACLE, NEMA 5-20R. SEE DETAIL A/E-508.
	BRANCH CIRCUIT – CONCEALED ABOVE CEILING OR IN WALL (#12 AWG UNLESS NOTED OTHERWISE OR REQ)
	BRANCH CIRCUIT – CONCEALED BELOW GRADE, SLAB OR FLOOR (#12 AWG UNLESS NOTED OTHERWISE OR REQ)
	BRANCH CIRCUIT – EXPOSED (#12 AWG UNLESS NOTED OTHERWISE OR REQ)
	BRANCH CIRCUIT – WITH CONDUIT BODY, TYPE NOTED OR REQUIRED
UP	BRANCH CIRCUIT – CIRCUIT RISER UP
DN	BRANCH CIRCUIT – CIRCUIT RISER DOWN
10	BRANCH CIRCUIT – SAME AS ABOVE EXCEPT NO. 10 AWG
8	BRANCH CIRCUIT – SAME AS ABOVE EXCEPT NO. 8 AWG
	BRANCH CIRCUIT – EMPTY CONDUIT
	BRANCH CIRCUIT – FLEXIBLE CONDUIT
	BRANCH CIRCUIT – HOMERUN TO PANEL TO 20A/1P BREAKER UNLESS NOTED OTHERWISE
E	BRANCH CIRCUIT – EMERGENCY SYSTEM
H	BRANCH CIRCUIT – NON-LINEAR LOAD CIRCUIT (WITH HARMONIC CURRENT)
—M—	BRANCH CIRCUIT – SURFACE METALLIC RACEWAY

EQUIPMENT

■	SERVICE ENTRANCE PANELBOARD
▨	DISTRIBUTION PANELBOARD
	LIGHTING OR POWER BRANCH CIRCUIT PANELBOARD SURFACE MOUNTED
	LIGHTING OR POWER BRANCH CIRCUIT PANELBOARD FLUSH MOUNTED
FP	FIREPUMP CONTROLLER SE RATED
	DISCONNECT SWITCH – NONFUSIBLE
	DISCONNECT – FUSIBLE
CB	ENCLOSED CIRCUIT BREAKER
MTS	MANUAL TRANSFER SWITCH
C	CONTACTOR
M	ELECTRIC METER
CT	CT CABINET FOR METERING EQUIPMENT
TS	TIME SWITCH
PE	PHOTO-CELL
T	TRANSFORMER
	MOTOR – SIZE AND CHARACTERISTICS INDICATED
	MOTOR CONTROLLER
	COMBINATION CONTROLLER/DISCONNECT SWITCH
F	EXHAUST FAN
WH	WATER HEATER
T	THERMOSTAT
FC	FAN COIL UNIT
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME BOX
FQ	AIRCRAFT FREQUENCY CONVERTER – 60HZ TO 400HZ, SEE D/E-509
FQR	TEST EQUIPMENT FREQUENCY CONVERTER – 60HZ TO 400HZ, SEE A/E-513
RC	LIGHTING ROOM CONTROLLER – SEE DETAIL, SHEET E-602
PP	POWER PACK – FOR POWERING LOW VOLTAGE CONTROL DEVICES. SEE SHEET E-602
PP	POWER PACK (AFC) – FOR POWERING LOW VOLTAGE CONTROL DEVICES. SEE SHEET E-602
PPR	POWER PACK RECEPTACLE – FOR SWITCHED RECEPTACLE CONTROL, SEE SHEET E-602
OS	OCCUPANCY SENSOR LOW VOLTAGE – CEILING MOUNTED (DUAL TECH TYPE)
OS LV	OCCUPANCY SENSOR LINE VOLTAGE – CEILING MOUNTED (DUAL TECH TYPE)
DS	DAYLIGHT SENSOR LOW VOLTAGE – CEILING MOUNTED

MISCELLANEOUS DEVICES

CP	CONTROL PANEL
SPD	SURGE PROTECTIVE DEVICE
HDCP	HANGAR DOOR CONTROL PANEL
HDRP	HANGAR DOOR REMOTE PANEL
HDMH	HANGAR DOOR MULLION HOIST
HDH	HANGAR DOOR HOIST
PSP	AIRCRAFT POWER SERVICE POINT – SEE DETAIL A/E-510
FMCU	FIRE ALARM MASS NOTIFICATION CONTROL UNIT

GROUNDING

	GROUNDING ELECTRODE CONNECTION
	SURGE ARRESTOR WITH GROUNDING CONNECTION
	SURGE PROTECTIVE DEVICE (SPD)
—G—	BARE CU GRD CONDUCTOR BELOW GRADE
	DRIVEN GRD ROD CONNECTED TO GRD CONDUCTOR

AUXILIARY

SEC	SECURITY SYSTEM – MASTER CONTROL PANEL, GFGI
CAM	SECURITY SYSTEM – CLOSED CIRCUIT TELEVISION CAMERA BACKBOX LOCATION. POE CAMERA IS GFGI
VM	SECURITY SYSTEM – CLOSED CIRCUIT TELEVISION VIDEO MONITOR, GFGI
—S—	SECURITY SYSTEM – WIRING PROVISIONS IN CONDUIT
S	PUBLIC ADDRESS SYSTEM – SPEAKER, RECESSED, CTG MTD.
S	PUBLIC ADDRESS SYSTEM – SPEAKER, WALL MTD
—PA—	PUBLIC ADDRESS SYSTEM – SPEAKER CABELING IN CONDUIT
M	PUBLIC ADDRESS SYSTEM – DESKTOP MICROPHONE
MIX	PUBLIC ADDRESS SYSTEM – MIXER
AMP	PUBLIC ADDRESS SYSTEM – AMPLIFIER

GENERAL LEGEND DEFINITIONS

CEILING OUTLET – BOX, FLANGE, SUPPORT, ETC.
WALL OUTLET – BOX, FLANGE, SUPPORT WITH LUMINAIRE OR DEVICE & DEVICE PLATE.
WALL SWITCH – BOX, FLANGE, SUPPORT, DEVICE & DEVICE PLATE.
JUNCTION BOX – BOX, SUPPORT & COVER.
BRANCH CIRCUIT – CONDUIT, CONDUCTORS & CONTINUOUS GROUNDING PATH.
(SEE DESIGNATION BLOCKS)
EQUIPMENT GROUND – CONDUCTOR FOR CONNECTING NONCURRENT – CARRYING METAL PARTS OF EQUIPMENT, ENCLOSURES, RACEWAYS, ETC., SIZED IN ACCORDANCE WITH NFPA 70, CURRENT N.E.C.

ABBREVIATIONS

@	AT
&	AND
1PH	SINGLE-PHASE
1P	SINGLE POLE
1WAY	ONE-WAY
2/C	TWO-CONDUCTOR
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3PH	THREE-PHASE
3WAY	THREE-WAY
4/C	FOUR-CONDUCTOR
4OUT	QUADRUPLE RECEPTACLE OUTLET
4PDT	FOUR-POLE DOUBLE THROW
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
4WAY	FOUR-WAY
AB	ABOVE
AC	ALTERNATING CURRENT/ARMORED CABLE
A/C	AIR CONDITIONING
ACB	AIR CIRCUIT BREAKER
AFC	ABOVE FINISH CEILING
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AFS	ABOVE FINISH SLAB
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
AMP	AMPERE
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
ASC	ABOVE SUSPENDED CEILING
ATS	AUTOMATIC TRANSFER SWITCH AUX AUXILIARY
AWG	AMERICAN WIRE GAGE
BIL	BASIC IMPULSE LEVEL
BKBD	BACKBOARD
BRKR	BREAKER
BLDG	BUILDING
CAB	CABINET
CCU	CENTRAL CONTROL UNIT
CF	CONTRACTOR FURNISHED
CFE	CONTRACTOR FURNISHED EQUIPMENT
CF/CI	CONTRACTOR FURNISHED & CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED & OWNER INSTALLED
CKT	CIRCUIT
CL	CURRENT LIMITING
CLG	CEILING
CND	CONDUIT
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CPU	CENTRAL PROCESS UNIT
CT	CURRENT TRANSFORMER
CTRL	CONTROL
CTV	CABLE TELEVISION
CU	COPPER
CW	COLD WATER PIPING
CWP	COLD WATER PIPE
DB	DIRECT BURIAL
DC	DIRECT CURRENT
DEG	DEGREE
DETD	DUAL ELEMENT TIME DELAY
DIR	DIRECTION
DISC	DISCONNECT SWITCH
DN	DOWN
DPST	DOUBLE POLE – SINGLE THROW
DPDT	DOUBLE POLE – DOUBLE THROW
EA	EACH
EES	ESSENTIAL ELECTRICAL SYSTEM
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
EMCP	ENERGY MONITORING CONTROL PANEL
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EPRF	EXPLOSION PROOF EQUIP EQUIPMENT
ES	ENERGY SAVINGS
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
F	FUSE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FIN	FINISH
FLR	FLOOR
FLA	FULL LOAD AMPERES (NAME PLATE DATA)
FLC	FULL LOAD CURRENT (CODE TABLES)
FLMT	FLUSH MOUNT
FMC	FLEXIBLE METAL CONDUIT
GA	GAUGE
GALV	GALVANIZED
GCB	GAS CIRCUIT BREAKER
GFI	GROUND FAULT INTERRUPTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFGI	GOVERNMENT FURNISHED/GOVERNMENT INSTALLED
GRC	GALVANIZED RIGID CONDUIT
GRD	GROUND
HD	HEAVY DUTY
HDDS	HEAVY DUTY DISCONNECT SWITCH
HH	HANDHOLE
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER (33k FOOT-POUNDS OF WORK PER MINUTE)
HV	HIGH VOLTAGE
HVAC	HEATING,VENTILATION, AND AIR CONDITIONING
HWP	HOT WATER PIPE
Hz	HERTZ (CYCLES PER SECOND)
I/O	INPUT/OUTPUT
ICCB	INSULATED CASE CIRCUIT BREAKER I
D	INSIDE DIAMETER
IEC	INTERNATIONAL ELECTROTECHNICAL COMMISSION
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
J-BOX	JUNCTION BOX
k	KILO (1000)
kCMIL	KILO CIRCULAR MILS
kV	KILO VOLTS
kVA	KILO VOLT – AMPERES
kW	KILO WATTS
LED	LIGHT EMITTING DIODE
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT
LGT	LIGHTING
LTC	LOAD TAP CHANGING
LTNG	LIGHTNING
LV	LOW VOLTAGE
LVPCB	LOW VOLTAGE POWER CIRCUIT BREAKER
MFR	MANUFACTURER
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MCM	1000 CIRCULAR MILS
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
NEUT	NEUTRAL
NA	NOT APPLICABLE
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSO.
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NO. OR #	NUMBER
OCPD	OVER CURRENT PROTECTION DEVICE
OD	OUTSIDE DIAMETER
OL	OVER LOAD
P	POLE
PCC	POINT OF COMMON COUPLING
PCS	POWER CONTROL SYSTEM
PF	POWER FACTOR
PH OR ø	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PMS	PAD MOUNTED SWITCH
PMT	PAD MOUNTED TRANSFORMER
PNL	PANEL
POD	POINT OF DEMARKATION
PRI	PRIMARY
PROVIDE	FURNISH AND INSTALL
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PW	PART WINDING REF REFERENCE
REQD	REQUIRED
RLA	RATED LOAD AMPERES
RM	ROOM
RMC	RIGID METALLIC CONDUIT
RNC	RIGID NONMETALLIC CONDUIT
ROR	RATE-OF-RISER
RT	RAINTIGHT
SC	SHORT CIRCUIT
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SCC	SHORT CIRCUIT CAPACITY
SCCR	SHORT CIRCUIT CURRENT RATING
SCHED	SCHEDULE
SD	SERVICE DROP
SE	SERVICE ENTRANCE
SEC	SECONDARY
SF6	SULFUR HEXAFLOURIDE
SHT	SHEET
SI	INTERNATIONAL SYSTEM OF UNITS
SL	SERVICE LATERAL
SLD	SINGLE LINE DIAGRAM
SMR	SURFACE METALLIC RACEWAY
SN	SOLID NEUTRAL
SPD	SURGE PROTECTIVE DEVICE
SPECS	SPECIFICATIONS
SPDT	SINGLE POLE – DOUBLE THROW
SPST	SINGLE POLE – SINGLE THROW
SS	STAINLESS STEEL
STATCOM	STATIC REACTIVE COMPENSATION
STS	STATIC TRANSFER SWITCH
SVC	STATIC VAR COMPENSATION
SW	SWITCH
SWBD	SWITCH BOARD
SWGR	SWITCHGEAR
TB	TERMINAL BACKBOARD
TEL	TELEPHONE
TEMP	TEMPERATURE
THD	TOTAL HARMONIC DISTERTION
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORY
ULSE	UNDERWRITER'S LABORATORY SERVICE ENTRANCE
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
VOLT	VOLTAGE
VAC	VOLTS ALTERNATING CURRENT
VDC	VOLTS DIRECT CURRENT
VENT	VENTILATION
VR	VOLTAGE REGULATOR
W	WIRE
W/	WITH
WP	WEATHERPROOF
WT	WATERTIGHT
Z	ZONE
'	FEET
"	INCHES

US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
KLH/JDW
DRAWN BY:
EWH
CHECKED BY:
KLH/JDW
SUBMITTED BY:
-
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005E-001.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

ELECTRICAL SYMBOL LEGEND
AND ABBREVIATIONS

SHEET ID
E-001

RTA SUBMITTAL

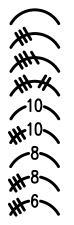
CONDUCTOR SCHEDULE & PROPERTIES DESIGNATIONS

SIZE AWG OR kCMIL	AREA mm^2 (NOTE 4)	AREA CIRCULAR MILS
18	1.0	1,620
16	1.5	2,580
14	2.5	4,110
12	4	6,530
10	6	10,380
8	10	16,510
6	16	26,240
4	25	41,740
2	35	66,360
1/0	50	105,600
2/0	70	133,100
3/0	95	167,800
4/0	120	211,600
300	150	300,000
350	185	350,000
500	240	500,000
600	300	600,000
750	400	750,000

NOTES

1. UNLESS NOTED OTHERWISE ALL LOW VOLTAGE CONDUCTORS SHALL BE RATED AT 600 VOLTS AND THE INSTALLATION BASED UPON AN AMBIENT TEMPERATURE OF 30°C AS FOLLOWS:
   - METAL – COPPER
   - INSULATION – SEE SPECIFICATIONS
   - TEMPERATURE RATING – 75°C
   - LOCATION – WET OR DRY
2. CONDUCTORS SHALL BE IDENTIFIED BY SURFACE MARKINGS FROM THE MANUFACTURER:
   - MANUFACTURER'S IDENTIFICATION
   - CONDUCTOR SIZE AND METAL
   - VOLTAGE RATING
   - UL LISTING
   - TYPE DESIGNATION & OPTIONAL RATINGS
3. CONDUCTORS SHALL BE LABELED BY THE CONTRACTOR, FOR ANY CIRCUIT 60 AMPERES AND HIGHER, IN EACH PULLBOX, J-BOX OR WIREWAY AS FOLLOWS:
   - PANEL SOURCE & CIRCUIT BREAKER SIZE
   - DESTINATION (LOAD SERVED)
4. THE mm^2 VALUE INDICATED ARE ACTUAL TRADE SIZES THAT CAN BE PURCHASED AND CONSIDERED EQUAL. THEY ARE NOT THE ACTUAL MEASURED AREA.

GENERAL BRANCH CIRCUIT DESIGNATIONS – SI

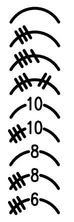


2-4mm2 & 1-4mm2 GRD – 16mmC
3-4mm2 & 1#4mm2 GRD – 16mmC
4-4mm2 & 1-4mm2 GRD – 21mmC
5-4mm2 & 1-4mm2 GRD – 21mmC, ETC.
2-6mm2 & 1-6mm2 GRD – 16mmC
3-6mm2 & 1-6mm2 GRD – 21mmC, ETC.
2-10mm2 & 1-6mm2 GRD – 21mmC
3-10mm2 & 1-6mm2 GRD – 27mmC, ETC.
3-16mm2 & 1-6mm2 GRD – 27mmC, ETC.

NOTES:

1. LARGER SIZE CONDUCTORS SHALL BE USED WHEN INDICATED AND AS REQUIRED FOR DERATING.
2. ALL CIRCUITS SHALL CONTAIN A GREEN EQUIPMENT GRD CONDUCTOR.
3. EQUIPMENT GROUND CONDUCTOR SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:
   - 4mm2 CIRCUIT – 4mm2 GRD
   - 6mm2 CIRCUIT – 6mm2 GRD
   - 10mm2 CIRCUIT – 6mm2 GRD
4. UNLESS OTHERWISE INDICATED, CONDUIT SIZE IS BASED UPON MAX NO. ALLOWED BY NEC UTILIZING A MAX ALLOWABLE PERCENTAGE FILL OF 40%. SEE CHAPTER 9 OF NEC.
5. METRIC DESIGNATORS ARE BASED UPON INDUSTRY STANDARDS. SEE CONDUIT AND TUBING SCHEDULE.

GENERAL BRANCH CIRCUIT DESIGNATIONS – ENG

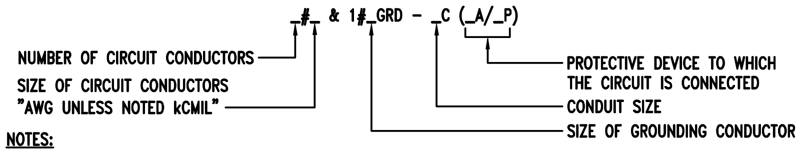


2#12 & 1#12 GRD – 1/2"C
3#12 & 1#12 GRD – 1/2"C
4#12 & 1#12 GRD – 3/4"C
5#12 & 1#12 GRD – 3/4"C, ETC..
2#10 & 1#10 GRD – 1/2"C
3#10 & 1#10 GRD – 3/4"C, ETC.
2#8 & 1#10 GRD – 3/4"C
3#8 & 1#10 GRD – 1"C, ETC.
3#6 & 1#10 GRD – 1"C, ETC.

NOTES:

1. LARGER SIZE CONDUCTORS SHALL BE USED WHEN INDICATED AND AS REQUIRED FOR DERATING.
2. ALL CIRCUITS SHALL CONTAIN A GREEN EQUIPMENT GRD CONDUCTOR.
3. EQUIPMENT GROUND CONDUCTOR SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:
   - #12 AWG CIRCUIT – #12 GRD
   - #10 AWG CIRCUIT – #10 GRD
   - #8 AWG CIRCUIT – #10 GRD
4. UNLESS OTHERWISE INDICATED, CONDUIT SIZE IS BASED UPON MAX NO. ALLOWED BY NEC UTILIZING A MAX ALLOWABLE PERCENTAGE FILL OF 40%. SEE CHAPTER 9 OF NEC.
5. METRIC DESIGNATORS ARE BASED UPON INDUSTRY STANDARDS. SEE CONDUIT AND TUBING SCHEDULE.

TYPICAL FEEDER DESIGNATIONS


_#_ & 1#_GRD – _C (_A/_P)
NUMBER OF CIRCUIT CONDUCTORS
SIZE OF CIRCUIT CONDUCTORS "AWG UNLESS NOTED kCMIL"
PROTECTIVE DEVICE TO WHICH THE CIRCUIT IS CONNECTED
CONDUIT SIZE
SIZE OF GROUNDING CONDUCTOR

NOTES:

1. CONDUCTOR INSULATION TO BE 600V UNLESS OTHERWISE INDICATED.
2. SEE FEEDER SCHEDULE

CONDUIT & TUBING SCHEDULE DESIGNATIONS

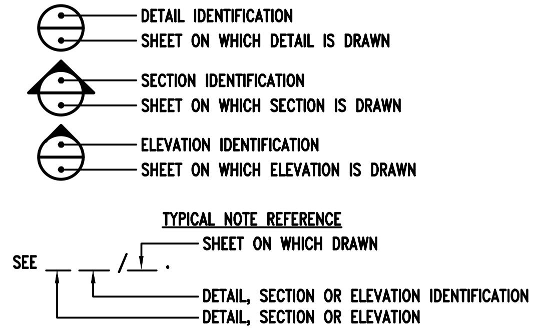
CONDUIT SIZE METRIC DESIGNATOR (mm)	CONDUIT SIZE NEC TRADE SIZE REF NO.
12	3/8
16	1/2
21	3/4
27	1
35	1 1/4
41	1 1/2
53	2
63	2 1/2
78	3
91	3 1/2
103	4
129	5
155	6

NOTES

1. THE METRIC DESIGNATORS AND TRADE SIZES ARE FOR IDENTIFICATION PURPOSES ONLY AND NOT EXACT DIMENSIONS.
2. SEE NEC TABLE FOR METRIC DESIGNATOR AND TRADE SIZES.
3. MINIMUM SIZE CONDUIT OR TUBING SYSTEM TO BE USED SHALL BE 16mm. THE 12mm SHALL BE USED ONLY FOR SPECIAL EQUIPMENT CONNECTIONS OR LUMINAIRE WHIPS AS AN ASSEMBLY COMPONENT OR INTEGRAL PARTS OF EQUIPMENT.
4. CONDUIT FILL SHALL BE BASED ON 40% FILL OF CROSS SECTION OF CONDUIT FOR NOMINAL CONDITIONS:
   - 3 OR MORE CONDUCTORS
   - LENGTH OF PULLS MINIMIZED
   - NUMBER OF BENDS LIMITED
   - ADEQUATE HEAT DISSIPATION

   OTHERWISE CONDUIT SIZE SHALL BE INCREASED.
5. SEE TYPICAL RACEWAY/CONDUIT INSTALLATION DETAILS.

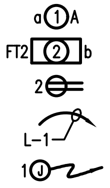
DETAIL AND SECTION DESIGNATIONS


DETAIL IDENTIFICATION
SHEET ON WHICH DETAIL IS DRAWN
SECTION IDENTIFICATION
SHEET ON WHICH SECTION IS DRAWN
ELEVATION IDENTIFICATION
SHEET ON WHICH ELEVATION IS DRAWN
TYPICAL NOTE REFERENCE
SHEET ON WHICH DRAWN
SEE ___ ___ /___ .
DETAIL, SECTION OR ELEVATION IDENTIFICATION
DETAIL, SECTION OR ELEVATION

KEY DESIGNATIONS

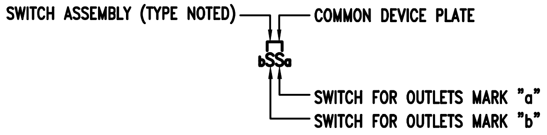
MARK	PURPOSE	NOTES
Ⓐ	DIMENSION REFERENCE	SEE CORRESPONDING DIMENSION BLOCK APPLICABLE LETTER INDICATED
⟨1⟩	KEY NOTE REFERENCE	SEE CORRESPONDING KEY NOTE APPLICABLE NUMBER INDICATED
⊖	EQUIPMENT REFERENCE	SEE CORRESPONDING EQUIPMENT SCHEDULE COORDINATE WITH APPLICABLE DIVISIONS
⟨A⟩	FEEDER REFERENCE	SEE CORRESPONDING FEEDER SCHEDULE APPLICABLE LETTER INDICATED

TYPICAL LUMINAIRE, DEVICE AND CIRCUIT DESIGNATIONS



LUMINAIRE TYPE 'A', CIRCUIT NO. 1, CONTROLLED BY SWITCH "a"
LUMINAIRE TYPE 'FT2', CIRCUIT NO. 2, CONTROLLED BY SWITCH "b"
WALL OUTLET WITH RECEPTACLE NOTED, CONNECT TO CIRCUIT NO. 2
HOMERUN TO PANEL 'L', CONNECT TO CIRCUIT NO 1
EQUIPMENT CONNECTION – CONNECT TO CIRCUIT NO. 1

TYPICAL GANGABLE SWITCH DESIGNATIONS


SWITCH ASSEMBLY (TYPE NOTED)
COMMON DEVICE PLATE
bSSa
SWITCH FOR OUTLETS MARK "a"
SWITCH FOR OUTLETS MARK "b"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
KLH/JDW
DRAWN BY:
EWH
CHECKED BY:
KLH/JDW
SUBMITTED BY:
-
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005E-002.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

GENERAL ELECTRICAL
DESIGNATIONS

SHEET ID
E-002

RTA SUBMITTAL

GENERAL ELECTRICAL NOTES

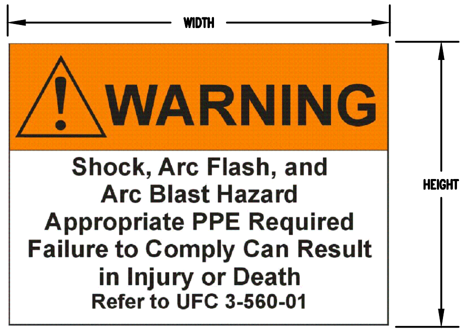
1. THE GENERAL SCOPE OF WORK IS TO FURNISH AND INSTALL THE ELECTRICAL SYSTEMS, COMPONENTS AND MATERIALS COMPLETE IN ACCORDANCE WITH PLANS, SPECIFICATIONS AND MANUFACTURER'S PUBLISHED DATA. COORDINATE AND SUPPLY ALL SERVICE RELATED REQUIREMENTS AS FOLLOWS:
   PRIMARY SERVICE SYSTEM (MEDIUM VOLTAGE MULTI-GROUNDED) – BY UTILITY
   SECONDARY SERVICE SYSTEM (LOW VOLTAGE)
   480Y/277 VOLT, 3 PHASE, 4 WIRE
2. THE UTILITY SUPPLY CONNECTION SHALL BE MADE IN ACCORDANCE WITH ALL UTILITY CRITERIA, CODES AND DETAILS. THE FOLLOWING SHALL BE COORDINATED AS A MINIMUM:
   - SPECIFIED NOMINAL VOLTAGE ESTABLISHED
   - SPECIFIED INSULATION VOLTAGE CLASS UTILIZED
   - PROPER PHASE & PHASE SEQUENCE ESTABLISHED
   - AVAILABLE FAULT CURRENT ESTABLISHED & PROPER EQUIP SCCR COORDINATION ESTABLISHED

   ALL SERVICE RELATED COMPONENTS SHALL BE RATED PER THESE REQUIREMENTS.
   THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE LOCAL UTILITY COMPANY AND PROVIDE ALL WORK, INSTALLATION, MATERIAL, EQUIPMENT, DEVICES, ETC. NOT PROVIDED BY THE UTILITY FOR A COMPLETE INSTALLATION TO ESTABLISH ELECTRICAL SERVICES. CONTRACTOR SHALL WORK WITH UTILITY FOR PHASING, SITE PREP AND FINAL CONNECTIONS THROUGH THE PROPER POINT OF CONTACT LISTED IN THIS CONTRACT AND PAY THE UTILITY ALL FEES ASSOCIATED WITH ESTABLISHING THE PRIMARY POWER SOURCE. THE UTILITY PROVIDER IS AS FOLLOWS:
   PRIVATIZED: 4-COUNTY ELECTRIC POWER ASSOCIATION COOPERATIVE
   THE CONTRACTOR MAY BE APPROVED BY THE UTILITY TO PERFORM DEMOLITION OR NEW INSTALLATION WORK, HOWEVER THE COST OF ALL WORK PERFORMED BY THE CONTRACTOR OR UTILITY SHALL BE IN THE CONSTRUCTION COST AND PAID BY THE CONTRACTOR.
3. INSTALLATION AS A MINIMUM SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AND THE NATIONAL ELECTRICAL SAFETY CODE (NESC). IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL WORK IN AN "ELECTRICAL SAFE WORKING CONDITION" AS DEFINED BY NFPA 70E. THE CONTRACTOR SHALL UTILIZE "QUALIFIED PERSONNEL" AS DEFINED IN NFPA 70 (NEC).
4. ALL CLEARANCES SHALL BE MAINTAINED PER NEC, NESC AND UL. ALL PARTS, DEVICES, EQUIPMENT, ETC. WHICH REQUIRE MAINTENANCE, ADJUSTMENT, OPERATION OR EXAMINATION DURING NORMAL NETWORK OPERATION SHALL BE ARRANGED SO AS TO BE ACCESSIBLE BY THE PROVISION OF ADEQUATE WORKING SPACES, WORKING FACILITIES AND CLEARANCES. UNLESS NOTED OTHERWISE ALL CLEARANCES ARE MEASURED FROM SURFACE TO SURFACE.
5. ALL DIMENSIONS INDICATED IN THESE DOCUMENTS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS IN THE FIELD. GENERALLY DIMENSIONS ARE SHOWN IN THE METRIC STANDARD AND ENGLISH EQUIVALENT WHEN APPLICABLE. VARIOUS CONVERSIONS ARE ROUNDED OFF, HOWEVER STANDARD MANUFACTURING AND INDUSTRY PRACTICES SHALL BE UTILIZED.
   EXAMPLE:
   CONVERSION: 1'-0" = 0.3048m
   STANDARD NOTATION: 305mm (ROUNDED) = 1'-0"
   SI UNITS OF LENGTH ARE GENERALLY GIVEN AS FOLLOWS:
   m = meter
   km = kilometer (10^3 m)
   hm = hectometer (10^2 m)
   dm = decimeter (10^{-1}m)
   cm = centimeter (10^{-2}m)
   mm = millimeter (10^{-3}m)
   ENGLISH UNITS OR LENGTHS ARE GENERALLY GIVEN AS FOLLOWS: _'-_" (FT-INCHES) WHEN SI AND ENGLISH UNITS ARE REFERENCED IN A NOTE, THE SI VERSION SHALL BE SHOWN FIRST WITH ENGLISH FOLLOWING IN PARENTHESIS.
   EXAMPLE:
   305mm (1')
   9m (30')
   COORDINATE WITH DIMENSION BLOCKS SHOWN ON DRAWINGS. ALL TRADE SIZE CONDUITS ARE NEMA AND INDUSTRY STANDARD IN ACCORDANCE WITH THEIR ROUNDED NOMINAL METRIC DESIGNATOR DIAMETER EQUIVALENT TO THE ENGLISH STANDARD AS INDICATED IN THE CONDUIT SCHEDULE.
6. PRIOR TO ANY ROUGH-IN THE CONTRACTOR SHALL SUBMIT SCALED DRAWINGS FOR APPROVAL FOR MAJOR ELECTRICAL EQUIPMENT INSTALLATIONS INDICATING ALL PROPER CLEARANCES PER THE NEC AND FOR MAINTENANCE. DRAWINGS SHALL INCLUDE MECHANICAL, PLUMBING AND STRUCTURAL DEVICES WITHIN THE SPACE OR AREA. DO NOT INSTALL ANY ELECTRICAL EQUIPMENT OR DEVICES UNTIL PROPER CLEARANCES ARE ESTABLISHED. PROVIDE FLOOR PLANS AND ELEVATION VIEWS FOR THE FOLLOWING:
   - SWITCHBOARDS
   - PANELBOARDS
   - TRANSFORMERS
   - MOTOR CONTROL CENTERS
   - MOTOR STARTERS
   - MANUAL TRANSFER SWITCHES
   - DISCONNECT SWITCHES
   - AUXILIARY SYSTEM BACKBOARDS
   - AUXILIARY SYSTEM CABINETS
7. COMPLETE CONTRACT DRAWINGS AND DETAILS SHALL BE EXAMINED FOR LOCATING ALL EQUIPMENT. COMPLETE SHOP DRAWING DATA (ALL TRADES) SHALL BE EXAMINED FOR EXACT DIMENSIONAL DATA. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR THE ACTUAL EQUIPMENT TO BE INSTALLED AND SHALL SECURE DIMENSIONAL DATA THAT WILL ASSIST IN DETERMINING ADEQUATE SPACE REQUIREMENTS FOR INSTALLING ALL ELECTRICAL EQUIPMENT, LUMINAIRES, DEVICES, ROUGH-IN REQUIREMENTS, ETC. ADJUST ACTUAL LOCATION OF ELECTRICAL PROVISIONS ACCORDINGLY. ADVISE ALL TRADES CONCERNING INSTALLATION OF PIPING, DUCTS, DEVICES, ETC., ABOVE ELECTRICAL EQUIPMENT AND TO MAINTAIN ADEQUATE CLEARANCES IN ACCORDANCE WITH THE NEC AND THE REQUIREMENTS OF THIS CONTRACT. NAMEPLATE DATA OR MANUFACTURER'S WRITTEN DATA OF ACTUAL EQUIPMENT INSTALLED SHALL BE USED TO DETERMINE EXACT UNIT OR DEVICE PROTECTION, CONDUCTOR TERMINATION REQUIREMENTS, ETC. ALL DEVICES SHALL BE COORDINATED FOR THE PROPER VOLTAGE, OPERATION, CONTACT RATINGS, COLOR CODING, ETC.
8. ALL OUTLETS AND DEVICES TO SUPPLY EQUIPMENT ITEMS SHALL BE COORDINATED WITH THE SPECIFIC EQUIPMENT REQUIREMENTS AND INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. REVIEW ALL SHOP DRAWINGS PRIOR TO ROUGH-IN.
   - INSTALL ELECTRIC WATER COOLER (EWC) OUTLETS FLUSH IN WALL AND CONCEALED BEHIND COOLER ASSEMBLY.
   - INSTALL PEDESTAL OUTLETS OR STUB-UPS AT EQUIPMENT LOCATIONS ACCESSIBLE AND CLEAR OF OBSTRUCTIONS.
9. ROUGH-IN OF OUTLET BOXES FOR DEVICES, EQUIPMENT CONNECTIONS, ETC., SHALL BE IN ACCORDANCE TO THEIR SPECIFIC PURPOSE AND COORDINATED WITH THE LATEST ARCHITECTURAL FLOOR PLANS AND ELEVATIONS AND APPROVED MILL WORK DRAWINGS.
   - FLUSH OUTLETS SHALL BE MTD FLUSH WITH THE FINAL FINISHED SURFACE. ALLOW FOR COMPLETE SURFACE TREATMENTS, EXTENSIONS, ETC.
   - CLG MTD AND WALL MTD EQUIPMENT OR DEVICES SHALL BE LOCATED TO MAINTAIN PROPER ACCESS FOR USE AND MAINTENANCE.
   - CLG MTD AND WALL MTD EQUIPMENT OR DEVICES SHALL BE LOCATED TO AVOID DOOR SWINGS WHERE REQUIRED.
   - AVOID CONFLICT WITH COUNTER TOP TRIM, SPLASH BOARDS, UPPER CABINETS, SINKS, ETC.
   - BOXES OVER 10.32 SQUARE MM (16 SQUARE INCHES) IN SMOKE AND FIRE WALLS SHALL BE FIVE SIDED WITH SAME RATED CONSTRUCTION AS WALL SYSTEM.
10. ARRANGE FOR CHASES, SLOTS AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROGRESS OF CONSTRUCTION, TO ALLOW FOR ELECTRICAL INSTALLATIONS. COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SLEEVES TO BE SET IN POURED-IN-PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED.
11. CONDUIT SYSTEMS IN GENERAL SHALL BE CONCEALED UNLESS INDICATED OTHERWISE.
    - ALL UNDERGROUND CONDUIT RUNS ENTERING THE BUILDING SHALL BE SEALED TO PREVENT THE ENTRANCE OF MOISTURE AND GASES
    - FLEX CONDUIT INSTALLED ON EXTERIOR, IN WET LOCATIONS OR ANY MECHANICAL ROOM SHALL BE LIQUID TIGHT WITH SUITABLE FITTINGS.
    - INSTALL CONDUIT EXPANSION FITTINGS WITH BONDING JUMPERS FOR CONDUITS PASSING THROUGH EXPANSION JOINTS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS.
    - ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULLWIRE
    - ALL GENERAL BRANCH CIRCUIT CONDUIT SYSTEMS SHALL BE RUN OVERHEAD UNLESS NOTED OTHERWISE.
    - MINIMUM SIZE CONDUIT SHALL BE 16mm UNLESS NOTED OTHERWISE
    - SEE CONDUIT & TUBING SCHEDULE
12. CONDUCTOR SYSTEMS IN GENERAL SHALL BE INSTALLED WITHIN AN APPROVED RACEWAY SYSTEM.
    - CONDUCTORS SHALL BE COPPER (THW OR THHN/THWN)
    - BRANCH CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN #12 AWG
    - CONDUCTORS NO. 8 & LARGER SHALL BE STRANDED
    - CONDUCTORS NO. 10 & SMALLER SHALL BE SOLID
    - INSTALL AN INSULATED (IDENTIFIED) EQUIPMENT GROUNDING CONDUCTOR WITH EACH BRANCH CIRCUIT AND FEEDER
    - SEE CONDUCTOR SCHEDULE & PROPERTIES
    - SEE FEEDER SCHEDULE
13. THE PROPER SIZED JUNCTION AND/OR PULL BOXES SHALL BE INSTALLED AS REQUIRED FOR RACEWAY TRANSITIONS AND PROPER WIRE PULLING REQUIREMENTS. THE FOLLOWING APPLIES FOR ALL BRANCH CIRCUIT AND FEEDER BOXES:
    - LABEL EACH BOX ON COVERPLATE; THE PANEL AND CIRCUIT NUMBERS THAT ARE ROUTED THROUGH THE BOX.
14. ALL NON-CURRENT CARRYING METALLIC PORTIONS OF THE ELECTRICAL SYSTEM, DEVICES, COMPONENTS, ENCLOSURES, OUTLET & JUNCTION BOXES, SUPPORTS, ETC. SHALL BE BONDED TO THE FACILITY GROUNDING SYSTEM.
15. MOUNTING HEIGHTS OF WALL OUTLETS SHALL BE AS INDICATED IN THE MOUNTING HEIGHT SCHEDULE.

MOUNTING HEIGHT SCHEDULE

DESCRIPTION	SI	ENG	REMARKS
RECEPTACLE-GENERAL	45.7cm	1'-6"	
RECEPTACLE-TOILET AREAS	1.22m	4'-0"	
RECEPTACLE-ABOVE COUNTERS	10.16cm	0'-4"	ABOVE SPLASH BOARD OR AS DIRECTED
RECEPTACLE-EXTERIOR	45.7cm	1'-6"	MINIMUM ABOVE FINISHED GRADE
RECEPTACLE-WALL MTD MONITOR	1.52m	5'-0"	OR AS DIRECTED
RECEPTACLE-APPLIANCES OR EQUIP			AS PER MANUFACTURER REQUIREMENTS
RECEPTACLE-MULTIOUTLET ASSEMBLY			AS NOTED OR AS DIRECTED
RECEPTACLE-SPECIAL PURPOSE			AS REQUIRED OR AS DIRECTED
WALL SWITCH-GENERAL	1.22m	4'-0"	
WALL SWITCH-DIMMER TYPE	1.22m	4'-0"	
WALL SWITCH-MANUAL MOTOR STARTER	1.22m	4'-0"	
WALL BRACKET-GENERAL	2.06m	6'-8"	OR ABOVE MIRRORS
WALL BRACKET-EXIT LIGHT	2.31m	7'-6"	OR ABOVE DOOR
TELECOM OUTLET-GENERAL	45.7cm	1'-6"	
TELECOM OUTLET-WALL PHONE	1.54m	5'-0"	
TELEVISION OUTLET-GENERAL	45.7cm	1'-6"	
SPEAKERS-GENERAL	2.16m	7'-0"	
SPEAKERS-EXTERIOR	3.08m	10'-0"	ABOVE FINISHED GRADE
VOLUME CONTROL	1.22m	4'-0"	
CALL-IN DEVICE	1.22m	4'-0"	
MICROPHONE OUTLET	61cm	2'-0"	OR AS DIRECTED
PUSHBUTTON STATIONS	1.22m	4'-0"	
THERMOSTAT OUTLET	1.54m	5'-0"	

NOTE:
1. ALL DIMENSIONS ARE FROM FLOOR TO CENTERLINE OF DEVICE.



GENERAL ARC FLASH LABEL

NOTES: ARC FLASH LABEL

1. PROVIDE SELF-ADHESIVE VINYL LABEL TO AFFIX TO ELECTRICAL EQUIPMENT TO WARN OF ARC FLASH HAZARDS.
2. THE LABEL FORMAT AND TEXT SHALL BE IN ACCORDANCE WITH THE FIGURE.
3. THE LABEL SHALL BE LOCATED ON THE EQUIPMENT TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT.
4. THE SIZE OF THE LABEL SHALL BE MINIMUM:

EQUIPMENT TYPE	HEIGHT	WIDTH
INDOOR	2"	3"
OUTDOOR	3"	4.5"

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MARK	DESCRIPTION	DATE

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KLH/JDW

SUBMITTED BY:
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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

ELECTRICAL NOTES
AND SCHEDULES

SHEET ID
E-003

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DEMOLITION LEGEND (TYP.)

⊡	TYPICAL LUMINAIRE TO BE REMOVED
⊖	TYPICAL WALL OUTLET TO BE REMOVED
$	TYPICAL WALL SWITCH TO BE REMOVED
Ⓙ	TYPICAL JUNCTION BOX TO BE REMOVED
-----	TYPICAL BRANCH CIRCUIT OR FEEDER TO BE REMOVED
⬚	TYPICAL EQUIPMENT TO BE REMOVED
--EX--	EXISTING BRANCH CIRCUIT OR FEEDER TO REMAIN
EX	EXISTING TO REMAIN
EX-R	EXISTING REMOVE
EX-RC	EXISTING TO BE RECONNECTED
EX-RD	EXISTING RELOCATED
EX-RL	EXISTING TO BE RELOCATED
EX-RP	EXISTING REPLACE
EX-RW	EXISTING TO BE REWORKED

GENERAL DEMOLITION NOTES

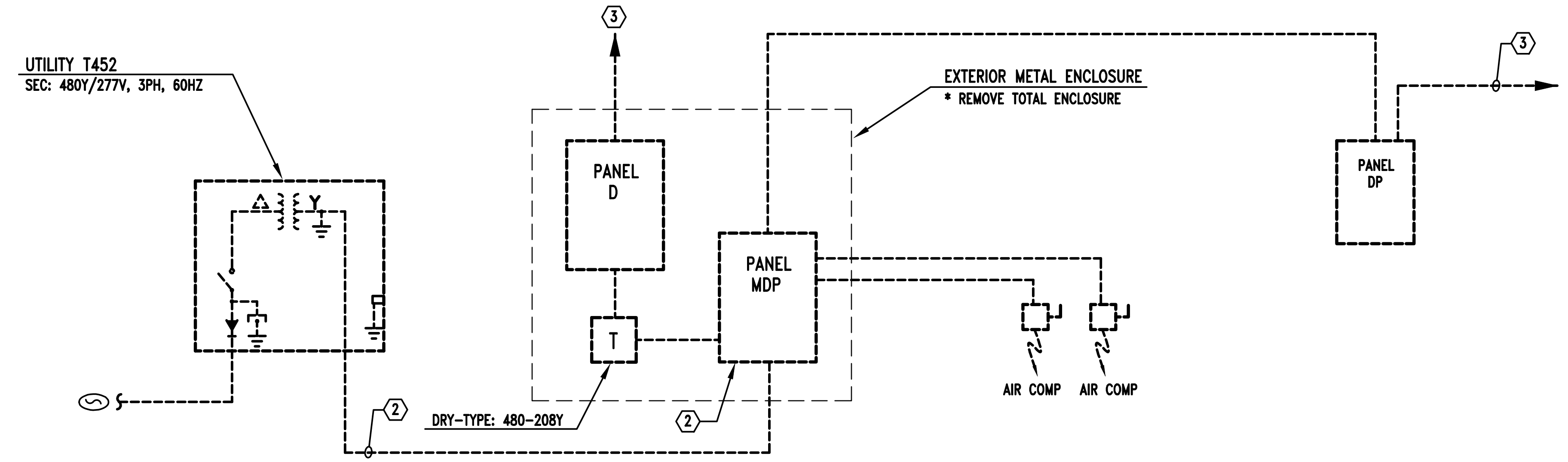
1. ALL ITEMS SHOWN DASHED INDICATE ITEMS TO BE DEMOLISHED OR SALVAGED. SEE KEYED NOTES FOR ADDITIONAL INFORMATION. REFER TO ALL OTHER DISCIPLINE DRAWINGS FOR ADDITIONAL DEMOLITION NOTES AND REQUIREMENTS.
2. DEPICTION OF EXISTING CONDITIONS ARE BASED ON OWNER-FURNISHED DOCUMENTS AND LIMITED FIELD OBSERVATIONS. EXISTING ELEMENTS AND CONDITIONS CONCEALED BY IN-PLACE EQUIPMENT AND FINISHES WERE NOT OBSERVED OR INVESTIGATED. ONCE CUTTING AND SELECTIVE DEMOLITION WORK IS COMPLETE, REPORT ANY CONFLICTS. THE CONTRACTOR SHALL MAKE ADJUSTMENTS AND/OR ALTERATIONS AS NECESSARY TO INSTALL COMPLETE AND OPERABLE SYSTEMS IN ACCORDANCE WITH THE CODES HAVING JURISDICTION AT NO ADDITIONAL COST.
3. ALL OPENINGS AND SURFACES MADE BARE BY DEMOLITION AND/OR REMOVAL OF MATERIALS SHALL BE REPAIRED AND/OR PATCHED TO MATCH ADJACENT FINISH AND RATING. PREPARE SURFACES TO RECEIVE NEW FINISH(S).
4. PLANNED INTERRUPTIONS OF UTILITY SERVICE TO ANY FACILITY OR AREAS WITHIN ANY FACILITY AFFECTED BY THIS CONTRACT, SHALL BE CAREFULLY PLANNED AND COORDINATED IN ADVANCE OF THE REQUESTED INTERRUPTION. THE CONTRACTOR SHALL NOT INTERRUPT SERVICES UNTIL SPECIFIED APPROVAL HAS BEEN GRANTED. THE REQUEST SHALL INDICATE SERVICES AND AREAS TO BE AFFECTED, DATE AND TIME OF INTERRUPTION AND DURATION OF OUTAGE. REQUEST FOR INTERRUPTION OF SERVICE WILL NOT BE APPROVED UNTIL ALL EQUIPMENT AND MATERIAL REQUIRED FOR THE COMPLETION OF THAT PARTICULAR PHASE OF WORK ARE ON THE JOB SITE.
5. ALL EXCAVATIONS AND/OR DEMOLITION WORK REQUIRED SHALL BE PERFORMED WITH CARE SO AS NOT TO INTERRUPT OTHER EXISTING SERVICES (WATER, GAS, ELECTRICAL, SEWER, SPRINKLERS, ETC.). IF ACCIDENTAL UTILITY INTERRUPTION, DAMAGE, ETC., RESULTS FROM WORK PERFORMED BY THE CONTRACTOR, THE AFFECTED UTILITY OR SERVICE SHALL BE RETURNED TO ITS ORIGINAL CONDITION WITHOUT DELAY, BY AND AT THE EXPENSE OF THE CONTRACTOR, USING SKILLED WORKMEN OF THE TRADE INVOLVED.
6. REMOVE ALL ELECTRICAL LUMINAIRES, EQUIPMENT, SYSTEMS, DEVICES, OUTLETS, SWITCHES, PULL BOXES, JUNCTION BOXES, ETC., AS REQUIRED TO COMPLETELY REMOVE THE ELECTRICAL ITEMS SHOWN UNLESS NOTED TO REMAIN. DISCONNECT AND REMOVE ALL ELECTRICAL PROVISIONS TO EQUIPMENT BEING REMOVED.
7. IN GENERAL, THE WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
   a. PROVIDE ALL DEMOLITION AS REQUIRED OF EXISTING SYSTEMS REMOVING ALL ITEMS FROM FACILITY

SHEET NOTES

1. SEE SHEET E-004 FOR GENERAL DEMOLITION NOTES AND LEGEND.
2. THE SCOPE OF THIS WORK IS TO REMOVE THE ENTIRE ELECTRICAL SYSTEM COMPLETELY FROM THIS FACILITY. ALL SERVICES, FEEDERS, DEVICES, CONDUIT AND CONDUCTORS ARE TO BE DEMOLISHED DOWN TO THE BUILDING FRAME.

KEYED NOTES

1. 4-COUNTY TO REMOVE EXISTING TRANSFORMER AND PRIMARY SERVICE.
2. CONTRACTOR TO REMOVE SECONDARY SERVICES, EQUIPMENT AND PANELS.
3. REMOVE ALL DOWNSTREAM FEEDERS, PANELS, BACKBOARDS, DISCONNECTS, OUTLETS, BRANCH CIRCUITS, ETC.



DEMOLITION SINGLE LINE DIAGRAM

NO SCALE

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BASKERVILLE-DONOVAN, INC.
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1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

GENERAL DEMOLITION
REQUIREMENTS

SHEET ID
ED-001

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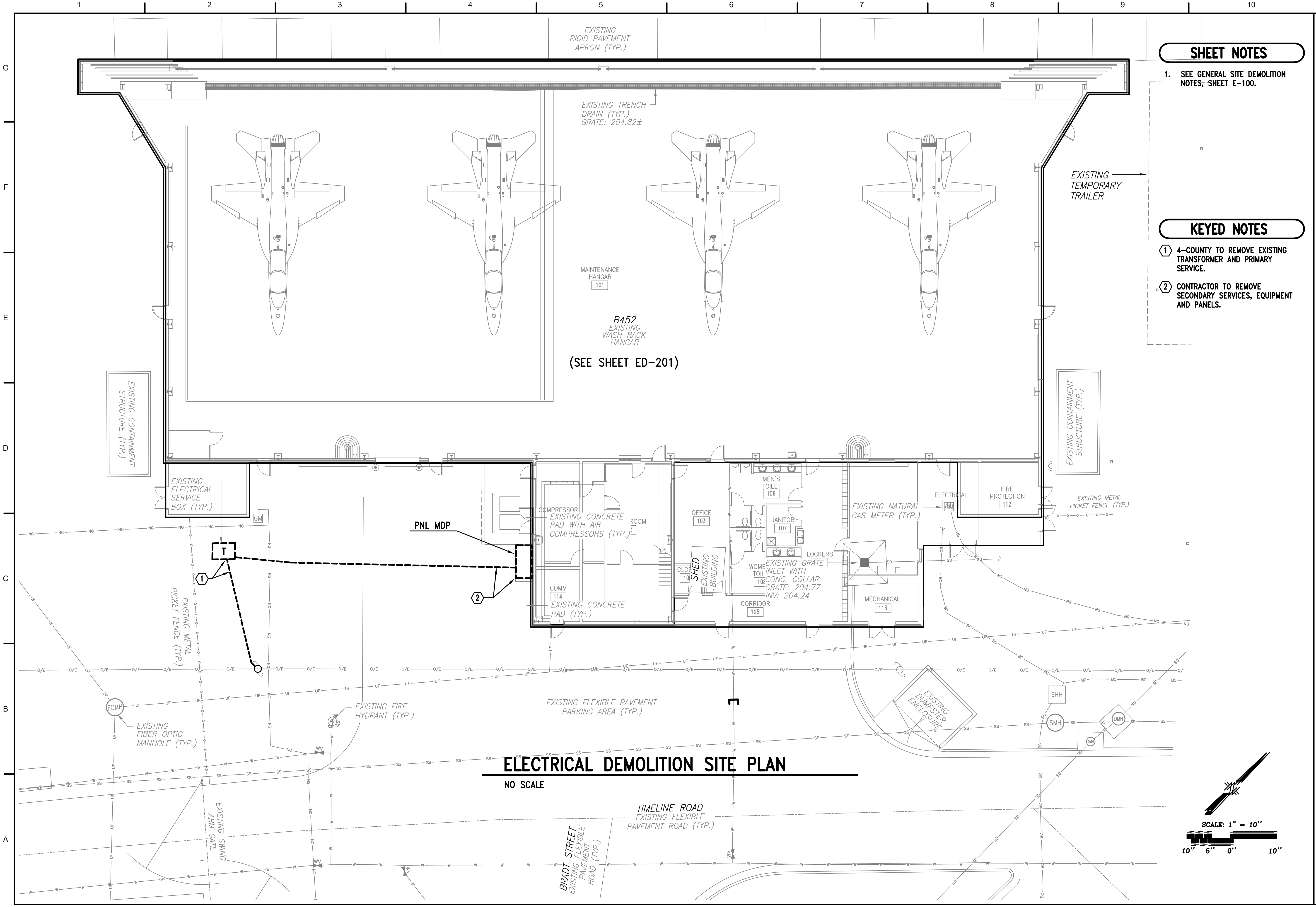
1
2
3
4
5
6
7
8
9
10
G
F
E
D
C
B
A
EXISTING RIGID PAVEMENT APRON (TYP.)
EXISTING TRENCH DRAIN (TYP.) GRATE: 204.82±
MAINTENANCE HANGAR 101
B452 EXISTING WASH RACK HANGAR
(SEE SHEET ED-201)
EXISTING TEMPORARY TRAILER
EXISTING CONTAINMENT STRUCTURE (TYP.)
EXISTING ELECTRICAL SERVICE BOX (TYP.)
GM
T
PNL MDP
1
2
COMPRESSOR
EXISTING CONCRETE PAD WITH AIR COMPRESSORS (TYP.)
ROOM
COMM 114
EXISTING CONCRETE PAD (TYP.)
OFFICE 103
SHED EXISTING BUILDING
CLO 10
MEN'S TOILET 106
JANITOR 107
WOMEN TOIL 10
LOCKERS
EXISTING GRATE INLET WITH CONC. COLLAR GRATE: 204.77 INV: 204.24
CORRIDOR 105
EXISTING NATURAL GAS METER (TYP.)
ELECTRICAL
MECHANICAL 113
FIRE PROTECTION 112
EXISTING METAL PICKET FENCE (TYP.)
EXISTING METAL PICKET FENCE (TYP.)
FOMH
EXISTING FIBER OPTIC MANHOLE (TYP.)
EXISTING FIRE HYDRANT (TYP.)
EXISTING FLEXIBLE PAVEMENT PARKING AREA (TYP.)
EXISTING DUMPSTER ENCLOSURE
EHH
SMH
DMH
WV
EXISTING SWING ARM GATE
TIMELINE ROAD EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
BRADT STREET EXISTING FLEXIBLE PAVEMENT ROAD (TYP.)
NG
O/E
UF
SS
W
SD
BC
SCALE: 1" = 10'
10' 5' 0' 10'

ELECTRICAL DEMOLITION SITE PLAN

NO SCALE

SHEET NOTES

1. SEE GENERAL SITE DEMOLITION NOTES, SHEET E-100.

KEYED NOTES

① 4-COUNTY TO REMOVE EXISTING TRANSFORMER AND PRIMARY SERVICE.

② CONTRACTOR TO REMOVE SECONDARY SERVICES, EQUIPMENT AND PANELS.

