



DELAWARE RIVER AND BAY AUTHORITY

DRBA CONTRACT NO. 33N-24-A



CONTRACT DRAWINGS FOR THE CONSTRUCTION OF

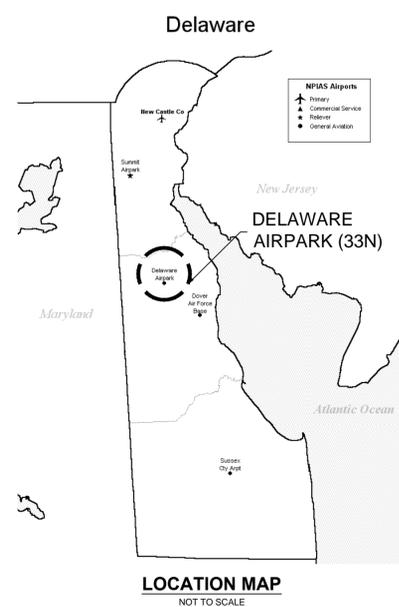
BOX HANGAR CONSTRUCTION

DELAWARE AIRPARK (33N)

DOVER COUNTY,
DOVER, DELAWARE

OCTOBER 2023

C&S PROJECT: 872.013.079



DELAWARE AIRPARK (33N)
DELAWARE RIVER AND BAY AUTHORITY

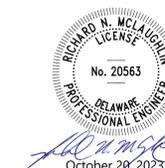
LIST OF DRAWINGS

SHEET NO.	SHEET REFERENCE NO.	SHEET TITLE
1	G-001	TITLE SHEET
2	G-100	GENERAL CONSTRUCTION AND SAFETY NOTES 1
3	G-101	GENERAL CONSTRUCTION AND SAFETY NOTES 2
4	G-110	MAXIMUM EQUIPMENT HEIGHT PLAN
5	GC-101	CONSTRUCTION SAFETY AND PHASING PLAN
6	A-001	SYMBOLS, ABBREVIATIONS, LEGENDS AND NOTES
7	A-002	CODE COMPLIANCE PLAN
8	A-101	FLOOR PLAN
9	A-102	ROOF PLAN
10	A-201	EXTERIOR ELEVATIONS
11	EL-001	ELECTRICAL NOTES, SYMBOLS, ABB
12	EL-101	ELECTRICAL SITE PLAN
13	EL-102	ELECTRICAL PLAN
14	EL-501	ELECTRICAL DETAILS
15	EL-601	ELECTRICAL SCHEDULES
16	S 1.0	EXISTING FOUNDATION PLAN
17	S 2.0	DETAIL AND NOTES

ITEM NO.	FAA SPEC	DESCRIPTION	QUANTITY	UNITS
1	C-105-6.1	MOBILIZATION (4%+- MAXIMUM)	1	LS
2	C-106-3.1	SAFETY, SECURITY AND MAINTENANCE OF TRAFFIC	1	LS
3	L-102-4.1a	ELECTRIC UTILITY ALLOWANCE	1	LS
4	L-102-4.1b	UTILITY COORDINATION	1	LS
5	L-108-5.1a	NO. 3/0 AWG, 600V, THWN CABLE, INSTALLED IN TRENCH, DUCT BANK OR CONDUIT	300	LF
6	L-108-5.2b	NO. 6 AWG, INSULATED, STRANDED EQUIPMENT BONDING INSTALLED IN DUCT BANK OR CONDUIT	100	LF
7	L-110-5.1a	CONCRETE ENCASED ELECTRICAL DUCT BANK, 2-WAY - 4" PVC CONDUIT, IN PAVEMENT	100	LF
8	L-110-5.1b	CONCRETE ENCASED ELECTRICAL DUCT BANK, 2-WAY, 2" PVC CONDUIT IN PAVEMENT	50	LF
9	L-110-5.1c	NON ENCASED ELECTRICAL DUCT BANK, 2-WAY 2" RGS CONDUIT, IN TURF	50	LF
10	P-101-5.1	JOINT AND CRACK REPAIR	820	LF
11	11000-1.6-B-1	BOX HANGAR	1	LS

PREPARED BY:

Richard N. McLaughlin
RICHARD N. MCLAUGHLIN D.E. PROFESSIONAL ENGINEER LICENSE NO. 20563
C&S ENGINEERS, INC. DATE: October 20, 2023



NO ALTERATION ON THESE DRAWINGS IS ALLOWED UNLESS SAID ALTERATIONS ARE MADE UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF AN ITEM BOUND BY THE SEAL OF AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND THE SPECIFIC DESCRIPTION OF SUCH ALTERATION.

PROJECT FILE NO. 872.013.079
CADD FILE NO. 33N BOX HANGAR CONSTRUCTION.DWG

G-001

GENERAL CONSTRUCTION NOTES

- 1. THIS PROJECT IS FOR WORK AT DELAWARE AIRPARK (33N), HEREAFTER REFERRED TO AS 'THE AIRPORT'.
- 2. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS AND ANY RULES, REGULATIONS, STANDARDS, OR SPECIFICATIONS REFERENCED THEREIN. THE PROJECT IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF THE DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT), THE FEDERAL AVIATION ADMINISTRATION (FAA), AND OTHER GOVERNING AGENCIES.
- 3. PROJECT PHASING - UPON COMPLETION OF ANY STAGE OR PHASE OF WORK, THE ENGINEER WILL ARRANGE A PHYSICAL INSPECTION OF THE AREA WITH AIRPORT OPERATIONS PERSONNEL PRIOR TO THE OPENING OF ANY TAXIWAY, RUNWAY, RAMP AREA OR AIRPORT ROADWAY THAT HAS BEEN CLOSED FOR WORK OR USED FOR A CROSSING POINT OR HAUL ROUTE BY THE CONTRACTOR.
- 4. PROJECT COMPLETION TIMES - THE CONTRACTOR IS EXPECTED TO COMPLETE CRITICAL PORTIONS OF THE PROJECT WITHIN THE SPECIFIED TIMEFRAMES AND TO COMPLETE THE ENTIRE PROJECT ON TIME. LIQUIDATED DAMAGES, IF SPECIFIED, WILL BE ASSESSED SHOULD THE TIMEFRAME BE EXCEEDED.
- 5. AIRPORT OPERATIONS - THE AIRPORT MAY BE IN OPERATION DURING THE CONSTRUCTION OF THIS PROJECT. RUNWAY 9-27 OPERATES AS A 4,200 FOOT RUNWAY DAWN TO DUSK DAILY. COORDINATION OF WORK WITH AIRPORT OPERATIONS IS MANDATORY TO MINIMIZE IMPACTS TO AIRPORT USERS.
- 6. CONTRACTOR COORDINATION - CONSTRUCTION AND MAINTENANCE OPERATIONS BY OTHERS MAY OCCUR CONCURRENTLY AND IN THE VICINITY OF CONSTRUCTION ASSOCIATED WITH THIS PROJECT. THE CONTRACTOR SHALL COORDINATE OPERATIONS AND COOPERATE WITH MAINTENANCE CREWS AND OTHER CONTRACTORS WORKING AT THE AIRPORT. CONTRACTOR COORDINATION WITH APPROPRIATE GOVERNMENT AND UTILITY AGENCIES IS ALSO REQUIRED PRIOR TO AND DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE RPR AND THE RPR SHALL COORDINATE WITH DELDOT/ATC.
- 7. FACILITY CLOSURES - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ARRANGE TO MEET WITH AIRPORT OPERATIONS, THE FAA, AND THE ENGINEER TO EVALUATE AND ESTABLISH ANY RUNWAY AND TAXIWAY CLOSURE TIMES AND DURATIONS. TO THE EXTENT POSSIBLE, THE CONTRACTOR SHALL COORDINATE CONSTRUCTION TO COINCIDE WITH RUNWAY AND TAXIWAY CLOSURES ALREADY SCHEDULED FOR CONSTRUCTION AND MAINTENANCE OPERATIONS BY OTHERS. CONTRACTOR SHALL COORDINATE WITH THE RPR AND THE RPR SHALL COORDINATE WITH DELDOT/ATC.
- 8. WASTE MATERIALS (i.e. TREES, STUMPS, EXCESS SOIL, ETC.) SHALL BE DISPOSED OF OFF AIRPORT PROPERTY. TRASH (i.e. CUPS, CANS, BOTTLES, PAPER, ETC.) SHALL BE DISPOSED OF THROUGH PROPER SANITARY METHODS.
- 9. EXISTING AIRFIELD LIGHTING SYSTEMS - INTERRUPTION OF EXISTING AIRFIELD LIGHTING SYSTEMS NOT INCLUDED IN THIS PROJECT SHALL NOT BE PERMITTED. ALL AIRFIELD LIGHTING CIRCUITS AFFECTED BY THIS PROJECT SHALL BE TEMPORARILY MAINTAINED BY THE CONTRACTOR DURING OPERATIONAL PERIODS.
- 10. PORTABLE FLOODLIGHTING - THE CONTRACTOR SHALL PROVIDE PORTABLE FLOODLIGHTING AS REQUIRED FOR NIGHT CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL PROVIDE SUFFICIENT UNITS SO THAT ALL WORK AREAS ARE ILLUMINATED TO A LEVEL OF FIVE (5) HORIZONTAL FOOT CANDLES. THE LIGHTING LEVELS SHALL BE CALCULATED AND MEASURED IN ACCORDANCE WITH THE CURRENT STANDARDS OF THE ILLUMINATION ENGINEERING SOCIETY. THE CONTRACTOR SHALL COORDINATE THE USE OF FLOODLIGHTING WITH THE CONTROL TOWER TO ENSURE THAT THE LIGHTING DOES NOT COMPROMISE THE CONTROL TOWER'S VISIBILITY OR CAUSE CONFUSION TO PILOTS.
- 11. THE CONTRACTOR SHALL PROVIDE LOW PROFILE CONSTRUCTION BARRICADES WITH FLASHING RED LIGHTS AS SHOWN ON THE DRAWINGS TO DELINEATE THE WORK AREAS WHEN CLOSED TO AIRPORT TRAFFIC. OPEN TRENCHES, EXCAVATIONS AND STOCKPILE MATERIAL LOCATED IN THE AOA SHALL BE PROMINENTLY MARKED WITH ORANGE FLAGS AND LIGHTED BY APPROVED LIGHT UNITS DURING HOURS OF LIMITED VISIBILITY AND DARKNESS.
- 12. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE NUMBER OF WATER TRUCKS TO CONTROL DUST IN THE PROJECT WORK AREA, STAGING/STORAGE AREAS, HAUL ROUTES AND THE WASTE SITE.
- 13. ALL THE PERMITS AND LICENSES REQUIRED FOR THE PROJECT WORK SHALL BE OBTAINED AT THE CONTRACTOR'S EXPENSE.
- 14. EXISTING TOPOGRAPHIC FIELD SURVEYS HAS NOT BEEN CONDUCTED PRIOR TO THIS SUBMISSION. THE CONTROL ON THIS PROJECT IS TIED TO THE NAD 83/91 HORIZONTAL DATUM AND NAVD 88 VERTICAL DATUM. SURVEY UNITS SHALL BE IN U.S. SURVEY FOOT.
- 15. IN ACCORDANCE WITH THE SPECIFICATIONS, FEDERAL WAGE RATES SHALL BE POSTED OUTSIDE THE SITE FIELD OFFICE(S) IN A WEATHERPROOF ENCLOSURE. (FOR FEDERALLY FUNDED PROJECTS ONLY.)

