

HDR Architecture
HDR Arlington
3001 Washington Blvd, Suite 200
Arlington, VA 22201

Project Number | 10235960

Electron Ion Collider

Upton, New York

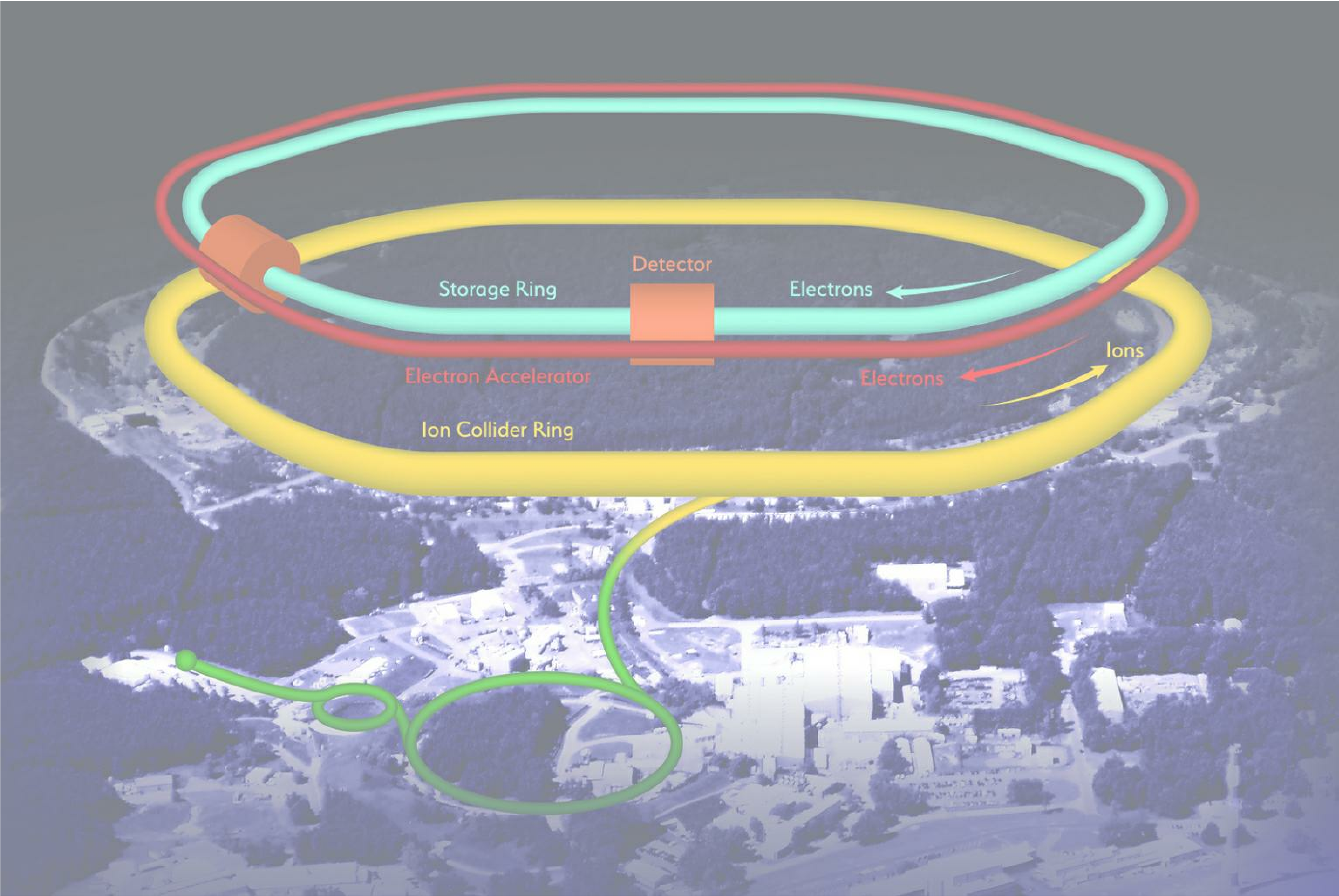
Brookhaven National Laboratory

Upton, New York,

Concept Design 100% Review Submittal

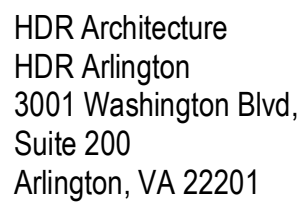
11/06/2020

Concept Design 100% Review Submittal 11/06/2020





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Brookhaven National
Laboratory
Electron Ion Collider

Upton, New York



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Harshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

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Project Number	10235960
Original Issue	9/6/2019

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Sheet Name

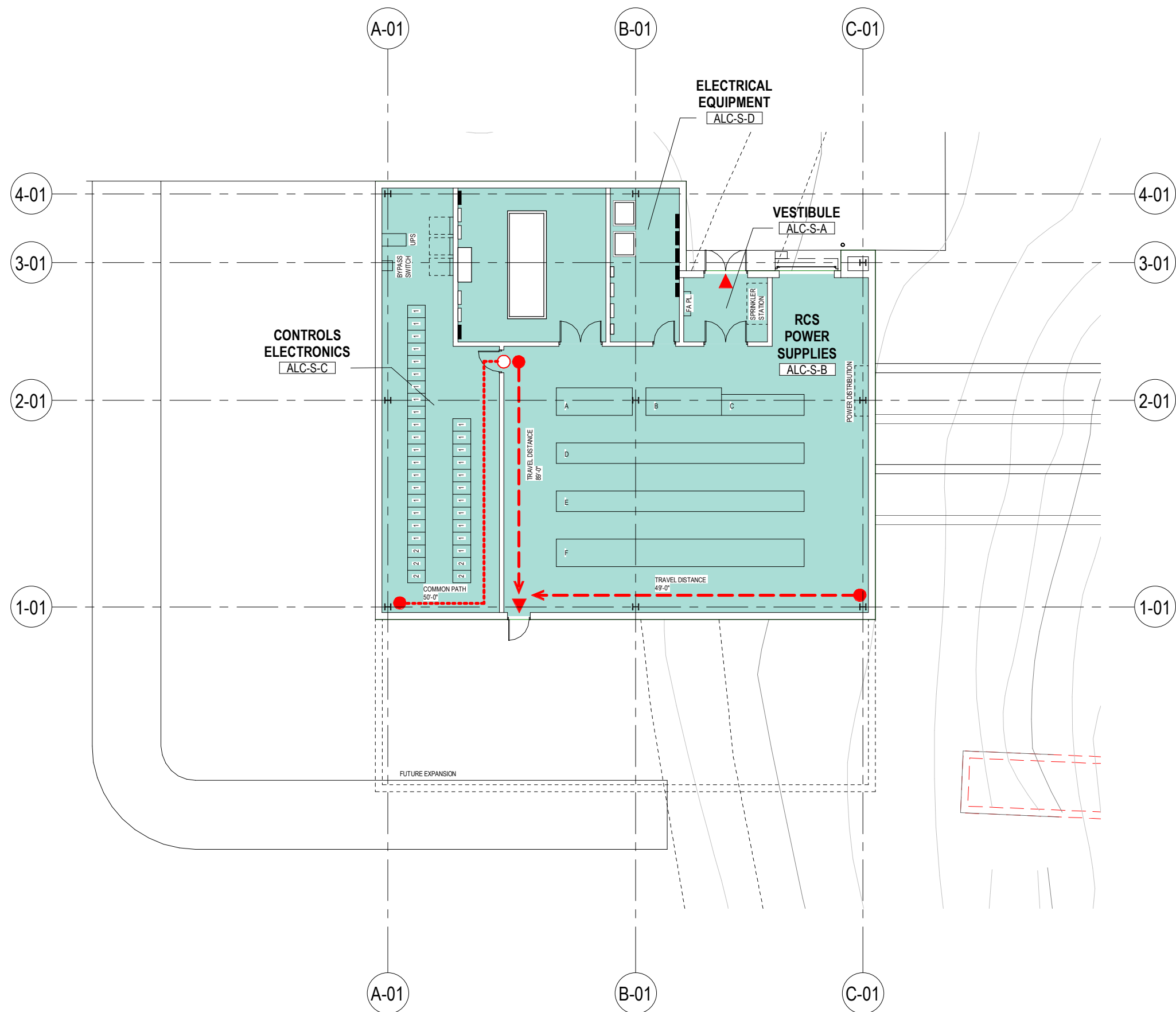
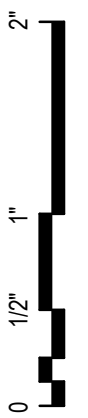
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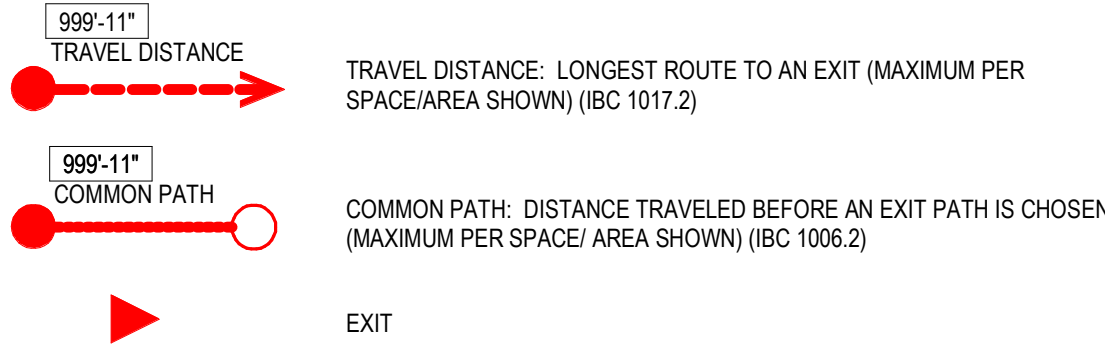
Project Status
Concept Design 100% Review Submittal

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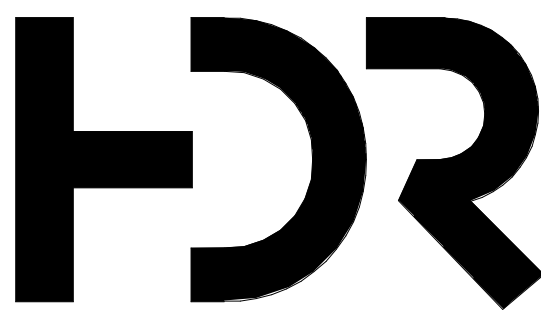
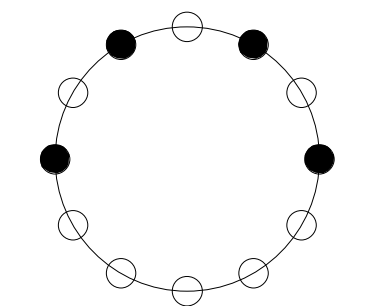
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1/16" = 1'-0"

LIFE SAFETY LEGEND



Room Legend

B



HDR Architecture
HDR Arlington
3001 Washington Blvd,
Suite 200
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Upton, New York



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Equipment Planner	
Wayfinding	

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	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number 10235960
Original Issue 09/16/20

PRELIMINARY
NOT FOR CONSTRUCTION

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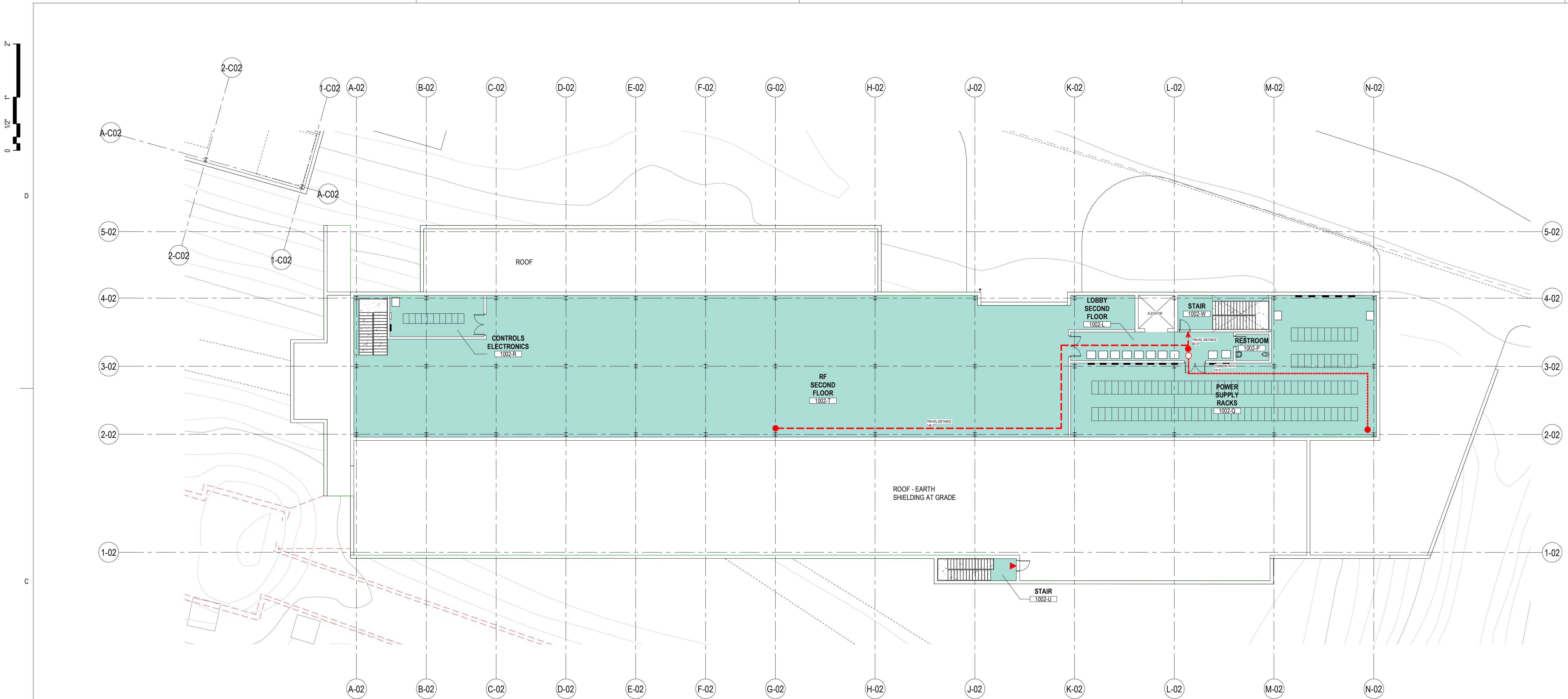
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ALC-01/03/09/11

Sheet Number

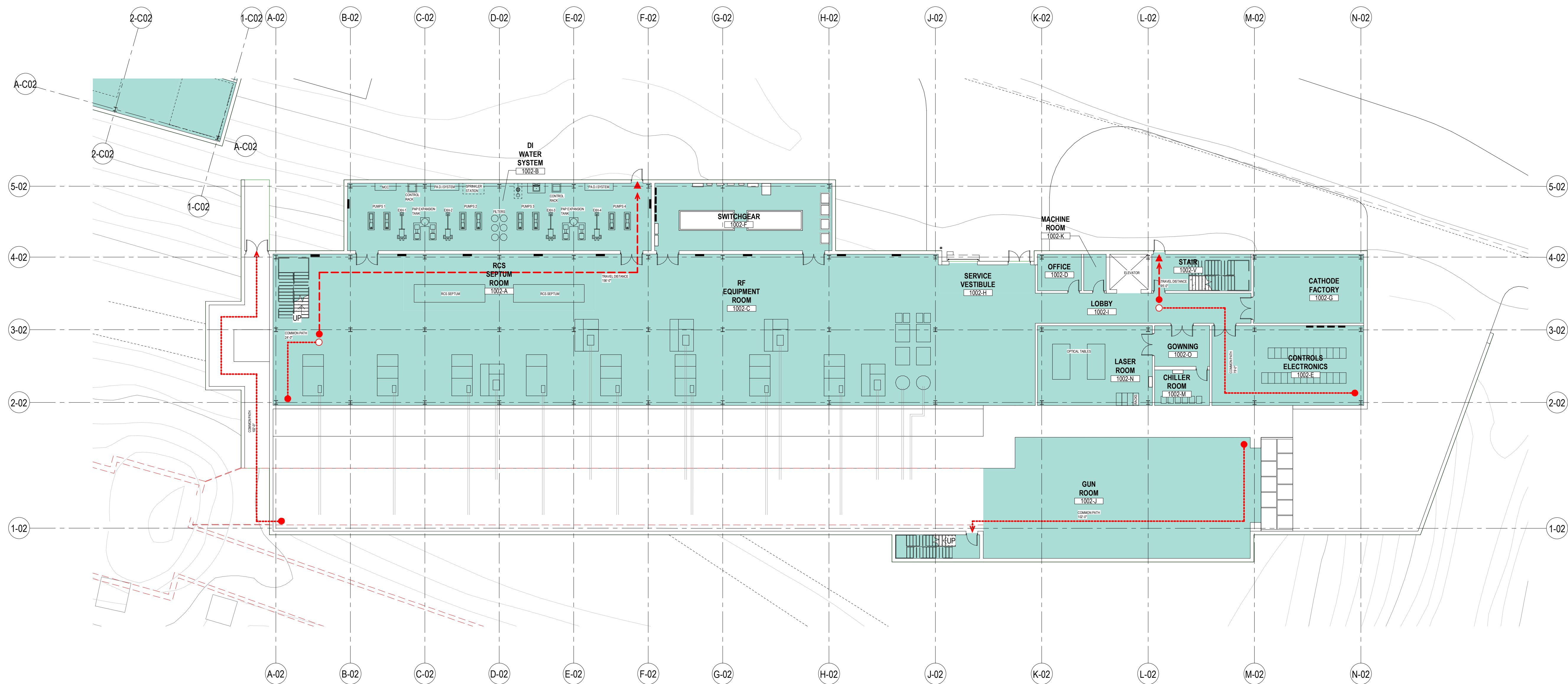
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Project Status
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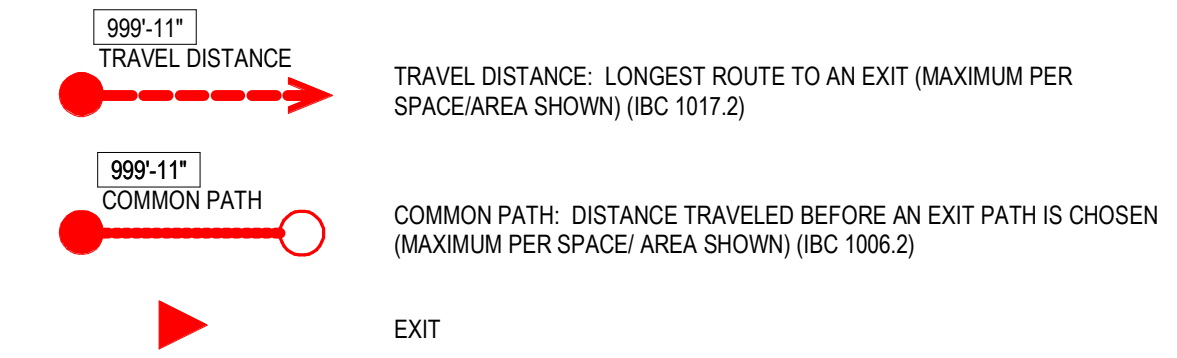


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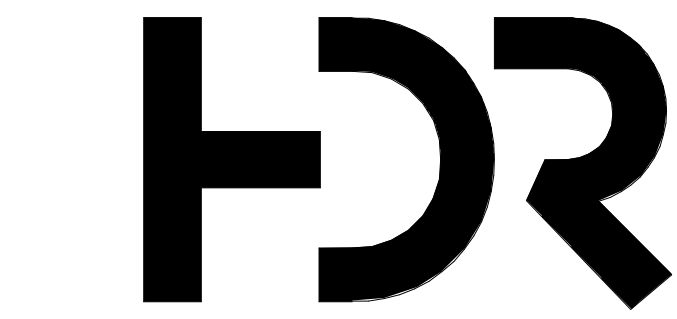
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1/16" = 1'-0"

