GENERAL STRUCTURAL & CONSTRUCTION NOTES

GENERAL CONSTRUCTION WORK

THE FOLLOWING GENERAL CONSTRUCTION NOTES ARE APPLICABLE TO THE STRUCTURAL DRAWINGS ONLY. THESE NOTES ARE PROVIDED FOR CONVENIENCE AND ARE SUPPLEMENTAL TO THE SPECIFICATIONS. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION NOT INDICATED ON THE DRAWING.

MASONRY

1. MASONRY HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402–16) AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602–16), EXCEPT WHERE OTHERWISE MODIFIED BY THESE GENERAL NOTES AND SPECIFICATIONS.
2. MORTAR SHALL CONFORM TO ASTM C270, TYPE M OR S. ALL PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE I. LIME SHALL CONFORM TO ASTM C207 AND MASONRY CEMENT SHALL CONFORM TO ASTM C91.
3. GROUT SHALL CONFORM TO ASTM C476 AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI. SLUMP OF GROUT SHALL BE 8 TO 10 INCHES AND A MAXIMUM AGGREGATE SIZE SHALL BE 3/8" (AGGREGATE GRADED TO PRODUCE FINE GROUT IN CONFORMANCE WITH ASTM C476 AND C404).
4. CONCRETE BLOCK UNITS:
   A. SOLID AND HOLLOW LOAD BEARING UNITS PER ASTM C90, TYPE N–1, AS REQUIRED TO PROVIDE 28 DAY COMPRESSIVE STRENGTH, F'M AS NOTE BELOW
   B. NANY BLOCK UNITS SHALL BE MADE TO PRODUCE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI ON THE NET AREA.
5. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF MASONRY, F'M SHALL BE 1,500 PSI, UNLESS NOTED OTHERWISE.
6. FULL BED AND HEAD JOINTS SHALL BE PROVIDED.
7. HORIZONTAL JOINT REINFORCING: ASTM A82; 9 GAUGE TRUSS–TYPE, GALVANIZED.
8. DEFORMED BAR REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 AND SHALL BE FULL HEIGHT OF WALLS UNLESS OTHERWISE NOTED. PROVIDE BAR SPACERS AND POSITIONERS AS REQUIRED TO PROPERLY LOCATE AND STABILIZE REINFORCING DURING GROUTING OPERATIONS. GROUT ALL REINFORCED CELLS SOLID WITH GROUT.
9. BUILD AND TEST MASONRY PRISMS DURING CONSTRUCTION TO VERIFY F'M FOR EACH CLASS OF MASONRY CONSTRUCTION. PRISM TESTS SHALL BE IN ACCORDANCE WITH ASTM E447, METHOD B.
10. HOLLOW CONCRETE UNITS BELOW GRADE AND SLAB ON GRADE SHALL BE NORMAL WEIGHT AND HAVE ALL CELLS GROUTED SOLID.
11. PROVIDE AND INSTALL TEMPORARY BRACING REQUIRED INSURING STABILITY OF ALL WALLS DURING CONSTRUCTION AND UNTIL ERECTION OF ATTACHED STRUCTURAL FRAMING IS COMPLETED.
12. PROVIDE GALVANIZED HORIZONTAL JOINT REINFORCEMENT IN ALL WALLS AND PARTITIONS AT 16" O.C. UNLESS OTHERWISE SHOWN OR NOTED. PROVIDE ONE (1) PIECE PREFABRICATED UNITS AT 8" O.C. AT ALL WALL CORNERS AND INTERSECTIONS.
13. LAP SPLICES FOR DEFORMED REINFORCING BARS USED IN MASONRY CONSTRUCTION SHALL BE 50 BAR DIAMETERS.
14. PROVIDE MASONRY ANCHORS AT 16" O.C. SER ON COURSING AND ATTACHED TO ALL BEAMS, COLUMNS, PARTITIONS AND WALLS ABUTTING OR EMBEDDED IN MASONRY UNLESS NOTED OTHERWISE ON ARCHITECTURAL AND STRUCTURAL DRAWINGS.
15. PROVIDE BOND BEAMS WITH A MINIMUM OF TWO (2) #5 CONTINUOUS HORIZONTAL REINFORCING BARS IN ALL MASONRY WALLS AT EACH FRAMING LEVEL. PROVIDE A MINIMUM OF TWO (2) #5 BARS AT THE ENDS OF ALL WALLS AND ON EACH SIDE OF EACH OPENING.
16. ALL PIERS AND PARTITIONS SHALL BE BONDED OR ANCHORED TO ADJACENT MASONRY WALLS. PROVIDE TIES TO ADJACENT FLOOR AND ROOF CONSTRUCTION IN ACCORDANCE WITH DETAILS ON DRAWINGS.
17. THE CONTRACTOR SHALL VERIFY ALL OPENINGS BELOW LINTELS INDICATED ARE ADEQUATE TO ACCEPT DOORFRAMES, LOUVERS, DUCTS, ETC. AS SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS. NOTIFY THE COR OF ANY DISCREPANCIES PRIOR TO LINTEL INSTALLATION.
18. NO OPENINGS SHALL BE PLACED ABOVE ANY LINTEL WITHIN A HEIGHT LESS THAN OR EQUAL TO THE WIDTH OF THE CLEAR OPENING BELOW THE LINTEL, UNLESS SPECIFICALLY SHOWN OR APPROVED BY THE COR.
19. PROVIDE VERTICAL MASONRY CONTROL JOINTS AT MAXIMUM 25'–0" ON CENTER UNLESS DETAILED ON ARCHITECTURAL DRAWINGS, COORDINATE LOCATIONS WITH ARCHITECT.
20. SUBMIT GROUT MIX DESIGN AND MASONRY UNIT CERTIFICATIONS TO THE COR FOR REVIEW.
21. GROUT PLACEMENT SHALL NOT START UNTIL THE PLACEMENT OF REINFORCING HAS BEEN APPROVED BY THE CONTRACTOR'S SPECIAL INSPECTOR.
22. FILL ALL CELLS IN TOP TWO COURSES BELOW FINISHED FLOOR, CMU LINTELS, BOND BEAMS AND BEAM BEARINGS AND CELLS WITH REINFORCEMENT FULL HEIGHT SOLID WITH GROUT.
23. ALLOW GROUT IN REINFORCED CMU WALLS TO CURE A MINIMUM OF 48 HOURS BEFORE IMPOSING CONCENTRATED OR OTHER LOADS FROM ABOVE.
24. ALL MASONRY WORK TO BE EXECUTED IN COLD WEATHER SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS FOR COLD WEATHER CONSTRUCTION FOUND IN THE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402) AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602) WITH THE FOLLOWING ADDITIONS: FOR ALL CONDITIONS WHEN TEMPERATURES FALL BELOW 40 DEGREES F, THE TEMPERATURE OF THE NEWLY LAID MASONRY OR NEWLY GROUTED MASONRY SHALL BE MAINTAINED ABOVE 32 DEGREES F FOR A MINIMUM OF 24 HOURS USING THE METHODS DESCRIBED IN TMS 602.
25. THE CONTRACTOR'S SPECIAL INSPECTOR SHALL MONITOR THE PROPORTIONING, MIXING AND CONSISTENCY OF MORTAR AND GROUT; THE PLACEMENT OF MORTAR, GROUT AND MASONRY UNITS; AND THE PLACEMENT OF REINFORCING STEEL FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
26. THE CONTRACTOR SHALL PREPARE ONE (1) SET OF PRISMS FOR TESTING AT SEVEN (7) DAYS AND ONE (1) SET FOR TESTING AT 28 DAYS. TESTS ARE TO BE CONDUCTED BY THE CONTRACTOR'S TESTING AGENCY FOR EACH 3,000 SQUARE FEET OF WALL INSTALLED, BUT NOT LESS THE TWO (2) TESTS.
27. ALL WALL SECTIONS AND PIERS LESS THAN TWO (2) SQUARE FEET IN CROSS–SECTIONAL AREA SHALL BE FULLY GROUTED.

STRUCTURAL STEEL

1. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO "THE MANUAL OF STEEL CONSTRUCTION", FIFTEENTH EDITION, 2017, AMERICAN INSTITUTE OF STEEL CONSTRUCTION INCLUDING SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS.
2. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL CONFORM TO "STRUCTURAL WELDING CODE ANSI/AWS D1.1", AMERICAN WELDING SOCIETY.
3. WIDE FLANGE SHAPES: ASTM A992, GRADE 50
4. STRUCTURAL SHAPES & PLATES: ASTM A36, A572
5. STEEL PIPE: ASTM A53, GRADE B
6. STEEL TUBING: ASTM A500, GRADE B
7. GALVANIZED STRUCTURAL STEEL:
   A. STRUCTURAL SHAPES AND RODS: ASTM A123.
   B. BOLTS, FASTENERS AND HARDWARE: ASTM F2329.
8. ALL BOLTED CONNECTIONS SHALL BE WITH ASTM F3125, GRADE A325 HIGH STRENGTH BOLTS 3/4" MINIMUM DIAMETER, UNLESS NOTED OTHERWISE.
9. ALL BOLTED CONNECTIONS ON WIND BRACING MEMBERS AND COLUMNS SHALL BE SLIP CRITICAL CONNECTIONS.
10. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 55, HOT–DIP GALVANIZED, UNLESS NOTED OTHERWISE.
11. WELDING ELECTRODES SHALL BE E70XX FOR MANUAL ARC WELDING AND F7X–EXXX FOR SUBMERGED ARC WELDING. ALL WELDERS SHALL BE CERTIFIED BY THE AWS. MINIMUM WELD SIZE SHALL BE 3/16" UNLESS NOTED OTHERWISE.
12. WELDING OF REINFORCING BARS TO OTHER BARS OR STRUCTURAL STEEL: E90–XX ELECTRODE.
13. CUTS, HOLES, COPING, ETC. REQUIRED FOR OTHER TRADES OF FIELD CONDITIONS SHALL BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. CUTTING OR BURNING OF MAIN STRUCTURAL MEMBERS IN THE FIELD WILL NOT BE PERMITTED.
14. SUBMIT SHOP DRAWINGS FOR FABRICATION AND ERECTION OF STRUCTURAL STEEL. CLEARLY INDICATE COORDINATED DIMENSIONS OF MECHANICAL UNIT AND ROOF PENETRATION SIZES. SHOP AND ERECTION DRAWINGS MUST SHOW ALL SHOP/FLOOR AND FIELD WELDS. INITIAL SHOP DRAWING SUBMITTAL SHALL INCLUDE PROPOSED CONNECTION DETAILS AND JOB STANDARDS. PROVIDE SIGNED AND SEALED CALCULATIONS FOR ALL NON–STANDARD CONNECTION DETAILS SHOWING DESIGN CAPACITIES.
15. STEEL MEMBERS SHOWN ON PLAN SHALL BE EQUALLY SPACED UNLESS NOTED OTHERWISE.
16. CAMBER INDICATED ON THESE DRAWINGS IS THE REQUIRED CAMBER AFTER FINAL ERECTION AND INCLUDES ALL MILL TOLERANCES.
17. ALL CONNECTIONS SHALL BE "FRAMED BEAM CONNECTIONS" DESIGNED IN ACCORDANCE WITH THE AISC MANUAL AND THE ENDS REACTIONS FROM THE "UNIFORM LOAD TABLES", BUT NOT LESS THAN 6 KIPS. PROVIDE DOUBLE ANGLE CONNECTIONS OR KNIFE PLATES CONNECTIONS FULL DEPTH OF SUPPORTING BEAM, UNLESS OTHERWISE APPROVED. MINIMUM TWO (2) BOLTS PER CONNECTION. UNLESS OTHERWISE NOTED, COMPOSITE BEAMS TO BE DESIGNED 80% OF THE "TOTAL" UNIFORM LOAD CAPACITY. SINGLE ANGLE OF SHEAR TAB CONNECTIONS ARE NOT ACCEPTABLE. ALL BEAM TO COLUMN CONNECTIONS SHALL BE DESIGNED FOR THE MINIMUM SHEAR REACTION INDICATED ABOVE IN COMBINATION WITH A 10 KIP AXIAL FORCE (ACTING IN BOTH TENSION AND COMPRESSION).
18. ALTERNATE CONNECTION DETAILS MAY BE USED IF SUCH DETAILS ARE SUBMITTED TO THE COR FOR REVIEW AND APPROVAL. HOWEVER, THE COR SHALL BE THE SOLE JUDGE OF ACCEPTANCE AND THE CONTRACTOR'S BID SHALL NOT ANTICIPATE THE USE OF THOSE DETAILS THAT HE PROPOSES.
19. BOLTING TO THE EXISTING STEEL IS PROHIBITED, UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL ANTICIPATE USING FIELD–WELDED CONNECTIONS TO THE EXISTING STEEL.
20. EXISTING FRAMING REQUIRING WELDING SHALL BE THOROUGHLY CLEANED TO ENSURE PROPER WELDING. PROVIDE TEMPORARY SHORING WHEN WELDING TO EXISTING STEEL.
21. FIELD–WELDED SURFACES WITHIN FOUR (4) INCHES OF WELD SHALL BE CLEANED AND GROUND SMOOTH. AFTER WELDING COAT THE EXPOSED AREA WITH APPROPRIATE PRIMER, PAINTS, AND/OR FIREPROOFING AS SPECIFIED.
22. FIELD–WELDED GALVANIZED SURFACES WITHIN FOUR (4) INCHES OF WELD SHALL BE CLEANED AND GROUND SMOOTH. AFTER WELDING COAT THE EXPOSED AREA WITH GALVANIZING REPAIR PAINT. GALVANIZING REPAIR PAINT SHALL BE A HIGH ZINC DUST CONTENT PAINT COMPLYING WITH FEDERAL SPECIFICATIONS DOD–P–21035A OR SSPC–PAINT–20, COLD GALVANIZING COMPOUND BY ZRC PRODUCTS CO. OR EQUAL.
23. ALL BRACING OR TRUSS CONNECTIONS, WHICH HAVE NOT BEEN SPECIFICALLY DETAILED, SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION FOR THE FORCES NOTED ON THE ELEVATIONS AND DETAILS. THIS SHALL INCLUDE ALL GUSSET PLATES, FILLER PLATES, ANGLES, STIFFENERS; BOLTS OR WELDS, OR OTHER MATERIAL REQUIRED FOR THE CONNECTION. STAMPED CALCULATIONS FOR THE CONNECTION DESIGN SHALL BE SUBMITTED ALONG WITH THE SHOP DRAWINGS FOR REVIEW BY THE COR.
24. ALL BOLTED BRACE OR TRUSS CONNECTIONS SHALL BE SLIP CRITICAL CONNECTIONS WITH A MAXIMUM BOLT DIAMETER OF ONE INCH.
25. GUSSET PLATE CONNECTIONS SHALL BE SIZED FOR 100% OF THE AXIAL FORCES INDICATED ON THE ELEVATIONS. DESIGN ALL GUSSET PLATES AND CONNECTORS AS REQUIRED FOR COMPLIANCE WITH AISC. PROVIDE STIFFENER PLATES AS REQUIRED AT THE GUSSET PLATE CONNECTIONS.
26. THE NET AREA (REFER TO AISC SECTION B2 AND B3) AT THE CONNECTION OF ANY BRACING MEMBER SHALL NOT BE LESS THAN 85 PERCENT OF THE GROSS CROSS SECTIONAL AREA OF THE MEMBER. ADDITIONAL PLATES SHALL BE ADDED AS NECESSARY TO MAINTAIN THE MINIMUM NET CROSS SECTIONAL AREA. SUCH PLATES SHALL EXTEND A MINIMUM DISTANCE EQUAL TO THE DEPTH OF THE MEMBER PAST THE LAST ROW IF BOLTS.
27. ALL CONNECTIONS SHALL BE SYMMETRICAL ABOUT THE AXIS OF THE MEMBER CONNECTED. PROVIDE ONLY ONE GRADE OF BOLT FOR EACH BOLT DIAMETER TO BE USED IN THE CONNECTIONS. DO NOT MIX GRADE OF BOLTS.
28. BEAMS AND GIRDERS SHALL HAVE BEAM WEB HOLES AS INDICATED ON THE STRUCTURAL DRAWINGS. ALL HOLES SHALL BE CENTERED AT MID–DEPTH OF THE BEAM UNLESS OTHERWISE NOTED. ALL RECTANGULAR WEB HOLES SHALL HAVE A MINIMUM CORNER RADIUS OF 5/8" OR TWICE THE THICKNESS OF THE BEAM WEB, WHICHEVER IS GREATER. ALL WEB OPENINGS SHALL BE MACHINE OXYGEN CUT. MANUAL CUTTING OR BURNING IS NOT PERMITTED. COORDINATE LOCATION AND SIZE OF HOLES WITH MECHANICAL CONTRACTOR PRIOR TO REVIEW BY THE COR.
29. ALL STEEL SHALL BE PAINTED WITH SHOP STANDARD PRIMER UNLESS NOTED OTHERWISE.
30. STEEL ANGLES AND PLATES ALONG WITH BOLTS AND WASHERS, IN DIRECT CONTACT WITH EXTERIOR FINISH MASONRY AND ALL EXTERIOR EXPOSED STRUCTURAL STEEL, SHALL BE HOT–DIPPED GALVANIZED PER ASTM A123.
31. ALL GUARDRAILS, CHAINS, AND SAFETY GATES SHALL BE PAINTED SAFETY YELLOW.
32. ALL EXTERIOR EXPOSED STRUCTURAL STEEL SHALL BE HOT–DIPPED GALVANIZED PER ASTM A123.
33. DELETE PAINT ON ALL STEEL TO RECEIVE SPRAYED–ON FIREPROOFING OR CONCRETE ENCASEMENT.
34. ALL STEEL SHALL BE THOROUGHLY CLEANED BY POWER TOOL CLEANING PRIOR TO PAINTING. ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL BE CLEANED WITH COMMERCIAL BLAST CLEANING.
35. ALL DISSIMILAR METALS SHALL BE TREATED OR PROPERLY SEPARATED TO PREVENT GALVANIC AND/OR CORROSIVE EFFECTS.
36. SPANDRELS AND COLUMNS ADJACENT TO MASONRY SHALL HAVE ADJUSTABLE MASONRY TIES.
37. MAIN SUPPORT MEMBERS FOR THE METAL DECK ARE SHOWN. DURING PREPARATION, SUBMISSION AND REVIEW OF SHOP DRAWINGS, ANY ADDITIONAL ANGLES OR MISCELLANEOUS ATTACHMENT DETAILS REQUIRED TO SUPPORT THE METAL DECK AT THE REQUIRED ELEVATION SHALL BE PROVIDED BY THE STRUCTURAL STEEL CONTRACTOR.
38. THE CONTRACTOR SHALL PREPARE A WRITTEN ERECTION PLAN TO BE SUBMITTED TO THE COR FOR REVIEW. THIS PLAN IS TO INDICATE, AS A MINIMUM, SEQUENCE OF ERECTION OPERATIONS, FIELD SPLICE LOCATIONS, FIELD SPLICE DETAILS, AND LOCATION OF TEMPORARY SHORING, SCAFFOLDING, BRACING, ETC. THE STRESSES CAUSED DURING ERECTION AND HANDLING SHALL NOT EXCEED ALLOWABLE MEMBER STRESSES.
39. THE GENERAL CONTRACTOR AND STEEL ERECTOR SHALL NOTIFY THE COR OF ANY FABRICATION OR ERECTION ERRORS OR DEVIATIONS AND RECEIVE WRITTEN APPROVAL FROM COR BEFORE ANY FIELD CORRECTIONS ARE MADE.
40. THE STEEL STRUCTURE IS A NON–SELF–SUPPORTING STEEL FRAME AND IS DEPENDANT UPON DIAPHRAGM ACTION OF THE METAL ROOF AND FLOOR DECK AND ATTACHMENT TO THE MASONRY WALLS FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES. PROVIDE ALL TEMPORARY SUPPORTS REQUIRED FOR STABILITY AND FOR RESISTANCE TO WIND AND SEISMIC FORCES UNTIL THESE ELEMENTS ARE COMPLETE AND ARE CAPABLE OF PROVIDING THIS SUPPORT.
41. GUYS AND OTHER BRACING REQUIRED TO PROVIDE LATERAL STABILITY TO STEEL FRAME SHALL BE ADEQUATELY SIZED AND ANCHORED. THIS BRACING SHALL REMAIN UNTIL PERMANENT BRACING ELEMENTS AND ATTACHED CONSTRUCTION IS INSTALLED.
42. VISUALLY INSPECT ALL FIELD WELDS. 10% OF ALL FIELD FILLET WELDS IN PRIMARY CONNECTIONS AND MULTI–PASS WELDS SHALL BE TESTED BY THE MAGNETIC PARTICLE METHOD, COMPLYING WITH ASTM E109, PERFORMED ON THE ROOT PASS AND ON THE FINISHED WELD.
43. 100% OF FULL PENETRATION WELDS SHALL HAVE ULTRASONIC INSPECTION, COMPLYING WITH ASTM E164.
44. 100% OF WELDS IN BEAM AND COLUMN MOMENT CONNECTIONS SHALL HAVE ULTRASONIC INSPECTION, COMPLYING WITH ASTM E164.
45. FIELD TEST BOLTED CONNECTIONS AND SHEAR STUDS IN ACCORDANCE WITH AISC.