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SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005ED-101.dwg

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MOBILE DISTRICT
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MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

ELECTRICAL DEMOLITION
SITE PLAN

SHEET ID
ED-101

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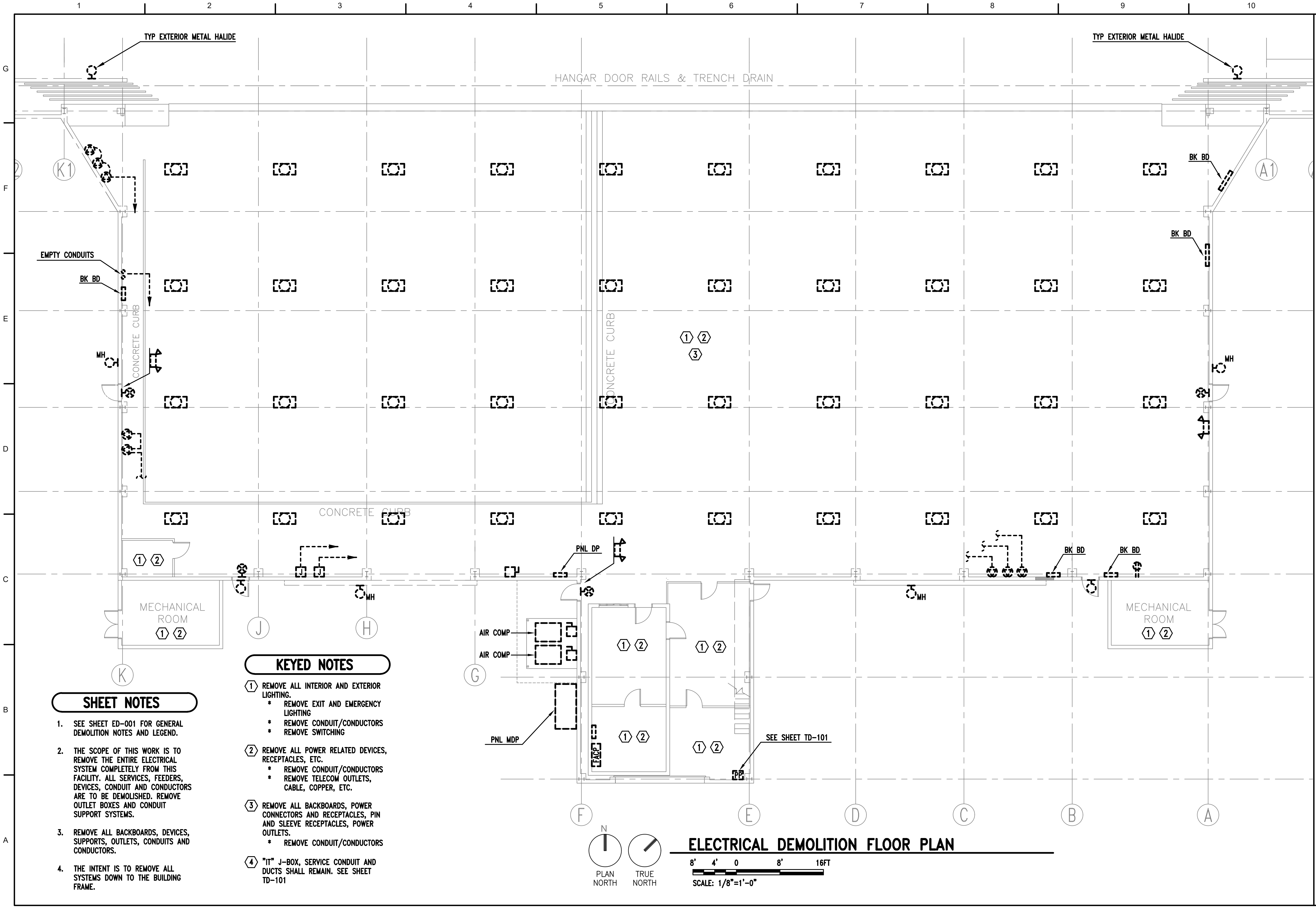

SHEET NOTES

1. SEE SHEET ED-001 FOR GENERAL DEMOLITION NOTES AND LEGEND.
2. THE SCOPE OF THIS WORK IS TO REMOVE THE ENTIRE ELECTRICAL SYSTEM COMPLETELY FROM THIS FACILITY. ALL SERVICES, FEEDERS, DEVICES, CONDUIT AND CONDUCTORS ARE TO BE DEMOLISHED. REMOVE OUTLET BOXES AND CONDUIT SUPPORT SYSTEMS.
3. REMOVE ALL BACKBOARDS, DEVICES, SUPPORTS, OUTLETS, CONDUITS AND CONDUCTORS.
4. THE INTENT IS TO REMOVE ALL SYSTEMS DOWN TO THE BUILDING FRAME.

KEYED NOTES

① REMOVE ALL INTERIOR AND EXTERIOR LIGHTING.
  - * REMOVE EXIT AND EMERGENCY LIGHTING
  - * REMOVE CONDUIT/CONDUCTORS
  - * REMOVE SWITCHING

② REMOVE ALL POWER RELATED DEVICES, RECEPTACLES, ETC.
  - * REMOVE CONDUIT/CONDUCTORS
  - * REMOVE TELECOM OUTLETS, CABLE, COPPER, ETC.

③ REMOVE ALL BACKBOARDS, POWER CONNECTORS AND RECEPTACLES, PIN AND SLEEVE RECEPTACLES, POWER OUTLETS.
  - * REMOVE CONDUIT/CONDUCTORS

④ "IT" J-BOX, SERVICE CONDUIT AND DUCTS SHALL REMAIN. SEE SHEET TD-101

ELECTRICAL DEMOLITION FLOOR PLAN

8' 4' 0 8' 16FT

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

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
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ELECTRICAL DEMOLITION
FLOOR PLAN

SHEET ID
ED-201

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AERIAL SITE LEGEND

NEW	EXISTING	DESCRIPTION
●	○	UTILITY POLE – SEE POLE SCHEDULE
—<	—<	SINGLE DOWN GUY AND ANCHOR ASSEMBLY
—<G2	—<G2	DOUBLE DOWN GUY AND ANCHOR ASSEMBLIES
▲	△	POLE MTD TRANSFORMER
GS	GS	GROUP OPERATED POLE MTD SWITCH ASSEMBLY
⇘	⇘	CUTOUT SWITCH ASSEMBLY
—OT—	— EOT —	OVERHEAD TRANSMISSION LINE
—OP—	— EOP —	OVERHEAD PRIMARY
—OS—	— EOS —	OVERHEAD SECONDARY
—SL—	— ESL —	OVERHEAD STREET LIGHT CIRCUIT
—OC—	— EOC —	OVERHEAD COMMUNICATIONS CIRCUIT
— G —	—EG—	OVERHEAD GUY SPAN
—LP—		OVERHEAD SHIELD WIRE
⊣○ →		FLOOD LIGHT ASSEMBLY

UNDERGROUND SITE LEGEND

NEW	EXISTING	DESCRIPTION
T	T EX	PAD MOUNTED TRANSFORMER (PMT)
S	S EX	PAD MOUNTED SWITCH (PMS)
■ MH	☐ EMH	MANHOLE
☒ HH	☒ EHH	HANDHOLE
o-☐	o-☐	SINGLE UNIT LIGHTING STANDARD – TYPE NOTED
☐-o-☐	☐-o-☐	DOUBLE UNIT LIGHTING STANDARD – TYPE NOTED
o-■		LIGHTING STANDARD LUMINAIRE – NIGHT LIGHT
—UP—	— EUP —	UNDERGROUND PRIMARY
—US—	— EUS —	UNDERGROUND SECONDARY
—UC—	— EUC —	UNDERGROUND COMMUNICATIONS

SITE DEMOLITION LEGEND

⌀	EXISTING UTILITY POLE TO BE REMOVED
⌀	EXISTING POLE MTD LUMINAIRE TO BE REMOVED
⫽ EOP ⫽	EXISTING OVERHEAD PRIMARY CIRCUIT TO BE REMOVED
⫽ EOS ⫽	EXISTING OVERHEAD SECONDARY CIRCUIT TO BE REMOVED
⫽ ESL ⫽	EXISTING OVERHEAD STREET LIGHT CIRCUIT TO BE REMOVED
⫽ EOC ⫽	EXISTING OVERHEAD COMMUNICATION CIRCUIT TO BE REMOVED
⫽ EUP ⫽	EXISTING UNDERGROUND PRIMARY CIRCUIT TO BE REMOVED
⫽ EUS ⫽	EXISTING UNDERGROUND SECONDARY CIRCUIT TO BE REMOVED
⫽ EUC ⫽	EXISTING UNDERGROUND COMMUNICATION CIRCUIT TO BE REMOVED
T	EXISTING PAD MOUNTED TRANSFORMER TO BE REMOVED
S	EXISTING PAD MOUNTED SWITCH TO BE REMOVED

MISCELLANEOUS SITE LEGEND

— W —	WATER LINE
⚲	FIRE HYDRANT
—SS—	SANITARY SEWER LINE
—Ⓢ—	SANITARY SEWER MANHOLE
— G —	GAS LINE
G	GAS METER
-×-×-×-×-	FENCING

SITE NOTES

1. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING SITE CONDITIONS. ANY EXISTING BURIED OR OVERHEAD UTILITY SYSTEMS IN DIRECT CONFLICT WITH PROPOSED SITE IMPROVEMENTS SHALL BE RELOCATED BY THE CONTRACTOR.

2. PROPER CARE SHALL BE TAKEN TO ENSURE CONTINUOUS CONTINUITY OF ALL UTILITY SYSTEMS. ALL SYSTEM DISRUPTIONS SHALL BE SCHEDULED AND APPROVED IN WRITING PRIOR TO DISCONNECTING. ANY DAMAGED UTILITY SYSTEMS SHALL BE REPAIRED AND/OR REPLACED IMMEDIATELY AT THE CONTRACTORS EXPENSE. SEE GENERAL DEMOLITION NOTE 6.

GENERAL SITE DEMOLITION NOTES

1. PLANNED INTERRUPTIONS OF UTILITY SERVICE TO ANY FACILITY OR AREAS WITHIN ANY FACILITY AFFECTED BY THIS CONTRACT, SHALL BE CAREFULLY PLANNED AND COORDINATED WITH THE CONTRACTING OFFICER IN ADVANCE OF THE REQUESTED INTERRUPTION. THE CONTRACTOR SHALL NOT INTERRUPT UTILITIES OR SERVICES UNTIL SPECIFIED APPROVAL HAS BEEN GRANTED. THE REQUEST SHALL INDICATE SERVICES AND AREAS TO BE AFFECTED, DATE AND TIME OF INTERRUPTION AND DURATION OF OUTAGE. REQUEST FOR INTERRUPTION OF SERVICE WILL NOT BE APPROVED UNTIL ALL EQUIPMENT AND MATERIAL REQUIRED FOR THE COMPLETION OF THAT PARTICULAR PHASE OF WORK ARE ON THE JOB SITE.

2. ALL EXCAVATIONS AND/OR DEMOLITION WORK REQUIRED SHALL BE PERFORMED WITH CARE SO AS NOT TO INTERRUPT OTHER EXISTING SERVICES (WATER, GAS, ELECTRICAL, SEWER, SPRINKLERS, ETC.). IF ACCIDENTAL UTILITY INTERRUPTION, DAMAGE, ETC., RESULTS FROM WORK PERFORMED BY THE CONTRACTOR, THE AFFECTED UTILITY OR SERVICE SHALL BE RETURNED TO ITS ORIGINAL CONDITION WITHOUT DELAY, BY AND AT THE EXPENSE OF THE CONTRACTOR, USING SKILLED WORKMEN OF THE TRADE INVOLVED.

3. SYMBOLS SHOWN ARE TYPICAL AND LOCATIONS ARE APPROXIMATE AND ARE NOT INTENDED TO LIMIT THE AMOUNT OF DEMOLITION. COORDINATE WITH EXISTING CONDITIONS AND THESE NOTES AND REMOVE ALL APPLICABLE SYSTEMS AND COMPONENTS CONFLICTING WITH FINISHED DESIGN INTENT.

4. TRENCH, CUT AND REMOVE EXISTING SURFACES AS REQUIRED FOR THE INSTALLATION OF ALL NEW ELECTRICAL PROVISIONS.

5. IN GENERAL, THE WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
   a. PROVIDE ALL DEMOLITION AS REQUIRED OF EXISTING SYSTEMS REMOVING ALL ITEMS THAT CONFLICT WITH FINISHED DESIGN INTENT AS INDICATED ABOVE.

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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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ELECTRICAL SITE LEGEND
AND NOTES

SHEET ID
E-100

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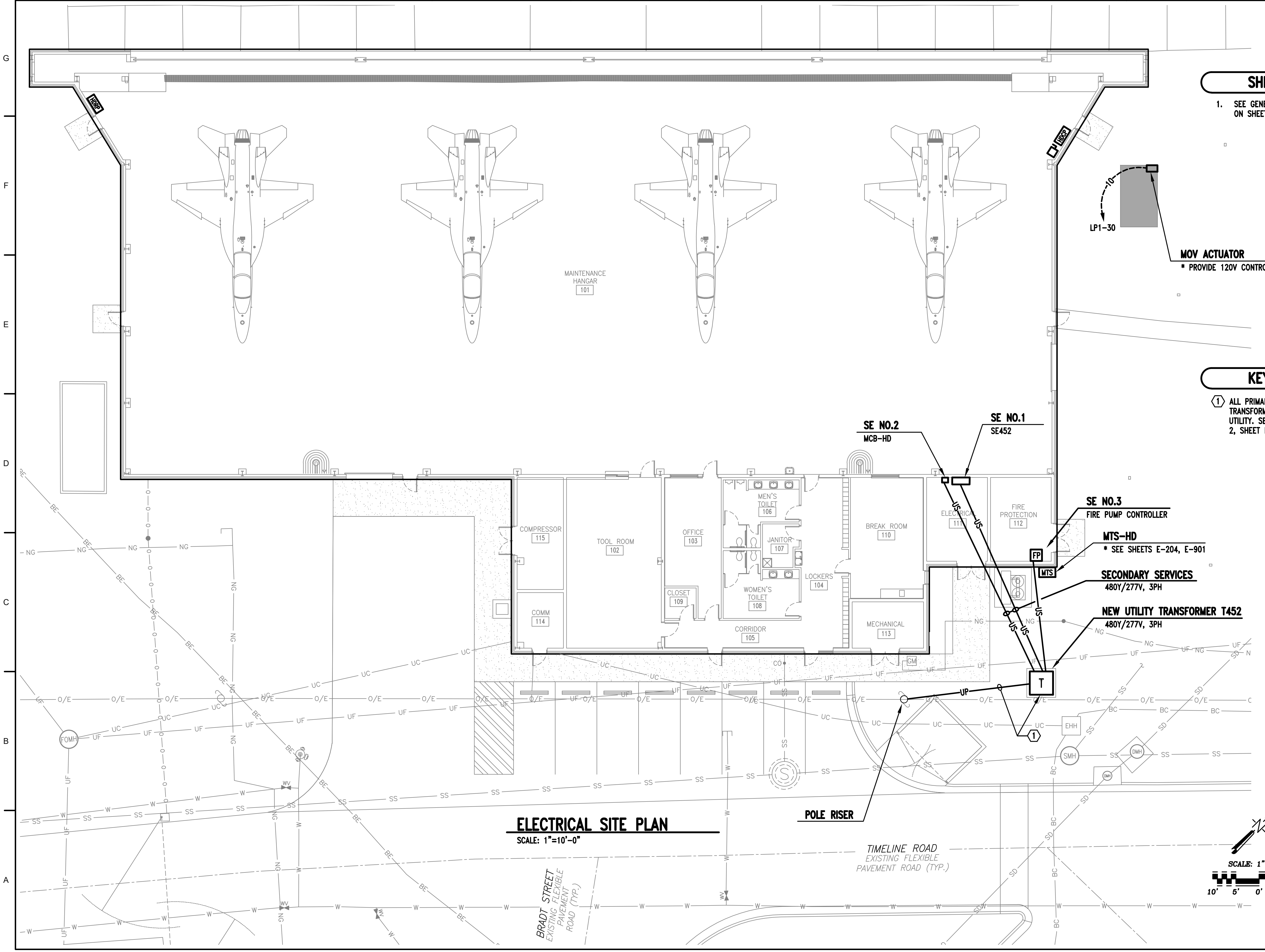

ELECTRICAL SITE PLAN

SCALE: 1"=10'-0"

SHEET NOTES

1. SEE GENERAL ELECTRICAL NOTES 1 & 2 ON SHEET E-003.

KEYED NOTES

① ALL PRIMARY ELECTRICAL AND TRANSFORMER IS TO BE INSTALLED BY UTILITY. SEE GENERAL ELECTRICAL NOTE 2, SHEET E-003.

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MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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ELECTRICAL SITE PLAN

SHEET ID
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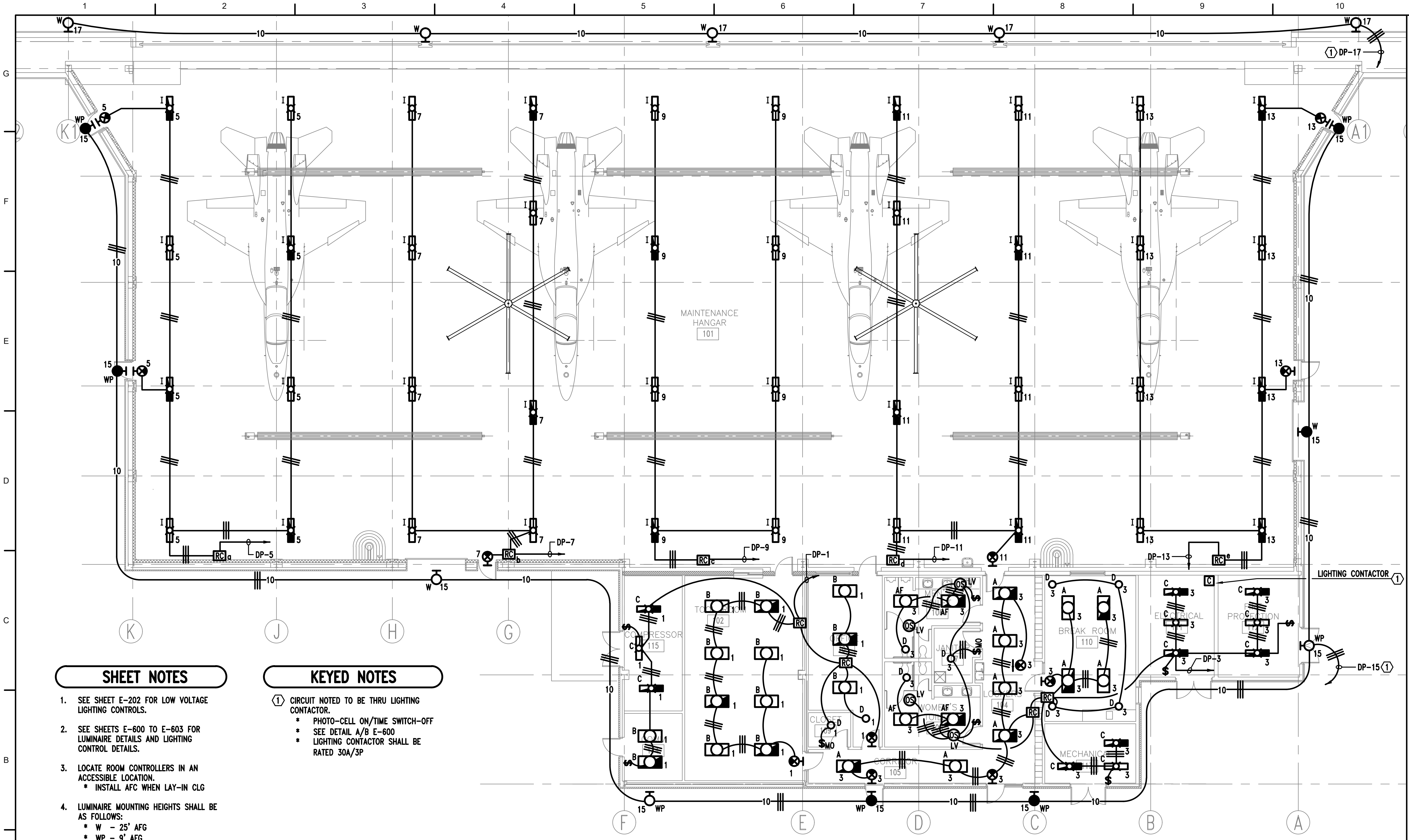
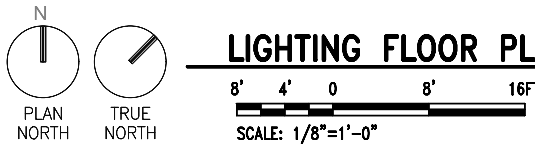


SHEET NOTES

1. SEE SHEET E-202 FOR LOW VOLTAGE LIGHTING CONTROLS.
2. SEE SHEETS E-600 TO E-603 FOR LUMINAIRE DETAILS AND LIGHTING CONTROL DETAILS.
3. LOCATE ROOM CONTROLLERS IN AN ACCESSIBLE LOCATION.
   - * INSTALL AFC WHEN LAY-IN CLG
4. LUMINAIRE MOUNTING HEIGHTS SHALL BE AS FOLLOWS:
   - * W – 25' AFG
   - * WP – 9' AFG
   - * I – 30' AFG
   - * C – 10' AFF
5. THE HANGAR IS CLASSIFIED AS A CLASS 1, DIV 2 ZONE. ALL CONDUIT RUNS SHALL BE OVERHEAD AND AWAY FROM HAZARDOUS AREAS AND ABOVE THE 18" CLASSIFICATION. ALL EQUIPMENT, DEVICES, CONDUIT, ETC. SHALL BE ABOVE 18".

KEYED NOTES

⟨1⟩ CIRCUIT NOTED TO BE THRU LIGHTING CONTACTOR.
   - * PHOTO-CELL ON/TIME SWITCH-OFF
   - * SEE DETAIL A/B E-600
   - * LIGHTING CONTACTOR SHALL BE RATED 30A/3P



LIGHTING FLOOR PLAN

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

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MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

DESIGNED BY:
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DRAWN BY:
EWH
CHECKED BY:
KLH/JDW
SUBMITTED BY:
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SIZE:
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FILE NAME:
MEF24005E-201.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

LIGHTING FLOOR PLAN

SHEET ID
E-201

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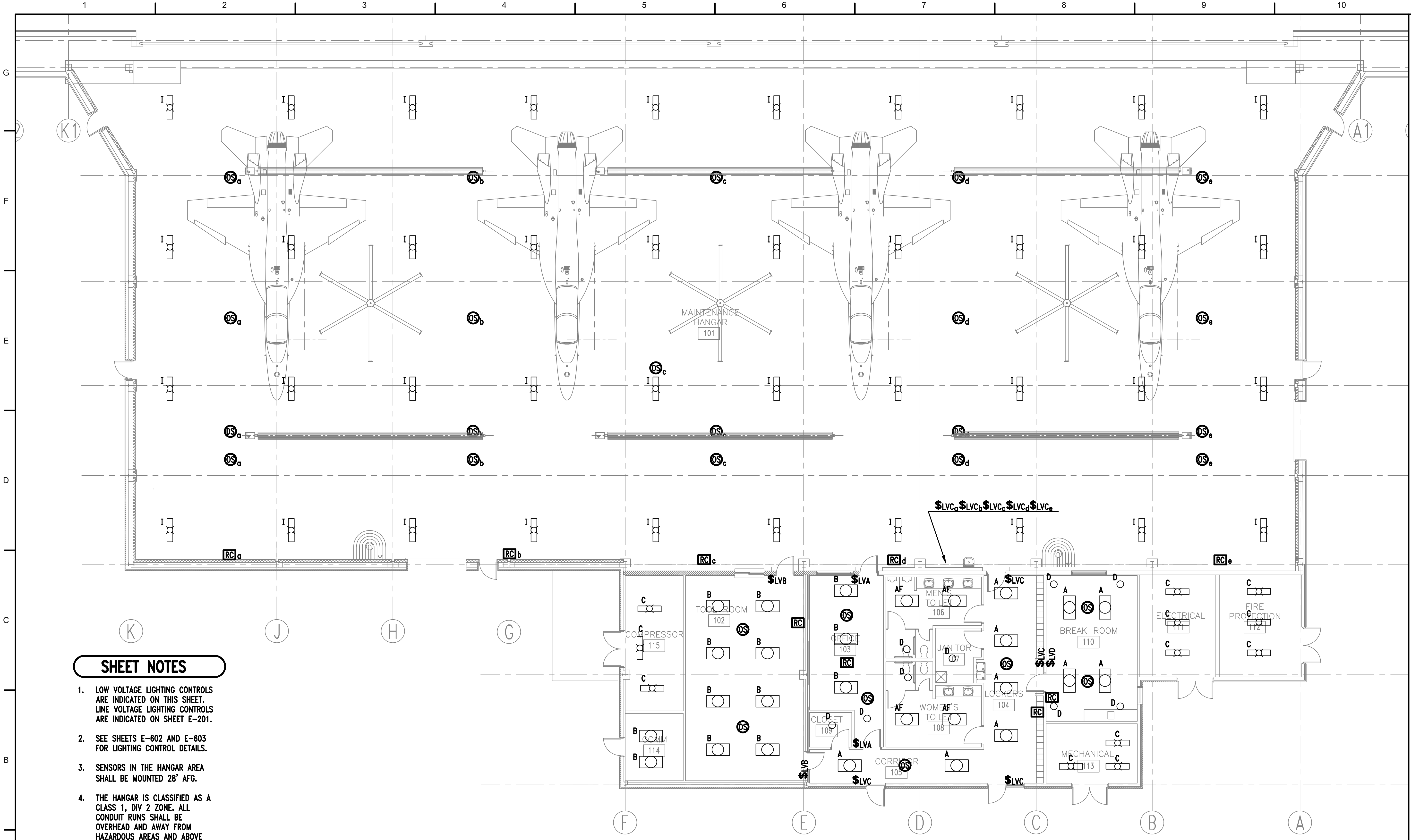
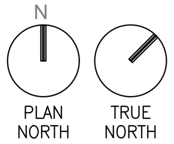


SHEET NOTES

1. LOW VOLTAGE LIGHTING CONTROLS ARE INDICATED ON THIS SHEET. LINE VOLTAGE LIGHTING CONTROLS ARE INDICATED ON SHEET E-201.
2. SEE SHEETS E-602 AND E-603 FOR LIGHTING CONTROL DETAILS.
3. SENSORS IN THE HANGAR AREA SHALL BE MOUNTED 28' AFG.
4. THE HANGAR IS CLASSIFIED AS A CLASS 1, DIV 2 ZONE. ALL CONDUIT RUNS SHALL BE OVERHEAD AND AWAY FROM HAZARDOUS AREAS AND ABOVE THE 18" CLASSIFICATION. ALL EQUIPMENT, DEVICES, CONDUIT, ETC. SHALL BE ABOVE 18".
5. LIGHTING CONTROLS EQUIPMENT LOCATED IN THE HANGAR AREA SHALL BE RATED FOR DAMP AND HUMID ENVIRONMENTS.



LIGHTING CONTROLS FLOOR PLAN

8' 4' 0 8' 16FT

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

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LIGHTING CONTROLS FLOOR PLAN

SHEET ID
E-202

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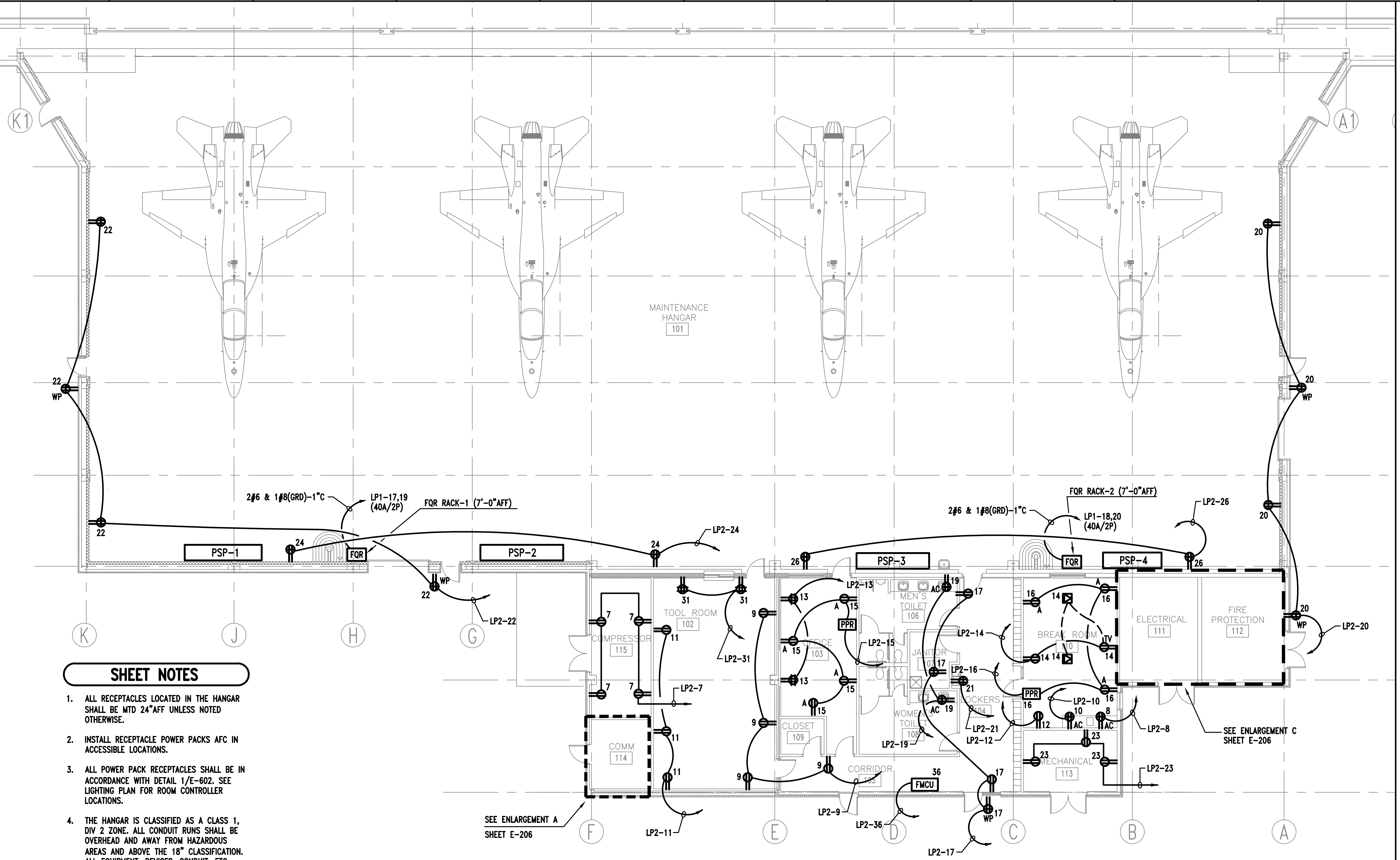

SHEET NOTES

1. ALL RECEPTACLES LOCATED IN THE HANGAR SHALL BE MTD 24"AFF UNLESS NOTED OTHERWISE.
2. INSTALL RECEPTACLE POWER PACKS AFC IN ACCESSIBLE LOCATIONS.
3. ALL POWER PACK RECEPTACLES SHALL BE IN ACCORDANCE WITH DETAIL 1/E-602. SEE LIGHTING PLAN FOR ROOM CONTROLLER LOCATIONS.
4. THE HANGAR IS CLASSIFIED AS A CLASS 1, DIV 2 ZONE. ALL CONDUIT RUNS SHALL BE OVERHEAD AND AWAY FROM HAZARDOUS AREAS AND ABOVE THE 18" CLASSIFICATION. ALL EQUIPMENT, DEVICES, CONDUIT, ETC. SHALL BE ABOVE 18".
   - * ALL CONDUIT SYSTEMS ARE TO BE AS FOLLOWS: RMC OR IMC
5. SEE DETAIL A/E-510 FOR ALL PROVISIONS AT EACH PSP. PROVIDE ALL POWER AND CONNECTION POINTS INDICATED WITHIN THIS SPACE.

N

PLAN NORTH

TRUE NORTH

POWER FLOOR PLAN

8' 4' 0 8' 16FT

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

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POWER FLOOR PLAN

SHEET ID

E-203

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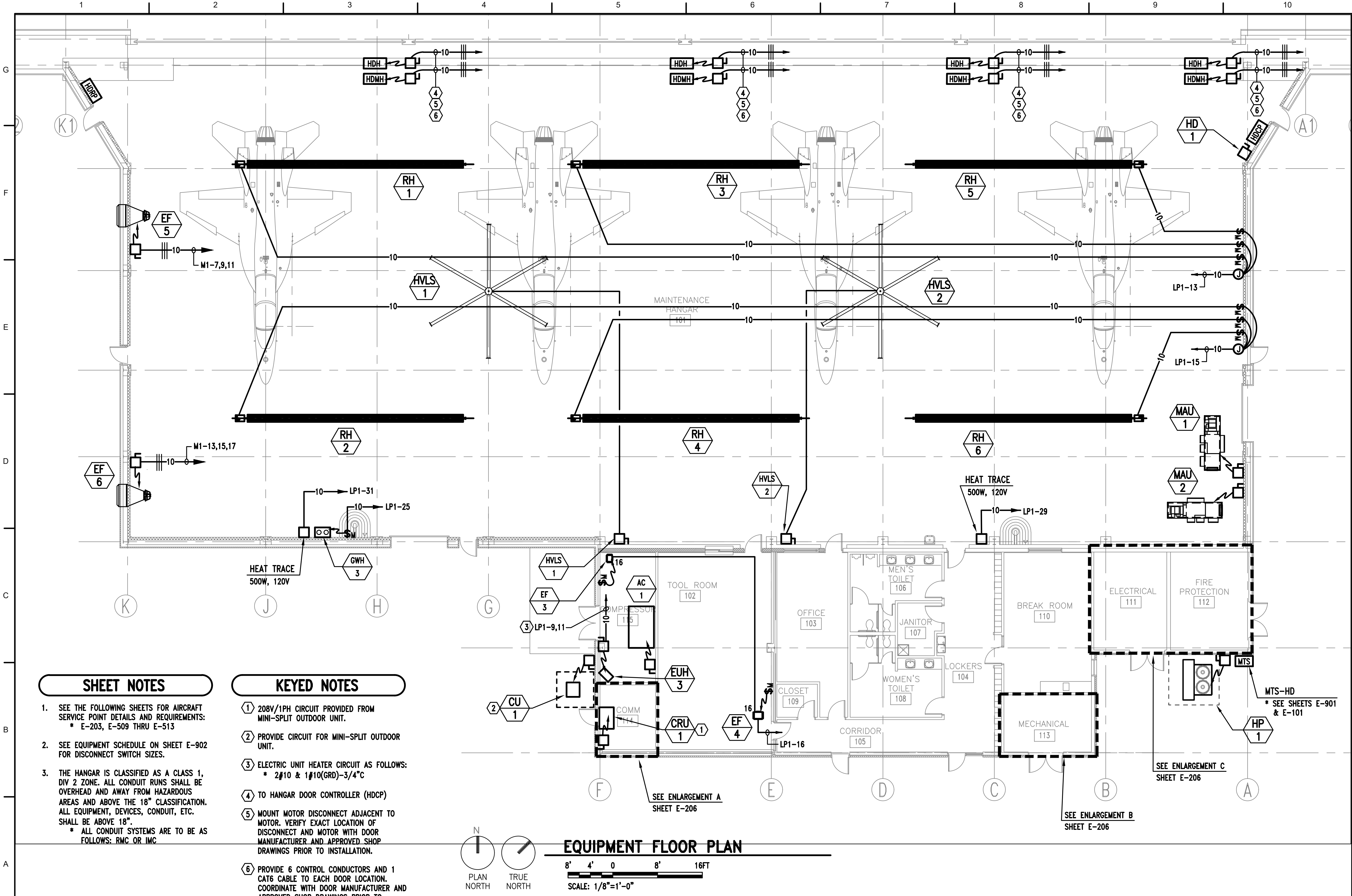

EQUIPMENT FLOOR PLAN

8' 4' 0 8' 16FT

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

SHEET NOTES

1. SEE THE FOLLOWING SHEETS FOR AIRCRAFT SERVICE POINT DETAILS AND REQUIREMENTS:
   - * E-203, E-509 THRU E-513
2. SEE EQUIPMENT SCHEDULE ON SHEET E-902 FOR DISCONNECT SWITCH SIZES.
3. THE HANGAR IS CLASSIFIED AS A CLASS 1, DIV 2 ZONE. ALL CONDUIT RUNS SHALL BE OVERHEAD AND AWAY FROM HAZARDOUS AREAS AND ABOVE THE 18" CLASSIFICATION. ALL EQUIPMENT, DEVICES, CONDUIT, ETC. SHALL BE ABOVE 18".
   - * ALL CONDUIT SYSTEMS ARE TO BE AS FOLLOWS: RMC OR IMC

KEYED NOTES

1. 208V/1PH CIRCUIT PROVIDED FROM MINI-SPLIT OUTDOOR UNIT.
2. PROVIDE CIRCUIT FOR MINI-SPLIT OUTDOOR UNIT.
3. ELECTRIC UNIT HEATER CIRCUIT AS FOLLOWS:
   - * 2#10 & 1#10(GRD)-3/4"C
4. TO HANGAR DOOR CONTROLLER (HDCP)
5. MOUNT MOTOR DISCONNECT ADJACENT TO MOTOR. VERIFY EXACT LOCATION OF DISCONNECT AND MOTOR WITH DOOR MANUFACTURER AND APPROVED SHOP DRAWINGS PRIOR TO INSTALLATION.
6. PROVIDE 6 CONTROL CONDUCTORS AND 1 CAT6 CABLE TO EACH DOOR LOCATION. COORDINATE WITH DOOR MANUFACTURER AND APPROVED SHOP DRAWINGS PRIOR TO INSTALLATION.

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EQUIPMENT FLOOR PLAN

SHEET ID
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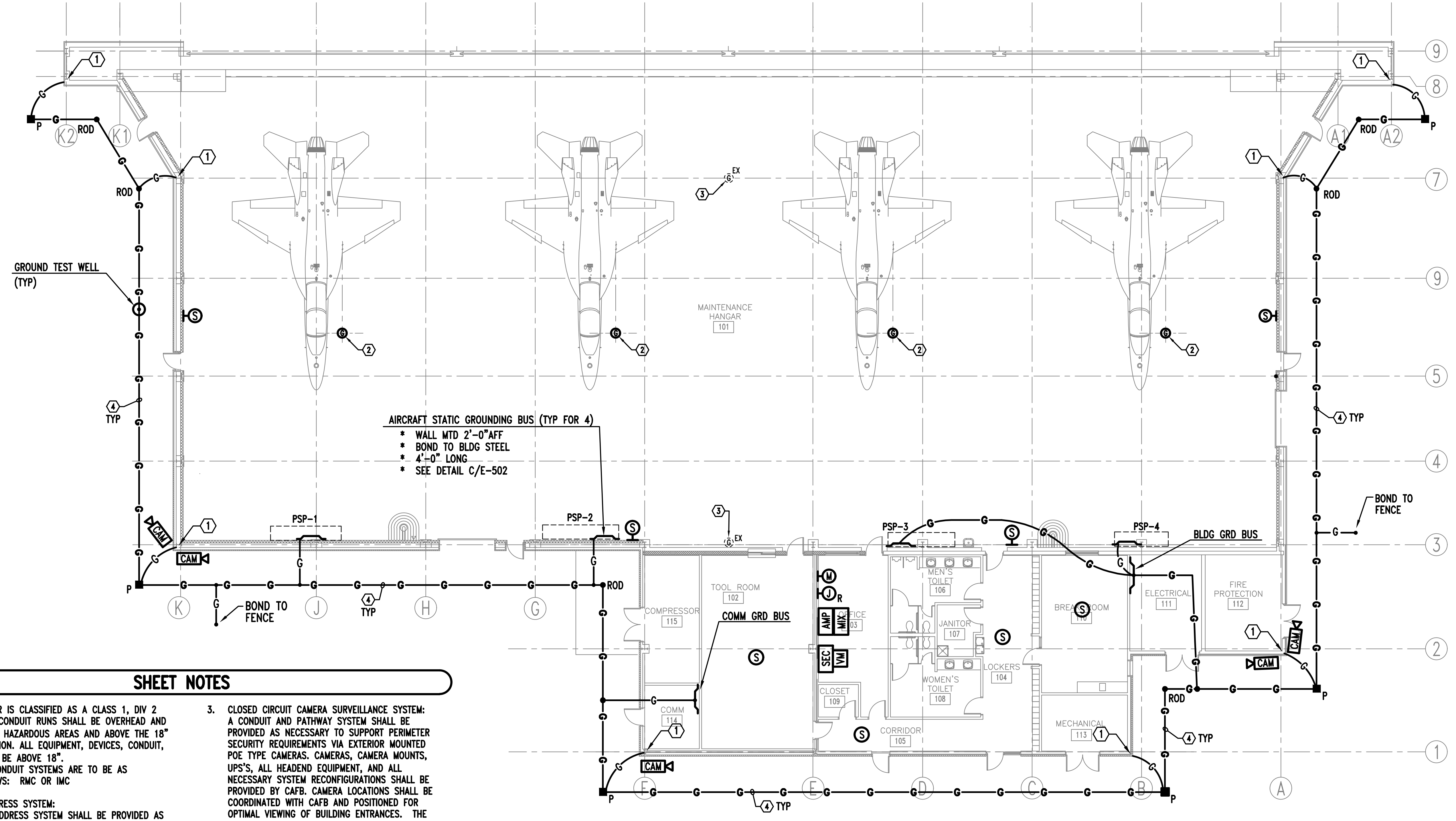

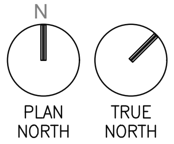

AUXILIARY AND GROUNDING FLOOR PLAN

10' 5' 0 10' 20FT

SCALE: 1"=10'-0"

SHEET NOTES

1. THE HANGAR IS CLASSIFIED AS A CLASS 1, DIV 2 ZONE. ALL CONDUIT RUNS SHALL BE OVERHEAD AND AWAY FROM HAZARDOUS AREAS AND ABOVE THE 18" CLASSIFICATION. ALL EQUIPMENT, DEVICES, CONDUIT, ETC. SHALL BE ABOVE 18".
   * ALL CONDUIT SYSTEMS ARE TO BE AS FOLLOWS: RMC OR IMC

2. PUBLIC ADDRESS SYSTEM:
   A PUBLIC ADDRESS SYSTEM SHALL BE PROVIDED AS INDICATED. EXTERIOR SPEAKERS ALONG WITH INTERIOR WALL/CEILING MOUNTED SPEAKERS SHALL BE PROVIDED. A MICROPHONE STATION SHALL ALSO BE PROVIDED. THE SYSTEM SHALL INCLUDE ALL NECESSARY MICROPHONES, SPEAKERS, CABLING, CONDUITS, BACKBOXES AND NECESSARY APPURTENANCES TO ENSURE A FULLY FUNCTIONAL SYSTEM. SEE RISER DIAGRAM ON SHEET E-803.

3. CLOSED CIRCUIT CAMERA SURVEILLANCE SYSTEM:
   A CONDUIT AND PATHWAY SYSTEM SHALL BE PROVIDED AS NECESSARY TO SUPPORT PERIMETER SECURITY REQUIREMENTS VIA EXTERIOR MOUNTED POE TYPE CAMERAS. CAMERAS, CAMERA MOUNTS, UPS'S, ALL HEADEND EQUIPMENT, AND ALL NECESSARY SYSTEM RECONFIGURATIONS SHALL BE PROVIDED BY CAFB. CAMERA LOCATIONS SHALL BE COORDINATED WITH CAFB AND POSITIONED FOR OPTIMAL VIEWING OF BUILDING ENTRANCES. THE CONDUIT AND PATHWAY SYSTEM SHALL PROVIDE CONNECTION BETWEEN THE CAMERA LOCATIONS TO THE FACILITY HEADEND EQUIPMENT. CONTRACTOR SHALL PROVIDE ALL NECESSARY ROUGH-IN REQUIREMENTS NECESSARY TO FACILITATE THE SYSTEM INCLUDING BUT NOT BE LIMITED TO ALL NECESSARY BACKBOXES, CONDUITS, AND CABLING. SEE RISER DIAGRAM ON SHEET E-803.

4. SEE SHEET E-801 FOR GROUNDING LEGEND AND SHEET E-802 FOR DETAILS.

KEYED NOTES

① BOND TO STRUCTURAL STEEL

② NEW STATIC GROUNDING POINT. SEE SHEET E-511 AND E-512.

③ EXISTING STATIC GROUNDING POINT.

④ INSTALL COUNTERPOISE AROUND FACILITY INTERCONNECTING ALL GROUNDING SYSTEMS TO EARTH.
   * 2'-6" BELOW GRADE
   * 3' MIN FROM BUILDING (PAST DRIP LINE)
   * NOT TO EXCEED 4' FROM BUILDING
   * #4/0 CU

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

AUXILIARY AND GROUNDING
FLOOR PLAN

SHEET ID

E-205

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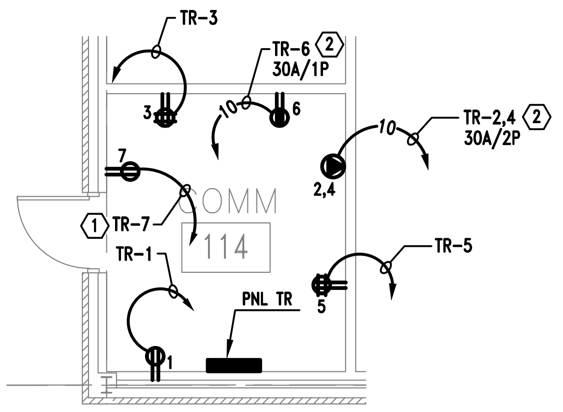


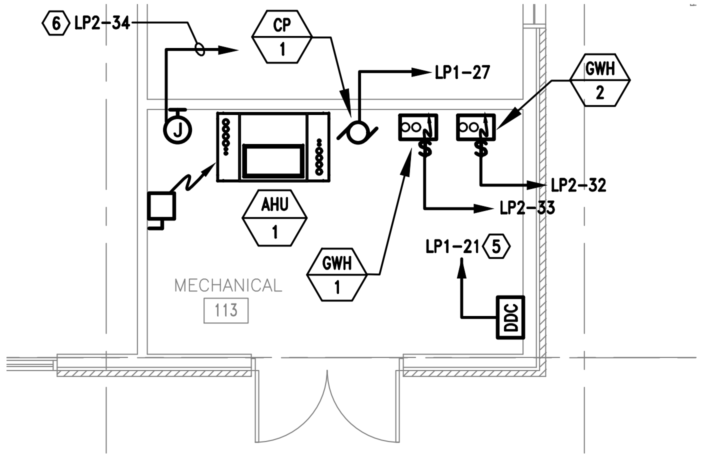
ENLARGEMENT A – COMM 114 POWER PLAN

4' 2' 0 4' 8FT

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

SIGN DETAIL

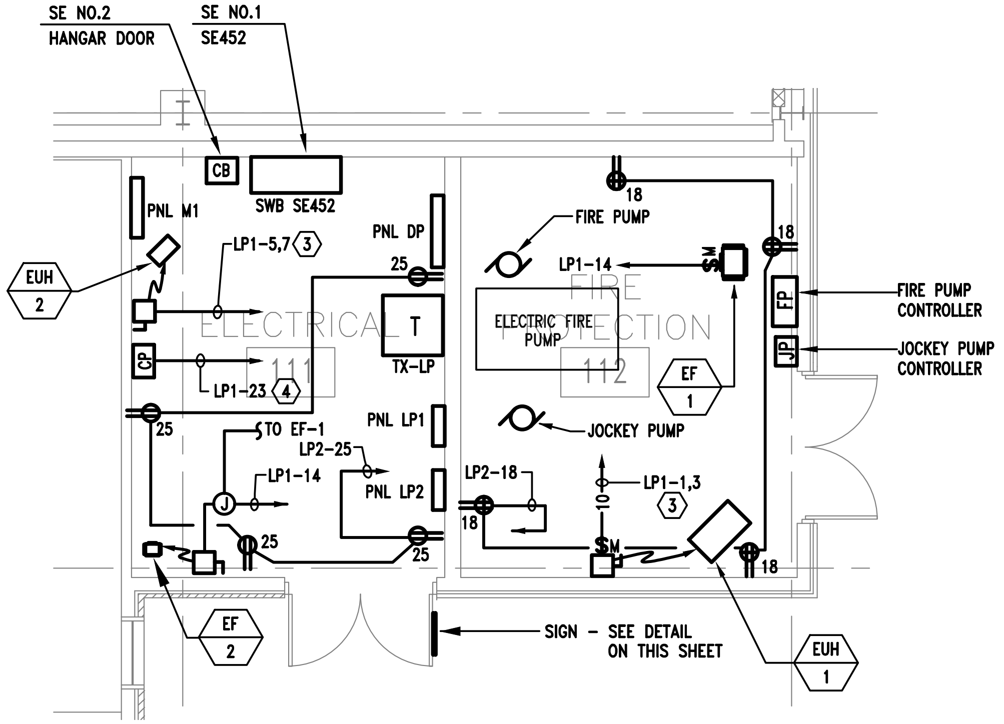
NO SCALE



ENLARGEMENT B – MECHANICAL 113 EQUIPMENT PLAN

8' 4' 0 8' 16FT

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



ENLARGEMENT C – UTILITIES 111 POWER PLAN

4' 2' 0 4' 8FT

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

ELECTRICAL ROOM NOTES

1. THE PURPOSE OF AN ELECTRICAL ROOM IS TO HOUSE ELECTRICAL EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, PROVIDING A SPACE THAT IS BOTH SAFE AND SECURE FOR THE OPERATION AND MAINTENANCE OF THE ELECTRICAL EQUIPMENT. ALL CLEARANCES SHALL BE ESTABLISHED PRIOR TO INSTALLATION AND MAINTAINED DURING INSTALLATION.
2. ALL CLEARANCES SHALL BE MAINTAINED PER NESC AND NEC. ALL PARTS, DEVICES, EQUIPMENT, ETC. WHICH REQUIRE MAINTENANCE, ADJUSTMENT, OPERATION OR EXAMINATION DURING NORMAL NETWORK OPERATION SHALL BE ARRANGED SO AS TO BE ACCESSIBLE BY THE PROVISION OF ADEQUATE WORKING SPACES, WORKING FACILITIES AND CLEARANCES. UNLESS NOTED OTHERWISE ALL CLEARANCES ARE MEASURED FROM SURFACE TO SURFACE.
3. ALL DIMENSIONS INDICATED IN THESE DOCUMENTS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS IN THE FIELD.
4. THE CONTRACTOR SHALL USE APPROVED EQUIPMENT MANUFACTURER DATA CUT-SHEETS FURNISHED IN THIS CONTRACT AND MODEL ALL LAYOUT AND SPACE REQUIREMENTS.
   - VARIOUS EQUIPMENT ITEMS THAT REQUIRE FRONT ACCESS ONLY MAY HAVE THE REQUIREMENT FOR REAR ACCESS TO PULL AND TERMINATE CONDUCTORS TO THE BUS. THIS SHALL BE CONSIDERED IN THE SUBMITTAL AND COORDINATION PROCESS.
5. AS A MINIMUM THE ELECTRICAL ROOM SHALL INCLUDE THE FOLLOWING:
   - DEDICATED WORKING SPACE AND CLEARANCE FOR ALL EQUIPMENT ITEMS REQUIRED BY THE INSTALLATION. SEE TYPICAL PANELBOARD DETAILS AND REQUIREMENTS SHEET.
   - DO NOT ALLOW OTHER TRADES TO INSTALL PIPING, DUCTS, AND DEVICES TO VIOLATE THE DEDICATED ELECTRICAL SPACE
6. ELECTRICAL DOORWAY WIDTHS SHALL BE SIZED TO FACILITATE EQUIPMENT INSTALLATION AND FUTURE REMOVAL AND REPLACEMENT.
7. ALL ENTRY DOORS SHALL BE FURNISHED WITH A LOCK TO FACILITATE ACCESS BY QUALIFIED PERSONNEL ONLY.
8. ALL ENTRY DOORS SHALL BE PROVIDED WITH A SIGN INDICATING:
   " DANGER – HIGH VOLTAGE ELECTRICAL ROOM "
   (SEE SIGN DETAIL – THIS SHEET)
9. INSTALL HOUSEKEEPING PADS (RAISED CONCRETE PADS) FOR THE FLOOR MOUNTED EQUIPMENT AND ELECTRICAL GEAR NOTED.
10. INSTALL NORMAL LIGHTING SYSTEMS AT A LEVEL TO PROMOTE MAINTENANCE, SAFETY AND MEET THE ENERGY CRITERIA OF THE INSTALLATION.
11. INSTALL EMERGENCY LIGHTING AS REQUIRED AND INDICATED.
12. ARC FLASH LABELS SHALL BE PLACED ON ALL APPLICABLE EQUIPMENT. PERSONAL PROTECTIVE EQUIPMENT (PPE) IS REQUIRED FOR THOSE WORKING ON ENERGIZED EQUIPMENT WITHIN THE FLASH PROTECTION BOUNDARY WHEN ENERGIZED.
13. HVAC SYSTEMS FOR ELECTRICAL ROOMS SHALL BE SPECIFICALLY DESIGNED FOR THE SPACE AND NOT INTERJECT ANY ITEMS OR OBJECTS TO CONFLICT WITH DEDICATED ELECTRICAL SPACE.

KEYED NOTES

① RECEPTACLE FOR ELECTRONIC SECURITY, MOUNTED ABOVE DOOR HEIGHT.

② MOUNT RECEPTACLE FOR EQUIP BY OTHERS.

③ ELECTRIC UNIT HEATER CIRCUIT AS FOLLOWS:
   * 2#10 & 1#10(GRD)–3/4"C

④ LEVEL ALARM PANEL FOR THE FUEL CONTAINMENT STORAGE. PROVIDE 120V CIRCUIT.

⑤ PROVIDE 120V CIRCUIT FOR THE DDC CONTROL PANEL.

⑥ PROVIDE 120V CIRCUIT FOR DUCT GAS HEATER.