GENERAL AIRFIELD SAFETY DURING CONSTRUCTION

- 1. THE CONTRACTOR SHALL ACQUAINT SUPERVISORS AND EMPLOYEES WITH ACTIVITY AND OPERATIONS THAT ARE INHERENT TO THE AIRPORT AND SHALL CONDUCT CONSTRUCTION ACTIVITIES TO CONFORM TO ALL ROUTINE AND EMERGENCY AIR TRAFFIC REQUIREMENTS AND GUIDELINES FOR SAFETY SPECIFIED HEREIN.
- 2. THE CONTRACTOR AND HIS/HER SUBCONTRACTOR(S) SHALL PROTECT WORKERS, DELDOT AND AIRPORT TENANT EMPLOYEES, AND THE GENERAL PUBLIC. THE CONTRACTOR SHALL ALSO ENSURE THAT PROPERTY OR EQUIPMENT, UNRELATED TO WORK, WHICH BELONGS TO DELDOT OR AIRPORT TENANTS IS NOT DAMAGED DURING CONSTRUCTION.
- 3. THE CONTRACTOR SHALL NOT ALLOW EMPLOYEES, SUBCONTRACTORS, SUPPLIERS, OR ANY OTHER UNAUTHORIZED PERSON TO ENTER OR REMAIN IN ANY AIRPORT AREA WHICH WOULD BE HAZARDOUS TO PERSONS OR TO AIRCRAFT OPERATIONS.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY PROTECTIVE GEAR AND EQUIPMENT REQUIRED FOR THE PROTECTION OF THE CONTRACTOR'S PERSONNEL DURING CONSTRUCTION.
- 5. DURING PERFORMANCE OF THIS CONTRACT, THE AIRPORT RUNWAYS, TAXIWAYS, AND AIRCRAFT PARKING APRONS SHALL REMAIN IN USE BY AIRCRAFT TO THE MAXIMUM EXTENT POSSIBLE. ALL AIRCRAFT TRAFFIC ON THESE SURFACES SHALL HAVE PRIORITY OVER CONTRACTOR'S TRAFFIC. WHILE USE OF AREAS NEAR THE CONTRACTOR'S WORK MAY BE CONTROLLED TO MINIMIZE DISTURBANCE TO THE CONTRACTOR'S OPERATION, THE OWNER RESERVES THE RIGHT TO ORDER THE CONTRACTOR, AT ANY TIME, TO VACATE ANY AREA NECESSARY TO MAINTAIN SAFE AIRCRAFT OPERATIONS.
- 6. ALL WORK TO BE PERFORMED WITHIN CERTAIN LIMITS OF AN ACTIVE RUNWAY, TAXIWAY, OR APRON UNDER OPERATIONAL CONDITIONS SHALL BE PERFORMED WHEN THE RUNWAY, TAXIWAY OR APRON IS NOT IN USE. SUCH WORK SHALL ONLY BE ACCOMPLISHED WITH PRIOR PERMISSION FROM THE ENGINEER. REQUESTS FOR RUNWAY CLOSURES SHALL BE MADE AT LEAST 7 DAYS IN ADVANCE. REQUESTS FOR TAXIWAY OR APRON CLOSURES SHALL BE MADE AT LEAST 96 HOURS IN ADVANCE.
- 7. THE CONTRACTOR SHALL INSPECT ALL CONSTRUCTION AND STORAGE AREAS AS OFTEN AS NECESSARY AND PROMPTLY TAKE ALL STEPS NECESSARY TO PREVENT OR REMEDY ANY UNSAFE OR POTENTIALLY UNSAFE CONDITIONS OR ACTIVITIES DISCOVERED.
- 8. THE CONTRACTOR SHALL BE AWARE OF THE FOLLOWING TYPES OF SAFETY PROBLEMS AND/OR HAZARDS:
 - a. TRENCHES, HOLES, OR EXCAVATION ON OR ADJACENT TO ANY OPEN RUNWAY OR IN SAFETY AREAS.
 - b. PAVEMENT DROP-OFFS OR PAVEMENT TURF-LIPS GREATER THAN 1 1/2 INCHES WHETHER PERMANENT OR TEMPORARY.
 - c. UNMARKED/UNLIGHTED HOLES OR EXCAVATION IN ANY APRON, OPEN TAXIWAY, OPEN TAXILANE, OR RELATED SAFETY AREA.
 - d. MOUNDS OR PILES OF EARTH, CONSTRUCTION MATERIALS, TEMPORARY STRUCTURES, OR OTHER OBJECTS IN THE VICINITY OF ANY OPEN RUNWAY, TAXIWAY, TAXILANE, OR IN A RELATED SAFETY AREA, APPROACH, OR DEPARTURE AREA.
 - e. VEHICLES OR EQUIPMENT, WHETHER OPERATING OR IDLE, ON ANY OPEN RUNWAY, TAXIWAY, TAXILANE, OR IN ANY RELATED SAFETY AREA, APPROACH, OR DEPARTURE AREA.
 - f. VEHICLES, EQUIPMENT, EXCAVATION, STOCKPILES, OR OTHER MATERIALS WHICH COULD DEGRADE OR OTHERWISE INTERFERE WITH ELECTRONIC SIGNALS FROM RADIOS OR ELECTRONIC NAVIGATIONAL AIDS (NAVAIDS).
 - g. UNMARKED UTILITY, NAVAID, WEATHER SERVICE, RUNWAY LIGHTING, OR OTHER POWER OR SIGNAL CABLES THAT COULD BE DAMAGED DURING CONSTRUCTION.
 - h. OBJECTS, WHETHER OR NOT MARKED OR FLAGGED, OR ACTIVITIES ANYWHERE ON OR IN THE VICINITY OF THE AIRPORT WHICH COULD BE DISTRACTING, CONFUSING, OR ALARMING TO PILOTS DURING AIRCRAFT OPERATIONS.
 - i. UNFLAGGED/UNLIGHTED LOW VISIBILITY ITEMS SUCH AS TALL CRANES, DRILLS, ETC. ANYWHERE IN THE VICINITY OF ACTIVE RUNWAYS OR IN ANY APPROACH OR DEPARTURE AREA. SUCH EQUIPMENT SHALL BE PARKED IN THE CONTRACTOR'S STAGING AREA AND THE BOOM(S) LOWERED TO THE GROUND WHEN NOT IN USE.
 - j. MISLEADING OR MALFUNCTIONING LIGHTS OR UNLIGHTED/UNMARKED OBSTRUCTIONS IN THE APPROACH TO ANY ACTIVE RUNWAY.
 - k. INADEQUATE APPROACH OR DEPARTURE SURFACES (THESE SURFACES ARE NEEDED TO ASSURE ADEQUATE LANDING OR TAKEOFF CLEARANCE OVER OBSTRUCTIONS, INCLUDING THE CONTRACTOR'S WORK AND STORAGE AREAS).
- 9. THE CONTRACTOR SHALL CONDUCT ACTIVITIES SO AS NOT TO VIOLATE ANY SAFETY STANDARDS CONTAINED HEREIN. THE CONTRACTOR SHALL INSPECT ALL CONSTRUCTION AND STORAGE AREAS AS OFTEN AS NECESSARY AND PROMPTLY TAKE ALL STEPS NECESSARY TO PREVENT OR REMEDY ANY UNSAFE OR POTENTIALLY UNSAFE CONDITIONS OR ACTIVITIES DISCOVERED.
- 10. AT LEAST 48 HOURS BEFORE ACTUAL COMMENCEMENT OF CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY DELDOT, IN WRITING, INDICATING THE PROPOSED TIME, DATE, AND AREA OF WHICH COMMENCEMENT IS TO OCCUR. UPON COMPLETION OF WORK AND RETURN OF ALL RELATED AREAS TO STANDARD CONDITIONS, THE CONTRACTOR SHALL AGAIN NOTIFY DELDOT, IN WRITING, AND DESCRIBE THE AREA THAT IS COMPLETE AND AVAILABLE FOR NORMAL AIRPORT OPERATIONS. DELDOT REQUIRES THIS INFORMATION SO THEY MAY ISSUE APPROPRIATE NOTICE TO MISSION CONCERNING CONSTRUCTION ACTIVITY ON THE AIRFIELD.
- 11. MOTORIZED VEHICLES - THIS PROJECT INCLUDES WORK WITHIN THE ACTIVE AIRCRAFT OPERATIONS AREA (AOA) (i.e. THE SECURE PORTION OF THE AIRPORT). ALL PERMITTED VEHICLES SHALL DISPLAY IN FULL VIEW ABOVE THE VEHICLE A 3 FOOT BY 3 FOOT OR LARGER, ORANGE AND WHITE CHECKERBOARD, PLASTIC FLAG. EACH CHECKERBOARD COLOR SHALL BE 1 FOOT SQUARE. ANY VEHICLE OPERATING IN THE AOA DURING THE HOURS OF DARKNESS SHOULD BE EQUIPPED WITH A FLASHING AMBER (YELLOW) DOME-TYPE LIGHT, MOUNTED ON TOP OF THE VEHICLE AND OF SUCH INTENSITY TO CONFORM TO LOCAL CODES FOR MAINTENANCE AND EMERGENCY VEHICLES. DARKNESS SHALL BE DEFINED AS ONE HOUR BEFORE OFFICIAL SUNSET UNTIL ONE HOUR AFTER SUNRISE. ALL VEHICLES OPERATING WITHIN THE AIRFIELD BOUNDARY SHALL BE IDENTIFIED WITH A SIGN ON EACH SIDE OF THE VEHICLE BEARING THE CONTRACTOR'S NAME WITH A 12 INCH MINIMUM LETTER HEIGHT.
- 12. RADIO COMMUNICATIONS - RADIO COMMUNICATIONS ARE REQUIRED BETWEEN THE CONTRACTOR'S REPRESENTATIVE AND THE AIR

- TRAFFIC CONTROL (ATC). RADIO CONTACT IS REQUIRED AT ALL TIMES WHILE THE CONTRACTOR HAS PERSONNEL AND EQUIPMENT ON THE PROJECT SITE AND WHILE THEY ARE IN AN ACTIVE AIR OPERATIONS AREA (AOA). RADIOS SHALL BE FURNISHED BY THE CONTRACTOR AND SHALL BE CAPABLE OF TRANSMITTING AND RECEIVING AT A GROUND CONTROL FREQUENCY OF 121.8 MHZ. THIS FREQUENCY IS TO BE UTILIZED WHEN CROSSING ACTIVE FACILITIES. SUFFICIENT RADIOS SHALL BE ON SITE AND OPERATING AT ALL TIMES SO THAT INSTRUCTIONS OR COMMUNICATIONS MAY BE DISPATCHED TO ALL CREWS WITHIN AN ACTIVE AOA WITHIN ONE MINUTE AFTER RECEIPT OF DIRECTION FROM THE ATC.
- 13. FLAGMEN - IN ACCORDANCE WITH THE SPECIFICATIONS, THE CONTRACTOR SHALL FURNISH, AT HIS OWN EXPENSE, FLAGMEN AS NECESSARY TO CONTROL CONSTRUCTION TRAFFIC UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ALL CONTRACTOR VEHICLES THAT ARE REQUIRED TO CROSS ACTIVE RUNWAYS, RUNWAY SAFETY AREAS, TAXIWAYS AND APRONS SHALL DO SO UNDER THE DIRECT CONTROL OF A COMPETENT FLAGMAN WHO IS IN DIRECT RADIO CONTACT WITH FAA ATC GROUND CONTROL. ALL AIRCRAFT TRAFFIC ON RUNWAYS, TAXIWAYS AND APRONS SHALL HAVE PRIORITY OVER CONTRACTOR'S TRAFFIC. AT NO TIME SHALL THE CONTRACTOR'S VEHICLES OR PERSONNEL BE ALLOWED TO ENTER OR CROSS ACTIVE RUNWAYS OR CLEAR ZONES WITHOUT PROPER AUTHORIZATION OBTAINED THROUGH GROUND CONTROL.
- OPEN FLAME, WELDING OR TORCH CUTTING OPERATIONS ARE PROHIBITED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS HAVE BEEN TAKEN AND THE PROCEDURE PREVIOUSLY APPROVED BY THE ENGINEER. A FIRE WATCH IS REQUIRED. OPEN FLAME OPERATIONS REQUIRE A BURNING/WELDING PERMIT THAT SHOULD BE COORDINATED WITH AIRPORT MANAGEMENT 302-571-6312.

D

C

B

A

JUL 19, 2023 - 1:49pm C:\33N\Projects\2023-0901 Box Hangar Installation\CAD\SHETS\G1_00_GENERAL CONSTRUCTION AND SAFETY NOTES 1.dwg



AIRPORT DESIGN CONSULTANTS, INC.
1880 JFK BLVD, SUITE 1140
PHILADELPHIA, PA 19103

MICHAEL P. PIZZA



EXP: 06/30/2024

D.E. PROFESSIONAL ENGINEER NO. 17625



33N BOX HANGAR
DELAWARE AIRPARK
DELAWARE RIVER AND BAY AUTHORITY
KENT COUNTY
DELAWARE

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	872.013.079
DATE:	TBD
PROJECT MANAGER:	RNM
DRAWN BY:	GCS
DESIGNED BY:	MPP
CHECKED BY:	MPP

NO ALTERATION ON THESE DRAWINGS IS ALLOWED UNLESS SAID ALTERATIONS ARE MADE UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF AN ITEM BOUND BY THE SEAL OF AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND THE SPECIFIC DESCRIPTION OF SUCH ALTERATION.

A

GENERAL CONSTRUCTION AND SAFETY NOTES 1

SHEET REFERENCE NO.

G-100

SHEET OF

SITE ACCESS, CONTRACTOR STAGING, HAUL ROUTES AND MATERIAL STORAGE

- ACCESS TO THE SITE - THE CONTRACTOR'S ACCESS POINTS TO THE SITE SHALL BE AS SHOWN ON THE OVERALL SAFETY AND PHASING PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL VEHICLES AND PERSONNEL WHO ENTER THE AIRPORT THROUGH THESE ACCESS POINTS. GATES SHALL BE SECURED WHEN NOT IN USE. THE CONTRACTOR SHALL PROVIDE AIRPORT OPERATIONS WITH A SCHEDULE OF TIMES THAT THE GATE WILL BE MANNED FOR ENTRY BY THE CONTRACTOR.
- ALL OFF-SITE HAUL ROUTES SHALL BE SELECTED TO MINIMIZE DISTURBANCE TO THE PUBLIC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES (STATE HIGHWAYS, COUNTY ROADS, OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. THE CONTRACTOR'S ON-AIRPORT HAUL ROUTES ARE TO BE COORDINATED WITH THE AIRPORT AND DELDOT. THESE SHALL BE EXISTING HAUL ROUTES, WHERE AVAILABLE, OR ALONG TAXIWAY/TAXILANE PAVEMENTS UNLESS OTHERWISE INDICATED IN THE CONTRACT DRAWINGS.
- ON-SITE ROADS AND OTHER AIRFIELD PAVEMENTS USED AS HAUL ROUTES SHALL BE MAINTAINED BY THE CONTRACTOR AND SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE TO THEIR ORIGINAL CONDITION UPON COMPLETION OF BEING USED AS A HAUL ROUTE, UNLESS OTHERWISE DIRECTED BY THE CONTRACT DOCUMENTS OR BY THE ENGINEER. THE BEFORE AND AFTER CONDITION OF ALL ON-SITE HAUL ROUTES (TEMPORARY OR PERMANENT) SHALL BE JOINTLY INSPECTED AND DETERMINED BY THE CONTRACTOR AND THE ENGINEER THROUGH THE USE OF DIGITAL PHOTOGRAPHY AND/OR VIDEO. THE CONTRACTOR MAY NEED TO COORDINATE HAUL ROUTE USAGE WITH OTHER CONTRACTORS WORKING ON THE AIRPORT.
- FENCING, DRAINAGE, GRADING AND OTHER MISCELLANEOUS CONSTRUCTION REQUIRED TO CONSTRUCT OR RESTORE TEMPORARY OR PERMANENT HAUL ROUTES OR ACCESS POINTS ON THE AIRPORT WILL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING THE WORK.
- ALL ON-SITE ACCESS ROADS TO AIRPORT FACILITIES SHALL REMAIN OPEN AND MAINTAINED AT ALL TIMES.
- CONTRACTOR'S STAGING AREA - AN AREA WILL BE MADE AVAILABLE FOR CONTRACTOR'S MOBILIZATION AND STORAGE. THE CONTRACTOR'S STAGING AREA SHALL BE FREE OF DEBRIS. IF DIRECTED BY THE ENGINEER, THE CONTRACTOR WILL BE REQUIRED TO STAKE OUT AND FLAG THE STAGING AREA LIMITS. NO STAGING WILL BE ALLOWED WITHIN RUNWAY SAFETY AREAS. UPON COMPLETION OF THE PROJECT, THE STAGING AREA SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- ALL MATERIALS AND EQUIPMENT (INCLUDING STOCKPILED MATERIAL) WHEN NOT IN USE SHALL BE PLACED IN APPROVED AREAS WHERE THEY WILL NOT CONSTITUTE A HAZARD TO AIRCRAFT OPERATIONS AND NOT PENETRATE CLEARANCE SURFACES SHOWN ON THE GENERAL PROJECT LAYOUT.
 - THE OBSTACLE FREE ZONE (OFZ) GOVERNS EQUIPMENT CLEARANCE DURING CONSTRUCTION ADJACENT TO AN ACTIVE RUNWAY. UNDER NO CIRCUMSTANCES SHALL ANY MEN OR EQUIPMENT PENETRATE THESE SURFACES UNLESS PRIOR ARRANGEMENTS HAVE BEEN MADE WITH AIRPORT OPERATIONS.
 - THE FAR PART 77 APPROACH, PRIMARY, AND TRANSITIONAL SURFACES GOVERN STOCKPILES AND PARKED EQUIPMENT. UNDER NO CIRCUMSTANCES SHALL STOCKPILES, PARKED EQUIPMENT, OR OTHER CONSTRUCTION ITEMS PENETRATE THESE SURFACES ADJACENT TO AN ACTIVE RUNWAY.
- EQUIPMENT SHALL BE PARKED AT THE CONTRACTOR'S STAGING AREA WHEN NOT IN USE. TALL EQUIPMENT SUCH AS CRANES SHALL BE LOWERED TO THE GROUND WHEN NOT IN USE. STOCKPILED MATERIAL SHALL BE CONSTRAINED IN A MANNER TO PREVENT MOVEMENT RESULTING FROM AIRCRAFT JET BLAST OR WIND CONDITIONS IN EXCESS OF 10 KNOTS.
- ALL CONTRACTOR VEHICLES AND TRAFFIC (UNLESS OTHERWISE AUTHORIZED) SHALL REMAIN WITHIN THE DESIGNATED CONSTRUCTION LIMITS OR HAUL ROUTES.