LIFE SAFETY LEGEND



Room Legend

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HDR Arlington
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Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kathy Harshorn

Sheet Reviewer Author

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09/16/20

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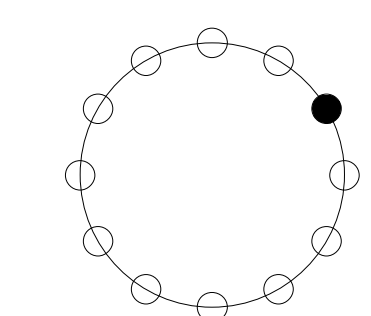
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LIFE SAFETY PLAN -
B1002

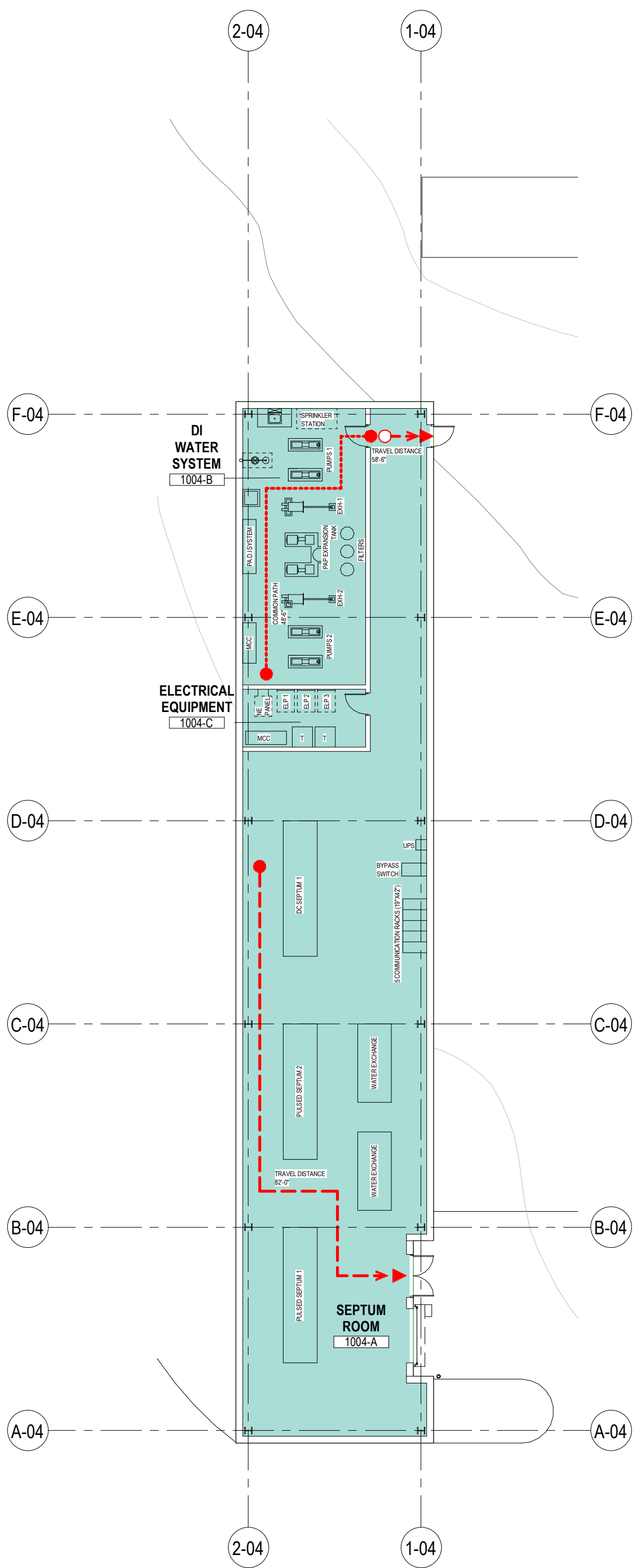
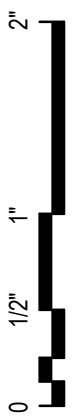
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Concept Design 100% Review Submittal

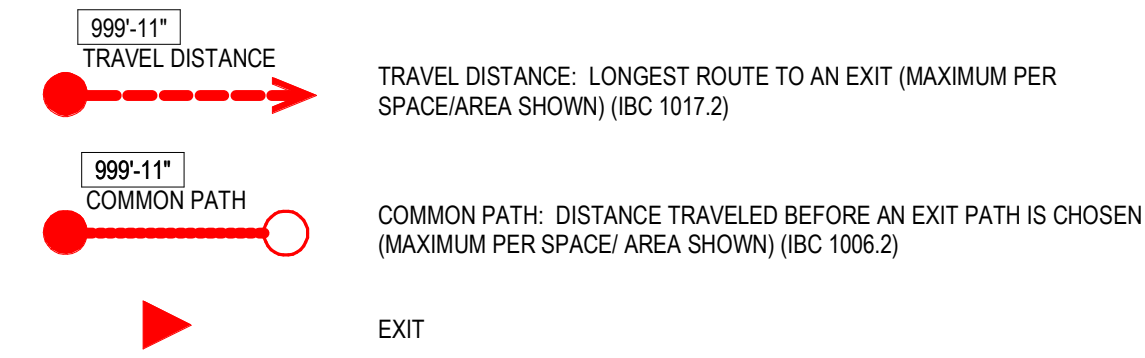


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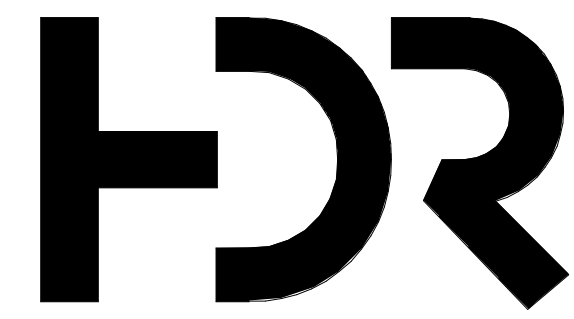
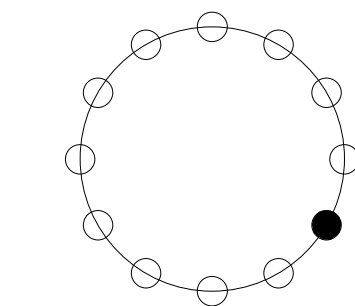


A5 FIRST FLOOR LIFE SAFETY PLAN - B1004
1/16" = 1'-0"

LIFE SAFETY LEGEND



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Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

B	Sheet Reviewer	Author
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Project Number	10235960
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NOT FOR CONSTRUCTION

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LIFE SAFETY PLAN -
B1004

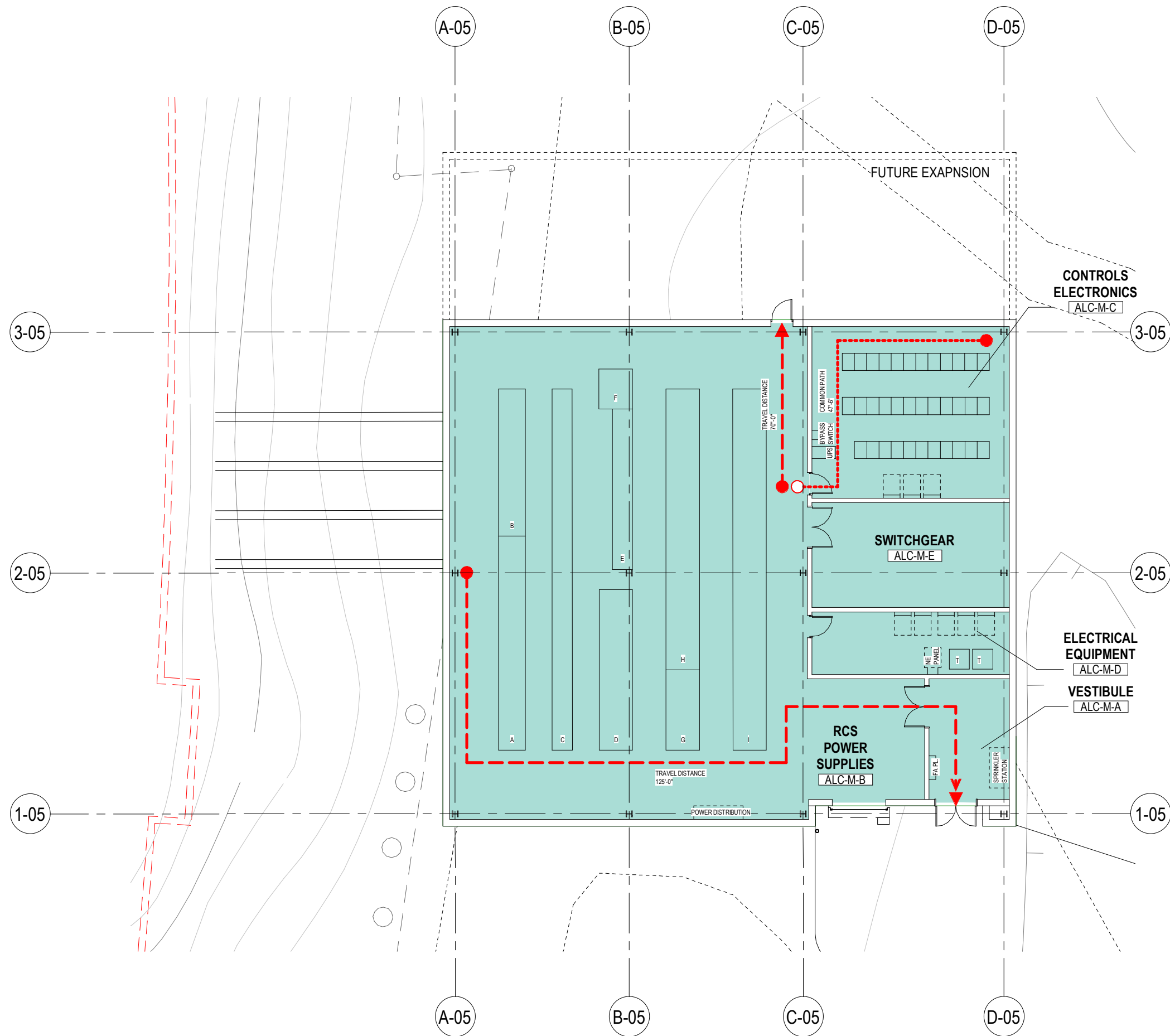
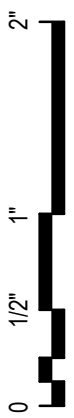
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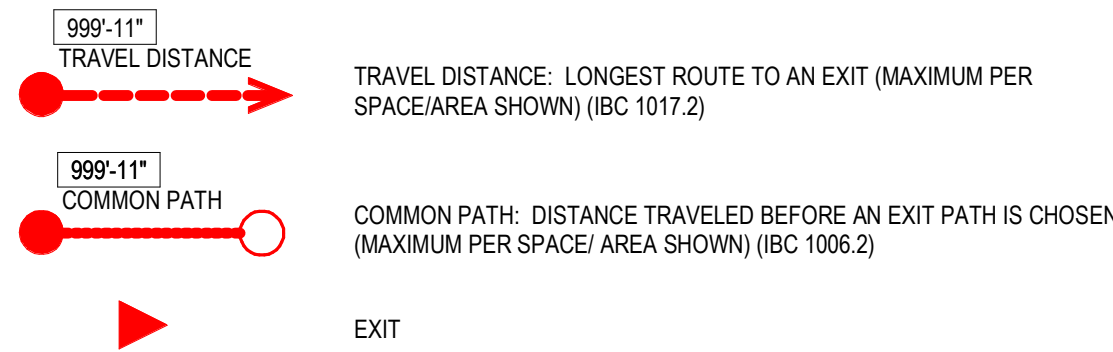
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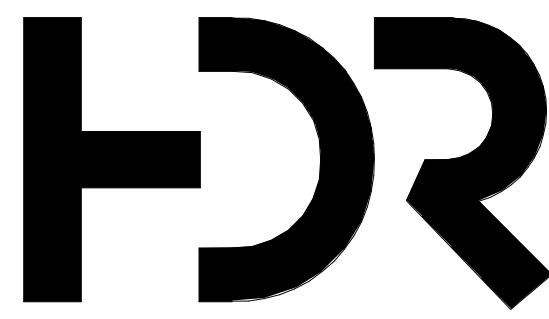
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1/16" = 1'-0"

LIFE SAFETY LEGEND



Room Legend

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HDR Arlington
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Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
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Electrical Engineer	Katy Harshorn
Plumbing Engineer	
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Wayfinding	

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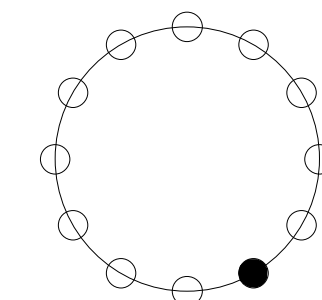
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LIFE SAFETY PLAN -
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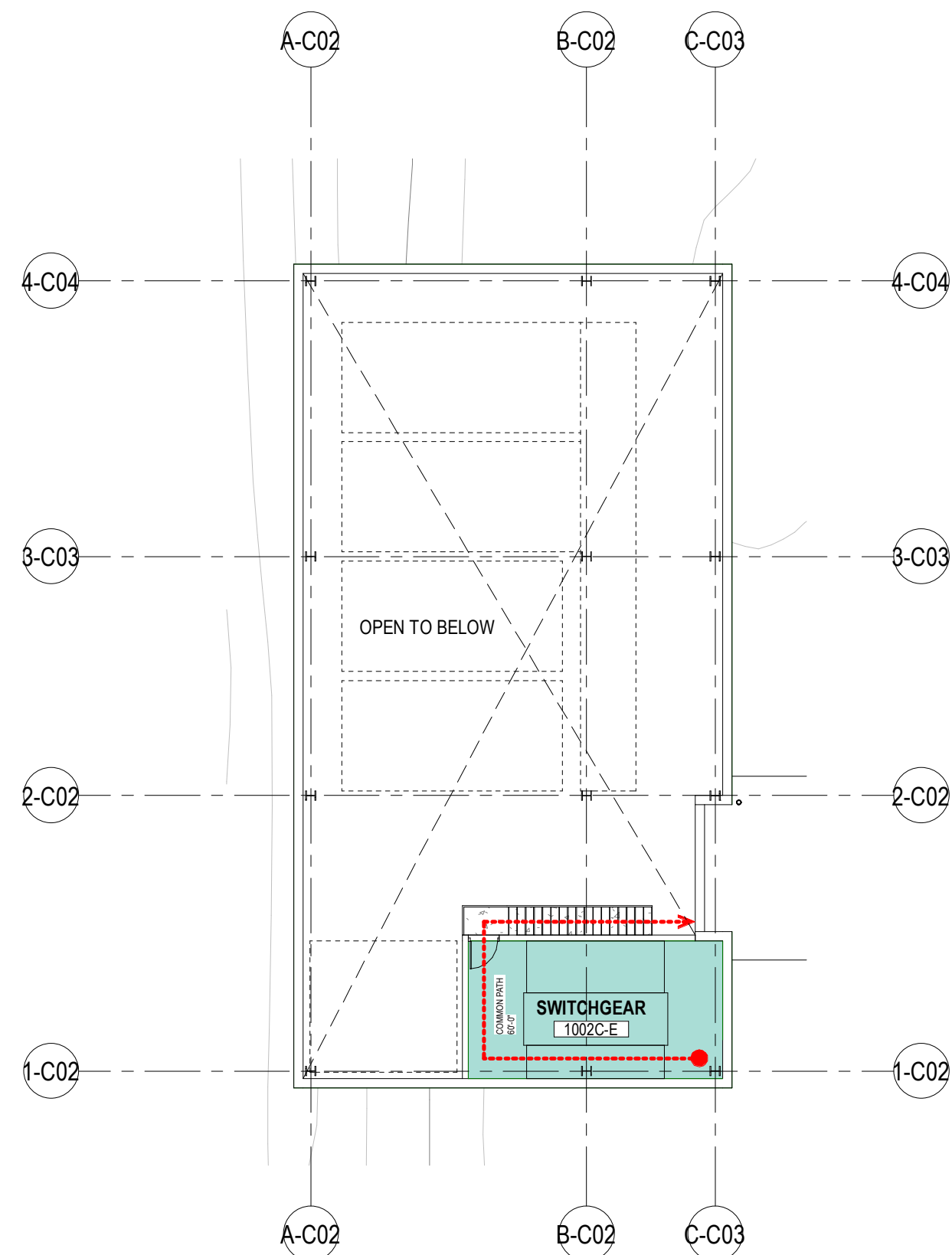
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Project Status
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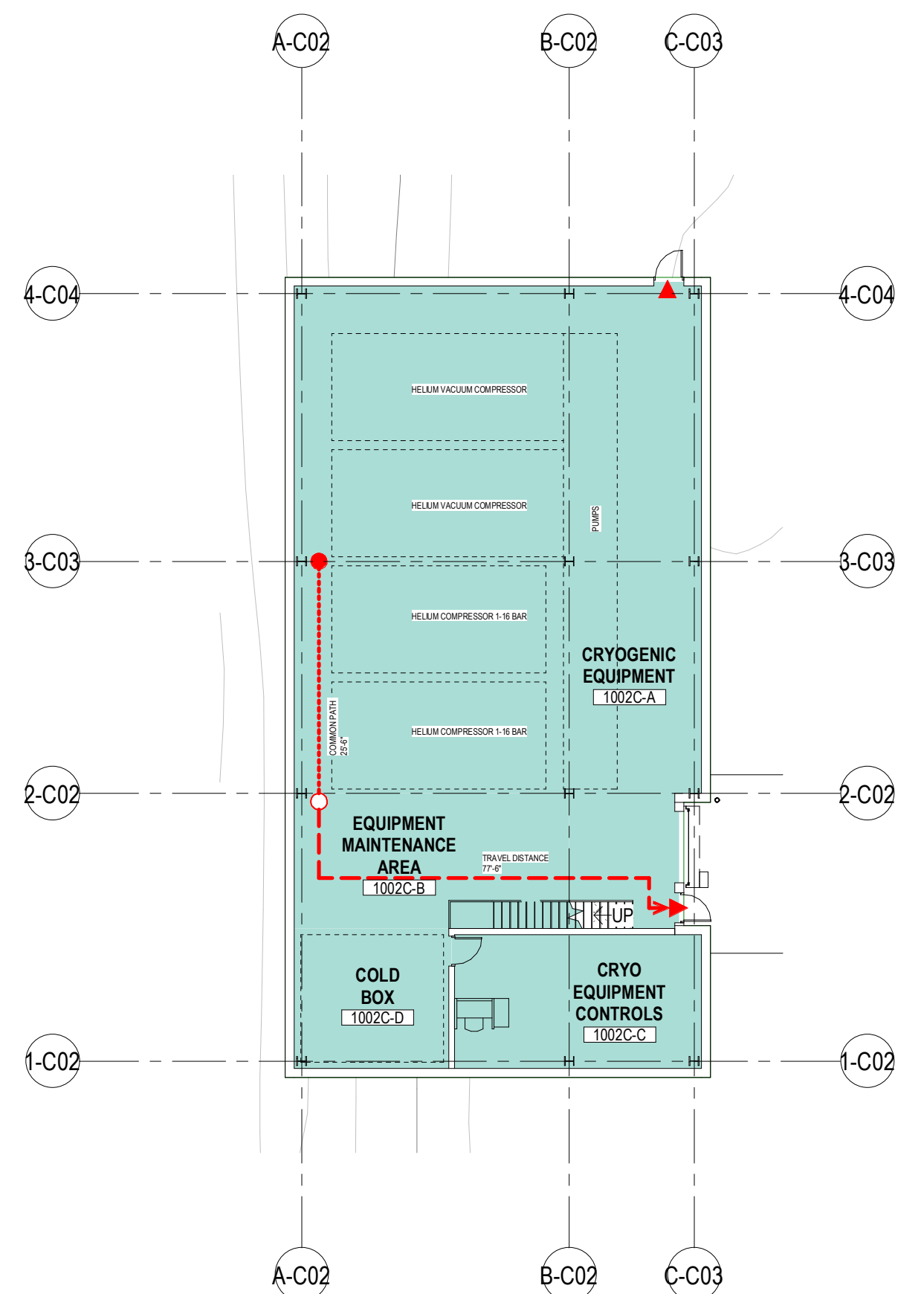