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MOBILE, ALABAMA

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

ENLARGEMENT PLANS

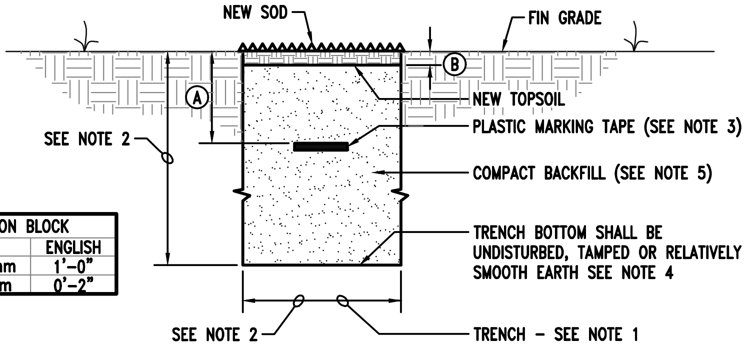
SHEET ID
E-206

RTA SUBMITTAL

CESAM v20181203

GENERAL UNDERGROUND UTILITY PROJECT NOTES

1. THE UNDERGROUND UTILITY PORTION OF THIS PROJECT CONSISTS OF BUT IS NOT LIMITED TO:
    a. TRENCHING/BACKFILLING FOR RACEWAY LINES AND CONDUIT SYSTEMS
    b. RACEWAY BANK INSTALLATIONS
    c. LOW VOLTAGE CONDUCTOR INSTALLATION
    d. PATCH/REPAIR ALL DAMAGED SURFACES AS A RESULT OF TRENCHING AND RACEWAY BANK INSTALLATIONS
    e. DEMOLITION AND REMOVAL AS NOTED
2. INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL SAFETY CODE (NESC) AND THE NATIONAL ELECTRICAL CODE (NEC). FURNISH AND INSTALL DANGER AND WARNING SIGNS IN ACCORDANCE WITH ALL APPLICABLE CODE REQUIREMENTS INCLUDING ARC FLASH CATEGORIZED AND WARNINGS.
3. ALL CONDUCTIVE PARTS OF EQUIPMENT, ENCLOSURES, SUPPORTS, FRAMES, CASES, CONDUIT SYSTEMS AND SURGE ARRESTORS, CABLE SHEATHS, CABLE SHIELDS, COMMON NEUTRALS, ETC., SHALL BE GROUNDED. UNLESS NOTED OTHERWISE CONNECTIONS BELOW GRADE SHALL BE FUSION-WELDED AND ABOVE GRADE FUSION-WELDED OR BOLTED SOLDERLESS. ALL GROUND CONDUCTORS SHALL BE COPPER AND PROTECTED FROM DAMAGE.
4. ALL CLEARANCES SHALL BE MAINTAINED PER NESC AND NEC. ALL PARTS, DEVICES, EQUIPMENT, ETC. WHICH REQUIRE MAINTENANCE, ADJUSTMENT, OPERATION OR EXAMINATION DURING NORMAL NETWORK OPERATION SHALL BE ARRANGED SO AS TO BE ACCESSIBLE BY THE PROVISION OF ADEQUATE WORKING SPACES, WORKING FACILITIES AND CLEARANCES. UNLESS NOTED OTHERWISE ALL CLEARANCES ARE MEASURED FROM SURFACE TO SURFACE.
5. ALL DIMENSIONS INDICATED IN THESE DOCUMENTS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS IN THE FIELD.
6. UNLESS OTHERWISE SHOWN OR DIRECTED RACEWAY LINES SHALL NOT BE LOCATED DIRECTLY UNDER STRUCTURES AND NOT DIRECTLY UNDER OR OVER OTHER SUBSURFACE STRUCTURES. WHERE RACEWAY LINES ARE REQUIRED TO CROSS OTHER UTILITIES SUCH AS SEWERS, WATER LINES, OTHER POWER LINES, COMMUNICATION LINES, ETC., ADEQUATE SUPPORT SHALL BE PROVIDED ON EACH SIDE OF THE CROSSING TO PREVENT TRANSFERRING ANY DIRECT LOAD ONTO THE OTHER LINE. RACEWAY LINES SHALL BE SO INSTALLED AS TO PREVENT HEAT TRANSFER BETWEEN ANY HEAT PRODUCING LINES AND/OR EQUIPMENT TO RACEWAY LINES.
    a. ROUTING SHOWN ON DRAWINGS IS TYPICAL AND THE CONTRACTOR SHALL PROPOSE FINAL ROUTING BASED UPON ACTUAL FIELD DIMENSIONS, CONDITIONS AND EXISTING UNDERGROUND UTILITIES AND STRUCTURES.
    b. PRIOR TO TRENCHING, THE CONTRACTOR SHALL STAKE OUT THE ENTIRE NEW NETWORK ARRANGEMENT. ONE GRADE A WOODEN STAKE WITH RED FLAG SHALL BE DRIVEN EVERY 15m (50'-0") AND AT EACH CHANGE OF DIRECTION. FOUR STAKES SHALL BE DRIVEN TO OUTLINE EQUIPMENT AND/OR MANHOLE LOCATIONS. ON PAVEMENTS RED PAINT SHALL BE USED TO OUTLINE THE AREAS TO BE CUT. SECURE EXISTING UNDERGROUND UTILITY INFORMATION PRIOR TO PERFORMING ANY TRENCHING. THE DATA SHALL CONTAIN UTILITY INFORMATION FROM ALL UTILITY SOURCES.
    c. DEPTHS INDICATED FOR INSTALLATION ARE MINIMUM. ACTUAL DEPTHS MAY VARY DUE TO TERMINATIONS, COMPENSATIONS FOR RADIUS OF VERTICAL TRANSITIONS, EXISTING UTILITY CROSSINGS, ETC. APPROVAL SHALL BE OBTAINED FOR ANY DEPTH LESS THAN INDICATED. TRENCHES SHALL BE OVER-EXCAVATED AS NECESSARY TO ALLOW FOR PROPER TRENCH PREPARATION, RACEWAY BANK CONSTRUCTION, FORMING AND/OR BACKFILLING REQUIREMENTS.
7. UNDERGROUND CIRCUITS SHOWN TO BE REMOVED SHALL INCLUDE ALL CONDUCTORS THE ENTIRE LENGTH AND RACEWAYS AND/OR CONDUIT SYSTEMS ABOVE GRADE. RACEWAY AND/OR CONDUITS MAY BE ABANDONED BELOW GRADE. CONDUCTORS TO BE REMOVED ARE OFTEN ENCASED IN COMMON RACEWAY BANKS WITH OTHER CIRCUITS. THROUGHOUT THE CONSTRUCTION PROCEDURE, OTHER CIRCUITS SHALL REMAIN COMPLETELY INTACT AND UNDISTURBED. THE CONTRACTOR SHALL PERFORM A SURVEY PRIOR TO CONSTRUCTION, IDENTIFY AND TAG EACH CABLE TO BE REMOVED AND OBTAIN APPROVAL FROM THE CONTRACTING OFFICER BEFORE CABLE CAN BE REMOVED.
8. THE CONTRACTOR SHALL PHASE THIS PROJECT IN ACCORDANCE WITH SPECIAL CRITERIA INDICATED ON THE DRAWINGS AND AS OUTLINED IN THE SPECIFICATIONS:
    a. CONTRACTOR SHALL SUBMIT A PHASING PLAN AND RECEIVE APPROVAL PRIOR TO PROCEEDING WITH ANY TRENCHING OR POWER OUTAGES. ALL OUTAGES SHALL BE KEPT TO A MINIMUM.
    b. THE CONTRACTOR SHALL PROVIDE TEMPORARY EQUIPMENT, CONNECTIONS, ETC., IN A SAFE MANNER AS REQUIRED TO COMPLY WITH POWER OUTAGE MAXIMUM TIME DURATION.
    c. ALL NEW PROVISIONS THAT CAN BE INSTALLED PRIOR TO DEMOLITION OF ANY SERVICES SHALL BE DONE FIRST. DEMOLITION SHALL BE PHASED AND SCHEDULED ACCORDINGLY.

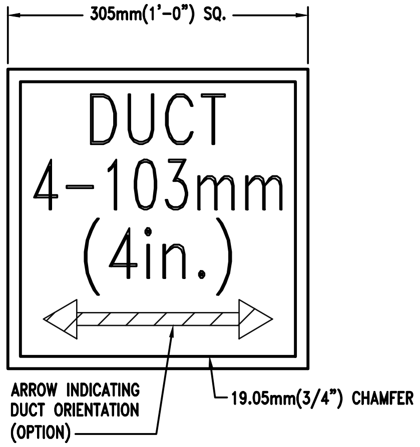

NEW SOD
FIN GRADE
Ⓑ
Ⓐ
NEW TOPSOIL
SEE NOTE 2
PLASTIC MARKING TAPE (SEE NOTE 3)
COMPACT BACKFILL (SEE NOTE 5)
TRENCH BOTTOM SHALL BE UNDISTURBED, TAMPED OR RELATIVELY SMOOTH EARTH SEE NOTE 4
SEE NOTE 2
TRENCH - SEE NOTE 1

DIMENSION BLOCK		
REF	SI	ENGLISH
A	305mm	1'-0"
B	51mm	0'-2"

A
E400
SECTION - TYP TRENCH/BACKFILLING ON GRADE
NO SCALE

SECTION 'A' NOTES

1. TRENCH/CUT EXISTING SURFACES. BACKFILL/PATCH/REPAIR AND INSTALL NEW SOD.
2. TRENCH DEPTH AND WIDTH SHALL BE AS REQUIRED FOR THE INSTALLATION OF THE RACEWAY LINE SPECIFIED. SEE APPLICABLE RACEWAY LINE SECTIONS.
3. PLASTIC MARKER TAPE SHALL BE RED AND CONTAIN FOIL BACKING OR EQUIVALENT TO ENABLE DETECTION BY A METAL DETECTOR. SEE SPECIFICATIONS.
4. WHERE ROCK IS PRESENT INSTALL A PROTECTIVE LAYER OR CLEAN TAMPED BACKFILL
5. ALL BACKFILL SHALL BE FREE OF MATERIAL THAT MAY DAMAGE RACEWAYS. BACKFILL WITHIN 150mm(6") OF THIS RACEWAY SHOULD BE FREE OF SOLID MATERIAL GREATER THAN 100mm(4") IN MAX DIMENSIONS OR WITH SHARP EDGES. THE REMAINDER OF BACKFILL SHOULD BE FREE OF SOLID MATERIAL GREATER THAN 200mm(8") IN MAX DIMENSIONS.



B
E400
DETAIL - DUCT MARKERS
NO SCALE

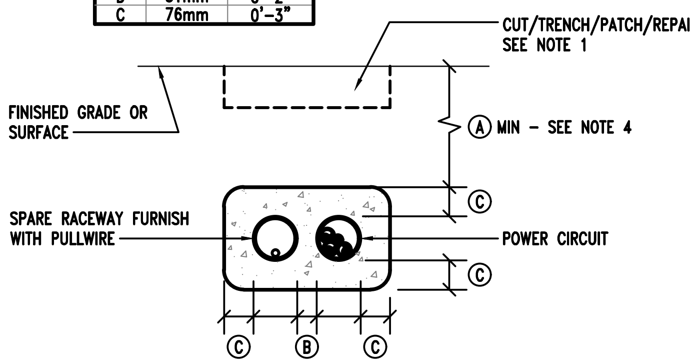
DETAIL B NOTES

1. HAND LETTERING NOT ALLOWED ON MARKERS. LETTERING IS TO BE BOLDLY IMPRESSED.
2. ARROW ON CABLE MARKER TO INDICATE DIRECTION OF CABLES (WHERE APPLICABLE).
3. DUCT MARKER SHALL INDICATE NUMBER AND SIZE OF DUCTS INSTALLED IN DUCT BANK. (4-103mm(4in.) SHOWN FOR EXAMPLE)
4. ALL MARKERS SHALL BE CONCRETE WITH A MINIMUM OF 50.8mm(2") IN THICKNESS.

SECTION 'C' NOTES

1. COORDINATE WITH APPLICABLE TRENCH/BACKFILL SECTIONS THIS SHEET.
2. RACEWAY SYSTEM SHALL BE NON-METALLIC FOR ALL HORIZONTAL RUNS. ALL VERTICAL CHANGES IN DIRECTION SHALL BE MADE WITH A LONG SWEEP TREATED GRC (CONDUIT SYSTEM) ELBOW. ALL VERTICAL RISER SECTIONS SHALL BE TREATED GRC BELOW GRADE. PROVIDE PVC TO GRC ADAPTORS AS APPLICABLE.
3. DEPTH OF INSTALLATION MAY BE INCREASED DUE TO RACEWAY CONNECTION REQUIREMENTS AT MANHOLES, UTILITY CROSSINGS, AND/OR VERTICAL TRANSITION DUE TO RADIUS OF ELBOWS.
4. FURNISH NUMBER OF DUCTS INDICATED ON SHEET E-900.

DETAIL 'C' DIMENSION BLOCK		
REF	SI	ENGLISH
A	914mm	3'-0"
B	51mm	0'-2"
C	76mm	0'-3"


CUT/TRENCH/PATCH/REPAIR - SEE NOTE 1
FINISHED GRADE OR SURFACE
Ⓐ MIN - SEE NOTE 4
Ⓒ
SPARE RACEWAY FURNISH WITH PULLWIRE
POWER CIRCUIT
Ⓒ
Ⓒ
Ⓑ
Ⓒ

C
E400
SECTION - CONCRETE ENCASED RACEWAY LINE (2-WAY)
NO SCALE

GENERAL UNDERGROUND TERMINOLOGY AND DEFINITIONS

BIL:	BASIC IMPULSE LEVEL
CONCRETE PAD:	REINFORCED CONCRETE PAD DESIGNED FOR SPECIFIC EQUIPMENT
SUBMERSIBLE:	DESIGNED FOR SUBSURFACE PLACEMENT AND OPERATION
PAD MOUNTED:	DESIGNED FOR SURFACE PLACEMENT AND OPERATION
URD:	UNDERGROUND RESIDENTIAL DISTRIBUTION
HDPE:	HIGH-DENSITY POLYETHYLENE
PVC:	POLYVINYL CHLORIDE

UNDERGROUND UTILITY TRENCHING AND BACKFILL REQUIREMENTS

1. ALL UNDERGROUND UTILITY TRENCHES SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GUIDES:
    - CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO EXCAVATION.
    - ALL DAMAGE TO EXISTING UTILITIES, CIRCUITS, STRUCTURES, ETC. SHALL BE REPAIRED AND/OR REPLACED AT THE EXPENSE OF THE CONTRACTOR.
2. DURING UNDERGROUND UTILITY WORK, CONSIDERATION SHALL BE GIVEN AND SOLUTIONS PROVIDED FOR THE FOLLOWING:
    - EARTH EXCAVATION AND POTENTIAL EROSION. PROVIDE EROSION BARRIERS AS REQUIRED.
    - EARTH AND VEGETATION DAMAGE FROM HEAVY EQUIPMENT.
    - CAREFUL AND SPECIFICALLY PLANNED ROUTING TO MINIMIZE EXCAVATION EXTENT AND DAMAGE TO OTHER UTILITIES AND ENVIRONMENTAL IMPACT.
    - POTENTIAL EXCAVATION DAMAGE TO VEGETATION AND/OR ROOTS.
    - HAND TRENCHES SHALL BE USED FOR HEAVY VEGETATION AND UTILITY CONGESTED AREAS, TO MINIMIZE POSSIBLE DAMAGE TO THE ENVIRONMENT, UTILITIES, EQUIPMENT AND SYSTEMS.
3. CONTRACTOR SHALL BE REQUIRED TO SECURE GROUND PENETRATING RADAR(GPR) SERVICES AS NEEDED TO PROPERLY LOCATE AND IDENTIFY EXISTING UNDERGROUND UTILITIES, CIRCUITS, STRUCTURES, ETC, PRIOR TO TRENCHING AND/OR DIRECTIONAL BORING.
4. ALL UNDERGROUND UTILITY WORK SHALL BE LOCATED IN A CONVENIENT ACCESSIBLE LOCATION AT AN APPROVED EASEMENT LOCATION.

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ISSUE DATE:
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SOLICITATION NO.:
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MEF24005
FILE NAME:
MEF24005E-400.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

UNDERGROUND UTILITY
REQUIREMENTS

SHEET ID
E-400

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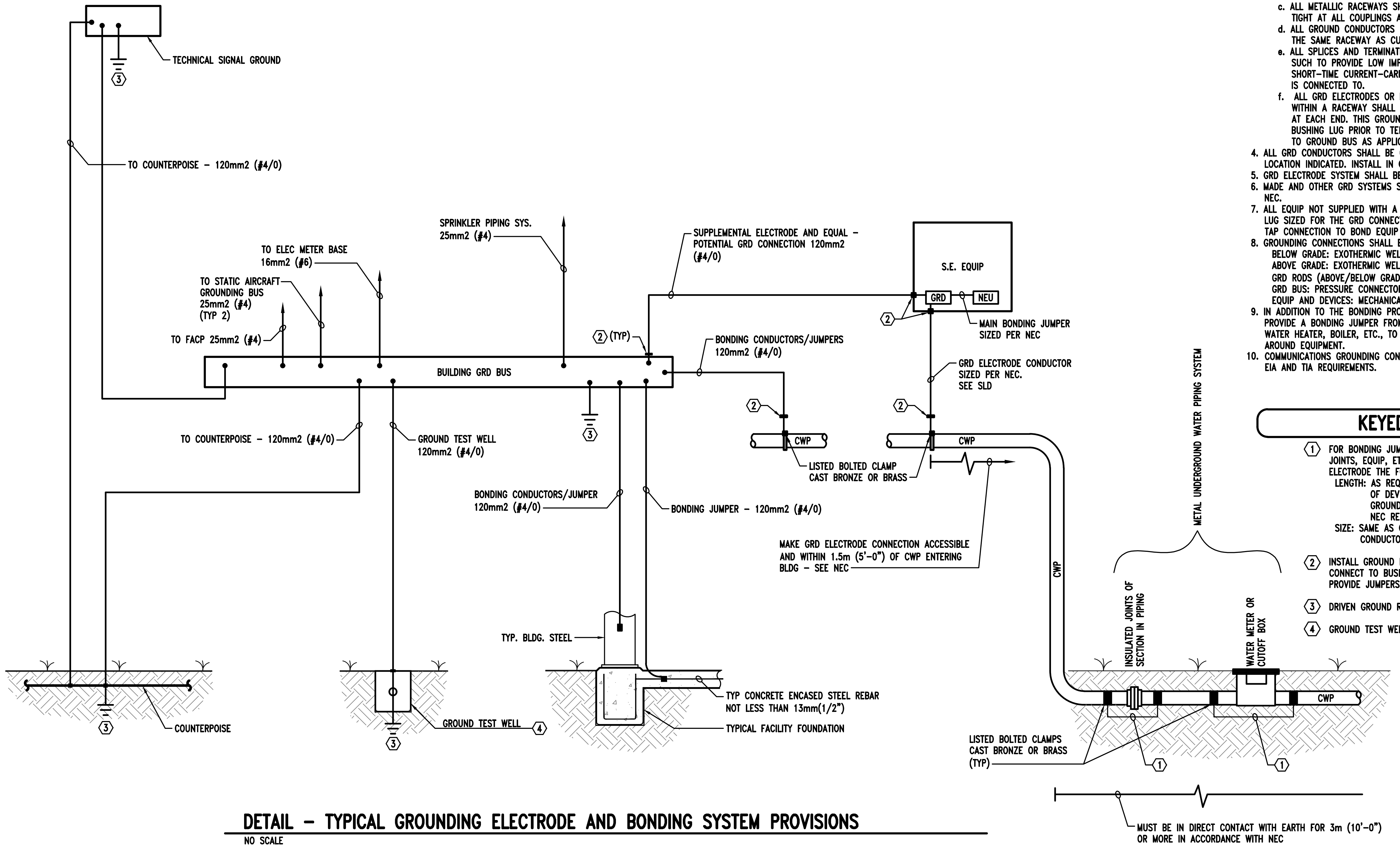
TECHNICAL SIGNAL GROUND
3
TO COUNTERPOISE – 120mm2 (#4/0)
SPRINKLER PIPING SYS.
25mm2 (#4)
TO ELEC METER BASE
16mm2 (#6)
TO STATIC AIRCRAFT GROUNDING BUS
25mm2 (#4)
(TYP 2)
TO FACP 25mm2 (#4)
SUPPLEMENTAL ELECTRODE AND EQUAL – POTENTIAL GRD CONNECTION 120mm2 (#4/0)
S.E. EQUIP
GRD
NEU
2
MAIN BONDING JUMPER SIZED PER NEC
2 (TYP)
BONDING CONDUCTORS/JUMPERS 120mm2 (#4/0)
BUILDING GRD BUS
GRD ELECTRODE CONDUCTOR SIZED PER NEC. SEE SLD
2
2
CWP
CWP
TO COUNTERPOISE – 120mm2 (#4/0)
GROUND TEST WELL 120mm2 (#4/0)
LISTED BOLTED CLAMP CAST BRONZE OR BRASS
BONDING CONDUCTORS/JUMPER 120mm2 (#4/0)
BONDING JUMPER – 120mm2 (#4/0)
MAKE GRD ELECTRODE CONNECTION ACCESSIBLE AND WITHIN 1.5m (5'–0") OF CWP ENTERING BLDG – SEE NEC
METAL UNDERGROUND WATER PIPING SYSTEM
CWP
TYP. BLDG. STEEL
INSULATED JOINTS OF SECTION IN PIPING
WATER METER OR CUTOFF BOX
COUNTERPOISE
GROUND TEST WELL
4
TYP CONCRETE ENCASED STEEL REBAR NOT LESS THAN 13mm(1/2")
TYPICAL FACILITY FOUNDATION
LISTED BOLTED CLAMPS CAST BRONZE OR BRASS (TYP)
1
1
MUST BE IN DIRECT CONTACT WITH EARTH FOR 3m (10'–0") OR MORE IN ACCORDANCE WITH NEC

DETAIL – TYPICAL GROUNDING ELECTRODE AND BONDING SYSTEM PROVISIONS

NO SCALE

METAL UNDERGROUND WATER PIPE SYSTEM

SHEET NOTES

1. ALL GROUNDING AND BONDING SHALL BE IN ACCORDANCE WITH THE NEC, NESC, IEEE, ANSI AND UL STANDARDS.
2. ALL DIMENSIONING INDICATED IN THESE DOCUMENTS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS IN THE FIELD.
3. THE PURPOSE OF THE GROUNDING AND BONDING SYSTEM IS TO ESTABLISH ALL EQUIPMENT ENCLOSURES, NON–CURRENT CARRYING METALLIC PORTIONS OF THE ELECTRICAL DISTRIBUTION SYSTEM, METAL PIPING, METAL BUILDING FRAME, ETC., AT A ZERO POTENTIAL RELATIVE TO THE EARTH GROUND AND PROVIDE FOR A SAFE, LOW IMPEDANCE RETURN PATH FOR GROUND–FAULT CURRENT. THIS SHALL BE ACCOMPLISHED IN THE FOLLOWING MANNER:
    a. PROVIDE A SOLIDLY GROUNDED SECONDARY SYSTEM.
    b. INTER–CONNECT ALL GROUND BUSES AND POINTS IN THE SYSTEM WITH A COPPER GRD CONDUCTOR (BUS) SYSTEM.
    c. ALL METALLIC RACEWAYS SHALL BE UL APPROVED AND MADE–UP TIGHT AT ALL COUPLINGS AND TERMINATIONS.
    d. ALL GROUND CONDUCTORS IN CIRCUITS SHALL BE CONTAINED WITHIN THE SAME RACEWAY AS CURRENT CARRYING CONDUCTORS.
    e. ALL SPLICES AND TERMINATIONS SHALL BE MADE TIGHT AND AS SUCH TO PROVIDE LOW IMPEDANCE AND SHALL HAVE THE SAME SHORT–TIME CURRENT–CARRYING CAPABILITY AS THE CONDUCTOR IT IS CONNECTED TO.
    f. ALL GRD ELECTRODES OR BONDING CONDUCTORS INSTALLED ALONE WITHIN A RACEWAY SHALL UTILIZE GRC WITH GROUNDING BUSHINGS AT EACH END. THIS GROUND CONDUCTOR SHALL LOOP THROUGH THE BUSHING LUG PRIOR TO TERMINATION. INSTALL GROUNDING JUMPERS TO GROUND BUS AS APPLICABLE.
4. ALL GRD CONDUCTORS SHALL BE CONTINUOUS AND UNBROKEN FROM EACH LOCATION INDICATED. INSTALL IN GRC WITH GRD BUSH ON EACH END.
5. GRD ELECTRODE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NEC.
6. MADE AND OTHER GRD SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH NEC.
7. ALL EQUIP NOT SUPPLIED WITH A GRD LUG SHALL BE PROVIDED WITH A LUG SIZED FOR THE GRD CONNECTION INDICATED AND PROVIDED WITH A TAP CONNECTION TO BOND EQUIP ENCLOSURE.
8. GROUNDING CONNECTIONS SHALL BE UL LISTED AND AS FOLLOWS:
    BELOW GRADE: EXOTHERMIC WELDING
    ABOVE GRADE: EXOTHERMIC WELDING, PRESSURE CONNECTORS
    GRD RODS (ABOVE/BELOW GRADE): EXOTHERMIC WELDING
    GRD BUS: PRESSURE CONNECTORS
    EQUIP AND DEVICES: MECHANICAL LUG
9. IN ADDITION TO THE BONDING PROVISIONS INDICATED IN THIS DETAIL PROVIDE A BONDING JUMPER FROM CWP TO HWP CONNECTIONS AT EACH WATER HEATER, BOILER, ETC., TO CONTINUE EQUAL–POTENTIAL GROUNDING AROUND EQUIPMENT.
10. COMMUNICATIONS GROUNDING CONNECTIONS SHALL BE IN ACCORDANCE WITH EIA AND TIA REQUIREMENTS.

KEYED NOTES

① FOR BONDING JUMPERS AROUND WATER METERS, INSULATED JOINTS, EQUIP, ETC. ASSOCIATED WITH THE GROUND ELECTRODE THE FOLLOWING APPLIES:
LENGTH: AS REQ TO PERMIT REMOVAL OF DEVICE WHILE RETAINING GROUNDING INTEGRITY. SEE NEC REQUIREMENTS.
SIZE: SAME AS GRD ELECTRODE CONDUCTOR. SEE SLD.

② INSTALL GROUND BUSHINGS. GRD CONDUCTOR SHALL CONNECT TO BUSHING AS IT EXITS CONDUIT SYSTEMS. PROVIDE JUMPERS TO GRD BUS AS APPLICABLE.

③ DRIVEN GROUND ROD

④ GROUND TEST WELL. SEE DETAIL

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MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

GROUNDING AND BONDING
REQUIREMENTS

SHEET ID
E-501

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DETAIL KEYED NOTES

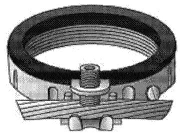
① LOCK-NUT ASSEMBLIES

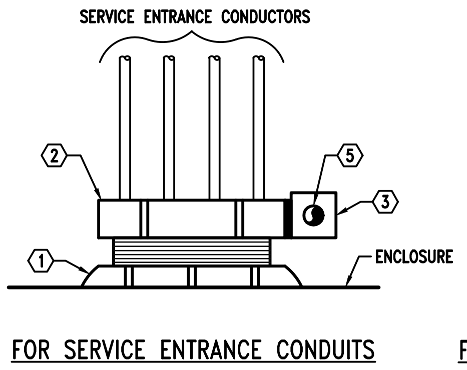
② METAL GROUNDING BUSHING

③ COPPER GROUND LUG

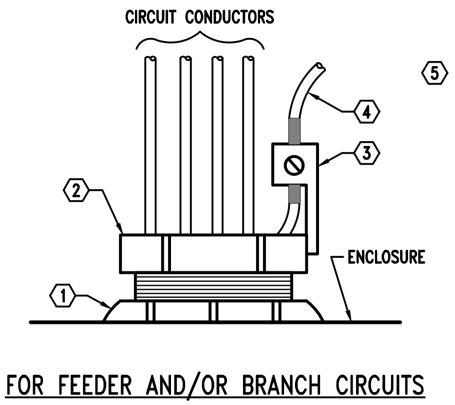
④ COPPER GROUND CONDUCTOR. REMOVE INSULATION AT BUSHING, RUN THROUGH BUSHING LUG AND BOND TO RACEWAY SYSTEM. DO NOT SPLICE OR TAP.

⑤ CONTINUOUS COPPER GROUND CONDUCTOR FROM GROUND BUS THROUGH EACH BUSHING. DO NOT SPLICE OR TAP.





FOR SERVICE ENTRANCE CONDUITS



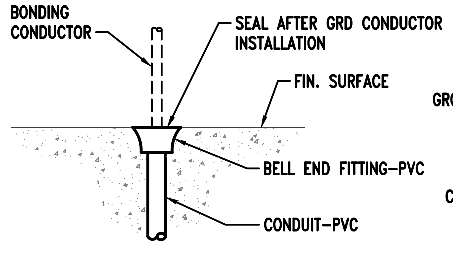
FOR FEEDER AND/OR BRANCH CIRCUITS

Ⓐ DETAIL - TYPICAL GROUND BUSHING INSTALLATION

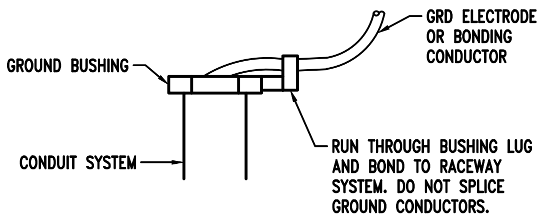
NO SCALE

DETAIL NOTES

1. ALL GROUND ELECTRODE CONDUCTORS, SYSTEM BONDING CONDUCTORS, ETC., RUN SEPARATELY SHALL BE PROTECTED BY A CONDUIT SYSTEM.
2. ALL SYSTEM GROUNDING OR BONDING CONDUCTORS SHALL GENERALLY BE ENCLOSED BY A RMC CONDUIT. PROVIDE GROUND BUSHINGS ON EACH END AND BOND CONDUCTORS TO RACEWAY SYSTEM.
3. SYSTEM BONDING CONDUCTORS THAT PENETRATE CONCRETE SLABS SHALL BE ENCLOSED BY A PVC CONDUIT. PROVIDE BELL END FITTING ON EACH END AND SEAL. THOSE TERMINATING AT A STUB-UP SHALL BE FLUSH WITH FLOOR.



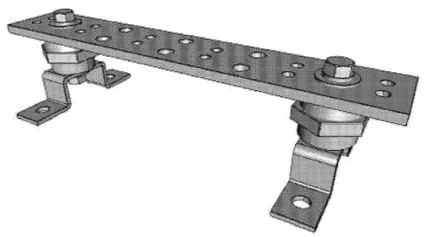
THROUGH CONCRETE


GRD ELECTRODE OR BONDING CONDUCTOR
GROUND BUSHING
CONDUIT SYSTEM
RUN THROUGH BUSHING LUG AND BOND TO RACEWAY SYSTEM. DO NOT SPLICE GROUND CONDUCTORS.

SURFACE MOUNTED

Ⓑ DETAIL - TYPICAL GROUND CONDUCTOR IN CONDUIT SYSTEM

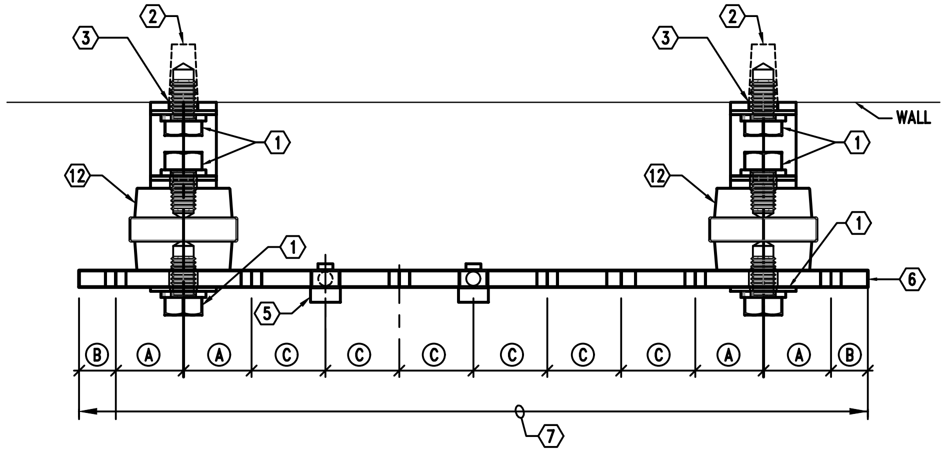
NO SCALE



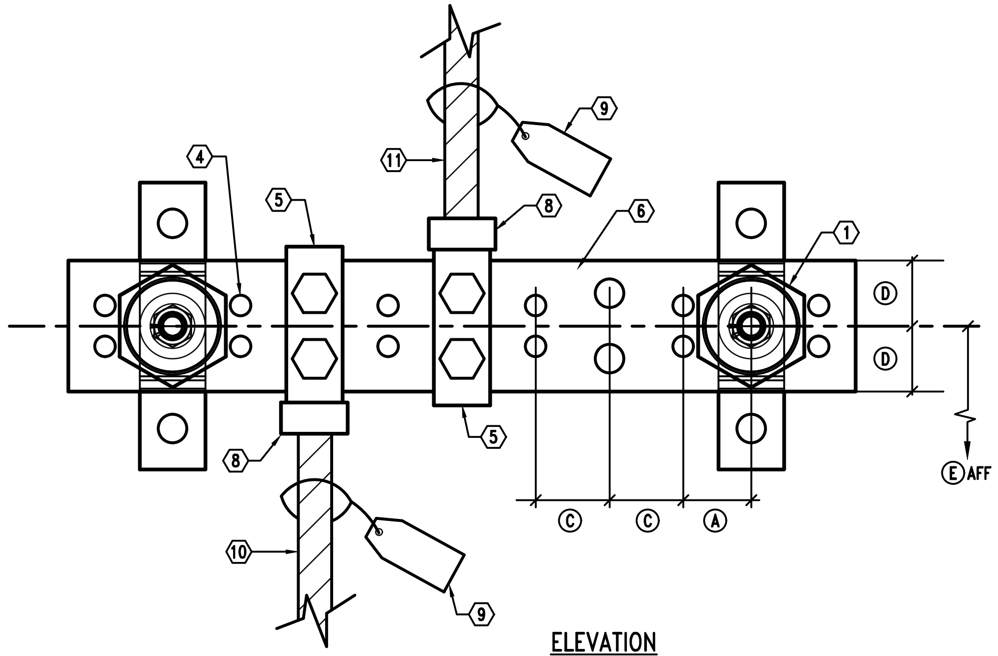
DIMENSION BLOCK		
REF	SI	ENGLISH
A	26.3mm	1-1/16"
B	14.22mm	9/16"
C	28.58mm	1-1/8"
D	25.4mm	1"
E	457mm	1'-6"

GROUND BUS NOTES

1. GROUND BUS INSTALLATION SHALL BE IN ACCORDANCE WITH THIS DETAIL AND AS INDICATED ON THE DRAWINGS.



PLAN VIEW



ELEVATION

Ⓒ DETAIL - TYPICAL GROUND BUS PROVISIONS

NO SCALE

SHEET NOTES

1. SEE SHEET NOTES ON E501.
2. DIMENSIONS INDICATED ON THIS SHEET ARE TYPICAL. PROVIDE MANUFACTURER'S STANDARD.

DETAIL KEYED NOTES

① 9.52mm (3/8") X 38.1mm (1 1/2") SILICON-BRONZE MACHINE BOLT & SILICON-BRONZE WASHER

② 9.52mm (3/8") EXPANSION ANCHOR

③ 14.29mm (9/16"ø) HOLE IN BAR SUPPORT

④ DRILLED DOUBLE CONNECTOR HOLES

⑤ FLAT, TWO-HOLE CU CABLE CONNECTOR
#6 TO #2 (DOUBLE LUGS)
#1 TO #4/0 (SINGLE LUGS ONLY)

⑥ 50.8mm (2") WIDE, 6.35mm (1/4") DEEP COPPER BUS BAR.

⑦ LENGTH AS REQUIRED BY NUMBER OF CONDUCTOR CONNECTIONS OR AS SPECIFICALLY INDICATED ON DRAWINGS. PROVIDE INTERMEDIATE WALL SUPPORTS AS REQUIRED. SUPPORT 609.6mm (24") ON CENTER (MAX).

⑧ TYP CU GRD CONDUCTOR CONNECTION

⑨ DESCRIPTION TAG. STATE SIZE OF CONDUCTOR AND TO WHAT IT IS CONNECTED TO.

⑩ TYP GRD CONNECTION FROM BELOW. SEE APPLICABLE DETAILS FOR SLAB PENETRATIONS.

⑪ TYP GRD CONNECTION FROM ABOVE. SEE APPLICABLE DETAILS FOR RMC INSTALLATIONS.

⑫ INSULATED NON-CONDUCTIVE STANDOFF(S).

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MEF24005
FILE NAME:
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109 SAINT JOSEPH STREET
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Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
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TYPICAL GROUNDING DETAILS

SHEET ID
E-502

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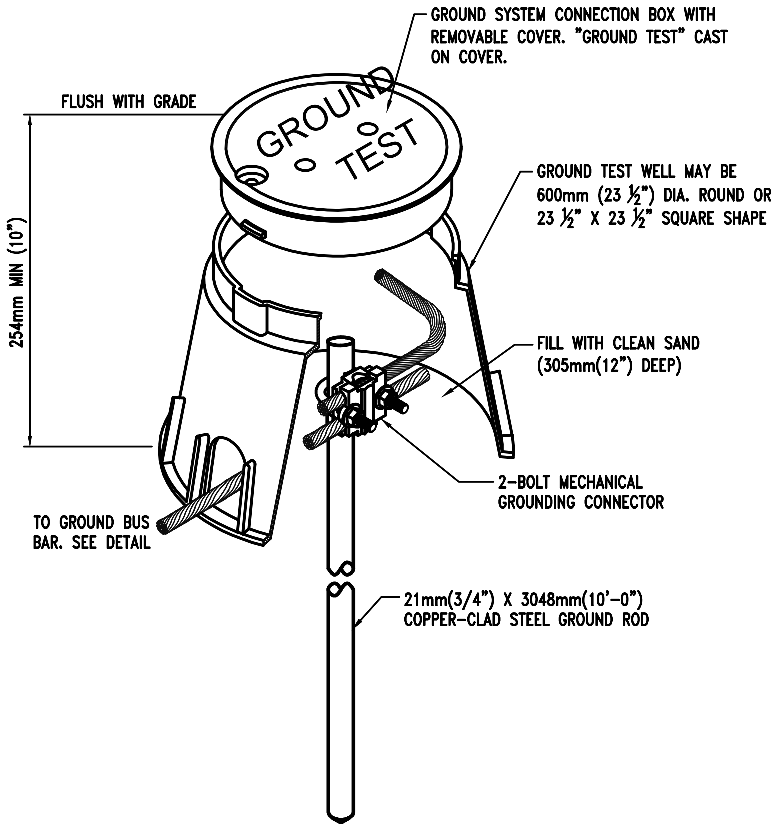
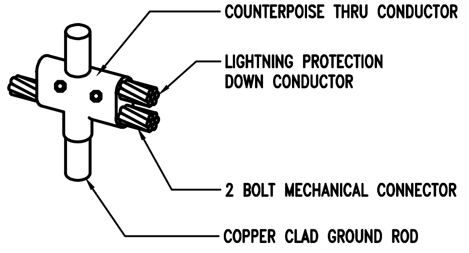
CESAM v20181203

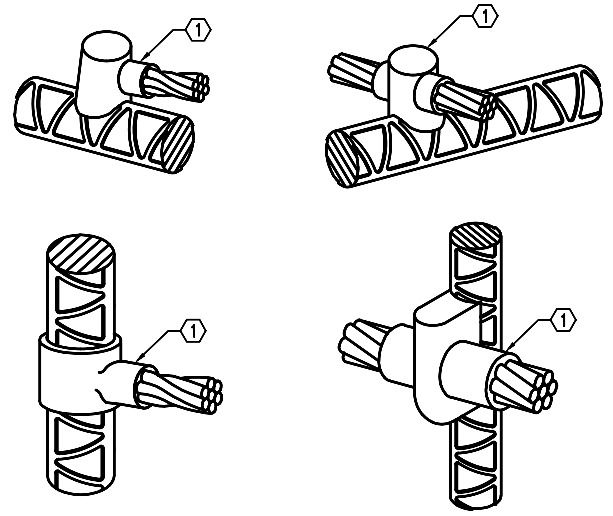

GROUND SYSTEM CONNECTION BOX WITH REMOVABLE COVER. "GROUND TEST" CAST ON COVER.
GROUND TEST
FLUSH WITH GRADE
254mm MIN (10")
GROUND TEST WELL MAY BE 600mm (23 ½") DIA. ROUND OR 23 ½" X 23 ½" SQUARE SHAPE
FILL WITH CLEAN SAND (305mm(12") DEEP)
2-BOLT MECHANICAL GROUNDING CONNECTOR
TO GROUND BUS BAR. SEE DETAIL
21mm(3/4") X 3048mm(10'-0") COPPER-CLAD STEEL GROUND ROD

INSPECTION HANDHOLE/GROUND WELL SYSTEM TEST AND SPLICE POINT DETAIL


COUNTERPOISE THRU CONDUCTOR
LIGHTNING PROTECTION DOWN CONDUCTOR
2 BOLT MECHANICAL CONNECTOR
COPPER CLAD GROUND ROD

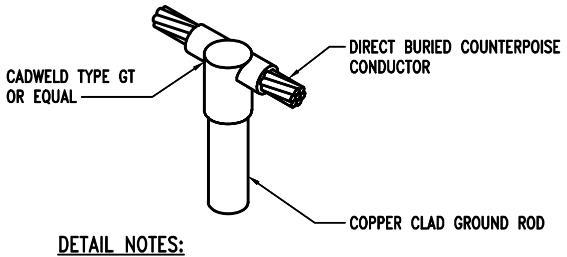
DETAIL NOTES:
1. THRU AND TAP CONDUCTOR TO TOP OF A GROUND ROD. THE ROD END CAN BE EITHER PLAIN OR THREADED USE 2 BOLT CONNECTOR FOR GROUND RODS AT TEST WELLS

THREE CONDUCTOR TO ROD DETAIL (TYP)



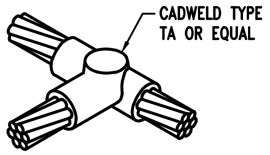
REBAR CONNECTIONS

GENERAL REBAR GROUNDING DETAILS

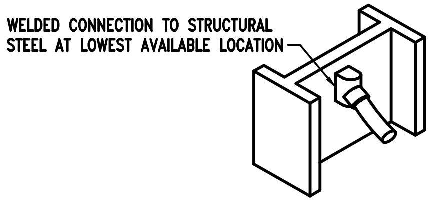


DETAIL NOTES:
1. THE ROD END CAN BE EITHER PLAIN OR THREADED.
2. CAN BE USED AS A DEAD END BY LETTING THE CONDUCTOR EXTEND ENOUGH PAST THE ROD TO EXIT THE MOLD ON THAT SIDE.

CONDUCTOR TO ROD DETAIL (TYP)



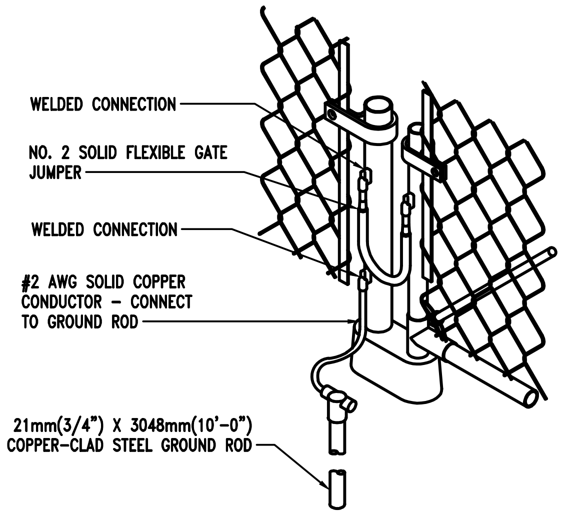
GROUND CONDUCTOR TAP DETAIL (TYP)


WELDED CONNECTION TO STRUCTURAL STEEL AT LOWEST AVAILABLE LOCATION

GENERAL STRUCTURAL STEEL GROUNDING DETAIL

GENERAL GROUNDING CONNECTION DETAILS

NO SCALE


WELDED CONNECTION
NO. 2 SOLID FLEXIBLE GATE JUMPER
WELDED CONNECTION
#2 AWG SOLID COPPER CONDUCTOR - CONNECT TO GROUND ROD
21mm(3/4") X 3048mm(10'-0") COPPER-CLAD STEEL GROUND ROD

FENCE & GATE GROUNDING DETAIL "FG"

SHEET NOTES

1. SEE SHEET NOTES ON E501.
2. DIMENSIONS INDICATED ON THIS SHEET ARE TYPICAL. PROVIDE MANUFACTURER'S STANDARD.

KEYED NOTES

⟨1⟩ ALL WELDS TO BE EXOTHERMIC TYPE. MAKE ALL CONNECTIONS AS CLOSE TO THE END OF REBAR AS POSSIBLE.

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

GENERAL GROUNDING
CONNECTION DETAILS

SHEET ID
E-503

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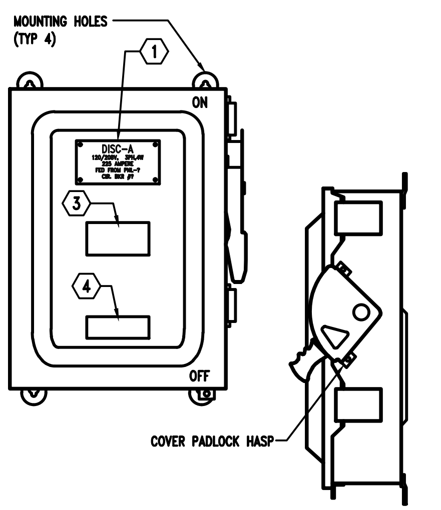
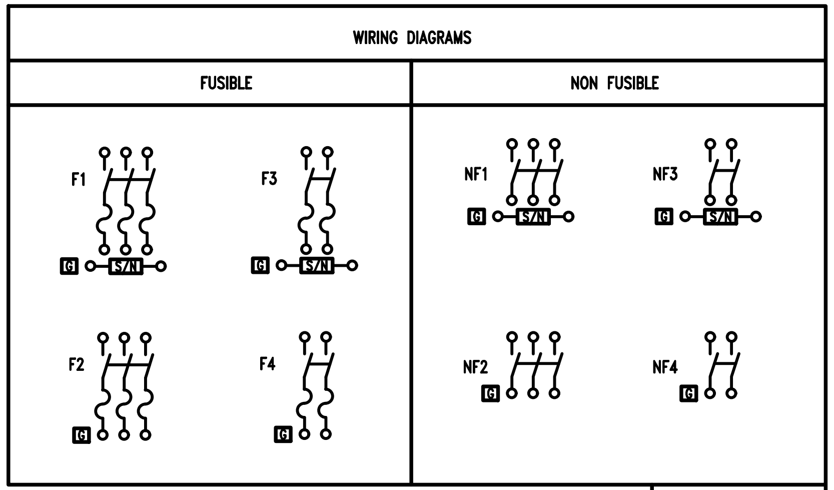
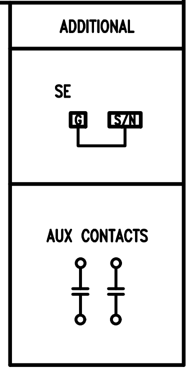


NOTE: SIDE HINGED DOOR

TYPICAL SMALL DISCONNECT
NO SCALE (TYP)



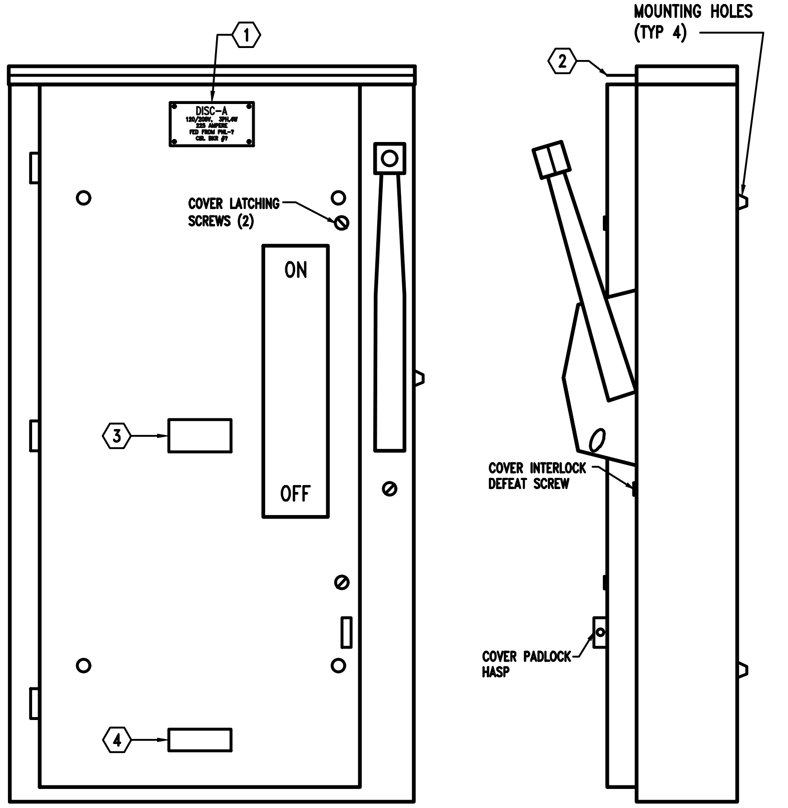


WIRING:

F1 – 3-POLE FUSIBLE WITH A SOLID NEUTRAL AND GROUND LUG
F2 – 3-POLE FUSIBLE AND GROUND LUG
F3 – 2-POLE FUSIBLE WITH A SOLID NEUTRAL AND GROUND LUG
F4 – 2-POLE FUSIBLE AND GROUND LUG

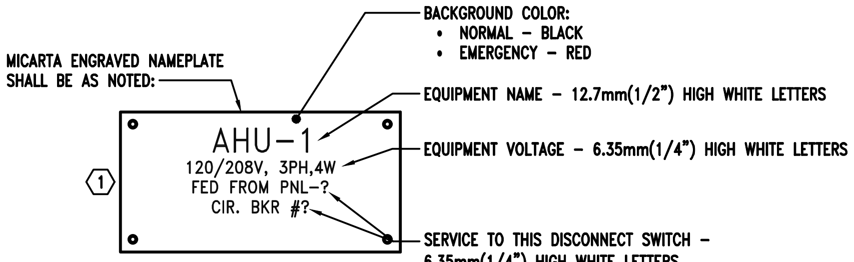
NF1 – 3-POLE NON-FUSIBLE WITH A SOLID NEUTRAL AND GROUND LUG
NF2 – 3-POLE NON-FUSIBLE AND GROUND LUG
NF3 – 2-POLE NON-FUSIBLE WITH A SOLID NEUTRAL AND GROUND LUG
NF4 – 2-POLE NON-FUSIBLE AND GROUND LUG

SE – DISCONNECT TYPE NOTED, ULSE RATED WITH NEUTRAL-GROUND BOND



NOTE: SIDE HINGED DOOR

TYPICAL LARGE DISCONNECT
NO SCALE (TYP)


MICARTA ENGRAVED NAMEPLATE SHALL BE AS NOTED:
BACKGROUND COLOR:
• NORMAL – BLACK
• EMERGENCY – RED
EQUIPMENT NAME – 12.7mm(1/2") HIGH WHITE LETTERS
EQUIPMENT VOLTAGE – 6.35mm(1/4") HIGH WHITE LETTERS
SERVICE TO THIS DISCONNECT SWITCH – 6.35mm(1/4") HIGH WHITE LETTERS
AHU-1
120/208V, 3PH,4W
FED FROM PNL-?
CIR. BKR #?
1

TYP. DISCONNECT SWITCH NAMEPLATE
NO SCALE (TYP)

SHEET NOTES

1. DISCONNECT SWITCH & DISCONNECT SWITCH INSTALLATION TO BE IN ACCORDANCE WITH NFPA 70, CURRENT NEC. ALL DISCONNECT SWITCHES SHALL BE HEAVY- DUTY TYPE, HORSEPOWER- RATED UL LISTED AND INSTALLED IN ACCORDANCE WITH THIS LISTING AND FULLY SUPPORTED BY MEANS DESIGNED FOR THAT LISTED INSTALLATION. ALL CLEARANCES REQUIRED BY CODE SHALL BE MAINTAINED AS A MINIMUM.
2. EACH DISCONNECT SWITCH SHALL BE FURNISHED COMPLETE WITH THE PROPERLY SIZED ENCLOSURE, INTERNAL HARDWARE, DEVICES, COMPONENTS, SUPPORTING STRUCTURES, ETC., FOR A COMPLETE INSTALLATION TO PROVIDE THE DESIGNED PERFORMANCE UNDER THE AMBIENT CONDITIONS ENCOUNTERED. ALL DEVICES, COMPONENTS, FITTINGS, SUPPORTS, ETC., SHALL BE COORDINATED TO PROVIDE A COMPLETE UL LISTED INSTALLATION. ALL DEVICES INSTALLED SHALL HAVE AN INTERRUPTING RATING GREATER THAN OR EQUAL TO THE SPECIFIED SCCR. AS A MINIMUM THE FOLLOWING SHALL BE PROVIDED:
   * SIDE HINGED DOORS.
   * LOCKABLE IN THE OFF POSITION
3. EACH DISCONNECT SWITCH SHALL BE FURNISHED WITH GROUND LUGS BONDED TO THE DISCONNECT ENCLOSURE. THIS GROUND LUG SHALL BE UTILIZED TO BOND ALL GROUNDING PROVISIONS IN ORDER TO ESTABLISH EQUAL POTENTIAL TO ALL GROUNDED COMPONENTS OF THE POWER SYSTEM NETWORK.
4. EACH DISCONNECT SWITCH SHALL BE FURNISHED WITH SOLID NEUTRAL LUGS ISOLATED FROM THE DISCONNECT ENCLOSURE. WHEN NOTED "SN" OR WHEN CIRCUIT CONTAINS A NEUTRAL CONDUCTOR.
5. EACH DISCONNECT SWITCH SHALL BE SPECIFICALLY RATED AND INSTALLED FOR THE PROTECTION AND/OR DISCONNECT MEANS NOTED.
   * AIC- 200,000 AMPERES
   * 250 VOLT- 240 VOLT SYSTEM AND BELOW
   * 600 VOLT- 480 VOLT SYSTEM AND BELOW
   * PROVIDE WITH CURRENT LIMITING REJECTION KITS WHEN CURRENT LIMITED FUSES ARE INSTALLED
6. PROVIDE THE PROPERLY SIZED CONDUCTOR TERMINATION POINTS OR LUGS (MULTIPLE LUGS WHEN PARALLEL FEEDERS ARE USED) FOR THE NUMBER AND SIZE CIRCUITS INDICATED.
7. CONDUCTORS, SPLICES AND TERMINATIONS SHALL BE ACCESSIBLE. ONLY CONDUCTORS RATED AND SIZED FOR THE TEMPERATURE OF THE TERMINATION SHALL BE USED.
8. DISCONNECT SWITCHES SHALL NOT BE INSTALLED IN CONTACT WITH COMBUSTIBLE MATERIALS. ADEQUATE SPACE FOR AIR CIRCULATION AND CODE COMPLIANCE SHALL BE PROVIDED AS A MINIMUM. FURNISH SPACERS, WASHERS, SUPPORT DEVICES, ETC., AS REQUIRED TO MAINTAIN PROPER CLEARANCES. EXTERIOR DISCONNECT SWITCHES SHALL CONTAIN AT LEAST 15MM(0.6") OF AIR SPACE BETWEEN THE CABINET AND SURFACE.
9. PROVIDE ARC-FLASH HAZARD WARNING SIGNS PER NFPA 70 & 70E.
   * REFER TO ANSI Z535.4
   * LOCATE ON FRONT OF DOOR.
10. AUXILIARY CONTACTS SHALL BE PROVIDED WHEN NOTED AND/OR AS REQUIRED TO PERFORM THE SPECIFIED FUNCTIONS.

KEYED NOTES

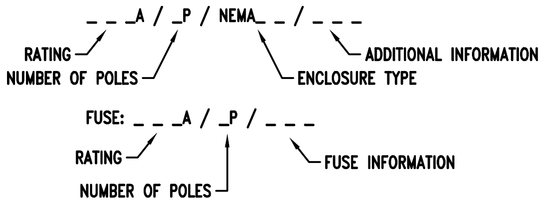
① FIELD INSTALLED NAMEPLATE. SEE TYPICAL DISCONNECT SWITCH NAMEPLATE DETAIL (THIS SHEET) FOR ADDITIONAL INFORMATION.

② DRIP HOOD – WEATHERPROOF TYPE(S) ONLY.

③ PROVIDE ARC-FLASH WARNING LABEL PER NFPA 70 & 70E.
- REFER TO ANSI Z535.4
- LOCATE ON FRONT OF DOOR

④ DISCONNECT SWITCH MANUFACTURER'S IDENTIFICATION PLATE & UL LABEL.

NAMING LEGEND



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY:
KLH/JDW
DRAWN BY:
EWH
CHECKED BY:
KLH/JDW
SUBMITTED BY:
-
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005E-504.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

TYPICAL DISCONNECT
SWITCH DETAILS

SHEET ID
E-504

RTA SUBMITTAL

IN EACH PHASE CONNECT TO TAPS	
PRIMARY VOLTS	2-2.5% FCAN 4-2.5% FCBN
504	1
492	2
480	3
468	4
456	5
444	6
432	7

TAP SETTING NOTE:
THE CONTRACTOR SHALL SET TAPS AT THE PROPER SETTING TO COMPENSATE FOR VOLTAGE VARIATIONS DUE TO LOAD CONDITIONS.