SECURITY

- THE AIRPORT WILL NOT PROVIDE AIRFIELD OPERATIONS AREA ESCORTS. THE CONTRACTOR MUST PROVIDE RADIOS TO THE CREW AND AQUAINT PERTINENT PERSONNEL WITH THE PROPER PROCEDURES IN COMMUNICATIONS WITH GROUND CONTROL.
- THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A CURRENT LIST OF ALL EMPLOYEES WORKING ON THE AIRPORT. THE LIST SHALL BE MAINTAINED CURRENT BY THE CONTRACTOR AND APPLIES TO BOTH THE CONTRACTOR AND SUBCONTRACTORS.
- THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT FOR ADDITIONAL SECURITY REQUIREMENTS.

UTILITIES

- UNDERGROUND UTILITIES - LOCATIONS OF KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE. ALL UTILITY LOCATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO COMPLETE A DIGGING AUTHORIZATION FORM, AS SUPPLIED BY THE ENGINEER, PRIOR TO INITIATION OF EXCAVATION OPERATIONS.
- REPAIR OF UTILITIES DAMAGED DURING CONSTRUCTION MUST BE STARTED IMMEDIATELY AND CONTINUE UNTIL COMPLETED.
- ALL SUCH REPAIRS SHALL BE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER AND SHALL BE AT THE CONTRACTOR'S EXPENSE.
- IF FAA CABLES ARE DAMAGED, REPAIRS SHALL BE DONE IN ACCORDANCE WITH FAA REQUIREMENTS AND IN THE PRESENCE OF AN FAA REPRESENTATIVE. THE FAA MAY ELECT TO HAVE THE REPAIR PERFORMED BY OTHERS IN WHICH CASE THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING THE INCURRED COSTS OF REPAIRS.
- UTILITIES NOTIFICATION - AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITIES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE OWNER OF EACH UNDERGROUND UTILITY AFFECTED.

EMERGENCY CONTACT INFORMATION

- EXCEPT FOR EMERGENCIES, ALL CONTACT WITH AIRPORT PERSONNEL SHALL BE MADE THROUGH THE ENGINEER. FOR EMERGENCIES INVOLVING SAFETY (INJURIES, FIRES, SECURITY BREACHES, ETC.) THE CONTRACTOR SHALL MAKE DIRECT CONTACT WITH AIRPORT OPERATIONS FOLLOWED BY NOTIFICATION TO THE ENGINEER AS SOON AS POSSIBLE.
- THE PROJECT SUPERVISORS SHALL HAVE THE FOLLOWING TELEPHONE NUMBERS WITH THEM AT ALL TIMES:
 - OWNER: DELAWARE DEPARTMENT OF TRANSPORTATION
 - 127 DURHAM LANE, DOVER, DE 19904: (302) 571-6312
 - MANAGER: BENJAMIN S. CLENDANIEL
 - 127 DURHAM LANE, DOVER, DE 19904: (302) 571-6312
 - THE FOLLOWING CONTACTS MUST BE OBTAINED PRIOR TO CONSTRUCTION
 - 33N FIRE MARSHAL
 - 33N FIRE/POLICE EMERGENCY (911)
 - 33N OPERATIONS
 - 33N ATC
 - AIR ROUTE TRAFFIC CONTROL CENTER (ARTCC)
- THE CONTRACTOR SHALL PROVIDE THE PHONE NUMBERS OF THREE PERSONNEL, INCLUDING THE PROJECT SUPERINTENDENT, WHO MAY BE CONTACTED IN AN EMERGENCY. PERSONNEL SHALL BE ON CALL 24 HOURS PER DAY FOR MAINTAINING AIRPORT HAZARD LIGHTING AND BARRICADES.

RELATED DOCUMENTS

- FAA ADVISORY CIRCULARS (AC's), ORDERS AND FEDERAL AVIATION REGULATIONS (FAR's) - THE FOLLOWING PUBLICATIONS CONTAIN DEFINITIONS OR DESCRIPTIONS OF CRITICAL AIRPORT OPERATING AREAS. COPIES OF THESE PUBLICATIONS ARE AVAILABLE THROUGH THE FAA AT WWW.FAA.GOV AND CAN BE REVIEWED AT THE OFFICES OF THE MAA.

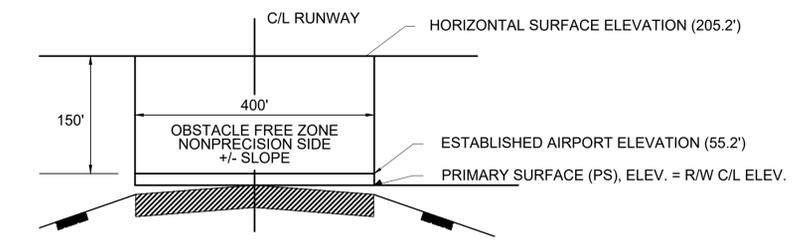
THE ITEMS OUTLINED BELOW PERTAIN TO AIRFIELD SAFETY REQUIREMENTS AND ARE REFERENCED THROUGHOUT THE CONTRACT DOCUMENTS.

 - AC 150/5370-2G, 'OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION', CURRENT EDITION, SETS FORTH GUIDELINES TO ASSIST AIRPORT OPERATORS IN COMPLYING WITH FAR PART 139, 'CERTIFICATION AND OPERATION: LAND AIRPORTS SERVING CERTAIN AIR CARRIERS' AND WITH THE REQUIREMENTS OF FEDERALLY FUNDED AIRPORT CONSTRUCTION PROJECTS.
 - FAR PART 77 'OBJECTS AFFECTING NAVIGABLE AIRSPACE', CURRENT EDITION:
 - ESTABLISHES STANDARDS FOR DETERMINING OBSTRUCTIONS TO NAVIGABLE AIRSPACE. IMAGINARY SURFACES ARE DEFINED IN THE PUBLICATION AND ARE SHOWN ON THIS SHEET.
 - ESTABLISHES REQUIREMENTS FOR FILING NOTICE TO THE FAA FOR CERTAIN PROPOSED CONSTRUCTION OR ALTERATION PROPOSALS. COMPLETION OF THE 'NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION' FORM (FAA FORM 7460-1) IS DISCUSSED IN AC 70/7460-1 'OBSTRUCTION MARKING AND LIGHTING', CURRENT EDITION.
 - AC 70/7460-2, 'PROPOSED CONSTRUCTION OF OBJECTS THAT MAY AFFECT THE NAVIGABLE AIRSPACE', CURRENT EDITION, PROVIDES INFORMATION TO PERSONS PROPOSING TO ERECT OR ALTER AN OBJECT THAT MAY AFFECT NAVIGABLE AIRSPACE. THE AC EXPLAINS THE REQUIREMENT TO NOTIFY THE FAA BEFORE CONSTRUCTION BEGINS AND THE FAA'S RESPONSIBILITY TO RESPOND TO THESE NOTICES.
 - AC 150/5300-13B, 'AIRPORT DESIGN', CURRENT EDITION, ESTABLISHES DESIGN AND OPERATIONAL STANDARDS FOR AIRPORTS. STANDARD TERMS USED IN THE CONTRACT PLANS AND SPECIFICATIONS ARE DEFINED BELOW.
 - OBSTACLE FREE ZONE (OFZ) - A VOLUME OF SPACE WHICH IS FREE OF ALL FIXED OBJECTS AND CLEAR OF VEHICLES IN THE PROXIMITY OF AN AIRPLANE CONDUCTING AN APPROACH, MISSED APPROACH, LANDING, TAKEOFF, OR DEPARTURE. AN OFZ TYPICAL SECTION IS SHOWN ON GENERAL PROJECT LAYOUT.
 - OBJECT FREE AREA (OFA) - A TWO DIMENSIONAL GROUND AREA SURROUNDING RUNWAYS, TAXIWAYS, AND TAXILANES WHICH IS CLEAR OF OBJECTS EXCEPT FOR OBJECTS WHOSE LOCATION IS FIXED BY FUNCTION.
 - SAFETY AREA - THE SURFACE ADJACENT TO RUNWAYS, TAXIWAYS, AND TAXILANES OVER WHICH AIRCRAFT SHOULD, IN DRY WEATHER, BE ABLE TO CROSS AT NORMAL SPEEDS WITHOUT INCURRING ANY SIGNIFICANT DAMAGE. A SAFETY AREA IS GRADED, DRAINED AND COMPACTED. IT IS FREE OF ANY HOLES, TRENCHES, BUMPS OR OTHER SIGNIFICANT SURFACE VARIATIONS OR OBJECTS OTHER THAN THOSE WHICH MUST BE THERE BECAUSE OF THEIR ESSENTIAL AERONAUTICAL FUNCTION. THE SAFETY AREA REQUIRES THE CAPABILITY OF SUPPORTING MAINTENANCE VEHICLES AND AIRCRAFT RESCUE AND FIRE FIGHTING VEHICLES UNDER NORMAL (DRY) CONDITIONS.



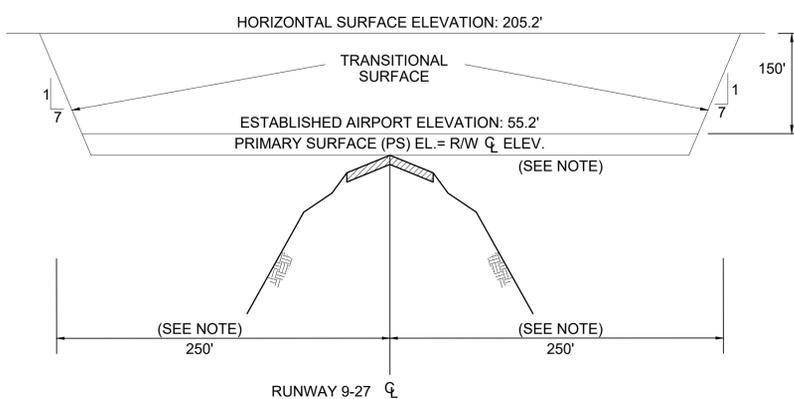
**TYPICAL PROFILE
F A R PART 77 IMAGINARY SURFACES**

NOT TO SCALE



**TYPICAL SECTION
RUNWAY OBSTACLE FREE ZONE**

NOT TO SCALE



NOTE
SEE "SAFETY REQUIREMENTS DURING CONSTRUCTION" AS CONTAINED IN THE SPECIFICATIONS, AND PLANS REGARDING RESTRICTED AREAS IN THE VICINITY OF ACTIVE RUNWAYS AND TAXIWAYS.

**TYPICAL SECTION
F A R PART 77 IMAGINARY SURFACES**

NOT TO SCALE



33N BOX HANGAR
 DELAWARE AIRPARK
 DELAWARE RIVER AND BAY AUTHORITY
 KENT COUNTY
 DELAWARE

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: 872.013.079		
DATE: TBD		
PROJECT MANAGER: RNM		
DRAWN BY: GCS		
DESIGNED BY: MPP		
CHECKED BY: MPP		

NO ALTERATION ON THESE DRAWINGS IS ALLOWED UNLESS SAID ALTERATIONS ARE MADE UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF AN ITEM BOUND BY THE SEAL OF AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND THE SPECIFIC DESCRIPTION OF SUCH ALTERATION.