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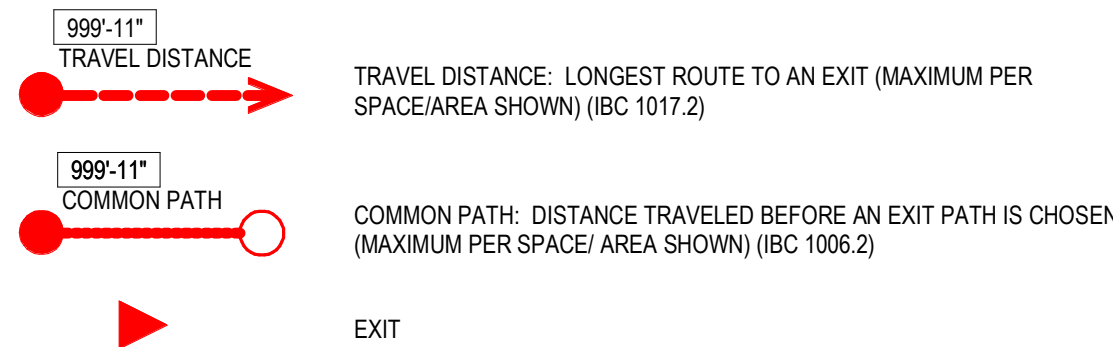


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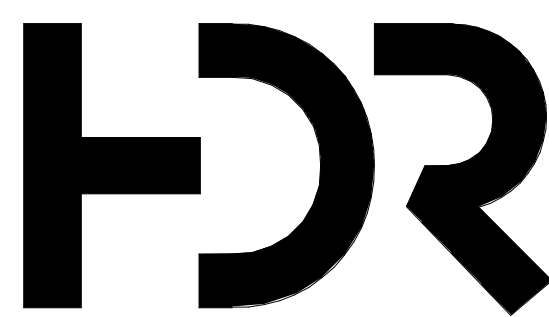
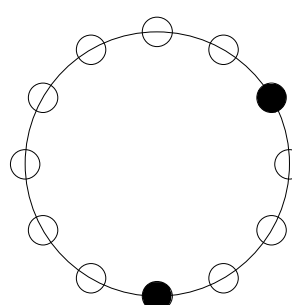
A5 FIRST FLOOR LIFE SAFETY PLAN - CRYO 1002/06
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LIFE SAFETY LEGEND



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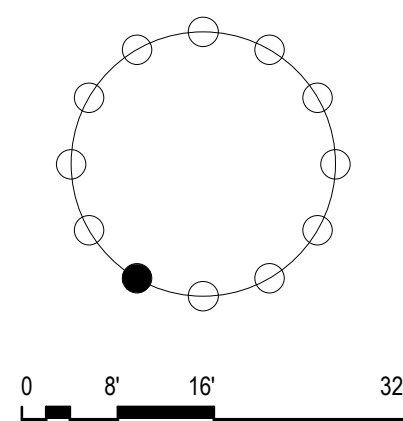
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LIFE SAFETY PLAN -
CRYO 1002/06

Sheet Number

G-104

Project Status
Concept Design 100% Review Submittal



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COMMON PATH: DISTANCE TRAVELED BEFORE AN EXIT PATH IS CHOSEN (MAXIMUM PER SPACE/ AREA SHOWN) (IBC 1006.2)

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Wayfinding	

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Sheet Name

LIFE SAFETY PLAN -
ALC-07

Sheet Number

G-105

Project Status
Concept Design 100% Review Submittal

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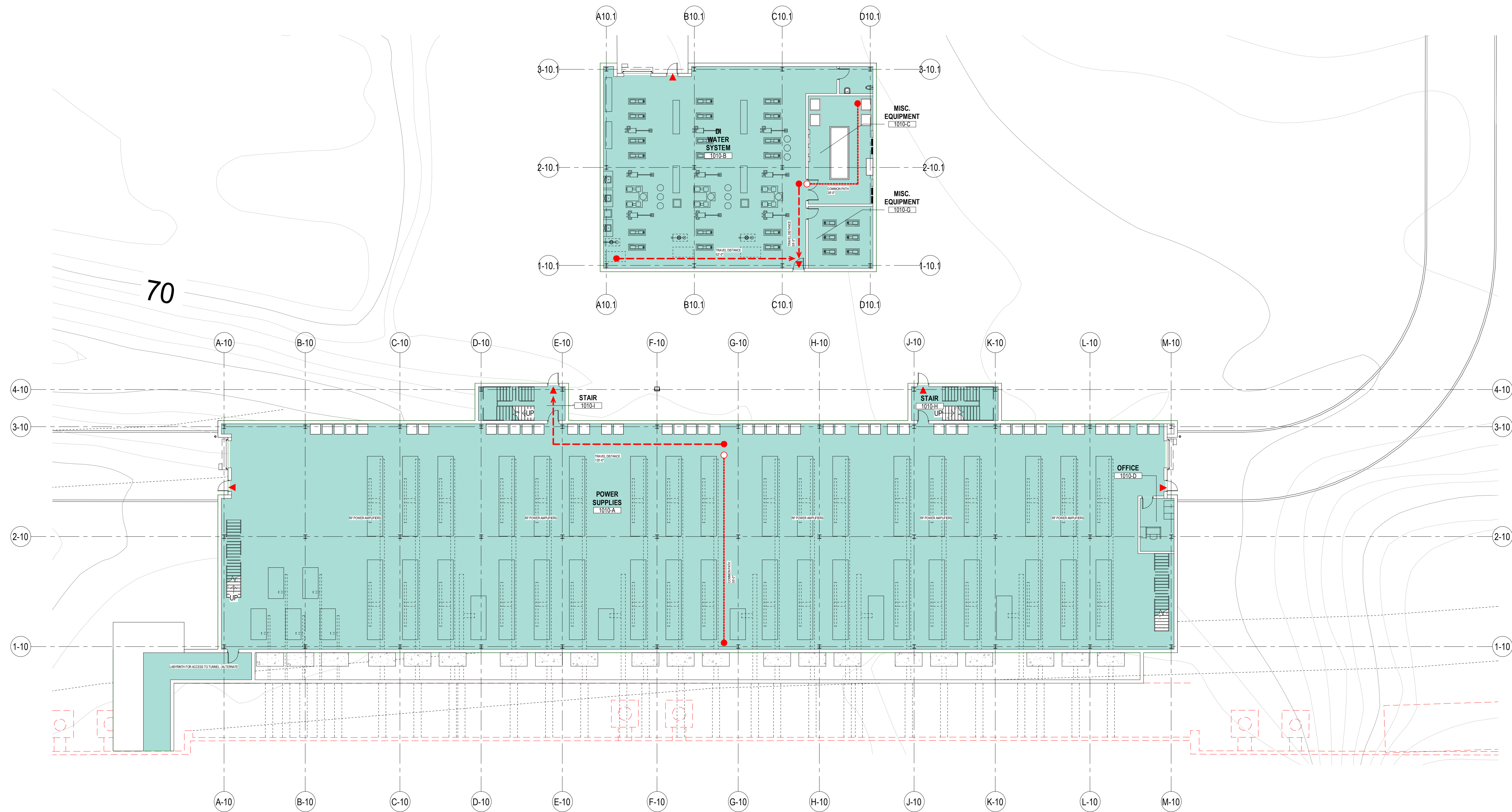
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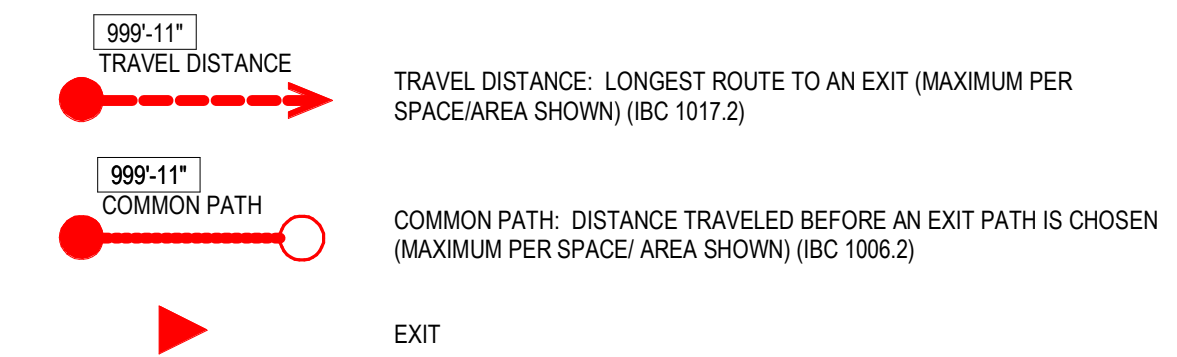
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A

A5 FIRST FLOOR LIFE SAFETY PLAN - B1010
1/16" = 1'-0"



LIFE SAFETY LEGEND



Room Legend

B

Brookhaven National
Laboratory
Electron Ion Collider

Upton, New York



Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Katy Harshorn

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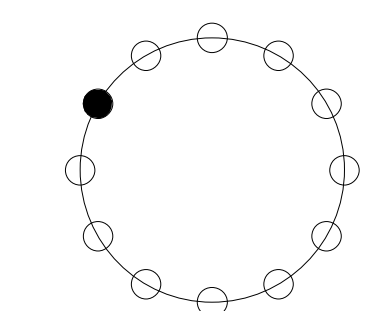
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Sheet Number

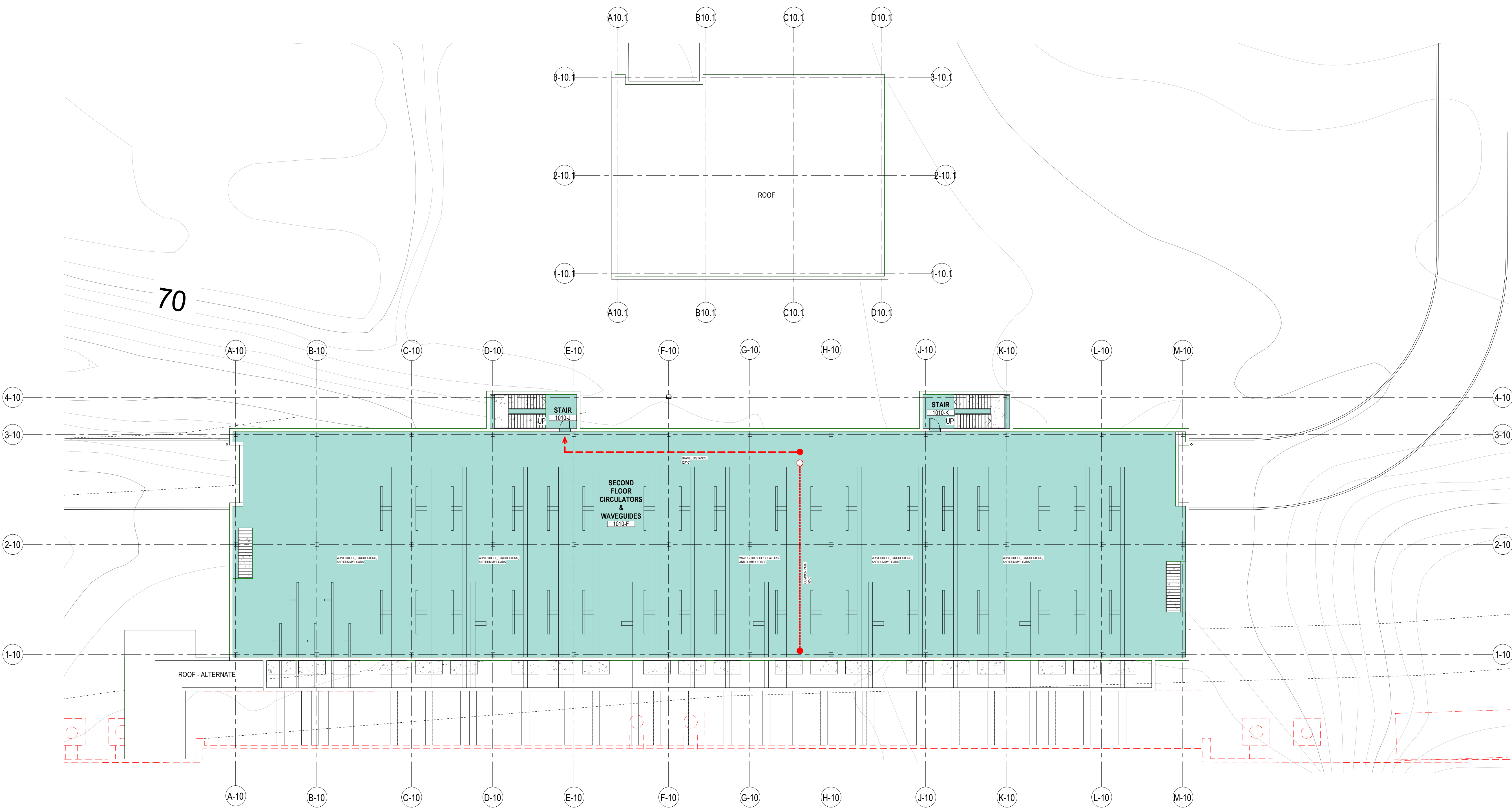
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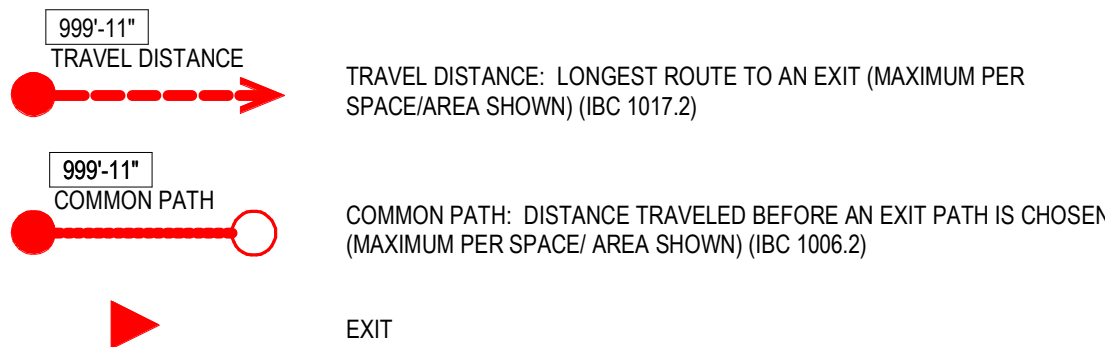
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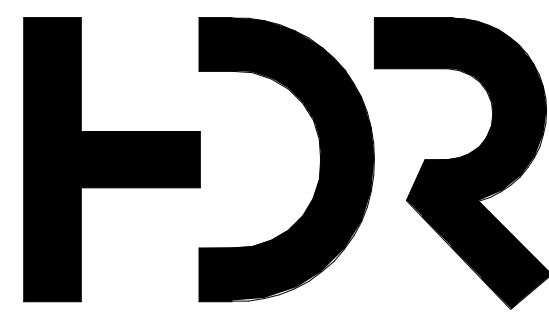
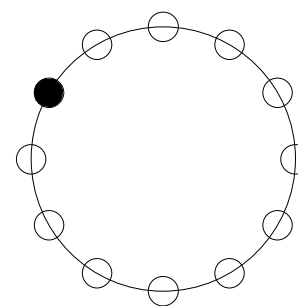
A5 SECOND FLOOR LIFE SAFETY PLAN - B1010
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LIFE SAFETY LEGEND



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Electron Ion Collider

Upton, New York



Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Katy Harshorn

MARK	DATE	DESCRIPTION
	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/23/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