METAL DECK

1. METAL DECK SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH THE "DESIGN MANUAL FOR FLOOR DECKS AND ROOF DECKS", STEEL DECK INSTITUTE. ALL COMPOSITE STEEL FLOOR DECK SHALL BE IN CONFORMANCE WITH THE "SPECIFICATIONS FOR COMPOSITE STEEL FLOOR DECK" OF THE STEEL DECK INSTITUTE, LATEST EDITION.
2. DECK PROPERTIES ARE BASED ON PRODUCTS MANUFACTURED BY NEW MILLENIUM. DECKS BY OTHER MANUFACTURERS MAY BE SUPPLIED PROVIDED LOAD CARRYING CAPACITY BASED ON MANUFACTURER'S STANDARD LOAD TABLES, DEFLECTION CHARACTERISTICS, AND UL FIRE RATINGS EQUAL OR EXCEED THOSE OF MATERIAL SPECIFIED AND IF APPROVED BY THE COR.
3. INSTALL IN ACCORDANCE WITH SDI SUGGESTED SPECIFICATIONS UNLESS NOTED OTHERWISE ON THE DRAWINGS. INDIVIDUAL DECK SHEETS SHALL EXTEND OVER AT LEAST THREE SPANS, WITH LAPS TO BE PLACED OVER SUPPORTS.
4. DECK SUPPLIER SHALL PROVIDE ALL ADDITIONAL FRAMING, CLOSURE ANGLES AND PLATES, POUR STOPS, SCREED ANGLES, AND ROOF SUMP PANS AS REQUIRED AT THE EDGES OF ALL OPENINGS AND AT ALL SLAB DEPRESSIONS, OR CHANGES OF DECK DIRECTION, INCLUDING THOSE WHICH HAVE NOT BEEN DETAILED.
5. ROOF AND NON–COMPOSITE DECKS SHALL BE WELDED TO STEEL SUPPORTS, INCLUDING THE EDGE SUPPORT PARALLEL TO THE DECK SPAN WITH 5/8" DIAMETER (EFFECTIVE FUSION DIAMETER) PLUG WELDS AT 12" ON CENTER INTERIOR AND 6" ON CENTER AT EDGE OF DECK SHEET UNLESS NOTED OTHERWISE ON THE DRAWINGS. FASTEN SIDE LAPS WITH #10 SELF–TAPPING SCREWS AT 36" O.C. MAXIMUM SPACING UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
6. COMPOSITE DECKS SHALL BE WELDED TO ALL SUPPORTS INCLUDING THE EDGE SUPPORT PARALLEL TO THE DECK SPAN WITH 5/8" DIAMETER (EFFECTIVE FUSION DIAMETER) PLUG WELDS AT 12 INCHES ON CENTER INTERIOR AND 6 INCHES ON CENTER AT EDGE OF DECK SHEET. FASTEN SIDE LAPS WITH #10 SELF–TAPPING SCREWS AT 30" O.C. HEADED STUDS SHALL BE FIELD INSTALLED BY WELDING THROUGH THE METAL DECK.
7. ALL STEEL FLOOR DECK SHALL BE WELDED TO ALL SUPPORTING STEEL ELEMENTS. WELDING WASHERS SHALL BE USED AS REQUIRED BY THE DECK MANUFACTURER.
8. STEEL DECK SUPPLIER SHALL SUBMIT SHOP DRAWINGS INDICATING THE SHEAR STUD PLACEMENT.
9. PRIOR TO AND DURING CONCRETE PLACEMENT, THE FLOOR DECK SHALL BE PLANKED TO PREVENT DAMAGE TO THE DECK. CONCENTRATED AND IMPACT LOADS SHALL BE AVOIDED.
10. SHEAR CONNECTORS SHALL BE HEADED STUDS CONFORMING TO ASTM A108, GRADES 1010, 1015, 1017, OR 1020. SHEAR CONNECTORS SHALL BE MACHINE WELDED TO STEEL.
11. THE NUMBER OF SHEAR CONNECTORS REQUIRED PER BEAM IS INDICATED ON THE DRAWINGS. WHERE NO SHEAR CONNECTORS ARE INDICATED FOR A BEAM THAT SUPPORTS A CONCRETE SLAB, PROVIDE SHEAR CONNECTORS AT 24 INCHES ON CENTER.
12. SHEAR CONNECTORS SHALL BE EQUALLY SPACED OVER THE LENGTH OF THE BEAM UNLESS NOTED OTHERWISE. WHERE THE NUMBER OF STEEL DECK CORRUGATIONS AVAILABLE IS LESS THAN THE NUMBER OF SHEAR CONNECTORS REQUIRED, USE PAIRS OF SHEAR CONNECTORS STARTING FROM EACH END OF THE BEAM AND CONTINUING TOWARD THE CENTER UNTIL IT IS POSSIBLE TO RETURN TO A SINGLE SHEAR CONNECTOR IN EACH CORRUGATION.
13. NO MECHANICAL OR ELECTRICAL PIPING, FIXTURES, UNITS OR SYSTEMS MAY BE HUNG DIRECTLY FROM THE ROOF DECK.

STEEL GRATING

1. STEEL GRATING SHALL BE MANUFACTURED IN ACCORDANCE WITH THE METAL BAR GRATING MANUAL BY THE NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS AND SHALL CONFORM TO FEDERAL SPECIFICATION RR–G–661E, TYPE 1, CLASS 1. STEEL FOR GRATING SHALL BE ASTM A569. ALL GRATING SHALL BE GALVANIZED AND ATTACHED WITH REMOVABLE TYPE FASTENERS.

BEARING PADS

1. ELASTOMERIC PADS: AASHTO M251, PLAIN, VULCANIZED, 100 PERCENT POLYCHLOROPRENE (NEOPRENE) ELASTOMER, MOLDED TO SIZE OR CUT FROM A MOLDED SHEET, 50 TO 70 SHORE A DUROMETER ACCORDING TO ASTM D2240, MINIMUM TENSILE STRENGTH 15.5 MPA (2250 PSI) PER ASTM D412.
2. RANDOM–ORIENTED, FIBER–REINFORCED ELASTOMERIC PADS: PREFORMED, RANDOMLY ORIENTED SYNTHETIC FIBERS SET IN ELASTOMER. SURFACE HARDNESS OF 70 TO 80 SHORE A DUROMETER ACCORDING TO ASTM D2240. CAPABLE OF SUPPORTING A COMPRESSIVE STRESS OF 20.7 MPA (3000 PSI) WITH NO CRACKING, SPLITTING OR DELAMINATING IN THE INTERNAL PORTIONS OF THE PAD. TEST ONE SPECIMEN FOR EACH 200 PADS USED IN THE PROJECT. SUBMIT TEST RESULTS.
3. COTTON–DUCK–FABRIC–REINFORCED ELASTOMERIC PADS: PREFORMED, HORIZONTALLY LAYERED COTTON–DUCK FABRIC BONDED TO AN ELASTOMER. SURFACE HARDNESS OF 80 TO 100 SHORE A DUROMETER ACCORDING TO ASTM D2240. CONFORMING TO DIVISION II, SECTION 18.10.2 OF AASHTO LRFD, OR MIL–C–882E.
4. FRICTIONLESS PADS: TETRAFLUOROETHYLENE (TEFLON), GLASS–FIBER REINFORCED, BONDED TO STAINLESS OR MILD–STEEL PLATES, OF TYPE REQUIRED FOR IN–SERVICE STRESS.
5. HIGH–DENSITY PLASTIC: MULTIMONOMER, NONLEACHING, PLASTIC STRIP.

MEP EQUIPMENT

1. ALL NEW MECHANICAL EQUIPMENT SHALL BE BOLTED TO THE CONCRETE PADS OR STEEL SUPPORTS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION BUT NOT LESS THAN 5/ 8" DIAMETER BOLTS AT 30" ON CENTER MAXIMUM.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INDICATING COORDINATION BETWEEN FINAL MEP EQUIPMENT SELECTION AND PROPOSED SUPPORTING STRUCTURE. SHOP DRAWINGS SHALL SHOW LOCATION AND SIZE OF ALL ANCHOR BOLTS, CENTERLINES OF BEAMS, AND UNIT DIMENSIONS INCLUDING OVERALL DIMENSIONS AND CENTERLINES OF ATTACHMENT POINTS.