**GENERAL
CONSTRUCTION
AND SAFETY
NOTES 2**

SHEET REFERENCE NO.
G-101
SHEET OF



C&S Engineers, Inc.
1500 Market Street, Suite W2410
Philadelphia, PA 19102
Phone: 215-709-4340
www.cscos.com



33N BOX HANGAER
DELEWARE RIVER AND BAY AUTHORITY
KENT COUNTY DELEWARE

Material legend table with columns for material type and symbol. Includes: EARTH, GRANULAR FILL, CONCRETE, BRICK, CONCRETE MASONRY UNIT, STEEL SECTION, STRUCTURAL STEEL, PLYWOOD, WOOD (FINISHED), WOOD (CONTINUOUS), WOOD (BLOCKING), INSULATION (LOOSE OR BATT), INSULATION (RIGID BOARD), GLASS, ACOUSTIC/CERAMIC TILE, GYPSUM WALL BOARD, SAND, PLASTER, CEMENT, GROUT, TERRAZZO, CARPET.

D3 MATERIAL LEGEND
SCALE: 1:1

- 1. THE TERM "WALL" AND "PARTITION" ARE USED INTERCHANGEABLY.
2. ALL DIMENSIONS ARE NOMINAL CENTERLINE OF METAL STUD PARTITION OR FACE OF MASONRY UNLESS OTHERWISE NOTED.
3. ALL GYPSUM BOARD SHALL BE INSTALLED VERTICALLY WITH JOINTS STAGGERED WHERE THERE ARE TWO LAYERS. NO GLUING ALLOWED.
4. PROVIDE ACOUSTICAL SEALANT AT ALL PARTITION PERIMETERS, RUNNERS, ELECTRICAL OUTLETS, PENETRATIONS AND OPENINGS. TO MINIMIZE SOUND TRANSMISSION ELECTRICAL OUTLETS SHALL BE SEPARATED BY A MINIMUM OF ONE STUD, BACK TO BACK.
5. THE LOCATIONS OF FIRE RATED WALLS ARE SHOWN ON THE DRAWINGS. PENETRATIONS IN RATED ASSEMBLIES SHALL BE FIRE STOPPED TO MAINTAIN REQUIRED RATING.
6. WALL HEIGHTS:
-ALL FIRE RATED WALLS SHALL BE FULL HEIGHT TO UNDERSIDE OF STRUCTURE. UNLESS OTHERWISE NOTED ON THE DRAWINGS ALL WALLS SHALL BE PARTIAL HEIGHT TO 6" ABOVE CEILING. STUDS MAY CONTINUE TO STRUCTURE FOR BRACING, OR BRACED AS NOTED BELOW.
7. LATERAL BRACING:
-PROVIDE APPROPRIATE LATERAL BRACING FOR WALLS EXCEEDING THE UNBRACED HEIGHT INDICATED OR THOSE THAT DO NOT EXTEND TO STRUCTURE. SEE LATERAL BRACING DETAILS FOR ADDITIONAL REQUIREMENTS.
8. GYPSUM WALL BOARD CONSTRUCTION SHALL BE ISOLATED WITH CONTROL JOINTS WHERE:
-PARTITIONS OR CEILINGS OF DISSIMILAR CONSTRUCTION MEET AND REMAIN IN THE SAME PLANE.
-EXPANSION OR CONTROL JOINTS OCCUR IN THE BUILDING STRUCTURE OR WALL CONSTRUCTION. PROVIDE CONTROL JOINTS IN THE FACE OF GWB PARTITIONS AND CEILINGS WHEN THE SIZE OF THE SURFACE EXCEEDS THE FOLLOWING CONTROL JOINT SPACING:
-PARTITIONS: 30' MAX. IN EITHER DIRECTION
-CEILINGS: 50' MAX. IN EITHER DIRECTION (WITH PERIMETER RELIEF)
9. PROVIDE METAL STUD INSERT BLOCKING AT ALL WALLS RECEIVING WALL MOUNTED EQUIPMENT AND/OR ACCESSORIES. COORDINATE WITH ALL TRADES AND OWNER EQUIPMENT LAYOUTS.
10. SEE PARTITION TYPES FOR LOCATIONS OF ACOUSTIC AND THERMAL INSULATION.
11. PROVIDE GYPSUM BOARD CONTROL JOINTS AT WALLS AND CEILINGS WITHOUT PERIMETER RELIEF EVERY 30 FEET. WITH PERIMETER RELIEF EVERY 50 FEET.

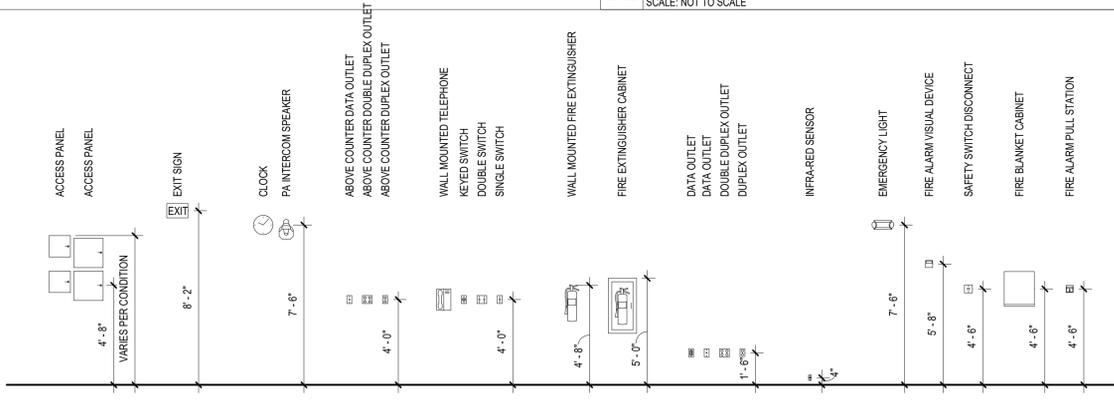
WORKING HEIGHTS table with columns: ITEM, COMMON FIXTURE, PHYSICALLY HANDICAPPED (ADA), REMARKS. Includes items like DRINKING FOUNTAIN (SPOUT), GRAB BAR (WALL MOUNTED), LAV AND SINK (TO RIM), etc.

- NOTE:
1. HEIGHTS OF ITEMS NOT INDICATED ON THIS CHART SHALL BE AS DETAILED, SPECIFIED, OR AS DIRECTED BY THE PRODUCT MANUFACTURERS INSTALLATION REQUIREMENTS.
2. ALL HEIGHTS ARE SHOWN IN INCHES ABOVE THE FINISHED FLOOR LINE.

Comprehensive list of abbreviations and symbols with descriptions. Includes: AFF ABOVE FINISHED FLOOR, ACT LAVATORY, AMP LENGTH 1 LONG, ALUM LINEAL FEET, ANGLE LAMINATED GLASS, etc.

B2 GENERAL WALL NOTES
SCALE: NOT TO SCALE

B3 WORKING HEIGHTS OF FIXTURES, HARDWARE, & EQUIPMENT
SCALE: 1/2" = 1'-0"



A3 SYMBOLS table with columns: SYMBOL, DESCRIPTION, SYMBOL, DESCRIPTION. Includes: 0000 STRUCTURAL GRID, A1/A-101 VIEW REFERENCE, ROOM NAME 101 ROOM TAG, etc.

A1 TYPICAL FIXTURE MOUNTING HEIGHT
SCALE: 1/4" = 1'-0"

A3 SYMBOLS
SCALE: NOT TO SCALE

A4 ABBREVIATION LIST
SCALE: 1 1/2" = 1'-0"

Table with columns: MARK, DATE, DESCRIPTION. Includes a REVISIONS section and project information: PROJECT NO: 872.013.079, DATE: AUGUST 2023, DRAWN BY: G. N. EURE, DESIGNED BY: G. N. EURE, CHECKED BY: M. LAMONTAGNE, AIA.

SYMBOLS, ABBREVIATIONS, LEGENDS AND NOTES

SHEET REFERENCE NO. A-001

GOVERNING CODES:

2015 INTERNATIONAL BUILDING CODE IBC
 2015 INTERNATIONAL MECHANICAL CODE - IMC
 2015 INTERNATIONAL PLUMBING CODE - IPC
 2018 INTERNATIONAL ENERGY CONSERVATION CODE - IECC
 2018 NFPA 70 NATIONAL ELECTRICAL CODE, of the NATIONAL FIRE PROTECTION ASSOC. INC.
 2010 ICC/ANSI A117.1 ACCESSIBLE and USABLE BUILDINGS and FACILITIES ANSI
 2018 INTERNATIONAL FIRE CODE - IFC
 2018 NATIONAL FIRE PROTECTION ASSOCIATION STANDARD (NFPA) 101 - LIFE SAFETY CODE
 2018 NATIONAL FIRE PROTECTION ASSOCIATION STANDARD (NFPA) 409 - STANDARD ON AIRCRAFT HANGARS
 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
 2022 NFPA 409 STANDARD AIRCRAFT HANGARS
 TITLE 1 AUTHORITIES, BOARDS AND COMMISSIONS, DELAWARE ADMINISTRATIVE CODE - DELAWARE STATE FIRE PREVENTION COMMISSION

CONSTRUCTION TYPE CLASSIFICATION (IBC TABLE 601):

TYPE IIB - NONCOMBUSTIBLE, UNPROTECTED - NEW CONSTRUCTION

FIRE RESISTANCE RATED CONSTRUCTION PROVIDED (IBC TABLE 601):

STRUCTURAL FRAME: 0 HRS
 BEARING WALLS, EXTERIOR: 0 HRS, SEPARATION DISTANCE <30FT
 BEARING WALLS, INTERIOR: 0 HRS
 NON-BEARING WALLS: 0 HRS
 FLOOR CONSTRUCTION: 0 HRS
 ROOF CONSTRUCTION: 0 HRS

INTERIOR FINISHES (IBC TABLE 803.13):

USE GROUP S1, NONSPRINKLED
 ALL EXITS HAVE MINIMUM CLASS B INTERIOR FINISH
 ALL CORRIDORS HAVE MINIMUM CLASS B INTERIOR FINISH
 ALL ROOMS & ENCLOSED SPACES HAVE MINIMUM CLASS C INTERIOR FINISH

PORTABLE FIRE EXTINGUISHERS (IBC 906.1):

PORTABLE FIRE EXTINGUISHERS - PROVIDED

OCCUPANT LOAD (IBC TABLE 1004.5):

AIRCRAFT HANGAR STORAGE: 500 GROSS

EGRESS WIDTHS (IBC 1005.3):

DOORS AND CORRIDORS: 0.2" PER OCCUPANT
 STAIRS: 0.3" PER OCCUPANT

EGRESS CAPACITY OF DOORS (IBC 1005.1):

DOORS WITH STANDARD HOLLOW METAL FRAMES AND BUTT HINGES

SIZE	CLEAR WIDTH	MAX. OCC. LOAD (CAP = 2"OCC)
(1) 3'-0"	33.125"	165 OCCUPANTS

SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY (IBC TABLE 1006.2.1):

OCCUPANCY S: 29 PEOPLE MAXIMUM OCCUPANT LOAD - PROVIDED
 MAXIMUM EXIT TRAVEL DISTANCE 100 FT - PROVIDED

MEANS OF EGRESS ILLUMINATION (IBC 1008.2):

PROVIDED AT EXIT DOORS

EXIT ACCESS TRAVEL DISTANCE (IBC TABLE 1017.2):

USE GROUP S1, 200' ALLOWABLE - REFER TO LIFE SAFETY PLAN

RISK CATEGORY (BCNJ TABLE 1604.5):

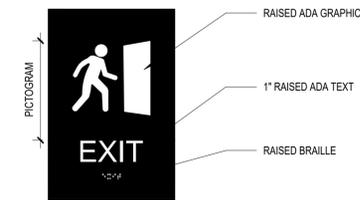
CATEGORY II

PLUMBING FIXTURES (IBC TABLE 2902.1):

NOT REQUIRED

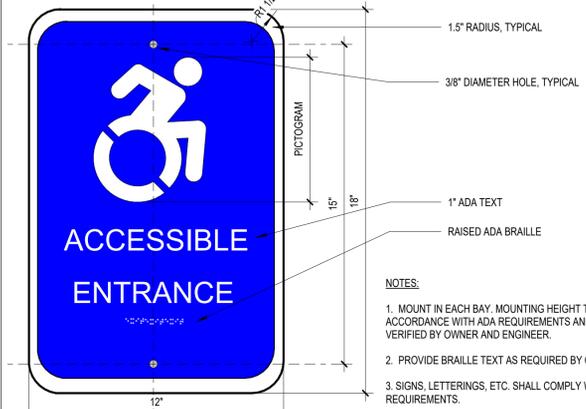
ENVELOPE REQUIREMENTS (IECC):

KENT COUNTY, DE
 CLIMATE ZONE: 7A
 UNCONDITIONED METAL BUILDING
 METAL BUILDING ENVELOPE: UNCONDITIONED BUILDING, EXEMPT - ASHRAE 90.1



- NOTES:**
1. MOUNT IN EACH BAY. MOUNTING HEIGHT TO BE IN ACCORDANCE WITH ADA REQUIREMENTS AND BE VERIFIED BY OWNER AND ENGINEER.
 2. PROVIDE BRAILLE TEXT AS REQUIRED BY CODE.
 3. SIGNS, LETTERINGS, ETC. SHALL COMPLY WITH ADA REQUIREMENTS.