LIFE SAFETY PLAN -
B1010 - SECOND
FLOOR

Sheet Number

G-107

Project Status

Concept Design 100% Review Submittal

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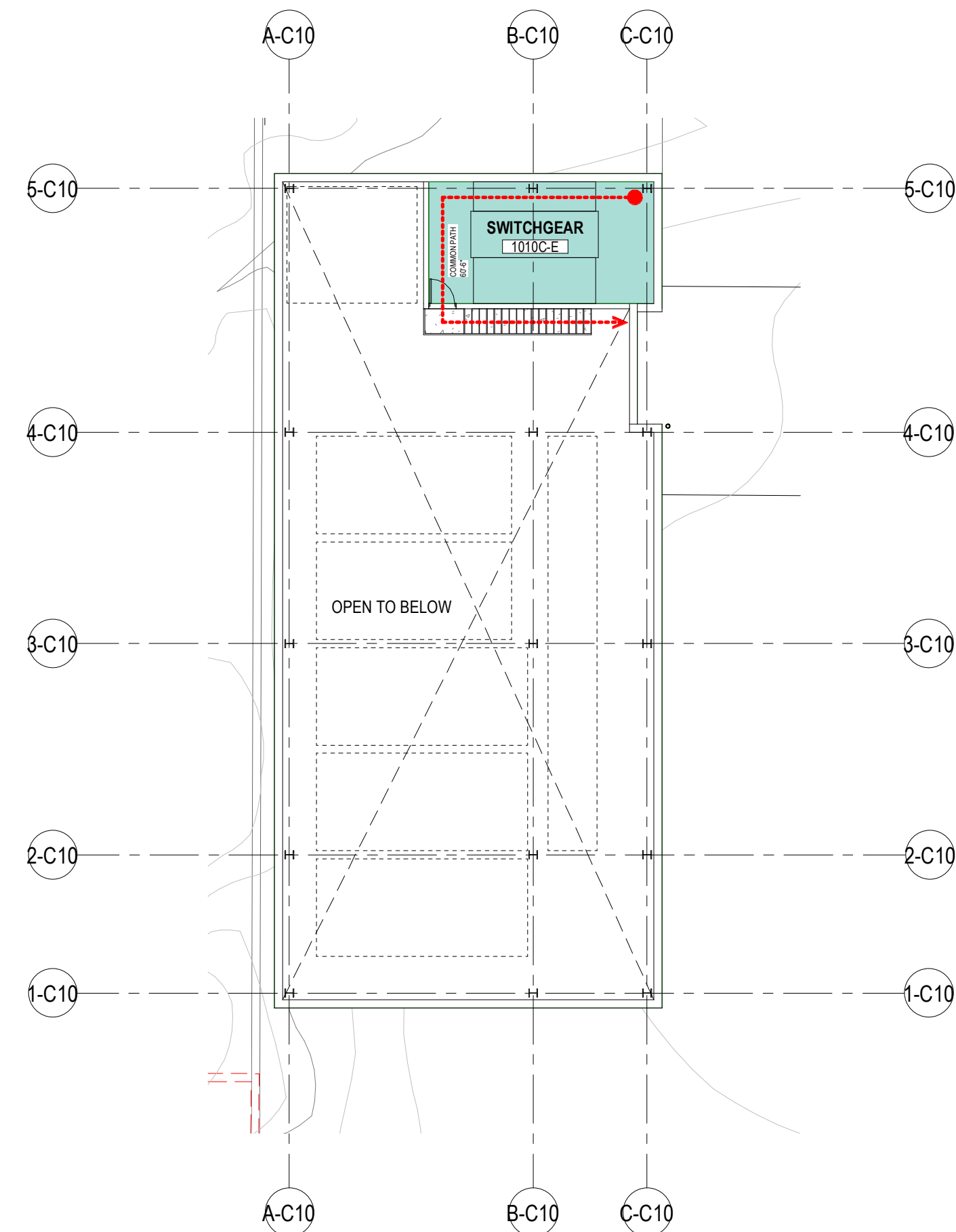
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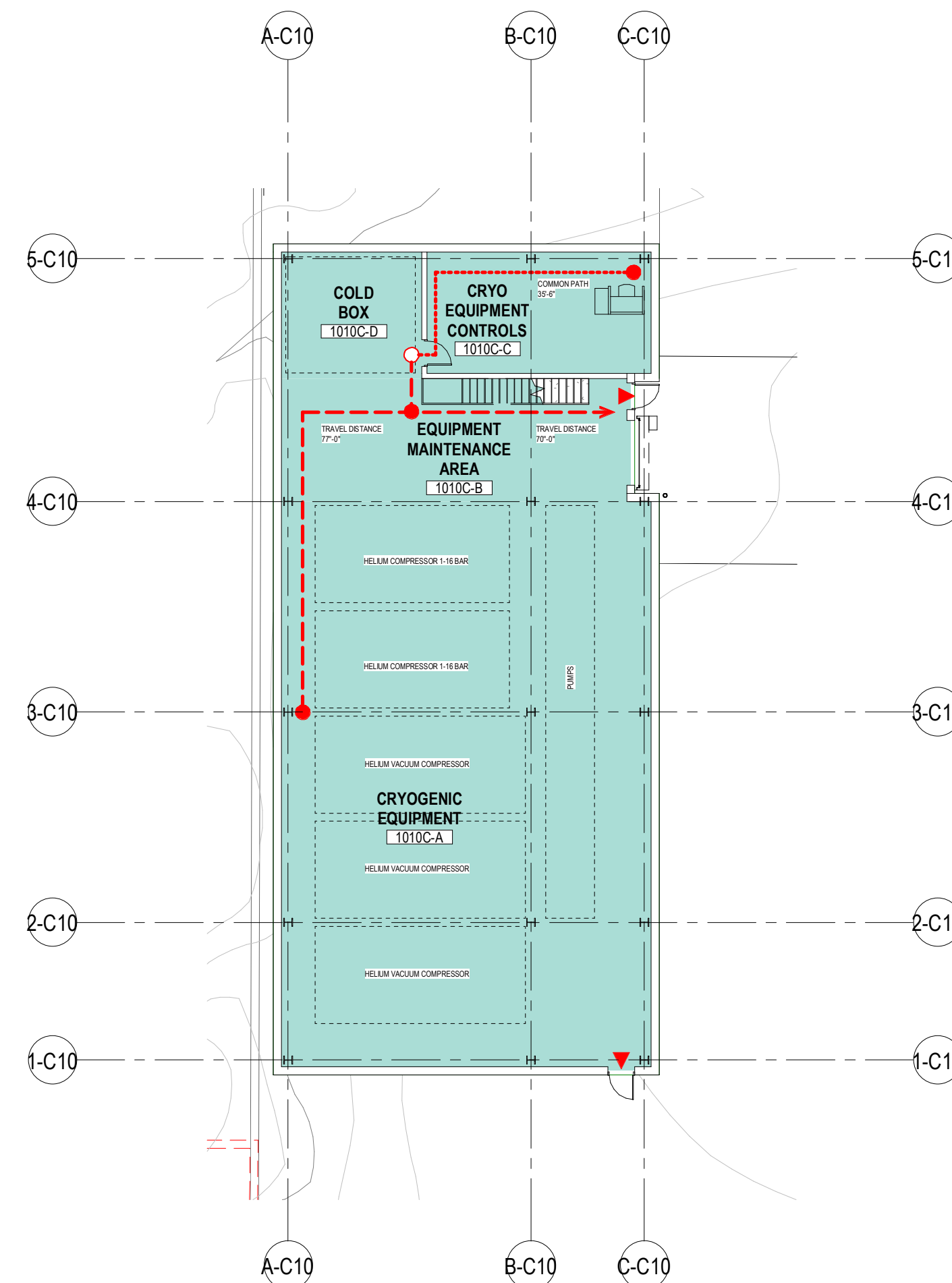
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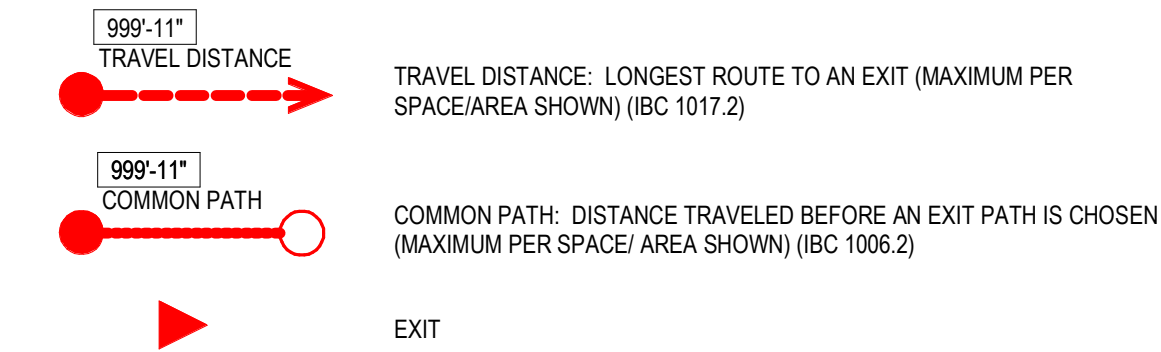


B5 SECOND FLOOR LIFE SAFETY PLAN - CRYO 1010
1/16" = 1'-0"



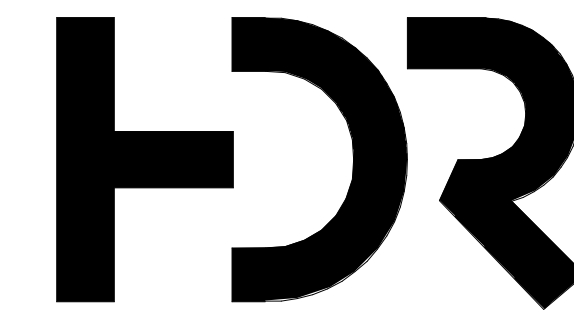
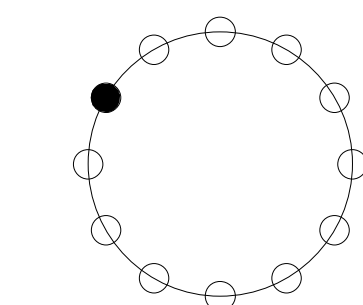
A5 FIRST FLOOR LIFE SAFETY PLAN - CRYO 1010
1/16" = 1'-0"

LIFE SAFETY LEGEND



Room Legend

8



HDR Architecture
HDR Arlington
3001 Washington Blvd,
Suite 200
Arlington, VA 22201

Brookhaven National
Laboratory
Electron Ion Collider

Upton, New York



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B	Sheet Reviewer	Author
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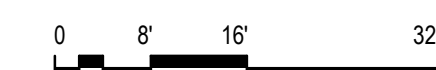
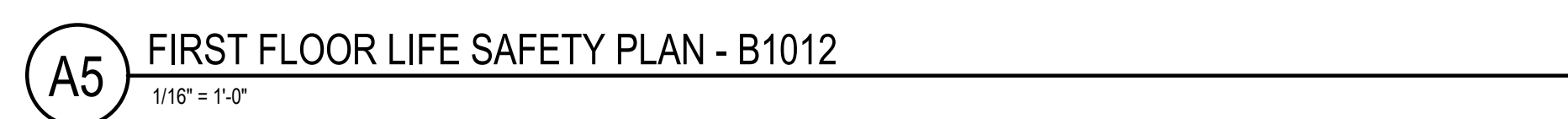
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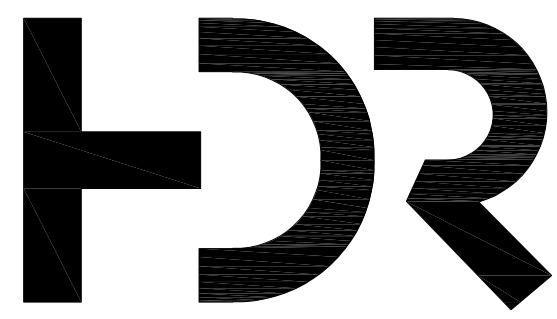
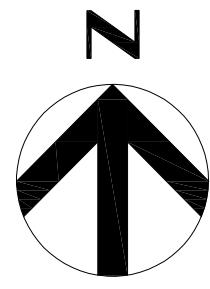
LIFE SAFETY PLAN -
CRYO 1010

Sheet Number

G-108

Project Status
Concept Design 100% Review Submittal





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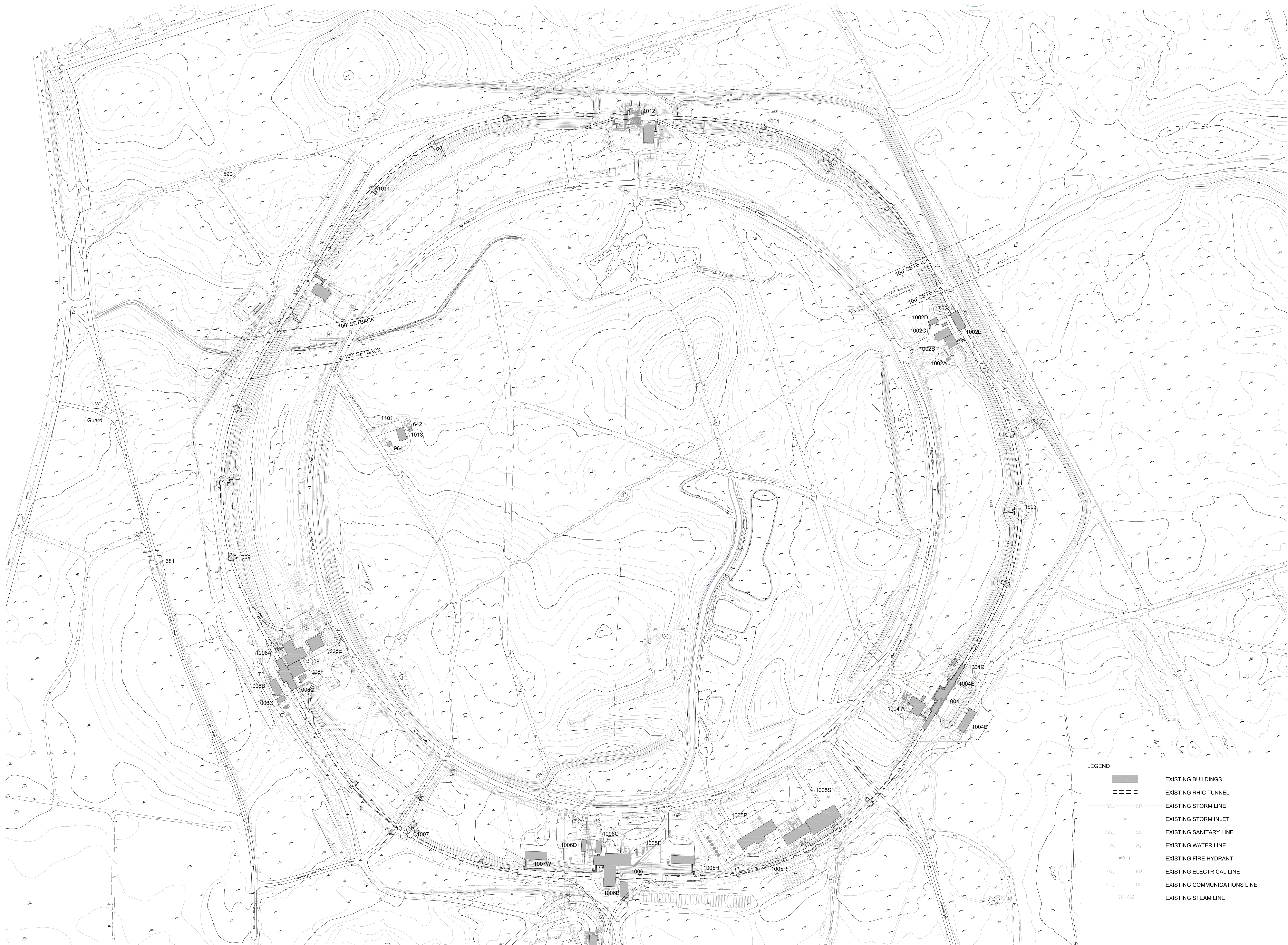
EXISTING
TOPOGRAPHY

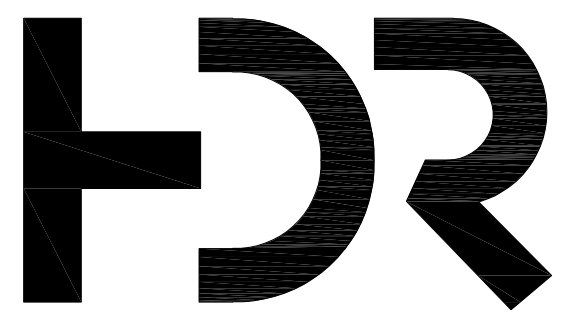
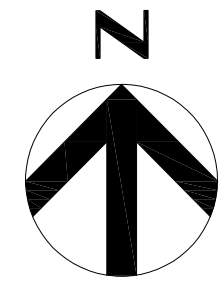
Sheet Number

C-100

Project Status

Concept Design 100% Review Submittal





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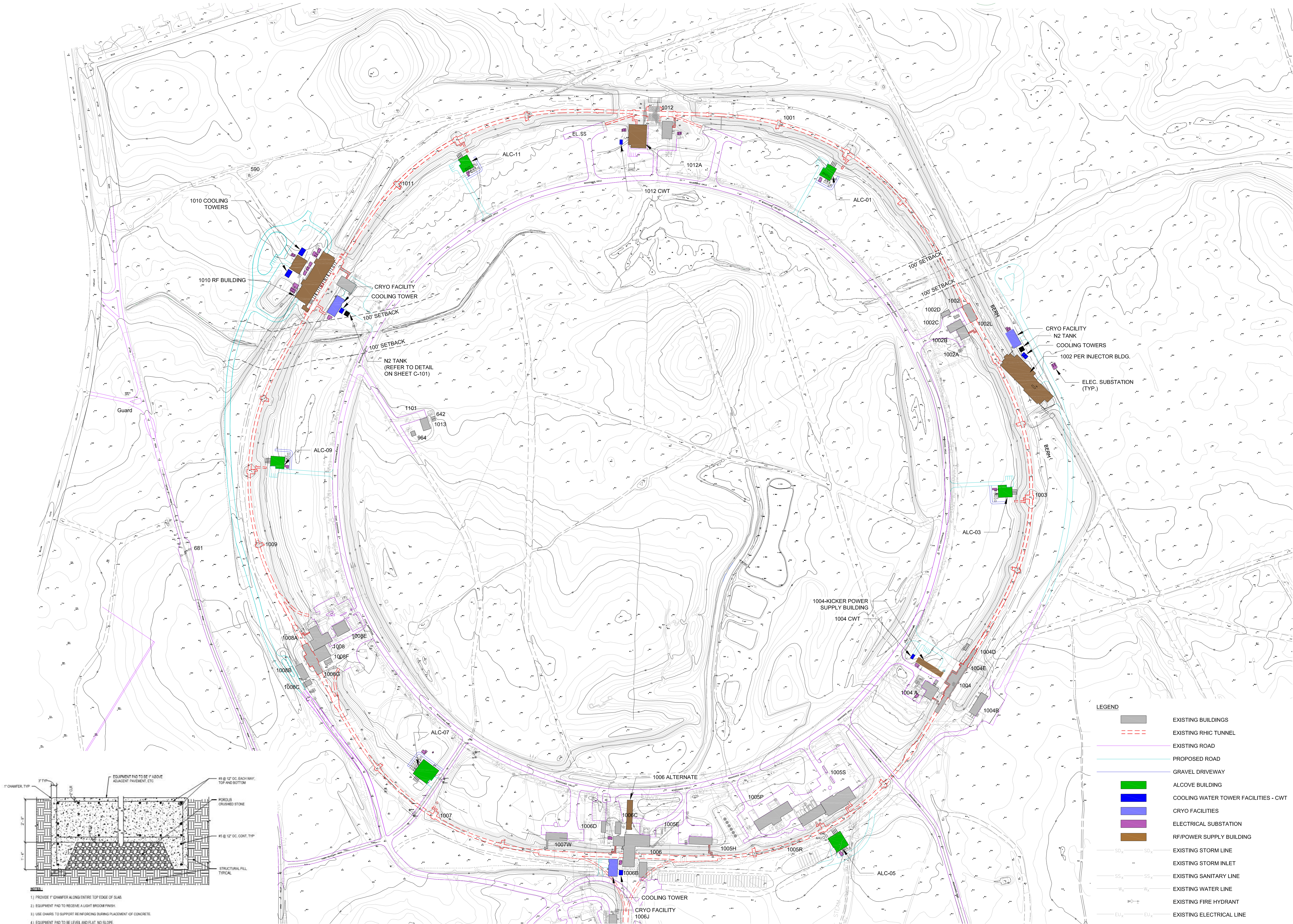
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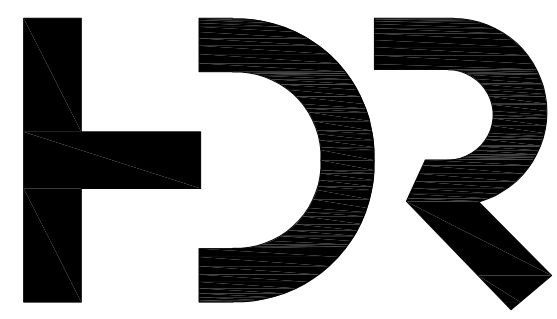
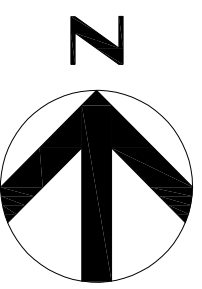
PROPOSED
SITE PLAN