DESIGN DATA

1. GOVERNING CODES:
   A. 2021 INTERNATIONAL BUILDING CODE
   B. ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE – ACI318
   C. AISC MANUAL OF STEEL CONSTRUCTION
   D. AWS STEEL WELDING CODES – AWS D1.1 AND D1.4
   E. STEEL DECK INSTITUTE MANUAL
   F. DEPARTMENT OF VETERANS AFFAIRS PROGRAM GUIDE PG–18–15
   G. DEPARTMENT OF VETERANS AFFAIRS STRUCTURAL DESIGN MANUAL
   H. DEPARTMENT OF VETERANS AFFAIRS SEISMIC DESIGN REQUIREMENTS H–18–8
2. DESIGN DATA:
   RISK CATEGORY: IV
3. FLOOR LIVE LOAD:
   UNIFORM
   CHILLER PLANT: 150 PSF
   DUNNAGE PLATFORMS: 40 PSF
   DUNNAGE STAIRS: 40 PSF
   CONCENTRATED
   CHILLER PLANT: 2,000 LBS
   DUNNAGE PLATFORMS: 1,000 LBS
   DUNNAGE STAIRS: 1,000 LBS
   LADDER: 250 LBS
3. ROOF LIVE LOAD:
   MINIMUM LIVE LOAD: 20 PSF
   SNOW LOAD
   PG (GROUND SNOW LOAD): 25 PSF
   CE (SNOW EXPOSURE FACTOR): 0.9
   I (SNOW LOAD IMPORTANCE FACTOR): 1.2
   CT (THERMAL FACTOR): 1.0
   PF (FLAT SNOW LOAD): 24 PSF
4. WIND LOAD:
   BASIC WIND SPEED: 121 MPH
   WIND EXPOSURE: B
5. EARTHQUAKE DESIGN DATA:
   SITE CLASSIFICATION: C (FROM EXISTING ADJACENT)
   SS: 0.089 (ASCE 7–16)
   SDS: 0.045 (CALCULATED)
   S1: 0.065 (ASCE 7–16)
   SD1: 0.072 (CALCULATED)
   SEISMIC DESIGN CATEGORY: A
   SEISMIC FORCE–RESISTING SYSTEM: STEEL FRAMING WITHOUT SPECIAL DETAILING
   V (BASE SHEAR): 4 Kips
   CS (RESPONSE COEFFICIENT): N/A
   R (RESPONSE MODIFICATION): N/A
   ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
6. SPECIAL LOADS (MAXIMUM):
   CHILLER: 75,000 LBS (470 PSF)
   COOLING TOWER: 65,000 LBS (194 PSF)
   PUMP: 6,000 LBS (220 PSF)
   REMOTE–MOUNTED VFD: 65,000 LBS (194 PSF)
   HEAT EXCHANGER: 5,000 LBS (270 PSF)

PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER.

NO.	DESCRIPTION	DATE

CONSULTANT
LaBella
Powered by partnership.
300 State Street, Suite 201, Rochester, NY 14614
P: (585) 454-6110
Engineering | Architecture | Environmental | Planning
www.labellapc.com

ENGINEER OF RECORD
Miller-Remick LLC
Mechanical, Electrical, Plumbing, & Structural Engineering
1010 KINGS HIGHWAY SOUTH
CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

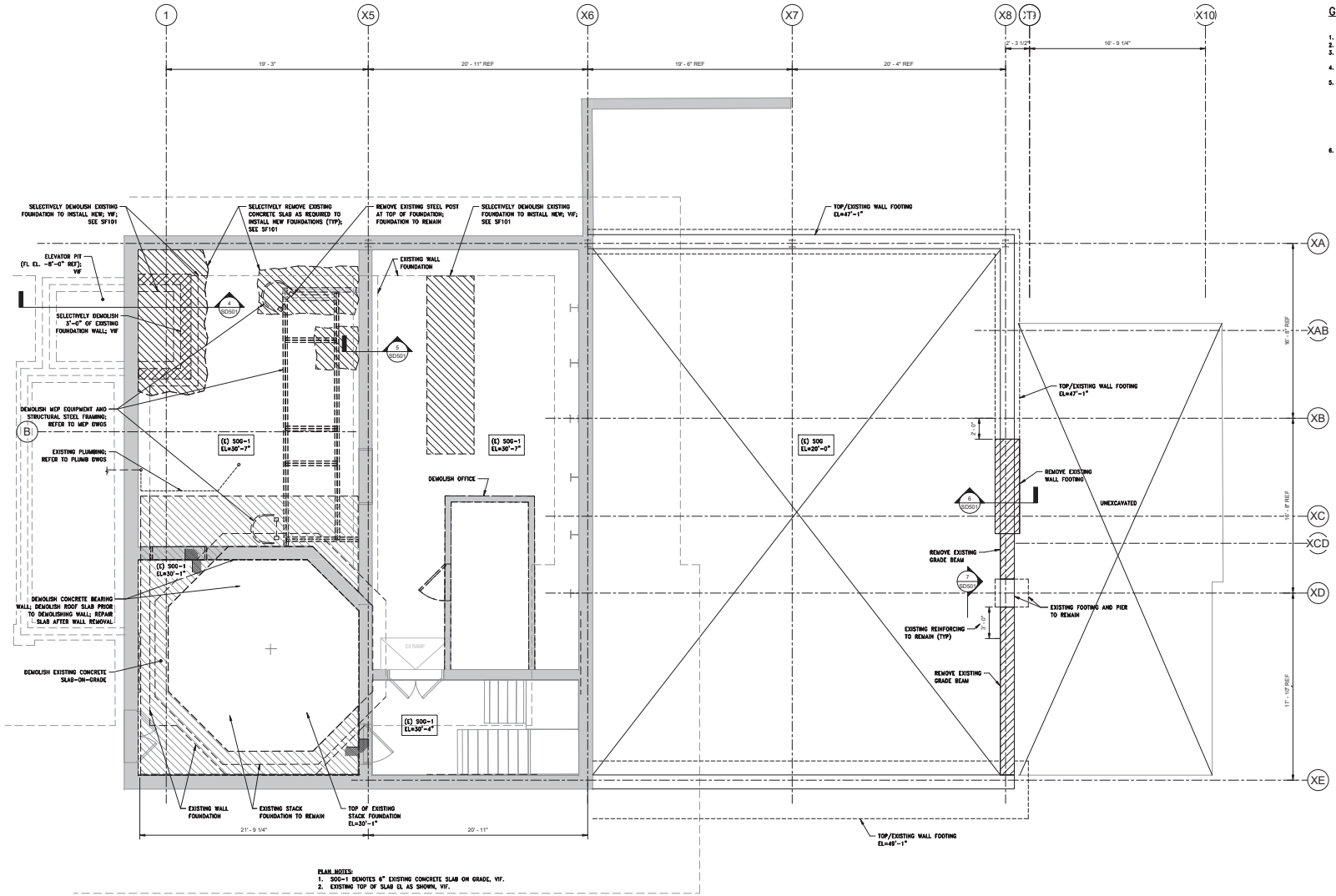
MILLER-REMICK LLC PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ANTHONY D. PACARO, JR. PE
5/11/2022

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title	Phase	Project Title	Project Number
STRUCTURAL NOTES	CONSTRUCTION BID DOCUMENTS	UD CHILLER CAPACITY UPGRADE	646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: S-002
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

VA FORM 08-6231

\\nrr1.local\shares\Projects\0507_DVA-Pittsburgh PA (D20)\0014 Pitt UD Chiller Capacity Upgrade\4_Drawings\1_Cad\1_Current Submittal Phase\2_Structural\S-002.dwg 5-10-22 11:58:51 AM dstur@vont



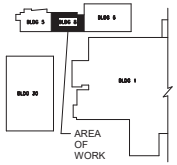
PLAN NOTES:
1. SOG-1 DENOTES 6" EXISTING CONCRETE SLAB ON GRADE, VIF.
2. EXISTING TOP OF SLAB EL AS SHOWN, VIF.

1 DEMOLITION PLAN - FIRST LEVEL

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

GENERAL SHEET NOTES:

1. FOR PROJECT PHASING, REFER TO GC101.
2. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.
3. ELEVATION 1.000' HAS BEEN SET TO DATUM 0'-0". ALL ELEVATIONS ARE MEASURED FROM THIS PROJECT DATUM.
4. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL SCOPE.
5. WORK AREAS WERE SURVEYED TO IDENTIFY HAZARDOUS MATERIALS. REFER TO MARBETT & ASSOCIATES REGULATED BUILDING MATERIALS SURVEY REPORT FOR VA PROJECT NO. 646-20-109, PITTSBURGH VAMC MAIN CHILLER PLANT – A/E DESIGN SERVICES FOR PITTSBURGH VAMC UD CHILLER CAPACITY AND CONTROLS UPGRADE DATED APRIL 2, 2021 FOR ADDITIONAL INFORMATION. NOT ALL AREAS MAY HAVE BEEN ACCESSIBLE AND HAZARDOUS MATERIALS MAY EXIST WHICH HAVE NOT BEEN IDENTIFIED. IF SUSPECT MATERIALS ARE DISCOVERED WHICH HAVE NOT BEEN PREVIOUSLY IDENTIFIED, THE CONTRACTOR SHALL NOT DISTURB THOSE MATERIALS AND SHALL IMMEDIATELY NOTIFY THE COTR.
6. OSHA LEAD REGULATIONS WILL APPLY TO ANY DEMOLITION OPERATION (I.E. SANDING, SCRAPING, CUTTING, AND WELDING) THAT WOULD DISTURB PAINTED SURFACES WHICH CONTAIN LEAD. OCCUPATIONAL EXPOSURE TO LEAD IS REGULATED BY OSHA (29CFR 1910.1025) AS WELL AS APPLICABLE STATE REGULATIONS. DISPOSAL OF MATERIALS COATED WITH PAINT CONTAINING LEAD IS SUBJECT TO THE USEPA RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) REGULATIONS. CONTRACTOR TO NOTIFY VA AND A/E IMMEDIATELY UPON DISCOVERY OF LEAD PAINTED SURFACES.



KEYPLAN

PLAN NORTH
ACTUAL NORTH

PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE

CONSULTANTS

LaBella
Powered by partnership.
300 State Street, Suite 201, Rochester, NY 14614, P: (585) 454-6110
Engineering, Architecture, Environmental, Planning
www.labellapc.com

ENGINEER OF RECORD

Miller-Remick LLC
Mechanical, Electrical, Plumbing, & Structural Engineering
1010 KINGS HIGHWAY SOUTH
CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER

Office of Construction and Facilities Management
U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL DEMOLITION PLAN FIRST LEVEL	Phase: CONSTRUCTION BID DOCUMENTS	Project Title: UD CHILLER CAPACITY UPGRADE	Project Number: 646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: SD111
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

VA FORM 08 - 6231

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GENERAL SHEET NOTES:

1. FOR PROJECT PHASING, REFER TO GC101.
2. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.
3. LEVEL 1 FLOOR ELEVATION [1130.11' REF] HAS BEEN SET TO DATUM 0'-0". ALL ELEVATIONS ARE MEASURED FROM THIS PROJECT DATUM.
4. REFER TO ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL SCOPE.
5. WORK AREAS WERE SURVEYED TO IDENTIFY HAZARDOUS MATERIALS. REFER TO MARBETT & ASSOCIATES REGULATED BUILDING MATERIALS SURVEY REPORT FOR VA PROJECT NO. 646-20-100, PITTSBURGH VAMC MAIN CHILLER PLANT – A/E DESIGN SERVICES FOR PITTSBURGH VAMC UD CHILLER CAPACITY AND CONTROLS UPGRADE DATED APRIL 2, 2021 FOR ADDITIONAL INFORMATION. NOT ALL AREAS MAY HAVE BEEN ACCESSIBLE AND HAZARDOUS MATERIALS MAY EXIST WHICH HAVE NOT BEEN IDENTIFIED. IF SUSPECT MATERIALS ARE DISCOVERED WHICH HAVE NOT BEEN PREVIOUSLY IDENTIFIED, THE CONTRACTOR SHALL NOT DISTURB THOSE MATERIALS AND SHALL IMMEDIATELY NOTIFY THE COR.
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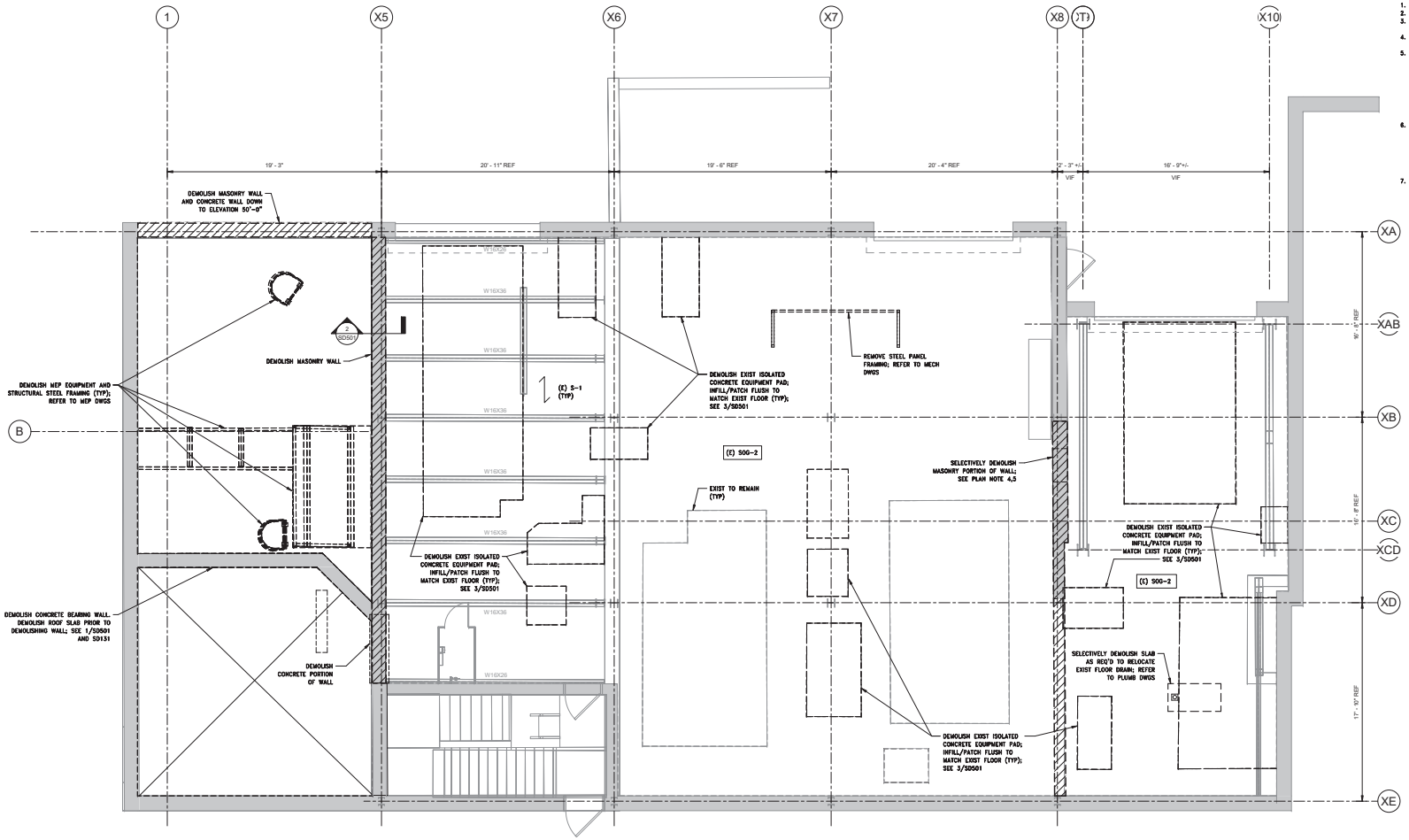
7. DASHED LINES INDICATE ITEMS TO BE DEMOLISHED.