TRANSFORMER SCHEDULE

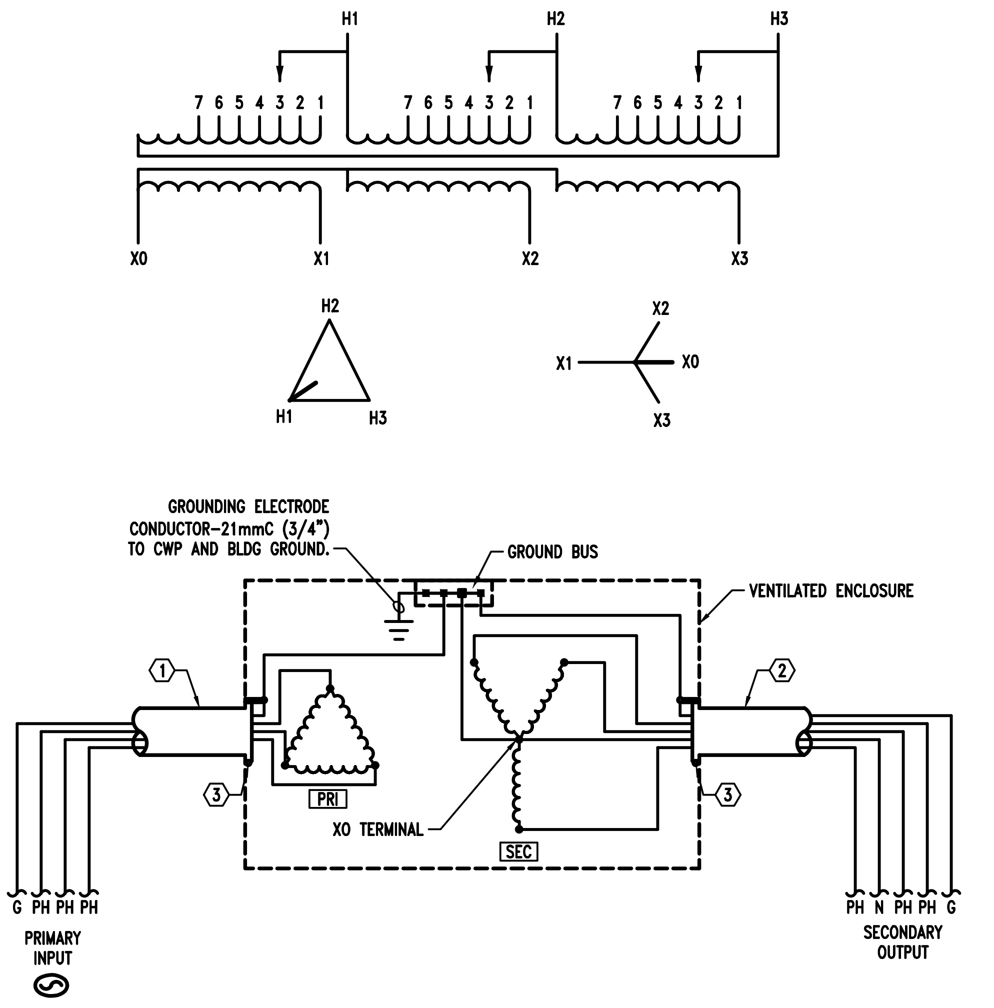
MARK	KVA	PRI VOLTAGE	SECONDARY VOLTAGE	Z	MTG	K-FACTOR
TX-LP	112.5	480V-DELTA	208Y/120V-WYE	5.7	WALL	4

HOUSEKEEPING PAD NOTES

1. INSTALL RAISED HOUSEKEEPING PAD 100mm (4") MIN. HIGH.
2. PROVIDE REINFORCEMENT WITH A 150mmX150mm (6"X6") NO. 6 MESH PLACED UNIFORMLY 50.8mm (2") FROM TOP.
3. PROVIDE A 12.5mm (1/2") CHAMFER ALL AROUND.
4. INCREASE EDGE DIMENSIONS ON WALL SIDE FOR VENTILATION CLEARANCE REQUIREMENTS.

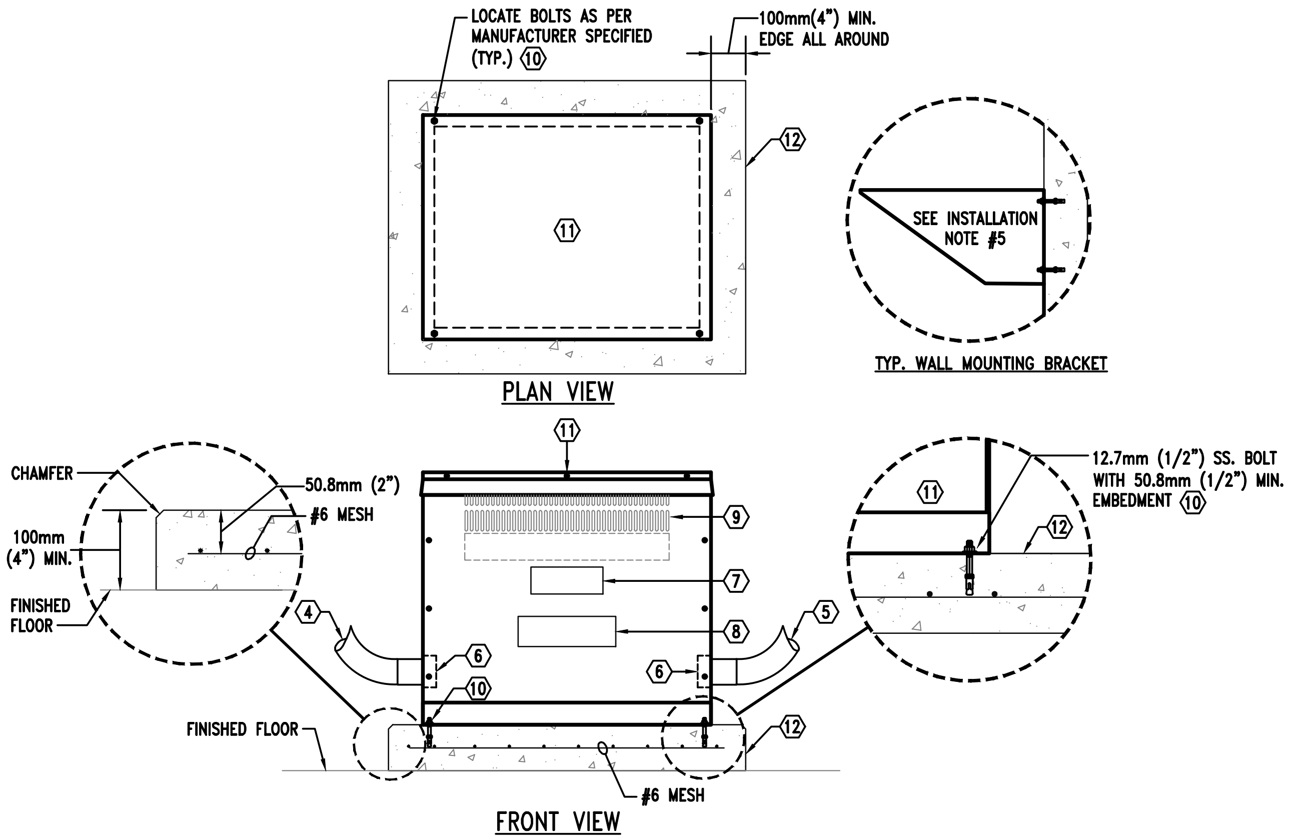
TRANSFORMER INSTALLATION NOTES

1. SIZE ALL SUPPORTS. ANCHOR SYSTEMS, BOLTS, ETC., AS REQUIRED FOR A SECURE INSTALLATION IN ACCORDANCE WITH THE SPECIFICATIONS.
2. EACH TRANSFORMER SHALL BE PROVIDED WITH VIBRATION ISOLATION. PROVIDE ADDITIONAL SPECIAL VIBRATION OR ISOLATION PADS (FLEXIBLE MOUNTS OR VIBRATION DAMPENERS WHEN INSTALLED TO A WALL, STRUCTURAL CEILING OR COLUMN.)
3. SEE TRANSFORMER SCHEDULE FOR MOUNTING REQUIREMENTS.
4. ALL FLOOR MOUNTED UNITS SHALL BE INSTALLED ON A RAISED CONCRETE HOUSEKEEPING PAD. COORDINATE WITH STRUCTURAL SLAB DRAWINGS.
5. ALL WALL OR CEILING SUSPENDED UNITS SHALL BE PROVIDED WITH ACCESSORIES FROM THE MANUFACTURER SPECIFICALLY FOR THAT PURPOSE.
   *MAX SIZE 30KVA



A DETAIL - TYPICAL THREE-PHASE DRY TYPE TRANSFORMER CONNECTIONS

NO SCALE



LOCATE BOLTS AS PER MANUFACTURER SPECIFIED (TYP.) 10
100mm(4") MIN. EDGE ALL AROUND
12
11
PLAN VIEW
SEE INSTALLATION NOTE #5
TYP. WALL MOUNTING BRACKET
CHAMFER
50.8mm (2")
#6 MESH
100mm (4") MIN.
FINISHED FLOOR
11
9
7
8
4
5
6
6
10
12
FINISHED FLOOR
#6 MESH
11
12.7mm (1/2") SS. BOLT WITH 50.8mm (1/2") MIN. EMBEDMENT 10
12
FRONT VIEW

B DETAIL - TYPICAL INSTALLATION OF 3-PHASE DRY TYPE TRANSFORMER

NO SCALE

SHEET NOTES

1. DRY-TYPE TRANSFORMERS SHALL CONSIST OF BUT NOT BE LIMITED TO THE FOLLOWING:
   a. VENTILATED ENCLOSURE
   b. PRIMARY SECTION
   c. SECONDARY SECTION
   d. OVERCURRENT PROTECTION
2. INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AND THE NATIONAL ELECTRICAL SAFETY CODE (NESC).
3. ALL CONDUCTIVE PARTS OF EQUIPMENT, ENCLOSURES, FRAMES, ETC., SHALL BE GROUNDED.
4. ALL CLEARANCES SHALL BE MAINTAINED PER NESC AND NEC. ALL PARTS, DEVICES, EQUIPMENT, ETC. WHICH REQUIRE MAINTENANCE, ADJUSTMENT, OPERATION OR EXAMINATION DURING NORMAL NETWORK OPERATION SHALL BE ARRANGED SO AS TO BE ACCESSIBLE BY THE PROVISION OF ADEQUATE WORKING SPACES, WORKING FACILITIES AND CLEARANCES. UNLESS NOTED OTHERWISE ALL CLEARANCES ARE MEASURED FROM SURFACE TO SURFACE.
5. ALL DIMENSIONS INDICATED IN THESE DOCUMENTS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS IN THE FIELD.
6. TRANSFORMERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE DETAILS, ACCESSIBLE WITH MECHANICAL PROTECTION, VENTILATED ENCLOSURES AND WITHIN A SPACE TO PROVIDE VENTILATION TO DISPOSE OF THE TRANSFORMER FULL LOAD LOSSES. EACH TRANSFORMER SHALL CONTAIN A NAMEPLATE IN ACCORDANCE WITH NEC AND THE CONTRACTOR SHALL INSURE THAT ALL SPECIAL PRECAUTIONS ARE MET SUCH AS PROPER CLEARANCES FOR VENTILATION, OVERCURRENT PROTECTION, ETC.
7. TRANSFORMERS UTILIZED FOR NON-LINEAR LOADS SHALL BE UL LISTED FOR THAT PURPOSE, THE ISOLATION TYPE AND K-FACTOR RATED WITH THE FOLLOWING FEATURES:
   * ELECTROSTATIC SHIELDING
   * DOUBLE SIZE NEUTRAL TERMINALS
   * ADDITIONAL COIL CAPACITY
   * REDUCED CORE FLUX
   * 115° C TEMPERATURE RISE

KEYED NOTES

① LIQUID-TIGHT FLEXIBLE METAL CONDUIT AND FITTINGS PRIMARY CONDUIT SYSTEM
② LIQUID-TIGHT FLEXIBLE METAL CONDUIT AND FITTINGS SECONDARY CONDUIT SYSTEM
③ GROUNDING BUSHING
④ LIQUID-TIGHT FLEXIBLE METAL CONDUIT AND FITTINGS PRIMARY CONNECTION - SEE SLD
⑤ LIQUID-TIGHT FLEXIBLE METAL CONDUIT AND FITTINGS SECONDARY CONNECTION - SEE SLD
⑥ GROUND BUSSING TERMINATIONS
⑦ NAMEPLATE
⑧ TRANSFORMER IDENTIFICATION PLATE
⑨ VENTED COVER
⑩ ATTACH TO CONCRETE SLAB
⑪ TYPICAL FLOOR MOUNTED DRY TYPE TRANSFORMER
⑫ RAISED HOUSEKEEPING PAD

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
DESIGNED BY: KLH/JDW
DRAWN BY: EWH
CHECKED BY: KLH/JDW
SUBMITTED BY: -
SIZE: ANSI D
FILE NAME: MEF24005E-505.dwg

U.S. ARMY CORPS OF ENGINEERS
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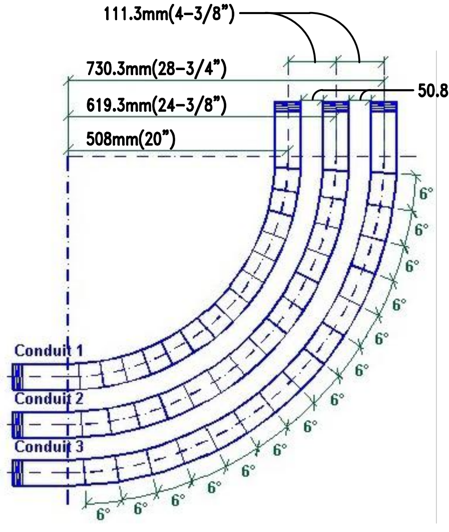
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

DRY TYPE TRANSFORMER
DETAILS AND SCHEDULES

SHEET ID
E-505

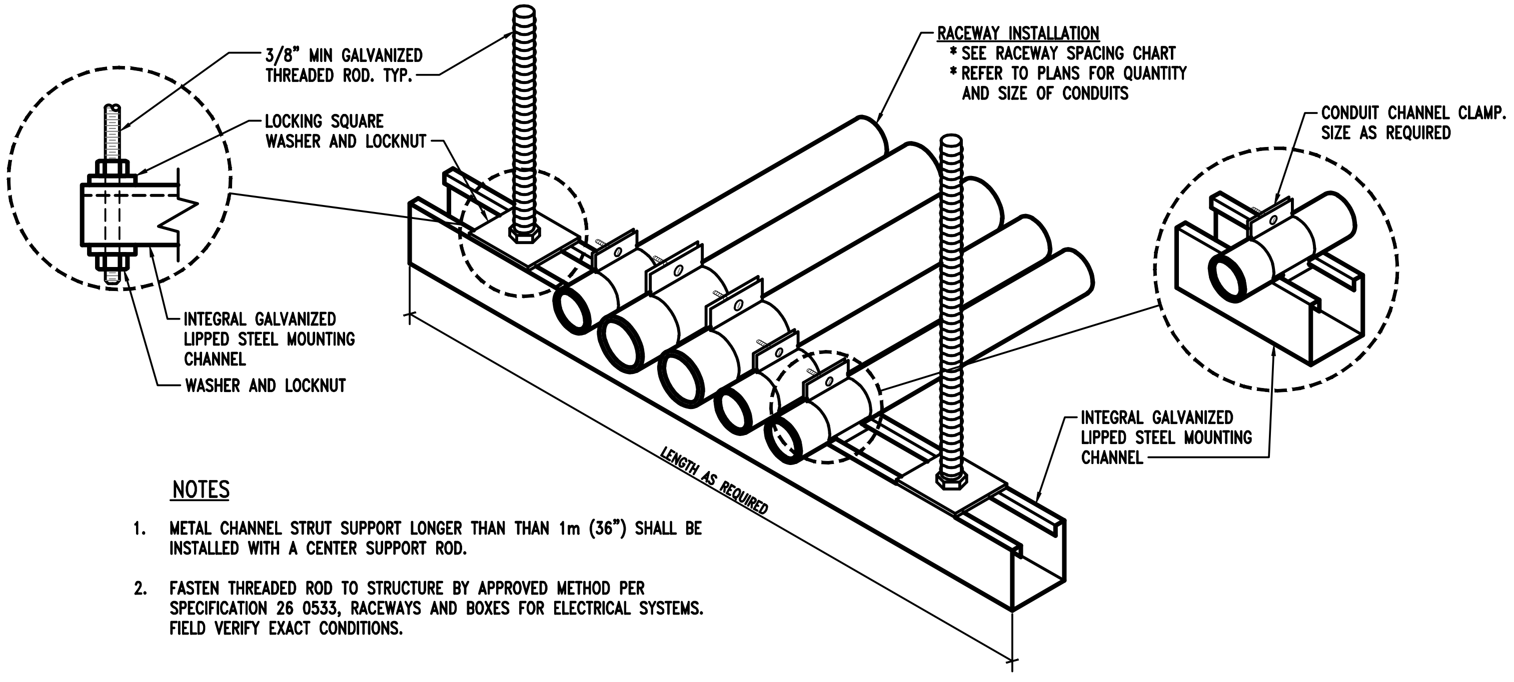
RTA SUBMITTAL



DETAIL - TYPICAL CONCENTRIC CONDUIT BENDING REQUIREMENTS

A

NO SCALE


3/8" MIN GALVANIZED THREADED ROD. TYP.
LOCKING SQUARE WASHER AND LOCKNUT
INTEGRAL GALVANIZED LIPPED STEEL MOUNTING CHANNEL
WASHER AND LOCKNUT
RACEWAY INSTALLATION
* SEE RACEWAY SPACING CHART
* REFER TO PLANS FOR QUANTITY AND SIZE OF CONDUITS
CONDUIT CHANNEL CLAMP. SIZE AS REQUIRED
INTEGRAL GALVANIZED LIPPED STEEL MOUNTING CHANNEL
LENGTH AS REQUIRED

NOTES

1. METAL CHANNEL STRUT SUPPORT LONGER THAN THAN 1m (36") SHALL BE INSTALLED WITH A CENTER SUPPORT ROD.
2. FASTEN THREADED ROD TO STRUCTURE BY APPROVED METHOD PER SPECIFICATION 26 0533, RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS. FIELD VERIFY EXACT CONDITIONS.

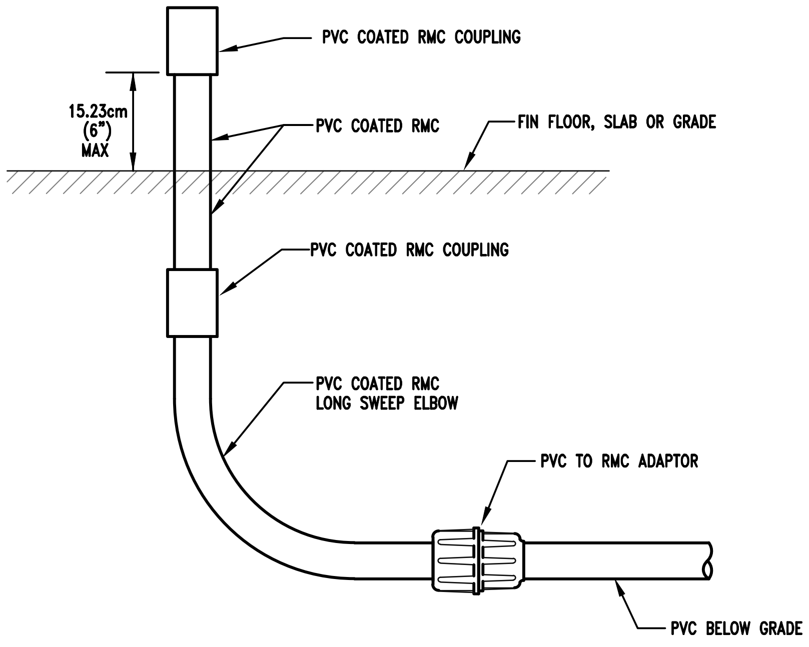
DETAIL - TYPICAL RACEWAY/CONDUIT TRAPEZE SUPPORT SYSTEM

B

NO SCALE

SHEET NOTES

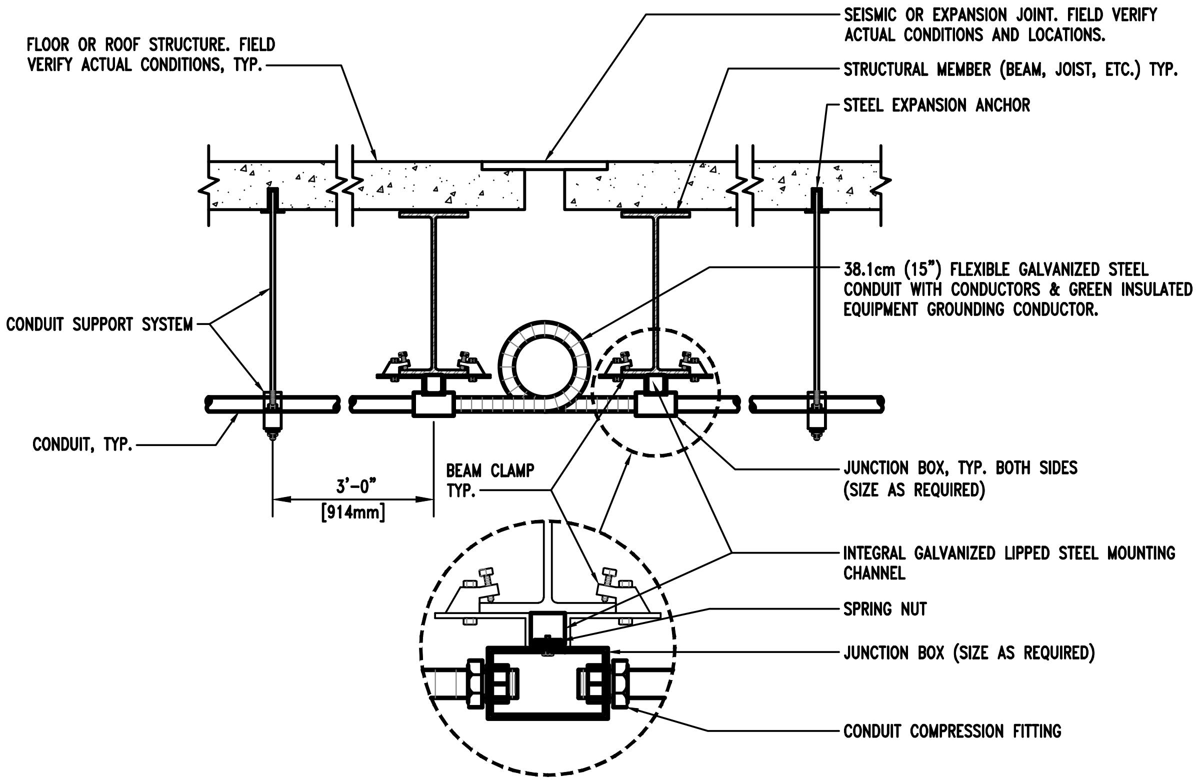
1. ALL RACEWAY/CONDUIT INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE NEC AND UL LISTED REQUIREMENTS. MAINTAIN MINIMUM SPACING REQUIREMENTS PER NEC FOR SUPPORTS, BOX AND/OR CABINET ENTRY, PROPER LOCKNUT/BUSHING INSTALLATION AND CABLE PULLING REQUIREMENTS. ALL RACEWAY/CONDUIT SYSTEMS SHALL BE CUT, REAMED AND THREADED AS REQUIRED TO PROVIDE A SMOOTH CABLE TRANSITION AND MAINTAIN A GROUNDED PATH.
2. RACEWAYS SHALL BE FIRMLY AND SECURELY FASTENED TO OR SUPPORTED FROM THE BUILDING STRUCTURE OR A STRUCTURAL MEMBER OR EMBEDDED IN CONCRETE OR MASONRY. PROVIDE THE PROPER OFF-SETS AND BENDS IN CONDUIT SYSTEMS WITH CARE, WITHOUT REDUCING THE INSIDE DIAMETER OF THE CONDUIT INSTALLATION. PROVIDE SYMMETRICAL BENDS, PULL BOXES AND/OR CAST-METAL FITTINGS IN CONDUIT RUNS, IN ORDER NOT TO EXCEED THE TOTAL BENDS IN DEGREES AS PER THE NEC.
3. HANGERS AND SUPPORTS SHALL BE OF A TYPE COMPATIBLE WITH AND SUITABLE FOR THE INTENDED USE. THEY MAY BE UL LISTED STANDARD MANUFACTURED ITEMS OR JOB FABRICATED. CONSIDERATION MUST BE GIVEN TO THE WEIGHT OF THE ENCLOSED CONDUCTORS WHEN SELECTING SUPPORTS AND FASTENING MEANS.
4. EXPOSED RACEWAYS SHALL BE RUN PARALLEL AND PERPENDICULAR TO THE BUILDING SURFACE OR EXPOSED STRUCTURAL MEMBERS AND FOLLOW THE SURFACE CONTOURS AS MUCH AS PRACTICAL TO PRESENT A NEAT APPEARANCE. USE CONCENTRIC BENDS IN MULTIPLE, BANKED OR PARALLEL RUNS. SEE DETAIL THIS SHEET.
5. CONDUITS OR RACEWAYS THROUGH WHICH MOISTURE MAY CONTACT LIVE PARTS SHALL BE SEALED OR PLUGGED AT BOTH ENDS, THIS INCLUDES ALL CONDUIT ENTERING THE FACILITY FROM THE EXTERIOR, SPARE OR UNUSED RACEWAYS SHALL BE SEALED. SEALANTS SHALL BE IDENTIFIED FOR USE WITH THE CABLE INSULATION, CONDUCTOR INSULATION, BARE CONDUCTOR, SHIELD AND/OR OTHER COMPONENTS.
6. RACEWAYS, BOXES, CABINETS, ELBOWS, COUPLINGS, FITTINGS, CONDUIT BODY, SUPPORTS, AND SUPPORT HARDWARE SHALL BE OF MATERIALS SUITABLE FOR THE ENVIRONMENT IN WHICH THEY ARE TO BE INSTALLED.
7. WHERE PORTIONS OF A RACEWAY OR SLEEVE ARE SUBJECTED TO DIFFERENT TEMPERATURES, AND WHERE CONDENSATION COULD BE PRODUCED, AS IN COLD STORAGE AREAS OF BUILDINGS OR WHERE PASSING FROM THE INTERIOR TO THE EXTERIOR OF A BUILDING, THE RACEWAY OR SLEEVE SHALL BE FILLED WITH AN APPROVED MATERIAL TO PREVENT THE CIRCULATION OF WARM AIR TO A COLDER SECTION OF THE RACEWAY OR SLEEVE.
8. RACEWAYS SHALL BE PROVIDED WITH EXPANSION, EXPANSION/DEFLECTION, OR DEFLECTION FITTINGS WHERE NECESSARY TO COMPENSATE FOR THERMAL EXPANSION, DEFLECTION, AND CONTRACTION. SEE APPLICABLE DETAILS FOR SPECIFIC BUILDING JOINT CROSSINGS.
9. CONDUCTORS RUN IN PARALLEL SHALL BE RUN IN RACEWAYS/CONDUITS OF RELATIVE SAME LENGTH AND RACEWAY MATERIALS.
10. SEE SPECIFICATIONS, UL LISTED ASSEMBLIES, CONDUIT PENETRATION DETAILS AND FOLLOW THE PROPERLY RATED ASSEMBLY, APPLICABLE TO THE INSTALLATION FOR CONDUITS PENETRATING WALLS, FLOORS, CEILINGS AND ROOFS.



DETAIL - TYPICAL CONDUIT TRANSITION FROM BELOW GRADE

C

NO SCALE


FLOOR OR ROOF STRUCTURE. FIELD VERIFY ACTUAL CONDITIONS, TYP.
SEISMIC OR EXPANSION JOINT. FIELD VERIFY ACTUAL CONDITIONS AND LOCATIONS.
STRUCTURAL MEMBER (BEAM, JOIST, ETC.) TYP.
STEEL EXPANSION ANCHOR
CONDUIT SUPPORT SYSTEM
38.1cm (15") FLEXIBLE GALVANIZED STEEL CONDUIT WITH CONDUCTORS & GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR.
CONDUIT, TYP.
3'-0" [914mm]
BEAM CLAMP TYP.
JUNCTION BOX, TYP. BOTH SIDES (SIZE AS REQUIRED)
INTEGRAL GALVANIZED LIPPED STEEL MOUNTING CHANNEL
SPRING NUT
JUNCTION BOX (SIZE AS REQUIRED)
CONDUIT COMPRESSION FITTING

DETAIL - TYPICAL RACEWAY/CONDUIT JOINT CROSSING

D

NO SCALE

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: KLH/JDW
DRAWN BY: EWH
CHECKED BY: KLH/JDW
SUBMITTED BY: -
SIZE: ANSI D
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
FILE NAME: MEF24005E-506.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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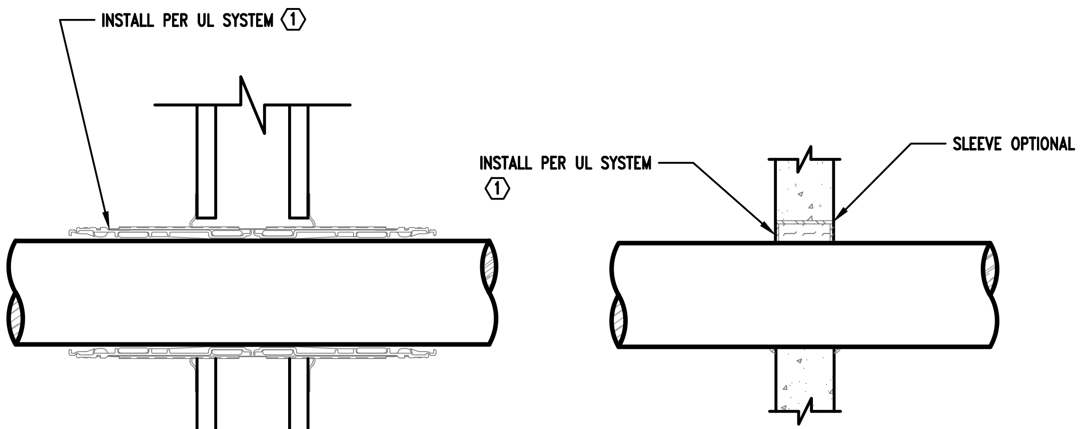
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

TYPICAL RACEWAY/CONDUIT
INSTALLATION DETAILS

SHEET ID
E-506

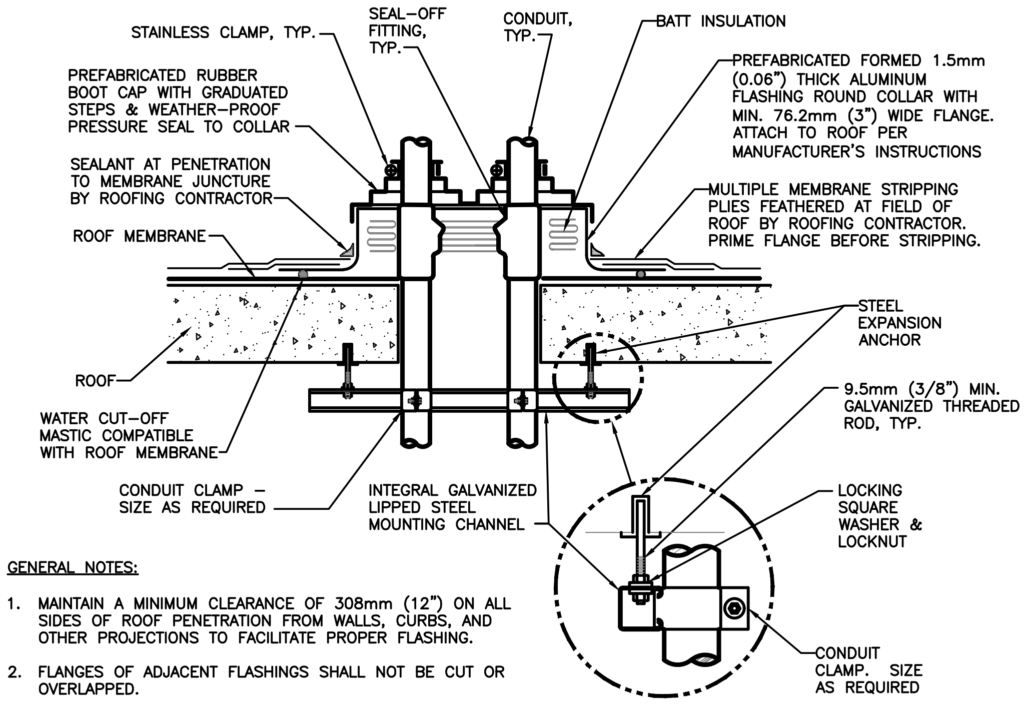
RTA SUBMITTAL



GYPSUM WALL

CONCRETE/BLOCK WALL

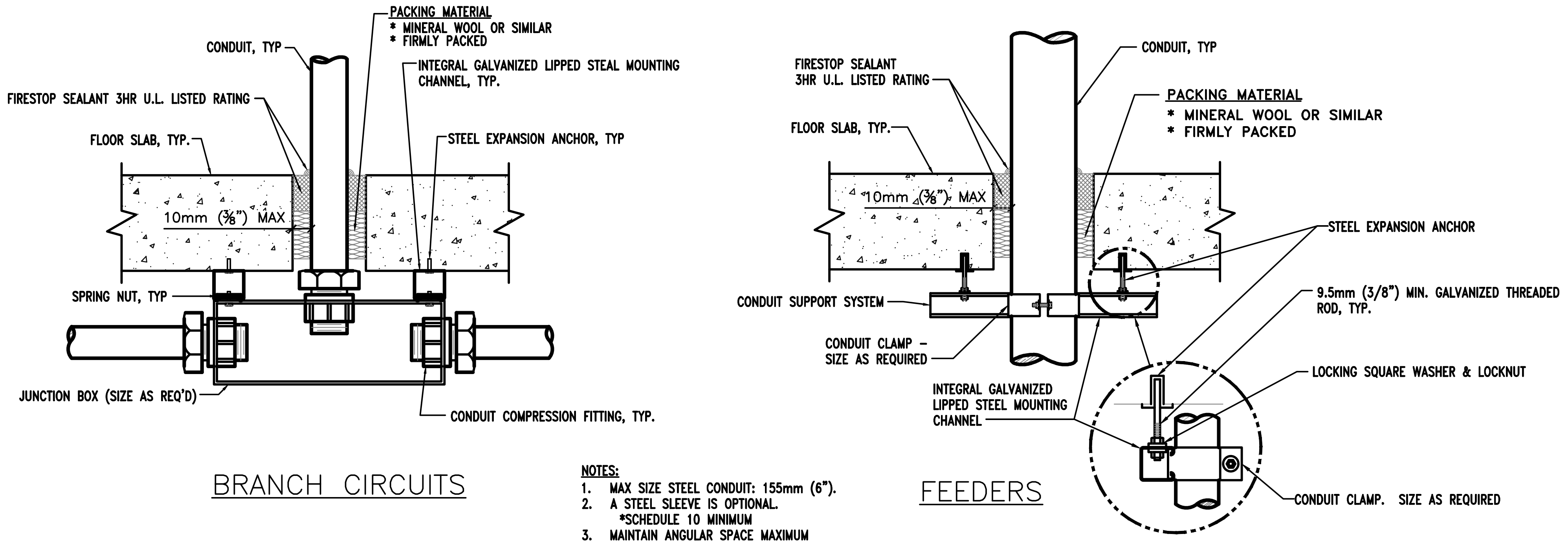
Ⓐ DETAIL - TYPICAL WALL PENETRATION
NTS


STAINLESS CLAMP, TYP.
SEAL-OFF FITTING, TYP.
CONDUIT, TYP.
BATT INSULATION
PREFABRICATED RUBBER BOOT CAP WITH GRADUATED STEPS & WEATHER-PROOF PRESSURE SEAL TO COLLAR
PREFABRICATED FORMED 1.5mm (0.06") THICK ALUMINUM FLASHING ROUND COLLAR WITH MIN. 76.2mm (3") WIDE FLANGE. ATTACH TO ROOF PER MANUFACTURER'S INSTRUCTIONS
SEALANT AT PENETRATION TO MEMBRANE JUNCTURE BY ROOFING CONTRACTOR
MULTIPLE MEMBRANE STRIPPING PLIES FEATHERED AT FIELD OF ROOF BY ROOFING CONTRACTOR. PRIME FLANGE BEFORE STRIPPING.
ROOF MEMBRANE
STEEL EXPANSION ANCHOR
ROOF
9.5mm (3/8") MIN. GALVANIZED THREADED ROD, TYP.
WATER CUT-OFF MASTIC COMPATIBLE WITH ROOF MEMBRANE
CONDUIT CLAMP - SIZE AS REQUIRED
INTEGRAL GALVANIZED LIPPED STEEL MOUNTING CHANNEL
LOCKING SQUARE WASHER & LOCKNUT
CONDUIT CLAMP. SIZE AS REQUIRED

GENERAL NOTES:

1. MAINTAIN A MINIMUM CLEARANCE OF 308mm (12") ON ALL SIDES OF ROOF PENETRATION FROM WALLS, CURBS, AND OTHER PROJECTIONS TO FACILITATE PROPER FLASHING.
2. FLANGES OF ADJACENT FLASHINGS SHALL NOT BE CUT OR OVERLAPPED.
3. VERIFY ROOF & STRUCTURAL SYSTEM WITH ARCHITECT.
4. COORDINATE FLASHING INSTALLATION WITH ROOFING CONTRACTOR TO ENSURE PROPER METHODS & MATERIALS ARE USED TO MAINTAIN ROOF WARRANTY.

Ⓑ DETAIL - TYPICAL ROOF PENETRATION
NTS


PACKING MATERIAL
* MINERAL WOOL OR SIMILAR
* FIRMLY PACKED
CONDUIT, TYP
INTEGRAL GALVANIZED LIPPED STEAL MOUNTING CHANNEL, TYP.
FIRESTOP SEALANT 3HR U.L. LISTED RATING
STEEL EXPANSION ANCHOR, TYP
FLOOR SLAB, TYP.
10mm (⅜") MAX
SPRING NUT, TYP
JUNCTION BOX (SIZE AS REQ'D)
CONDUIT COMPRESSION FITTING, TYP.
FIRESTOP SEALANT 3HR U.L. LISTED RATING
CONDUIT, TYP
PACKING MATERIAL
* MINERAL WOOL OR SIMILAR
* FIRMLY PACKED
FLOOR SLAB, TYP.
10mm (⅜") MAX
STEEL EXPANSION ANCHOR
CONDUIT SUPPORT SYSTEM
9.5mm (3/8") MIN. GALVANIZED THREADED ROD, TYP.
CONDUIT CLAMP - SIZE AS REQUIRED
LOCKING SQUARE WASHER & LOCKNUT
INTEGRAL GALVANIZED LIPPED STEEL MOUNTING CHANNEL
CONDUIT CLAMP. SIZE AS REQUIRED

BRANCH CIRCUITS

FEEDERS

NOTES:

1. MAX SIZE STEEL CONDUIT: 155mm (6").
2. A STEEL SLEEVE IS OPTIONAL.
   *SCHEDULE 10 MINIMUM
3. MAINTAIN ANGULAR SPACE MAXIMUM REQUIREMENTS PER LISTING.

Ⓒ DETAIL - TYPICAL ABOVE GRADE FLOOR SLAB PENETRATION
NTS

SHEET NOTES

1. ALL WALL, FLOOR, CEILING AND ROOF ASSEMBLIES SHALL BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, LIFE SAFETY, FIRE PROTECTION DRAWINGS AND SPECIFICATIONS.
2. CONDUIT PENETRATIONS OF NON-FIRE RATED ASSEMBLIES SHALL BE SEALED WITH A SEALANT TO PROVIDE A NON-LABELED SMOKE BARRIER TO MATCH THE ASSEMBLY.
   *SEAL WITH WALL PLUG OR GROUT.
3. ALL PENETRATIONS SHALL MATCH RATED ASSEMBLIES AS FOLLOWS:
   *WEATHERPROOF
   *1-4HR. RATING
   *SMOKE WALL
4. CONDUIT SPACING MAY BE AFFECTED BY THE RATED ASSEMBLY.
   *COORDINATE WITH MANUFACTURER
5. PENETRATION SHALL BE COORDINATED WITH THE TYPE OF MATERIALS.
   *CONCRETE
   *CONCRETE BLOCK
   *GYPSUM BOARD
6. NEW CONSTRUCTION SHALL REQUIRE COORDINATION PRIOR TO INSTALLATION.
7. IN ANY CASE THAT A PENETRATION GAP IS MORE THAN 51MM (2") AN APPROVED BACKING MATERIAL SHALL BE REQUIRED.
8. IN ANY CASE THAT A PENETRATION GAP IS MORE THAN 76MM (3") AN APPROVED COMPOSITE SHALL BE REQUIRED.
9. DETAILS SHOWN ARE TYPICAL DETAILS, CONTAINING GENERAL INFORMATION ONLY. ALWAYS REFER TO THE FULL UL SYSTEM DETAIL FOR COMPLETE SYSTEM REQUIREMENTS. IF FIELD CONDITIONS DO NOT MATCH REQUIREMENTS OF DETAILS, APPROVED ALTERNATE DETAILS SHALL BE UTILIZED. DESIGN REQUIREMENTS, FIELD CONDITIONS AND DIMENSIONS NEED TO BE VERIFIED FOR COMPLIANCE WITH THE DETAILS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   * FIRE RATING (F-RATING)
   * TEMPERATURE RATING (T-RATING)
   * LEAKAGE RATING (L-RATING)
   * WATER RATING (W-RATING)
   * ANNULAR SPACE
   * PERCENT FILL
   * MOVEMENT
   * TYPE AND THICKNESS OF FIRE-RATED CONSTRUCTION.
10. REFERENCES:
   * 2013 UNDERWRITER'S LABORATORIES FIRE RESISTANCE DIRECTORY, VOLUMES 1 & 2
   * NFPA 101 LIFE SAFETY CODE
   * NFPA 70 - NATIONAL ELECTRIC CODE
   * ALL GOVERNING LOCAL AND REGIONAL BUILDING CODES
11. FOR OUTLET BOXES REQUIRING PROTECTION, USE ONLY WALL OPENING PROTECTIVE MATERIALS, CATEGORY CLIV AS CLASSIFIED BY UNDERWRITER'S LABORATORIES, FIRE RESISTANCE DIRECTORY (VOLUME 1.)

KEYED NOTES

① TREAT ALL PENETRATIONS ACCORDING TO THE RATED ASSEMBLY. SEE SHEET NOTES 1, 2, 3 AND OTHER NOTES AS APPLICABLE FOR THE INSTALLATION.

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MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

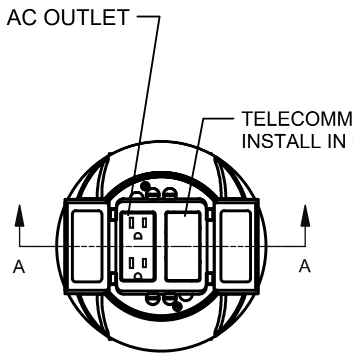
TYPICAL RACEWAY
PENETRATION DETAILS

SHEET ID
E-507

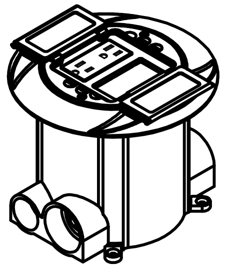
RTA SUBMITTAL

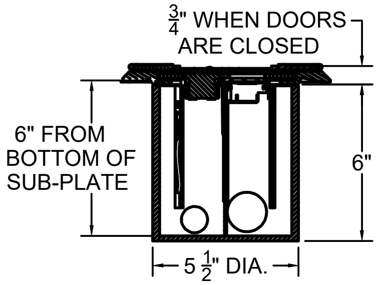
DETAIL NOTES

1. BRANCH CIRCUIT TO BE INSTALLED TO SERVE 120V DEVICE.
2. TELECOM CONDUIT TO RISE IN WALL AND TERMINATE AT CABLE TRAY.

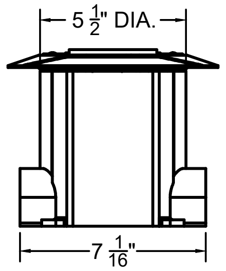

AC OUTLET
TELECOMMUNICATIONS OUTLET (CO) - BLANK COVER PLATE
INSTALL IN CONDUIT BACK TO PATCH PANEL
A
A

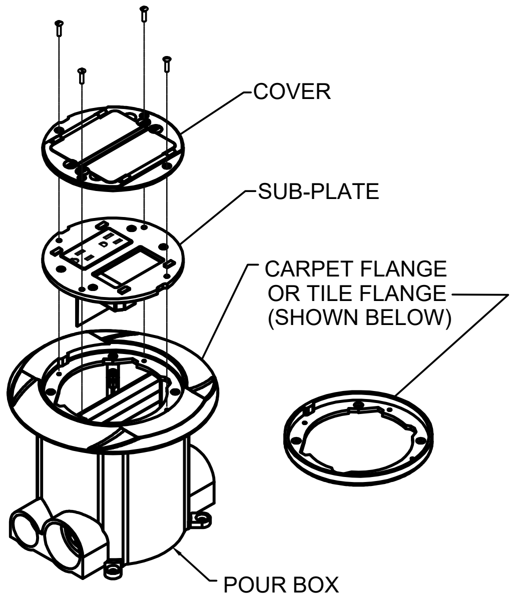
COVER DOOR SHOWN OPEN

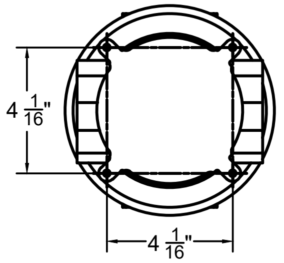




CUTAWAY A-A







BOTTOM OF PART
SHOWING MOUNTING HOLES

A
E-508

DETAIL - FLOOR BOX

NO SCALE

US Army Corps
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
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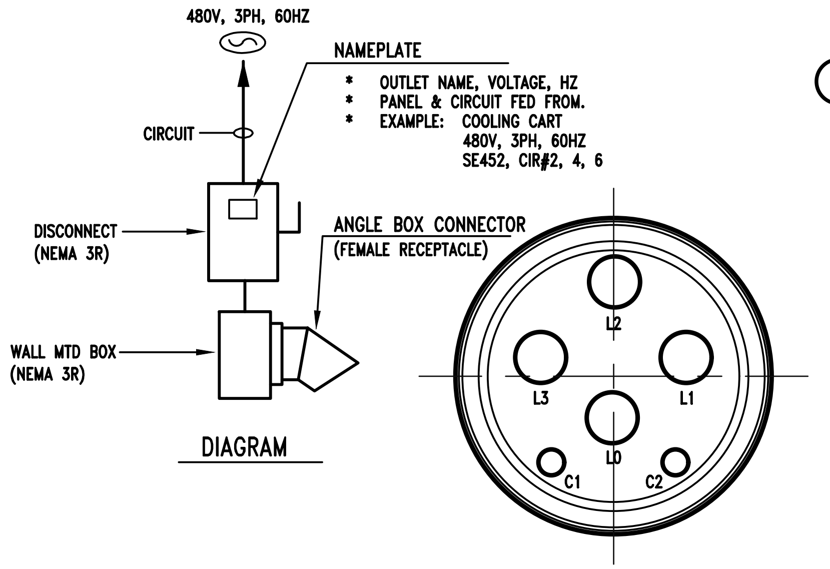
FLOOR BOX DETAILS

SHEET ID
E-508

RTA SUBMITTAL

CESAM v20181203



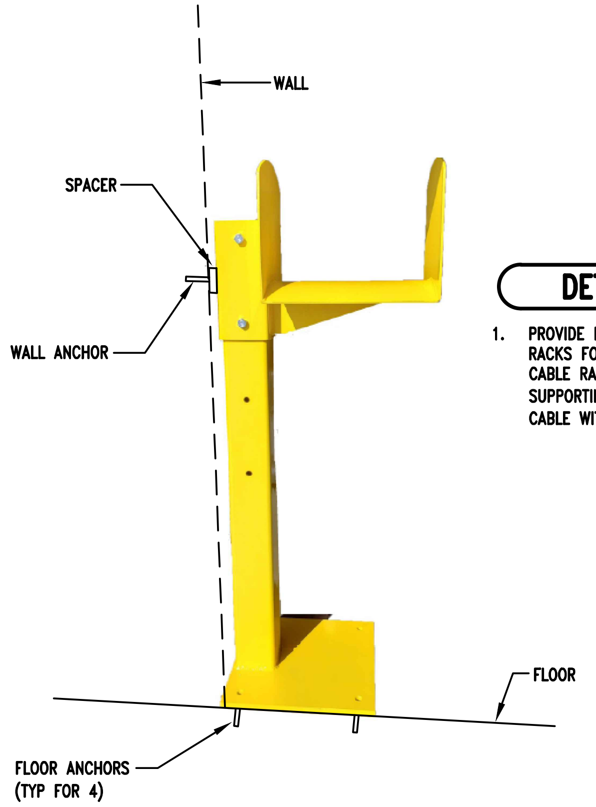
DETAIL 'A' NOTES

1. COOLING CART AND PRESSURIZED TESTER RECEPTACLES SHALL BE COMPATIBLE WITH MILITARY STANDARD MS27285 AND MATE WITH MS27265 PLUGS.
2. RECEPTACLES SHALL BE RATED AS FOLLOWS:
   - 480V, 200A, 3PH, 60HZ
   - GASKETED CAP
   - NEMA 3R
3. 28VDC CONTROL PINS SHALL BE PROVIDED BUT NOT BE USED IN THIS APPLICATION.
4. PROVIDE SURFACE MTD COMBINATION ANGLE BOX ASSEMBLIES/DISCONNECT SWITCH, NEMA 3R.

A E-509 AIRCRAFT GROUND SUPPORT EQUIPMENT RECEPTACLE DETAIL

NO SCALE

COOL AND PRES



DETAIL 'C' NOTES

1. PROVIDE HEAVY DUTY FLOOR-MOUNTED CABLE RACKS FOR AIRCRAFT POWER CABLES. POWER CABLE RACKS SHALL BE CAPABLE OF SUPPORTING AND RATED FOR 100' OF 260A CABLE WITH SCUFF JACKET (350lbs).

C E-509 AIRCRAFT POWER CABLE RACKS

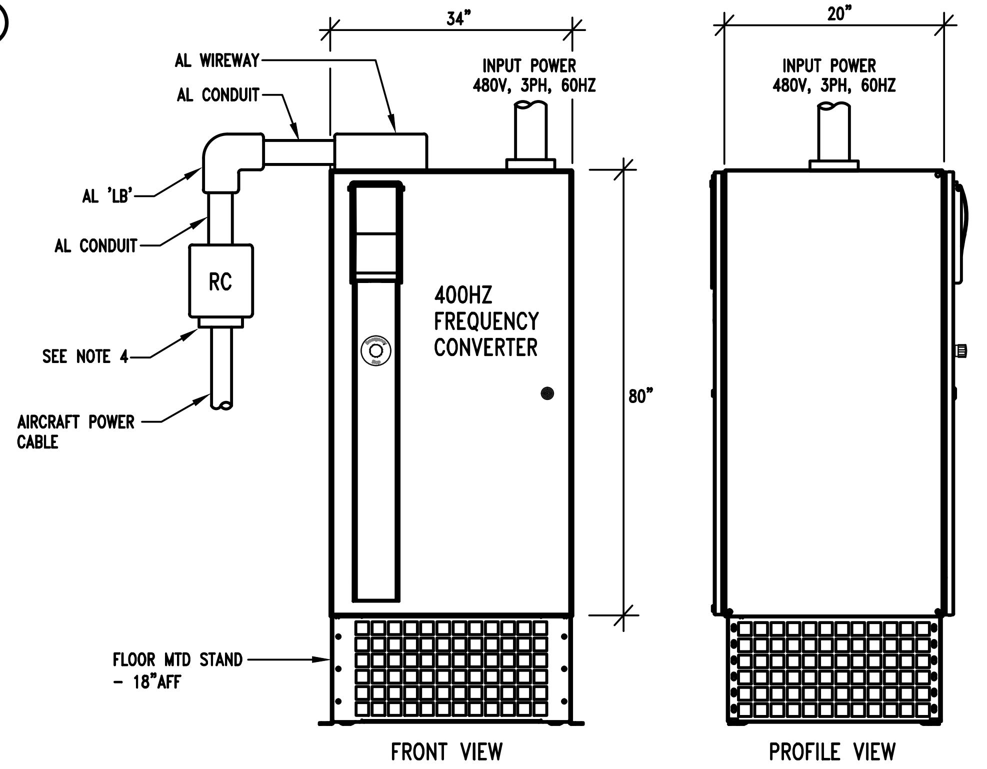
NO SCALE

DETAIL 'B' NOTES

1. FURNISH A MODULAR 400HZ CABLE ASSEMBLY SINGLE JACKET PER CONVERTER. CABLE ASSEMBLY SHALL CONSIST OF THE FOLLOWING:
   - 400HZ POWER CABLE. CABLE LENGTH SHALL BE 105 FT. CABLE ASSEMBLY SHALL BE RATED FOR 180AMPS, 200Y/115V, 3PH, 400HZ, WITH BALANCED CENTER NEUTRAL.
   - 28V E AND F PIN INTERLOCK
   - 400HZ POWER CONNECTOR. PROVIDE WITH GROUND POWER PLUG WITH ON/OFF MODULAR SAFETY SWITCH.
   - CABLE SCUFF JACKET IN HIGH VISIBILITY ORANGE COLOR
   - CABLE HEAD DUST CAP
   - PROVIDE WITH CABLE STRAIN RELIEF.
   - APPROX WEIGHT: 105' AT 2.15lbs/FT=226lbs
2. PROVIDE CONNECTOR ASSEMBLY TO THE FREQ CONVERTER IN DETAIL D/E-509.
3. PROVIDE A POWER CABLE HOLDER PER CABLE.
   - SEE DETAIL C, THIS SHEET.

B E-509 AIRCRAFT POWER CABLE ASSEMBLY DETAIL

NO SCALE



D E-509 POWER UNIT - AIRCRAFT FREQUENCY CONVERTER DETAIL

NO SCALE

FREQ A

DETAIL 'D' NOTES

1. THE AIRCRAFT POWER UNIT IS A FLOOR MOUNTED FREQUENCY CONVERTER FOR POWERING A SINGLE AIRCRAFT DURING MAINTENANCE OPERATIONS. EACH POWER UNIT SHALL FEATURE THE FOLLOWING:
   - INPUT RATINGS: 480V, 3PH, 20kVA/16kW AT .8PF, 60HZ, 30A
   - OUTPUT RATINGS: 200Y/115V, 3PH, 400HZ, 15kW
   - EFFICIENCY RATING:
     - > 86% AT 50% LOAD
     - > 90% AT 100% LOAD
   - UL AND MIL-STD-704 CERTIFIED
   - FLOOR MOUNTED STAND TO RAISE UNIT 18"AFF. STAND TO BE PROVIDED BY MANUFACTURER & BOLT THE POWER UNIT TO THE FLOOR.
   - NEMA 1 ENCLOSURE WITH LOCKABLE ACCESS PANEL
   - EMERGENCY SHUTDOWN BUTTON
   - SHORT CIRCUIT PROTECTION AND OVER/UNDER VOLTAGE PROTECTION AT OUTPUT.
2. ASSEMBLY SHALL INCLUDE A NEMA 3R REMOTE CONTROL (RC) POWER UNIT WITH CONTACTOR, CABLE TERMINATIONS, AND CONTROLS.
3. THE POWER UNIT SHALL FEATURE 28VDC DRY CONTACTS TO ACTIVATE THE FREQUENCY CONVERTER WHEN CONNECTIVITY TO AN AIRCRAFT IS ESTABLISHED. OTHERWISE THE POWER UNIT SHALL BE OFF.
4. PROVIDE PROPER CABLE CONNECTOR WITH CABLE RELIEF FOR OUTPUT CABLES.
   - PROVIDE CABLE MANAGEMENT WITH RACK
5. ALL OUTPUT (400HZ) RACEWAY TO BE ALUMINUM 'AL'. CONDUCTORS WITHIN AL RACEWAY SHALL BE TYPE XHHW TWISTED, 400HZ CABLE, #1 AWG.