Sheet Number

C-101

Project Status
Concept Design 100% Review Submittal





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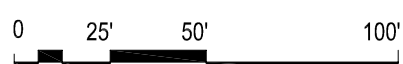
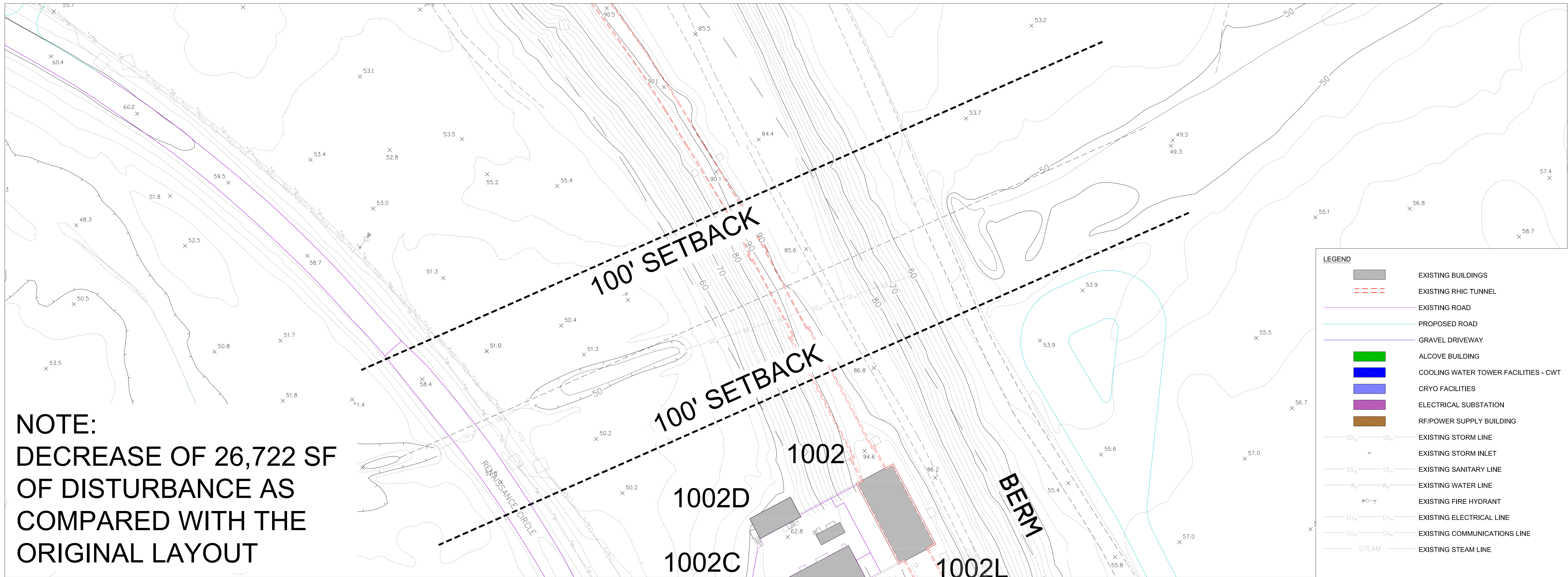
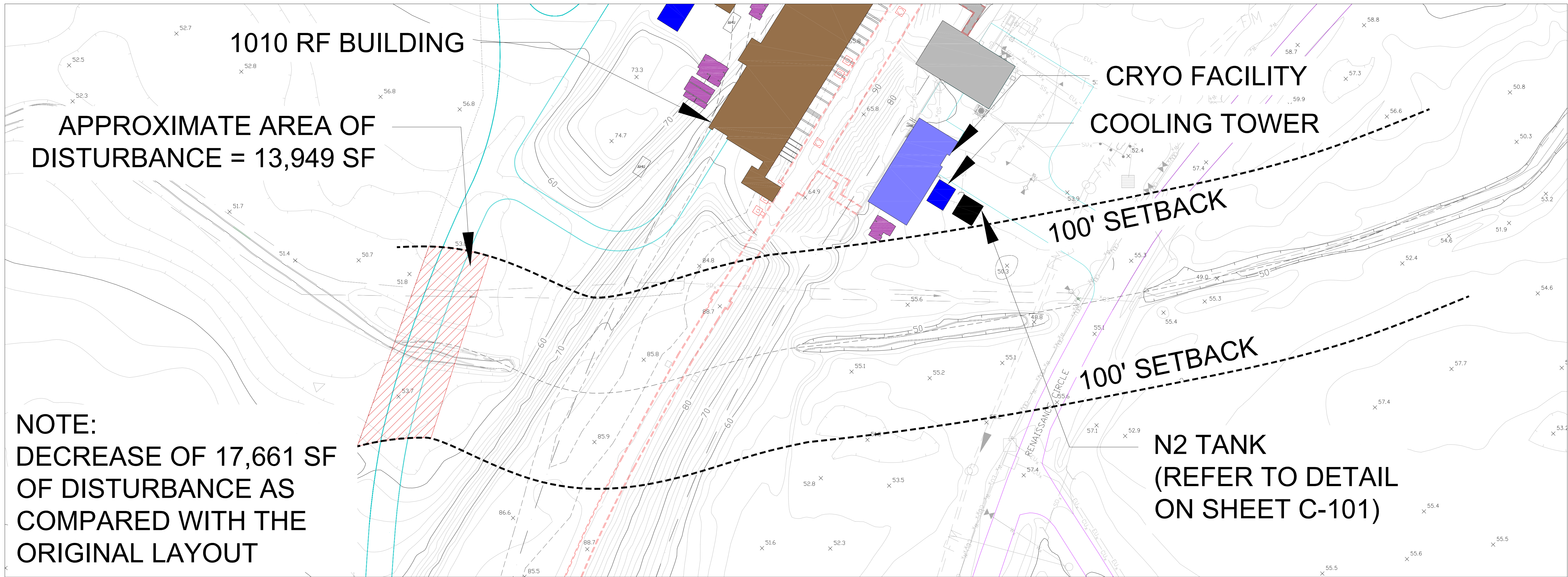
SITE PLANS FOR THE
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CORRIDOR AND
BUFFER AREAS

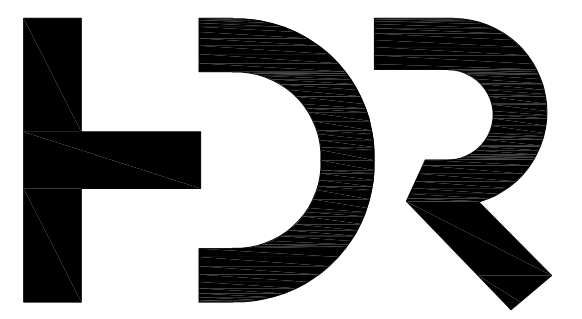
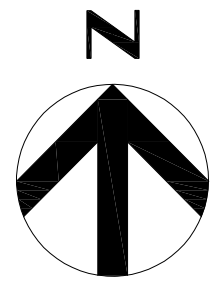
Sheet Number

C-102

Project Status

Concept Design 100% Review Submittal





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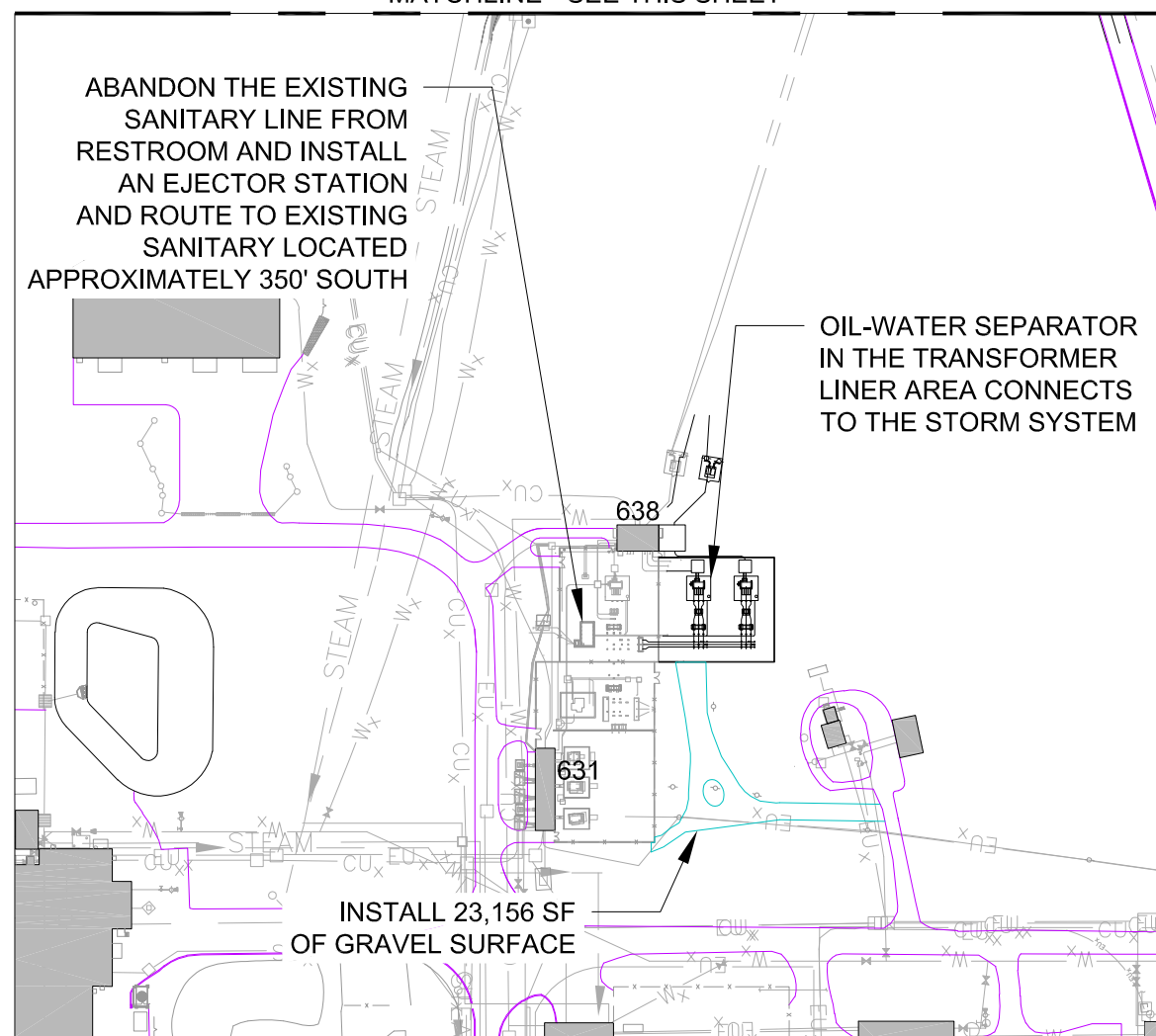
OVERALL
UTILITY PLAN

Sheet Number

C-103

Project Status

Concept Design 100% Review Submittal



Building ID	Number of Jacked Ports	Size of Port
ALC-01	4	16"
ALC-03	4	16"
ALC-05	4	16"
ALC-07	4	16"
ALC-09	4	16"
51010	28	26"
CRYO-1002	1	24"
CRYO-1002	1	24"
CRYO-1006	1	24"
CRYO-1006	1	24"
CRYO-1010	1	14"
CRYO-1010	1	24"

LEGEND

	EXISTING BUILDINGS
	EXISTING RHIC TUNNEL
	EXISTING ROAD
	PROPOSED ROAD
	GRAVEL DRIVEWAY
	ALCOVE BUILDING
	COOLING WATER TOWER FACILITIES - CWT
	CRYO FACILITIES
	ELECTRICAL SUBSTATION
	RF/POWER SUPPLY BUILDING
	EXISTING STORM LINE
	EXISTING STORM INLET
	EXISTING SANITARY LINE
	EXISTING WATER LINE
	EXISTING FIRE HYDRANT
	EXISTING ELECTRICAL LINE
	EXISTING COMMUNICATIONS LINE
	EXISTING STEAM LINE

NOTE:

- UTILITY INFORMATION SHOWN IS PROVIDED BY BROOKHAVEN NATIONAL LABORATORY AND IS CURRENT AS OF SEPTEMBER 2020.
- PROPOSED UTILITY CONNECTIONS FOR NEW BUILDINGS ARE REFLECTED ON THE MECHANICAL PLANS FOR DOMESTIC WATER AND SANITARY SEWER AND ON THE ELECTRICAL PLANS IN TERMS OF ELECTRICAL POWER OR COMMUNICATIONS.

0 100' 200' 400'

APPLICABLE CODES AND STANDARDS

- BUILDING CODE 2020 OF NEW YORK STATE.
- THE INTERNATIONAL BUILDING CODE, IBC 2018.
- BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-14).
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, 360-16.
- AMERICAN WELDING SOCIETY (AWS) D1.1, D1.3, D1.4, D1.8.
- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-16).
- STEEL DECK INSTITUTE SPECIFICATIONS AND LOAD TABLES.
- ASTM MATERIAL STANDARDS AS NOTED.
- ASI SPECIFICATIONS FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS (ASI S100).
- STEEL JOIST INSTITUTE, STANDARD SPECIFICATIONS, LOAD TABLES, AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS.
- BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 402)

DESIGN LOADS

- DEAD LOAD – ACTUAL WEIGHT OF MATERIALS USED ADDING THE FOLLOWING:

ROOF FRAMING AND DECK	10 PSF
ROOF INSULATION	5 PSF
CEILING	5 PSF
TYPICAL MEP SYSTEMS	10 PSF
CABLE TRAY/RACK SYSTEMS	40 PSF

FLOOR FRAMING	12 PSF
2 1/2" N.W. SLAB ON 3" DECK	50 PSF
LEVELING CONCRETE (1" TO 1 1/2" AVG.)	10 PSF
CEILING	5 PSF
TYPICAL MEP SYSTEMS	10 PSF
MEP SYSTEMS ABOVE MECH. ROOM	20 PSF
CABLE TRAY/RACK SYSTEMS	40 PSF

STAIR FRAMING	10 PSF
---------------	--------

EXTERIOR WALLS	20 PSF
METAL PANEL/CURTAIN WALL	75 PSF OF WALL SURFACE
MASONRY	
- LIVE LOAD

AREA OF BUILDING	DESIGN LIVE LOAD
ROOF	20 PSF (MINIMUM)
GENERAL OFFICE AREAS, STAIR, CORRIDORS	100 PSF
CORRIDORS ABOVE FIRST FLOOR	80 PSF
LABORATORIES	120 PSF
MECHANICAL ROOMS	150 PSF
MEZZANINE/CATWALK	40 PSF
LIGHT STORAGE	120 PSF
HIGH DENSITY STORAGE	250 PSF
RAILINGS	50 PLF / 200 LBS. CONCENTRATED
CMU PARTITION	60 PSF OF WALL SURFACE

*15 PSF PARTITION ALLOWANCE IS INCLUDED

- SNOW LOAD

GROUND SNOW LOAD	P _g = 20 PSF
FLAT ROOF SNOW LOAD	P _f = 14 PSF
SNOW EXPOSURE FACTOR	E = 1.0
SNOW LOAD IMPORTANCE FACTOR	I = 1
THERMAL FACTOR	C _t = 1.0
- WIND LOAD

RISK CATEGORY = I	
BASIC WIND VELOCITY	V _{ult} = 127 MPH
EXPOSURE CATEGORY	C
- SEISMIC LOAD
IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.

SEISMIC IMPORTANCE FACTOR, I _s = 1.00	
MAPPED SPECTRAL RESPONSE ACCELERATIONS PARAMETERS, S _s = 0.178 g AND S ₁ = 0.049 g	
SITE CLASS = D	
SPECTRAL RESPONSE COEFFICIENTS, S _{ds} = 0.190 g AND S _{d1} = 0.079 g	
SEISMIC DESIGN CATEGORY: B	

FOUNDATION DESIGN

- ASSUMED ALLOWABLE SOIL BEARING CAPACITY = 4,000 PSF, UNLESS NOTED OTHERWISE ON PLAN, TO BE CONFIRMED BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION.
- FROST DEPTH = - 3' - 6"

MATERIALS OF CONSTRUCTION

- NORMAL WEIGHT CONCRETE
GENERAL STRUCTURAL CONCRETE
F_c = 4,000 PSI
- REINFORCING STEEL – ASTM A615 - GRADE 60
F_y = 60 KSI
- WELDED WIRE FABRIC – ASTM A185
F_y = 70 KSI
- STRUCTURAL STEEL
WIDE FLANGE AND TEE SHAPES - ASTM A992
ANGLES CHANNELS AND PLATE - ASTM A 36
HSS TUBES AND PIPES - ASTM A500
PIPES - ASTM A53 GRADE B
BOLTS - ASTM F1552
ANCHOR BOLTS - ASTM F1554 GRADE 36
HIGH STRENGTH ANCHOR BOLT ASSEMBLY
ANCHOR BOLT - ASTM F1554 GRADE 105
NUTS – GRADE ASTM A563 GRADE D
WELDING ELECTRODES - E70XX
METAL ROOF DECKING (GALVANIZED)
ASTM A653 (60) / Z180 ZINC COATING
FY = 33 KSI, STRUCT. QUALITY
- NON-SHRINK GROUT AND NON-METALLIC GROUT
AT BASE PLATES AND BEARING PLATES
F_c = 4,000 PSI AT 7 DAYS
F_c = 8,000 PSI AT 28 DAYS

CONSTRUCTION NOTES

A. GENERAL CONSTRUCTION NOTES

- STRUCTURAL DRAWINGS SHOULD NOT BE SCALED. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE SCALE OVER SMALL.
- THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS. CHECK AND VERIFY EXISTING DIMENSIONS AND TAKE ADDITIONAL MEASUREMENTS AS NEEDED. NOTIFY ARCHITECT OF ANY DISCREPANCY BETWEEN ACTUAL CONDITIONS AND INDICATED CONDITIONS. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER.
- ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR LOCATION AND SIZE OF OPENINGS, BLOCKOUTS, FLOOR DEPRESSIONS, CURBS, DIMENSIONS, ETC. NOT INDICATED ON THE STRUCTURAL DRAWINGS. THE LOCATION AND SIZE OF MECHANICAL AND ELECTRICAL OPENINGS IN SLABS, WALLS AND DECKS SHALL BE COORDINATED BY THE CONTRACTOR. PROVIDE ALL ADDITIONAL FRAMING OR REINFORCING TO ACCOMMODATE OPENINGS AS REQUIRED BY THE APPLICABLE STANDARD DETAILS SHOWN ON THE STRUCTURAL DRAWINGS OR PROVIDED BY THE STRUCTURAL ENGINEER. NO HOLES, NOTCHES, BLOCKOUTS, ETC. ARE ALLOWED IN STRUCTURAL MEMBERS UNLESS DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
- WHERE DIMENSIONS ARE PROVIDED FOR OPENINGS, BLOCKOUTS, FLOOR DEPRESSIONS, CURBS, ETC., BUT MAY BE AFFECTED BY THE EQUIPMENT PURCHASED, THE CONTRACTOR SHALL VERIFY THE INFORMATION PROVIDED PRIOR TO CONSTRUCTION.
- PROVIDE CONCRETE EQUIPMENT PADS AND MERTIAL BASES FOR MECHANICAL AND ELECTRICAL INSTALLATIONS. CONSTRUCT PADS AND BASES IN ACCORDANCE WITH THE TYPICAL DETAILS. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LIMITS AND LOCATIONS.
- CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED BY NEW WORK.
- ALL COLUMNS AND FOUNDATIONS, UNLESS NOTED OTHERWISE, SHALL BE CENTERED ON GRIDLINES IN EACH DIRECTION. BEAMS SHALL BE EQUALLY SPACED BETWEEN COLUMN CENTERLINES UNLESS NOTED OTHERWISE.
- TYPICAL DETAILS SHALL APPLY IN GENERAL CONSTRUCTION UNLESS SPECIFICALLY DETAILED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS, SHORING AND TEMPORARY BRACING. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION.
 - DO NOT PLACE CONSTRUCTION MATERIALS OR OTHER CONSTRUCTION LOADS ON THE STRUCTURE SUCH THAT THE LOADS PLACED EXCEED THE CAPACITY OF THE STRUCTURE.
 - TAKE INTO CONSIDERATION THAT FULL STRUCTURAL CAPACITY OF MANY STRUCTURAL MEMBERS IS NOT REALIZED UNTIL STRUCTURAL ASSEMBLY IS COMPLETE; THAT IS, UNTIL SLABS, DECKS, DIAGONAL BRACING AND SHEAR WALLS ARE INSTALLED.
 - PROVIDE TEMPORARY BRACING AND GUYING TO PROVIDE STABILITY AND RESIST ALL LOADS TO WHICH THE PARTIALLY COMPLETED STRUCTURE MAY BE SUBJECTED INCLUDING ERECTION EQUIPMENT AND ITS OPERATION. ADEQUACY OF TEMPORARY BRACING AND GUYING FOR THIS PURPOSE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

B. EARTHWORK AND FOUNDATIONS

- ALL EARTHWORK AND SITE PREPARATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS. ALL FOUNDATION EXCAVATIONS SHALL BE OBSERVED AND APPROVED BY THE GEOTECHNICAL ENGINEER.
- ANY EXISTING FILLS OR UNSUITABLE SOILS AS DETERMINED BY THE GEOTECH SHALL BE EXCAVATED AND REPLACED WITH PROPERLY COMPACTED FILL.
- EXTREME CARE SHALL BE EXERCISED WHEN EXCAVATING OR GRADING ADJACENT TO EXISTING STRUCTURES OR IMPROVEMENTS SO AS NOT TO DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.
- DO NOT EXCAVATE BELOW THE BEARING ELEVATION OF ANY COMPLETED FOOTING NOR ANY CLOSER TO THE FOOTING THAN A SLOPE OF TWO HORIZONTAL, (MEASURED FROM EDGE OF FOOTING TO NEAREST POINT IN EXCAVATION) TO ONE VERTICAL.
- HORIZONTAL CONSTRUCTION JOINTS IN COLUMN FOOTINGS, PILE CAPS, SLABS ON GRADE AND MAT FOUNDATIONS ARE NOT PERMITTED.
- PROVIDE DOWELS FOR ALL WALLS, COLUMNS, AND SHEAR WALLS EMBEDDED INTO FOOTINGS, MAT FOUNDATIONS AND GRADE BEAMS. DOWELS SHALL BE THE SAME SIZE AND SPACING AS VERTICAL WALL REINFORCEMENT.
- BOTTOM OF ALL FOOTINGS SUBJECT TO FROST SHALL BE PLACED AT OR BELOW FROST DEPTH.