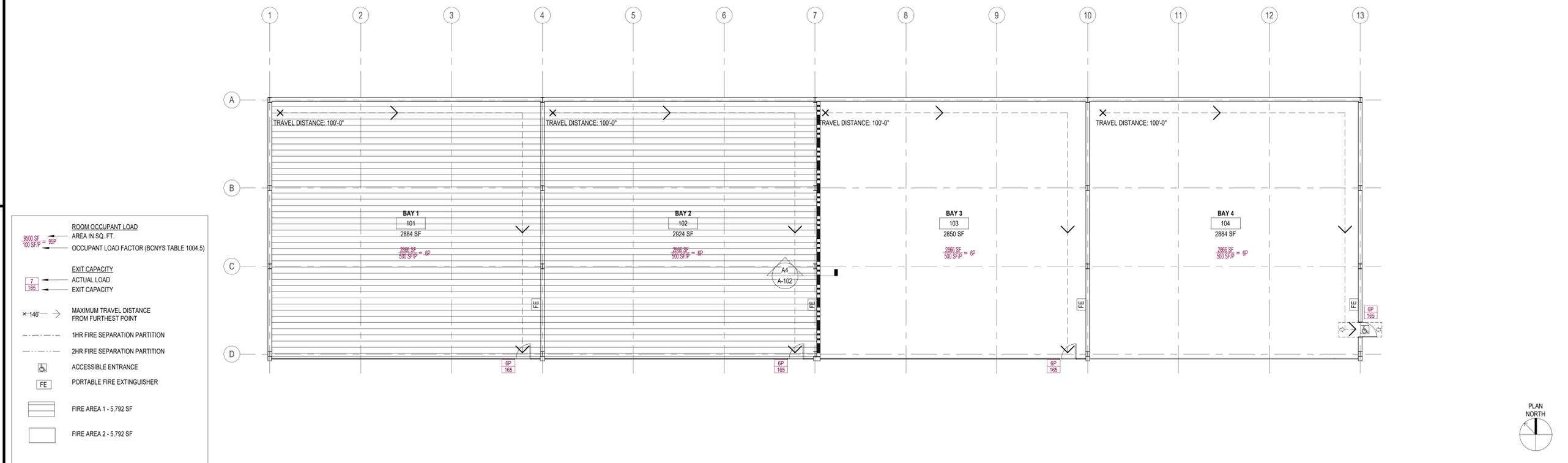
D4 EXIT SIGN - RAISED CHARACTER & BRAILLE
 SCALE: 3" = 1'-0"



- NOTES:**
1. MOUNT IN EACH BAY. MOUNTING HEIGHT TO BE IN ACCORDANCE WITH ADA REQUIREMENTS AND BE VERIFIED BY OWNER AND ENGINEER.
 2. PROVIDE BRAILLE TEXT AS REQUIRED BY CODE.
 3. SIGNS, LETTERINGS, ETC. SHALL COMPLY WITH ADA REQUIREMENTS.

C4 ACCESSIBLE ENTRANCE SIGNAGE
 SCALE: 3" = 1'-0"

C1 BUILDING CODE INFORMATION
 SCALE: NOT TO SCALE



A1 LIFE SAFETY PLAN
 SCALE: 3/32" = 1'-0"



C&S Engineers, Inc.
 1500 Market Street, Suite W2410
 Philadelphia, PA 19102
 Phone: 215-709-4340
 www.cscos.com



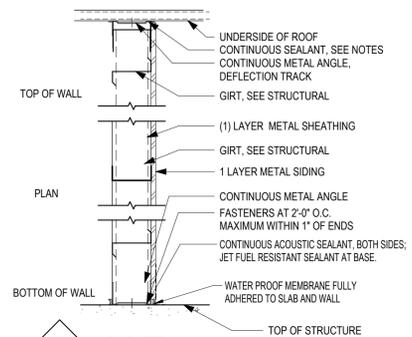
33N BOX HANGAER
DELEWARE RIVER AND BAY AUTHORITY
KENT COUNTY DELEWARE

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO:	872.013.079	
DATE:	AUGUST 2023	
DRAWN BY:	G. N. EURE	
DESIGNED BY:	G. N. EURE	
CHECKED BY:	M. LAMONTAGNE, AIA	
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION.		

CODE COMPLIANCE PLAN

SHEET REFERENCE NO.

A-002



MA-6 NON-RATED METAL GIRT SIZE: 6\"/>

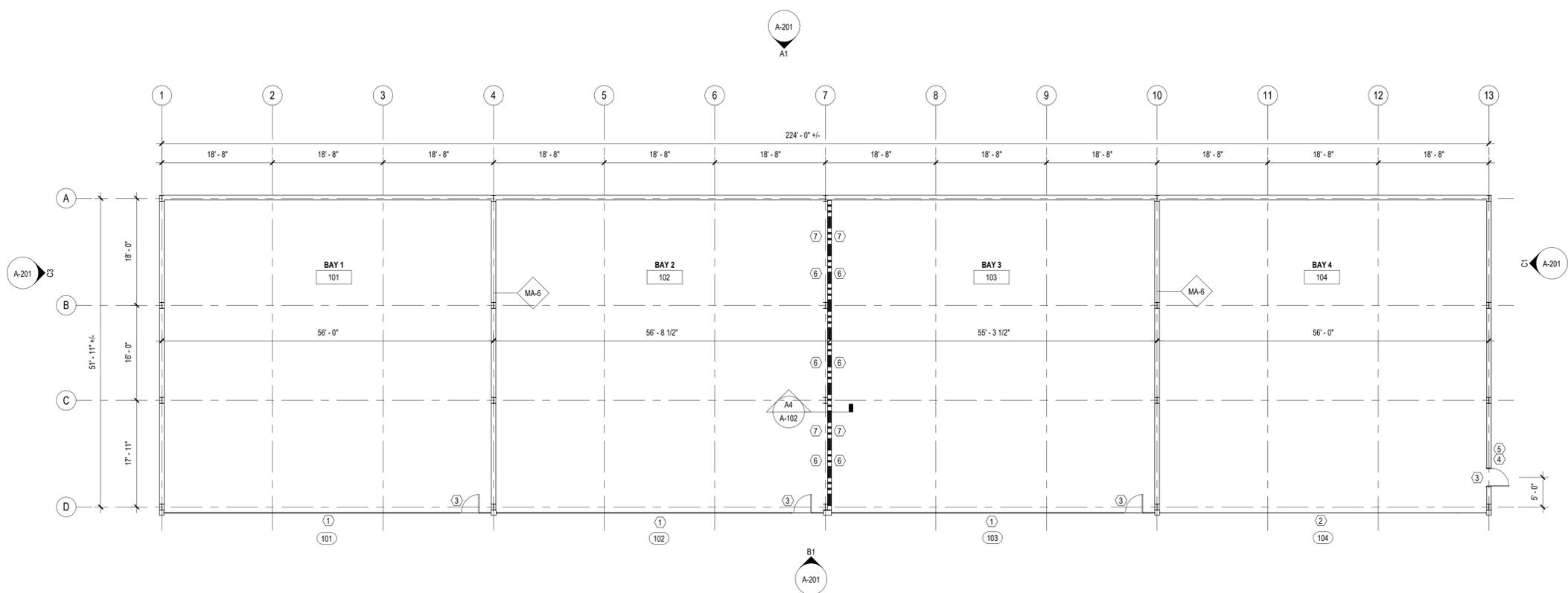
D2 NON RATED INTERIOR PARTITION TYPES
SCALE: NOT TO SCALE

- D3 KEYED NOTES**
SCALE: NOT TO SCALE
- ① OVERHEAD VERTICAL BI-FOLD DOOR TO BE 55'-0" X 16'-0" CLEAR WITH A 3'-0" X 6'-8" STEEL WALK DOOR WITH STANDARD LOCKSET.
 - ② OVERHEAD VERTICAL BI-FOLD DOOR TO BE 55'-0" X 16'-0" CLEAR.
 - ③ REQUIRED SIGNAGE 4'X6' OR 6'X9' SIGN WITH 1" HIH LETTERS. SEE NOTES ON DRAWING A-002.
 - ④ ACCESSIBLE MAN DOOR PER ANSI A117.1 WITH STANDARD LOCKSET.
 - ⑤ ACCESSIBLE ENTRANCE SIGNAGE AT EXTERIOR OF DOOR. SEE NOTES ON DRAWING A-002.
 - ⑥ FOR RATED WALL, LABEL WALL IDENTIFICATION TYPE AND FIRE RESISTANCE RATING AT 6FT AFF AND 12 FT AFF. LABEL TO BE EVERY 30 FT MINIMUM OC AND WITHING 15FT MAXIMUM OC OF WALL ENDS. LETTERING TO BE 3" MIN WITH MINIMUM 2/3" STROKE IN CONTRASTING COLOR
 - ⑦ 2 HOUR RATED 8" CONCRETE MASONRY FIRE WALL. SEE DETAIL A4/A-102.

- D4 GENERAL NOTES**
SCALE: NOT TO SCALE
1. ALL HC ACCESSIBLE DOORS TO HAVE STANDARD CODE COMPLIANT THRESHOLDS AND HARDWARE PER ANSI A117.1.
 2. EXIT SIGN AT EVERY DOOR.
 3. NO SMOKING SIGN AND FIRE EXTINGUISHER FOR EACH UNIT.
 4. PROVIDE STATIC GROUNDING RECEPTACLE FOR EACH STORAGE UNIT.
 5. OVERHEAD BIFOLD SECTIONAL DOORS TO HAVE SLAB GROMMET EMBEDS AS REQUIRED -TYP.
 6. SPILL CONTAINMENT ANGLE AND SEALANT AT ALL INTERIOR PARTITIONS.
 7. OVERHEAD DOOR & MAN DOOR FINISHES TO BE SELECTED BY ARCHITECT FROM THE MANUFACTURER'S FULL RANGE OF COLOR.
 8. STANDARD HARDWARE SET TO BE APPROVED PRIOR TO INSTALLATION.

D3 KEYED NOTES
SCALE: NOT TO SCALE

D4 GENERAL NOTES
SCALE: NOT TO SCALE



A1 FIRST FLOOR - FLOOR PLAN
SCALE: 3/32" = 1'-0"



C&S Engineers, Inc.
1500 Market Street, Suite W2410
Philadelphia, PA 19102
Phone: 215-709-4340
www.cscos.com



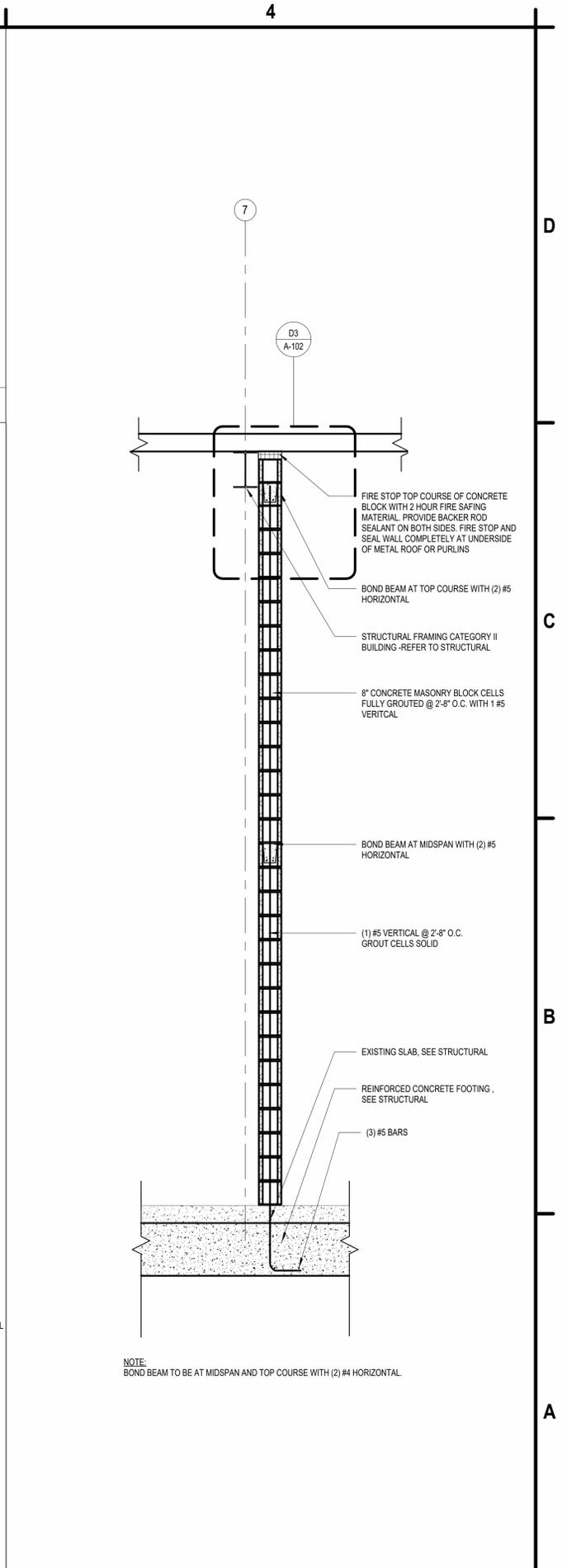
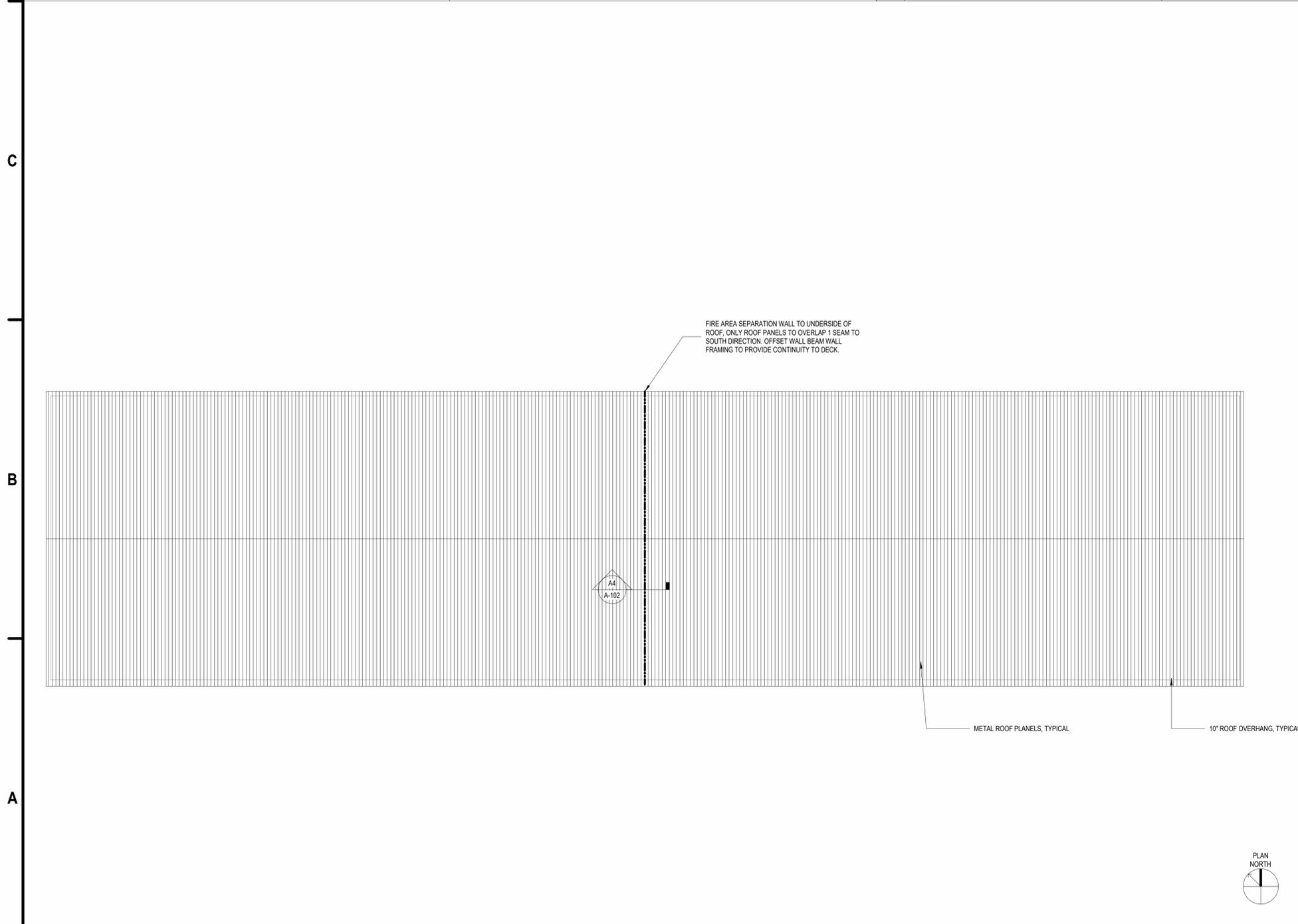
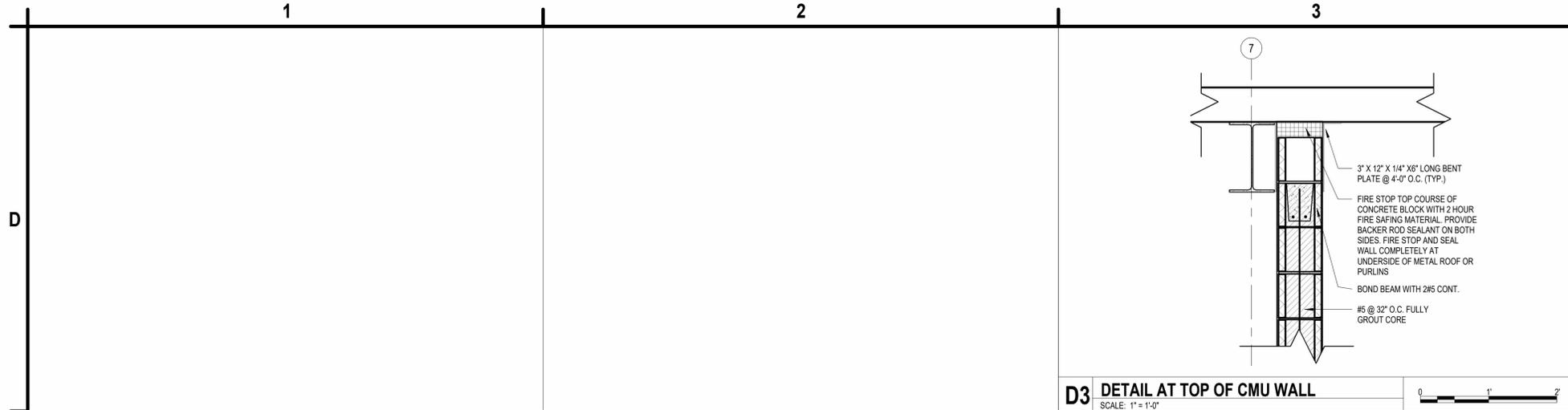
**33N BOX HANGAER
DELAWARE RIVER AND BAY AUTHORITY
KENT COUNTY DELEWARE**