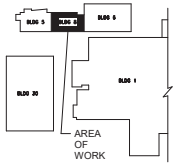


PLAN NOTES:

1. TOP OF SLAB EL= 50'-0" REF.
2. SOG-2 DENOTES EXISTING 6" CONCRETE SLAB-ON-GRADE.
3. S-1 DENOTES EXISTING 8" CONCRETE FLOOR SLAB. TOP OF SLAB EL = [1150.00'] REF, VERIFY IN FIELD.
4. DEMOLISH EXISTING MASONRY WALL. DO NOT DAMAGE STEEL BEAMS AND COLUMNS THAT ARE EMBEDDED WITHIN WALLS. SEE 2/SD501.
5. DEMOLISH EXISTING MASONRY WALL FROM PARAPET TO TOP OF CONCRETE.

1 DEMOLITION PLAN - SECOND LEVEL

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



KEYPLAN

PLAN NORTH
ACTUAL NORTH

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NO.	DESCRIPTION	DATE

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CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL DEMOLITION PLAN SECOND LEVEL	Phase: CONSTRUCTION BID DOCUMENTS	Project Title: UD CHILLER CAPACITY UPGRADE	Project Number: 646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: SD121
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

VA FORM 08 - 6231

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GENERAL SHEET NOTES:

1. FOR PROJECT PHASING, REFER TO GC101.
2. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.
3. LEVEL 1 FLOOR ELEVATION [1130.11' REF] HAS BEEN SET TO DATUM 0'-0". ALL ELEVATIONS ARE MEASURED FROM THIS PROJECT DATUM.
4. REFER TO ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL SCOPE.
5. WORK AREAS WERE SURVEYED TO IDENTIFY HAZARDOUS MATERIALS. REFER TO MARBETT & ASSOCIATES REGULATED BUILDING MATERIALS SURVEY REPORT FOR VA PROJECT NO. 646-20-109, PITTSBURGH VAMC MAIN CHILLER PLANT – A/E DESIGN SERVICES FOR PITTSBURGH VAMC UD CHILLER CAPACITY AND CONTROLS UPGRADE DATED APRIL 2, 2021 FOR ADDITIONAL INFORMATION. NOT ALL AREAS MAY HAVE BEEN ACCESSIBLE AND HAZARDOUS MATERIALS MAY EXIST WHICH HAVE NOT BEEN IDENTIFIED. IF SUSPECT MATERIALS ARE DISCOVERED WHICH HAVE NOT BEEN PREVIOUSLY IDENTIFIED, THE CONTRACTOR SHALL NOT DISTURB THOSE MATERIALS AND SHALL IMMEDIATELY NOTIFY THE COTR.
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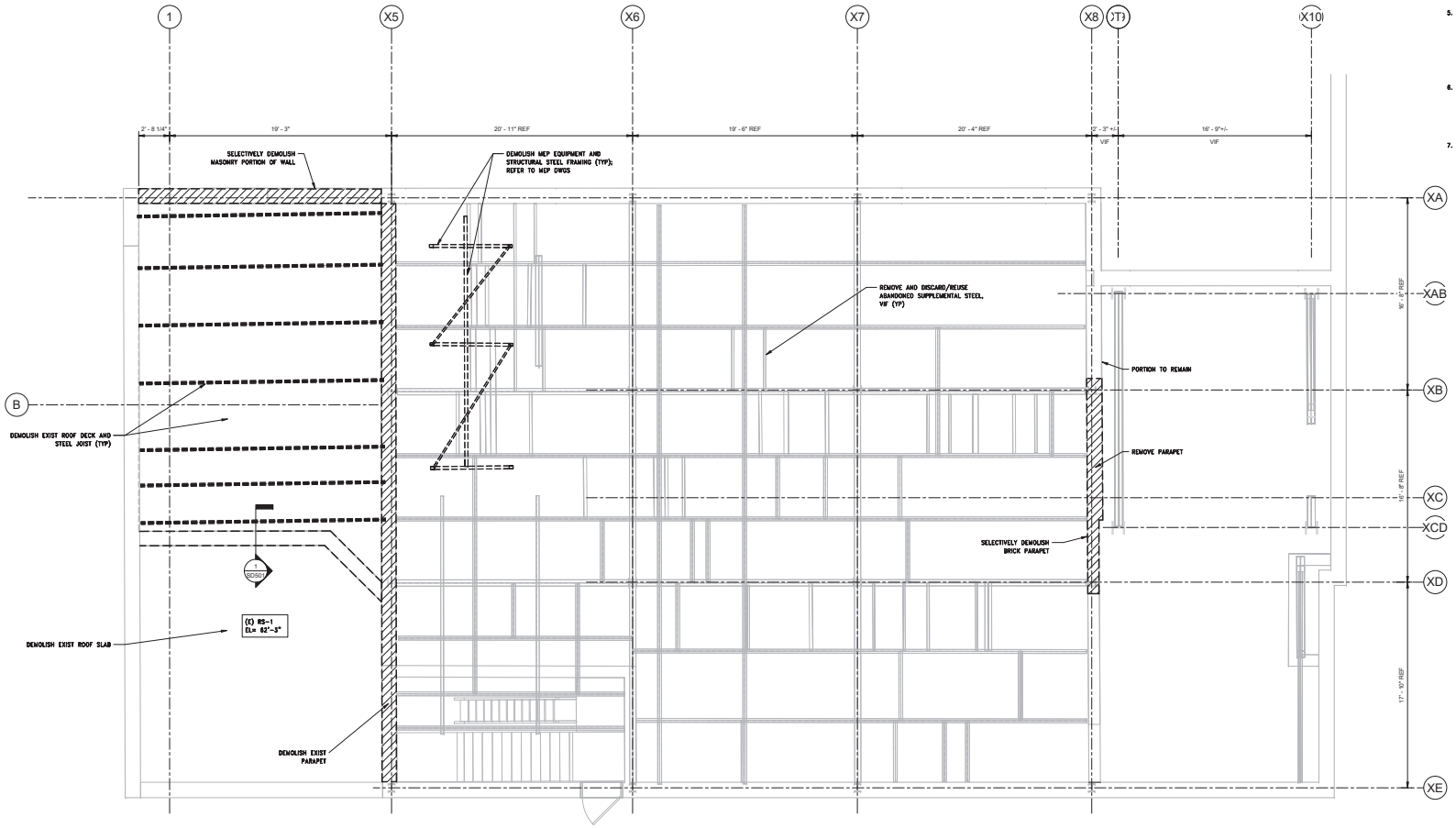
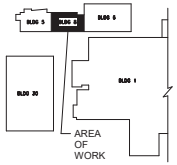
7. DASHED LINES INDICATE ITEMS TO BE DEMOLISHED.



PLAN NOTES:

1. TOP OF STEEL EL= 70'-8" REF.
2. DEMOLISH EXISTING MASONRY WALL. DO NOT DAMAGE STEEL BEAMS AND COLUMNS THAT ARE EMBEDDED WITHIN WALLS. SEE 2/SD501.
3. RS-1 DENOTES EXISTING 6" CONCRETE ROOF SLAB.
4. DEMOLISH EXISTING MASONRY WALL. DO NOT DAMAGE STEEL BEAMS AND COLUMNS THAT ARE EMBEDDED WITHIN WALLS. SEE 2/SD501.
5. DEMOLISH EXISTING MASONRY WALL FROM PARAPET TO TOP OF CONCRETE.

1 DEMOLITION PLAN - ROOF LEVEL
SCALE: 1/4" = 1'-0"



KEYPLAN

PLAN NORTH
ACTUAL NORTH

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NO.	DESCRIPTION	DATE

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ENGINEER OF RECORD

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CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ANTHONY D. PACARO, JR. No. PE062173

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL DEMOLITION PLAN ROOF LEVEL	Phase: CONSTRUCTION BID DOCUMENTS	Project Title: UD CHILLER CAPACITY UPGRADE	Project Number: 646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: SD131
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

VA FORM 08 - 6231

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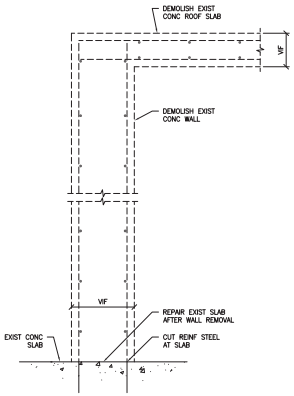
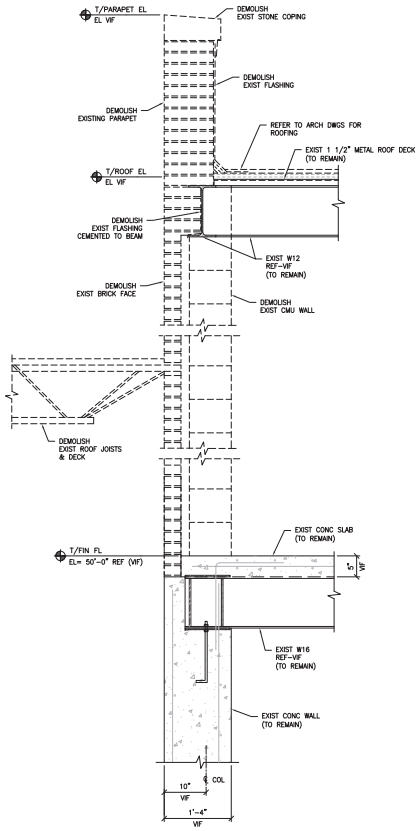
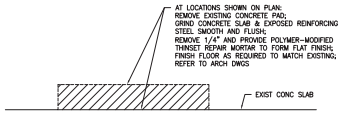


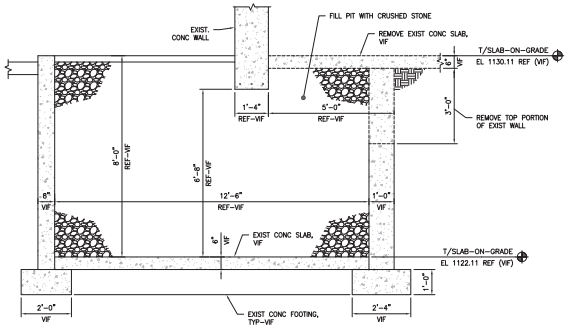
1 WALL DEMOLITION DETAIL
SCALE: 1"=1'-0"



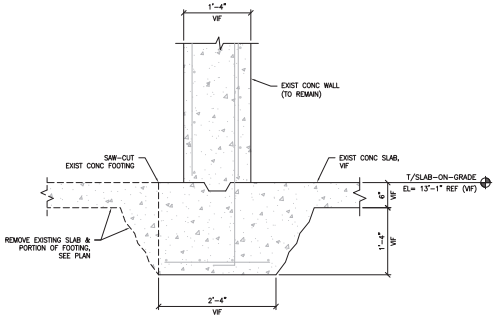
2 WALL DEMOLITION DETAIL
SCALE: 1"=1'-0"



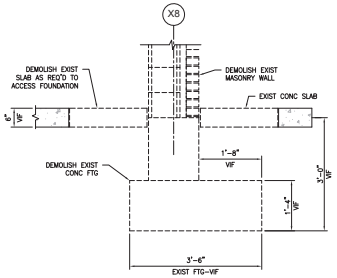
3 CONCRETE PAD DEMOLITION DETAIL
SCALE: 1" = 1'-0"



4 FOUNDATION DEMOLITION SECTION
SCALE: 1/2"=1'-0"

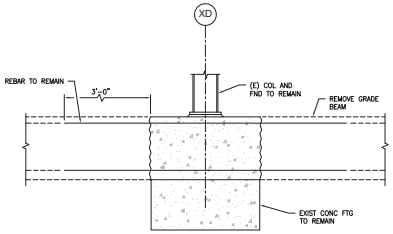


5 FOUNDATION DEMOLITION DETAIL
SCALE: 1"=1'-0"



NOTE:
ALL DIMENSIONS ARE PER REFERENCE DRAWINGS AND ARE TO BE VERIFIED IN FIELD.

6 FOUNDATION ENLARGEMENT DETAIL
SCALE: 3/4"=1'-0"
REF: SFT01



NOTE:
ELEVATION SHOWN ARE PER REFERENCE DRAWINGS AND ARE TO BE VERIFIED IN FIELD.

7 FOUNDATION DEMOLITION ELEVATION
SCALE: 3/4"=1'-0"

GENERAL SHEET NOTES:

1. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.
2. WORK AREAS WERE SURVEYED TO IDENTIFY HAZARDOUS MATERIALS. REFER TO MABBETT & ASSOCIATES REGULATED BUILDING MATERIALS SURVEY REPORT FOR VA PROJECT NO. 646-20-109, PITTSBURGH VAMC MAIN CHILLER PLANT – A/E DESIGN SERVICES FOR PITTSBURGH VAMC UD CHILLER CAPACITY AND CONTROLS UPGRADE DATED APRIL 2, 2021 FOR ADDITIONAL INFORMATION. NOT ALL AREAS MAY HAVE BEEN ACCESSIBLE AND HAZARDOUS MATERIALS MAY EXIST WHICH HAVE NOT BEEN IDENTIFIED. IF SUSPECT MATERIALS ARE DISCOVERED WHICH HAVE NOT BEEN PREVIOUSLY IDENTIFIED, THE CONTRACTOR SHALL NOT DISTURB THOSE MATERIALS AND SHALL IMMEDIATELY NOTIFY THE COTR.
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MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ANTHONY D. PACARO, JR. No. 075077-E
5/11/2022

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL DEMOLITION SECTIONS & DETAILS	Phase: CONSTRUCTION BID DOCUMENTS	Project Title: UD CHILLER CAPACITY UPGRADE	Project Number: 646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: SD501
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

VA FORM 08-6231

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GENERAL SHEET NOTES:

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2. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.
3. ELEVATION 1,000' HAS BEEN SET TO DATUM 0'-0". ALL ELEVATIONS ARE MEASURED FROM THIS PROJECT DATUM.
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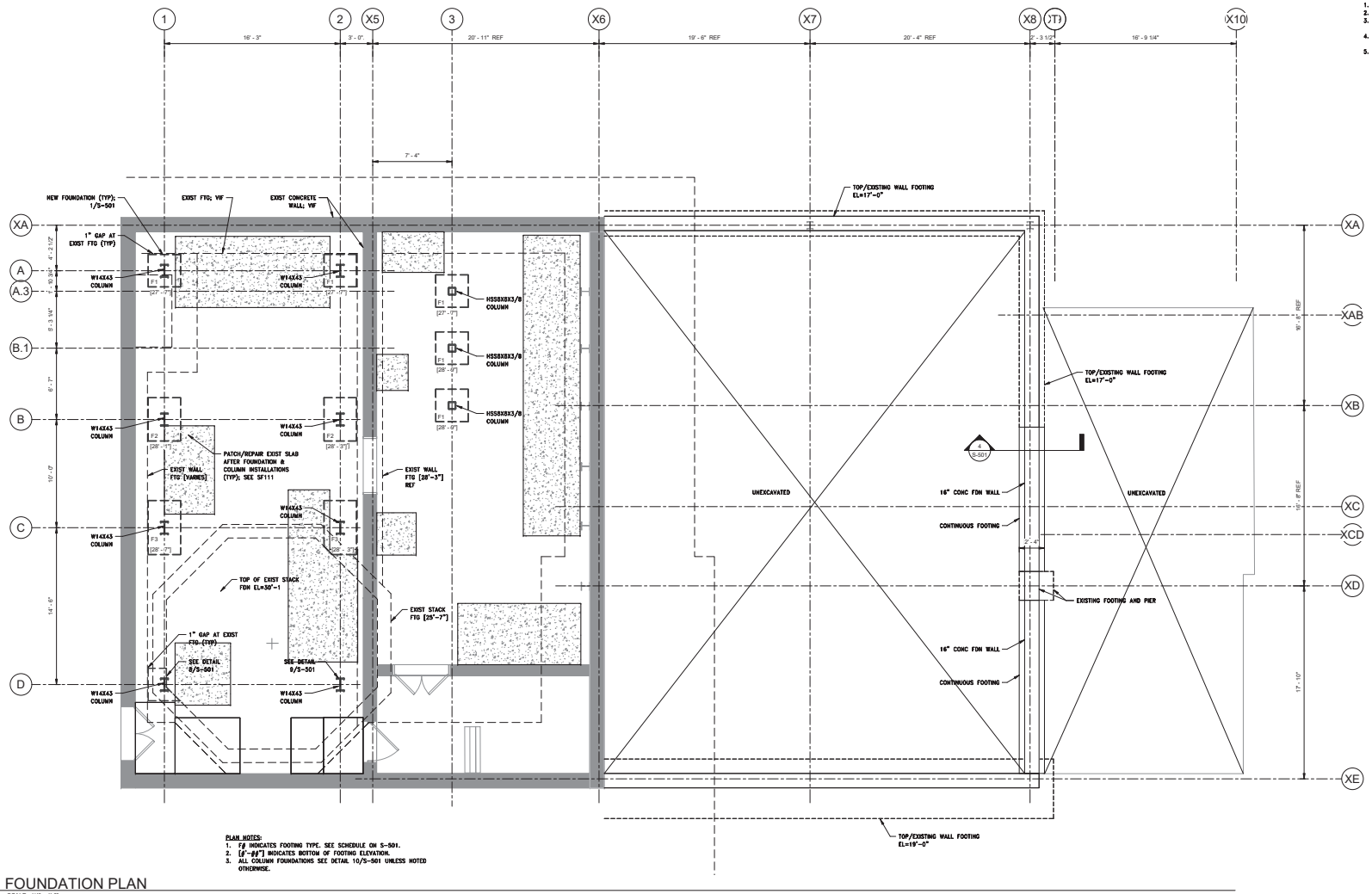
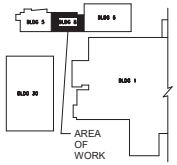
5. CONTRACTOR TO NOTIFY VA AHD A/E IMMEDIATELY UPON DISCOVERY OF LEAD PAINTED SURFACES.



PLAN NOTES:
1. F# INDICATES FOOTING TYPE. SEE SCHEDULE ON S-501.
2. [#'-##"] INDICATES BOTTOM OF FOOTING ELEVATION.
3. ALL COLUMN FOUNDATIONS SEE DETAIL 10/S-501 UNLESS NOTED OTHERWISE.

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



KEYPLAN

PLAN NORTH
ACTUAL NORTH

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NO.	DESCRIPTION	DATE

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MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ANTHONY D. PACARO, JR. No. 075017-E

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL FOUNDATION PLAN	Phase: CONSTRUCTION BID DOCUMENTS	Project Title: UD CHILLER CAPACITY UPGRADE	Project Number: 646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: SF101
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

VA FORM 08 - 6231

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GENERAL SHEET NOTES:

1. FOR PROJECT PHASING, REFER TO GC101.
2. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001.
3. LEVEL 1 FLOOR ELEVATION [1130.11' REF] HAS BEEN SET TO DATUM 0'-0". ALL ELEVATIONS ARE MEASURED FROM THIS PROJECT DATUM.
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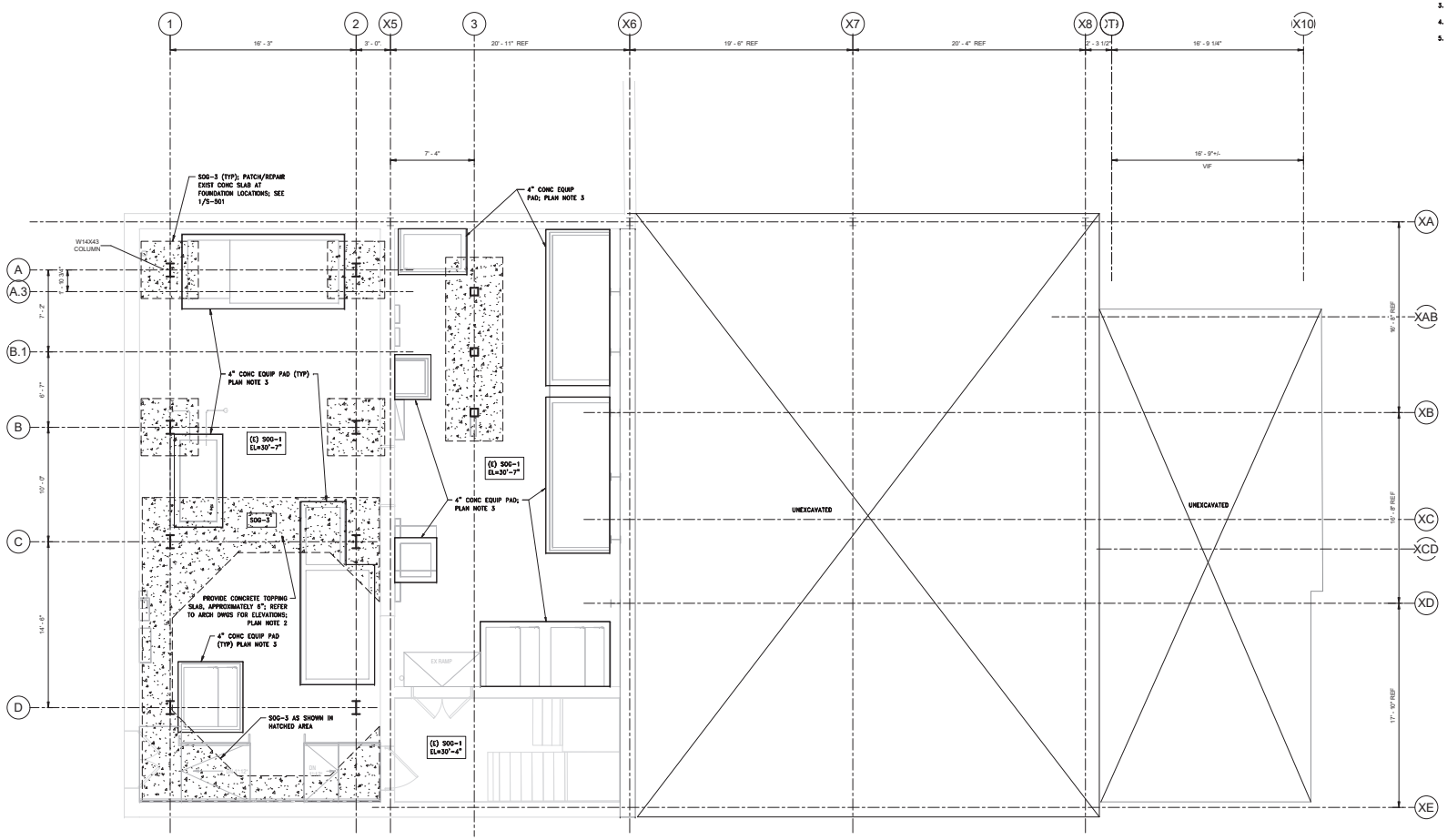
5. CONTRACTOR TO NOTIFY VA AHD A/E IMMEDIATELY UPON DISCOVERY OF LEAD PAINTED SURFACES.

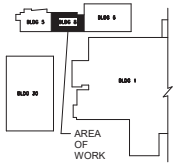


PLAN NOTES:

1. SOG-1 DENOTES 8" EXISTING CONCRETE SLAB-ON-GRADE.
2. SOG-3 DENOTES 8" MINIMUM NORMAL WEIGHT CONCRETE SLAB-ON-GRADE W/#4 @12" OC, EW. 15 MIL MINIMUM POLETHYLENE SHEET ON 6" CRUSHED STONE SUBBASE ON COMPACTED SUBGRADE (95%). DOWEL SLAB TO EXISTING SLAB. MATCH EXISTING TOP OF SLAB REF. SEE 2,3/S-501.
3. COORDINATE SIZE, DIMENSION, AND LOCATION OF NEW CONCRETE EQUIPMENT PAD WITH FINAL PURCHASE OF MEEP EQUIPMENT. SEE 5/S-501

1 FRAMING PLAN - FIRST LEVEL

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



KEYPLAN

PLAN NORTH
ACTUAL NORTH

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NO.	DESCRIPTION	DATE

CONSULTANTS

LaBella
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300 State Street, Suite 201, Rochester, NY 14614, P: (585) 454-6110
Engineering, Architecture, Environmental, Planning
www.labellapc.com

ENGINEER OF RECORD

Miller-Remick LLC
Mechanical, Electrical, Plumbing, & Structural Engineering
1010 KINGS HIGHWAY SOUTH
CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
ANTHONY D. PACARO, JR.
No. 075027-E
5/11/2022

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL FRAMING PLAN FIRST LEVEL
Approved: Project Director
Phase: CONSTRUCTION BID DOCUMENTS
NON-SPRINKLERED
Project Title: UD CHILLER CAPACITY UPGRADE
Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA
Issue Date: 2022-05-11
Checked: ER
Drawn: DS
Project Number: 646-20-109
Building Number: 8
Drawing Number: SF111

VA FORM 08 - 6231

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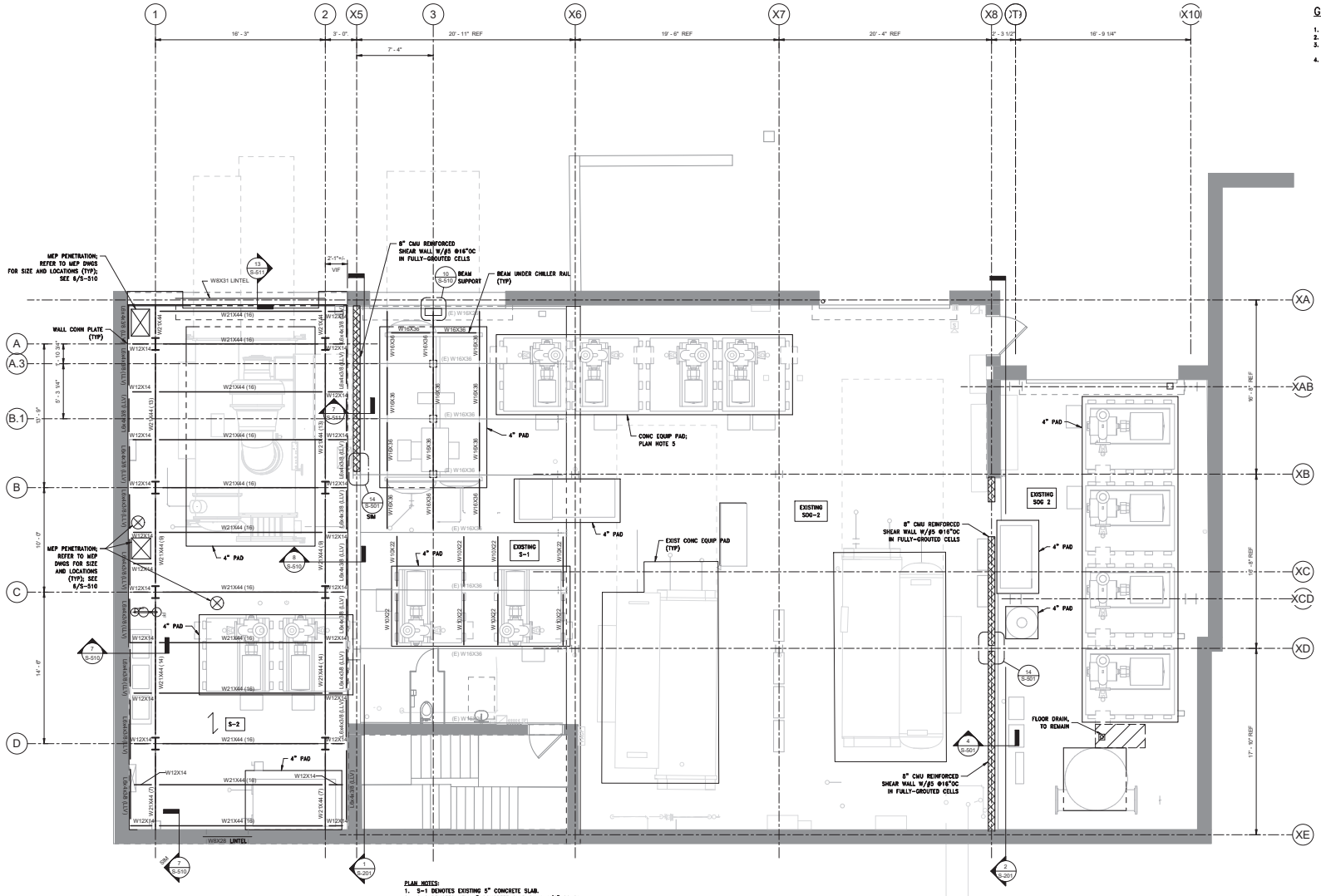


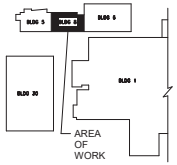
GENERAL SHEET NOTES:

1. FOR PROJECT PHASING, REFER TO GC101.
2. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.
3. LEVEL 1 FLOOR ELEVATION [1130.11' REF] HAS BEEN SET TO DATUM 0'-0". ALL ELEVATIONS ARE MEASURED FROM THIS PROJECT DATUM.
4. REFER TO ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL SCOPE.

PLAN NOTES:

1. S-1 DENOTES EXISTING 5" CONCRETE SLAB.
2. S-2 DENOTES NEW 4" CONCRETE SLAB ON 1 1/2" 20 GA COMPOSITE METAL DECK (5 1/2" TOTAL THICKNESS) W/WZ.1xWZ.1-8x8.
3. SOG-2 DENOTES EXISTING 6" CONCRETE SLAB-ON-GRADE.
4. TOP OF SLAB EL = [50'-0"] REF.
5. COORDINATE SIZE, DIMENSION, AND LOCATION OF NEW CONCRETE EQUIPMENT PAD WITH FINAL PURCHASE OF MECHANICAL EQUIPMENT. REFER TO MECHANICAL DWGS. SEE S/S-501.
6. (#) DENOTES NUMBER OF 3/4" x4" STEEL STUDS.