C. CONCRETE AND REINFORCING

- LOCATION OF CONSTRUCTION JOINTS OR POUR JOINTS SHALL BE AS INDICATED ON APPROVED SHOP DRAWINGS.
- ALL CONCRETE SHALL BE VIBRATED DURING PLACEMENT.
- PROVIDE 3/4" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
- NO STAKES, STEEL OR WOOD, SHALL BE PERMITTED IN ANY CONCRETE POUR. SUSPEND FORMS FROM ABOVE GRADE.
- ANCHOR BOLTS, DOWELS, REINFORCING STEEL, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE. CONCRETE BLOCKS ONLY SHALL BE USED TO SUPPORT REINFORCING OFF GRADE.
- ALL REINFORCEMENT SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315.
- PROVIDE MINIMUM CONCRETE COVERING FOR REINFORCEMENT AS FOLLOWS:

CONDITION	CLEAR COVER
CONCRETE DEPOSITED AGAINST EARTH: FORMED SURFACES EXPOSED TO WEATHER OR IN CONTACT WITH EARTH: REINFORCING BARS NOT OR LARGER	3 IN.
REINFORCING BARS LESS THAN NO. 6	1-1/2 IN.
BUILDING INTERIOR SURFACES: BEAMS, GIRDERS, AND COLUMNS SLABS, WALLS AND JOISTS: NO 11 BARS OR SMALLER NO 14 AND NO 16 BARS	1-1/2 IN. 3/4 IN. 1-1/2 IN.
- PROVIDE DOWELS OF SAME SIZE AND NUMBER FROM ADJACENT POUR, BOTH VERTICALLY AND HORIZONTALLY, TO MATCH TYPICAL REINFORCING SHOWN. LAPS TO BE IN ACCORDANCE WITH THE DEVELOPMENT LENGTH AND LAP SCHEDULE SCHEDULE. DOWELS SHALL BE CLEANED AFTER POUR.
- FIELD WELDING OR BENDING OF REINFORCING IS NOT PERMITTED EXCEPT AS INDICATED ON THE DRAWINGS OR AS APPROVED BY THE STRUCTURAL ENGINEER. USE LOW HYDROGEN ELECTRODES GRADE E70 OR E90 AS REQUIRED.
- CONTINUOUS REINFORCEMENT IN WALLS AND FOOTINGS MAY BE SPLICED AS REQUIRED, PROVIDED THAT BARS ARE OF THE LONGEST PRACTICAL LENGTH AND ALL SPLICES ARE SHOWN ON THE REINFORCING BAR SHOP DRAWINGS. SPLICES ARE TO BE STAGGERED WHEN POSSIBLE. PROVIDE LAP SPLICES AND DEVELOPMENT LENGTHS IN ACCORDANCE WITH THE DEVELOPMENT LENGTH AND LAP SCHEDULE. USE CLASS 'B' LAP SPLICES UNLESS NOTED OTHERWISE.
- CORING OF SLABS, BEAMS, COLUMNS, OR SHEAR WALLS IS NOT PERMITTED. PROVIDE SLEEVES FOR ALL PENETRATIONS PRIOR TO PLACING CONCRETE.

D. EXPANSION ANCHORS

- EXPANSION ANCHORS SHALL BE A SINGLE-END EXPANSION SHELID ANCHOR WHICH COMPLIES WITH THE DESCRIPTIVE PART OF FEDERAL SPECIFICATION A.A 1923A, TYPE 4, FOR WEDGE ANCHORS. WEDGE ANCHORS SHALL BE HILTI KWIK BOL T.12. ANCHORS SHALL BE BY HILTI FASTENING SYSTEMS OF TULSA, OK. (ICC ESR REPORTS ESR-1917) OR EQUAL.
- ANCHORS SHALL BE ZINC PLATED UNLESS SPECIFICALLY NOTED AS STAINLESS STEEL ON THE PLAN DETAILS.
- WHEN DETAILS OF SECTIONS INDICATE EXPANSION ANCHORS BUT NO SIZE, PROVIDE ANCHORS WITH 3/4" (20mm) DIAMETER.
- WHEN INSTALLING DRILLED-IN-ANCHORS, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO CONCRETE WITH STRESSING TENDONS (POST-TENSIONED OR PRE-TENSIONED), LOCATE THE TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION AND MAINTAIN AT LEAST 1" CLEAR BETWEEN THE TENDON AND THE ANCHOR. CUTTING A TENDON CAN CAUSE COLLAPSE.

E. ADHESIVE ANCHORS AND DOWEL BARS

- REINFORCING BAR DOWELS, REINFORCING BARS, THREADED RODS, BOLTS ETC. WHICH ARE INDICATED AS ADHESIVE ANCHORS OR ADHESIVE DOWELS IN CONCRETE OR SOLID MASONRY SHALL BE ACCOMPLISHED USING HIT HY-150 MAX SD SYSTEM BY HILTI FASTENING SYSTEMS OF TULSA, OK. (ICC REPORT NO. ESR 3013), OR EQUAL.
- DRILL, BRUSH, AND CLEAN ALL HOLES, AND INSTALL ALL ANCHORS IN COMPLETE ACCORDANCE WITH MANUFACTURERS PUBLISHED RECOMMENDATIONS, AS WELL AS ALL APPLICABLE BUILDING CODES OR ENGINEERING REPORTS.
- PROVIDE THE FOLLOWING MINIMUM ANCHOR EMBEDMENT DEPTHS UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DETAILS.

A. REINFORCING BARS	
BAR SIZE	EMBEDMENT DEPTH
#3 (#10)	4" (100)
#4 (#13)	5" (125)
#5 (#16)	7" (175)
#6 (#19)	9" (225)
#7 (#22)	10" (250)
#8 (#25)	12" (300)
#9 (#29)	13" (325)
#10 (#32)	16" (400)
#11 (#36)	18" (450)

B. BOLTS OR THREADED RODS	
DIAMETER	EMBEDMENT DEPTH
3/8" (10)	5" (125)
1/2" (13)	7" (175)
5/8" (16)	8" (200)
3/4" (19)	10" (250)
7/8" (22)	12" (300)
1" (25)	13" (330)

C. HILTI HS INSERTS	
DIAMETER	EMBEDMENT DEPTH
3/8" (10)	4 1/4" (110)
1/2" (13)	5" (125)
5/8" (16)	6 5/8" (170)
3/4" (19)	8 1/4" (210)

- WHEN INSTALLING DRILLED-IN-ANCHORS, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO CONCRETE WITH STRESS IN TENDONS (POST-TENSIONED OR PRE-TENSIONED), LOCATE THE TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION AND MAINTAIN AT LEAST 1" CLEAR BETWEEN THE TENDON AND THE ANCHOR. CUTTING A TENDON CAN CAUSE COLLAPSE.

F. HEADED STUDS

- HEADED STUDS AND DEFORMED BAR ANCHORS SHALL BE ELECTRIC-ARC STUD WELDED PER MANUFACTURERS RECOMMENDATIONS AND THE AWS CODE. FILLET WELDING SHALL NOT BE ALLOWED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER. WELDMENT SHALL BE IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE STUD AND THE PLATE. THERE SHOULD BE NO DISCONTINUITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE STUD AND THE PLATE. THE STUD WILL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8" DIAMETER STUDS AND SMALLER, 3/16" FOR LARGER THEN 5/8" DIAMETER.
- HEADED STUDS SHALL BE TYPE B PER THE AWS CODE WITH A MINIMUM YIELD STRENGTH OF 51 KSI (345 MPa). NELSON GRANULAR FILL FUSED (OR APPROVED EQUAL). STUDS SHALL BE MANUFACTURED OF COLD DRAWN BAR STOCK CONFORMING TO ASTM A-106.
- UNLESS NOTED OTHERWISE, DEFORMED BAR ANCHOR LENGTH SHALL BE AS FOLLOWS:

BAR DIAMETER	EMBEDMENT LENGTH
3/8" (10)	24" (600)
1/2" (13)	24" (600)
5/8" (16)	30" (750)

G. STRUCTURAL STEEL

- STEEL FRAMING DESIGNATIONS AND SYMBOLS ARE DEFINED IN THE STRUCTURAL STEEL SYMBOL LEGEND.
- ALL FIELD BOLT SHEAR CONNECTIONS SHALL BE MADE WITH MINIMUM 3/4"(20) DIAMETER F1552 BOLTS, UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE FULLY PRETENSIONED AND INSPECTED USING TENSION CONTROL TWIST-OFF STYLE BOLTS. UNLESS SPECIFICALLY INDICATED AS SLIP CRITICAL OR PRETENSIONED, ALL JOINTS SHALL BE DESIGNATED AS SNUG TIGHT. ROUTINE OBSERVATION TO VERIFY THE SP UNED ENDS ARE PROPERLY SEVERED DURING INSTALLATION IS REQUIRED FOR ALL BOLTS.
- PLACE NON-SHRINK GROUT UNDER ALL COLUMN BASE PLATES BEFORE PLACING ANY ELEVATED SLABS.
- WHERE THE WORK OF OTHER TRADES REQUIRES CUTS OR OPENINGS TO BE MADE IN STRUCTURAL STEEL MEMBERS, APPROVAL SHALL BE OBTAINED FROM THE ENGINEER. SUCH OPENINGS SHALL BE MADE IN THE SHOP AND CLEARLY INDICATED ON THE SHOP DRAWINGS.
- ET0XX ELECTRODES SHALL BE USED FOR ALL WELDING. PROPERLY QUALIFIED WELDERS SHALL PERFORM ALL WELDING, AS PRESCRIBED UNDER STANDARD QUALIFICATION PROCEDURE" OF THE AMERICAN WELDING SOCIETY.
- WELD LENGTHS CALLED FOR ON THE PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED, WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED BY AISC OR 3/16", WHICH EVER IS GREATER.
- ALL GROOVE WELDS INDICATED ON PLANS AND SECTIONS SHALL BE COMPLETE JOINT PENETRATION WELDS (CJP) UNLESS SPECIFICALLY INDICATED TO BE PARTIAL PENETRATION WELDS.
- CANTILEVER BEAM SIZE MATCHES MAIN SPAN BEAM SIZE UNLESS NOTED OTHERWISE.
- COMPOSITE BEAMS ARE DESIGNED FOR UNSHORED CONSTRUCTION. BEAMS SHALL BE FABRICATED WITH THE CAMBER INDICATED ON THE PLANS. BEAMS WITHOUT SPECIFIED CAMBER SHALL BE ERCTED WITH THE STANDARD MILL TOLERANCE CAMBER UP.

H. COMPOSITE SLABS AND DECKS

- CONCRETE WITH CALCIUM CHLORIDE OR ANY ADMIXTURE CONTAINING CHLORIDES SHALL NOT BE USED WITH COMPOSITE STEEL DECK.
- COMPOSITE BEAMS ARE DESIGNED FOR UNSHORED CONSTRUCTION. BEAMS SHALL BE FABRICATED WITH THE CAMBER INDICATED ON THE PLANS. BEAMS WITHOUT SPECIFIED CAMBER SHALL BE ERCTED WITH THE STANDARD MILL TOLERANCE CAMBER UP.
- PROVIDE COMPOSITE DECK LAYOUT THAT IS CONTINUOUS OVER THREE OR MORE SUPPORTS. COMPLY WITH DECK MANUFACTURER SHORING REQUIREMENTS FOR OTHER DECK LAYOUTS.
- TO COMPENSATE FOR DEFLECTION OF THE STRUCTURE UNDER THE LOAD OF FRESHLY PLACED CONCRETE, THE SLAB THICKNESS SHALL BE INCREASED ACCORDINGLY TO PROVIDE A LEVEL SURFACE WITHIN TOLERANCE. ADDITIONAL CONCRETE SHALL BE PLACED AT NO ADDITIONAL COST TO THE OWNER. MAXIMUM ADDITIONAL THICKNESS OF 1.5" ASSUMED IN PARABOLIC PROFILE ACROSS BAY.
- CORE DRILLED OR CUT OPENINGS IN COMPOSITE SLABS SHALL NOT EXCEED 10" IN ANY DIMENSION. LARGER OPENINGS, WHEN REQUIRED, SHALL BE BOXED OUT AND REINFORCED PER TYPICAL UNFRAMED OPENING DETAIL.
- CORE DRILLED OR CUT OPENINGS SHALL NOT BE PLACED CLOSER THAN 1 OPENING DIAMETER OR WIDTH TO ANY BEAM NOR SPACED CLOSER THAN 2 OPENING DIAMETERS OR WIDTHS, WHEN TWO ADJACENT OPENINGS ARE OF A DIFFERENT SIZE. SPACING SHALL BE BASED UPON THE LARGER SIZE.
- WHEN TOTAL WIDTH OF ADJACENT OPENINGS REQUIRED IS LARGER THAN 30" OR WHEN REQUIRED SPACING OF OPENINGS CANNOT BE MET, CORED OR CUT OPENINGS SHALL BE SUPPORTED ALONG ALL EDGES. PROVIDE W10 X 12 SUPPORT BEAMS AT THESE LOCATIONS. LOCATE BEAMS 6" CLEAR OF OPENING EDGES.
- ELECTRICAL CONDUIT IN SLAB ON METAL DECK SHALL NOT BE PERMITTED.
- ALL CONTINUOUS REBARS SHALL HAVE CLASS 'B' LAP SPLICES, TYPICAL. STAGGER SPLICES AS REQUIRED.
- ADDITIONAL REINFORCING BARS SHOWN ON PLAN ARE IN ADDITION TO THOSE NOTED IN THE COMPOSITE DECK CONFIGURATION TABLE AND AS SHOWN ON TYPICAL AND SPECIFIC DETAILS.
- CENTER ALL ADDITIONAL SLAB REINFORCING IN THE SLAB ABOVE THE DECK, TYPICAL.
- REINFORCING SHALL BE FULLY DEVELOPED. PAST PERPENDICULAR REINFORCING AT CORNERS AND OPENINGS, UNLESS NOTED OTHERWISE.

I. STAIR DESIGN

- CONTRACTOR SHALL PROVIDE COMPLETE DRAWINGS AND CALCULATIONS FOR ALL STAIRS, STAIR LANDINGS, STAIR MEMBERS, AND SUPPORTS NOT SHOWN SHALL BE STRUCTURALLY DESIGNED, DETAILED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE THAT THE PROJECT IS LOCATED.
- ALL REQUIRED EMBEDDED ANGLES AND PLATES SHALL BE PART OF THE STAIR DESIGN AND DETAILING.
- STAIRWAYS SHALL BE DESIGNED FOR DEAD LOAD, LIVE LOAD OF 100 PSF (4.8 kPa) AND SEISMIC LOADS.
- STAIRS AND RELATED ITEMS SHALL COMPLY WITH THE BUILDING CODE.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR STAIRWAY DIMENSIONS, DETAILS AND OTHER REQUIREMENTS.
- STAIRS MAY BE SUPPORTED BY THE PRIMARY STRUCTURE PROVIDED STAIR FRAMING DOES NOT IMPOSE ECCENTRIC OR TORSIONAL LOADING UPON THE PRIMARY FRAMING.

J. POWDER ACTUATED FASTENERS

- ALL POWDER ACTUATED FASTENERS SHALL BE APPROVED FOR TYPE, APPLICATION AND INSTALLATION AND SHALL HAVE AN APPROVED ICCO RESEARCH REPORT NUMBER.
- FASTENERS SHALL NOT BE INSTALLED UNTIL THE CONCRETE HAS REACHED ITS DESIGN STRENGTH.
- FASTENERS SHALL NOT BE INSTALLED IN CONCRETE WHERE THE THICKNESS IS LESS THAN THREE TIMES THE PENETRATION REQUIRED, EXCEPT 1 1/8" PENETRATION IN 3-1/4" THICK FLOOR SLAB IS ACCEPTABLE.
- THE MINIMUM DISTANCE FROM THE EDGE OF CONCRETE TO CENTER OF ANCHOR IS 3 INCHES.
- FASTENERS IN THE UNDERSIDE OF CONCRETE ON METAL DECKING SHALL BE PLACED IN THE HIGH FLOOR PORTION OF THE SLAB.
- WHEN INSTALLING POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE- OR POST-TENSIONED), LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A CLEARANCE OF 1 INCH BETWEEN THE REINFORCEMENT AND THE PIN.

K. MASONRY

- ALL CONCRETE MASONRY UNITS SHALL BE HOLLOW BLOCK MADE WITH NORMAL WEIGHT AGGREGATE IN ACCORDANCE WITH ASTM C33.
- ALL MASONRY WALLS SHALL BE REINFORCED UNLESS NOTED OTHERWISE, THE FOLLOWING SHALL CONSTITUTE MINIMUM REINFORCEMENT REQUIREMENTS:

WALL SIZE	VERTICAL REINFORCEMENT
14'4" AT 48" CENTERED	8"
1-4/8" AT 48" CENTERED	8"
1-4/8" AT 48" EACH FACE	10" AT 48" EACH FACE
- PROVIDE VERTICAL REINFORCEMENT AS INDICATED. IN ADDITION, PROVIDE VERTICAL BARS AROUND ALL OPENINGS, AT CORNERS, ANCHORED INTERSECTIONS AND AT END OF WALL PANELS.
- CONCRETE BOND BEAMS SHALL BE PLACED IN ONE OF THE TOP THREE COURSES OF ALL WALLS. BOND BEAMS SHALL BE REINFORCED AS FOLLOWS:

WALL SIZE	REINFORCEMENT
8"	1-#6
8"	2-#5
10" & 12"	2-#6
- ALL REINFORCING SHALL HAVE A MINIMUM COVERAGE OF ONE BAR DIAMETER (1/2" MIN.) OF GROUT. CENTERED BARS SHALL BE SECURELY PLACED IN THE CENTER OF A CELL. EACH FACE BARS SHALL BE PLACED 1" CLEAR OF THE FACE SHELL. WHERE TWO LAYERS ARE REQUIRED IN 8" OR SMALLER BLOCK, USE ONE BAR IN EACH OF TWO ADJACENT CELLS.
- CONTROL JOINTS. MAXIMUM SPACING OF CONTROL JOINTS SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE. (DO NOT PLACE CONTROL JOINTS IN SHEAR WALLS. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON LOCATION OF CONTROL JOINTS).

EXTERIOR WALLS	INTERIOR WALLS
30 FT	40 FT
- ALL MASONRY WALLS SHOWN ON STRUCTURAL DRAWINGS ARE LOAD BEARING, UNLESS NOTED OTHERWISE. REFER TO ARCHITECTURAL DRAWINGS FOR NON-LOAD BEARING MASONRY WALLS.
- REFER TO MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF CONDUIT, PIPING, DUCTWORK, AND OPENINGS IN MASONRY WALLS. PROVIDE ADDITIONAL REINFORCEMENT AT OPENINGS OR SLEEVES AS INDICATED. DO NOT CUT REINFORCEMENT.
- CONTINUOUS REINFORCING IN WALLS MAY BE SPLICED AS REQUIRED, PROVIDED BARS ARE OF THE LONGEST PRACTICAL LENGTH AND ALL SPLICES ARE SHOWN ON REINFORCING SHOP DRAWINGS. WHEREVER POSSIBLE, SPLICES SHALL BE STAGGERED.
- LAP ALL REINFORCING BARS IN MASONRY 40 (48 FOR OSHPD) BAR DIAMETERS AT SPLICES. HORIZONTAL MASONRY REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS AND INTERSECTIONS.
- ALL VERTICAL REINFORCING SHALL BE CONTINUOUS FOR FULL HEIGHT OF WALL AND DOWELED INTO FOOTING OR SLAB ON GRADE BELOW AND EXTENDED INTO BOND BEAMS ABOVE. CONTINUITY MAY BE ESTABLISHED WITH LAPPED SPLICES MEETING ALL INDICATED REQUIREMENTS.
- GROUT CELLS SOLID IN ALL WALLS UNLESS NOTED OTHERWISE. REINFORCING SHALL BE SECURELY HELD IN PLACE. GROUT IN 20" MAXIMUM LIFTS.
- NO PIPES OR DUCTS SHALL BE EMBEDDED IN MASONRY UNLESS NOTED OR DETAILED SPECIFICALLY.
- CELLS CONTAINING BOLTS SHALL BE GROUTED SOLID WITH AT LEAST 1/2" GROUT COVERAGE BETWEEN THE BOLT AND THE MASONRY AT THE BLOCK FACE.