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MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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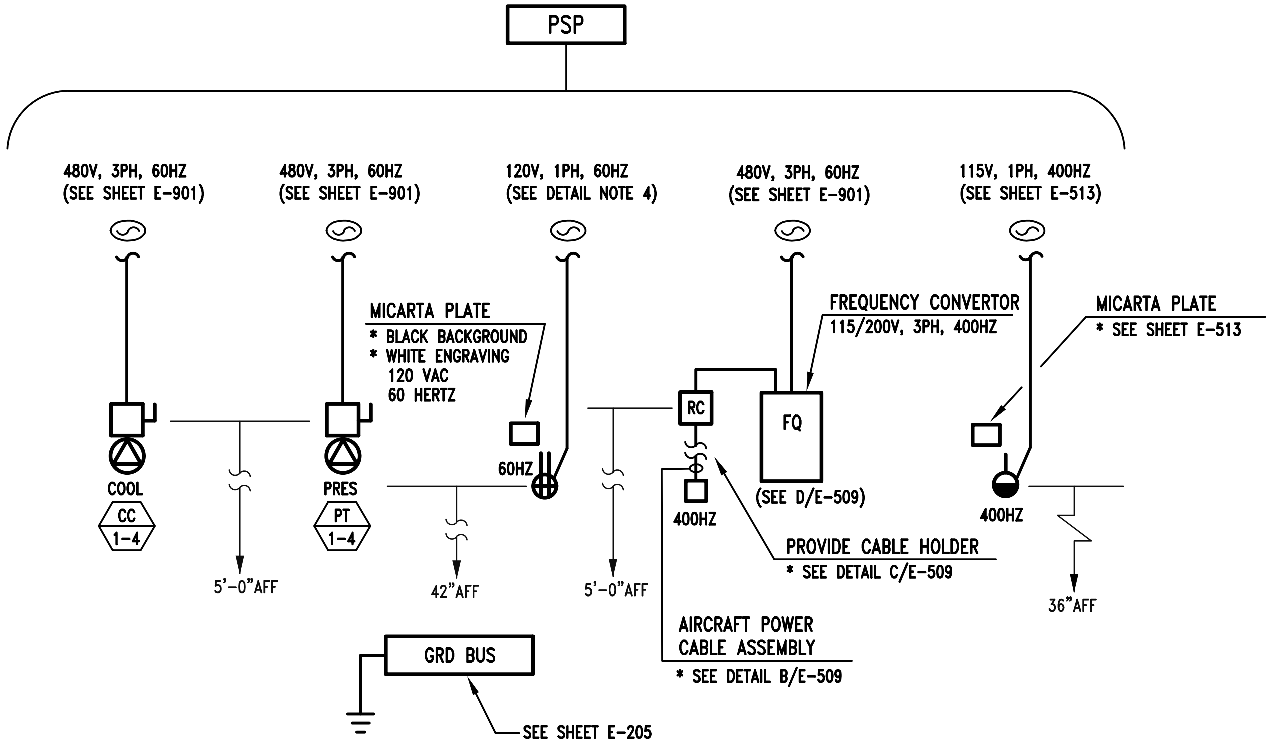
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

AIRCRAFT SUPPORT EQUIPMENT
DETAILS

SHEET ID
E-509

RTA SUBMITTAL

CESAM v20181203



A
E-510

TYPICAL DIAGRAM – POWER SERVICE POINT (1, 2, 3 & 4)

NO SCALE

PSP

DETAIL 'A' NOTES

1. EACH PSP LOCATION (1, 2, 3 & 4) RECEIVE ALL PROVISIONS INDICATED IN THIS DIAGRAM. PROVIDE ALL SUPPORTING CIRCUITS, DISTRIBUTION SYSTEMS, AND OUTLETS SPECIFIED.
   * OUTLETS SHALL BE MOUNTED AS INDICATED AFF. GROUP TOGETHER WITHIN THE PSP SPACE INDICATED ON SHEET E-203.
   * THE FQ MAY BE MOVED OUT OF THE ALLOCATED SPACE IF NEEDED, AS LONG AS THE 'RC' REMAINS.
   * OUTLETS MAY BE STACKED TO SAVE SPACE WITH ALL PSP LOCATIONS TO REMAIN THE SAME.

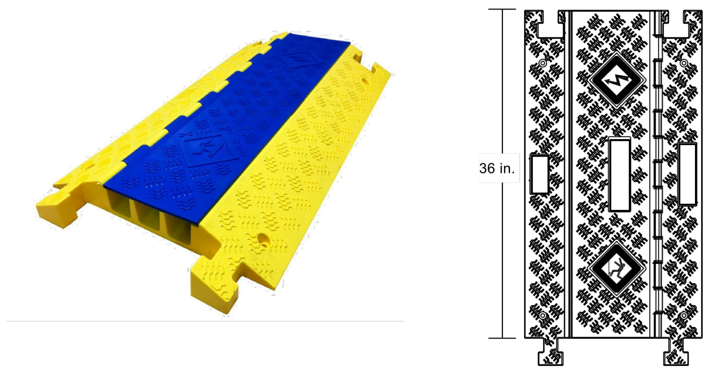
2. COOLING CART OUTLETS 1 THRU 4:
   * SEE DETAIL A/E-509
   * SEE SLD, SHEET E-901

3. PRESSURIZED TESTER OUTLETS 1 THRU 4:
   * SEE DETAIL A/E-509
   * SEE SLD, SHEET E-901

4. CONVENIENCE OUTLETS (120V, 1PH, 60HZ) 1 THRU 4 SHALL BE NEMA 5-20R (GFCI) TYPE. PROVIDE A 120V, 1PH CIRCUIT FROM PANEL LP2 TO EACH PSP LOCATION AS FOLLOWS:
   * PSP-1 (CIR #27)
   * PSP-2 (CIR #29)
   * PSP-3 (CIR #28)
   * PSP-4 (CIR #30)

   PROVIDE 2#10 & 1#10(GRD)-3/4"C FOR EACH.

5. THE TEST EQUIPMENT OUTLETS FOR 400HZ SHALL BE AS DETAILED ON SHEET E-513.



DETAIL 'B' NOTES

1. PROVIDE HEAVY DUTY 3-CHANNEL CABLE PROTECTORS DESIGNED FOR LOADS OF UP TO 50,000 lbs. POLYURETHANE CONSTRUCTION FOR WEATHER RESISTANCE & HARSH ELEMENTS.

2. CABLE CHANNEL DIAMETER SHALL ACCOMMODATE THE DIAMETER OF THE AIRCRAFT POWER CABLE.

3. PROVIDE HINGED TOP COVER TO ALLOW ACCESS TO CABLE CHANNELS.

4. PROVIDE A TOTAL OF THE FOLLOWING:
   * 300 LINEAR FEET
   * PROVIDE IN 36" SECTIONS FOR FLEXIBILITY

B
E-510

AIRCRAFT POWER CABLE PROTECTOR

NO SCALE

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CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

AIRCRAFT SERVICE POINT
DETAILS

SHEET ID
E-510

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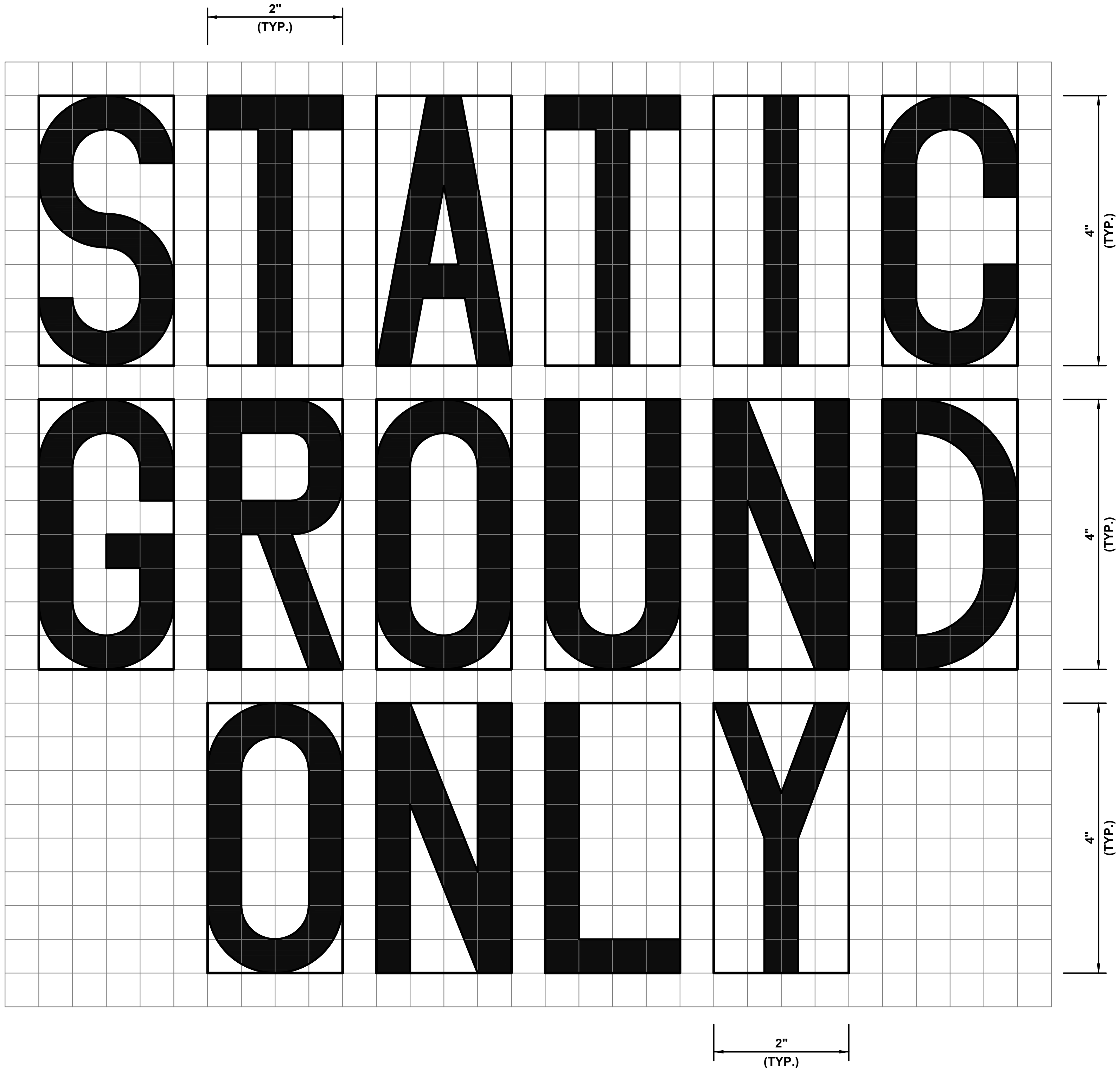
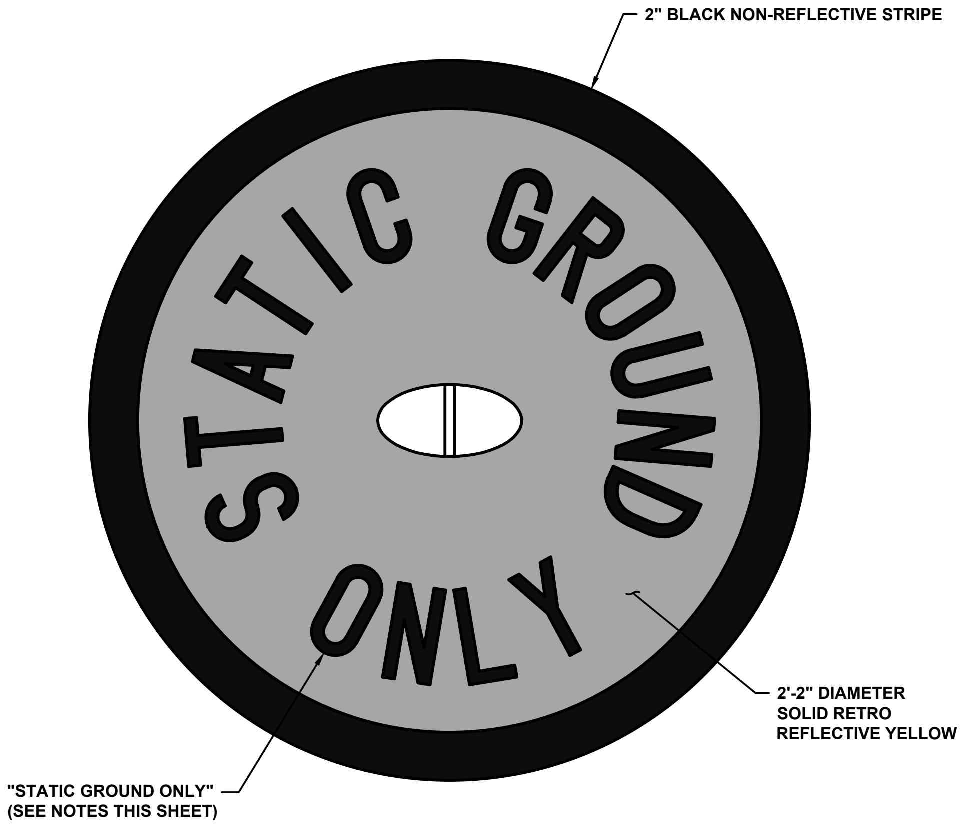


STATIC GROUNDING PAVEMENT MARKING LETTER DETAILS

N.T.S.

NOTES:

1. STATIC GROUND ONLY WORD MARKINGS SHALL BE NON-REFLECTIVE BLACK ON RETRO REFLECTIVE YELLOW BACKGROUND.
2. LETTERS SHOULD BE STENCILED BLOCK LETTERS, 4 INCHES IN HEIGHT AND 2" IN WIDTH.
3. LETTERS SHOULD BE PROPORTIONALLY SPACED TO FIT WITHIN THE WIDTH OF THE 2'-2" DIAMETER PAVEMENT MARKING.



STATIC GROUNDING POINT MARKING

N.T.S.

NOTE: SEE SHEET E-512 FOR AIR FORCE STATIC GROUND POINT DETAIL.

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MOBILE, ALABAMA

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

STATIC GROUND
PAVEMENT MARKING DETAILS

SHEET ID

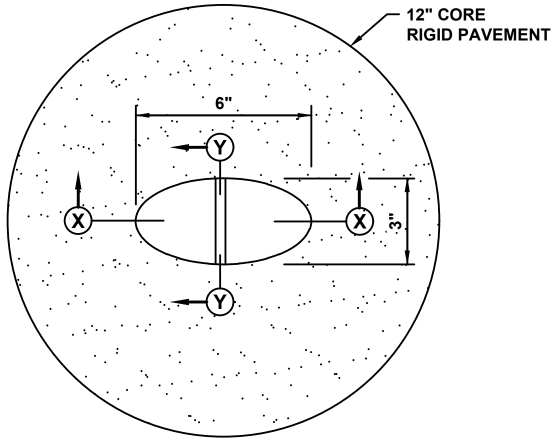
E-511

RTA SUBMITTAL

CESAM v20181203

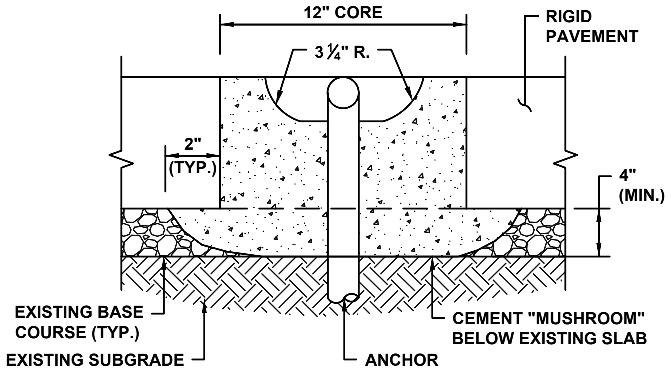
NOTES:

1. THE CONTRACTOR SHALL TEST AND VERIFY THE MAXIMUM RESISTANCE OF ALL NEW STATIC GROUNDING POINTS IN ACCORDANCE WITH IEEE STANDARD 81, WHICH SHOULD NOT EXCEED 10,000 OHMS UNDER NORMAL DRY CONDITIONS.
2. SEE PAVEMENT MARKING DETAILS ON SHEET E-511.



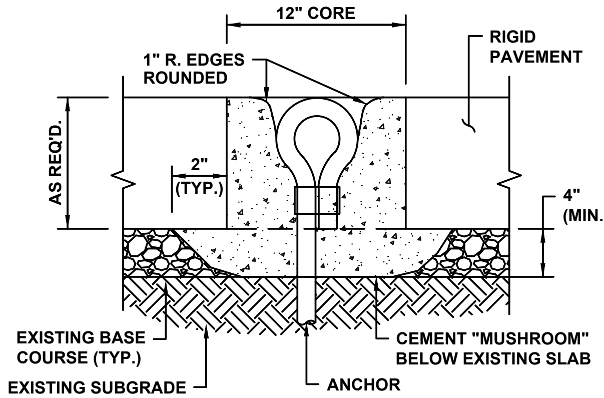
INSTALLATION REQUIREMENTS IN EXISTING RIGID PAVEMENTS:

1. CTS CEMENT (RAPID SET) OR SIKAQUICK 2500 SHALL BE USED TO REPLACE CONCRETE CORES. CONTRACTOR SHALL STRICTLY ADHERE TO MANUFACTURES MIXING, PLACEMENT AND CURING RECOMMENDATIONS.
2. PLACE IN TWO CONSOLIDATED LIFTS, ALLOWING BOTTOM LIFT TO "MUSHROOM" BELOW EXISTING SLAB.



SECTION X-X

N.T.S.



SECTION Y-Y

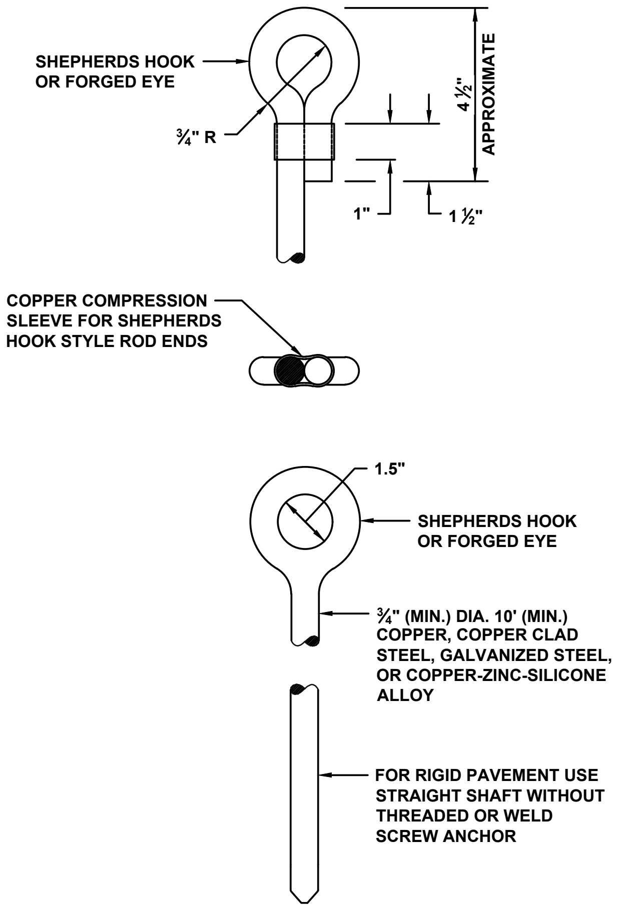
N.T.S.

DETAIL OF PAVEMENT RECESS

N.T.S.

RETRO-FIT AIR FORCE STATIC GROUND POINT (CORING METHOD)

N.T.S.


SHEPHERDS HOOK OR FORGED EYE
¾" R
4 ½"
APPROXIMATE
1"
1 ½"
COPPER COMPRESSION SLEEVE FOR SHEPHERDS HOOK STYLE ROD ENDS
1.5"
SHEPHERDS HOOK OR FORGED EYE
¾" (MIN.) DIA. 10' (MIN.) COPPER, COPPER CLAD STEEL, GALVANIZED STEEL, OR COPPER-ZINC-SILICONE ALLOY
FOR RIGID PAVEMENT USE STRAIGHT SHAFT WITHOUT THREADED OR WELD SCREW ANCHOR

DETAIL OF EYE AND SLEEVE ASSEMBLY

N.T.S.

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
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AIRFORCE RETROFIT
STATIC GROUND DETAILS

SHEET ID
E-512

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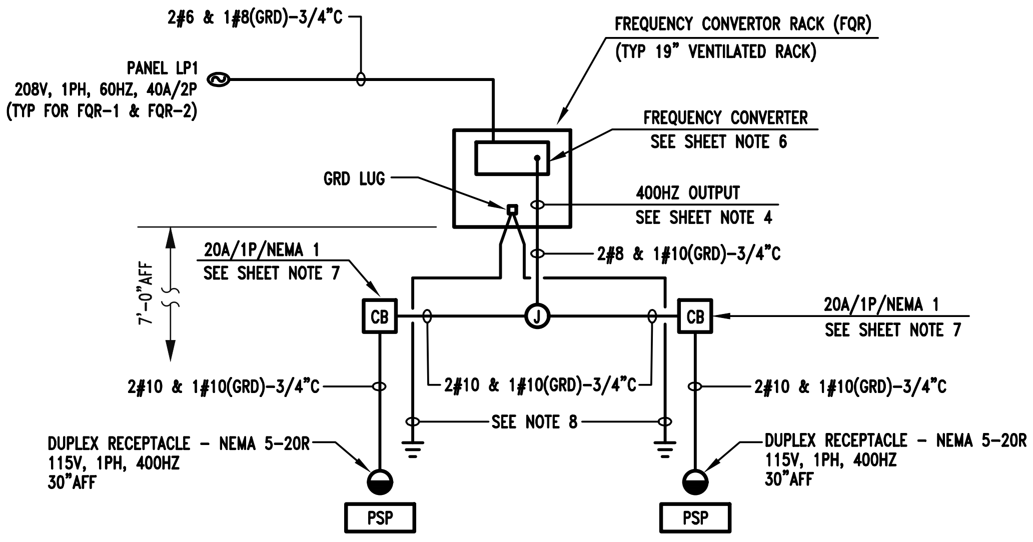


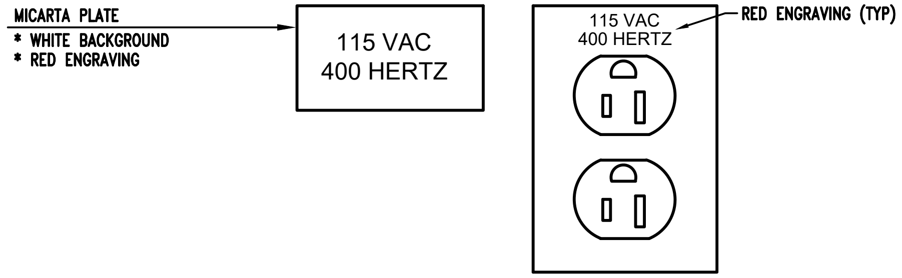
A
E-513

DETAIL - TEST EQUIPMENT "FQR"

NO SCALE

SHEET NOTES

1. FURNISH AND INSTALL A COMPLETE SYSTEM OF 400HZ POWER SUPPLY, CIRCUITS, OUTLETS, ETC. FOR THE 400HZ POWER TEST EQUIPMENT.
2. ALL CONDUIT, OUTLET BOXES AND SUPPORTING DEVICES FOR 400HZ CIRCUITS SHALL BE ALUMINUM ONLY. DO NOT INSTALL IN CONTACT WITH OR CLOSE PROXIMITY TO THE FOLLOWING:
   a. STEEL CONDUIT SYSTEMS
   b. STEEL SUPPORT
   c. METAL STRUCTURES
   d. METAL DUCT WORK
   e. METALLIC OBJECTS
3. MINIMIZE CIRCUIT LENGTHS; LIMIT VERTICAL CONDUIT RUNS.
4. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE XHHW 75°C, ALL IN AL CONDUIT
5. BRANCH CIRCUITS ARE AS FOLLOWS:
   20A/1P, 115VAC, 1PH, 400HZ
6. THE FREQUENCY CONVERTER SHALL BE RACK MOUNTED RATED AS FOLLOWS:
   * INPUT: 208V, 1PH, 60HZ
   * OUTPUT: 115V, 1PH, 400HZ
   * 3,000VA: 37A-IN/26A-OUT
7. CIRCUIT BREAKERS FOR PROTECTION SHALL BE MOUNTED BELOW RACK 5'-0"AFF.
   * EXTEND CIRCUIT TO OUTLET LOCATION.
8. INSTALL A #8 CU GRD IN 3/4"RMC FROM FQR TO EACH GRD BUS OF THE ASSOCIATED PSP.
9. FEEDERS TO EACH FQR ARE AS FOLLOWS:
   * FQR-1 (CIR #17,19)
   * FQR-2 (CIR #18,20)



115 VAC 400HZ - RECEPTACLE
NEMA 5-20R ◓

DETAIL 'B' NOTES

1. CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL SYSTEMS OUTLETS NOTED ON THE DRAWINGS AND PROVIDE THE PROPER CONNECTIONS AND POWER SUPPLIES. RECEPTACLES SHALL BE AS FOLLOWS:
   * 20A, 115VAC, 400HZ - NEMA 5-20R
   * ORANGE IN COLOR
2. PROVIDE ENGRAVED DEVICE PLATES AND SIGNAGE WITH THE SPECIAL SYSTEM IDENTIFICATION SHOWN.
   * STAINLESS STEEL PLATE
   * RED LETTERING

B
E-513

DETAIL - 400 HZ RECEPTACLE

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
DESIGNED BY: KLH/JDW
DRAWN BY: EWH
CHECKED BY: KLH/JDW
SUBMITTED BY: -
SIZE: ANSI D
FILE NAME: MEF24005E-513.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

400HZ TEST
EQUIPMENT POWER
REQUIREMENTS

SHEET ID
E-513

RTA SUBMITTAL

LUMINAIRE SCHEDULE

LUMINAIRE MARK	USACE STANDARD DETAILS	LUMINAIRE						MTG	LUMINAIRE VOLTAGE	LUMINAIRE CRITERIA					
										ZONAL CAVITY METHOD ASSUME RCR = 1				SPACING TO MTG HGT RATIO	NOTE NO
										EFFECTIVE REFLECTANCE			CU		
	TYPE	LUMEN OUTPUT	WATTAGE	COLOR TEMP	NUMBER OF DRIVERS	DRIVE CURRENT	NUMBER OF LED BOARDS			CLG	WALL	FLOOR			
A	–	3850	29	3500K	–	–	–	RL	MVOLT	80	50	20	1.04	1.24	2, 6, 7
AF	–	3850	29	3500K	–	–	–	RF	MVOLT	80	50	20	1.04	1.24	2, 6, 7
B	–	6402	61	3500K	–	–	–	RL	MVOLT	80	50	20	1.04	1.24	2, 6, 7
C	–	4700	34	3500K	–	–	–	CH	MVOLT	80	50	20	1.08	1.27	6, 7
D	–	2380	21	3500K	–	–	–	RL	MVOLT	80	50	20	1.07	1.08	7
I	–	30240	175	3500K	–	–	–	CH	MVOLT	80	50	20	1.04	1.27	6, 7, 8
W	–	12000	90	4000K	–	–	–	W	MVOLT	–	–	–	–	–	4, 7
WP	–	6100	45	4000K	–	–	–	W	MVOLT	–	–	–	–	–	4, 6, 7
⊢⊗ ⊗	XL1	–	.5	–	–	–	–	U	MVOLT	–	–	–	–	–	5

LUMINAIRE SCHEDULE NOTES

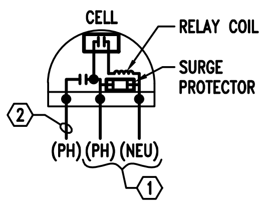
1. THE CONTRACTOR SHALL SUBMIT, FURNISH AND INSTALL A LUMINAIRE WITH SIMILAR LUMINAIRE CRITERIA LISTED IN THE SCHEDULE. THE DESIGN AND LAYOUT PRESENTED IS BASED UPON THE INFORMATION CONTAINED IN THE COLUMNS UNDER "LUMINAIRE CRITERIA" AND ANY DEVIATION MAY REQUIRE THE CONTRACTOR TO FURNISH ADDITIONAL LUMINAIRES BASED ON NEW LIGHTING CALCULATIONS TO MEET THE DESIGN INTENT.
2. PATTERN FOR SHIELDING IN LUMINAIRES SHALL BE #12 (SQUARE BASE FEMALE CONE). THE AVERAGE LUMINANCE MEASURED AT 75 AND 85 DEGREES FROM NADIR SHALL BE LESS THAN 600 FOOT LAMBERTS BOTH LENGTHWISE AND CROSSWISE.
3. UNIT SHALL CONTAIN UL DAMP LOCATION LABEL.
4. UNIT SHALL CONTAIN UL WET LOCATION LABEL.
5. UNIT SHALL BE CONNECTED AHEAD OF LOCAL SWITCHING.
6. PROVIDE THE LUMINAIRE MARK INDICATED WITH BATTERY PACK CONNECTED AHEAD OF LOCAL SWITCHING WHEN NOTED. WHERE SO UTILIZED UNIT SHALL BE COMPATIBLE WITH THE DRIVER/LED MODULE SPECIFIED.
7. DRIVER SHALL HAVE 0-10V DIMMING AND BE CAPABLE OF DIMMING DOWN TO 10%.
8. UNIT SHALL HAVE AIRCRAFT CABLE SUPPORTS AND HARDWARE.

LUMINAIRE SUSTAINABILITY REQUIREMENTS

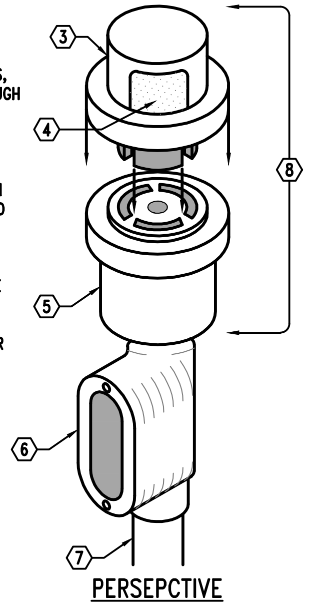
1. THE CONTRACTOR SHALL VERIFY THAT LUMINAIRES ARE INSTALLED, AIMED, AND SHIELDED AS INDICATED IN DESIGN DOCUMENTS.
2. INSTALLED LUMINAIRES SHALL BE FURNISHED WITH CUT SHEETS THAT INDICATE COMPLIANCE WITH DESIGN DOCUMENTS.
3. AUTOMATIC LIGHTING CONTROLS SHALL BE FURNISHED WITH DOCUMENTATION SHOWING COMPLIANCE WITH DESIGN DOCUMENTS. WHEN APPLICABLE, CONTROL SCHEDULES SHOWING SEQUENCE OF OPERATION SHALL BE PROVIDED.

LIGHTING CONTROL NOTES

1. LIGHTING CONTROL DEVICES AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC AND MANUFACTURER'S INSTRUCTIONS.
2. ALL NON-CURRENT CARRYING METALLIC PARTS OF DEVICES AND SYSTEMS, ENCLOSURES, OUTLET BOXES, SUPPORTS, ETC., SHALL BE BONDED THROUGH THE INTERIOR GROUNDING SYSTEM. FACE PLATES AND COVERS SHALL BE EFFECTIVELY GROUNDED PER MANUFACTURERS UL LISTING.
3. TOGGLE SWITCHES SHALL BE GROUPED AND GANGED TOGETHER UNDER COMMON DEVICE PLATES WHERE APPLICABLE. DO NOT GANG SWITCHES IN ENCLOSURES WHERE VOLTAGE BETWEEN ADJACENT SWITCHES CAN EXCEED 300 VOLTS UNLESS ENCLOSURES ARE EQUIPPED WITH PERMANENTLY INSTALLED BARRIERS BETWEEN ADJACENT SWITCHES.
4. TOGGLE SWITCHES SHALL BE RATED AT THE BRANCH CIRCUIT PROTECTIVE DEVICE RATING OF THE CIRCUIT TO WHICH IT IS CONNECTED.
5. ALL COMPONENTS OR SYSTEMS SHALL BE COORDINATED FOR THE PROPER VOLTAGE, OPERATION, CONTACT RATINGS, ETC.



WIRING DIAGRAM



PERSEPCTIVE

DETAIL B KEYED NOTES

① POWER SUPPLY

② SWITCH LEG RETURN

③ TURN-LOCK PHOTO CONTROL DEVICE WITH SURGE PROTECTOR.

④ CADMIUM SULFIDE CELL (FACE NORTH).

⑤ TURN-LOCK PHOTO CONTROL RECEPTACLE: RAINTIGHT WITH 12.5mm (1/2") NIPPLE AND 304.8mm (12") LEADS.

⑥ 12.5mm (1/2") CAST 'C' CONDUIT BODY, GASKETED AND WEATHERPROOF

⑦ 12.5mm (1/2") GRC WITH ADEQUATE SUPPORT

⑧ COMPLETE ASSEMBLY TO BE U.L. LISTED FOR WET LOCATIONS.

⑨ THE UNIT SHALL BE TOTALLY SELF-CONTAINED WITH MORE THAN 15 SECOND DELAY AND BE RATED AS FOLLOWS:
    CAPACITY: 1500 WATTS TUNGSTEN
    : 1800 VOLT-AMPERES MERCURY VAPOR AND HID
    CONTACTS: SPST, NORMALLY CLOSED
    PRESET: AT 1 TO 3 FOOTCANDLES
    TEMPERATURE: -50 TO +60 DEGREES CELSIUS

B
E-600

DETAIL - TYPICAL PHOTO-CELL INSTALLATION

NO SCALE

LUMINAIRE AND DRIVER NOTES

1. LUMINAIRE AND LUMINAIRE INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 70, ARTICLE 410. ALL LUMINAIRES SHALL BE UL LISTED AND INSTALLED IN ACCORDANCE WITH THE UL LISTING "FIXTURE MARKING GUIDE" AND SUPPORTED BY MEANS DESIGNED FOR THAT LISTED INSTALLATION. ALL CLEARANCES REQUIRED BY CODE SHALL BE MAINTAINED. LUMINAIRES INSTALLED IN UNUSUAL CONDITIONS SUCH AS DAMP, WET, ETC., LOCATIONS SHALL BE MARKED AND LABELED FOR THE PURPOSE.
2. EACH LUMINAIRE SHALL BE FURNISHED COMPLETE WITH THE PROPER DRIVER, SURGE SUPPRESSION, DIMMING CONTROLS, WIRING COMPONENTS, SUPPORTING FRAMES AND/OR DEVICES, ETC., FOR A COMPLETE INSTALLATION SUITABLE WITH THE AMBIENT CONDITIONS ENCOUNTERED. ALL DEVICES, COMPONENTS, FITTINGS, SUPPORTS, ETC., SHALL BE COORDINATED TO PROVIDE A COMPLETE UL LISTED INSTALLATION.
3. EACH LUMINAIRE SHALL BE FURNISHED WITH GROUNDING PROVISIONS AND BE GROUNDED TO THE GROUNDING PROVISIONS OF THE WIRING SYSTEM.
4. LUMINAIRES SHALL NOT BE INSTALLED IN CONTACT WITH COMBUSTIBLE MATERIALS. ADEQUATE SPACE FOR AIR CIRCULATION AND CODE COMPLIANCE SHALL BE PROVIDED AS A MINIMUM. FURNISH SPACERS, WASHERS, SUPPORT DEVICES, ETC., AS REQUIRED TO MAINTAIN PROPER CLEARANCES. LUMINAIRES SHALL BE CONSTRUCTED, INSTALLED AND EQUIPPED SUCH THAT ADJACENT MATERIAL WILL NOT BE SUBJECTED TO TEMPERATURES IN EXCESS OF 90°C (194°F).
5. OUTLET BOXES, CONDUCTORS, SPLICES AND TERMINATIONS SHALL BE ACCESSIBLE. ONLY CONDUCTORS RATED FOR THE ENVIRONMENTAL CONDITIONS, CURRENT, VOLTAGE AND TEMPERATURES ENCOUNTERED SHALL BE USED.
6. CEILING MOUNTED LUMINAIRES SHALL BE SUITABLE FOR THE CEILING TYPES SPECIFIED AND PROVIDED WITH THE PROPER LISTED SUPPORTS.
    a. PROVIDE DEVICES FOR SECURING EACH RECESS LAY-IN LUMINAIRE AT TWO LOCATIONS TO CEILING GRID. PROVIDE BOLTS, SCREWS, RIVETS OR APPROVED CLIPS IDENTIFIED FOR USE WITH THE TYPE CEILING AND LUMINAIRE INSTALLED.
    b. PROVIDE SUPPORTING FRAME, ADJUSTABLE MOUNTING BRACKETS, PROPER TRIM AND ADEQUATE SUPPORT TO CEILING GRID FOR SECURING EACH RECESS LUMINAIRE INSTALLED WITHIN CEILING TILES OF LAY-IN TYPE CEILINGS.
    c. PROVIDE PLASTER FRAMES AND PROPER SUPPORT FROM STRUCTURE FOR SECURING EACH RECESS LUMINAIRE INSTALLED IN PLASTER AND/OR HARD CEILINGS.
    d. THE CONTRACTOR SHALL COORDINATE WITH ALL STRUCTURAL MEMBERS AND/OR DEVICES, ARCHITECTURAL CEILING PLANS AND TYPES, OTHER CEILING MOUNTED DEVICES AND SYSTEM COMPONENTS. INSTALL LUMINAIRES ACCORDING TO LIGHTING AND REFLECTED CEILING PLANS TO PROVIDE A SYMMETRICAL LAYOUT IN CONJUNCTION WITH ALL CEILING COMPONENTS.
7. LUMINAIRES SHOWN IN MECHANICAL AND ELECTRICAL ROOMS SHALL BE ADJUSTED ACCORDING TO FINAL EQUIPMENT, DEVICE, DUCT, ETC., INSTALLATION TO ILLUMINATE SPACE ADEQUATELY. SUSPEND BELOW DUCTS WHERE CONFLICTS OCCUR.
8. ALL ADJUSTABLE LUMINAIRES SHALL BE ADJUSTED FOR FINAL APPROVAL DURING NON-DAYLIGHT HOURS.
9. LED MODULE/DRIVER CONTROL COMBINATIONS SHALL BE COMPATIBLE IN ACCORDANCE WITH MANUFACTURER'S TESTING DATA AND RECOMMENDATIONS.
    * DRIVERS SHALL MEET 47 CFR, PART 18, FOR RFI EMISSIONS.
    * DRIVERS SHALL NOT EXCEED 20% TOTAL HARMONIC DISTORTION (THD)
    * DRIVERS SHALL BE COMPATIBLE WITH DIMMING AND SWITCHING SCHEMES.
10. LED LUMINAIRE'S LUMEN MAINTENANCE SHALL MEET OR EXCEED THE LATEST VERSION OF IES LM-80 TESTING STANDARDS. LUMINAIRE PHOTOMETRICS SHALL COMPLY WITH THE LATEST VERSION OF IESNA LM-79 TESTING CRITERIA.
11. ALL LUMINAIRES SHALL COMPLY WITH MINIMUM ENERGY EFFICIENCY REQUIREMENTS OF APPLICABLE CODES.
12. LED MODULES/DRIVERS SHALL BE ACCESSIBLE AND UPGRADABLE.
13. LUMINAIRES SHALL HAVE INTEGRAL SURGE SUPPRESSION WHEN APPLICABLE.

DETAIL A KEYED NOTES

① POWER SUPPLY - 277V, 1PH, 60HZ

② JUNCTION BOX

③ CONTACTOR ENCLOSURE - NEMA 1 UNLESS NOTED OTHERWISE

④ POWER TAP TO PHOTO-CELL IN GRC

⑤ TURN-LOCK PHOTO-CELL, SEE DETAIL THIS SHEET.

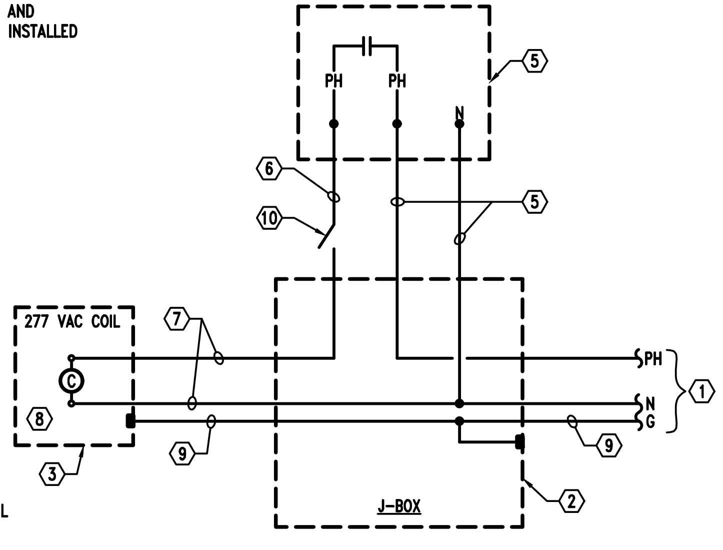
⑥ SWITCH LEG RETURN IN GRC

⑦ POWER TO CONTACTOR COIL

⑧ LIGHTING CONTACTOR AS FOLLOWS: - NEMA ICS 2-211B INDUSTRIAL DUTY TYPE - ELECTRICALLY OPERATED - ELECTRICALLY HELD -RATING AND NUMBER OF POLES INDICATED - CONTACTS SHALL BE SILVER ALLOY, DOUBLE-BREAK, SUITABLE FOR TUNGSTEN, BALLAST LIGHTING, RESISTANCE AND MOTOR LOADS-FUSING FOR CONTROL CIRCUIT.

⑨ GROUND CONDUCTOR - BOND TO EACH ENCLOSURE AND INSTALL IN EACH CONDUIT SYSTEM.

⑩ MANUAL SWITCH OVER-RIDE (20A, SPST)



A
E-600

DETAIL - TYPICAL OPERATION OF PHOTO-CELL CONTACTOR CONTROL

NO SCALE

LUMINAIRE SCHEDULE AND LAMP/DRIVER CHART - KEY LEGEND & TERMINOLOGY

LAMP TYPES

LED	LIGHT EMITTING DIODE

LAMP DESIGNATION

A	A - LAMP
FL	FLOOD
MFL	MEDIUM FLOOD
NFL	NARROW FLOOD
WFL	WIDE FLOOD
HO	HIGH OUTPUT
IF	INSIDE FROSTED
MR	MIRRORED REFLECTOR
PAR	PARABOLIC ALUMINUM REFLECTOR
SP	SPOT
VHO	VERY HIGH OUTPUT
W	WATT

LUMINAIRE MOUNTING

C	CEILING
CB	CONCRETE BASE
CH	CHAIN HANG
D	DESK
F	FLOOR
G	GRADE
P	PENDANT
PT	POST TOP
R	RECESS
RL	RECESS LAY - IN
RF	RECESS FLANGE
RW	RECESS WALL
S	SURFACE
SR	SEMI - RECESS
T	TRACK
U	UNIVERSAL
UC	UNDERCABINET
W	WALL

IES LIGHTING TERMS

CCT	COLOR CORRECTED TEMPERATURE
CRI	COLOR RENDERING INDEX
CU	COEFFICIENT OF UTILIZATION
CDC	CANDLE POWER DISTRIBUTION CURVE
CBCP	CENTER BEAM CANDLE POWER
FC	FOOTCANDLES
K	DEGREES KELVIN
LUX	METRIC FOOTCANDLE (FC X 10.8)
RCR	ROOM CAVITY RATIO
LUMENS	MEASURED OUTPUT OF LAMP, LUMINAIRE, OR BOTH
LUMINAIRE	COMPLETE LIGHTING UNIT, INCLUDING LAMP, REFLECTOR, AND HOUSING

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: KLH/JDW	ISSUE DATE: JUNE 2024	
DRAWN BY: EWH	SOLICITATION NO.: -	
CHECKED BY: KLH/JDW	CONTRACT NO.: -	
SUBMITTED BY: -	PROJECT NUMBER: MEF24005	
SIZE: ANSI D	FILE NAME: MEF24005E-600.dwg	

U.S. ARMY CORPS OF ENGINEERS
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

LUMINAIRE SCHEDULE
AND NOTES

SHEET ID
E-600

RTA SUBMITTAL

FEATURES

LIGHT SOURCE: LED / 3850, 6402 LUMENS

WATTAGE: 29W, 61W

SHIELDING: ACRYLIC PRISMATIC LENS

COLOR TEMP: 3500K

DRIVER: HIGH EFFICIENCY, CAPABLE OF DIMMING TO 10% OR LESS, FLICKER FREE OPERATION, LOW EMI EMISSIONS, LOW INRUSH CURRENT.

LUMEN MAINTENANCE: L90 / 60,000 HOURS

SHIELDING: 3.2 mm (0.125")
PATTERN 12, PATTERN
19, RFI SUPPRESSION

EFFICIENCY: 80% (NOMINAL 105 LUMENS PER WATT)

NOM. DIMENSIONS 602 mm X 1212 mm X 51 mm
(22 3/4" W X 47 3/4" L X 2" D)

GENERAL DESCRIPTION

HOUSING: COLD ROLLED STEEL, FLANGE TO COORDINATE WITH CEILING; EXTRUDED ALUMINUM LENS FRAME, HINGED REMOVAL AND SPRING-LOADED CATCHES

MOUNTING: A, B - RECESSED INTO STANDARD GRID
AF - TYPE A FLANGE MOUNT FOR HARD CEILING

ELECTRICAL: 277 VOLT DRIVER, INTERNAL SURGE SUPPRESSION

A: 3850 LUMENS
AF: 3850 LUMENS
B: 6402 LUMENS

RECESSED LENSED 2'x4" LED TROFFER

MARK "A, B, AF"
(PROVIDE BATTERY PACK WHEN MARKED)

FEATURES

LIGHT SOURCE: LED / 4700 LUMENS
WATTAGE: 34W
SHIELDING: ACRYLIC PRISMATIC LENS
COLOR TEMP: 3500K

DRIVER: HIGH EFFICIENCY, CAPABLE OF DIMMING TO 10% OR LESS, FLICKER FREE OPERATION, LOW EMI EMISSIONS, LOW INRUSH CURRENT.

LUMEN MAINTENANCE: L70/100,000 HOURS

EFFICIENCY: 70% (NOMINAL 140 LUMENS PER WATT)

NOM. DIMENSIONS 279.4mm X 1168.84mm X 124.46mm
(11"W X 46"L X 4.9" D)

GENERAL DESCRIPTION

HOUSING: COLD ROLLED STEEL WITH CENTER CHANNEL. SUSPENSION MOUNTING

ELECTRICAL: 277 VOLT DRIVER, INTERNAL SURGE SUPPRESSION.

FINISH: WHITE ENAMEL WITH RUST INHIBITOR

CHAIN HUNG 4' LED LOW BAY LIGHT

MARK "C"
(PROVIDE BATTERY PACK WHEN MARKED)

FEATURES

LIGHT SOURCE: LED / 2380 LUMENS

WATTAGE: 21W

COLOR TEMP: 3500K

DRIVER: HIGH EFFICIENCY, CAPABLE OF DIMMING TO 10% OR LESS, FLICKER FREE OPERATION, LOW EMI EMISSIONS, LOW INRUSH CURRENT.

LUMEN MAINTENANCE: L70 / 50,000 HOURS

EFFICIENCY: 80% (NOMINAL 63 LUMENS PER WATT)

NOM. DIMENSIONS 261.93mm X 165.1mm
(10 5/16" DIA. X 6 1/2"D)

GENERAL DESCRIPTION

HOUSING: DIE-FORMED 16 GA. GALVANIZED STEEL MOUNTING PAN, UNIVERSAL MOUNTING BRACKETS

REFLECTORS: CLEAR SEMI-SPECULAR ALUMINUM, WITH 55 DEGREE CUTOFF, LED LIGHT SOURCE WITH DIFFUSED LENS RECESSED WITHIN REFLECTOR

ELECTRICAL: 277 VOLT DRIVER, INTERNAL SURGE SUPPRESSION

6" DIA. RECESSED LED DOWNLIGHT

MARK " D"

FEATURES

LIGHT SOURCE: LED / 30240 LUMENS

WATTAGE: 175W

COLOR TEMP: 3500K

DRIVER: HIGH EFFICIENCY, CAPABLE OF DIMMING TO 10% OR LESS, FLICKER FREE OPERATION, LOW EMI EMISSIONS, LOW INRUSH CURRENT.

LUMEN MAINTENANCE: L80 / 60,000 HOURS

EFFICIENCY: (NOMINAL 174 LUMENS PER WATT)

NOM. DIMENSIONS 266 mm X 86 mm X 1152 mm
(10 1/2"W X 3 3/8"H X 45 3/8"L)

GENERAL DESCRIPTION

HOUSING: DIE-FORMED COLD ROLLED STEEL, DESIGNED FOR INDIVIDUAL SUSPENSION MOUNTING.

ELECTRICAL: 277 VOLT DRIVER, INTERNAL SURGE SUPPRESSION

FINISH: HIGH GLOSS WHITE ENAMEL OR POLYESTER POWDER COAT

AIRCRAFT CABLE HUNG 4' LED HIGHBAY LIGHT

MARK "I"
(PROVIDE WITH BATTERY PACK)

FEATURES

LAMP TYPE: LED

MOUNTING: UNIVERSAL

SHIELDING: HIGH IMPACT THERMOPLASTIC WITH WHITE FACE

LETTERS: RED

NOM. DIMENSIONS 350 mm X 188 mm X 62 mm
(13 3/4" W X 7 3/8" H X 2 7/16" D)

GENERAL DESCRIPTION

HOUSING: INJECTION MOLDED PLASTIC WITH WHITE FACE, HARDWARE FINISH TO MATCH HOUSING FINISH. 152 mm (6") H LETTERS WITH 19 mm (3/4") STROKE. DIRECTIONAL ARROWS AS REQUIRED.

ELECTRICAL: 277 VOLT

FINISH: HIGH IMPACT THERMOPLASTIC

OTHER: MINIMUM BRIGHTNESS 20 CD/SQ METER ON FACE OF SIGN.

⊗ INDICATES DOULBE FACE WITH LIGHTED SIGN EACH FACE.

LED STENCIL WHITE FACE EXIT SIGN

⊗ ⊗

FEATURES

LIGHT SOURCE: LED / 12000 & 6100 LUMENS
WATTAGE: 90W, 45W

COLOR TEMP: 4000K

DRIVER: HIGH EFFICIENCY, CAPABLE OF DIMMING TO 10% OR LESS, FLICKER FREE OPERATION, LOW EMI EMISSIONS, LOW INRUSH CURRENT.

LUMEN MAINTENANCE: L70 / 100,000 HOURS

EFFICIENCY: (NOMINAL 110 LUMENS PER WATT)

NOM. DIMENSIONS 400mm X 164mm X 308mm
(15 11/16"W X 6 1/2"H X 12 1/8"D)

GENERAL DESCRIPTION

HOUSING: DIE CAST ALUMINUM HOUSING, DOOR ASSEMBLY AND BACKPLATE, UL WET LOCATION. MODULAR DESIGN FOR WALL MTD UPGRADE-ABILITY & MAINTENANCE ACCESS. INTEGRATED SCREEN TO PREVENT DEBRIS BUILD-UP AND ALLOW FOR PROPER AIRFLOW.

ELECTRICAL: 277 VOLT DRIVER, INTERNAL SURGE SUPPRESSION.

W = WALL MTD 12000 LUMENS
WP = WALL MTD 6100 LUMENS

FINISH: BAKED-ON POLYURETHANE DARK BRONZE POWDER COAT PAINT

PROVIDE WITH TYPE 3 FULL CUTOFF DISTRIBUTION

LED WALL PACK & AREA LIGHT-CUTOFF LUMINAIRE

MARK "W, WP"
(PROVIDE BATTERY PACK WHEN MARKED)

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
KLH/JDW
DRAWN BY:
EWH
CHECKED BY:
KLH/JDW
SUBMITTED BY:
-
SIZE:
ANSI D
FILE NAME:
MEF24005E-601.dwg

ISSUE DATE:
JUNE 2024
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-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005

U.S. ARMY CORPS OF ENGINEERS
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ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

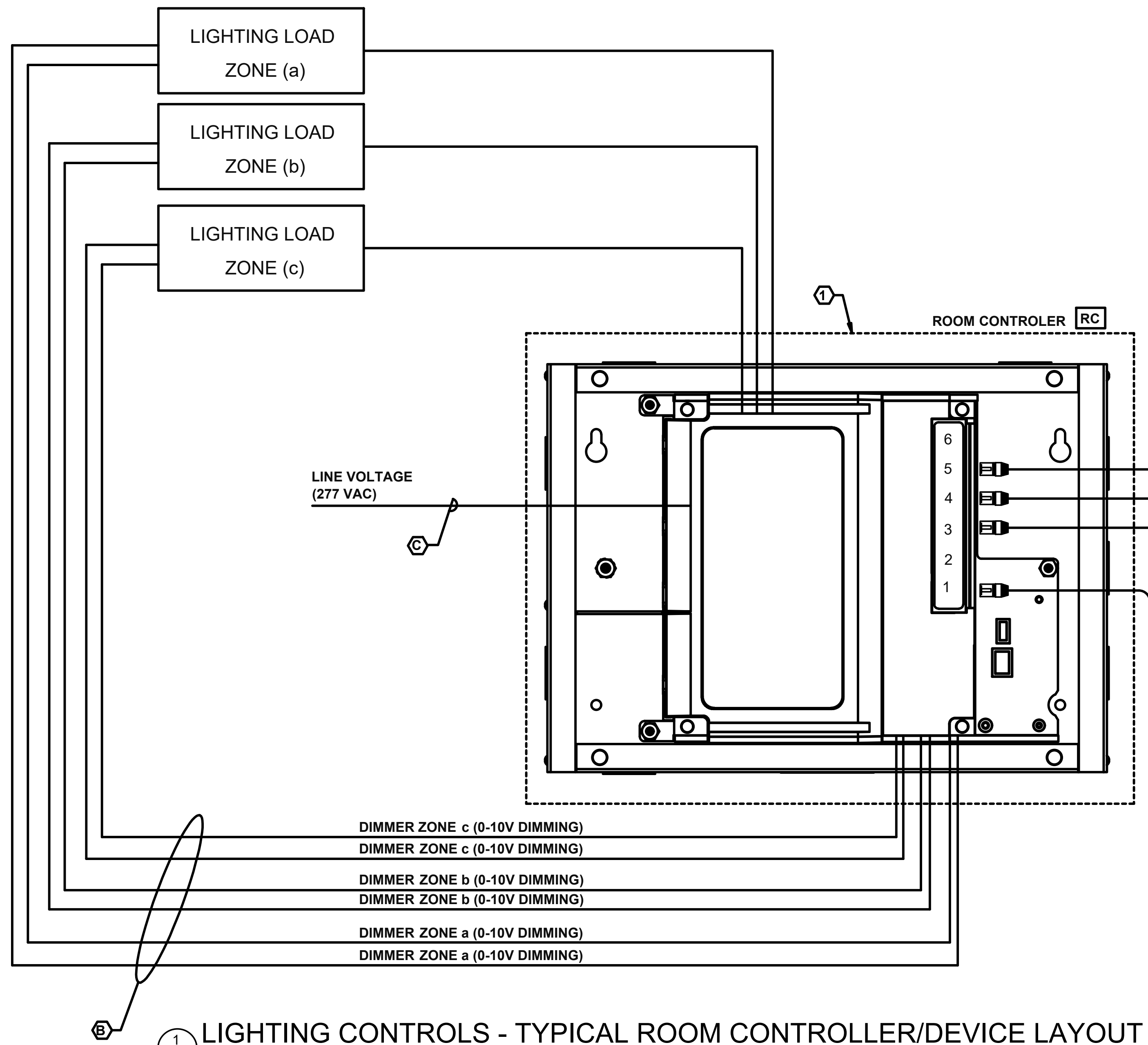
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

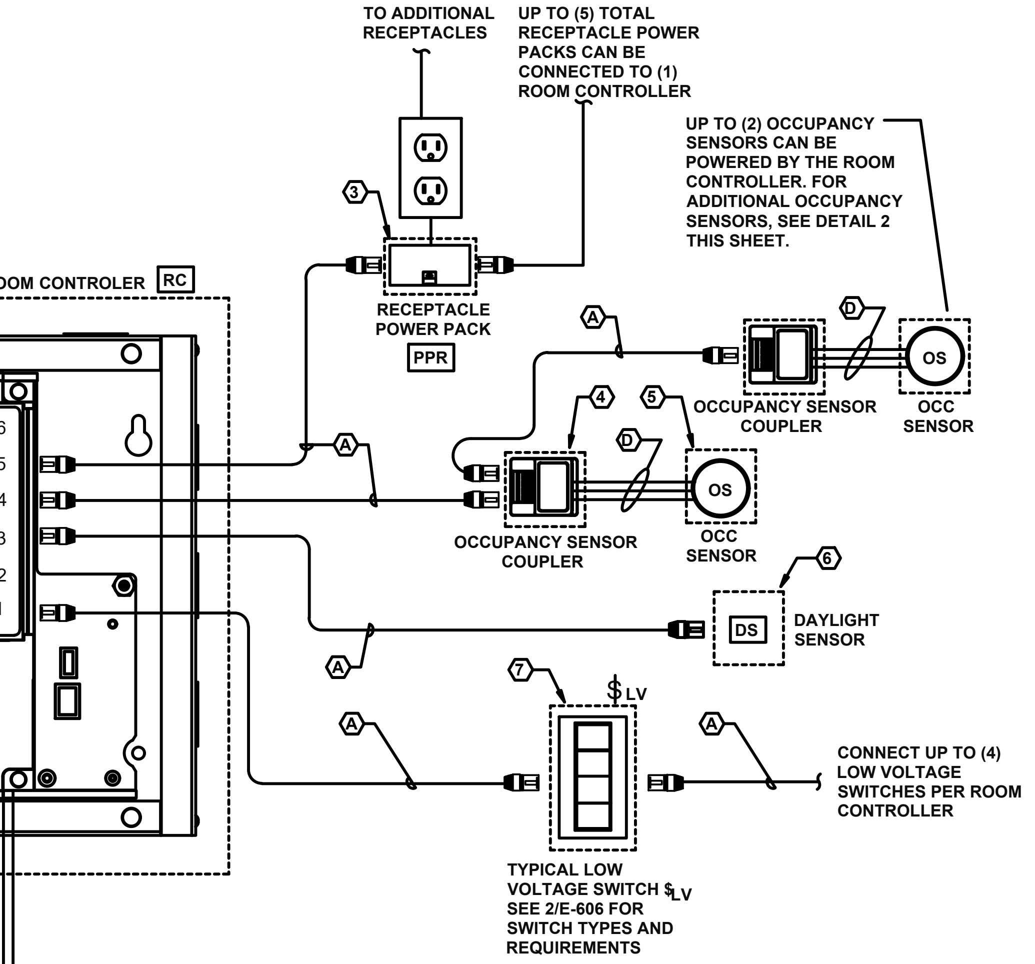
LUMINAIRE DETAILS

SHEET ID
E-601

RTA SUBMITTAL

CESAM v20181203


LIGHTING LOAD ZONE (a)
LIGHTING LOAD ZONE (b)
LIGHTING LOAD ZONE (c)
1
ROOM CONTROLER RC
LINE VOLTAGE (277 VAC)
C
6
5
4
3
2
1
DIMMER ZONE c (0-10V DIMMING)
DIMMER ZONE c (0-10V DIMMING)
DIMMER ZONE b (0-10V DIMMING)
DIMMER ZONE b (0-10V DIMMING)
DIMMER ZONE a (0-10V DIMMING)
DIMMER ZONE a (0-10V DIMMING)
B


TO ADDITIONAL RECEPTACLES
UP TO (5) TOTAL RECEPTACLE POWER PACKS CAN BE CONNECTED TO (1) ROOM CONTROLLER
3
RECEPTACLE POWER PACK
PPR
UP TO (2) OCCUPANCY SENSORS CAN BE POWERED BY THE ROOM CONTROLLER. FOR ADDITIONAL OCCUPANCY SENSORS, SEE DETAIL 2 THIS SHEET.
A
D
OS
OCCUPANCY SENSOR COUPLER
OCC SENSOR
4
5
D
A
OCCUPANCY SENSOR COUPLER
OS
OCC SENSOR
6
DS
DAYLIGHT SENSOR
A
7
$LV
A
A
CONNECT UP TO (4) LOW VOLTAGE SWITCHES PER ROOM CONTROLLER
TYPICAL LOW VOLTAGE SWITCH $LV SEE 2/E-606 FOR SWITCH TYPES AND REQUIREMENTS

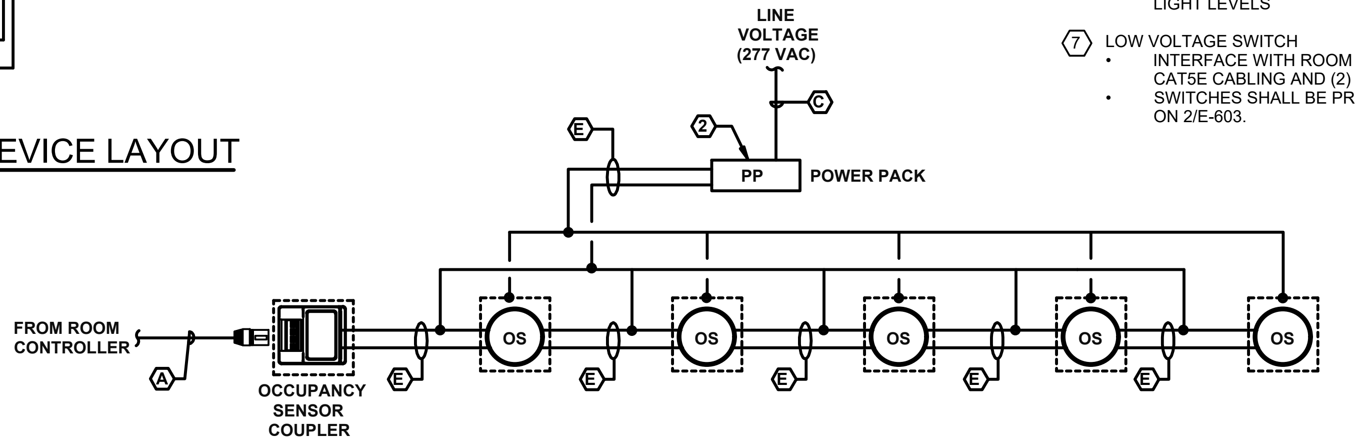
1 / E-602

LIGHTING CONTROLS - TYPICAL ROOM CONTROLLER/DEVICE LAYOUT

NOT TO SCALE

FEEDER SCHEDULE ⬡

MARK	CONDUCTORS	CONDUIT SI	CONDUIT ENGLISH	REMARKS
Ⓐ	CAT 5E	16mm	1/2"	CONTROL CABLING
Ⓑ	2 #16	16mm	1/2"	0 - 10V DIMMING
Ⓒ	2 #12 & 1 #12 GRD (UNLESS OTHERWISE NOTED)	16mm	1/2"	LINE VOLTAGE
Ⓓ	3 #18	16mm	1/2"	OCCUPANCY SENSOR (1-2 SENSORS)
Ⓔ	2 #18	16mm	1/2"	OCCUPANCY SENSOR (MORE THAN 2 SENSORS



2 / E-602

MULTIPLE OCCUPANCY SENSORS (3-5)

NOT TO SCALE

DETAIL NOTES

1. PRODUCTS SHALL BE UL LISTED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS & UL LISTING.
2. THE LOW VOLTAGE LIGHTING SYSTEM SHALL BE FURNISHED COMPLETE WITH PROPER SWITCHES, SENSORS, POWER PACKS, CONDUCTORS, COUPLERS, ADAPTERS, ETC. FOR A COMPLETE INSTALLATION SUITABLE FOR CONDITIONS/SCENARIOS SHOWN.