1 FRAMING PLAN - SECOND LEVEL
SCALE: 1/4" = 1'-0"



KEYPLAN

PLAN NORTH
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www.labellagc.com

ENGINEER OF RECORD

Miller-Remick LLC
Mechanical, Electrical, Plumbing, & Structural Engineering
1010 KINGS HIGHWAY SOUTH
CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL FRAMING PLAN SECOND LEVEL	Phase: CONSTRUCTION BID DOCUMENTS	Project Title: UD CHILLER CAPACITY UPGRADE	Project Number: 646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: SF121
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

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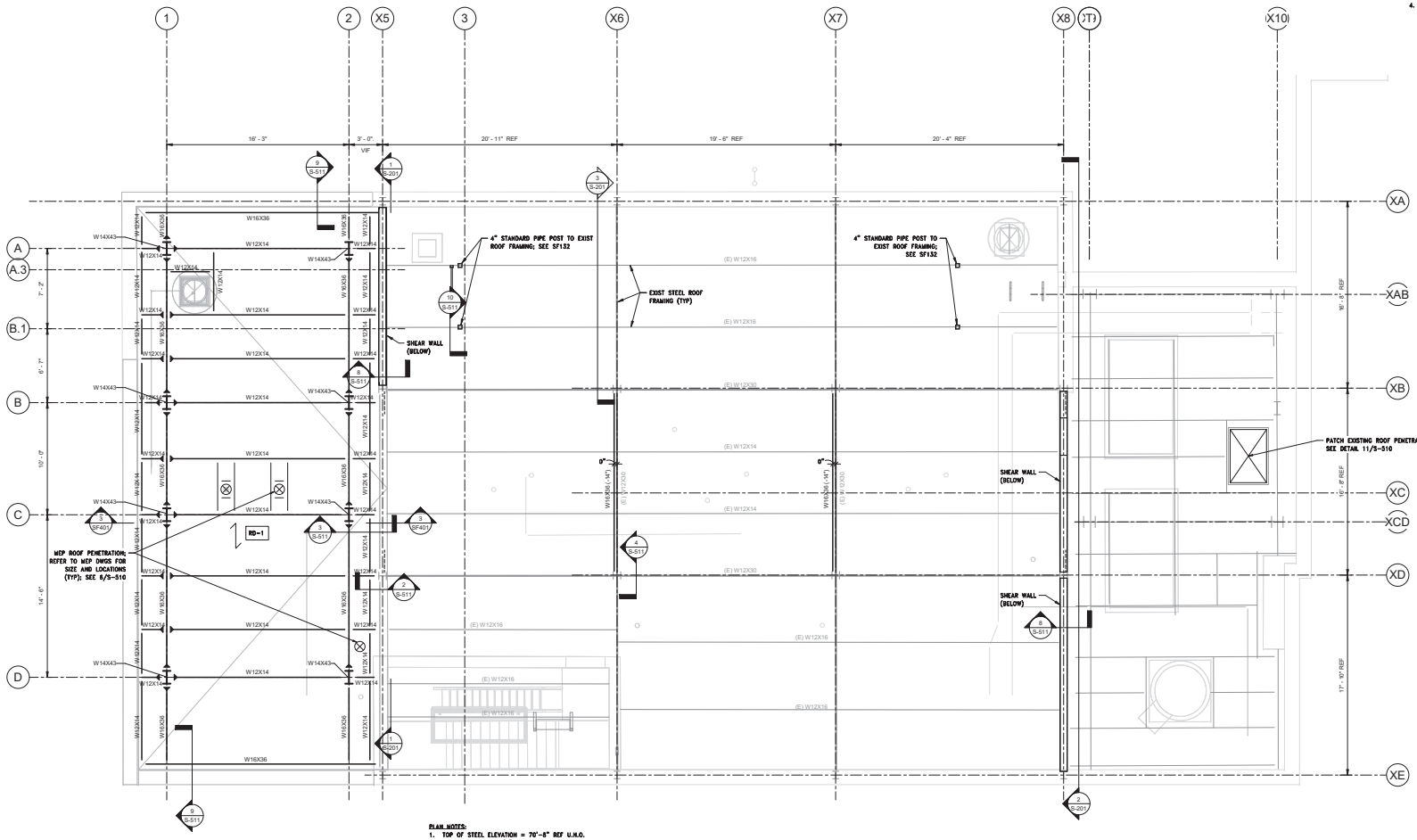
GENERAL SHEET NOTES:

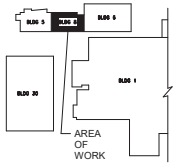
1. FOR PROJECT PHASING, REFER TO GC101.
2. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.
3. LEVEL 1 FLOOR ELEVATION [1130.11' REF] HAS BEEN SET TO DATUM 0'-0". ALL ELEVATIONS ARE MEASURED FROM THIS PROJECT DATUM.
4. REFER TO ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL SCOPE.



PLAN NOTES:

1. TOP OF STEEL ELEVATION = 70'-8" REF U.N.O.
2. RD-1 DENOTES 1 1/2", 20 GA, TYPE B ROOF DECK.
3. REFER TO GENERAL NOTES FOR FINISH INFORMATION.
4. ⊢——— INDICATES MOMENT CONNECTION, SEE DETAIL 3/S-510.

1 FRAMING PLAN - ROOF LEVEL
SCALE: 1/4" = 1'-0"



KEYPLAN

PLAN NORTH
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Miller-Remick LLC
Mechanical, Electrical, Plumbing, & Structural Engineering
1010 KINGS HIGHWAY SOUTH
CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER

Office of Construction and Facilities Management
U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL FRAMING PLAN ROOF LEVEL	Phase: CONSTRUCTION BID DOCUMENTS	Project Title: UD CHILLER CAPACITY UPGRADE	Project Number: 646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: SF131
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

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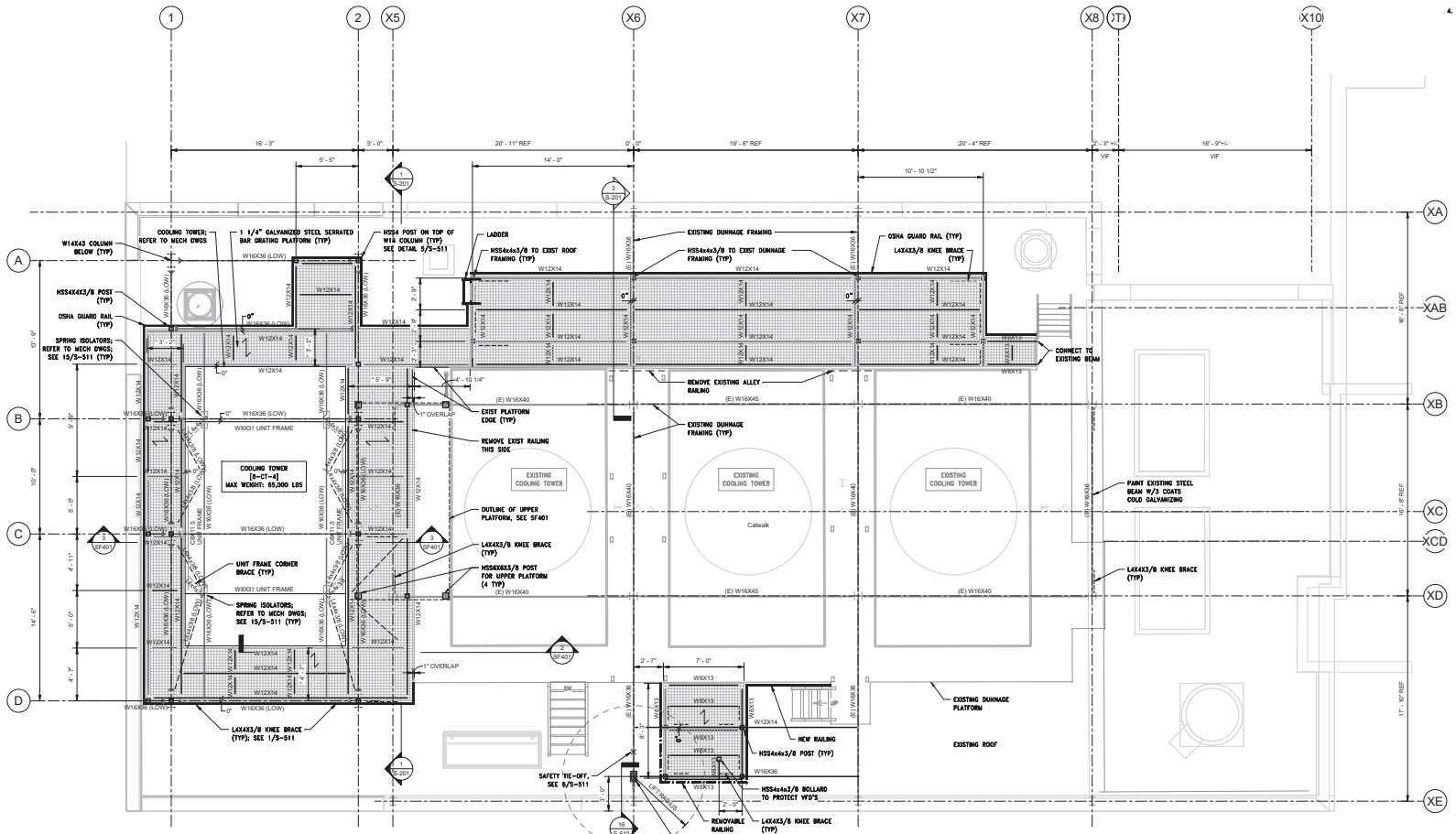
GENERAL SHEET NOTES:

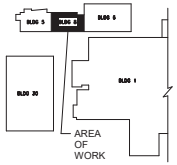
1. FOR PROJECT PHASING, REFER TO GC101.
2. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.
3. LEVEL 1 FLOOR ELEVATION [1130.11' REF] HAS BEEN SET TO DATUM 0'-0". ALL ELEVATIONS ARE MEASURED FROM THIS PROJECT DATUM.
4. REFER TO ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL SCOPE.



PLAN NOTES:

1. TOP OF NEW PLATFORM STEEL ELEVATION = 47'-8".
2. (LOW) DENOTES TOP OF NEW DUNNAGE STEEL ELEVATION = 43'-5".
3. TOP OF EXISTING STEEL ELEVATION = VIF.
4. * INDICATES COORDINATE FINAL DIMENSION AND LOCATION WITH PURCHASED MECHANICAL EQUIPMENT.
5. COORDINATE CLEARANCES WITH PURCHASED MECHANICAL EQUIPMENT.
6. ⊢— INDICATES MOMENT CONNECTION.
7. ALL STEEL TO BE GALVANIZED.
8. ELECTRICALLY-POWERED, ROTATING EQUIPMENT LIFT TO LIFT EQUIPMENT FROM GRADE TO ROOF. 2,000 LB CAPACITY WHEN FULLY-EXTENDED. SEE DETAIL 11/S-511.

1 FRAMING PLAN - ROOF DUNNAGE
SCALE: 1/4" = 1'-0"



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ENGINEER OF RECORD

Miller-Remick LLC
Mechanical, Electrical, Plumbing, & Structural Engineering
1010 KINGS HIGHWAY SOUTH
CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ANTHONY D. PACARO, JR. No. PE-075611-E
5/11/2022

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL FRAMING PLAN ROOF DUNNAGE	Phase: CONSTRUCTION BID DOCUMENTS	Project Title: UD CHILLER CAPACITY UPGRADE	Project Number: 646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: SF132
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

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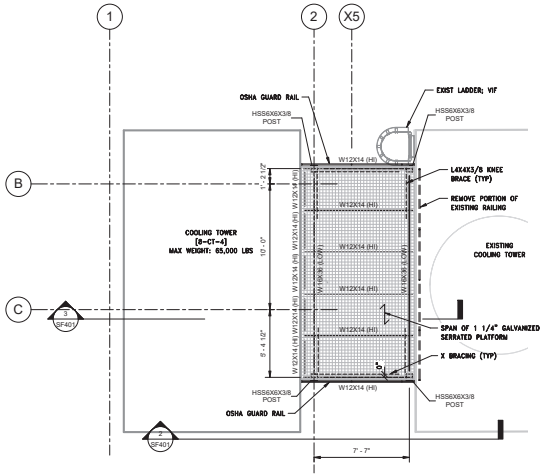
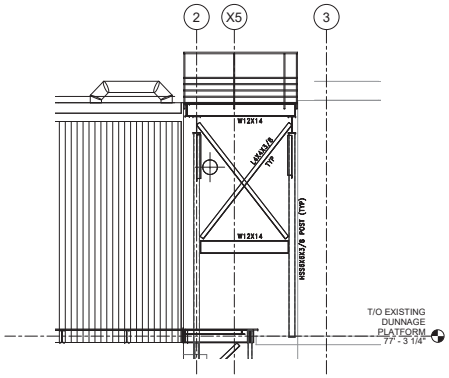
GENERAL SHEET NOTES:

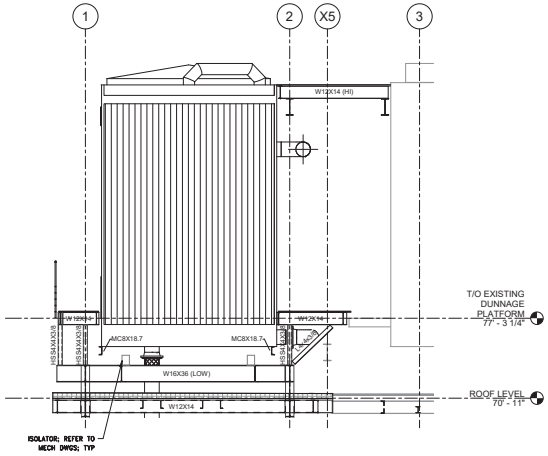
1. FOR PROJECT PHASING, REFER TO GC101.
2. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.
3. LEVEL 1 FLOOR ELEVATION [1130.11' REF] HAS BEEN SET TO DATUM 0'-0". ALL ELEVATIONS ARE MEASURED FROM THIS PROJECT DATUM.
4. REFER TO ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL SCOPE.
5. CONTRACTOR TO NOTIFY VA AHD A/E IMMEDIATELY UPON DISCOVERY OF LEAD PAINTED SURFACES.



1 FRAMING PLAN - TOP OF COOLING TOWER PLATFORM
SCALE: 1/4" = 1'-0"

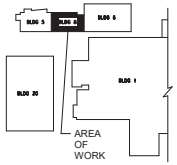


2 COOLING TOWER PLATFORM ELEVATION
SCALE: 1/4" = 1'-0"



PLAN NOTES:
1. TOP OF STEEL GRATING TO MATCH TOP OF NEW COOLING TOWER.