L. STEEL STUD EXTERIOR WALL FRAMING

- CONTRACTOR SHALL PROVIDE COMPLETE DRAWINGS AND CALCULATIONS FOR ALL EXTERIOR STEEL STUD WALL FRAMING. ALL FRAMING MEMBERS, SPACING AND CONNECTIONS SHALL BE DESIGNED, DETAILED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.
- COMPLY WITH ALL LOADING REQUIREMENTS AS ESTABLISHED BY THE BUILDING CODE.
- LIMIT MAXIMUM LATERAL DEFLECTION TO 1/600 OF SPAN WHERE EXTERIOR FINISH MATERIAL IS STONE OR MASONRY, 1/720 FOR STONE, AND 1/360 OF SPAN OTHERWISE.
- REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL REQUIREMENTS, OPENING LOCATIONS, ETC. AND TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS. STUDS SHALL BE DETAILED TO ACCOMMODATE MOVEMENT OF THE STRUCTURE THROUGH THE USE OF VERTICAL SLIDE CLIPS, SLIP CONNECTIONS, ETC.

ABBREVIATIONS

@	= AT	ID	= INSIDE DIAMETER OR DIMENSION
&	= AND	IJ	= ISOLATION JOINT
ACI	= AMERICAN CONCRETE INSTITUTE	INC	= INCORPORATED
ADDL	= ADDITIONAL	INSUL	= INSULATION OR INSULATING
ADJ	= ADJUSTABLE, ADJUST	INST	= INSTALL OR INSTALLATION
AISC	= AMERICAN INSTITUTE OF STEEL CONSTRUCTION	INT	= INTERIOR
AISS	= AMERICAN IRON AND STEEL INSTITUTE	INV	= INVERT
ALT	= ALTERNATE	ISO	= ISOMETRIC
APPROX	= APPROXIMATE OR APPROXIMATELY	JST	= JOIST
ARCH	= ARCHITECT OR ARCHITECTURAL	JT	= JOINT
ASCE	= AMERICAN SOCIETY OF CIVIL ENGINEERS	La	= LENGTH OF SPAN a
ASSN	= ASSOCIATION	Lb	= LENGTH OF SPAN b
ASTM	= AMERICAN SOCIETY FOR TESTING AND MATERIALS	Lc	= LENGTH OF SPAN c
ASWG	= AMERICAN STEEL AND WIRE GAGE	Ld	= REBAR DEVELOPMENT LENGTH
AVG	= AVERAGE	Lh	= REBAR HOOK DEVELOPMENT LENGTH
AWG	= AMERICAN WIRE GAGE	Lfv	= LONG FACE HORIZONTAL
B/	= BOTTOM OF	LGH	= LENGTH
BLDG	= BUILDING	LBB	= LONG LEG BACK TO BACK
BM	= BEAM	LLH	= LONG LEG HORIZONTAL
BOP	= BOTTOM OF PIPE	LLV	= LONG LEG VERTICAL
BOT	= BOTTOM	LOC	= LOCATION
BRG	= BEARING	LP	= LOW POINT
BS	= BOTH SIDES	LWT	= LIGHT WEIGHT
BSMT	= BASEMENT		
C	= CHANNEL	MATL	= MATERIAL
c/c	= CENTER TO CENTER	MAX	= MAXIMUM
CEM	= CEMENT	MECH	= MECHANICAL
CH	= CHECKED	MEP	= MECHANICAL, ELECTRICAL, PLUMB
CHAN	= CHANNEL	MEZZ	= MEZZANINE
CIR	= CIRCULAR	MFR	= MANUFACTURER
CJ	= CONTROL JOINT	MIN	= MINIMUM
C	= CENTER LINE	MISC	= MISCELLANEOUS
CLG	= CEILING		
CLR	= CLEAR	N/A	= NOT APPLICABLE
CONC	= CONCRETE MASONRY UNIT	NIC	= NOT IN CONTRACT
COL	= COLUMN	NLWT	= NORMAL WEIGHT
CONC	= CONCRETE	No.#	= NUMBER
CONFIG	= CONFIGURATION	NOM	= NOMINAL
CONN	= CONNECT OR CONNECTION	NTS	= NOT TO SCALE
CONST	= CONSTRUCTION		
CONST JT	= CONSTRUCTION JOINT	oc	= ON CENTER
CONT	= CONTINUOUS	OD	= OUTSIDE DIAMETER
CONTR	= CONTRACTOR	OPNG	= OPENING
CORP	= CORPORATION	OPP	= OPPOSITE
CR	= COLD ROLLED	OPP HD	= OPPOSITE HAND
CRS	= COLD ROLLED STEEL		
CS	= CARBON STEEL		
CSG	= CASTING		
CTR	= CENTER OR CENTERED		
		PCC	= PIECE OR PRECAST
		PDF	= POWER DRIVEN FASTENER
DBL	= DOUBLE	PERP	= PERPENDICULAR
DEG	= DEGREE	PL	= PLATE
DEP	= DEPTH OR DEPRESSION	PLBG	= PLUMBING
DET	= DETAIL	PLAS	= PLASTER
DIA. Ø	= DIAMETER	PRSS	= PRESSURE
DWG	= DIAGRAM, DIAGONAL	PT	= POINT
DM	= DIMENSION	RAD	= RADIUS
DN	= DOWN	REBAR	= REINFORCING BAR
DO	= DOWN	REF	= REFERENCE
DWS	= DRAWING	REQD	= REQUIRED
		REV	= REVISION OR REVISED
EA	= EACH		
EF	= EACH FACE	SDH	= SCHEDULE
ELEC	= ELECTRIC OR ELECTRICAL	SEC	= SECOND
ELEV. EL	= ELEVATION OR ELEVATOR	SECT	= SECTION
EMB	= EMBEDDED OR EMBEDMENT	SHEET	= SHEET
EO	= EDGE OF BLOCK	SIM	= SIMILAR
EOS	= EDGE OF SLAB	SPCG	= SPACING
EQ	= EQUAL	SPEC	= SPECIFICATION
EQUIP	= EQUIPMENT	SS	= STAINLESS STEEL
EWS	= EACH WAY	STD	= STANDARD
EXIST	= EXISTING	STL	= STEEL
EXP	= EXPANSION	STL STL	= STAINLESS STEEL
EXT	= EXPANSION JOINT	STL PL	= STEEL PLATE
EXT JT	= EXTENT OR EXTERIOR	STRUC	= STRUCTURE OR STRUCTURAL
FAB	= FABRICATE	T	= TOP OF
FB	= FOUNDATION	TH	= THICKNESS OR THICK
FF	= FACE TO FACE	T/O	= TOP OF CONCRETE
FF F	= FINISHED FLOOR	TOS	= TOP OF STEEL
FF F E	= FINISHED FLOOR ELEVATION	TOW	= TOP OF WALL
FIG	= FIGURE	TYP	= TYPICAL
FIN	= FINISH		
FIN DIM	= FINISH DIMENSION		
FIN GR	= FINISH GRADE		
FL	= FLOOR		
FLG	= FLANGE		
FL FL	= FLOOR PLATE		
FOR	= FACE OF BUILDING		
FTG	= FOOTING		
		VEF	= VERTICAL EACH FACE
		VERT	= VERTICAL
		VIF	= VERIFY IN FIELD
		W/	= WITH
		WELD	= WELDING
		WF	= WIDE FLANGE
		WO	= WITHOUT
		WP	= WORKING POINT
		WT	= WEIGHT
		WWF	= WELDED WIRE FABRIC

SCHEDULE OF SPECIAL INSPECTION SERVICES					
INSPECTION ITEM REQUIRED	FREQUENCY		SPECIFICATION SECTION	CODE REFERENCE	REMARKS
	CONTINUOUS	PERIODIC			
SOILS AND EARTHWORK					
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	●		31 23 00	IBC 1704.7	ALL FOOTING AND GRADE BEAM EXCAVATIONS SHALL BE OBSERVED AND APPROVED PRIOR TO CONCRETE PLACEMENT
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	●				
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	●				
OBSERVE PROOF ROLLING OF SUBGRADE PRIOR TO FILL PLACEMENT		●			
PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIAL		●			
TESTING AND EVALUATION OF IN-PLACE DENSITY OF COMPACTION FILL AS WORK PROGRESSES		●			ONE DENSITY TEST FOR EACH LIFT, DAYS OPERATION, OR 5,000 SQ. FT. OF FILL AREA
INSPECT VAPOR RETARDER FOR CONFORMANCE WITH MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS		●	03 31 10		

STATEMENT OF SPECIAL INSPECTIONS

THIS STATEMENT OF SPECIAL INSPECTIONS IS PREPARED IN ACCORDANCE WITH SECTION 1705 OF THE INTERNATIONAL BUILDING CODE (IBC). IT INCLUDES A SCHEDULE OF SPECIAL INSPECTIONS, APPLICABLE TO THIS PROJECT.

THE SPECIAL INSPECTIONS COORDINATOR SHALL KEEP RECORDS OF SPECIFIED SPECIAL INSPECTIONS AND TESTING, AND SHALL FURNISH COPIES OF INSPECTION AND TESTING REPORTS TO THE CLIENT AND TO THE APPROPRIATE DESIGN PROFESSIONALS OF RECORD. DETAILED SUMMARIES OF ALL SPECIAL INSPECTION ACTIVITIES, FINDINGS, DEFICIENCIES AND DISCREPANCIES SHALL BE FURNISHED TO THE CLIENT AND TO THE APPROPRIATE DESIGN PROFESSIONALS OF RECORD AT INTERVALS NOT EXCEEDING ONE (1) WEEK.

DISCREPANCIES FROM THE APPROVED PLANS, SPECIFICATIONS, SHOP DRAWINGS OR DESIGN DIRECTIVES AND CODE VIOLATIONS OBSERVED DURING THE CONDUCT OF SPECIAL INSPECTION SERVICES, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, TO THE ATTENTION OF THE CLIENT AND TO THE ATTENTION OF THE APPROPRIATE DESIGN PROFESSIONALS OF RECORD.

A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING COMPLETION OF THE SPECIFIED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES, DEFICIENCIES AND CODE VIOLATIONS SHALL BE SUBMITTED AND APPROVED BY THE CLIENT AND THE DESIGNED PROFESSIONALS OF RECORD, PRIOR TO FINAL INSPECTION.

TESTING AND INSPECTION SERVICES

QUALIFIED SPECIAL INSPECTORS SHALL BE EMPLOYED PER THE PROVISIONS OF THE CONSTRUCTION CONTRACT TO PERFORM INSPECTIONS IN ACCORDANCE WITH THE BUILDING CODE. INSPECTORS SHALL PERFORM ALL DUTIES AND RESPONSIBILITIES AS REQUIRED BY THE BUILDING CODE.

THE FOLLOWING SCHEDULE CONTAINS A LIST OF SPECIAL INSPECTION ACTIVITIES RELATED TO THE QUALITY ASSURANCE PLAN REQUIRED BY THE BUILDING CODE (IBC CHAPTER 17) FOR THE FABRICATION, ERECTION AND CONSTRUCTION OF THE STRUCTURAL SYSTEMS AS GIVEN IN THE SPECIFICATIONS AND DRAWINGS OF THE PROJECT. ALL INSPECTORS SHALL BE QUALIFIED BY TRAINING AND EXPERIENCE FOR THE REQUIRED INSPECTIONS AND TEST PROCEDURES. REFER TO IBC CHAPTER 17, "STRUCTURAL TESTS AND SPECIAL INSPECTIONS", FOR SPECIFIC TEST PROCEDURES.

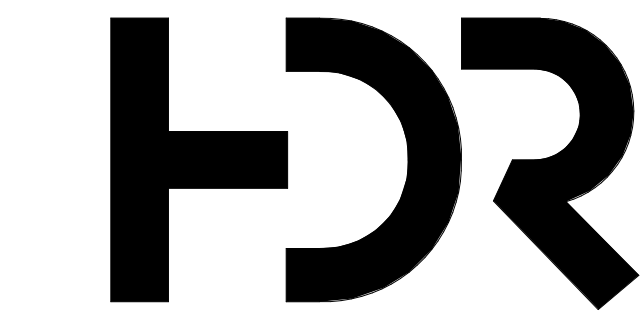
TESTING AND INSPECTION REPORTS SHALL BE PREPARED FOR EACH INSPECTION ITEM ON A DAILY BASIS WHENEVER WORK IS PERFORMED ON THAT ITEM. REPORTS SHALL BE DISTRIBUTED TO THE CLIENT, CONTRACTOR, BUILDING OFFICIAL (IF REQUESTED), AND ARCHITECT FOR THEIR REVIEW, COMMENT, AND ACTION, AS NEEDED.

AISC CERTIFICATION IS NOT CONSIDERED TO BE FABRICATOR APPROVAL PER SECTION 1704.2.2, UNLESS SPECIFICALLY APPROVED BY THE CLIENT. IN LIEU OF, OR UNTIL SUCH APPROVAL IS GRANTED, SPECIAL INSPECTION PROVISIONS FOR STRUCTURAL STEEL SHALL BE CONSIDERED TO BE APPLICABLE TO THOSE COMPONENTS FABRICATED AND / OR ASSEMBLED IN THE FABRICATION SHOP.

SCHEDULE OF SPECIAL INSPECTION SERVICES					
INSPECTION ITEM REQUIRED	FREQUENCY		SPECIFICATION SECTION	CODE REFERENCE	REMARKS
	CONTINUOUS	PERIODIC			
GENERAL					
CONDUCT WEEKLY VISUAL OBSERVATIONS OF THE STRUCTURAL SYSTEMS FOR GENERAL CONFORMANCE TO THE CONSTRUCTION DOCUMENTS AND PREPARE WEEKLY REPORTS OF THE OBSERVATIONS, DESCRIBING WORK PROGRESS AND NON-CONFORMING ITEMS		●			
SPRAY FIRE PROTECTION MATERIAL					
INSPECT SURFACE PREPARATION OF MEMBERS, RECORD AMBIENT TEMPERATURES AND VENTILATION MEASURES		●	07 81 17	IBC 1704.10	VERIFY CONDITIONS ARE IN CONFORMANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS
MEASURE APPLIED THICKNESS		●		ASTM E605	ONE SET FOR MEASUREMENT FOR EVERY 10,000 SQ FT OF FLOOR AND ROOF AREA AND 25 PERCENT THE STEEL MEMBERS ON EACH LEVEL
TEST FOR DENSITY, BONDING STRENGTH AND THICKNESS		●		ASTM E685 ASTM E736	ONE SAMPLE FOR EVERY 10,000 SQ FT OF FLOOR AND ROOF AREA
COLD-FORMED STEEL FRAMING					
OBSERVE AND VERIFY USE OF CORRECT MEMBER SIZES, MATERIAL THICKNESS, FASTENERS AND WELDING		●	05 40 00	AISI	

SCHEDULE OF SPECIAL INSPECTION SERVICES					
INSPECTION ITEM REQUIRED	FREQUENCY		SPECIFICATION SECTION	CODE REFERENCE	REMARKS
	CONTINUOUS	PERIODIC			
STRUCTURAL STEEL AND METAL DECK					
VISIT FABRICATION SHOP TO OBSERVE FABRICATION PROCEDURES		●	05 12 10		ONLY ONE INSPECTION PER FABRICATION SHOP IS REQUIRED UNLESS ON-SITE EVENTS INDICATE FURTHER INSPECTIONS ARE NECESSARY
VERIFY FABRICATOR CERTIFICATION		●		IBC 1704.2	
VERIFY CORRECT STRUCTURAL STEEL MATERIAL DELIVERED TO JOB SITE		●			
VERIFY JOINT WELD PROCEDURES ARE BEING USED IN ACCORDANCE WITH AWS		●		AWS D1.1	
VERIFY CONTRACTOR'S RECEIPT OF WELDER CERTIFICATIONS		●			
VERIFY CORRECT FILLER MATERIAL USED IN WELDS		●		AISC 360-05 A3.5	
VISUALLY INSPECT ALL WELDS, PROVIDE CONTINUOUS INSPECTION ON ALL FULL OR PARTIAL PENETRATION WELDS AND FILLET WELDS GREATER THAN 5/16"	●			AWS D1.1	
PERFORM ULTRASONIC TESTING OR MAGNETIC PARTICLE TESTING ON ALL FULL PENETRATION WELDS	●				
PERFORM MAGNETIC PARTICLE TESTING ON 20% OF ALL PARTIAL PENETRATION AND FILLET WELDS GREATER THAN 5/16"		●			
INSPECT STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONTRACT DOCUMENTS INCLUDING MEMBER LOCATIONS, DETAILS SUCH AS BRACING AND STIFFENING AND APPLICATION OF JOINT DETAILS AT EACH CONNECTION		●		IBC 1704.3.2	
VERIFY CORRECT MATERIAL USED HIGH STRENGTH BOLTS, NUTS AND WASHERS		●	AISC 360-05 A3.3		
OBSERVE AND CHECK TIGHTNESS OF ALL BOLTS IN BEARING CONNECTIONS		●	IBC 1704.3.3 AISC 360-05 M2.5		
OBSERVE AND CHECK TORQUE OF ALL BOLTS IN SLIP-CRITICAL CONNECTIONS		●			
OBSERVE AND TEST ALL FIELD INSTALLED HEADED STUDS		●	AWS D1.1	VERIFY CORRECT NUMBER, LOCATION AND WELDING	
VISUALLY INSPECT ALL ROOF DECK WELDS, SCREWS, OR OTHER FASTENERS FOR COMPLIANCE WITH CONTRACTOR DOCUMENTS		●	05 31 23	AWS D1.3	

SCHEDULE OF SPECIAL INSPECTION SERVICES					
INSPECTION ITEM REQUIRED	FREQUENCY		SPECIFICATION SECTION	CODE REFERENCE	REMARKS
	CONTINUOUS	PERIODIC			
CONCRETE AND REINFORCING STEEL					
INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		●		ACI 318 6.1.1	
OBSERVE AND VERIFY PLACEMENT OF REINFORCING STEEL PRIOR TO CLOSING OF THE FORMS AND ARRIVAL OF CONCRETE TO THE JOBSITE		●		IBC 1913.4 ACI 318 3.5, 7.1-7.7	
OBSERVE WELDING OF STEEL REINFORCEMENT IN BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT		●		AWS D1.4 ACI 318 3.5.2	
VERIFY CORRECT MATERIAL USED, INCLUDING THE USE OF A706 IN WELDED SPLICES, IF ANY		●		AWS D1.4 ACI 318 3.5.2 IBC 1903.1	
OBSERVE AND VERIFY PLACEMENT OF EMBEDDED BOLTS, RODS AND STUDS PRIOR TO AND DURING CONCRETE PLACEMENT. INSPECT CONCRETE PLACEMENT AND CONSOLIDATION AROUND ANCHORS		●		ACI 318 8.1.3, 21.2.8 IBC 1911.5 IBC 1912.1	
VERIFY USE OF CORRECT CONCRETE MIX DESIGN AND REVIEW DELIVERY TICKETS		●	03 08 13	ACI 318 CH. 4, 5.2-5.4 IBC 1904.2.2	
SAMPLE FRESH CONCRETE AND MEASURE SLUMP, AIR CONTENT, AND TEMPERATURE DURING CONCRETE DELIVERY		●		ASTM C172 ASTM C31 ACI 318 5.6, 5.8	ADDITIONAL CYLINDERS SHALL BE MADE AS NEEDED FOR EARLY FORM REMOVAL. NOTE: TWO #X12 OR #X8 CYLINDERS ARE REQUIRED FOR AN ACCEPTABLE TEST
SAMPLE CONCRETE SPECIMENS FOR STRENGTH TESTS TO BE PERFORMED IN LAB. A MINIMUM OF FIVE (5) CYLINDERS SHALL BE MADE. TEST TWO (2) AT 7 DAYS AND TWO (2) AT 28 DAYS. HOLD ONE CYLINDER IN RESERVE		●			
PERFORM CONCRETE STRENGTH TESTING		●			
MAINTAIN A SPREADSHEET SHOWING DATE, SEQUENTIAL ORDER OF STRENGTH TEST RESULTS, AND INDICATE RUNNING AVERAGE		●		ACI 318 5.3	
OBSERVE FOR CONCRETE PLACEMENT AND THAT CONCRETE IS PROPERLY CONSOLIDATED. VERIFY THAT CONCRETE PLACEMENT DOES NOT CAUSE SEGREGATION, CONTAMINATION OR DISPLACEMENT OF REINFORCING OR EMBEDDED ITEMS		●	03 08 13	ACI 318 5.9, 5.10	
OBSERVE FOR PROPER CURING TEMPERATURE AND TECHNIQUES		●		ACI 318 5.11, 5.13	
VERIFY THAT THE NECESSARY CONCRETE DESIGN STRENGTH HAS BEEN REACHED PRIOR TO THE REMOVAL OF SHORES AND FORMS		●	03 11 00		
MEASURE FLOOR FLATNESS AND LEVELNESS AS DIRECTED		●	03 35 00	ACI 318 6.2	
ERECTION OF PRECAST MEMBERS AND INSPECTION OF MEMBERS CONNECTIONS		●		ACI 318 CH. 16	
VERIFY FABRICATION/QUALITY CONTROL PROCEDURES FOR PRECAST CONCRETE MANUFACTURER		●			VERIFY PLANT IS PCI CERTIFIED
OBSERVE AND VERIFY PLACEMENT OF VERTICAL CONCRETE WALL REINFORCEMENT EMBEDDED INTO EXISTING CONCRETE USING ADHESIVE SYSTEM		●		IBC 1704.15 ACI 318 APPENDIX D CMAA GUIDELINES	