KEYED NOTES

① ROOM CONTROLLER
- PROVIDES LIGHTING AND RECEPTACLE CONTROL
- (3) LIGHTING ZONES WITH (3) 0-10V DIMMING OUTPUTS
- 277V, 20A INPUT. PLENUM RATED
- INPUTS FOR OCCUPANCY AND DAYLIGHT SENSORS. PROVIDES POWER FOR UP TO (2) OCCUPANCY SENSORS
- INPUTS FOR LOW VOLTAGE WALL SWITCHES
- OUTPUTS FOR RECEPTACLE POWERPACKS UP TO (5) RECEPTACLE POWERPACKS CAN BE CONNECTED TO A ROOM CONTROLLER

② POWER PACK
- PROVIDES LOW VOLTAGE POWER FOR ROOM SENSORS
- 277V, 20A INPUT. PLENUM RATED
- 24VDC, 225mA LOW VOLTAGE OUTPUT
- POWERS UP TO (5) OCCUPANCY SENSORS

③ POWER PACK RECEPTACLE
- PROVIDES RECEPTACLE CONTROL THROUGH INTERFACE WITH ROOM CONTROLLER
- 120V, 20A CONTACTS. PLENUM RATED
- RJ45, CAT5E INPUT

④ OCCUPANCY SENSOR COUPLER
- PROVIDES POWER TO OCCUPANCY SENSOR THROUGH CAT5E CABLING
- (2) RJ45 PORTS
- (4) LOW VOLTAGE POWER OUTPUTS FOR OCCUPANCY SENSOR

⑤ OCCUPANCY SENSOR
- LOW VOLTAGE INPUT (10-30VDC) FROM LIGHTING POWER PACK OR ROOM CONTROLLER
- DUAL TECH SENSING (PIR AND US)
- TIME DELAY SETTINGS FOR 5, 15, OR 30 MIN.

⑥ DAYLIGHT SENSOR
- LOW VOLTAGE INPUT (24VDC) FROM ROOM CONTROLLER
- OPEN LOOP TYPE WITH (3) DIFFERENT PRESET LIGHT LEVELS

⑦ LOW VOLTAGE SWITCH
- INTERFACE WITH ROOM CONTROLLER VIA CAT5E CABLING AND (2) RJ45 CONNECTIONS
- SWITCHES SHALL BE PREDEFINED AS SHOWN ON 2/E-603.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
KLH/JDW
DRAWN BY:
EWH
CHECKED BY:
KLH/JDW
SUBMITTED BY:
-
SIZE:
ANSI D

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
FILE NAME:
MEF24005E-602.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

LIGHTING CONTROLS - TYPICAL ROOM
CONTROLLER / DEVICE LAYOUT

SHEET ID

E-602

RTA SUBMITTAL

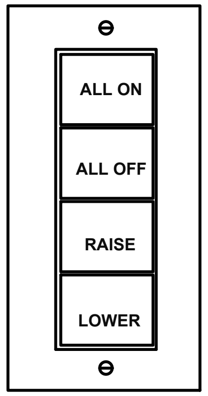
LIGHTING CONTROL SEQUENCE OF OPERATIONS

	AUTO ON	MANUAL ON (VACANCY)	AUTO OFF (15 MIN MAX)	AUTO OFF (30 MIN MAX)	AUTO PARTIAL OFF	RECEP-TACLE CONTROL	TASK LIGHTING OFF (5 MIN MAX)	MANUAL ON/OFF	MANUAL DIMMING CONTROL	MANUAL BI-LEVEL REDUCTION	TASK LIGHTING (MANUAL ON)	AUTO CONT'D DIM	LOW VOLTAGE SWITCH TYPE (SEE BELOW)	
ROOM TYPE	OCCUPANCY SENSOR							MANUAL CONTROL				DAYLIGHT CTL		SEQUENCE OF OPERATIONS
INDIVIDUAL OFFICES (WITH DAYLIGHT)		X	X			X	X	X	X		X	X	A	MANUAL ON TO 70% OUTPUT. OCC SENSOR TIME OUT. CONT'D DIMMING WITH DAYLIGHT. RECEPTACLE CONTROL WITH OCC SENSOR.
INDIVIDUAL OFFICES (NO DAYLIGHT)		X	X			X	X	X	X		X		A	MANUAL ON TO 70% OUTPUT. PROVIDE WITH DIMMING CONTROL. OCC SENSOR TIME OUT. RECEPTACLE CONTROL WITH OCC SENSOR.
OPEN OFFICES (NO DAYLIGHT)	X		X			X	X	X		X	X		B	AUTO ON WITH OCC SENSOR TO 50% OUTPUT WITH MANUAL BI-LEVEL INCREASE TO 100%. OCC SENSOR TIME OUT. RECEPTACLE CONTROL WITH OCC SENSOR.
CORRIDOR (NO DAYLIGHT)	X				X			X					C	AUTO ON WITH OCC SENSOR TO 100%. OCC SENSOR REDUCES TO 50% WITH VACANCY. MANUAL ON/OFF CONTROL.
BREAK ROOM (NO DAYLIGHT)		X	X			X		X		X			B	AUTO ON WITH OCC SENSOR TO 50% OUTPUT WITH MANUAL BI-LEVEL INCREASE TO 100%. OCC SENSOR TIME OUT. RECEPTACLE CONTROL WITH OCC SENSOR.
STORAGE ROOM		X	X					X					C	MANUAL ON. OCC SENSOR TIME OUT.
AIRCRAFT HANGAR		X		X				X		X		X	B	MANUAL ON TO 100% OUTPUT. OCC SENSOR TIME OUT. CONT'D DIMMING WITH DAYLIGHT. MANUAL BI-LEVEL CONTROL.
OFFICE SUPPORT AREAS		X		X		X	X	X		X	X	X	B	MANUAL ON TO 100% OUTPUT. OCC SENSOR TIME OUT. CONTD DIMMING WITH DAYLIGHT. RECEPTACLE CONTROL WITH OCC SENSOR.
CONFERENCE ROOMS		X	X			X		X	X				D	MANUAL ON TO 100% OUTPUT. OCC SENSOR TIME OUT. SEPARATE CONTROL OF DOWNLIGHTS. RECEPTACLE CONTROL WITH OCC SENSOR.

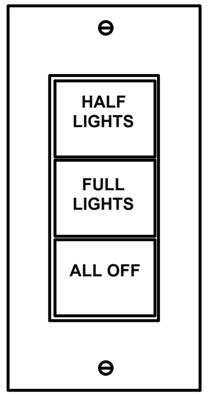
NOTES:
1. LIGHTING CONTROLS SHALL BE PROGRAMMED AS SHOWN.
2. SEQUENCE OF OPERATIONS REFERENCE UFC 3 - 530 - 01 AND ASHRAE 90.1 - 2013.

DETAIL - TYPICAL BUILDING INTERIOR LOW VOLTAGE LIGHTING SYSTEM REQUIREMENTS

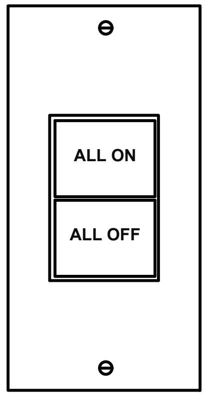
1 E-606 N.T.S



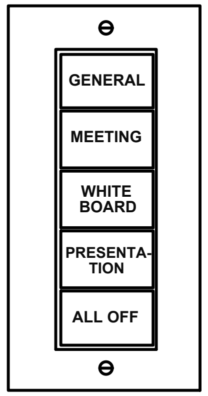
TYPICAL 4 POSITION LOW VOLTAGE SWITCH
A $\$_{LVA}$



TYPICAL 3 POSITION LOW VOLTAGE SWITCH
B $\$_{LVB}$



TYPICAL 2 POSITION LOW VOLTAGE SWITCH
C $\$_{LVC}$



TYPICAL 5 POSITION LOW VOLTAGE SWITCH
D $\$_{LVD}$

LOW VOLTAGE SWITCH REQUIREMENTS

2 E-606 N.T.S

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
DESIGNED BY: KLH/JDW
DRAWN BY: EWH
CHECKED BY: KLH/JDW
SUBMITTED BY: -
SIZE: ANSI D
FILE NAME: MEF24005E-603.dwg

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
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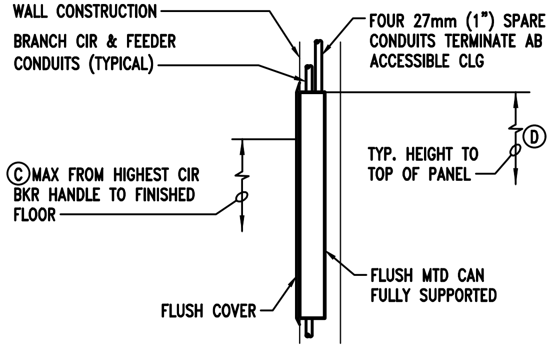
LIGHTING CONTROLS

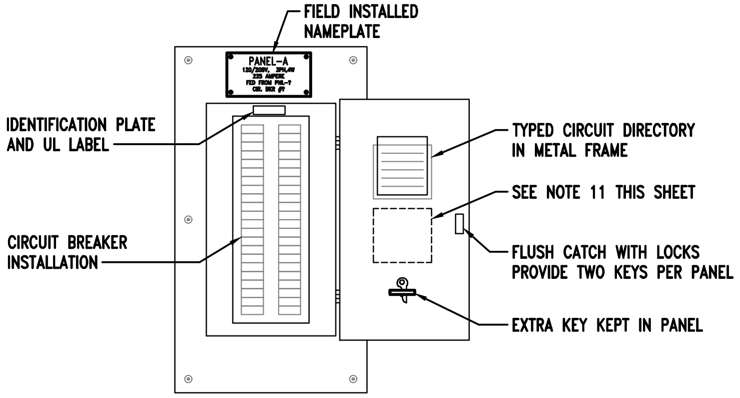
SHEET ID
E-603

RTA SUBMITTAL

CESAM v20181203

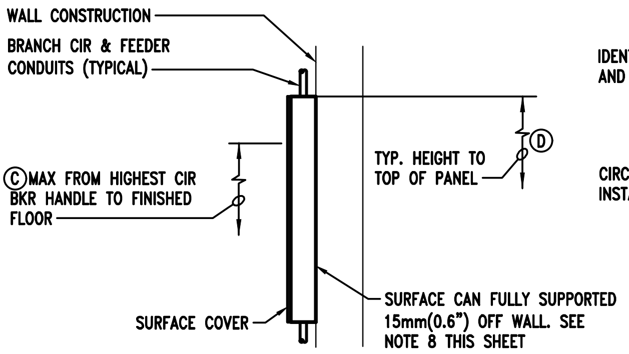

WALL CONSTRUCTION
BRANCH CIR & FEEDER CONDUITS (TYPICAL)
FOUR 27mm (1") SPARE CONDUITS TERMINATE AB ACCESSIBLE CLG
TYP. HEIGHT TO TOP OF PANEL
D
C MAX FROM HIGHEST CIR BKR HANDLE TO FINISHED FLOOR
FLUSH MTD CAN FULLY SUPPORTED
FLUSH COVER

FLUSH MTG.

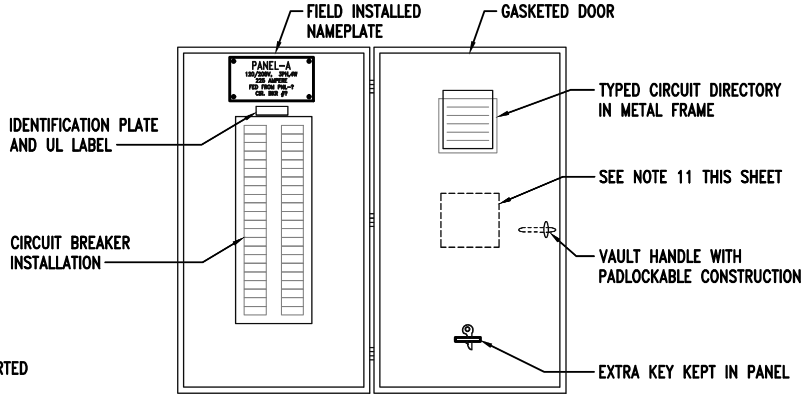

FIELD INSTALLED NAMEPLATE
PANEL-A
120/208V, 3PH,4W
225 AMPERE
FED FROM PNL-?
CIR. BKR #?
IDENTIFICATION PLATE AND UL LABEL
CIRCUIT BREAKER INSTALLATION
TYPED CIRCUIT DIRECTORY IN METAL FRAME
SEE NOTE 11 THIS SHEET
FLUSH CATCH WITH LOCKS PROVIDE TWO KEYS PER PANEL
EXTRA KEY KEPT IN PANEL

TYPICAL FRONT VIEW - NEMA 1

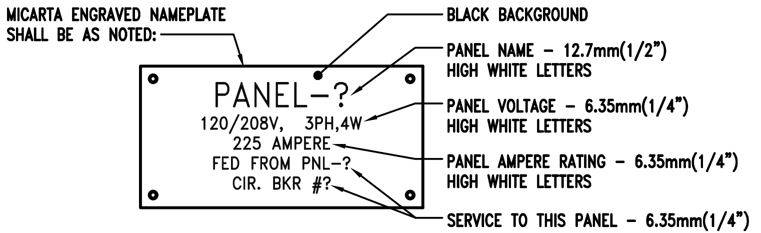
DIMENSION BLOCK		
REF	SI	ENGLISH
A	1m	3'-6"
B	.38m	1'-3"
C	2.0m	6'-7"
D	1.82m	6'-0"


WALL CONSTRUCTION
BRANCH CIR & FEEDER CONDUITS (TYPICAL)
TYP. HEIGHT TO TOP OF PANEL
D
C MAX FROM HIGHEST CIR BKR HANDLE TO FINISHED FLOOR
SURFACE COVER
SURFACE CAN FULLY SUPPORTED 15mm(0.6") OFF WALL. SEE NOTE 8 THIS SHEET

SURFACE MTG.


FIELD INSTALLED NAMEPLATE
GASKETED DOOR
PANEL-A
IDENTIFICATION PLATE AND UL LABEL
CIRCUIT BREAKER INSTALLATION
TYPED CIRCUIT DIRECTORY IN METAL FRAME
SEE NOTE 11 THIS SHEET
VAULT HANDLE WITH PADLOCKABLE CONSTRUCTION
EXTRA KEY KEPT IN PANEL

TYPICAL FRONT VIEW - NEMA 3R AND 4X


MICARTA ENGRAVED NAMEPLATE SHALL BE AS NOTED:
PANEL-?
120/208V, 3PH,4W
225 AMPERE
FED FROM PNL-?
CIR. BKR #?
BLACK BACKGROUND
PANEL NAME - 12.7mm(1/2") HIGH WHITE LETTERS
PANEL VOLTAGE - 6.35mm(1/4") HIGH WHITE LETTERS
PANEL AMPERE RATING - 6.35mm(1/4") HIGH WHITE LETTERS
SERVICE TO THIS PANEL - 6.35mm(1/4") HIGH WHITE LETTERS

TYP. PANEL NAMEPLATE
(SEE NOTE 13)

PANELBOARD SCHEDULE & DETAIL - KEY LEGEND

MOUNTING

F	FLUSH
FS	FREE STANDING
S	SURFACE

ELECTRICAL

A	AMPERE
PH	PHASE
V	VOLTAGE
W	WIRE
Y	WYE
△	DELTA

MAINS & CIRCUIT BREAKERS

GF	GROUND FAULT CIRCUIT INTERRUPTER
L	LOCKHANDLE TYPE
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
SD	SWITCH DUTY
ST	SHUNT TRIP TYPE

MISC. TERMS

AIC	AMPERE INTERRUPTING CAPACITY
BCB	BOLT-ON CIRCUIT BREAKER
SCCR	SHORT CIRCUIT CURRENT RATING
FUS	FUSIBLE SWITCH
LC	LOAD CENTER
SE	SERVICE ENTRANCE

PANELBOARD SCHEDULE AND DETAIL NOTES

1. PANELBOARD & PANELBOARD INSTALLATION TO BE IN ACCORDANCE WITH NFPA 70, CURRENT NEC. ALL PANELBOARDS SHALL BE UL LISTED AND INSTALLED IN ACCORDANCE WITH THIS LISTING AND FULLY SUPPORTED BY MEANS DESIGNED FOR THAT LISTED INSTALLATION. ALL CLEARANCES REQUIRED BY CODE SHALL BE MAINTAINED AS A MINIMUM.

2. EACH PANELBOARD SHALL BE FURNISHED COMPLETE WITH THE PROPERLY SIZED CAN, INTERNAL HARDWARE, DEVICES, COMPONENTS, SUPPORTING STRUCTURES, ETC., FOR A COMPLETE INSTALLATION TO PROVIDE THE DESIGNED PERFORMANCE UNDER THE AMBIENT CONDITIONS ENCOUNTERED. ALL DEVICES, COMPONENTS, FITTINGS, SUPPORTS, ETC., SHALL BE COORDINATED TO PROVIDE A COMPLETE UL LISTED INSTALLATION. ALL DEVICES INSTALLED SHALL HAVE AN INTERRUPTING RATING GREATER THAN OR EQUAL TO THE SPECIFIED SCCR.

3. EACH PANELBOARD SHALL BE FURNISHED WITH A GROUND BAR BONDED TO THE PANEL ENCLOSURE. THIS GROUND BUS SHALL BE UTILIZED TO BOND ALL GROUNDING PROVISIONS IN ORDER TO ESTABLISH EQUAL POTENTIAL TO ALL GROUNDED COMPONENTS OF THE POWER SYSTEM NETWORK.

4. PANELBOARD CANS SHALL BE RIGID AND CONTAIN KNOCK-OUT PROVISIONS TO FACILITATE THE TERMINATION OF THE NUMBER AND SIZE OF CONDUIT SYSTEMS REQUIRED.

5. THE TERMINATION POINT OF THE FEEDER SERVING EACH ASSEMBLY SHALL BE AT THE NEAREST POINT OF FEEDER ENTRY TO MINIMIZE CONDUCTOR FILL IN THE CAN. COORDINATE TOP/BOTTOM FEED PANELBOARD PROVISIONS WITH EACH FEEDER INSTALLATION.

6. PROVIDE THE PROPERLY SIZED CONDUCTOR TERMINATION POINTS OR LUGS (MULTIPLE LUGS WHEN PARALLEL FEEDERS ARE USED) FOR THE NUMBER AND SIZE CIRCUITS INDICATED.

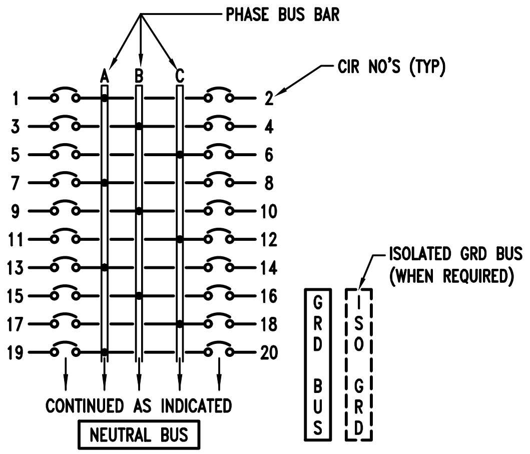
7. CONDUCTORS, SPLICES AND TERMINATIONS SHALL BE ACCESSIBLE. ONLY CONDUCTORS RATED AND SIZED FOR THE TEMPERATURE OF THE TERMINATION SHALL BE USED.

8. PANELBOARDS SHALL NOT BE INSTALLED IN CONTACT WITH COMBUSTIBLE MATERIALS. ADEQUATE SPACE FOR AIR CIRCULATION AND CODE COMPLIANCE SHALL BE PROVIDED AS A MINIMUM. FURNISH SPACERS, WASHERS, SUPPORT DEVICES, ETC., AS REQUIRED TO MAINTAIN PROPER CLEARANCES. EXTERIOR PANELS SHALL CONTAIN AT LEAST 15mm(0.6") OF AIR SPACE BETWEEN THE CABINET AND SURFACE.

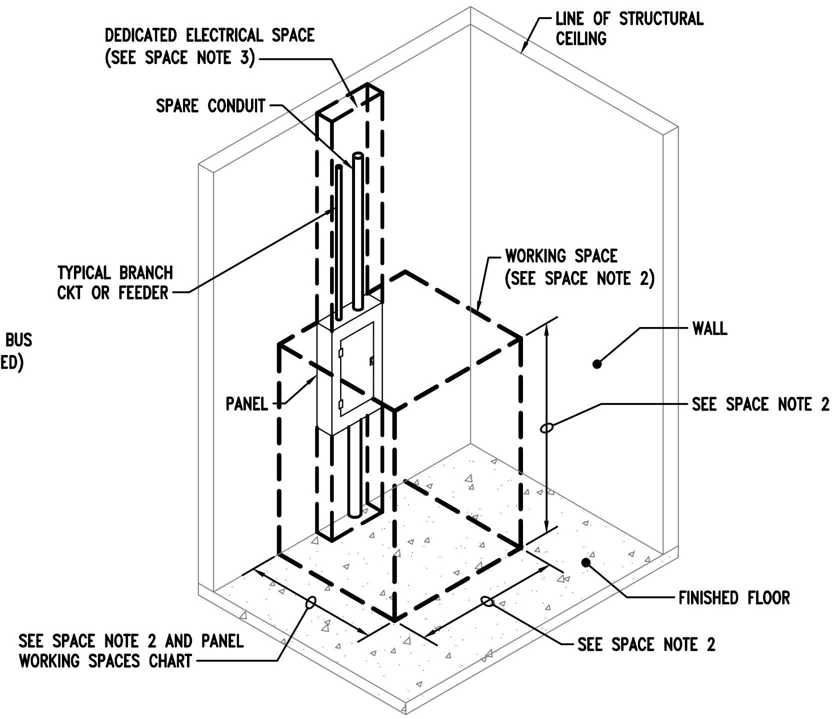
9. EACH PANELBOARD SHALL BE FURNISHED WITH THE FOLLOWING ACCESSORIES:
   * DOOR - IN - DOOR TRIM
   * TWO KEYS
   * ONE-HALF PINT CONTAINER OF TOUCH-UP PAINT FOR EACH SURFACE MOUNTED PANELBOARD
   * METAL DIRECTORY FRAME WITH TYPED DIRECTORY
   * FILLER PLATES FOR KNOCK-OUT SPACES FOR UNUSED OPENINGS

10. ALL FLUSH MOUNTED PANELBOARDS SHALL BE PROVIDED WITH FOUR (4) 27mm(1") EMPTY SPARE CONDUITS TO ABOVE THE NEAREST ACCESSIBLE CEILING.

11. PROVIDE ARC-FLASH HAZARD WARNING SIGNS PER NFPA 70 & 70E.
    * REFER TO ANSI Z535.4
    * LOCATE ON FRONT OF DOOR.



TYPICAL PANELBOARD 3-PHASE CIRCUITING DIAGRAM


DEDICATED ELECTRICAL SPACE (SEE SPACE NOTE 3)
LINE OF STRUCTURAL CEILING
SPARE CONDUIT
TYPICAL BRANCH CKT OR FEEDER
WORKING SPACE (SEE SPACE NOTE 2)
WALL
PANEL
SEE SPACE NOTE 2
FINISHED FLOOR
SEE SPACE NOTE 2 AND PANEL WORKING SPACES CHART
SEE SPACE NOTE 2

WORKING CLEARANCE DIAGRAM

PANEL WORKING SPACES

NOMINAL VOLTAGE TO GROUND	MINIMUM CLEAR DISTANCE		
	CONDITION 1	CONDITION 2	CONDITION 3
0-150	914mm (3')	914mm (3')	914mm (3')
151-600	914mm (3')	1.07m (3'-6")	1.22m (4')

NOTE:
WHERE THE CONDITIONS ARE AS FOLLOWS:
- CONDITION 1 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE THAT ARE EFFECTIVELY GUARDED BY INSULATING MATERIALS.
- CONDITION 2 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE. CONCRETE, BRICK, OR TILE WALLS SHALL BE CONSIDERED AS GROUNDED.
- CONDITION 3 - EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE.

SPACE NOTES:

1. DIMENSIONS SHOWN ARE MINIMUM.
2. WORKING SPACE IS DEFINED AS THE SPACE IN FRONT OF THE PANEL FOR EXAMINATION, ADJUSTMENTS, SERVICING AND/OR MAINTENANCE WHILE ENERGIZED. IN ALL CASES WORK SPACES SHALL PERMIT AT LEAST A 90 DEG. OPENING OF EQUIPMENT DOORS OR HINGED PANELS.
   - WIDTH: 762mm(30") OR WIDTH OF EQUIPMENT (WHICHEVER IS GREATER)
   - HEIGHT: 2.0m(6'-6") FROM FLOOR OR HEIGHT OF EQUIPMENT. (WHICHEVER IS GREATER)
   - DEPTH: DEPENDS ON CONDITIONS OUTLINED IN PANEL WORKING SPACES CHART.
3. DEDICATED ELECTRICAL SPACE IS DEFINED AS THE SPACE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT, EXTENDING FROM FLOOR TO A HEIGHT OF 1.8m(6'-0") ABOVE THE EQUIPMENT OR TO THE STRUCTURAL CEILING. (WHICHEVER IS LOWER)
4. SEE NFPA 70, CURRENT NEC.

A
E701

DETAIL - TYPICAL PANELBOARD PROVISIONS

NO SCALE

TYPICAL PANELBOARD DETAILS AND REQUIREMENTS

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: KLH/JDW	ISSUE DATE: JUNE 2024	
DRAWN BY: EWH	SOLICITATION NO.: -	
CHECKED BY: KLH/JDW	CONTRACT NO.: -	
SUBMITTED BY: -	PROJECT NUMBER: MEF24005	
SIZE: ANSI D	FILE NAME: MEF24005E-700.dwg	

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

TYPICAL 3-PHASE PANELBOARD
DETAILS AND REQUIREMENTS

SHEET ID
E-700

RTA SUBMITTAL

CESAM v20181203

SWITCHBOARD SCHEDULE

SWITCHBOARD: SE452 MAINS: 1,200 AMP-GFP MCB - ULSE SERVICE: 480/277 VOLTS, 3 PHASE, 4 WIRE
TYPE: BOLT - ON AIC: 42,000 AMPERES MOUNTED: FREE STANDING

LOAD DIRECTORY	VOLT AMPERE LOAD			CIRCUIT BREAKERS						VOLT AMPERE LOAD			LOAD DIRECTORY
	PHASE A	PHASE B	PHASE C	TRIP	POLE	CIR. #	CIR. #	TRIP	POLE	PHASE A	PHASE B	PHASE C	
PNL-DP	=====	=====	=====				1	400		46,189	=====	=====	PNL-DP
(SUB BREAKER)	=====	=====	=====							=====	43,824	=====	(SUB BREAKER)
	=====	=====	=====						3	=====	=====	46,428	
GRD COOLING CART - 1	42,104	=====	=====	200		3	2	200		21,329	=====	=====	PRESSURE TESTER - 1
	=====	42,104	=====							=====	21,329	=====	
	=====	=====	42,104		3				3	=====	=====	21,329	
GRD COOLING CART - 2	42,104	=====	=====	200		5	4	200		21,329	=====	=====	PRESSURE TESTER - 2
	=====	42,104	=====							=====	21,329	=====	
	=====	=====	42,104		3				3	=====	=====	21,329	
GRD COOLING CART - 3	42,104	=====	=====	200		7	6	200		21,329	=====	=====	PRESSURE TESTER - 3
	=====	42,104	=====							=====	21,329	=====	
	=====	=====	42,104		3				3	=====	=====	21,329	
GRD COOLING CART - 4	42,104	=====	=====	200		9	8	200		21,329	=====	=====	PRESSURE TESTER - 4
	=====	42,104	=====							=====	21,329	=====	
	=====	=====	42,104		3				3	=====	=====	21,329	
FQ- 1	5,000	=====	=====	30		11	10	30		5,000	=====	=====	FQ - 3
	=====	5,000	=====							=====	5,000	=====	
	=====	=====	5,000		3				3	=====	=====	5,000	
FQ - 2	5,000	=====	=====	30		13	12	30		5,000	=====	=====	FQ - 4
	=====	5,000	=====							=====	5,000	=====	
	=====	=====	5,000		3				3	=====	=====	5,000	
SPARE		=====	=====	30		15	14				=====	=====	SPD
	=====		=====							=====		=====	(INTERNAL ASSEMBLY)
	=====	=====			3				3	=====	=====		
BREAKER PROVIONS 3/P		=====	=====			17	16				=====	=====	BREAKER PROVIONS 3/P
	=====		=====							=====		=====	
	=====	=====								=====	=====		
BREAKER PROVIONS 3/P		=====	=====			19	18				=====	=====	BREAKER PROVIONS 3/P
	=====		=====							=====		=====	
	=====	=====								=====	=====		
SUB TOTAL	178,416	178,416	178,416							141,505	139,140	141,744	SUB TOTAL

CONNECTED LOAD PHASE A 319,921 VA
CONNECTED LOAD PHASE B 317,556 VA
CONNECTED LOAD PHASE C 320,160 VA
TOTAL CONNECTED LOAD 957,637 VA = 1,152 AMF

PANELBOARD NOTES:
1. PANELBOARD SHALL BE UL LISTED FOR SERVICE ENTRANCE.
2. MAIN BREAKER SHALL BE GFP EQUIPPED WITH ARC FLASH MITIGATION MEANS.

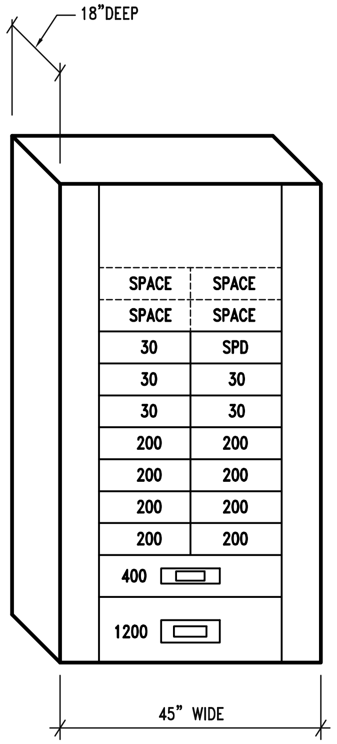
PANELBOARD SCHEDULE

PANEL: TR MAINS: 100 AMP MAIN LUGS SERVICE: 120/208 VOLTS, 3 PHASE, 4 WIRE
TYPE: BOLT - ON AIC: 22,000 AMPERES MOUNTED: SURFACE

LOAD DIRECTORY	VOLT AMPERE LOAD			CIRCUIT BREAKERS						VOLT AMPERE LOAD			LOAD DIRECTORY
	PHASE A	PHASE B	PHASE C	TRIP	POLE	CIR. #	CIR. #	TRIP	POLE	PHASE A	PHASE B	PHASE C	
RECEPTACLES	360	=====	=====	20	1	1	2	30		1,000	=====	=====	COMM RACK
RECEPTACLES	=====	360	=====	20	1	3	4		2	=====	1,000	=====	
RECEPTACLES	=====	=====	360	20	1	5	6	30	1	=====	=====	1,000	COMM RACK
SECURITY	500	=====	=====	30	1	7	8	20	1		=====	=====	SPARE
CU-1	=====	2,309	=====	30		9	10	20	1	=====		=====	SPARE
	=====	=====	2,309		2	11	12	20	1	=====	=====		SPARE
SPACE WITH BUSSING		=====	=====			13	14	20	1		=====	=====	SPACE WITH BUSSING
SPACE WITH BUSSING	=====		=====			15	16			=====		=====	SPACE WITH BUSSING
SPACE WITH BUSSING	=====	=====				17	18			=====	=====		SPACE WITH BUSSING
SPACE WITH BUSSING		=====	=====			19	20	40			=====	=====	SPD
SPACE WITH BUSSING	=====		=====			21	22			=====		=====	
SPACE WITH BUSSING	=====	=====				23	24		3	=====	=====		
SUB TOTAL	860	2,669	2,669							1,000	1,000	1,000	SUB TOTAL

CONNECTED LOAD PHASE A 1,860 VA
CONNECTED LOAD PHASE B 3,669 VA
CONNECTED LOAD PHASE C 3,669 VA
TOTAL CONNECTED LOAD 9,198 VA = 25.6 AMPS

PANELBOARD NOTES:



SWITCHBOARD ELEVATION

NO SCALE

SWITCHBOARD NOTES

1. THE SWITCHBOARD SHALL BE A FREE STANDING METAL-ENCLOSED, DISTRIBUTION SWITCHBOARD UNIT, FRONT ACCESSIBLE ONLY AND SHALL CONSIST OF BUT NOT BE LIMITED TO THE FOLLOWING:
    - a. NEMA 1 METAL-ENCLOSED ASSEMBLY
    - b. MAIN CIRCUIT BREAKER
    - c. DISTRIBUTION BREAKERS
    - d. SURGE PROTECTIVE DEVICE (SPD)
2. INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL SAFETY CODE (NESC) AND THE NATIONAL ELECTRICAL CODE (NEC).
3. ALL CONDUCTIVE PARTS OF EQUIPMENT, ENCLOSURES, FRAMES ETC., SHALL BE GROUNDED.
4. ALL CLEARANCES SHALL BE MAINTAINED PER NESC AND NEC. ALL PARTS, DEVICES, EQUIPMENT, ETC. WHICH REQUIRE MAINTENANCE, ADJUSTMENT, OPERATION OR EXAMINATION DURING NORMAL NETWORK OPERATION SHALL BE ARRANGED SO AS TO BE ACCESSIBLE BY THE PROVISION OF ADEQUATE WORKING SPACES, WORKING FACILITIES AND CLEARANCES. UNLESS NOTED OTHERWISE ALL CLEARANCES ARE MEASURED FROM SURFACE TO SURFACE.
5. ALL DIMENSIONS INDICATED IN THESE DOCUMENTS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS IN THE FIELD.
6. CIRCUIT BREAKERS SHALL BE AS FOLLOWS:
    - a. MAIN - MOLDED CASE WITH GFP AND ARC FLASH MODIFICATION
    - b. DISTRIBUTION - MOLDED CASE

US Army Corps
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MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
-
CONTRACT NO.:
-
PROJECT NUMBER:
MEF24005
DESIGNED BY:
KLH/JDW
DRAWN BY:
EWH
CHECKED BY:
KLH/JDW
SUBMITTED BY:
-
SIZE:
ANSI D
FILE NAME:
MEF24005E-701.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SWITCHBOARD AND
PANELBOARD SCHEDULES

SHEET ID
E-701

RTA SUBMITTAL

CESAM v20181203

PANELBOARD SCHEDULE

PANEL: DP | MAINS: 400 AMP MAIN LUGS | SERVICE: 480/277 VOLTS, 3 PHASE, 4 WIRE
TYPE: BOLT - ON | AIC: 42,000 AMPERES | MOUNTED: SURFACE

LOAD DIRECTORY	VOLT AMPERE LOAD			CIRCUIT BREAKERS						VOLT AMPERE LOAD			LOAD DIRECTORY
	PHASE A	PHASE B	PHASE C	TRIP	POLE	CIR. #	CIR. #	TRIP	POLE	PHASE A	PHASE B	PHASE C	
INTERIOR LIGHTING	940	=====	=====	20	1	1	2	175		20,833	=====	=====	PNL-M1
INTERIOR LIGHTING	=====	755	=====	20	1	3	4			=====	20,833	=====	
HANGAR LIGHTING	=====	=====	1,400	20	1	5	6		3	=====	=====	20,833	
HANGAR LIGHTING	1,400	=====	=====	20	1	7	8	200		21,616	=====	=====	PNL-LP1
HANGAR LIGHTING	=====	1,400	=====	20	1	9	10			=====	20,341	=====	
HANGAR LIGHTING	=====	=====	1,400	20	1	11	12		3	=====	=====	22,345	
HANGAR LIGHTING	1,400	=====	=====	20	1	13	14	20	1		=====	=====	SPARE
EXTERIOR LIGHTING	=====	495	=====	20	1	15	16	20	1	=====		=====	SPARE
EXTERIOR LIGHTING	=====	=====	450	20	1	17	18	20	1	=====	=====		SPARE
SPARE		=====	=====	20	1	19	20	20	1		=====	=====	SPARE
SPARE	=====		=====	20	1	21	22	20	1	=====		=====	SPARE
SPARE	=====	=====		20	1	23	24	20	1	=====	=====		SPARE
SPARE		=====	=====	20	1	25	26	20	1		=====	=====	SPARE
SPACE WITH BUSSING	=====		=====			27	28			=====		=====	SPACE WITH BUSSING
SPACE WITH BUSSING	=====	=====				29	30			=====	=====		SPACE WITH BUSSING
SPACE WITH BUSSING		=====	=====			31	32				=====	=====	SPACE WITH BUSSING
SPACE WITH BUSSING	=====		=====			33	34			=====		=====	SPACE WITH BUSSING
SPACE WITH BUSSING	=====	=====				35	36			=====	=====		SPACE WITH BUSSING
SPACE WITH BUSSING		=====	=====			37	38	40			=====	=====	SPD
SPACE WITH BUSSING	=====		=====			39	40			=====		=====	
SPACE WITH BUSSING	=====	=====				41	42		3	=====	=====		
SUB TOTAL	3,740	2,650	3,250							42,449	41,174	43,178	SUB TOTAL

CONNECTED LOAD PHASE A 46,189 VA
CONNECTED LOAD PHASE B 43,824 VA
CONNECTED LOAD PHASE C 46,428 VA
TOTAL CONNECTED LOAD 136,441 VA = 164 AMPS

PANELBOARD NOTES:

PANELBOARD SCHEDULE

PANEL: M1 | MAINS: 225 AMP MAIN LUGS | SERVICE: 480/277 VOLTS, 3 PHASE, 4 WIRE
TYPE: BOLT - ON | AIC: 42,000 AMPERES | MOUNTED: SURFACE

LOAD DIRECTORY	VOLT AMPERE LOAD			CIRCUIT BREAKERS						VOLT AMPERE LOAD			LOAD DIRECTORY
	PHASE A	PHASE B	PHASE C	TRIP	POLE	CIR. #	CIR. #	TRIP	POLE	PHASE A	PHASE B	PHASE C	
AIR COMPRESSOR	18,005	=====	=====	125		1	2	15		970	=====	=====	HVLS - 1
	=====	18,005	=====			3	4			=====	970	=====	
	=====	=====	18,005		3	5	6		3	=====	=====	970	
EF-5	444	=====	=====	15		7	8	15		970	=====	=====	HVLS - 2
	=====	444	=====			9	10			=====	970	=====	
	=====	=====	444		3	11	12		3	=====	=====	970	
EF - 6	444	=====	=====	15		13	14	20	1		=====	=====	SPARE
	=====	444	=====			15	16	20	1	=====		=====	SPARE
	=====	=====	444		3	17	18	20	1	=====	=====		SPARE
SPARE		=====	=====	20	1	19	20	20	1		=====	=====	SPARE
SPARE	=====		=====	20	1	21	22	20	1	=====		=====	SPARE
SPARE	=====	=====		20	1	23	24			=====	=====		SPACE WITH BUSSING
SPARE		=====	=====	20	1	25	26				=====	=====	SPACE WITH BUSSING
SPACE WITH BUSSING	=====		=====			27	28			=====		=====	SPACE WITH BUSSING
SPACE WITH BUSSING	=====	=====				29	30			=====	=====		SPACE WITH BUSSING
SPACE WITH BUSSING		=====	=====			31	32				=====	=====	SPACE WITH BUSSING
SPACE WITH BUSSING	=====		=====			33	34			=====		=====	SPACE WITH BUSSING
SPACE WITH BUSSING	=====	=====				35	36			=====	=====		SPACE WITH BUSSING
SPACE WITH BUSSING		=====	=====			37	38	40			=====	=====	SPD
SPACE WITH BUSSING	=====		=====			39	40			=====		=====	
SPACE WITH BUSSING	=====	=====				41	42		3	=====	=====		
SUB TOTAL	18,893	18,893	18,893							1,940	1,940	1,940	SUB TOTAL

CONNECTED LOAD PHASE A 20,833 VA
CONNECTED LOAD PHASE B 20,833 VA
CONNECTED LOAD PHASE C 20,833 VA
TOTAL CONNECTED LOAD 62,499 VA = 75.2 AMPS

PANELBOARD NOTES:

PANELBOARD SCHEDULE

PANEL: LP1 | MAINS: 400 AMP MCB | SERVICE: 120/208 VOLTS, 3 PHASE, 4 WIRE
TYPE: BOLT - ON | AIC:22,000 AMPERES | MOUNTED: SURFACE

LOAD DIRECTORY	VOLT AMPERE LOAD			CIRCUIT BREAKERS						VOLT AMPERE LOAD			LOAD DIRECTORY
	PHASE A	PHASE B	PHASE C	TRIP	POLE	CIR. #	CIR. #	TRIP	POLE	PHASE A	PHASE B	PHASE C	
EUH-1	1,500	=====	=====	20		1	2	20		1,104	=====	=====	AHU - 1
	=====	1,500	=====		2	3	4			=====	1,104	=====	
EUH-2	=====	=====	1,500	20		5	6		3	=====	=====	1,104	
	1,500	=====	=====		2	7	8	50		3,936	=====	=====	HP - 1
EUH-3	=====	1,500	=====	20		9	10			=====	3,936	=====	
	=====	=====	1,500		2	11	12		3	=====	=====	3,936	
RH 1,3,5	500	=====	=====	15	1	13	14	15	1	200	=====	=====	EF - 1,2
RH 2,4,6	=====	500	=====	15	1	15	16	15	1	=====	200	=====	EF - 3,4
FQR-1	=====	=====	1,500	40		17	18	40		=====	=====	1,500	FQR-2
	1,500	=====	=====		2	19	20		2	1,500	=====	=====	
DDC CONTROL PNL	=====	500	=====	20	1	21	22	30		=====	1,945	=====	MAU - 1
LEVEL ALARM PANEL	=====	=====	500	20	1	23	24		2	=====	=====	1,945	
GWH-3	500	=====	=====	20	1	25	26	30		1,945	=====	=====	MAU - 2
CP - 1	=====	100	=====	20	1	27	28		2	=====	1,945	=====	
HEAT TRACE 1	=====	=====	500	20	1	29	30	20	1	=====	=====	1,000	MOV ACTUATOR
HEAT TRACE 2	500	=====	=====	20	1	31	32	125		7,580	=====	=====	PNL-LP-2
SPACE WITH BUSSING	=====		=====			33	34			=====	8,409	=====	
SPACE WITH BUSSING	=====	=====				35	36		3	=====	=====	8,009	
SPACE WITH BUSSING		=====	=====			37	38	40			=====	=====	SPD
SPACE WITH BUSSING	=====		=====			39	40			=====		=====	
SPACE WITH BUSSING	=====	=====				41	42		3	=====	=====		
SUB TOTAL	6,000	4,100	5,500							16,265	17,539	17,494	SUB TOTAL

CONNECTED LOAD PHASE A 22,265 VA
CONNECTED LOAD PHASE B 21,639 VA
CONNECTED LOAD PHASE C 22,994 VA
TOTAL CONNECTED LOAD 66,898 VA = 186 AMPS

PANELBOARD NOTES:

PANELBOARD SCHEDULE

PANEL: LP2 | MAINS: 225 AMP MAIN LUGS | SERVICE: 120/208 VOLTS, 3 PHASE, 4 WIRE
TYPE: BOLT - ON | AIC: 22,000 AMPERES | MOUNTED: SURFACE

LOAD DIRECTORY	VOLT AMPERE LOAD			CIRCUIT BREAKERS						VOLT AMPERE LOAD			LOAD DIRECTORY
	PHASE A	PHASE B	PHASE C	TRIP	POLE	CIR. #	CIR. #	TRIP	POLE	PHASE A	PHASE B	PHASE C	
SPARE		=====	=====	20	1	1	2	100		1,860	=====	=====	PNL-TR
SPARE	=====		=====	20	1	3	4			=====	3,669	=====	
SPARE	=====	=====		20	1	5	6		3	=====	=====	3,669	
RECEPTACLES	720	=====	=====	20	1	7	8	20	1	180	=====	=====	RECEPTACLE
RECEPTACLES	=====	720	=====	20	1	9	10	20	1	=====	180	=====	RECEPTACLE
RECEPTACLES	=====	=====	540	20	1	11	12	20	1	=====	=====	500	REFRIDGERATOR
RECEPTACLES	720	=====	=====	20	1	13	14	20	1	720	=====	=====	RECEPTACLES
RECEPTACLES	=====	720	=====	20	1	15	16	20	1	=====	540	=====	RECEPTACLES
RECEPTACLES	=====	=====	720	20	1	17	18	20	1	=====	=====	720	RECEPTACLES
RECEPTACLES	360	=====	=====	20	1	19	20	20	1	720	=====	=====	RECEPTACLES
WATER COOLER	=====	500	=====	20	1	21	22	20	1	=====	720	=====	RECEPTACLES
RECEPTACLES	=====	=====	540	20	1	23	24	20	1	=====	=====	360	RECEPTACLES
RECEPTACLES	720	=====	=====	20	1	25	26	20	1	360	=====	=====	RECEPTACLES
RECEPTACLE PSP-1	=====	180	=====	20	1	27	28	20	1	=====	180	=====	RECEPTACLE PSP-3
RECEPTACLE PSP-2	=====	=====	180	20	1	29	30	20	1	=====	=====	180	RECEPTACLE PSP-4
RECEPTACLES	720	=====	=====	20	1	31	32	20	1	500	=====	=====	GWH-2
GWH-1	=====	500	=====	20	1	33	34	20	1	=====	500	=====	DUCT GAS HEATER
SPARE	=====	=====		20	1	35	36	20	1L	=====	=====	600	FMCU
SPARE		=====	=====	20	1	37	38	40			=====	=====	SPD
SPARE	=====		=====	20	1	39	40			=====		=====	
SPARE	=====	=====		20	1	41	42		3	=====	=====		
SUB TOTAL	3,240	2,620	1,980							4,340	5,789	6,029	SUB TOTAL

CONNECTED LOAD PHASE A 7,580 VA
CONNECTED LOAD PHASE B 8,409 VA
CONNECTED LOAD PHASE C 8,009 VA
TOTAL CONNECTED LOAD 23,998 VA = 66.7 AMPS

PANELBOARD NOTES:
1. "L" INDICATES A LOCK-HANDLE CIRCUIT BREAKER (RED COLOR)

US Army Corps
of Engineers ®

MARK | DESCRIPTION | DATE

DESIGNED BY: KLH/JDW
DRAWN BY: EWH
CHECKED BY: KLH/JDW
SUBMITTED BY: -
SIZE: ANSI D
FILE NAME: MEF24005E-702.dwg
ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

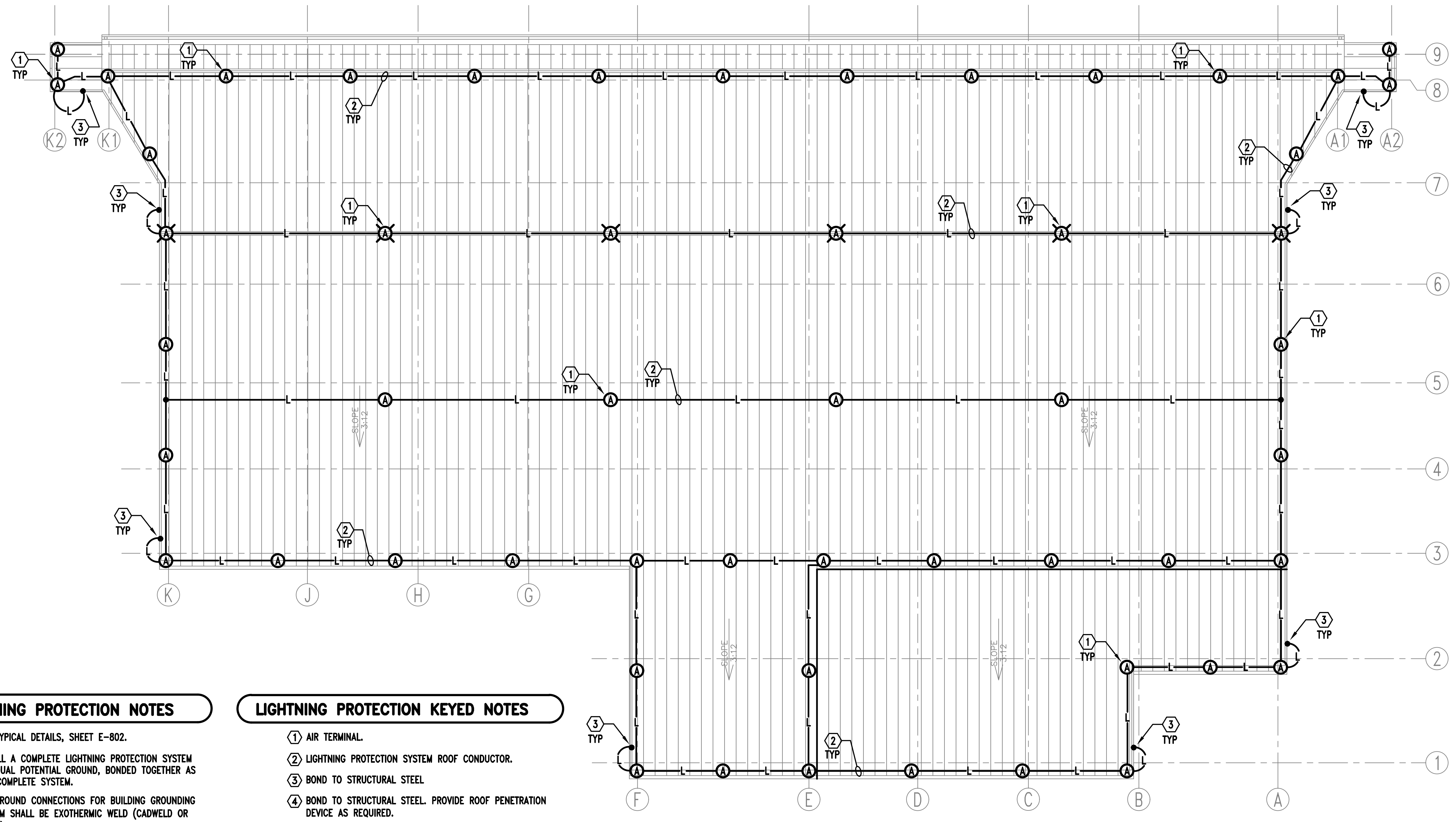
BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

PANELBOARD SCHEDULES

SHEET ID
E-702

RTA SUBMITTAL



LIGHTNING PROTECTION NOTES

1. SEE TYPICAL DETAILS, SHEET E-802.
2. INSTALL A COMPLETE LIGHTNING PROTECTION SYSTEM AT EQUAL POTENTIAL GROUND, BONDED TOGETHER AS ONE COMPLETE SYSTEM.
3. ALL GROUND CONNECTIONS FOR BUILDING GROUNDING SYSTEM SHALL BE EXOTHERMIC WELD (CADWELD OR EQUAL) AND ROOFTOP LIGHTNING PROTECTION SYSTEM CONNECTIONS SHALL BE MECHANICAL OR EXOTHERMIC WELD TYPE.
4. THE LIGHTNING PROTECTION SYSTEM SHALL BE CERTIFIED BY A 3RD PARTY INSPECTION ENTITY STATING COMPLIANCE TO AFI 32-1065 AND NFPA 780.
5. GROUND SYSTEM IMPEDANCE NOT TO EXCEED 10 OHMS.
6. ALL MATERIALS SHALL BE AS REQUIRED IN NFPA 780.
7. ALL AIR TERMINALS SHALL BE A MINIMUM OF 2'-0" IN LENGTH.