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



KEYPLAN

PLAN NORTH
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LaBella
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P: (585) 454-6110
Engineering, Architecture, Environmental, Planning
www.labellagc.com

ENGINEER OF RECORD

Miller-Remick LLC
Mechanical, Electrical, Plumbing, & Structural Engineering
1010 KINGS HIGHWAY SOUTH
CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ANTHONY P. PACARO, JR. No. PE-073217-E
5/11/2022

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL FRAMING PLAN TOP OF COOLING TOWER PLATFORM
Approved: Project Director
Phase: CONSTRUCTION BID DOCUMENTS
NON-SPRINKLERED
Project Title: UD CHILLER CAPACITY UPGRADE
Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA
Issue Date: 2022-05-11
Checked: ER
Drawn: DS
Project Number: 646-20-109
Building Number: 8
Drawing Number: SF401

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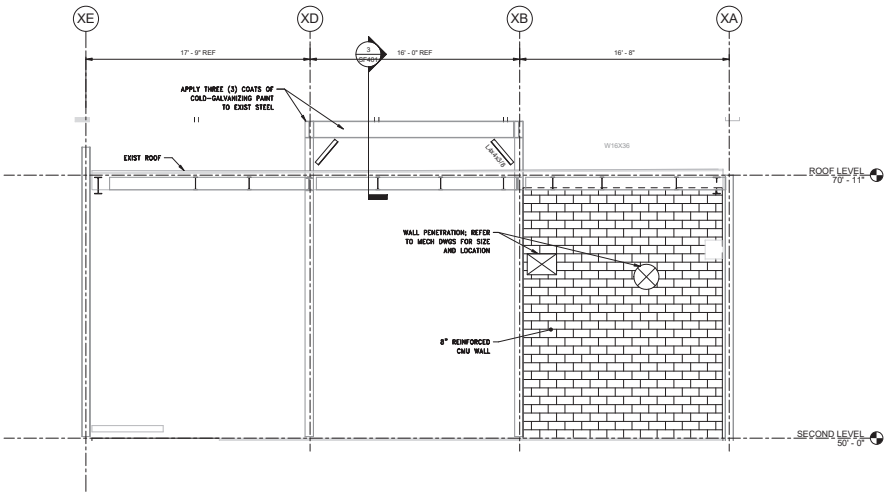
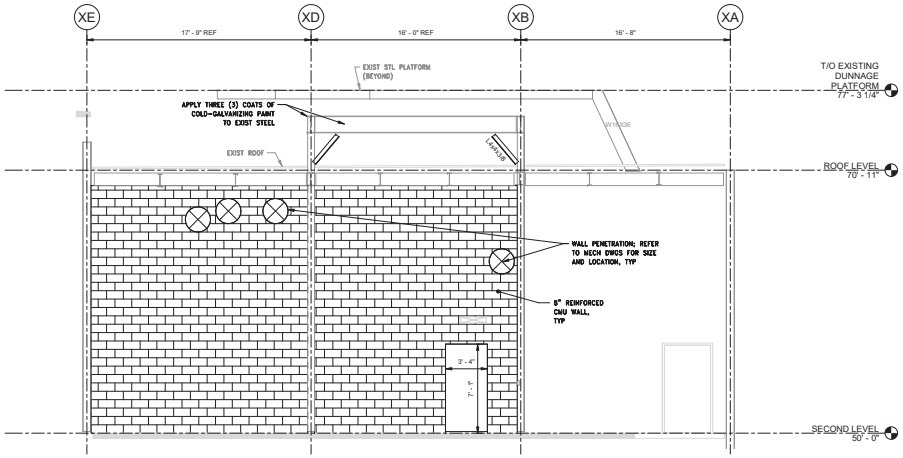
GENERAL SHEET NOTES:

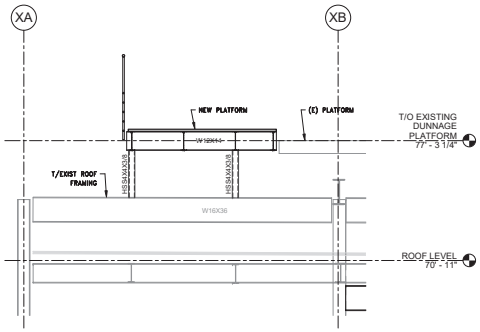
1. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.
2. LEVEL 1 FLOOR ELEVATION [1130.11' REF] HAS BEEN SET TO DATUM 0'-0". ALL ELEVATIONS ARE MEASURED FROM THIS PROJECT DATUM.
3. REFER TO ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL SCOPE.
4. CONTRACTOR TO NOTIFY VA AND A/E IMMEDIATELY UPON DISCOVERY OF LEAD PAINTED SURFACES.



1 ELEVATION ALONG COLUMN LINE X5
SCALE: 1/4" = 1'-0"



2 ELEVATION ALONG COLUMN LINE X8
SCALE: 1/4" = 1'-0"



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

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PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
ANTHONY D. PACARO, JR.
No. 075017-E
5/11/2022

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL BRACE FRAME ELEVATIONS	Phase: CONSTRUCTION BID DOCUMENTS	Project Title: UD CHILLER CAPACITY UPGRADE	Project Number: 646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: S-201
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

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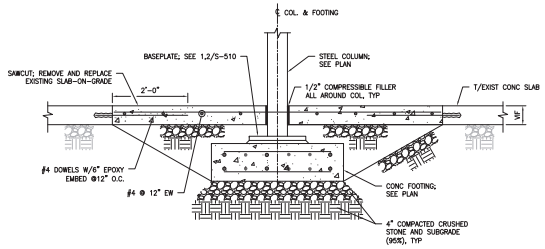
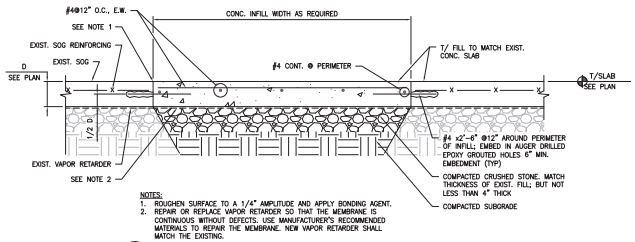


1 FOOTING DETAIL
SCALE: 3/4" = 1'-0"

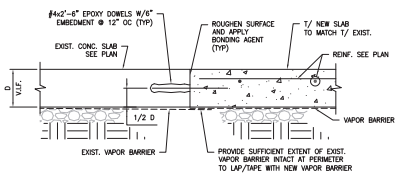


NOTES:
1. ROUGHEN SURFACE TO A 1/4" AMPLITUDE AND APPLY BONDING AGENT.
2. REPAIR OR REPLACE VAPOR RETARDER SO THAT THE MEMBRANE IS CONTINUOUS WITHOUT DEFECTS. USE MANUFACTURER'S RECOMMENDED MATERIALS TO REPAIR THE MEMBRANE. NEW VAPOR RETARDER SHALL MATCH THE EXISTING.

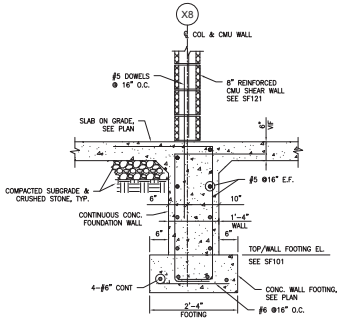
2 EXISTING CONCRETE SLAB INFILL DETAIL
SCALE: 1 1/2"=1'-0"

GENERAL SHEET NOTES:

1. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.
2. FOR FOUNDATION PLAN SEE DRAWING SF101.

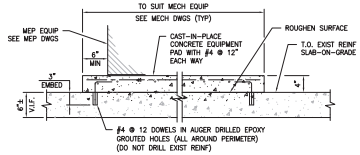


3 TYPICAL NEW TO EXISTING CONCRETE SLAB
SCALE: 1 1/2" = 1'-0"



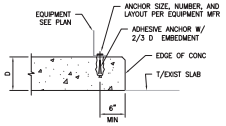
NOTE:
REPAIR SLAB TO MATCH EXISTING.

4 TYPICAL CONTINUOUS FOOTING DETAIL
SCALE: 3/4" = 1'-0
REF: SF101



NOTES:
1. SEE MEP DRAWINGS FOR LOCATION(S) OF EQUIPMENT PAD(S).
2. ANCHOR MEP EQUIPMENT TO CONCRETE PAD PER DETAIL 6/S-501.
3. PAINT ALL CONCRETE EQUIPMENT PADS SAFETY YELLOW.

5 TYPICAL CONCRETE EQUIPMENT PAD DETAIL
SCALE: 1" = 1'-0"

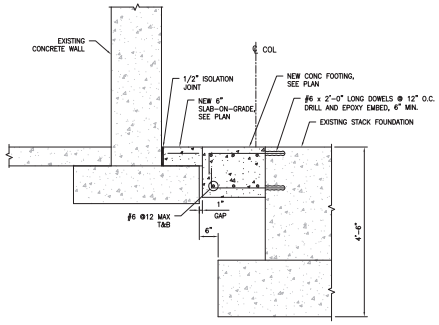


6 ANCHOR DETAIL
SCALE: 1" = 1'-0"

FOOTING SCHEDULE		
MARK	SIZE (L x W x T)	REINFORCEMENT
F1	3'-0" x 3'-0" x 1'-4"	4-#6 T&B, EACH WAY
F2	3'-0" x 4'-0" x 1'-4"	5-#6 T&B, SHORT; 4-#6 T&B, LONG
F3	3'-0" x 5'-0" x 1'-4"	6-#6 T&B, SHORT; 4-#6 T&B, LONG

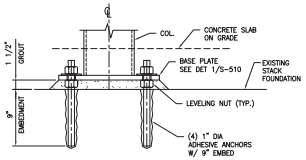
1. PREPARE, TEST, AND REMEDIATE ALL SUBGRADE AS OUTLINED IN THE GENERAL NOTES.
2. TOP OF FOOTING ELEVATION MARKED [ ] ON SF101.
3. FOR FOOTING LOCATIONS SEE SF101.

7 FOOTING SCHEDULE
SCALE: NTS

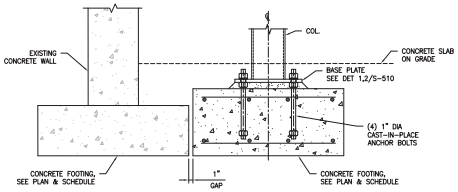


NOTE:
1. COLUMN NOT SHOWN FOR CLARITY.
2. SEE PLAN FOR LOCATION.
3. SEE DETAIL 9/S-501 FOR BASE DETAIL.

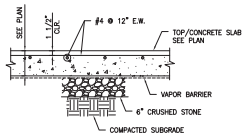
8 COLUMN FOUNDATION DETAIL
SCALE: N.T.S.
REF: SF101



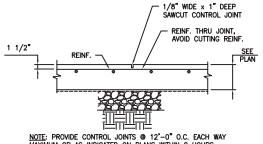
9 COLUMN BASE DETAIL
SCALE: 1 1/2" = 1'-0"



10 FOUNDATION DETAIL
SCALE: 1" = 1'-0"

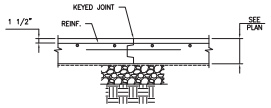


11 DETAIL-SLAB ON GRADE
SCALE: 3/4" = 1'-0"

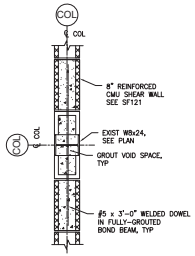


NOTE: PROVIDE CONTROL JOINTS @ 12'-0" O.C. EACH WAY MAXIMUM OR AS INDICATED ON PLANS WITHIN 8 HOURS FROM POURING CONCRETE.

12 DETAIL-TYPICAL S.O.G. CONTROL JOINT
SCALE: 3/4" = 1'-0"



13 DETAIL-TYPICAL CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"



14 CMU CONNECTION DETAIL
SCALE: 3/4" = 1'-0
REF: SF121

PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER.

NO.	DESCRIPTION	DATE

CONSULTANT
LaBella Powered by partnership.
300 State Street, Suite 201, Rochester, NY 14614, P: (585) 454-6110
Engineering, Architecture, Environmental, Planning
www.labellapc.com

ENGINEER OF RECORD
Miller-Remick LLC
Mechanical, Electrical, Plumbing, & Structural Engineering
1010 KINGS HIGHWAY SOUTH
CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

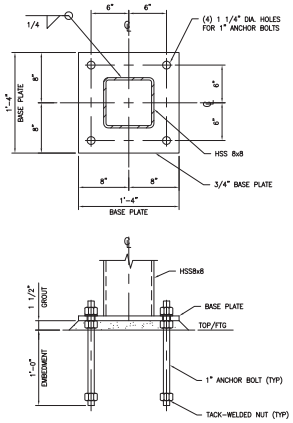
MILLER-REMICK LLC PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ANTHONY M. PACARO, JR. No. 075411-E
5/11/2022

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

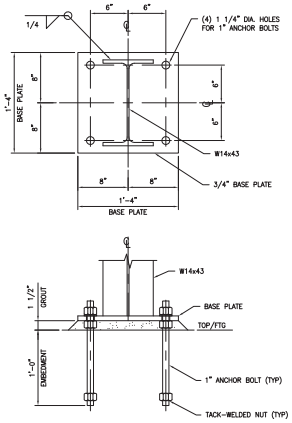
Drawing Title: STRUCTURAL CONCRETE SECTIONS & DETAILS	Phase: CONSTRUCTION BID DOCUMENTS	Project Title: UD CHILLER CAPACITY UPGRADE	Project Number: 646-20-109
			Building Number: 8
Approved: Project Director: NON-SPRINKLERED		Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: S-501
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

VA FORM 08-6231

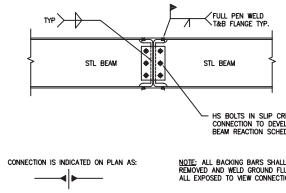
\\nrr1.local\shares\Projects\0507_DVA-Pittsburgh PA IDIQ\0014 Pitt UD Chiller Capacity Upgrade\4_Drawings\1_Cad\1_Current Submittal Phase\2_Structural\S-501.dwg 5-10-22 11:59:09 AM dstur@vent



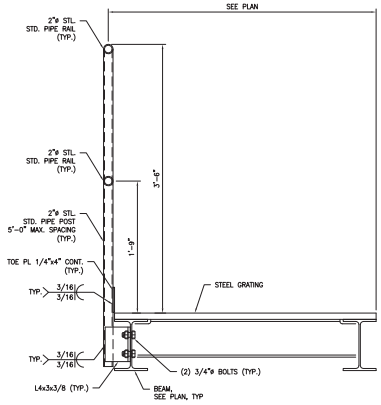
1 HSS COLUMN BASE DETAIL
SCALE: 1 1/2" = 1'-0"



2 W-SECTION COLUMN BASE DETAIL
SCALE: 1 1/2" = 1'-0"



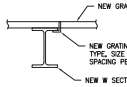
3 TYPICAL BEAM TO BEAM MOMENT CONNECTION DETAIL
SCALE: 3/4" = 1'-0"
REF DWG: SF131, SF132



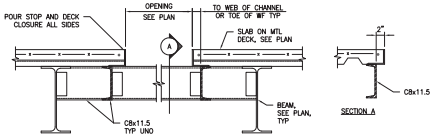
4 TYPICAL PLATFORM SECTION
SCALE: 1 1/2"=1'-0"

GENERAL SHEET NOTES:

1. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.