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO:	872.013.079	
DATE:	AUGUST 2023	
DRAWN BY:	G. N. EURE	
DESIGNED BY:	G. N. EURE	
CHECKED BY:	M. LAMONTAGNE, AIA	
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION.		

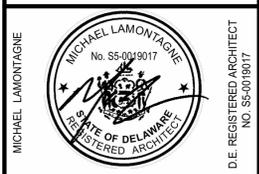
FLOOR PLAN

SHEET REFERENCE NO.

A-101



C&S Engineers, Inc.
1500 Market Street, Suite W2410
Philadelphia, PA 19102
Phone: 215-709-4340
www.cscos.com



33N BOX HANGAER
DELEWARE RIVER AND BAY AUTHORITY
KENT COUNTY DELEWARE

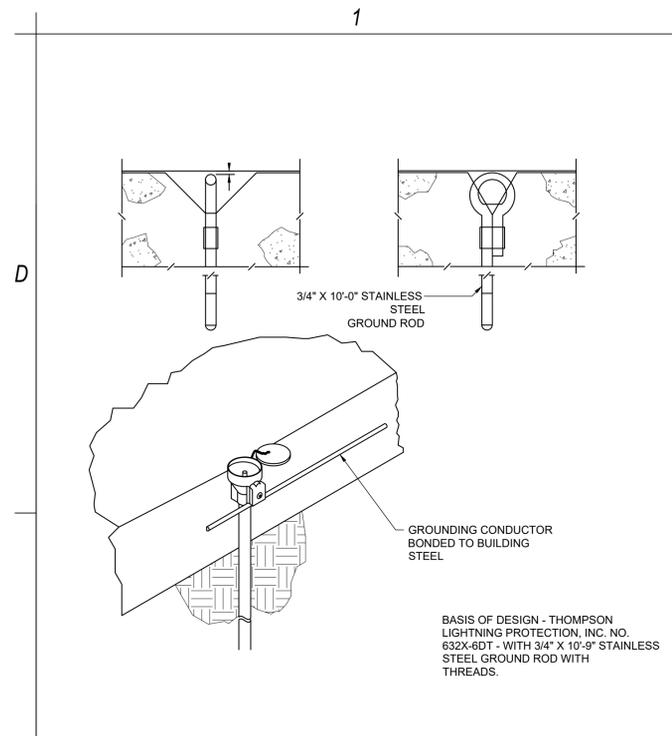
MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO:	872.013.079	
DATE:	AUGUST 2023	
DRAWN BY:	G. N. EURE	
DESIGNED BY:	G. N. EURE	
CHECKED BY:	M. LAMONTAGNE, AIA	
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION.		

ROOF PLAN

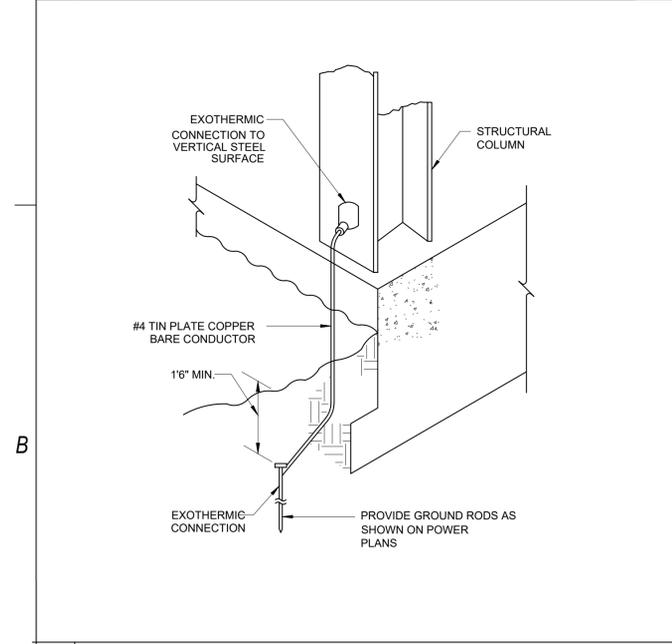
SHEET REFERENCE NO.

A-102

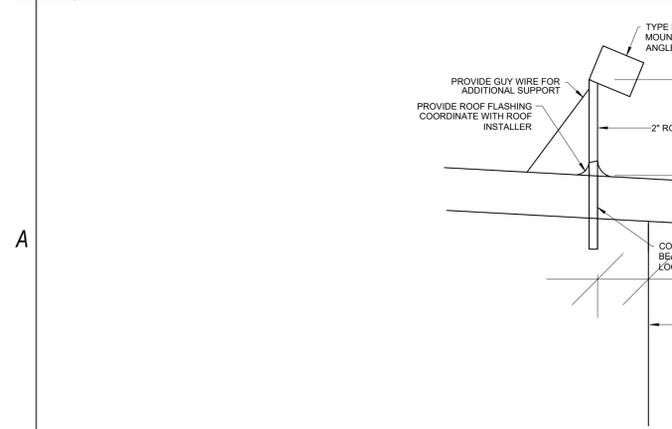
Oct 06, 2023 - 3:20pm
 F:\projects\072 - DELAWARE RIVER & BAY AUTHORITY\072013079 33N Box Hangar Design\Design\CADD\Sheet Files\072013079_EL_SERIES.dwg



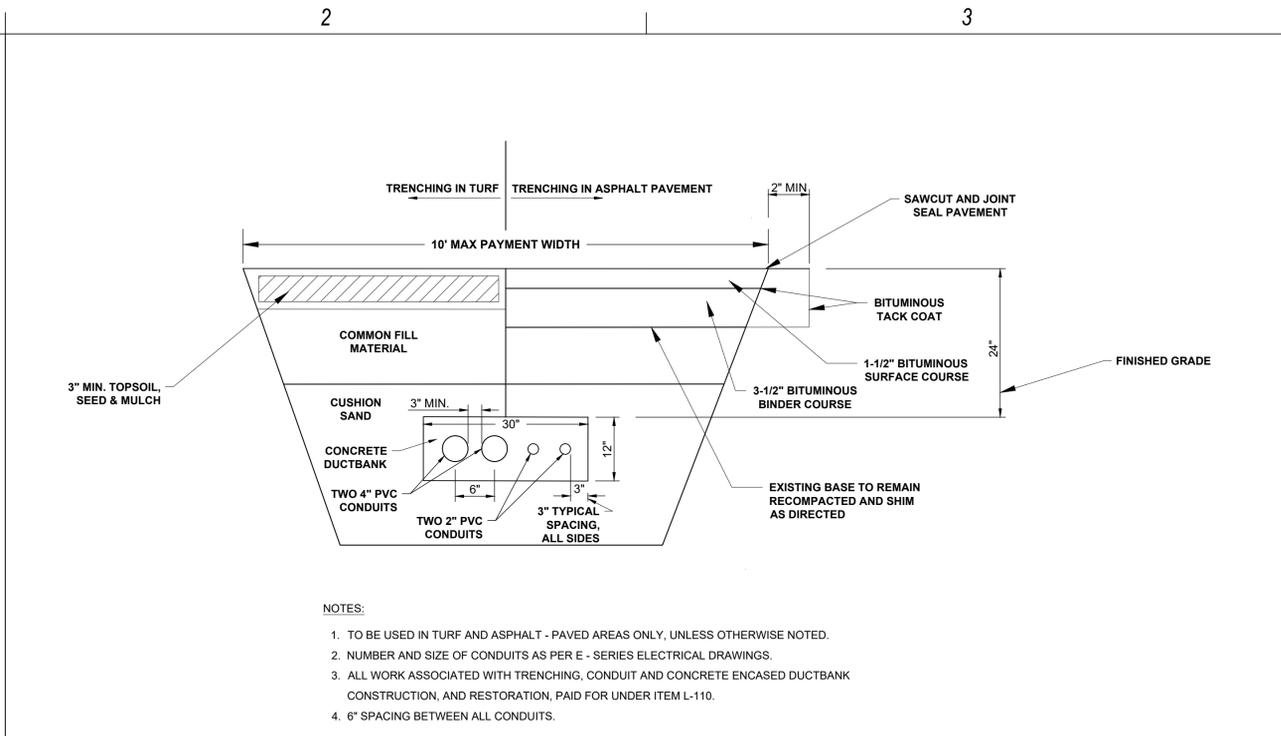
C1 STATIC GROUND RECEPTACLE DETAIL
SCALE: NOT TO SCALE



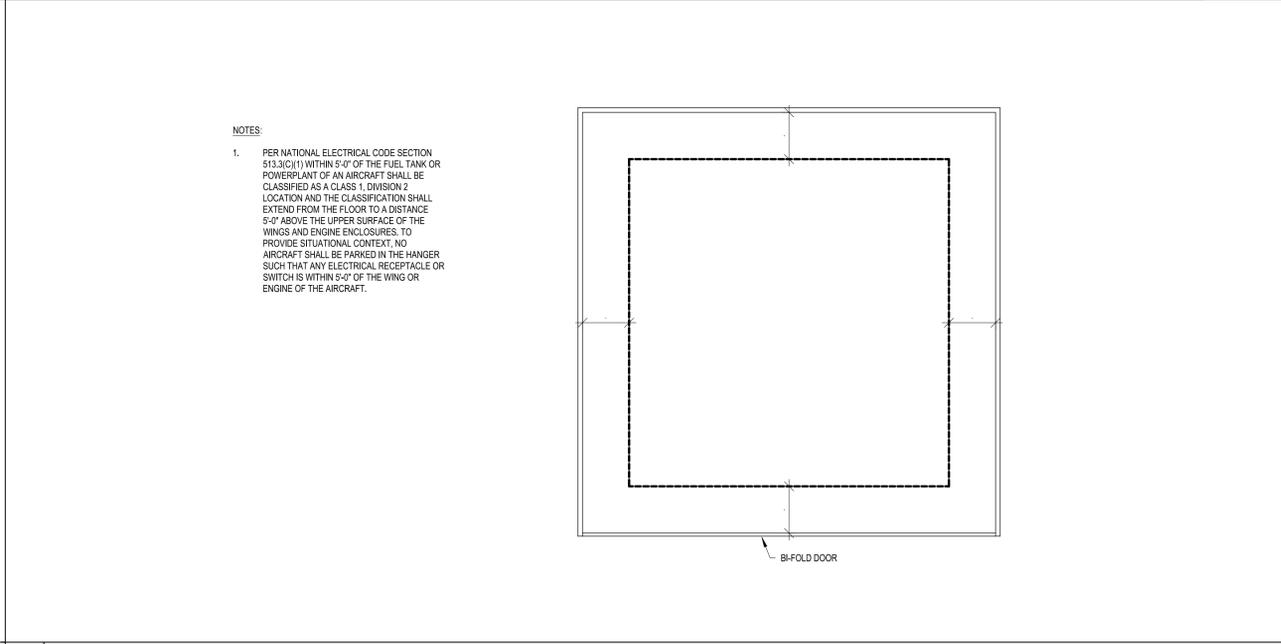
B1 GROUND BOND DETAIL
SCALE: NOT TO SCALE