LIGHTNING PROTECTION KEYED NOTES

① AIR TERMINAL.
② LIGHTNING PROTECTION SYSTEM ROOF CONDUCTOR.
③ BOND TO STRUCTURAL STEEL
④ BOND TO STRUCTURAL STEEL. PROVIDE ROOF PENETRATION DEVICE AS REQUIRED.

LIGHTNING PROTECTION PLAN

NORTH

10' 5' 0 10' 20FT

SCALE: 1"=10'-0"

LIGHTNING PROTECTION SYSTEM LEGEND

•	LIGHTNING PROTECTION SYSTEM – GENERAL BONDING CONNECTION POINT
Ⓐ	LIGHTNING PROTECTION SYSTEM – AIR TERMINAL
Ⓐ	LIGHTNING PROTECTION SYSTEM – AIR TERMINAL – RIDGE MTD
Ⓟ	LIGHTNING PROTECTION SYSTEM – PENETRATION DEVICE
—G—	LIGHTNING PROTECTION SYSTEM – GROUNDING CONDUCTOR SYSTEM
—L—	LIGHTNING PROTECTION SYSTEM – MAIN ROOF CONDUCTOR SYSTEM
■P	LIGHTNING PROTECTION SYSTEM – GROUNDING PLATE
•ROD	LIGHTNING PROTECTION SYSTEM – GROUNDING ROD
⊙	LIGHTNING PROTECTION SYSTEM – GROUNDING TEST WELL
Ⓖ	LIGHTNING PROTECTION SYSTEM – STATIC GROUNDING POINT

US Army Corps
of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: KLH/JDW	ISSUE DATE: JUNE 2024
DRAWN BY: EWH	SOLICITATION NO.: -
CHECKED BY: KLH/JDW	CONTRACT NO.: -
SUBMITTED BY: -	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005E-801.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
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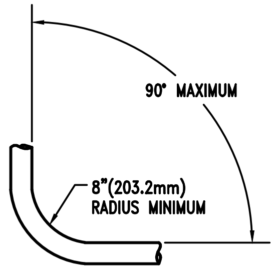
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

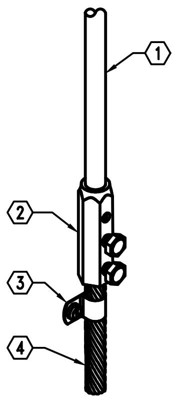
LIGHTNING PROTECTION
PLAN

SHEET ID
E-801

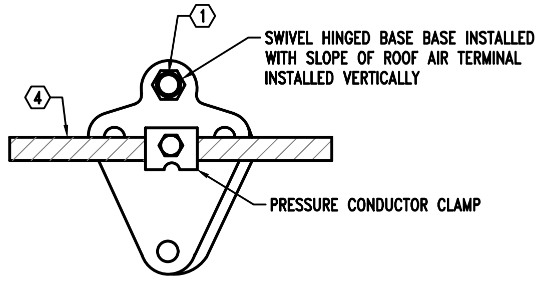
RTA SUBMITTAL



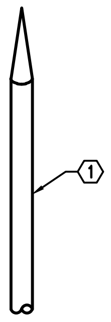
CONDUCTOR BENDS



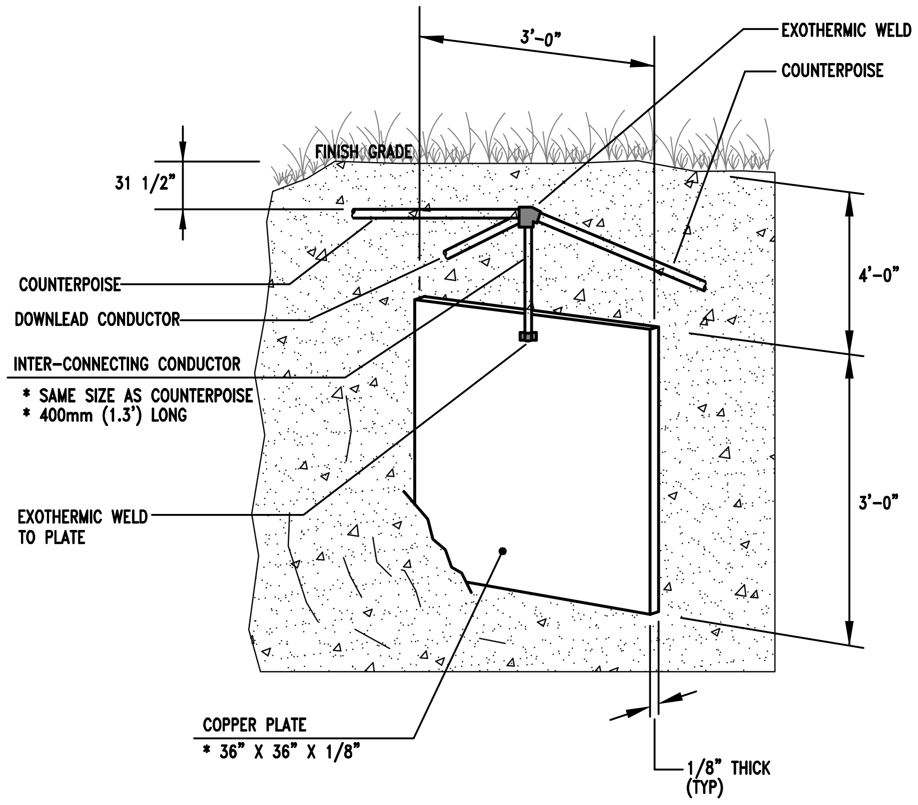
VERTICAL CONNECTION


①
④
SWIVEL HINGED BASE BASE INSTALLED WITH SLOPE OF ROOF AIR TERMINAL INSTALLED VERTICALLY
PRESSURE CONDUCTOR CLAMP

SWIVEL HINGED BASE SUPPORT



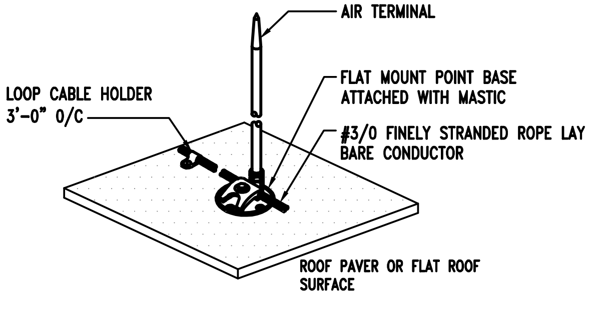
STRIKE TERMINATION DEVICE - AIR TERMINAL



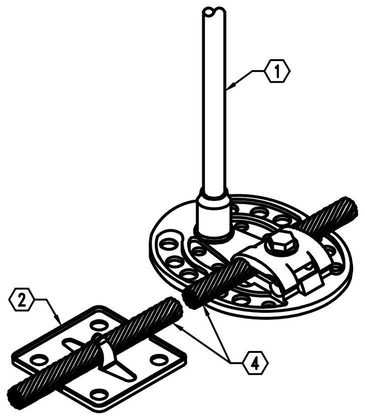
TYPICAL GROUNDING PLATE DETAIL

SHEET NOTES

1. THE COMPLETED INSTALLATION SHALL MEET THE REQUIREMENTS OF THE FOLLOWING:
   - * NFPA-780 STANDARD FOR THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS
   - * UL-96A INSTALLATION REQUIREMENTS FOR LIGHTNING PROTECTION SYSTEMS.
2. THE LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED COMPLETE WITH LISTED, LABELED OR APPROVED COMPONENTS AND SHALL BE THE MANUFACTURER'S LATEST UL APPROVED DESIGN.
3. THE SYSTEM DESIGN AND INSTALLATION AS A MINIMUM SHALL CONSIST OF THE FOLLOWING:
   - * STRIKE TERMINATION DEVICES (AIR TERMINALS)
   - * MAIN CONDUCTORS
   - * DOWN CONDUCTORS
   - * BONDING
   - * GROUND TERMINATIONS
   - * SURGE PROTECTIVE DEVICE (SPD)
4. COPPER LIGHTNING PROTECTION SYSTEM COMPONENTS SHALL NOT BE MOUNTED TO ALUMINUM SURFACES. ALUMINUM COMPONENTS SHALL BE USED TO AVOID ELECTROLYTIC CORROSION.
5. GROUNDED METAL BODIES WITHIN THE BONDING DISTANCE DETERMINED BY NFPA 780 SHALL BE BONDED TO THE NEAREST CONDUCTOR OR GROUND ELECTRODE.
6. ANY UNDERGROUND METALLIC PIPING ENTERING THE BUILDING SHALL BE BONDED TO THE NEAREST CONDUCTOR OR GROUND ELECTRODE.
7. ADHESIVE USED WITH ADHESIVE AIR TERMINAL BASES AND CONDUCTOR FASTENERS SHALL BE COMPATIBLE WITH ROOFING MEMBRANE - VERIFY WITH ROOFING SPECIFICATIONS.


AIR TERMINAL
FLAT MOUNT POINT BASE ATTACHED WITH MASTIC
LOOP CABLE HOLDER 3'-0" O/C
#3/0 FINELY STRANDED ROPE LAY BARE CONDUCTOR
ROOF PAVER OR FLAT ROOF SURFACE

AIR TERMINAL ON SURFACE DETAIL (TYP)



ADHESIVE SUPPORT

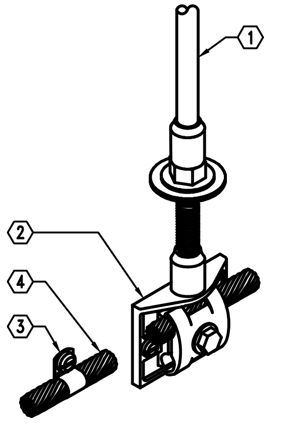
KEYED NOTES

① STRIKE TERMINATION DEVICE - TYPE SPECIFIED THIS SHEET. PROVIDE PROPER SUPPORT.

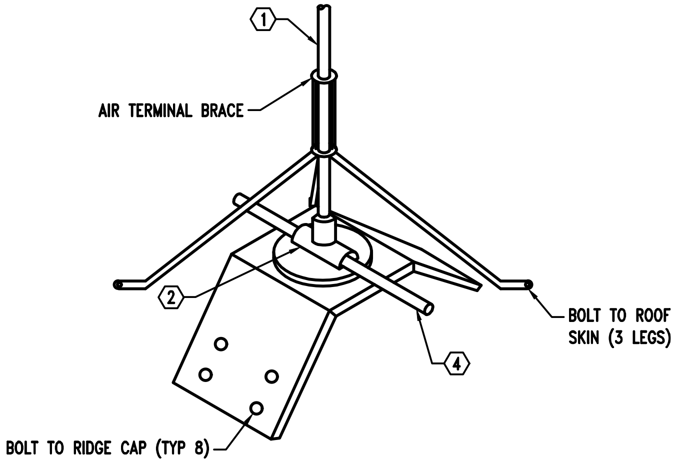
② PROVIDE THE PROPER FITTINGS AS REQUIRED BY THE LISTINGS OF THE MANUFACTURER FOR THE SYSTEM INSTALLED.

③ PROVIDE THE PROPER FASTENER SYSTEMS AS REQUIRED BY THE LISTINGS OF THE MANUFACTURER FOR THE SYSTEM INSTALLED.

④ MAIN CONDUCTOR SYSTEM SPECIFIED.



CONCEALED INSTALLATION



RIDGE SADDLE BASE

DETAIL - TYPICAL LIGHTNING PROTECTION SYSTEM DEVICES

A
E802

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024
SOLICITATION NO.: -
CONTRACT NO.: -
PROJECT NUMBER: MEF24005
DESIGNED BY: KLH/JDW
DRAWN BY: EWH
CHECKED BY: KLH/JDW
SUBMITTED BY: -
SIZE: ANSI D
FILE NAME: MEF24005E-802.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

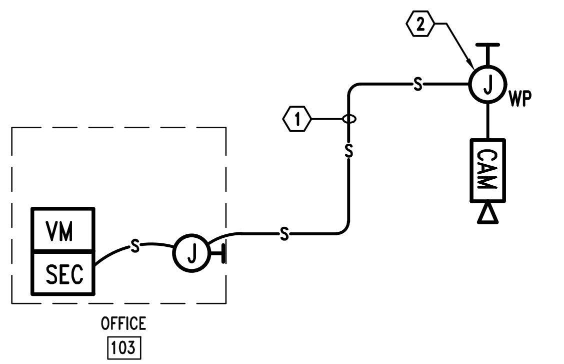
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

LIGHTNING PROTECTION
SYSTEM DEVICE DETAILS

SHEET ID

E-802

RTA SUBMITTAL



CCTV RISER KEYED NOTES

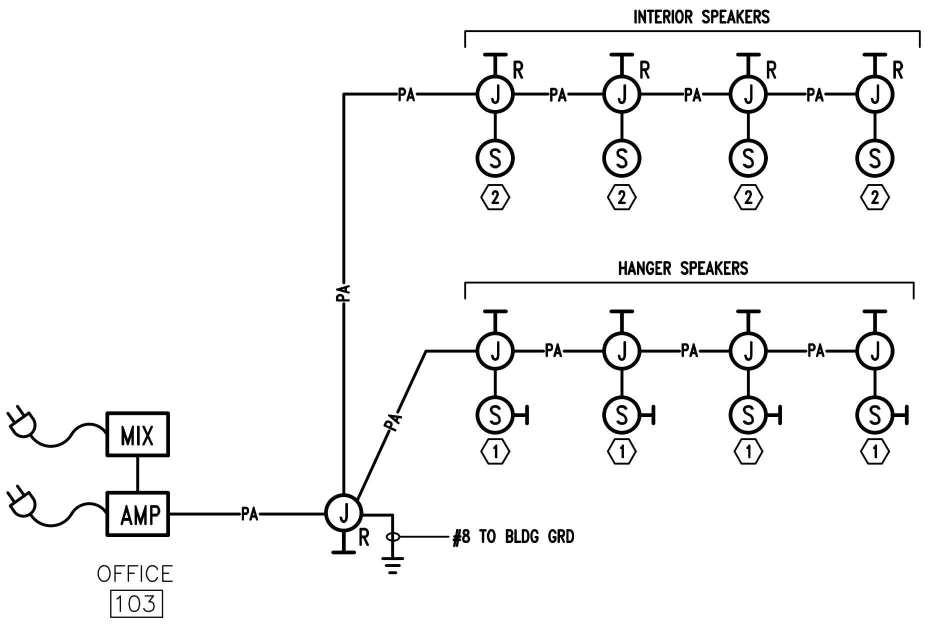
① SECURITY SYSTEM WIRING PROVISIONS IN CONDUIT.
- * 1" CONDUIT. RUN CONDUIT CONCEALED IN INTERIOR SPACES. STUB CONDUIT OUT TO CCTV CAMERA LOCATIONS.

② PROVIDE SURFACE MTD J-BOX FOR EXTERIOR CCTV CAMERA LOCATIONS.
- * CAST TYPE WITH GASKETED COVER

B
E-803

TYPICAL CLOSED CIRCUIT TELEVISION (CCTV) - RISER DIAGRAM

NO SCALE



PUBLIC ADDRESS RISER NOTES

1. INSTALL RECESSED CEILING SPEAKERS J-BOX FLUSH WALL MTD WITH INTER-CONNECTIONS WITH GRD, AMP, AND MIXER.
2. INSTALL WALL MTD SPEAKERS J-BOX SURFACE MTD WITH INTER-CONNECTIONS WITH GRD, AMP, AND MIXER.

PUBLIC ADDRESS RISER KEYED NOTES

① WALL MOUNTED LOUD SPEAKER
- * HORN TYPE, WEATHERPROOF, MOUNT 120"AFF
- * MINIMUM 7 WATTS WITH 120 DEGREES HORIZONTAL DISPERSION AND 130 FT OF EFFECTIVE LENGTH OF THROW.

② CEILING MTD LOUDSPEAKER
- * 8" DIAMETER CONE TYPE WITH WHITE ENAMEL RECESSED ENCLOSURE.
- * MINIMUM OF 7 WATTS WITH ADJUSTABLE POWER TAPS

A
E-803

TYPICAL PUBLIC ADDRESS SYSTEM - RISER DIAGRAM

NO SCALE

US Army Corps
of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: KLH/JDW	ISSUE DATE: JUNE 2024
DRAWN BY: EWH	SOLICITATION NO.: -
CHECKED BY: KLH/JDW	CONTRACT NO.: -
SUBMITTED BY: -	PROJECT NUMBER: MEF24005
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MOBILE, ALABAMA

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

AUXILIARY SYSTEM RISERS

SHEET ID
E-803

RTA SUBMITTAL

FEEDER SCHEDULE ⬡

MARK	CONDUCTORS	CONDUIT		REMARKS
		SI	ENGLISH	
A	4 #500kCMIL & 1 #3 (GRD)	91	3 1/2"	---
B	3 #6 & 1 #10 (GRD)	35	1 1/4"	
C	3 #10 & 1 #10 (GRD)	21	3/4"	
D	3 #12 & 1 #12 (GRD)	21	3/4"	
E	2 #10 & 1 #10 (GRD)	21	3/4"	
F	4 #1/0 & 1 #6 (GRD)	53	2"	
G	3 #8 & 1 #8 (GRD)	41	1 1/2"	
H	4 #3/0 & 1 #6 (GRD)	53	2"	
I	---	-	-	AIRCRAFT POWER CABLE ASSEMBLY. 400HZ & INTERLOCK SIGNAL CONDUCTORS. SEE B/E-509.
J	4 #1 & 1 #8 (GRD)	53	2"	
K	3 #3/0 & 1 #6(GRD)	53	2"	
L	4 #2/0 & 1 #6 (GRD)	53	2"	
M	3 #1 & 1 #8 (GRD)	41	1 1/2"	
N	3 #1/0 & 1 #6 (GRD)	41	1 1/2"	
O	4 CIR: 4 -350kCMIL (EA)	4-78	4-3"	BLDG 452 SERVICE ENTRANCE
P	4 #3/0	63	2 1/2"	HANGAR DOORS SERVICE ENTRANCE
Q	3 -500kCMIL & 1 #1/0 NEU	2-91	2-3 1/2"	FIRE PUMP SERVICE ENTRANCE & 1 SPARE
R	4 #3/0 & 1 #6 (GRD)	53	2"	

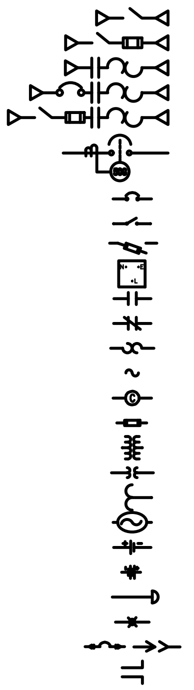
NOTES:
1. ALL CONDUCTOR SIZES ARE INDICATED IN AMERICAN WIRE GAUGE (AWG) OR 'kCMIL' UNLESS NOTED OTHERWISE.
2. UNLESS NOTED OTHERWISE LOW VOLTAGE CONDUCTORS SHALL BE RATED AT 600 VOLTS BASED UPON AN AMBIENT TEMPERATURE OF 30 DEGREES C AND AS FOLLOWS:
   - COPPER
   - INSULATED (THW OR THHN/THWN TYPE)
   - TEMPERATURE RATING – 75 DEGREES C
3. SEE "CONDUCTOR SCHEDULE & PROPERTIES DESIGNATIONS"

CIRCUIT BREAKER SCHEDULE

DES	DESCRIPTION	REMARKS
MC	MOLDED-CASE	NEMA AB1 THERMAL MAGNETIC
MCC	MOLDED-CASE	NEMA AB1 MAGNETIC ONLY
PCB	POWER CIRCUIT BREAKER	ANSI/IEEE C37.13 ANSI C37.16
IC	INSULATED CASE	

NOTES:
1. LOW VOLTAGE CIRCUIT BREAKERS SHALL BE IN ACCORDANCE WITH ANSI C37.100 AND UL 489.

DIAGRAM SYMBOLS



DISCONNECT SWITCH – NONFUSIBLE
DISCONNECT – FUSIBLE
MOTOR CONTROLLER
COMBINATION CONTROLLER/CIRCUIT BREAKER
COMBINATION CONTROLLER/FUSED DISCONNECT SWITCH
CIRCUIT BREAKER (GFCI TYPE)
CIRCUIT BREAKER
NONFUSIBLE SWITCH
FUSIBLE SWITCH
TRANSFER SWITCH
CONTACTS – NORMALLY OPEN
CONTACTS – NORMALLY CLOSED
THERMAL ELEMENT
FUSIBLE ELEMENT
COIL
FUSE
TRANSFORMER WINDINGS
INSTRUMENT TRANSFORMER
CURRENT TRANSFORMER
ALTERNATING CURRENT POWER SOURCE
DIRECT CURRENT POWER SOURCE
BATTERY
WEATHERHEAD
SPLICE
DRAWOUT CONNECTION
BUILDING PENETRATION/SEAL

FUSE SCHEDULE – LOW VOLTAGE

DES	DESCRIPTION	REMARKS	UL AIC RATING
MCF	MISCELLANEOUS CARTRIDGE FUSES	UTILIZE IN CONTROL AND/OR ELECTRONIC CIRCUITS ONLY.	NOT RATED
H	CLASS H	ANSI/UL 198B 600 AMPERES & LESS	10,000 AMPERES
HTD	CLASS H TIME DELAY	ANSI/UL 198B MIN DELAY OF 10S @ 50% OF RATING 600 AMPERES & LESS	10,000 AMPERES
RK1	CLASS RK1 CURRENT LIMITING	ANSI/UL 198E 600 AMPERES & LESS	200.000 AMPERES
RK5	CLASS RK5 CURRENT LIMITING DUAL-ELEMENT TIME DELAY	ANSI/UL 198E 600 AMPERES & LESS	200.000 AMPERES
L	CLASS L CURRENT LIMITING	ANSI/UL 198C 601 TO 6000 AMPERES	200.000 AMPERES
T	CLASS T CURRENT LIMITING (REDUCED SIZE)	ANSI/UL 198H 600V – 800 AMPERES & LESS 250V – 1200 AMPERES & LESS	10,000 AMPERES

NOTES:
1. FUSES SHALL BE IN ACCORDANCE WITH ANSI C97.1 AND THE ANSI/UL 198 SERIES. THE NONRENEWABLE TYPE, AND SHALL BE APPLIED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AND CONTRACT DOCUMENTS.

SINGLE LINE DIAGRAM NOTES

1. THE PURPOSE OF THE DIAGRAM IS TO DEMONSTRATE THE POWER SYSTEM SERVICE REQUIREMENTS, BUS CAPACITIES, FEEDER REQUIREMENTS, LEVELS OF PROTECTION, ETC., IN ORDER TO PROVIDE A COORDINATED AND PROTECTED POWER DISTRIBUTION SYSTEM.
2. AMPERE INTERRUPTING CAPACITY OR SHORT CIRCUIT CURRENT RATINGS ARE INDICATED AT VARIOUS BUSES IN THE SYSTEM AND THE CONTRACTOR SHALL COORDINATE, FURNISH AND INSTALL THE PROPER EQUIPMENT, DEVICES, TERMINATIONS AND MATERIAL AT THOSE LOCATIONS CAPABLE OF INTERRUPTING AND/OR WITHSTANDING THESE CURRENTS WITHOUT DAMAGE IN ACCORDANCE WITH UL AND THE NEC.
3. ALL OVERCURRENT PROTECTIVE DEVICES FOR THIS PROJECT SHALL BE CURRENT SENSING DEVICES AND SHALL PROTECT ALL BUSES, CONDUCTORS, EQUIPMENT, DEVICES, MOTORS, APPLIANCES, TRANSFORMERS AND SYSTEMS INDICATED. THE FOLLOWING TYPES OF PROTECTION SHALL BE PROVIDED:
   - OVERCURRENT
   - SHORT CIRCUIT
   - GROUND-FAULT
   - OVERLOAD

   THE FOLLOWING TYPES OF DEVICES ARE TO BE USED AND COORDINATED FOR THIS PROJECT:
   - CIRCUIT BREAKERS
   - FUSES
   - GROUND-FAULT SENSING DEVICES
4. APPLICATION, INSTALLATION AND CONNECTION OF ALL DEVICES SHALL BE IN ACCORDANCE WITH THE NEC, MANUFACTURER'S RECOMMENDATIONS AND CONTRACT DOCUMENTS.
5. ALL EQUIPMENT LOADS AND PROTECTION ARE TYPICAL AND BASED UPON DESIGN CALCULATIONS FOR BIDDING PURPOSES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND VERIFY WITH ALL DIVISIONS THE ACTUAL NAMEPLATE DATA OF ALL EQUIPMENT AND DEVICES SUPPLIED ON THIS PROJECT. BASE BID SHALL INCLUDE PROVIDING THE PROPER PROTECTIVE DEVICES FOR ALL COMPONENTS OF THE ELECTRICAL SYSTEM IN ACCORDANCE WITH NOTE 3 ABOVE AND AS PER EQUIPMENT MANUFACTURER'S NAMEPLATE DATA OR INSTRUCTIONS. THE CONTRACT DRAWINGS MAY NOT SIZE THE ACTUAL FUSE SIZE FOR CERTAIN SYSTEMS AND THE CONTRACTOR WILL BE RESPONSIBLE TO SIZE IN ACCORDANCE WITH NAMEPLATE DATA AND FURNISH THIS INFORMATION WITH THE AS-BUILT DRAWINGS.
6. ALL MOTORS SHALL BE CONNECTED AND PROTECTED WITH PROPER OVER-CURRENT AND SHORT CIRCUIT PROTECTION DEVICES IN ACCORDANCE WITH THE FOLLOWING:
   - NAMEPLATE DATA OR MANUFACTURER'S WRITTEN DATA FOR ACTUAL MOTOR SUPPLIED
   - MANUFACTURER'S TERMINAL MARKINGS
   - NEMA CODE LETTER
   - CORRECT ROTATION
7. CIRCUIT BREAKERS SHALL BE INSTALLED AS INDICATED RATED FOR THE PROPER VOLTAGE POTENTIAL, CURRENT, FREQUENCY, AND THE INTERRUPTING RATING INDICATED. CIRCUIT BREAKERS SHALL BE INSTALLED IN UL LISTED ENCLOSURES WITHIN THE ENVIRONMENTAL LIMITATION LISTED OF THE UNIT, SUCH AS AMBIENT TEMPERATURE, HUMIDITY, CLEAN & FREE FROM CONTAMINANTS. CIRCUIT BREAKERS SHALL PROVIDE SIMULTANEOUS DISCONNECTION OF ALL PHASE CONDUCTORS DURING TRIPPING. ALL LOW VOLTAGE CIRCUIT BREAKERS WITHIN THE SYSTEM SHALL BE OF THE SAME MANUFACTURER SO THAT COORDINATION UP AND DOWN STREAM CAN BE FACILITATED.
8. FUSES SHALL BE INSTALLED AS INDICATED, RATED FOR THE PROPER VOLTAGE POTENTIAL, CURRENT, FREQUENCY, MAXIMUM PEAK LET THROUGH, MAXIMUM CLEARING THERMAL ENERGY (I T), AND THE INTERRUPTING RATING INDICATED. FUSES SHALL BE INSTALLED IN UL LISTED ENCLOSURES WITHIN THE ENVIRONMENTAL LIMITATION LISTING OF THE UNITS, SUCH AS AMBIENT TEMPERATURE, HUMIDITY, CLEAN & FREE FROM CONTAMINANTS. ALL FUSES WITHIN THE SYSTEM SHALL BE OF THE SAME MANUFACTURER SO THAT COORDINATION UP AND DOWN STREAM CAN BE FACILITATED.
9. WHEN APPLYING AND INSTALLING PROTECTIVE DEVICES THE CONTRACTOR SHALL TAKE INTO CONSIDERATION THE FOLLOWING:
   - STEADY STATE CONTINUOUS CURRENT
   - IN-RUSH CURRENT FROM MOTOR STARTING
   - IN-RUSH CURRENT FROM TRANSFORMER MAGNETIZING UNDER LOAD
   - SHORT CIRCUIT WITHSTAND RATINGS-NEC 110-10 AND 240-1
   - INTERRUPTING RATINGS-NEC 110-9 AND 230-65
   - CURRENT LIMITING LET THROUGH CURRENTS-NEC 240-11
10. THE CONTRACTOR IS TOTALLY RESPONSIBLE FOR THE INSTALLATION, MARKING AND CONNECTING OF ALL POWER CONDUCTORS FOR THE PROPER PHASE SEQUENCE AND BALANCED LOADING. PHASE METERS SHALL BE USED TO TEST EACH FEEDER AND MOTOR BRANCH CIRCUIT PRIOR TO CONNECTING LOADS.

UTILITY INFORMATION

PRIMARY VOLTAGE	13,800Y/8000
SECONDARY VOLTAGE	480Y/277
AVAILABLE FAULT CURRENT	35,000

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

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SUBMITTED BY: -	PROJECT NUMBER: MEF24005
SIZE: ANSI D	FILE NAME: MEF24005E-900.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SINGLE LINE DIAGRAM NOTES,
SYMBOLS AND SCHEDULES

SHEET ID
E-900

RTA SUBMITTAL

SHEET NOTES

1. SEE SHEET E-900 FOR SINGLE LINE DIAGRAM NOTES, SYMBOLS AND SCHEDULES.
2. SEE SHEET E902 FOR EQUIPMENT SCHEDULE AND DISCONNECT SWITCH SIZES.

KEYED NOTES

① ALL PRIMARY ELECTRICAL MEDIUM VOLTAGE SERVICES AND TRANSFORMER ARE INSTALLED BY UTILITY.

② CABLE RACK HOLDER
  * SEE DETAIL C/E-509

③ COOLING CART RECEPTACLE
  * 480V, 200A, 3PH, 60HZ
  * SEE DETAIL A/E-510

④ PRESSURIZED TESTER RECEPTACLE
  * 480V, 200A, 3PH, 60HZ
  * SEE DETAIL A/E-510

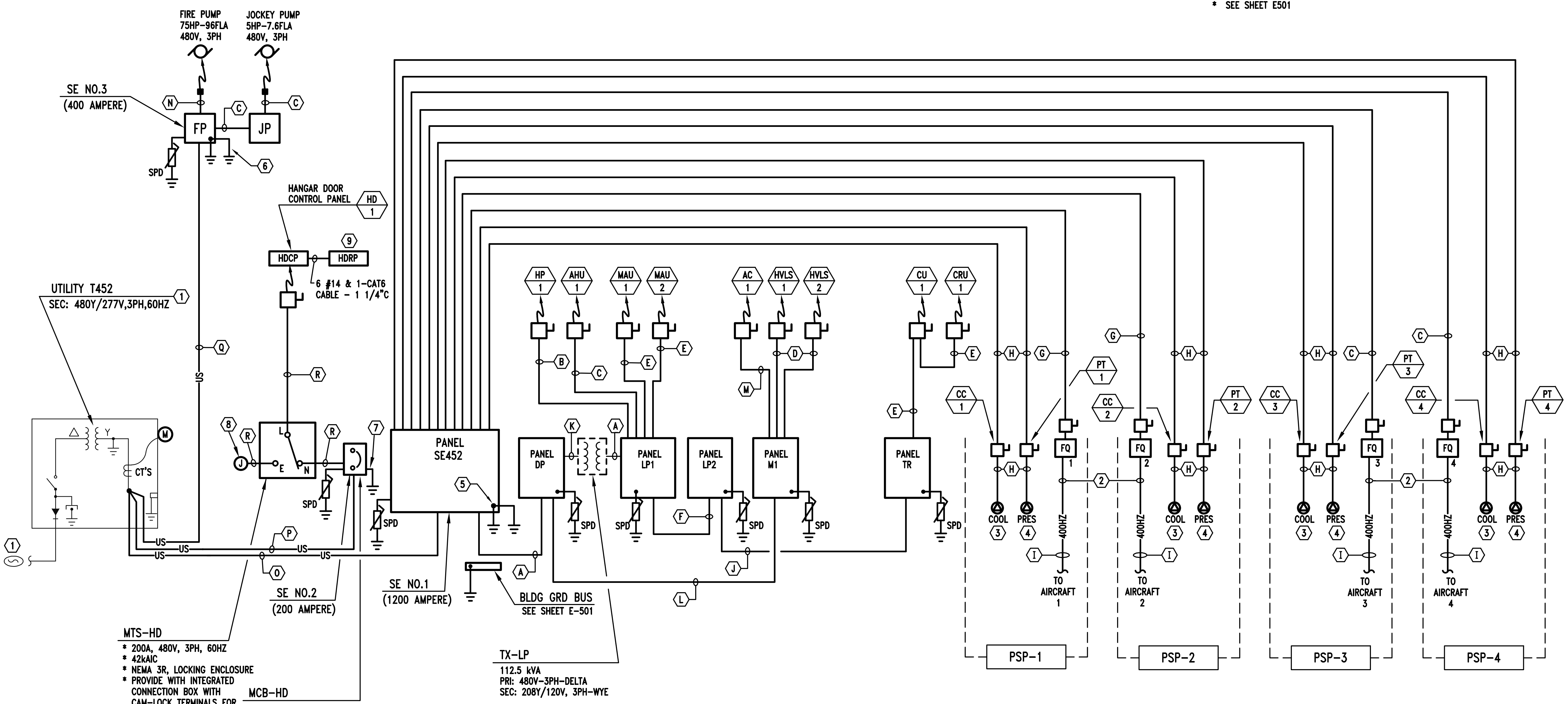
⑤ INSTALL GROUNDING ELECTRODE SYSTEM (SE NO.1)
  * 4/0 TO CWP
  * 4/0 TO BLDG GRD BUS
  * SEE SHEET E501

⑥ INSTALL GROUNDING ELECTRODE SYSTEM (SE NO.3)
  * #2 TO CWP
  * #2 TO BLDG GRD BUS
  * SEE SHEET E501

⑦ INSTALL GROUNDING ELECTRODE SYSTEM (SE NO.2)
  * #4 TO CWP
  * #4 TO BLDG GRD BUS
  * SEE SHEET E501

⑧ INTEGRATED MTS CONNECTION BOX FOR TACTICAL GEN CONNECTION.

⑨ COORDINATE WITH DOOR MANUFACTURER AND APPROVED SHOP DRAWINGS PRIOR TO INSTALLATION.



SINGLE LINE DIAGRAM

NOT TO SCALE

US Army Corps of Engineers®

MARK | DESCRIPTION | DATE

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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

SINGLE LINE DIAGRAM

SHEET ID
E-901

RTA SUBMITTAL

CESAM v20181203

GENERAL EQUIPMENT SCHEDULE

MARK	EQUIPMENT DATA: EQUIPMENT DESCRIPTION	EQUIPMENT DATA: VOLTAGE/PHASE	LOAD INFORMATION: HP	LOAD INFORMATION: kVA	LOAD INFORMATION: kW	LOAD INFORMATION: AMPS	DISCONNECT SWITCH: CHARACTERISTICS	DISCONNECT SWITCH: NEMA TYPE ENCLOSURE	REMARKS
FQ 1	FREQUENCY CONVERTER	480V/3PH	–	20	16	24	30A/3P	1	NON-FUSED
FQ 2	FREQUENCY CONVERTER	480V/3PH	–	20	16	24	30A/3P	1	NON-FUSED
FQ 3	FREQUENCY CONVERTER	480V/3PH	–	20	16	24	30A/3P	1	NON-FUSED
FQ 4	FREQUENCY CONVERTER	480V/3PH	–	20	16	24	30A/3P	1	NON-FUSED
CC 1	GROUND COOLING CART	480V/3PH	–	–	–	152	200A/3P	1	NON-FUSED DEVICE ASSEMBLY – SEE DETAIL A/E-509
CC 2	GROUND COOLING CART	480V/3PH	–	–	–	152	200A/3P	1	NON-FUSED DEVICE ASSEMBLY – SEE DETAIL A/E-509
CC 3	GROUND COOLING CART	480V/3PH	–	–	–	152	200A/3P	1	NON-FUSED DEVICE ASSEMBLY – SEE DETAIL A/E-509
CC 4	GROUND COOLING CART	480V/3PH	–	–	–	152	200A/3P	1	NON-FUSED DEVICE ASSEMBLY – SEE DETAIL A/E-509
PT 1	CABIN PRESSURE TESTER	480V/3PH	60	–	–	77	200A/3P	1	NON-FUSED DEVICE ASSEMBLY – SEE DETAIL A/E-509
PT 2	CABIN PRESSURE TESTER	480V/3PH	60	–	–	77	200A/3P	1	NON-FUSED DEVICE ASSEMBLY – SEE DETAIL A/E-509
PT 3	CABIN PRESSURE TESTER	480V/3PH	60	–	–	77	200A/3P	1	NON-FUSED DEVICE ASSEMBLY – SEE DETAIL A/E-509
PT 4	CABIN PRESSURE TESTER	480V/3PH	60	–	–	77	200A/3P	1	NON-FUSED DEVICE ASSEMBLY – SEE DETAIL A/E-509
HVLS 1	HANGAR BAY FAN	480V/3PH	2	–	–	3.4	30A/3P	1	NON-FUSED
HVLS 2	HANGAR BAY FAN	480V/3PH	2	–	–	3.4	30A/3P	1	NON-FUSED
AC 1	AIR COMPRESSOR	480V/3PH	50	–	–	65	200A/3P	1	NON-FUSED
AHU 1	DX SPLIT SYSTEM AIR HANDLER	208V/3PH	–	–	–	9.2	30A/3P	1	NON-FUSED
EF 1	EXHAUST FAN	120V/1PH	–	–	–	.34	20A/1P	1	MOTOR RATED SWITCH
EF 2	EXHAUST FAN	120V/1PH	–	–	–	.34	20A/1P	1	MOTOR RATED SWITCH
EF 3	EXHAUST FAN	120V/1PH	–	–	–	.34	20A/1P	1	MOTOR RATED SWITCH
EF 4	EXHAUST FAN	120V/1PH	–	–	–	.90	20A/1P	1	MOTOR RATED SWITCH
EF 5	EXHAUST FAN	480V/3PH	3/4	–	–	1.6	30A/3P	1	NON-FUSED
EF 6	EXHAUST FAN	480V/3PH	3/4	–	–	1.6	30A/3P	1	NON-FUSED
CU 1	OUTDOOR MINI-SPLIT UNIT	208V/1PH	–	–	–	3.6	30A/2P	3R	SINGLE POINT CONNECTION NON-FUSED
CRU 1	INDOOR MINI-SPLIT UNIT	208V/1PH	–	–	–	19.9	30A/2P	3R	POWERED BY CU-1 NON-FUSED

GENERAL EQUIPMENT SCHEDULE CONT'D

MARK	EQUIPMENT DATA: EQUIPMENT DESCRIPTION	EQUIPMENT DATA: VOLTAGE/PHASE	LOAD INFORMATION: HP	LOAD INFORMATION: kVA	LOAD INFORMATION: kW	LOAD INFORMATION: AMPS	DISCONNECT SWITCH: CHARACTERISTICS	DISCONNECT SWITCH: NEMA TYPE ENCLOSURE	REMARKS
MAU 1	MAKE-UP AIR UNIT	208V/1P	3	–	–	18.7	30A/2P	1	NON-FUSED
MAU 2	MAKE-UP AIR UNIT	208V/1P	3	–	–	18.7	30A/2P	1	NON-FUSED
RH 1	INFRARED GAS RADIANT HEATER	115V/1P	–	–	.166	–	20A/1P	1	MOTOR RATED SWITCH
RH 2	INFRARED GAS RADIANT HEATER	115V/1P	–	–	.166	–	20A/1P	1	MOTOR RATED SWITCH
RH 3	INFRARED GAS RADIANT HEATER	115V/1P	–	–	.166	–	20A/1P	1	MOTOR RATED SWITCH
RH 4	INFRARED GAS RADIANT HEATER	115V/1P	–	–	.166	–	20A/1P	1	MOTOR RATED SWITCH
RH 5	INFRARED GAS RADIANT HEATER	115V/1P	–	–	.166	–	20A/1P	1	MOTOR RATED SWITCH
RH 6	INFRARED GAS RADIANT HEATER	115V/1P	–	–	.166	–	20A/1P	1	MOTOR RATED SWITCH
EUH 1	ELECTRIC UNIT HEATER	208V/1P	–	–	3	14.4	30A/2P	1	NON-FUSED
EUH 2	ELECTRIC UNIT HEATER	208V/1P	–	–	3	14.4	30A/2P	1	NON-FUSED
EUH 3	ELECTRIC UNIT HEATER	208V/1P	–	–	3	14.4	30A/2P	1	NON-FUSED
HP 1	DX SPLIT SYSTEM OUTSIDE UNIT	208V/3P	–	–	–	32.8	60A/3P	3R	NON-FUSED
HD 1	HANGAR DOOR	480V/3P	54	–	–	70.8	200A/3P	1	NON-FUSED
GWH 1	GAS WATER HEATER	120/1P	–	0.5	–	4.2	20A/1P	1	MOTOR RATED SWITCH
GWH 2	GAS WATER HEATER	120/1P	–	0.5	–	4.2	20A/1P	1	MOTOR RATED SWITCH
GWH 3	GAS WATER HEATER	120/1P	–	0.5	–	4.2	20A/1P	1	MOTOR RATED SWITCH

NOTES:

1. ALL EQUIPMENT CONNECTIONS, TERMINATIONS, PROTECTION, ETC., SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED DATA OR NAMEPLATE DATA.
2. DISCONNECT SWITCHES SHALL BE HEAVY-DUTY, HORSEPOWER RATED, WITH 200,000 AIC. CL REJECTION KITS SHALL BE PROVIDED WHEN CURRENT LIMITING FUSES ARE UTILIZED. NOMINAL VOLTAGE RATING OF EACH DISCONNECT SWITCH SHALL BE AS FOLLOWS:
   250 VOLT – 240 VOLT SYSTEMS AND BELOW
   600 VOLT – 480 VOLT SYSTEMS
3. FUSES SHALL BE INSTALLED IN EACH FUSIBLE DISCONNECT SWITCH IN ACCORDANCE WITH THE FUSE SCHEDULE, SINGLE LINE DIAGRAM AND/OR EQUIPMENT CRITERIA.
4. ALL DISCONNECT SWITCHES SHALL CONTAIN AN EQUIPMENT GROUNDING ROD BONDED TO THE ENCLOSURE WITH ALL EQUIPMENT GROUNDING CONDUCTORS WITH THERE OWN TERMINAL POINT.
5. ALL DISCONNECT SWITCHES SHALL BE LOCATED ADJACENT TO THE CORRESPONDING VFD.

'*' INDICATES WHEN THE CONTRACTOR IS RESPONSIBLE FOR SIZING THE PROPER FUSE PER THE NAMEPLATE DATA OF THE ACTUAL EQUIPMENT SUPPLIED.

SHEET NOTES

1. ALL EQUIPMENT CONNECTIONS, TERMINATIONS, PROTECTION, ETC., SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED DATA OR NAMEPLATE DATA.
2. DISCONNECT SWITCHES SHALL BE HEAVY-DUTY, HORSEPOWER RATED, WITH 200,000 AIC. CL REJECTION KITS SHALL BE PROVIDED WHEN CURRENT LIMITING FUSES ARE UTILIZED. NOMINAL VOLTAGE RATING OF EACH DISCONNECT SWITCH SHALL BE AS FOLLOWS:
   - 250 VOLT-240 VOLT SYSTEMS AND BELOW
   - 600VOLT – 480 VOLT SYSTEMS
3. FUSES SHALL BE INSTALLED IN EACH FUSIBLE DISCONNECT SWITCH IN ACCORDANCE WITH THE FUSE SCHEDULE, SINGLE LINE DIAGRAM AND/OR EQUIPMENT CRITERIA.
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   '*' INDICATES WHEN THE CONTRACTOR IS RESPONSIBLE FOR SIZING THE PROPER FUSE PER THE NAMEPLATE DATA OF THE ACTUAL EQUIPMENT SUPPLIED.
5. ALL DISCONNECT SWITCHES SHALL BE LOCATED ADJACENT TO CORRESPONDING VFD'S.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
JUNE 2024
SOLICITATION NO.:
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CONTRACT NO.:
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PROJECT NUMBER:
MEF24005

DESIGNED BY:
KLH/JDW
DRAWN BY:
EWH
CHECKED BY:
KLH/JDW
SUBMITTED BY:
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SIZE:
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FILE NAME:
MEF24005E-902.dwg

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

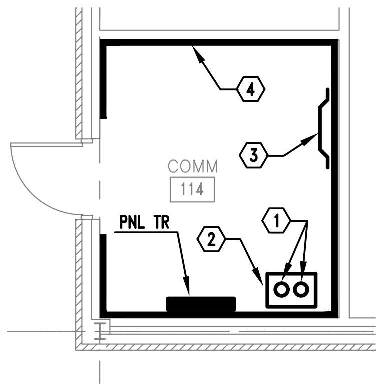
GENERAL EQUIPMENT
SCHEDULE

SHEET ID
E-902

RTA SUBMITTAL

TELECOM SYSTEM LEGEND

▬	TELECOMMUNICATIONS SYSTEM – TERMINAL BACKBOARD
◀	TELECOMMUNICATIONS SYSTEM – WALL OUTLET W/BLANK COVER PLATE
◀ AC	TELECOMMUNICATIONS SYSTEM – WALL OUTLET W/BLANK COVER PLATE – MTD ABOVE COUNTER
◀ W	TELECOMMUNICATIONS SYSTEM – WALL OUTLET W/BLANK COVER PLATE FOR WALL MTD PHONE
◀ DDC	TELECOMMUNICATIONS SYSTEM – WALL OUTLET W/BLANK COVER PLATE – DIGITAL DIRECT CONTROL
◀ M	TELECOMMUNICATIONS SYSTEM – WALL OUTLET W/BLANK COVER PLATE FOR MONITOR – 84"AFF
WAP W	TELECOMMUNICATIONS SYSTEM – WIRELESS ACCESS POINT W/BLANK COVER PLATE – WALL MTD – 84"AFF
WAP C	TELECOMMUNICATIONS SYSTEM – WIRELESS ACCESS POINT W/BLANK COVER PLATE – CLG MTD
⊲	TELECOMMUNICATIONS SYSTEM – FLOOR BOX OUTLET WITH BLANK COVER PLATE – SEE A/E-508.
—T—	TELECOMMUNICATIONS SYSTEM – CONDUIT SYSTEM WITH PULLWIRE
▥	TELECOMMUNICATIONS SYSTEM – CABLE TRAY
TV	CABLE TELEVISION SYSTEM – OUTLET W/BLANK COVER PLATE
TV W	CABLE TELEVISION SYSTEM – OUTLET W/BLANK COVER PLATE – MTD 84"AFF



Ⓐ ENLARGEMENT PLAN – COMM 114

4' 2' 0 4' 8FT

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

ENLARGED PLAN KEYED NOTES

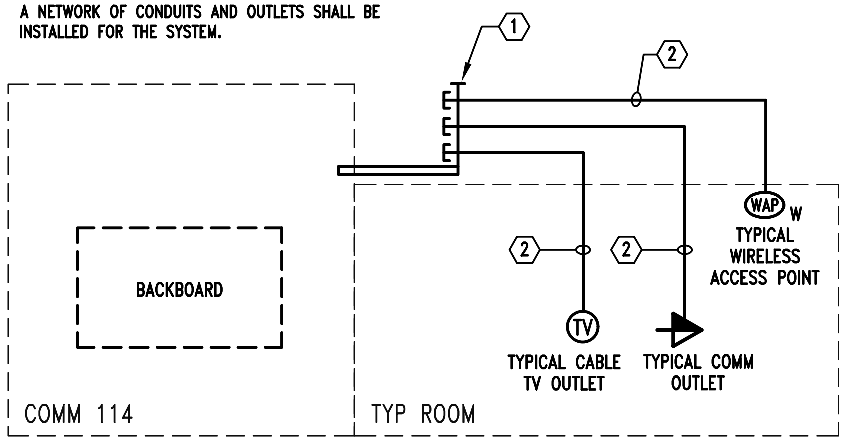
1. COMMUNICATIONS BACKBONE CONDUIT STUB-UP. SEE SITE PLAN, SHEET T-101.
2. 18" WIDE CABLE RUNWAY MOUNTED VERTICALLY FROM CONDUIT ENTRANCE IN FLOOR TO 7'-0" AFF.
3. GROUNDING BUSBAR. MAKE ALL CONNECTIONS WITH TWO HOLE LONG COMPRESSION LUGS. BOND TO BUSBAR WITH TWO SS HEX HEAD CAP SCREWS WITH SS LOCKING LUG NUTS.
4. PLYWOOD BACKBOARD, 8' HIGH x FULL LENGTH OF WALL. MOUNT WITH BOTTOM AT 6" ABOVE FINISHED FLOOR. MOUNTED ON ALL FOUR WALLS. ROUGH ALL ELECTRICAL OUTLETS IN BACKBOARD FOR FLUSH MOUNT INSTALLATION OF FACEPLATES. BACKBOARDS SHALL BE 3/4" THICK FIRE-RATED PLYWOOD. THE FIRE RATING OF THE PLYWOOD SHALL NOT BE PAINTED OVER IN AT LEAST ONE LOCATION ON EACH WALL. COUNTERSINK ALL SCREWS. PRIME WITH TWO COATS, SANDING SMOOTH AFTER EACH COAT. FINISH WITH TWO COATS OF FIRE RETARDANT PAINT, COLOR BATTLESHIP GRAY. FINAL SURFACE SHALL BE UNIFORMLY SMOOTH AND EVEN. TOUCH UP AT END OF PROJECT. COORDINATE WORK WITH ELECTRICAL CONTRACTOR TO ENSURE THAT POWER RECEPTACLES ARE PROPERLY LOCATED AND WITH FACEPLATES FLUSH ON FACE OF BACKBOARD.

VOICE/DATA SYSTEM/CABLE TV SYSTEM GENERAL NOTES

1. A NETWORK OF CONDUITS AND OUTLETS SHALL BE INSTALLED FOR THE SYSTEM.

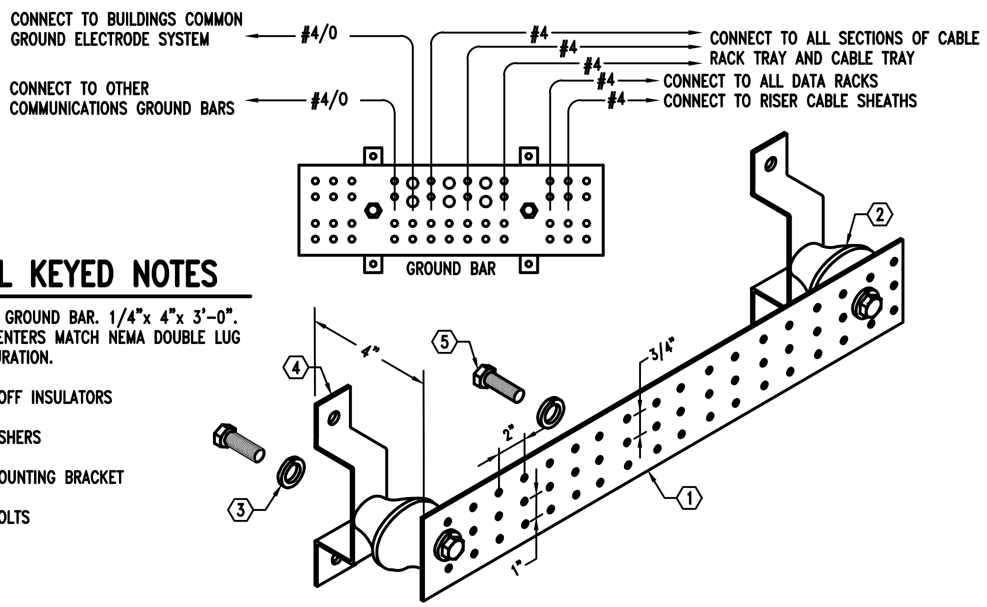
VOICE/DATA/CABLE TV SLD KEYED NOTES

1. CABLE TRAY SYSTEM
2. CONDUIT PATHWAY WITH PULLSTRING FROM OUTLET TO CABLE TRAY. CONDUIT SHALL BE MINIMUM 1".



Ⓑ VOICE/DATA/CABLE TV SYSTEM – SINGLE LINE DIAGRAM

NO SCALE


CONNECT TO BUILDINGS COMMON GROUND ELECTRODE SYSTEM
#4/0
CONNECT TO OTHER COMMUNICATIONS GROUND BARS
#4/0
#4
#4
#4
CONNECT TO ALL SECTIONS OF CABLE RACK TRAY AND CABLE TRAY
#4
CONNECT TO ALL DATA RACKS
#4
CONNECT TO RISER CABLE SHEATHS
GROUND BAR
4"
3/4"
2"
1"
1
2
3
4
5

DETAIL KEYED NOTES

1. COPPER GROUND BAR. 1/4"x 4"x 3'-0". HOLE CENTERS MATCH NEMA DOUBLE LUG CONFIGURATION.
2. STAND-OFF INSULATORS
3. LOCKWASHERS
4. WALL MOUNTING BRACKET
5. HHCS BOLTS

Ⓒ DETAIL – TYPICAL COMMUNICATIONS GROUNDING BUSBAR

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

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DRAWN BY: EWH
CHECKED BY: KLH/JDW
SUBMITTED BY: -
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PROJECT NUMBER: MEF24005

U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
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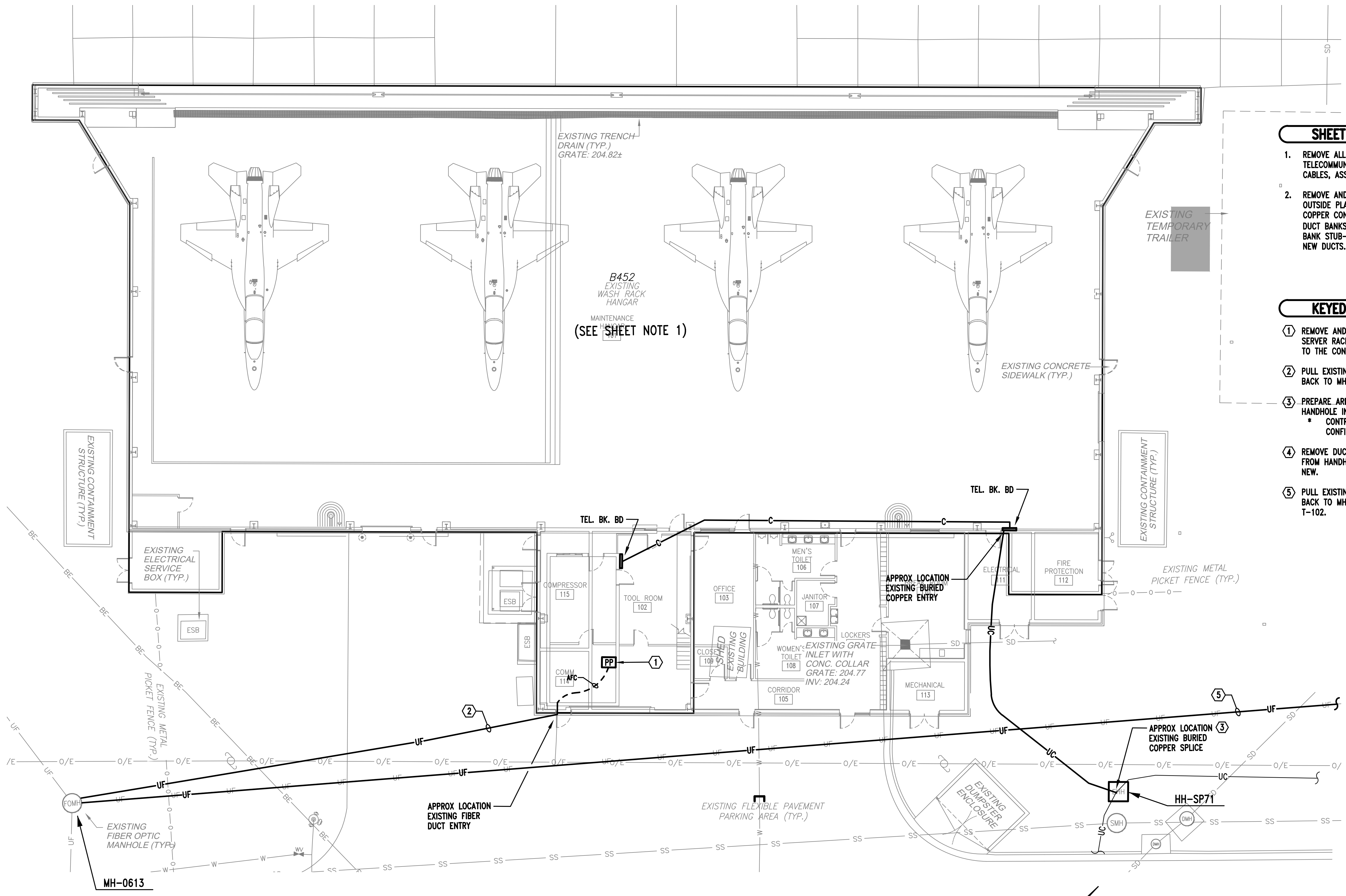
COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

TELECOMMUNICATION LEGEND, NOTES AND DETAILS

SHEET ID
T-001

RTA SUBMITTAL

CESAM v20181203


EXISTING TRENCH DRAIN (TYP.)
GRATE: 204.82±
B452
EXISTING WASH RACK HANGAR
MAINTENANCE HANGAR
(SEE SHEET NOTE 1)
EXISTING TEMPORARY TRAILER
EXISTING CONCRETE SIDEWALK (TYP.)
EXISTING CONTAINMENT STRUCTURE (TYP.)
EXISTING CONTAINMENT STRUCTURE (TYP.)
EXISTING ELECTRICAL SERVICE BOX (TYP.)
ESB
ESB
ESB
TEL. BK. BD
TEL. BK. BD
C
COMPRESSOR 115
TOOL ROOM 102
OFFICE 103
MEN'S TOILET 106
JANITOR 107
WOMEN'S TOILET 108
LOCKERS
CLOSET 109
EXISTING SHED BUILDING
CORRIDOR 105
COMM 114
PP
AFC
1
ELECTRICAL 111
FIRE PROTECTION 112
MECHANICAL 113
EXISTING GRATE INLET WITH CONC. COLLAR
GRATE: 204.77
INV: 204.24
APPROX LOCATION EXISTING BURIED COPPER ENTRY
EXISTING METAL PICKET FENCE (TYP.)
EXISTING METAL PICKET FENCE (TYP.)
SD
UC
5
UF
2
APPROX LOCATION 3 EXISTING BURIED COPPER SPLICE
HH-SP71
HH
SMH
DMH
APPROX LOCATION EXISTING FIBER DUCT ENTRY
FOMH
EXISTING FIBER OPTIC MANHOLE (TYP.)
MH-0613
EXISTING FLEXIBLE PAVEMENT PARKING AREA (TYP.)
EXISTING DUMPSTER ENCLOSURE
BE
O/E
W
WV
SS

TELECOMMUNICATION DEMOLITION REQUIREMENTS

10' 5' 0 10' 20FT

SCALE: 1"=10'-0"

N

PLAN NORTH

TRUE NORTH

SHEET NOTES

1. REMOVE ALL INSIDE PLANT TELECOMMUNICATIONS OUTLETS, CABLES, ASSEMBLIES, ETC.
2. REMOVE AND DISCONNECT ALL OUTSIDE PLANT FIBER AND COPPER CONNECTIONS. REMOVE DUCT BANKS AND LEAVE 5' DUCT BANK STUB-OUT TO RECONNECT NEW DUCTS.