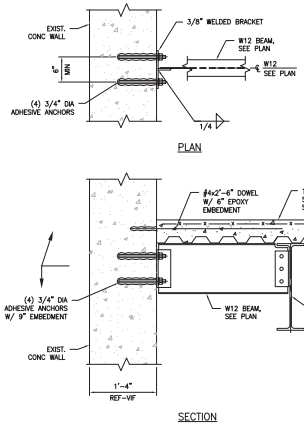


5 TYPICAL GRATING CONNECTION DETAIL
SCALE: 1-1/2" = 1'-0"

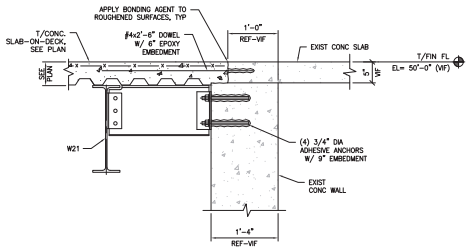


NOTES:
1. REFER TO ARCHITECTURAL, FIRE PROTECTION, AND MEP DRAWINGS FOR SIZE AND LOCATIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
2. APPLIES FOR OPENINGS GREATER THAN 12" IN ANY DIRECTION.
3. APPLIES FOR GROUP OF SLEEVES WITH AN OVERALL OUTER SLEEVE TO OUT SLEEVE DIMENSION GREATER THAN 12" PERPENDICULAR TO THE SPAN OF THE DECK.

6 TYPICAL DECK REINFORCING AT OPENINGS IN SOD
SCALE: 1"=1'-0"

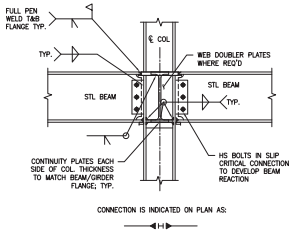


7 TYPICAL BEAM TO WALL CONNECTION
SCALE: 1" = 1'-0"



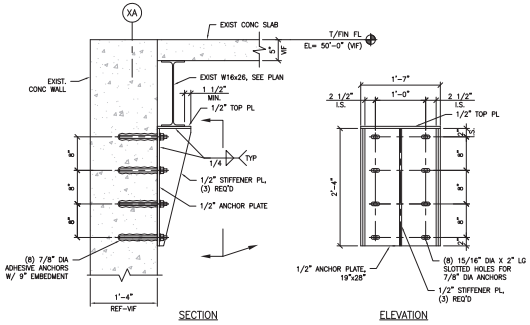
NOTES:
1. COORDINATE WITH WALL DEMOLITION DETAIL 2/SD501.
2. FOR INFORMATION & DETAILS NOT SHOWN, SEE 7/S-510.

8 TYPICAL BEAM TO WALL CONNECTION
SCALE: 1" = 1'-0"

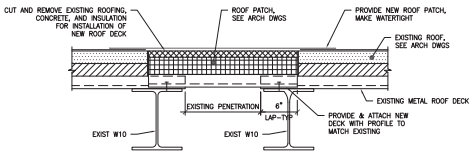


NOTE:
ALL BACKING BARS SHALL BE REMOVED AND WELD GROUND FLUSH IN ALL EXPOSED TO VIEW CONNECTIONS.

9 TYPICAL MOMENT CONNECTION AT COLUMN DETAIL
SCALE: 3/4"=1'-0"



10 BEAM SUPPORT
SCALE: 1" = 1'-0"



11 ROOF PATCH DETAIL
SCALE: 3" = 1'-0"

PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER.

NO.	DESCRIPTION	DATE

CONSULTANT

LaBella
Powered by partnership.
300 State Street, Suite 201, Rochester, NY 14614
P: (585) 454-6110
Engineering, Architecture, Environmental, Planning
www.labellapc.com

ENGINEER OF RECORD

Miller-Remick LLC
Mechanical, Electrical, Plumbing, & Structural Engineering
1010 KINGS HIGHWAY SOUTH
CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002

MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ANTHONY D. PACARO, JR. ENGINEER No. PE061713 5/11/2022

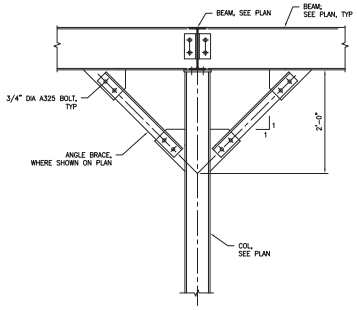
Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

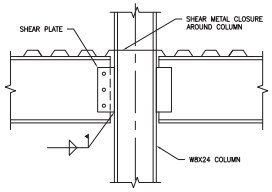
Drawing Title: STRUCTURAL STEEL SECTIONS & DETAILS	Phase: CONSTRUCTION BID DOCUMENTS	Project Title: UD CHILLER CAPACITY UPGRADE	Project Number: 646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: S-510
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

VA FORM 08-6231

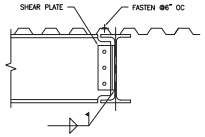
\\nrr1.local\shares\Projects\0507_DVA-Pittsburgh PA IDIQ\0014 Pitt UD Chiller Capacity Upgrade\4_Drawings\1_Cad\1_Current Submittal Phase\2_Structural\S-510.dwg 6-02-22 10:43:47 AM dstuardivent



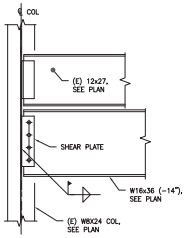
1 TYPICAL BRACING DETAIL
SCALE: 1"=1'-0"



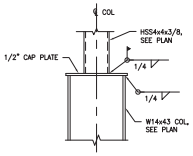
2 SECTION
SCALE: 1"=1'-0"
REF DWG: SF131



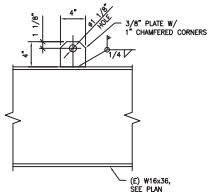
3 SECTION
SCALE: 1"=1'-0"
REF DWG: SF131



4 SECTION
SCALE: 1"=1'-0"
REF DWG: SF131



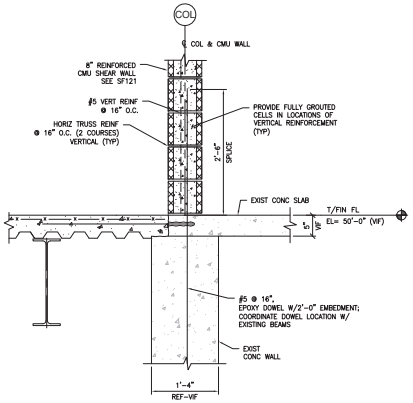
5 SECTION
SCALE: 1"=1'-0"
REF DWG: SF131



6 TIE-OFF DETAIL
SCALE: 1 1/2"=1'-0"
REF DWG: SF132

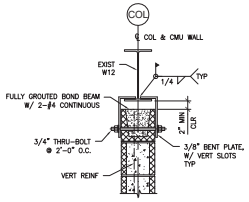
GENERAL SHEET NOTES:

1. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.

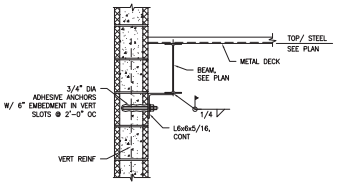


NOTES:
1. FOR INFORMATION & DETAILS NOT SHOWN, SEE 8/S-510.

7 SHEAR WALL BASE DETAIL
SCALE: 1" = 1'-0"

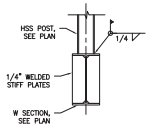


8 SHEAR WALL TOP DETAIL
SCALE: 1" = 1'-0"

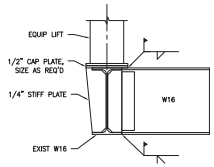


NOTES:
1. REFER TO ARCHITECTURAL DETAILS FOR MORE INFORMATION.

9 EXTERIOR WALL DETAIL
SCALE: 1" = 1'-0"



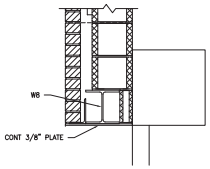
10 PLATFORM POST CONNECTION DETAIL
SCALE: 1" = 1'-0"



11 EQUIPMENT LIFT DETAIL
SCALE: 1" = 1'-0"
REF DWG: SF132

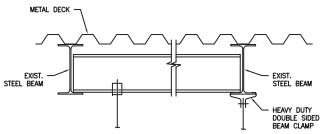
BEAM REACTION SCHEDULE	
BEAM	REACTION
L6	5k
W12	10k
W16	30k
W21	40k

12 BEAM REACTION SCHEDULE
SCALE: NTS



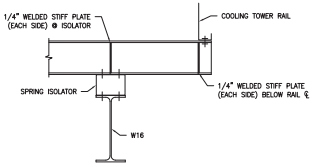
NOTES:
1. REFER TO ARCHITECTURAL DETAILS FOR MORE INFORMATION.

13 SECTION
SCALE: 1" = 1'-0"
REF: SF121



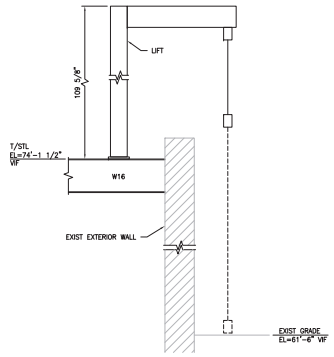
NOTES:
1. DO NOT ATTACH TO METAL DECK.
2. COORDINATE WITH MEP DRAWINGS.

14 PIPE HANGER SUPPORT DETAIL
SCALE: 1 1/2" = 1'-0"



NOTE:
MCB RAIL AND CORNER BRACING NOT SHOWN FOR CLARITY.

15 COOLING TOWER SUPPORT DETAIL
SCALE: 1" = 1'-0"
REF DWG: SF132



16 LIFT SECTION
SCALE: NTS
REF DWG: SF132

PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER.

NO.	DESCRIPTION	DATE

CONSULTANT

LaBella
Powered by partnership.
300 State Street, Suite 201, Rochester, NY 14614, P: (585) 454-6110
Engineering, Architecture, Environmental, Planning
www.labellapc.com

ENGINEER OF RECORD

Miller-Remick LLC
Mechanical, Electrical, Plumbing, & Structural Engineering
1010 KINGS HIGHWAY SOUTH
CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

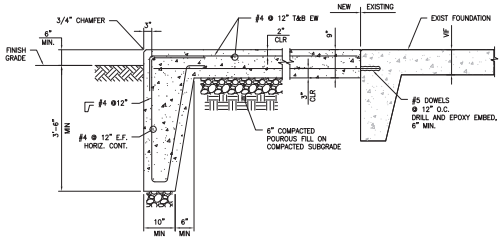
MILLER-REMICK LLC PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ANTHONY M. PACARO, JR. ENGINEER No. PE062774 PENNSYLVANIA
5/11/2022

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title	Phase	Project Title	Project Number
STRUCTURAL SECTIONS & DETAILS	CONSTRUCTION BID DOCUMENTS	UD CHILLER CAPACITY UPGRADE	646-20-109
			Building Number: 8
Approved: Project Director	NON-SPRINKLERED	Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA	Drawing Number: S-511
		Issue Date: 2022-05-11 / Checked: ER / Drawn: DS	

VA FORM 08-6231

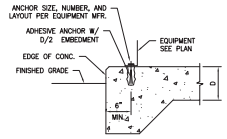
\\mr1.local\shares\Projects\0507_DVA-Pittsburgh PA IDIQ\0014 Pitt UD Chiller Capacity Upgrade\4_Drawings\1_Cad\1_Current Submittal Phase\2_Structural\S-511.dwg 6-02-22 10:30:58 AM dsturdivant



NOTES:

1. REFER TO MEP PLANS FOR FOUNDATION LOCATIONS.
2. ANCHOR MEP EQUIPMENT TO CONCRETE PAD PER DETAIL 2/S-531.
3. PROVIDE CONTROL JOINTS AT MAXIMUM 7'-0" SPACING. REFER TO DETAIL S-501.

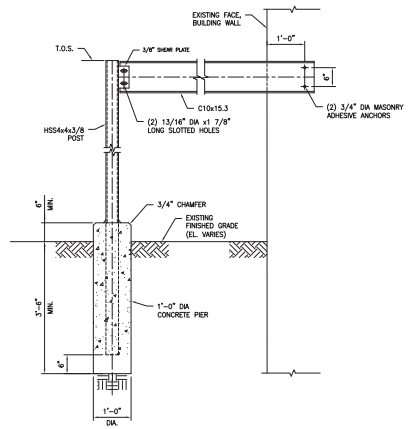
1 EXTERIOR EQUIPMENT FOUNDATION DETAIL
SCALE: N.T.S.



NOTES:

1. ATTACH MEP EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. MIN. (4) 1/2" DIAMETER STAINLESS STEEL EPOXY BOLT WITH 4" EMBEDMENT OR BOLT SIZE, SPACING, AND NUMBER, TO MATCH MANUFACTURER-PROVIDED HOLES.
2. ATTACH MEP EQUIPMENT TO PAD USING EQUIPMENT RAILS, LEGS, OR OTHER MFR PROVIDED SUPPORT. IF NO SUPPORT IS PROVIDED, WELD L4x3x5/16 GALVANIZED CLIP ANGLE.
3. AVOID CUTTING SLAB REINFORCEMENT.

2 ANCHOR DETAIL
SCALE: 1" = 1'-0"



NOTES:

1. REFER TO DRAWING ES101.
2. ALL STEEL TO BE HOT DIP GALVANIZED.

3 PIPE SUPPORT DETAIL
SCALE: 3/4" = 1'-0"

GENERAL SHEET NOTES:

1. FOR GENERAL STRUCTURAL NOTES SEE DRAWING S-001 & S-002.

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NO.	DESCRIPTION	DATE

PRINTS OF THIS DRAWING SHALL NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER.

CONSULTANT

LaBella
Powered by partnership.
300 State Street, Suite 201, Rochester, NY 14614, P: (585) 454-6110
Engineering, Architecture, Environmental, Planning
www.labellapc.com

ENGINEER OF RECORD

Miller-Remick LLC
Mechanical, Electrical, Plumbing, & Structural Engineering
1010 KINGS HIGHWAY SOUTH
CHERRY HILL, NEW JERSEY 08034
PHONE: (856)429-4000
FAX: (856)429-5002
MR PROJECT NO: 0507-0014

MILLER-REMICK LLC PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER ANTHONY D. PACARO, JR. No. 075071-E
5/11/2022

Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title: STRUCTURAL SITE SECTIONS & DETAILS

Approved: Project Director

Phase: CONSTRUCTION BID DOCUMENTS

NON-SPRINKLERED

Project Title: UD CHILLER CAPACITY UPGRADE

Location: UNIVERSITY DRIVE CAMPUS PITTSBURGH, PENNSYLVANIA

Issue Date: 2022-05-11 | Checked: ER | Drawn: DS

Project Number: 646-20-109

Building Number: 8

Drawing Number: S-531

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