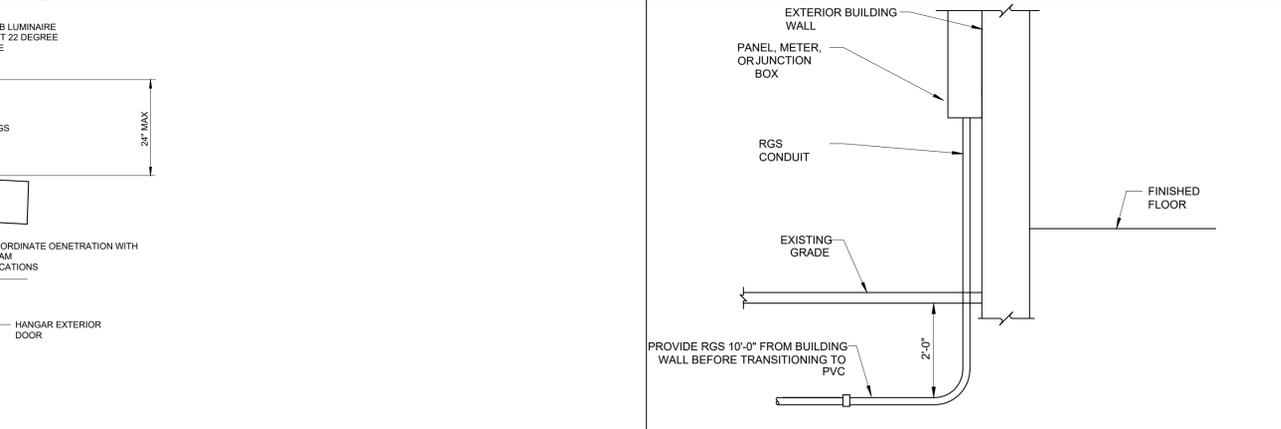
A1 EXTERIOR LIGHTING MOUNTING DETAIL
SCALE: NOT TO SCALE



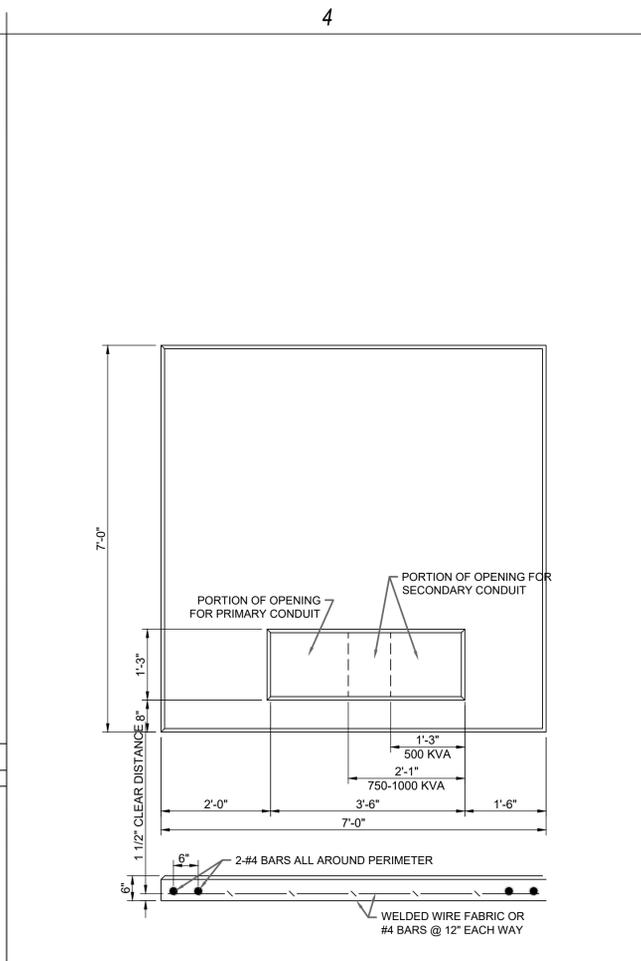
C2 TRENCH AND RESTORATION DETAIL
SCALE: NOT TO SCALE



B2 HAZARDOUS AREA CLASSIFICATION
SCALE: NOT TO SCALE



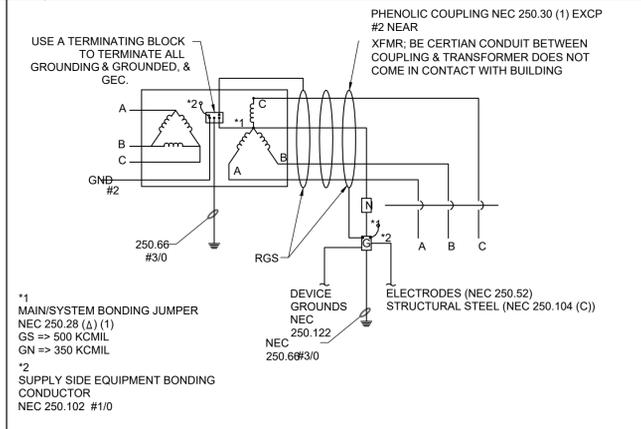
A3 CONDUIT ENTRANCE DETAIL
SCALE: NOT TO SCALE



REINFORCING SCHEDULE

	APPROX. WT.
#4 BARS @ 12" EACH WAY	60 LBS
OR, WWF 4 x 4 X4/4	38 LBS
OR, WWF 6 x 6 X 2/2	42 LBS
CONCRETE VOLUME	0.83 CU. YD.

B4 CONDUIT ENTRANCE DETAIL
SCALE: NOT TO SCALE



A4 SERVICE GROUNDING DETAIL
SCALE: NOT TO SCALE

C&S COMPANIES
 C&S Engineers, Inc.
 1500 Market Street, Suite W2410
 Philadelphia, PA 19102
 Phone: 215-709-4340
 www.cscos.com

RICHARD N. McLAUGHLIN
 D.E. PROFESSIONAL ENGINEER
 NO. 20963



BOX HANGAR CONSTRUCTION
DELAWARE AIRPARK
DELAWARE RIVER AND BAY AUTHORITY
KENT COUNTY
DELAWARE

MARK	DATE	DESCRIPTION
REVISIONS		
	PROJECT NO:	872.013.079
	DATE:	OCTOBER 2023
	PROJECT MANAGER:	RNM
	DRAWN BY:	F.K. NEILEY, P.E.
	DESIGNED BY:	F.K. NEILEY, P.E.
	CHECKED BY:	S.H. SHOVA

NO ALTERATION ON THESE DRAWINGS IS ALLOWED UNLESS SAID ALTERATIONS ARE MADE UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF AN ITEM BOUND BY THE SEAL OF AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND THE SPECIFIC DESCRIPTION OF SUCH ALTERATION.

ELECTRICAL DETAILS

SHEET REFERENCE NO.
EL-501

SHEET OF

PANEL SCHEDULE BOX HANGAR MDP

BUS SIZE: 200 A
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
POLES: 18

MAIN TYPE: MCB
MAIN BREAKER: 200 A
GND. BAR TYPE: COPPER
SC RATING: 42
ENCLOSURE: TYPE 1

INSTALLATION: SURFACE
LOCATION:
NOTES:

CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AMPS	Poles	CKT	A	B	CKT	Poles	CB. AMPS	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
BAY 1 PANEL	2-#6, 1-#6, 1-#10	1"	60 A	2	1			2	2	60 A	1"	2-#6, 1-#6, 1-#10	BAY 2 PANEL
					3			4					
					5			6					
BAY 3 PANEL	2-#6, 1-#6, 1-#10	1"	60 A	2	7			8					
					9			10					
EXTERIOR LIGHTING	1-#12, 1-#12, 1-#12	3/4"	20 A	1	11			12					
					13			14					
					15			16					
					17			18					

PANEL SCHEDULE BAY X PANEL

BUS SIZE: 100 A
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
POLES: 12

MAIN TYPE: MLO
GND. BAR TYPE: COPPER
SC RATING: 42
ENCLOSURE: TYPE 1

INSTALLATION: SURFACE
LOCATION:
NOTES: TYPICAL OF 3 LOCATIONS
X = BAY NUMBER

CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AMPS	Poles	CKT	A	B	CKT	Poles	CB. AMPS	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
LIGHTING	1-#12, 1-#12, 1-#12	3/4"	20 A	1	1			2	2	30 A	3/4"	2-#10, 1-#10	BI-FOLD DOOR POWER
RECEPTACLES	1-#12, 1-#12, 1-#12	3/4"	20 A	1	3			4					
SPARE	--	--	20 A	1	5			6	1	20 A	--	--	SPARE
SPARE	--	--	20 A	1	7			8	1	20 A	--	--	SPARE
SPARE	--	--	20 A	1	9			10	1	20 A	--	--	SPARE
SPARE	--	--	20 A	1	11			12	1	20 A	--	--	SPARE

PANEL SCHEDULE HOUSE PANEL

BUS SIZE: 100 A
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
POLES: 12

MAIN TYPE: MLO
GND. BAR TYPE: COPPER
SC RATING: 42
ENCLOSURE: TYPE 1

INSTALLATION: SURFACE
LOCATION:
NOTES: TYPICAL OF 3 LOCATIONS
X = BAY NUMBER

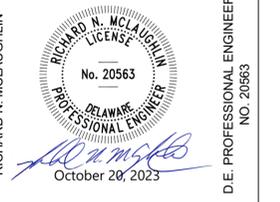
CIRCUIT DESCRIPTION	WIRE SIZE	CONDUIT	CB. AMPS	Poles	CKT	A	B	CKT	Poles	CB. AMPS	CONDUIT	WIRE SIZE	CIRCUIT DESCRIPTION
LIGHTING	1-#12, 1-#12, 1-#12	3/4"	20 A	1	1			2	1	20 A	--	--	SPARE
SPARE	--	--	20 A	1	3			4	1	20 A	--	--	SPARE
SPARE	--	--	20 A	1	5			6	1	20 A	--	--	SPARE
SPARE	--	--	20 A	1	7			8	1	20 A	--	--	SPARE
SPARE	--	--	20 A	1	9			10	1	20 A	--	--	SPARE
SPARE	--	--	20 A	1	11			12	1	20 A	--	--	SPARE

MASTER LUMINAIRE SCHEDULE

FIXTURE DESCRIPTION	MANUFACTURER AND MODEL NUMBER	NUMBER AND TYPE OF LAMP	VOLTS	DRIVER	MOUNTING	REMARKS
A	H.E. WILLIAMS #66-4-L110/840-HIAFR-DWET1-SSCM8-DRV-120 OR APPROVED EQUAL	88W LED	120	LED DRIVER	SUSPENDED @ 22'-0" A.F.F.	
B	VISIONAIRE #V5F-1-7X5-48L-C-5-4K-JUNV-KM-BZ-PC(120) OR APPROVED EQUAL	78W LED	120	LED DRIVER	WALL MOUNT @ 23'-0" A.F.F.	
X	H.E. WILLIAMS #EXIT/EMW-SF-R-GRAY-SDT OR APPROVED EQUAL	7.2W LED	120	LED DRIVER	WALL MOUNT 6" ABOVE DOOR	



C&S Engineers, Inc.
1500 Market Street, Suite W2410
Philadelphia, PA 19102
Phone: 215-709-4340
www.cscos.com