KEYED NOTES

① REMOVE AND TURN OVER WALL SERVER RACK AND PATCH PANEL TO THE CONTRACTING OFFICER.

② PULL EXISTING 12-STRAND FIBER BACK TO MH-0613. DEMO DUCTS.

③ PREPARE AREA OF SPLICE FOR A HANDHOLE INSTALLATION.
- * CONTRACTOR TO LOCATE AND CONFIRM LOCATION.

④ REMOVE DUCT BANK CONNECTION FROM HANDHOLE AND PREP FOR NEW.

⑤ PULL EXISTING 12-STRAND FIBER BACK TO MH-0614. SEE SHEET T-102.

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PROJECT NUMBER: MEF24005
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

TELECOMMUNICATION DEMOLITION REQUIREMENTS

SHEET ID
TD-101

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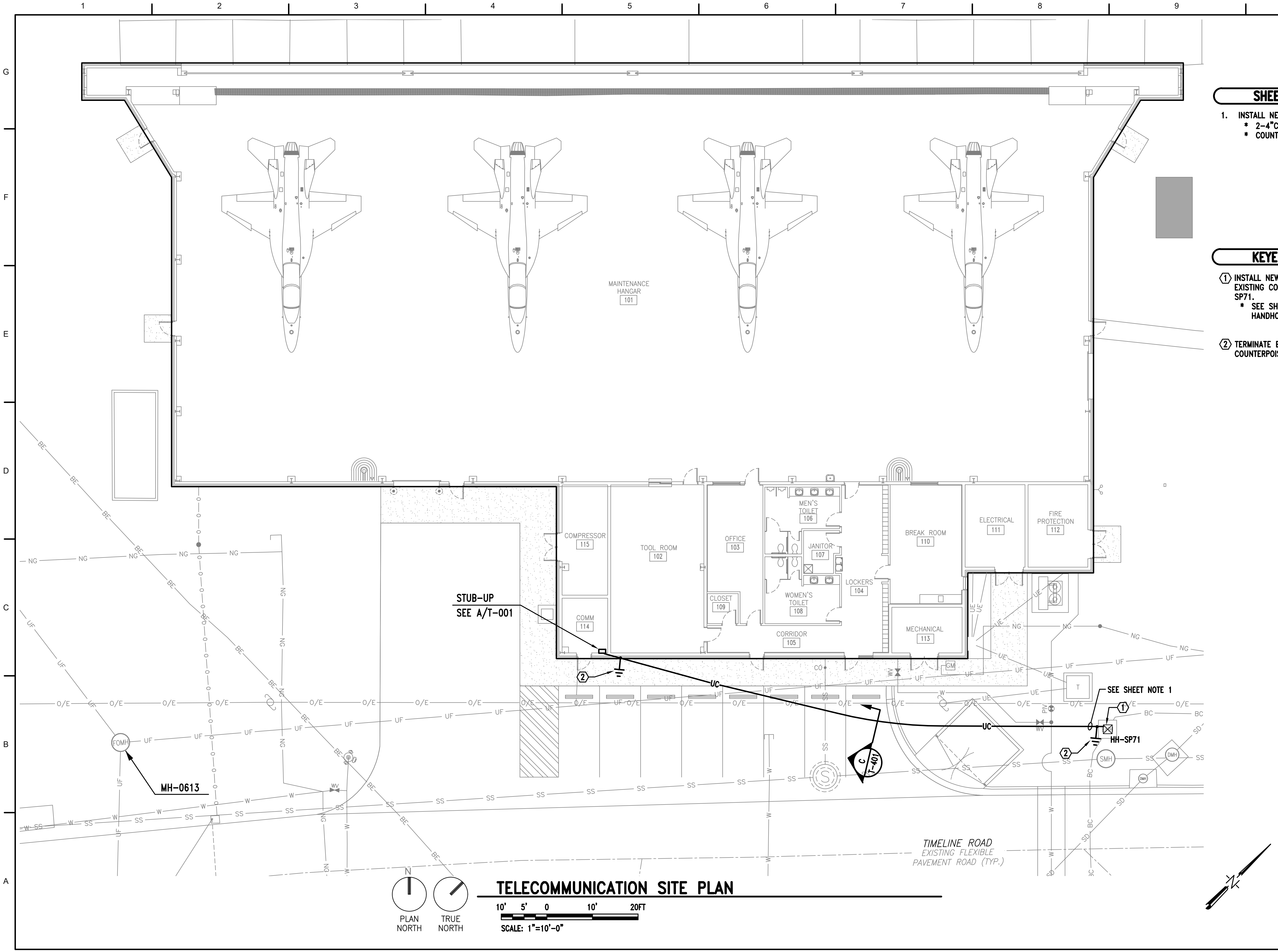

TELECOMMUNICATION SITE PLAN

SCALE: 1"=10'-0"

SHEET NOTES

1. INSTALL NEW DUCT BANK.
   - * 2-4"C CONCRETE ENCASED
   - * COUNTERPOISE ON TOP

KEYED NOTES

① INSTALL NEW 4X4X4 HANDHOLE AT EXISTING COPPER SPLICE POINT SP71.
- * SEE SHEET T-402 FOR HANDHOLE REQUIREMENTS

② TERMINATE EACH END OF THE COUNTERPOISE WITH A GROUND ROD.

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CHECKED BY: KLH/JDW	CONTRACT NO.: -
SUBMITTED BY: -	PROJECT NUMBER: MEF24005
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CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

TELECOMMUNICATION
SITE PLAN

SHEET ID

T-101

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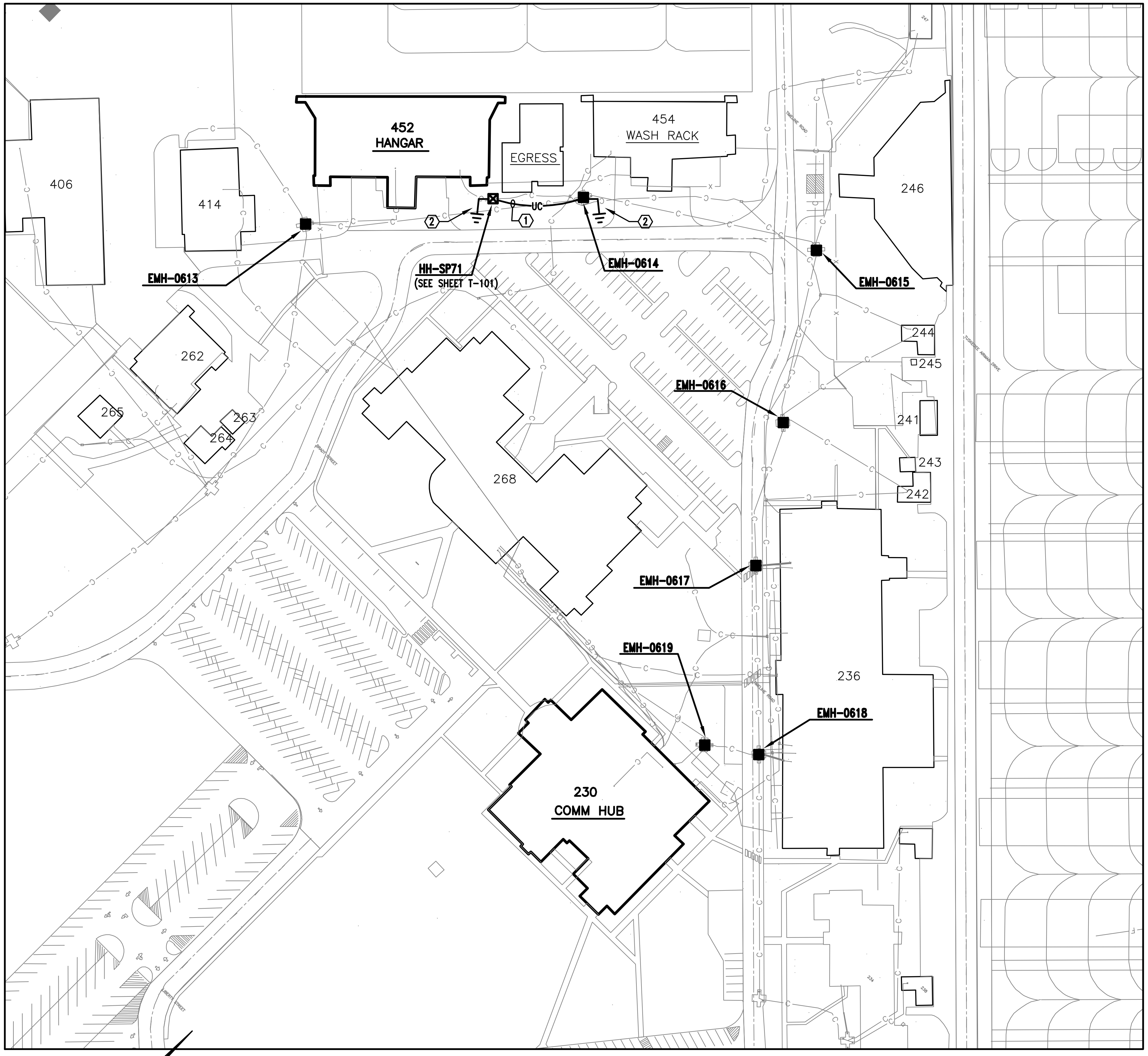

TELECOMMUNICATION OVERALL SITE PLAN

800' 400' 0 800' 1600' 2000' 2400'

SCALE: 1"=800'-0"

SHEET NOTES

1. SEE SHEET T-101 FOR NEW REQUIREMENTS.
2. EXISTING TELECOMMUNICATIONS INFRASTRUCTURE, MANHOLES, DUCTBANKS, ETC. SHOWN FOR INFORMATION ONLY.

KEYED NOTES

① INSTALL NEW DUCT BANK.
  * 2-4"C CONCRETE ENCASED
  * COUNTERPOISE ON TOP

② TERMINATE EACH END OF THE COUNTERPOISE TO A DRIVEN GRD ROD.

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DESIGNED BY: KLH/JDW	ISSUE DATE: JUNE 2024
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CHECKED BY: KLH/JDW	CONTRACT NO.: -
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U.S. ARMY CORPS OF ENGINEERS
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MOBILE, ALABAMA

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

TELECOMMUNICATION
OVERALL SITE PLAN

SHEET ID

T-102

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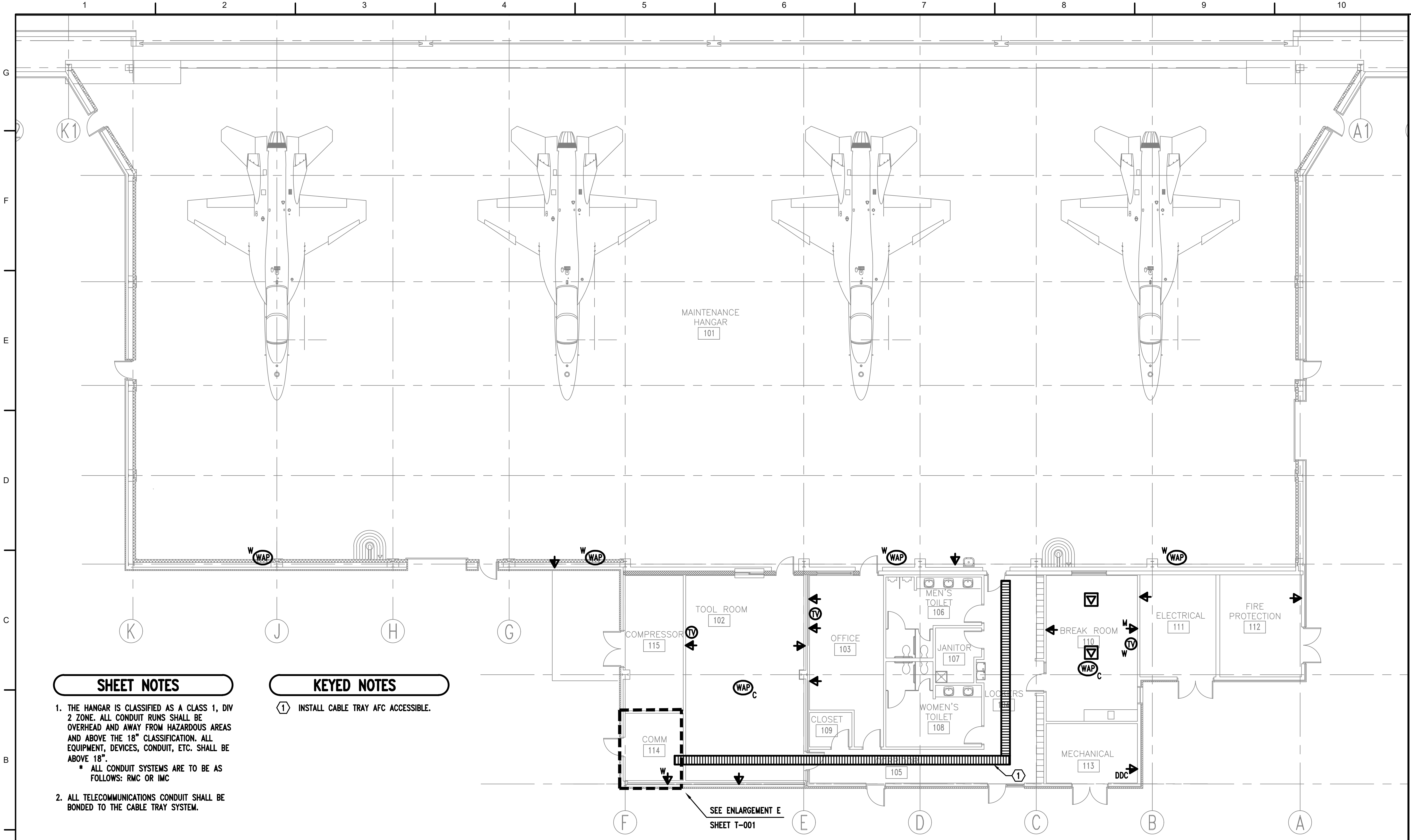
CESAM v20181203

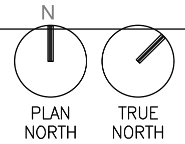


SHEET NOTES

1. THE HANGAR IS CLASSIFIED AS A CLASS 1, DIV 2 ZONE. ALL CONDUIT RUNS SHALL BE OVERHEAD AND AWAY FROM HAZARDOUS AREAS AND ABOVE THE 18" CLASSIFICATION. ALL EQUIPMENT, DEVICES, CONDUIT, ETC. SHALL BE ABOVE 18".
   - * ALL CONDUIT SYSTEMS ARE TO BE AS FOLLOWS: RMC OR IMC
2. ALL TELECOMMUNICATIONS CONDUIT SHALL BE BONDED TO THE CABLE TRAY SYSTEM.

KEYED NOTES

⟨1⟩ INSTALL CABLE TRAY AFC ACCESSIBLE.



TELECOMMUNICATION FLOOR PLAN

8' 4' 0 8' 16FT

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

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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

TELECOMMUNICATION
FLOOR PLAN

SHEET ID
T-201

RTA SUBMITTAL

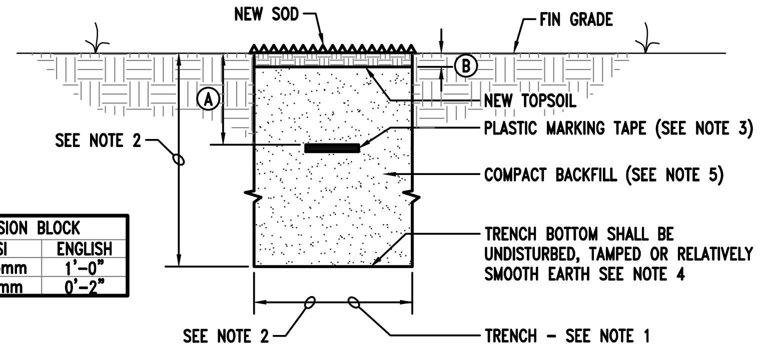
CESAM v20181203

GENERAL UNDERGROUND UTILITY PROJECT NOTES

1. THE UNDERGROUND UTILITY PORTION OF THIS PROJECT CONSISTS OF BUT IS NOT LIMITED TO:
   - a. TRENCHING/BACKFILLING FOR RACEWAY LINES AND CONDUIT SYSTEMS
   - b. RACEWAY BANK INSTALLATIONS
   - c. PATCH/REPAIR ALL DAMAGED SURFACES AS A RESULT OF TRENCHING AND RACEWAY BANK INSTALLATIONS
   - d. DEMOLITION AND REMOVAL AS NOTED
2. INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL SAFETY CODE (NESC) AND THE NATIONAL ELECTRICAL CODE (NEC). FURNISH AND INSTALL DANGER AND WARNING SIGNS IN ACCORDANCE WITH ALL APPLICABLE CODE REQUIREMENTS INCLUDING ARC FLASH CATEGORIZED AND WARNINGS.
3. ALL CONDUCTIVE PARTS OF EQUIPMENT, ENCLOSURES, SUPPORTS, FRAMES, CASES, CONDUIT SYSTEMS AND SURGE ARRESTORS, CABLE SHEATHS, CABLE SHIELDS, COMMON NEUTRALS, ETC., SHALL BE GROUNDED. UNLESS NOTED OTHERWISE CONNECTIONS BELOW GRADE SHALL BE FUSION-WELDED AND ABOVE GRADE FUSION-WELDED OR BOLTED SOLDERLESS. ALL GROUND CONDUCTORS SHALL BE COPPER AND PROTECTED FROM DAMAGE.
4. ALL CLEARANCES SHALL BE MAINTAINED PER NESC AND NEC. ALL PARTS, DEVICES, EQUIPMENT, ETC. WHICH REQUIRE MAINTENANCE, ADJUSTMENT, OPERATION OR EXAMINATION DURING NORMAL NETWORK OPERATION SHALL BE ARRANGED SO AS TO BE ACCESSIBLE BY THE PROVISION OF ADEQUATE WORKING SPACES, WORKING FACILITIES AND CLEARANCES. UNLESS NOTED OTHERWISE ALL CLEARANCES ARE MEASURED FROM SURFACE TO SURFACE.
5. ALL DIMENSIONS INDICATED IN THESE DOCUMENTS ARE FOR REFERENCE AND COORDINATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS IN THE FIELD.
6. UNLESS OTHERWISE SHOWN OR DIRECTED RACEWAY LINES SHALL NOT BE LOCATED DIRECTLY UNDER STRUCTURES AND NOT DIRECTLY UNDER OR OVER OTHER SUBSURFACE STRUCTURES. WHERE RACEWAY LINES ARE REQUIRED TO CROSS OTHER UTILITIES SUCH AS SEWERS, WATER LINES, OTHER POWER LINES, COMMUNICATION LINES, ETC., ADEQUATE SUPPORT SHALL BE PROVIDED ON EACH SIDE OF THE CROSSING TO PREVENT TRANSFERRING ANY DIRECT LOAD ONTO THE OTHER LINE. RACEWAY LINES SHALL BE SO INSTALLED AS TO PREVENT HEAT TRANSFER BETWEEN ANY HEAT PRODUCING LINES AND/OR EQUIPMENT TO RACEWAY LINES.
   - a. ROUTING SHOWN ON DRAWINGS IS TYPICAL AND THE CONTRACTOR SHALL PROPOSE FINAL ROUTING BASED UPON ACTUAL FIELD DIMENSIONS, CONDITIONS AND EXISTING UNDERGROUND UTILITIES AND STRUCTURES.
   - b. PRIOR TO TRENCHING, THE CONTRACTOR SHALL STAKE OUT THE ENTIRE NEW NETWORK ARRANGEMENT. ONE GRADE A WOODEN STAKE WITH RED FLAG SHALL BE DRIVEN EVERY 15m (50'-0") AND AT EACH CHANGE OF DIRECTION. FOUR STAKES SHALL BE DRIVEN TO OUTLINE EQUIPMENT AND/OR MANHOLE LOCATIONS. ON PAVEMENTS RED PAINT SHALL BE USED TO OUTLINE THE AREAS TO BE CUT. SECURE EXISTING UNDERGROUND UTILITY INFORMATION PRIOR TO PERFORMING ANY TRENCHING. THE DATA SHALL CONTAIN UTILITY INFORMATION FROM ALL UTILITY SOURCES.
   - c. DEPTHS INDICATED FOR INSTALLATION ARE MINIMUM. ACTUAL DEPTHS MAY VARY DUE TO TERMINATIONS, COMPENSATIONS FOR RADIUS OF VERTICAL TRANSITIONS, EXISTING UTILITY CROSSINGS, ETC. APPROVAL SHALL BE OBTAINED FOR ANY DEPTH LESS THAN INDICATED. TRENCHES SHALL BE OVER-EXCAVATED AS NECESSARY TO ALLOW FOR PROPER TRENCH PREPARATION, RACEWAY BANK CONSTRUCTION, FORMING AND/OR BACKFILLING REQUIREMENTS.

7. NEW HANDHOLES SHALL BE INSTALLED AS INDICATED. PRECAST HANDHOLES MAY BE PROVIDED WHEN THEY PROVIDE THE SAME INSIDE DIMENSIONS, STRENGTH AND SEALED JOINTS COMPARABLE TO THE MONOLITHIC CONSTRUCTION OF CAST-IN-PLACE HANDHOLES. INSTALL HANDHOLES AS FOLLOWS:
   - d. RACEWAY LINE INTERSECTIONS
   - e. NOT SPACED MORE THAN 150M(500') ON STRAIGHT RUNS
   - f. NOT SPACED MORE THAN 80M(260') ON CURVED SECTIONS
   - g. NOT MORE THAN 40M(130') FROM A 90° RISER

8. WHEN WORKING IN EXISTING MANHOLES OR HANDHOLES THE CONTRACTOR SHALL REMOVE DEBRIS AND WATER BY PUMPING PRIOR TO BEGINNING WORK. NEW PENETRATIONS AND/OR REWORKING OF EXISTING PENETRATIONS SHALL BE ACCOMPLISHED AND THE EXISTING WALLS PATCHED, REPAIRED AND WATERPROOFED. REMOVE EXISTING ABANDONED CONDUIT TERMINATIONS AS REQUIRED TO MAKE ROOM FOR NEW. REMOVE THE IDENTIFIED CABLE, FIREPROOFING MATERIAL ON THE CABLE AND INSTALL NEW CABLE ACCORDINGLY. AFTER NEW CABLE HAS BEEN INSTALLED, THE EXISTING MANHOLE OR HANDHOLE SHALL AGAIN BE DEWATERED AND CLEANED OF ALL MUD AND DEBRIS FOR INSPECTION.


NEW SOD
FIN GRADE
A
B
NEW TOPSOIL
SEE NOTE 2
PLASTIC MARKING TAPE (SEE NOTE 3)
COMPACT BACKFILL (SEE NOTE 5)
TRENCH BOTTOM SHALL BE UNDISTURBED, TAMPED OR RELATIVELY SMOOTH EARTH SEE NOTE 4
SEE NOTE 2
TRENCH - SEE NOTE 1

DIMENSION BLOCK		
REF	SI	ENGLISH
A	305mm	1'-0"
B	51mm	0'-2"

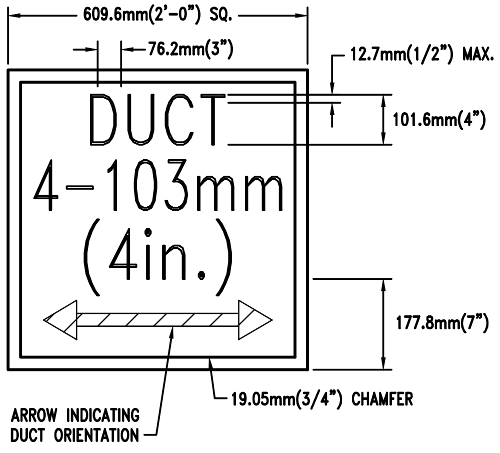
A
E400

SECTION - TYP TRENCH/BACKFILLING ON GRADE

NO SCALE

DETAIL 'A' NOTES

1. TRENCH/CUT EXISTING SURFACES. BACKFILL/PATCH/REPAIR AND INSTALL NEW SOD.
2. TRENCH DEPTH AND WIDTH SHALL BE AS REQUIRED FOR THE INSTALLATION OF THE RACEWAY LINE SPECIFIED. SEE APPLICABLE RACEWAY LINE SECTIONS.
3. PLASTIC MARKER TAPE SHALL BE RED AND CONTAIN FOIL BACKING OR EQUIVALENT TO ENABLE DETECTION BY A METAL DETECTOR. SEE SPECIFICATIONS.
4. WHERE ROCK IS PRESENT INSTALL A PROTECTIVE LAYER OR CLEAN TAMPED BACKFILL
5. ALL BACKFILL SHALL BE FREE OF MATERIAL THAT MAY DAMAGE RACEWAYS. BACKFILL WITHIN 150mm(6") OF THIS RACEWAY SHOULD BE FREE OF SOLID MATERIAL GREATER THAN 100mm(4") IN MAX DIMENSIONS OR WITH SHARP EDGES. THE REMAINDER OF BACKFILL SHALL BE FREE OF SOLID MATERIAL GREATER THAN 200mm(8") IN MAX DIMENSIONS.



DUCT MARKER

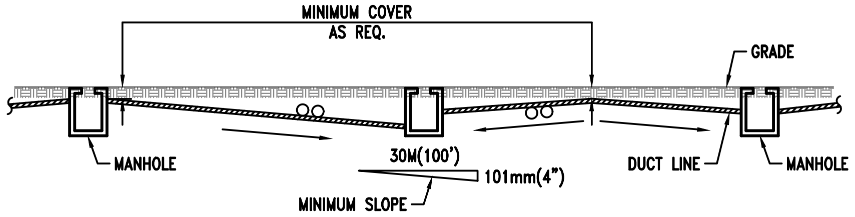
B
E400

DETAIL - DUCT MARKERS

NO SCALE

DETAIL 'B' NOTES

1. HAND LETTERING NOT ALLOWED ON MARKERS. LETTERING IS TO BE BOLDLY IMPRESSED. LINE WIDTH AND DEPTH SHALL BE 12.7mm(1/2") MINIMUM.
2. ARROW ON CABLE MARKER TO INDICATE DIRECTION OF CABLES (WHERE APPLICABLE).
3. DUCT MARKER SHALL INDICATE NUMBER AND SIZE OF DUCTS INSTALLED IN DUCT BANK. (4-103mm(4in.) SHOWN FOR EXAMPLE)
4. ALL MARKERS SHALL BE CONCRETE WITH A MINIMUM OF 103mm(4") IN THICKNESS.



C
E400

SECTION - TYPICAL DUCT LINE SLOPE

NO SCALE

DETAIL 'C' NOTES

1. INSTALL ALL DUCTS TO DRAIN TO A MANHOLE OR HANDHOLE. SEE SPECIFICATIONS.

GENERAL UNDERGROUND TERMINOLOGY AND DEFINITIONS

BIL:	BASIC IMPULSE LEVEL
CONCRETE PAD:	REINFORCED CONCRETE PAD DESIGNED FOR SPECIFIC EQUIPMENT
SUBMERSIBLE:	DESIGNED FOR SUBSURFACE PLACEMENT AND OPERATION
PAD MOUNTED:	DESIGNED FOR SURFACE PLACEMENT AND OPERATION
URD:	UNDERGROUND RESIDENTIAL DISTRIBUTION
HDPE:	HIGH-DENSITY POLYETHYLENE
PVC:	POLYVINYL CHLORIDE

UNDERGROUND UTILITY TRENCHING AND BACKFILL REQUIREMENTS

1. ALL UNDERGROUND UTILITY TRENCHES SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GUIDES:
   - CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO EXCAVATION.
   - ALL DAMAGE TO EXISTING UTILITIES, CIRCUITS, STRUCTURES, ETC. SHALL BE REPAIRED AND/OR REPLACED AT THE EXPENSE OF THE CONTRACTOR.
2. DURING UNDERGROUND UTILITY WORK, CONSIDERATION SHALL BE GIVEN AND SOLUTIONS PROVIDED FOR THE FOLLOWING:
   - EARTH EXCAVATION AND POTENTIAL EROSION. PROVIDE EROSION BARRIERS AS REQUIRED.
   - EARTH AND VEGETATION DAMAGE FROM HEAVY EQUIPMENT.
   - CAREFUL AND SPECIFICALLY PLANNED ROUTING TO MINIMIZE EXCAVATION EXTENT AND DAMAGE TO OTHER UTILITIES AND ENVIRONMENTAL IMPACT.
   - POTENTIAL EXCAVATION DAMAGE TO VEGETATION AND/OR ROOTS.
   - HAND TRENCHES SHALL BE USED FOR HEAVY VEGETATION AND UTILITY CONGESTED AREAS, TO MINIMIZE POSSIBLE DAMAGE TO THE ENVIRONMENT, UTILITIES, EQUIPMENT AND SYSTEMS.
3. CONTRACTOR SHALL BE REQUIRED TO SECURE GROUND PENETRATING RADAR(GPR) SERVICES AS NEEDED TO PROPERLY LOCATE AND IDENTIFY EXISTING UNDERGROUND UTILITIES, CIRCUITS, STRUCTURES, ETC, PRIOR TO TRENCHING AND/OR DIRECTIONAL BORING.
4. ALL UNDERGROUND UTILITY WORK SHALL BE LOCATED IN A CONVENIENT ACCESSIBLE LOCATION AT AN APPROVED EASEMENT LOCATION.
5. THE GEOTECHNICAL TESTING SHALL BE IN ACCORDANCE WITH ASTM D698. THE BOTTOM OF ALL EXCAVATIONS TO ACHIEVE 85% TO 95% OF MAXIMUM DRY DENSITY, PRIOR TO CONCRETE PLACEMENT.

US Army Corps
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U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
109 SAINT JOSEPH STREET
MOBILE, ALABAMA

BASKERVILLE-DONOVAN, INC.
ENGINEERING THE SOUTH SINCE 1927
1201 MONTLIMAR DRIVE, SUITE 650, MOBILE, AL 36609 (251) 380-0311
ENGINEERING BUSINESS: EB-0000340
Pensacola - Panama City Beach - Tallahassee - Mobile

DESIGNED BY: KLH/JDW	ISSUE DATE: JUNE 2024
DRAWN BY: EWH	SOLICITATION NO.: -
CHECKED BY: KLH/JDW	CONTRACT NO.: -
SUBMITTED BY: -	PROJECT NUMBER: MEF24005
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COLUMBUS AIR FORCE BASE, MISSISSIPPI
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

UNDERGROUND UTILITY
REQUIREMENTS

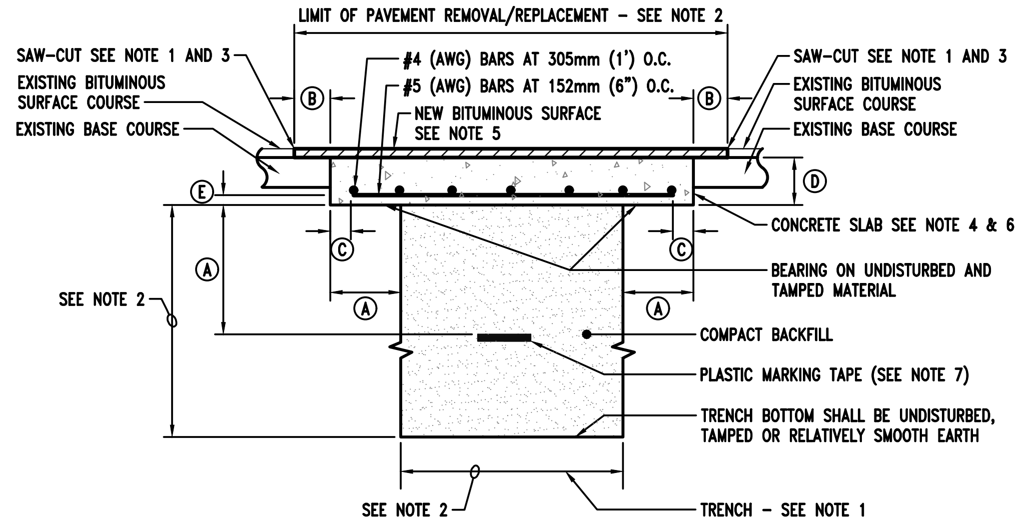
SHEET ID
T-400

RTA SUBMITTAL

CESAM v20181203

DETAIL 'A'
DIMENSION BLOCK

REF	SI	ENGLISH
A	305mm	1'-0"
B	152mm	0'-6"
C	51mm	0'-2"
D	203mm	0'-8"
E	76mm	0'-3"



LIMIT OF PAVEMENT REMOVAL/REPLACEMENT - SEE NOTE 2
SAW-CUT SEE NOTE 1 AND 3
EXISTING BITUMINOUS SURFACE COURSE
EXISTING BASE COURSE
#4 (AWG) BARS AT 305mm (1') O.C.
#5 (AWG) BARS AT 152mm (6") O.C.
NEW BITUMINOUS SURFACE SEE NOTE 5
SAW-CUT SEE NOTE 1 AND 3
EXISTING BITUMINOUS SURFACE COURSE
EXISTING BASE COURSE
CONCRETE SLAB SEE NOTE 4 & 6
BEARING ON UNDISTURBED AND TAMPED MATERIAL
COMPACT BACKFILL
PLASTIC MARKING TAPE (SEE NOTE 7)
TRENCH BOTTOM SHALL BE UNDISTURBED, TAMPED OR RELATIVELY SMOOTH EARTH
TRENCH - SEE NOTE 1
SEE NOTE 2
SEE NOTE 2
A
B
C
D
E

A/T-401 SECTION - TYP TRENCH/BACKFILLING/REPAIR FLEXIBLE PAVEMENT

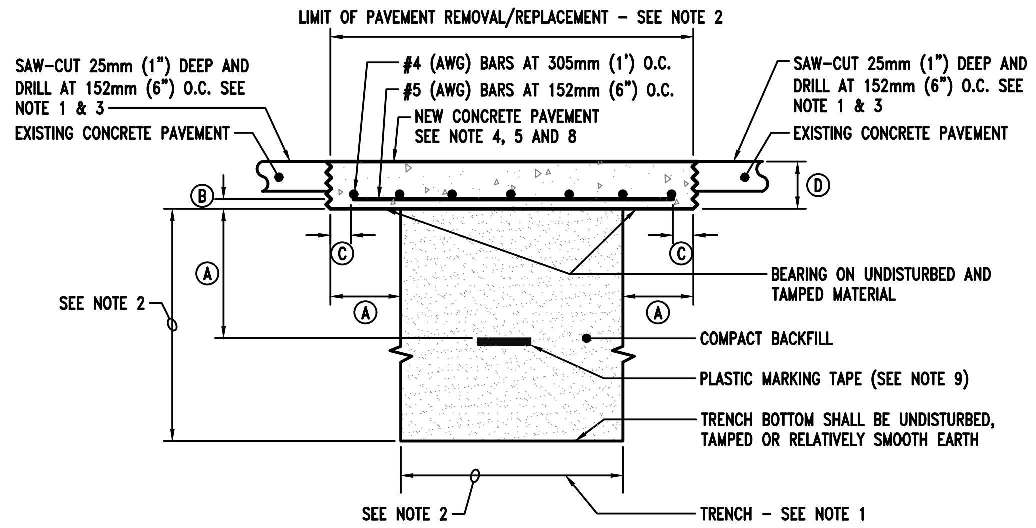
NO SCALE

DETAIL 'A' NOTES

1. TRENCH/CUT EXISTING SURFACES. BACKFILL/PATCH/REPAIR ALL SURFACES AS SHOWN.
2. TRENCH DEPTH AND WIDTH SHALL BE AS REQUIRED FOR THE INSTALLATION OF THE RACEWAY LINE SPECIFIED. SEE APPLICABLE RACEWAY LINE SECTION.
3. PAVEMENT REMOVAL SHALL BE COMPLETE FROM THE SITE AND EXTEND BEYOND THE TRENCH WIDTH AS INDICATED.
4. CONCRETE SHALL BE CLASS A.
5. MATCH THICKNESS OF EXISTING BITUMINOUS SURFACE, OR 38mm (1.5") MINIMUM, WHICHEVER IS GREATER.
6. REINFORCING BARS SHALL MEET ASTM A615, A616 OR A617, GRADE 40. REINFORCING BARS SHALL BE INSTALLED THE CONTINUOUS LENGTH OF CONCRETE SLAB.
7. PLASTIC MARKER TAPE SHALL BE RED AND CONTAIN FOIL BACKING OR EQUIVALENT TO ENABLE DETECTION BY A METAL DETECTOR. SEE SPECIFICATIONS.

DETAIL 'B'
DIMENSION BLOCK

REF	SI	ENGLISH
A	305mm	1'-0"
B	76mm	0'-3"
C	51mm	0'-2"
D	203mm	0'-8"



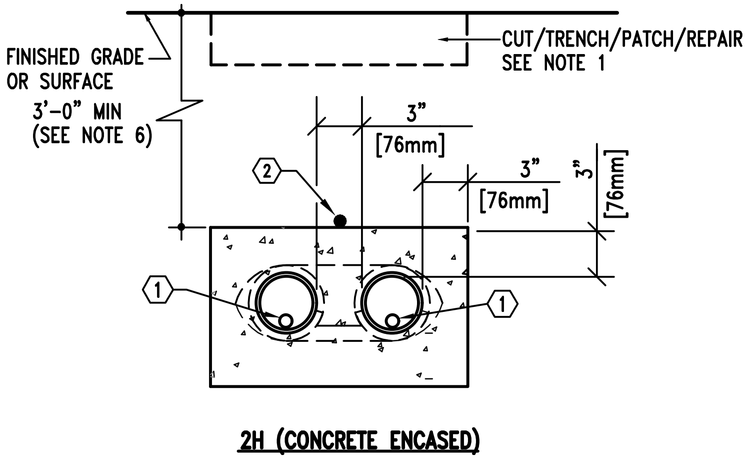
LIMIT OF PAVEMENT REMOVAL/REPLACEMENT - SEE NOTE 2
SAW-CUT 25mm (1") DEEP AND DRILL AT 152mm (6") O.C. SEE NOTE 1 & 3
EXISTING CONCRETE PAVEMENT
#4 (AWG) BARS AT 305mm (1') O.C.
#5 (AWG) BARS AT 152mm (6") O.C.
NEW CONCRETE PAVEMENT SEE NOTE 4, 5 AND 8
SAW-CUT 25mm (1") DEEP AND DRILL AT 152mm (6") O.C. SEE NOTE 1 & 3
EXISTING CONCRETE PAVEMENT
BEARING ON UNDISTURBED AND TAMPED MATERIAL
COMPACT BACKFILL
PLASTIC MARKING TAPE (SEE NOTE 9)
TRENCH BOTTOM SHALL BE UNDISTURBED, TAMPED OR RELATIVELY SMOOTH EARTH
TRENCH - SEE NOTE 1
SEE NOTE 2
SEE NOTE 2
A
B
C
D

B/T-401 SECTION - TYP TRENCH/BACKFILLING/REPAIR RIGID PAVEMENT

NO SCALE

DETAIL 'B' NOTES

1. TRENCH/CUT EXISTING SURFACES. BACKFILL/PATCH/REPAIR ALL SURFACES AS SHOWN.
2. TRENCH DEPTH AND WIDTH SHALL BE AS REQUIRED FOR THE INSTALLATION OF THE RACEWAY LINE SPECIFIED. SEE APPLICABLE RACEWAY LINE SECTION.
3. PAVEMENT REMOVAL SHALL BE COMPLETE FROM THE SITE AND EXTEND BEYOND THE TRENCH WIDTH AS INDICATED.
4. CONCRETE SHALL BE CLASS A.
5. MATCH THICKNESS OF EXISTING CONCRETE PAVEMENT 8" (20.32cm) MIN.
6. LEAVE DRILLED FACE OF EXISTING PAVEMENT IRREGULAR TO INSURE KEY TO NEW CONCRETE PAVEMENT.
7. ALL EXISTING JOINTS TO BE RE-ESTABLISHED.
8. REINFORCING BARS SHALL MEET ASTM A615, A616 OR A617, GRADE 40. REINFORCING BARS SHALL BE INSTALLED THE CONTINUOUS LENGTH OF CONCRETE PAVEMENT.
9. PLASTIC MARKER TAPE SHALL BE RED AND CONTAIN FOIL BACKING OR EQUIVALENT TO ENABLE DETECTION BY A METAL DETECTOR. SEE SPECIFICATIONS.



C/T-401 SECTION - DUCT BANK (2-WAY)

NO SCALE

SECTION KEYED NOTES

1. INSTALL PULL ROPE.
2. INSTALL #4/0 CU GRD COUNTERPOISE.
   * TERMINATE BOTH ENDS TO GROUND ROD

DETAIL NOTES

1. COORDINATE WITH APPLICABLE TRENCH/BACKFILL SECTIONS ON THIS SHEET.
2. CONCRETE SHALL BE CLASS B.
3. RACEWAY SYSTEM SHALL BE NON-METALLIC FOR ALL HORIZONTAL RUNS. ALL VERTICAL CHANGES IN DIRECTION SHALL BE MADE WITH A LONG SWEEP TREATED GRC (CONDUIT SYSTEM) ELBOW. ALL VERTICAL RISER SECTIONS SHALL BE TREATED GRC BELOW GRADE. PROVIDE PVC TO GRC ADAPTORS AS APPLICABLE.
4. DEPTH OF INSTALLATION MAY BE INCREASED DUE TO RACEWAY CONNECTION REQUIREMENTS AT MANHOLES, UTILITY CROSSINGS, AND/OR VERTICAL TRANSITION DUE TO RADIUS OF ELBOWS.
5. H - NUMBER OF DUCTS IN HORIZONTAL PLANE.
   V - NUMBER OF DUCTS IN VERTICAL PLANE.
6. DUCT BANKS SHALL BE MARKED WITH A 152.4mm(6") WIDE RED PLASTIC MARKER STRIP LABELED TO INDICATE "TELE-COMMUNICATION" AND PLACED IN THE BACKFILL APPROXIMATELY 304.8mm(12") ABOVE THE ENTIRE LENGTH OF THE DUCT BANK.
7. USE DUCT SPACERS TO HOLD DUCTS IN POSITION. NOTED SPACINGS ARE 1219mm(48") MINIMUMS. TIE TOGETHER USING NON-FERROUS WIRE TO HOLD DUCT BANK DURING CONCRETE POUR.
8. INSTALL MASONRY LEVELING BLOCKS AT BASE SPACERS AS NEEDED TO LEVEL DUCT BANK.

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SOLICITATION NO.: -
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PROJECT NUMBER: MEF24005
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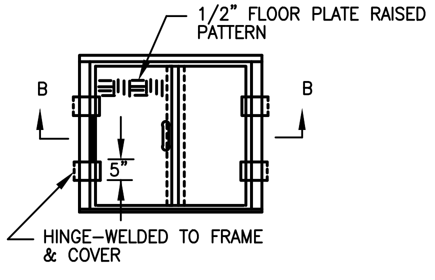
CONVERT WASH RACK TO 4-BAY T-7 HANGAR, B452

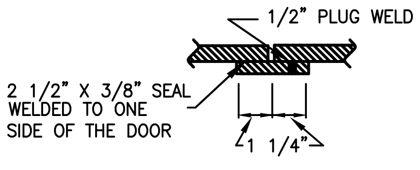
UNDERGROUND UTILITY
SECTIONS AND DETAILS

SHEET ID
T-401

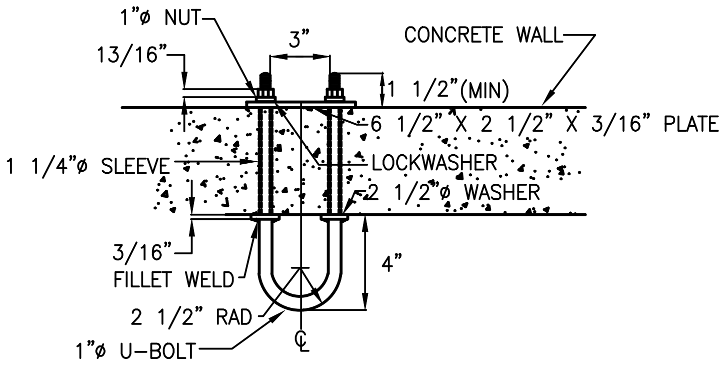
RTA SUBMITTAL


1/2" FLOOR PLATE RAISED PATTERN
B
B
5"
HINGE-WELDED TO FRAME & COVER

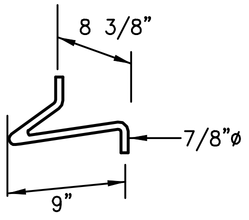
PLAN OF COVER



SEAL DETAIL



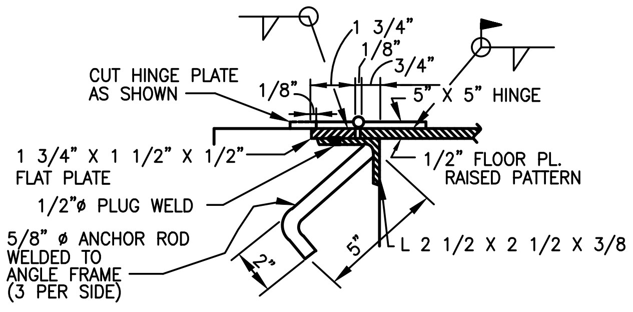
ALTERNATE METHOD



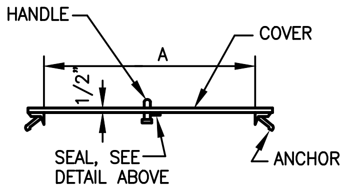
CAST IN PLACE

NOTE
ALL METAL PARTS SHALL BE HOT DIP GALVANIZED

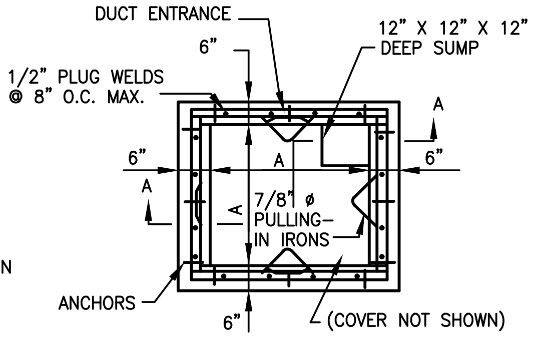
DETAIL OF PULLING-IN IRON


1 3/4"
1/8"
3/4"
CUT HINGE PLATE AS SHOWN
1/8"
5" X 5" HINGE
1 3/4" X 1 1/2" X 1/2" FLAT PLATE
1/2" FLOOR PL. RAISED PATTERN
1/2"ø PLUG WELD
5/8" ø ANCHOR ROD WELDED TO ANGLE FRAME (3 PER SIDE)
2"
5"
L 2 1/2 X 2 1/2 X 3/8

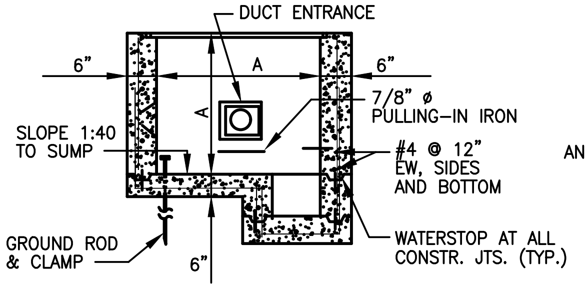
SECTION OF FRAME



SECTION B-B



PLAN

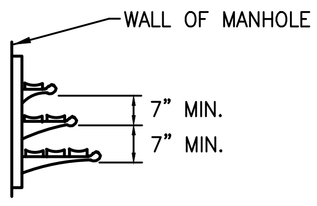


SECTION A-A

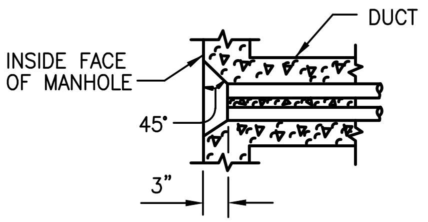
HANDHOLE	DIMENSIONS
TYPE	A
1	4'-0"

NOTES:

1. FOR DETAILS OF CABLE RACKS, DUCT ENTRANCE AND PULLING-IN IRONS, SEE PLATE UG-7.
2. MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE 3000 PSI.



TYPICAL CABLE RACK



TYPICAL DUCT ENTRANCE

SHEET NOTES

1. HAND HOLES SHALL BE AS DETAILED ON THIS SHEET OR EQUAL PROVISIONS IN A MONOLITHICALLY CONSTRUCTED PRECAST-CONCRETE DESIGN IN ACCORDANCE WITH ASTM C478, THE SAME INSIDE DIMENSIONS, STRENGTHS AND SEALED JOINTS COMPARABLE TO THE MONOLITHIC CONSTRUCTION OF CAST-IN-PLACE MANHOLES INDICATED ON THIS DRAWING SHALL BE MAINTAINED AS A MINIMUM.
2. INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL SAFETY CODE (NESC) AND THE NATIONAL ELECTRICAL CODE (NEC).
3. A 3.05m(10'-0") GROUND ROD SHALL BE INSTALLED WITH 101.6mm(4") OF ROD EXPOSED ABOVE HAND HOLE FLOOR. ALL CONDUCTIVE PARTS OF CABLE RACKS, CABLE-PULLING IRONS, SUPPORTS, CABLE SHIELDING, METALLIC SHEATH, GROUNDED CONDUCTORS, ETC., SHALL BE BONDED TO THE GROUND ROD. MAXIMUM GROUNDING RESISTANCE SHALL BE 10 OHMS.
4. ALL CLEARANCES SHALL BE MAINTAINED PER NESC FROM STRUCTURES, UTILITY LINES, ETC.. THE EXACT LOCATION SHALL BE APPROVED PRIOR TO INSTALLATION.
5. ALL DIMENSIONS INDICATED IN THESE DOCUMENTS ARE FOR REFERENCE AND MINIMUM REQUIREMENTS TO PROVIDE A REASONABLY SAFE WORKING SPACE AND TO PROVIDE EGRESS FOR AN EMERGENCY PER NESC.
6. EXCAVATION SHALL BE AS NECESSARY TO ALLOW FOR PROPER FORMING, CONSTRUCTION, UTILITY SYSTEM TRENCHING/TERMINATIONS AND/OR BACKFILLING REQUIREMENTS. ALL SURFACES SHALL BE CUT, PATCHED AND REPAIRED TO THEIR ORIGINAL CONDITION. ALL DAMAGED UTILITY SYSTEMS, UNDERGROUND CIRCUITS, DEVICES, STRUCTURES ETC., SHALL BE REPAIRED AND PLACED BACK INTO OPERATION.
7. UNDERGROUND DUCT LINES SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS AND AS DETAILED. ALL DUCTS SHALL TERMINATE WITH BELL END FITTINGS AND A CABLE-PULLING IRON SHALL BE INSTALLED ON EACH WALL OF THE HAND HOLE. DUCT TERMINATIONS SHALL BE WATERTIGHT AND AT THE DEPTH REQUIRED TO FACILITATE CABLE PULLING. INSTALL DUCT PLUGS IN ALL UNUSED DUCTS.
8. AFTER INSTALLATION OF UNDERGROUND PROVISIONS AND PRIOR TO ACCEPTANCE THE HAND HOLE SHALL BE PUMPED AND DE-WATERED AND CLEANED OF ALL MUD, DEBRIS, ETC. FOR INSPECTION.
9. FRAME AND COVER SHALL LIMIT ACCESS TO AUTHORIZED PERSONS AND FORM AN INTEGRAL PART OF THE STRUCTURAL SYSTEM.

KEYED NOTES

① #4 AWG BARE CU BONDING CONDUCTOR & CLAMPS.

② EXPANSION TYPE, WATERTIGHT, CORROSION RESISTANT DUCT-PLUG INSERT, TYP FOR ALL SPARE DUCTS.

A
T402

DETAIL - TYPICAL HANDHOLE REQUIREMENTS

NO SCALE

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