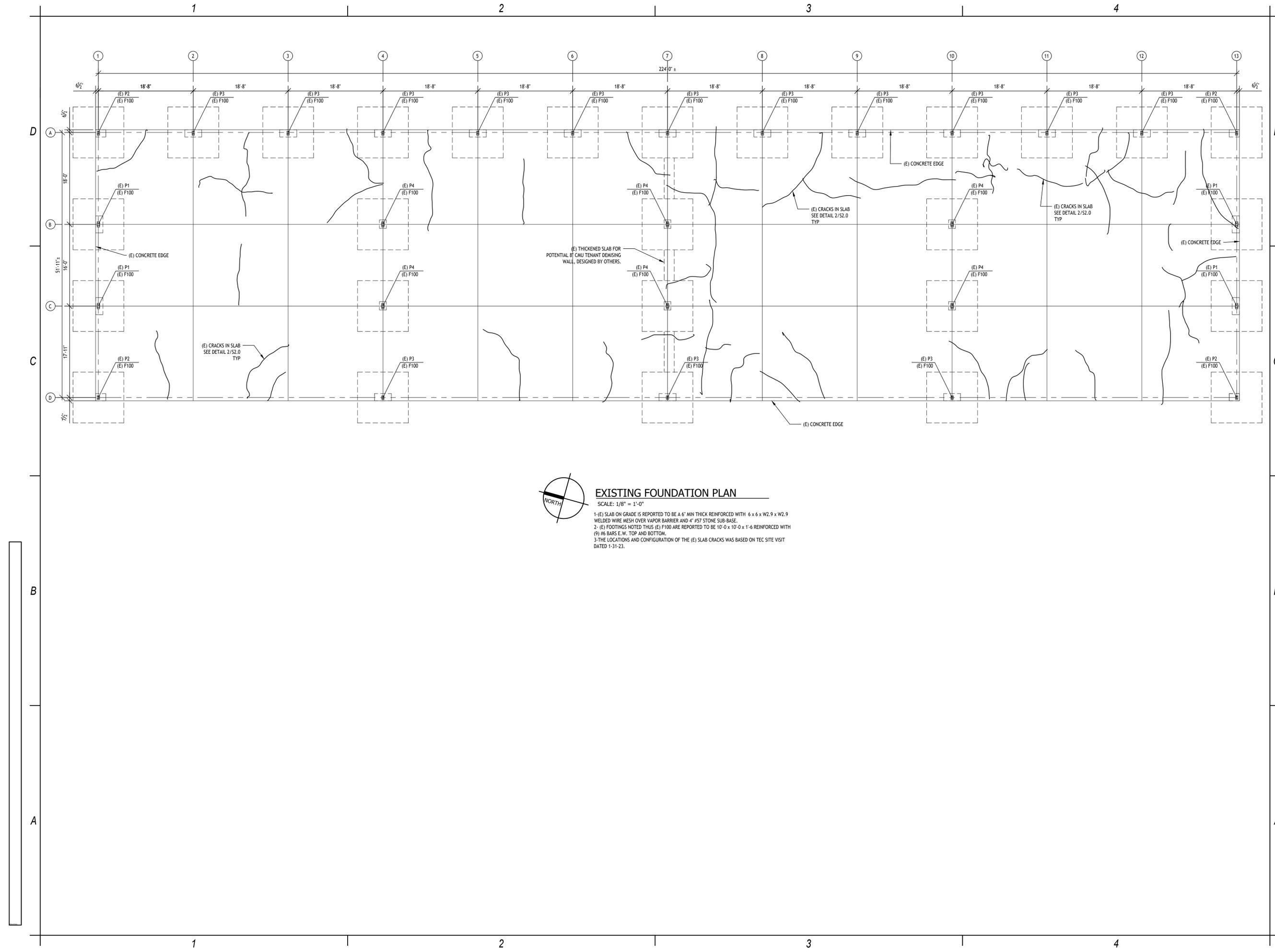
33N BOX HANGAR
 DELAWARE AIRPARK
 DELAWARE RIVER AND BAY AUTHORITY
 DOVER COUNTY
 DELAWARE

MARK	DATE	DESCRIPTION
REVISIONS		
		PROJECT NO: 872.013.079
		DATE: TBD
		PROJECT MANAGER: RNM
		DRAWN BY: F.K. NEILEY, P.E.
		DESIGNED BY: F.K. NEILEY, P.E.
		CHECKED BY: S.H. SHOVA

NO ALTERATION ON THESE DRAWINGS IS ALLOWED UNLESS SAID ALTERATIONS ARE MADE UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF AN ITEM BOUND BY THE SEAL OF AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE SPECIFIC DESCRIPTION OF SUCH ALTERATION.

ELECTRICAL SCHEDULES

SHEET REFERENCE NO.
EL-601
SHEET OF __



EXISTING FOUNDATION PLAN
 SCALE: 1/8" = 1'-0"

- 1- (E) SLAB ON GRADE IS REPORTED TO BE A 6" MIN THICK REINFORCED WITH 6 x 6 x W2.9 x W2.9 WELDED WIRE MESH OVER VAPOR BARRIER AND 4" #57 STONE SUB-BASE.
- 2- (E) FOOTINGS NOTED THUS (E) F100 ARE REPORTED TO BE 10'-0" x 10'-0" x 1'-6" REINFORCED WITH (9) #6 BARS E.W. TOP AND BOTTOM.
- 3- THE LOCATIONS AND CONFIGURATION OF THE (E) SLAB CRACKS WAS BASED ON TEC SITE VISIT DATED 1-31-23.

PROFESSIONAL CERTIFICATION:
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE.
 MARK W. DUNLAP, LICENSE NO. 25674
 EXPIRATION DATE: 6/30/2024

CONSULTANT: 22-254DH
TEC Tarantino Engineering Consultants, PC
 8115 Maple Lawn Blvd, Suite 350
 Fulton, MD 20759
 410-921-7678
 www.tarantinoec.com

MARK W. DUNLAP, P.E.

 D.E. PROFESSIONAL ENGINEER NO. 25674



33N BOX HANGAR
 DELAWARE AIRPARK
 DELAWARE RIVER AND BAY AUTHORITY
 KENT COUNTY
 DELAWARE

MARK	DATE	DESCRIPTION
	07/21/23	
REVISIONS		
PROJECT NO: 872.013.079		
DATE: TBD		
PROJECT MANAGER:		
DRAWN BY: MWD		
DESIGNED BY: MWD		
CHECKED BY: MWD		

NO ALTERATION ON THESE DRAWINGS IS ALLOWED UNLESS SAID ALTERATIONS ARE MADE UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IF AN ITEM BOUND BY THE SEAL OF AN ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND THE SPECIFIC DESCRIPTION OF SUCH ALTERATION.

EXISTING FOUNDATION PLAN

SHEET REFERENCE NO.
S1.0
 SHEET OF

Copyright ©

PRE-ENGINEERED METAL BUILDING DESIGN CRITERIA LOADS AND REACTIONS.

THE DETAILS AND FOUNDATIONS WERE BASED ON THE LOADS AND REACTIONS AS LISTED BELOW. IF ANOTHER FABRICATOR IS USED OR FINAL LOADS DIFFER, THEN ANY RE-DESIGN OR ADDITIONAL ELEMENTS INSTALLED MUST BE BORNE AT THE FULL EXPENSE OF THE GENERAL CONTRACTOR.



Entry Date: April 17, 2013
Rev: 01



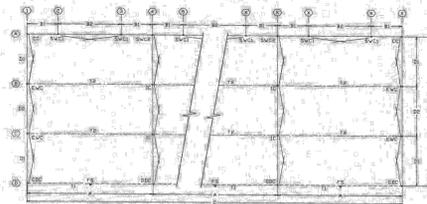
Job No.: 19477

Customer Name: BID

Location: DOVER, DE

Table with 3 columns: Dim, Feet, Description. Lists dimensions for endwall lengths, total end wall width, trans. wingbay cl., snow load, lower eave height, higher eave height, roof pitch, and wind exposure.

Table with 2 columns: 2021 IBC Model Building Code, psf Ground Snow Load Per Map, psf Roof Snow Load, Balanced, Importance Factor, Exposure Factor, Building Use Group, Unshaded, Building Risk Category, psf Dead Load, psf Conditional Load, psf Additional Load, psf Total Roof Load, balanced, psf Total Roof Load, unbalanced.



Out to out of concrete foundation 169.083 ft. by 53.083 ft. Qty. of Piers 22
Qty. of FS 6

Summary of Building Reactions... Allowable Stress Design (ASD) Loads

Table with 7 columns: Key, Vdown - Total, Vd, Vel, Vt, Vlat, V-Hy. Lists reaction values for various keys like CC, EWC, DDC, CDC, SWC1, SWC2, FS.

UNBALANCED SNOW LOADS ARE FIGURED INTO THE COLUMN REACTIONS

- General Notes: 1. Reaction values are at ASD level and are in kips. 2. Any values less than 1 kip, use 1 kip. 3. Vup, Hx and Hy are due to lateral load, worst case between wind and seismic. 4. All horizontal reactions can act positive or negative direction. 5. All end wall base plates are designed for four 3/4" diameter anchor bolts, for bids, comply with the OSHA Regulations of March 2003 for steel erection. 6. All anchor bolts not provided by Erect-a-Tube, Inc. 7. Floor anchors are an embedment supplied by Erect-a-Tube, Inc. 8. Concrete C.S. to be 3,000 p.s.i., minimum at age 30 days. Refer to bid specifications.

GENERAL NOTES

SITE INSPECTION

CONTRACTORS BIDDING ON THIS WORK SHALL VISIT THE SITE BEFORE SUBMITTING THEIR BIDS TO ACQUAINT THEMSELVES WITH ALL EXISTING CONDITIONS, MEANS OF ACCESS, AVAILABLE WORK AND STORAGE AREAS, AND ALL OTHER CONDITIONS WHICH MAY AFFECT THEIR WORK. INCLUDED IN SITE INSPECTION WILL BE THE DETERMINATION OF ROUTE TO BE FOLLOWED FOR DELIVERY AND DISPOSAL OF ALL THE CONSTRUCTION MATERIALS AND DEBRIS. ALL NECESSARY PERMITS, FEES, APPROVALS AND SAFEGUARDS REQUIRED BY LOCAL AUTHORITIES FOR DELIVERY AND DISPOSAL OF MATERIALS SHALL BE OBTAINED, PAID FOR BY THE CONTRACTOR.

SPECIAL CONDITIONS

COORDINATE AND SCHEDULE ALL WORK WITH PLANT OPERATIONS. SCHEDULE TO BE SUBMITTED AND APPROVED BY THE LANDLORD PRIOR TO STARTING.

POST INSTALLED ADHESIVE ANCHORS IN CONCRETE

- 1. HILTI HIT-HY 200-A ICC-ES ESR-3187 & 3963 (CONCRETE)

EXISTING INFORMATION

ALL INFORMATION SHOWN ON THESE PLANS ARE BASED ON EXISTING BUILDING DRAWINGS S-1B AND S-2B, AS PREPARED BY STEINLE CONSTRUCTION ENGINEERS AND DATED 2/27/2015.

ACCORDING TO INSPECTION REPORTS AND FOUNDATION SUMMARY LETTER, DATED 4/5/2015, AS PREPARED BY HILLI-CARNES ENGINEERING ASSOCIATES, INC., ALL FOUNDATIONS AND SLABS WERE PLACED IN ACCORDANCE WITH THE DRAWINGS LISTED ABOVE, AND CONCRETE CYLINDER BREAKS VERIFIED THAT THE IN-PLACE CONCRETE MEETS OR EXCEEDS THE DESIGN STRENGTH OF 4,000 P.S.I.

INSPECTIONS

ALL ANCHORS SHALL BE INSPECTED, DURING INSTALLATION, BY AN APPROVED THIRD PARTY INSPECTION AGENCY. ANY ANCHOR INSTALLED WITHOUT THE INSPECTION AGENCY OBSERVING AND DOCUMENTING, SHALL EITHER BE REJECTED OR SUBJECT TO A PULL TEST. PULL TEST RESULTS SHALL EXCEED A MINIMUM OF 125% OF THE FULL IN-PLACE ALLOWABLE WORKING LOAD FOR THAT ANCHOR.

MAJOR CODES AND STANDARDS

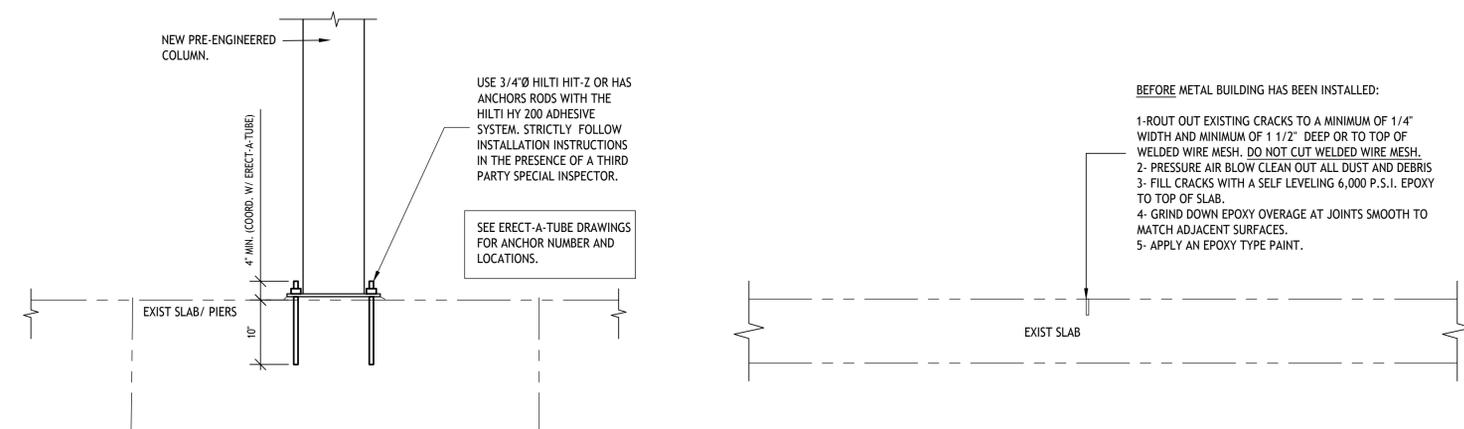
- 1. INTERNATIONAL BUILDING CODE (IBC 2018)
- 2. ASCE 7-16 (Formerly ANSI A58.1) CURRENT EDITION
- 3. ACI 318-14
- 4. AISC ASD 15th Edition.
- 5. ASTM Current Edition.

D

C

B

A



1 COLUMN BASE DETAIL SCALE: 3/4" = 1'-0"

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

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF DELAWARE. MARK W. DUNLAP, LICENSE NO. 25674, EXPIRATION DATE: 6/30/2024. CONSULTANT: Tarantino Engineering Consultants, PC, 8115 Maple Lawn Blvd, Suite 350, Fulton, MD 20759, 410-921-7678, www.tarantinoec.com. 22-254DH

MARK W. DUNLAP, P.E. DELAWARE PROFESSIONAL ENGINEER LICENSE NO. 25674. DE PROFESSIONAL ENGINEER NO. 25674.

DRBA DELAWARE RIVER & BAY AUTHORITY

33N BOX HANGAR DELAWARE AIRPARK DELAWARE RIVER AND BAY AUTHORITY KENT COUNTY DELAWARE

Table with columns: MARK, DATE, DESCRIPTION. Includes project number 872.013.079, project manager MWD, and designer MWD.

DETAILS & NOTES

SHEET REFERENCE NO. SHEET S2.0