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Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kelly Hartshorn

Sheet Reviewer | Author

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	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

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CONSTRUCTION

Project Number
Original Issue

10235960
09/25/20

Sheet Name

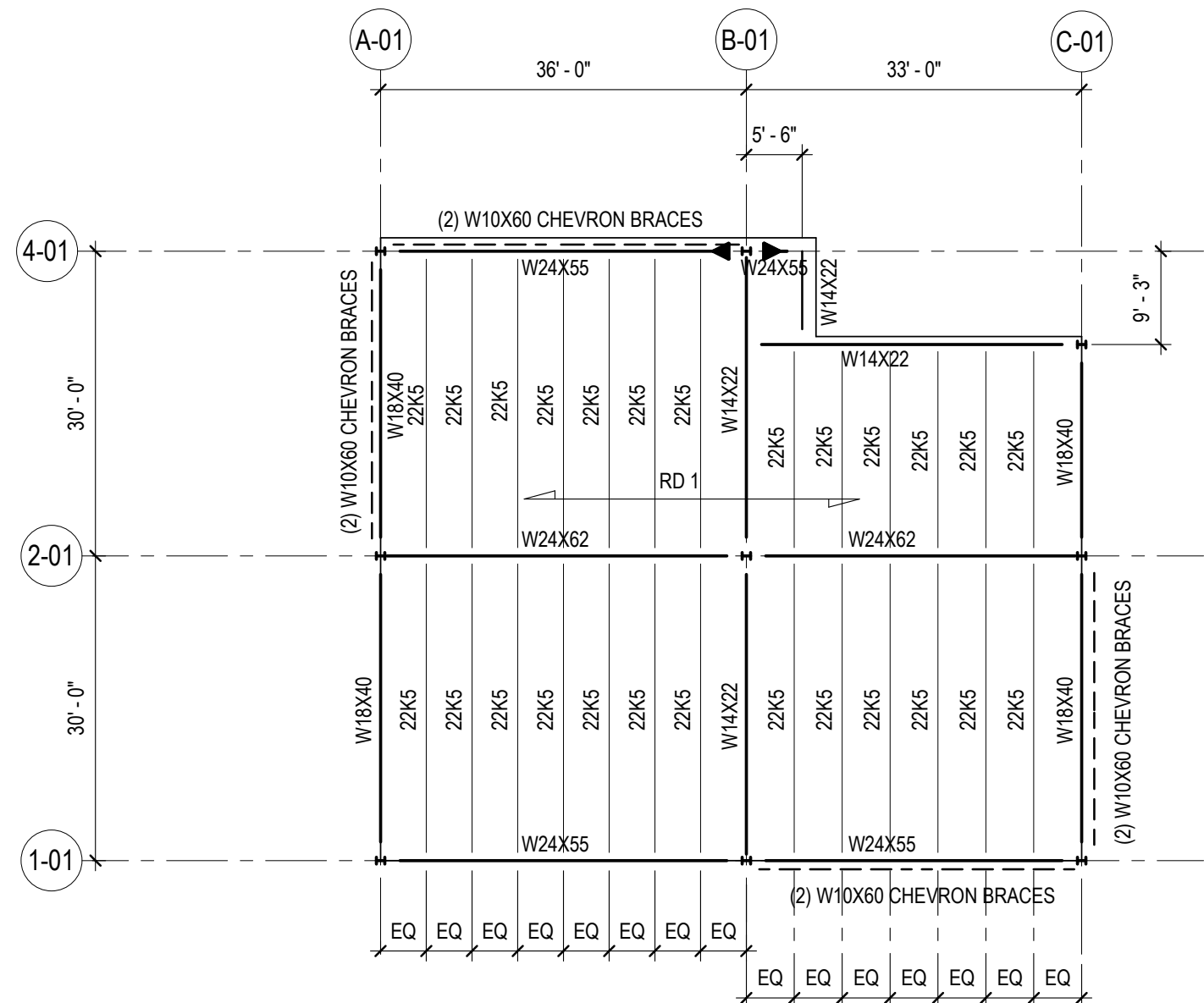
SPECIAL INSPECTION AND
SCHEDULES

Sheet Number

S-002

Project Status

Concept Design 100% Review Submittal



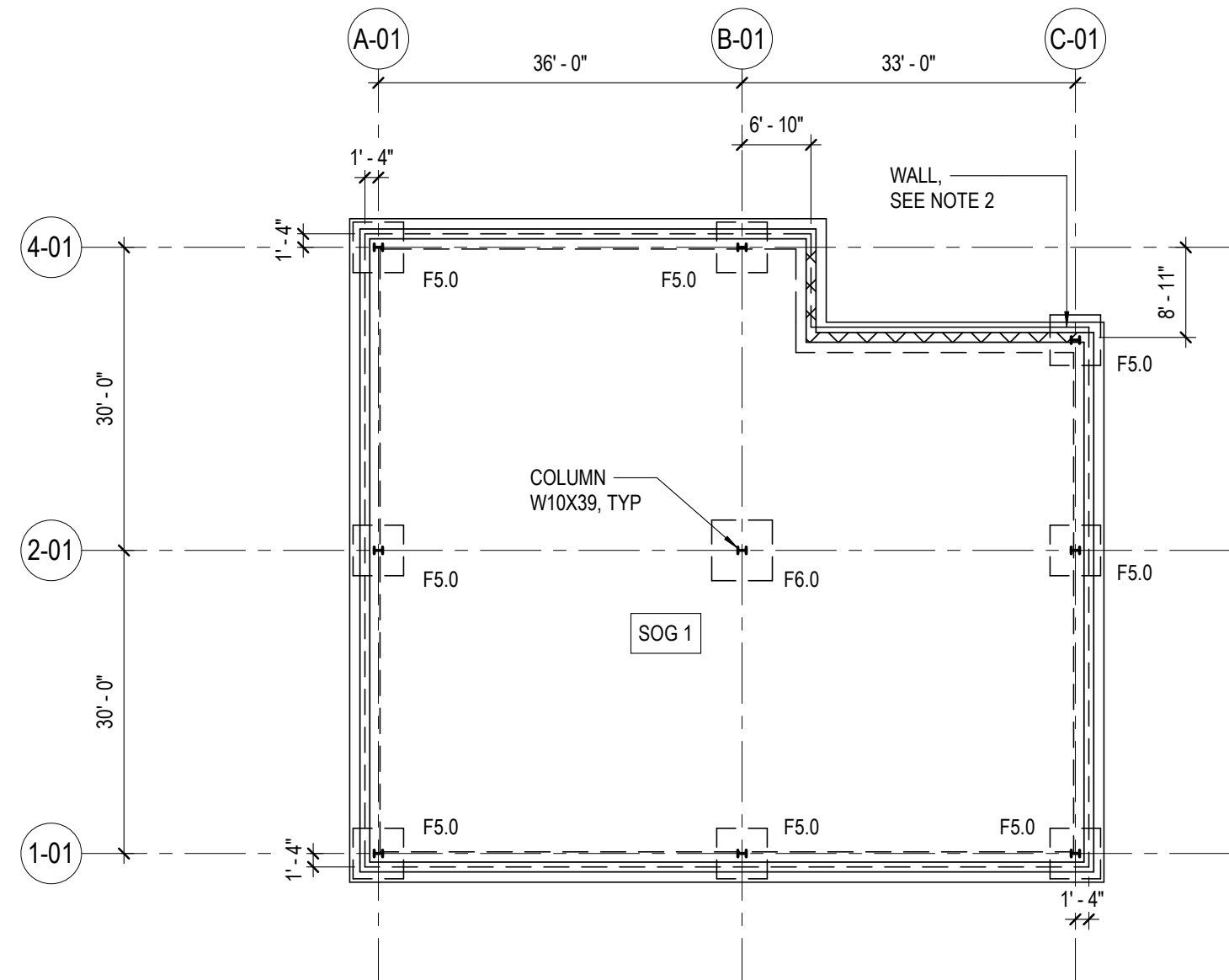
LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM

ALC-01 - ROOF FRAMING PLAN
ALC-03, ALC-09 AND ALC-11 - ROOF FRAMING PLAN, SIMILAR

1/16" = 1'-0"

PLAN NOTES :

- 1) 'RD 1' INDICATES 3", 18 GAGE METAL ROOF DECK.
- 2) TOP OF DECK ELEVATION 22'-0", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 22'-0"
- 3) TOP OF STEEL ELEVATION 21'-9", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 21'-9"
- 4) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION



LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT

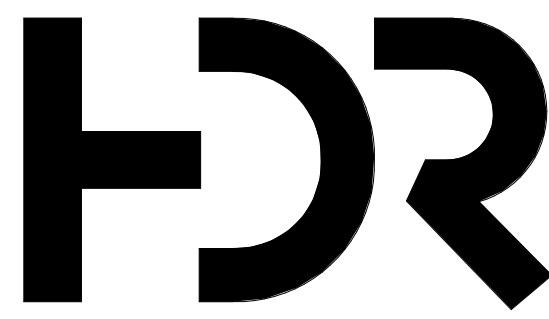
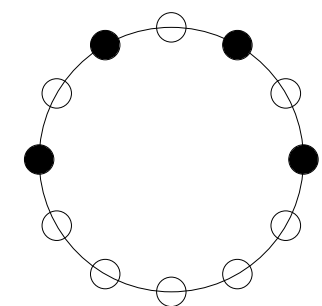
ALC-01 - FOUNDATION PLAN
ALC-03, ALC-09 AND ALC-11 - FOUNDATION PLAN, SIMILAR

1/16" = 1'-0"

PLAN NOTES :

- 1) 'SOG 1' INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR #46 - W2.5XW2.5.
- 2) 12" THICK CMU FROST WALLS ON 2'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- 3) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0".
- 4) TOP OF INTERIOR FOOTINGS SHALL BE -1'-0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE -3'-6" BELOW FINISHED FLOOR FOR FROST, TYPICAL.
- 5) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION.

STEEL BRACED FRAME OPTION



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Project Architect	Kevin LeMans
Landscape Architect	
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Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer	Author
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Original Issue	09/25/20

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FLOOR PLANS - ALC-01,
ALC-03, ALC-09 & ALC-11
(STEEL BRACED FRAME
OPTION)

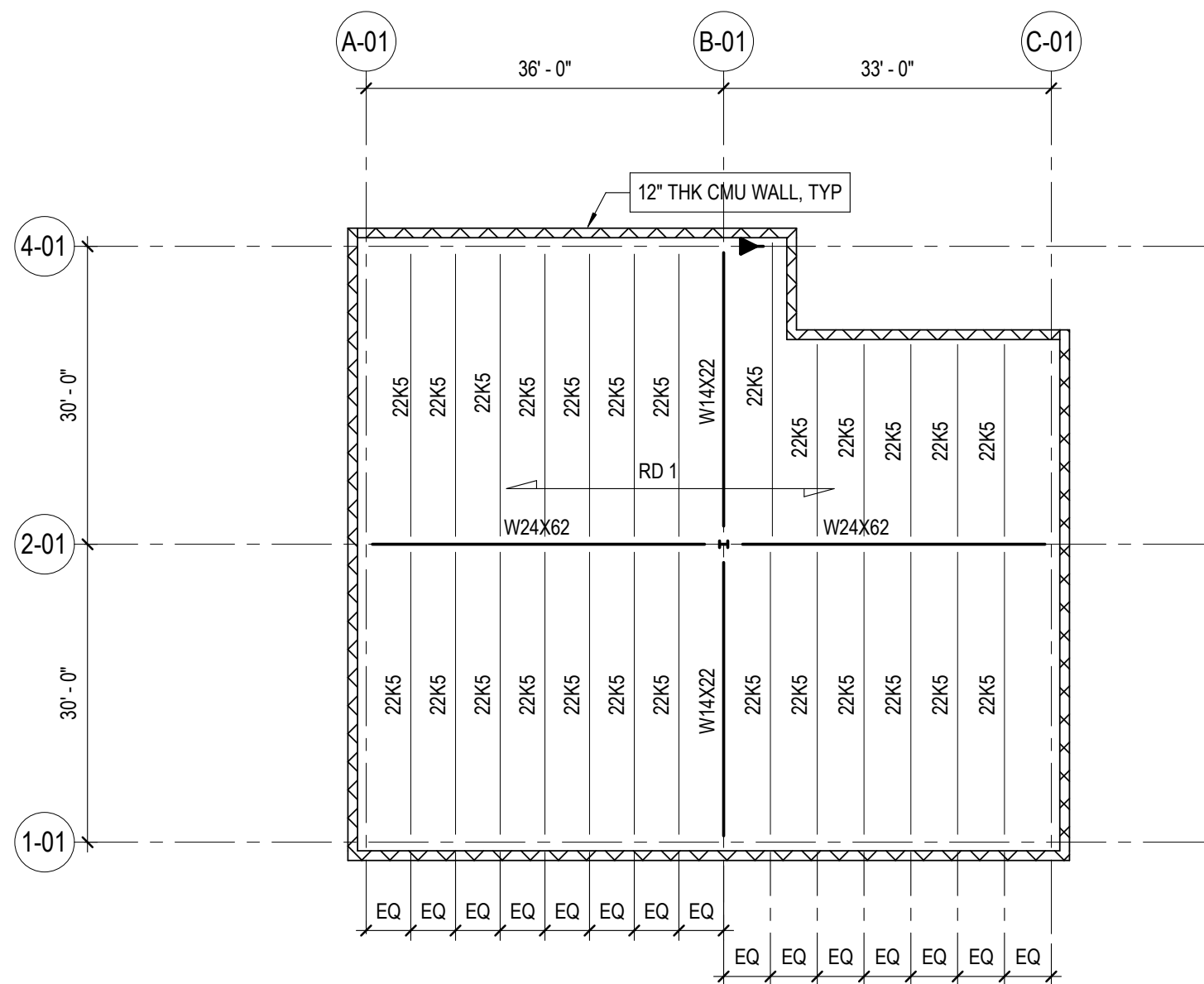
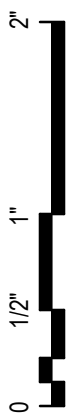
Sheet Number

S-100

Project Status

Concept Design 100% Review Submittal

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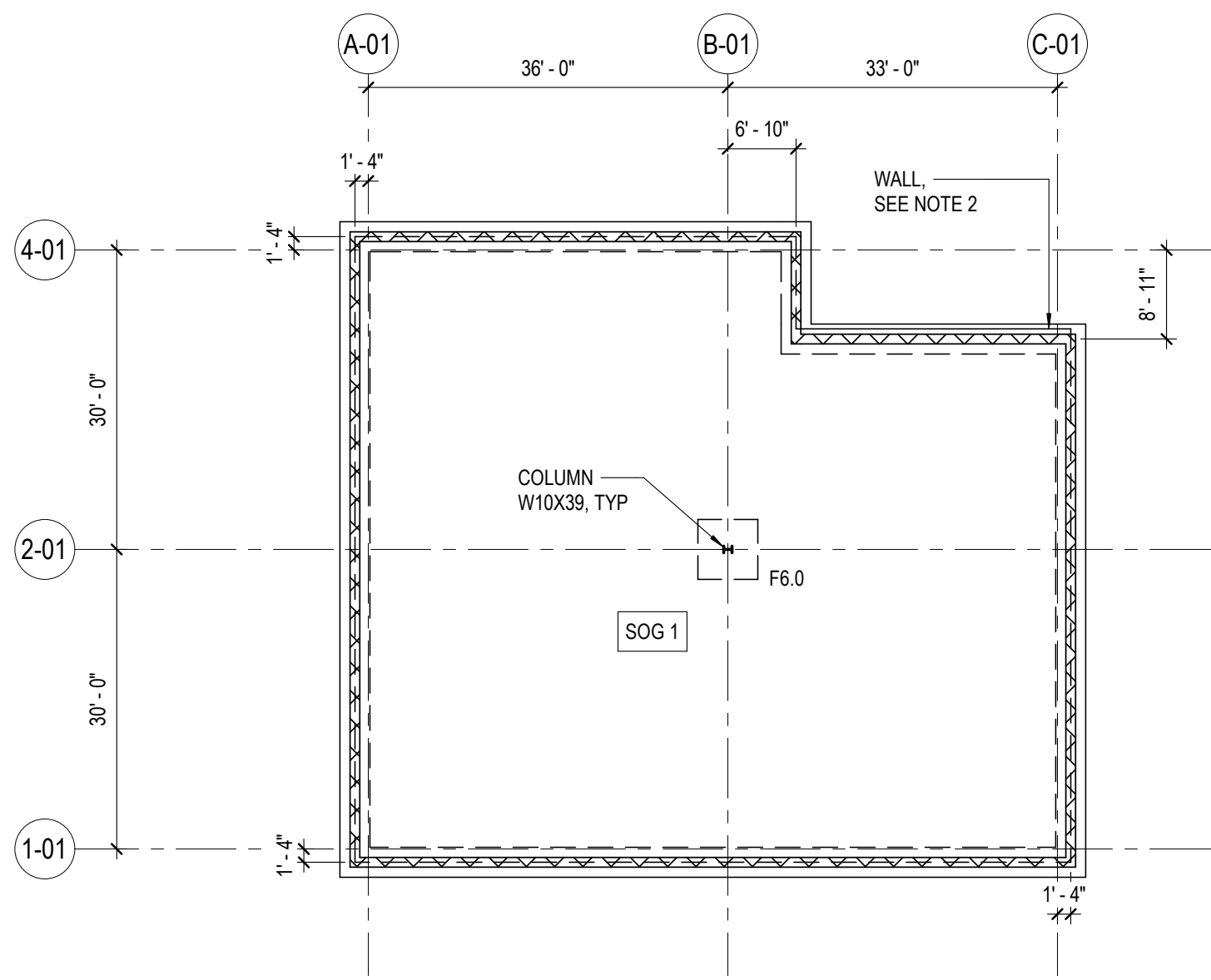
LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM

ALC-01 - ROOF FRAMING PLAN
ALC-03, ALC-09 AND ALC-11 - ROOF FRAMING PLAN, SIMILAR

1/16" = 1'-0"

PLAN NOTES:

- 1.) RD 1 INDICATES 3", 18 GAGE METAL ROOF DECK.
- 2.) TOP OF DECK ELEVATION 22'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 22'-0"
- 3.) TOP OF STEEL ELEVATION 21'-9", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 21'-9"
- 4.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION



LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT

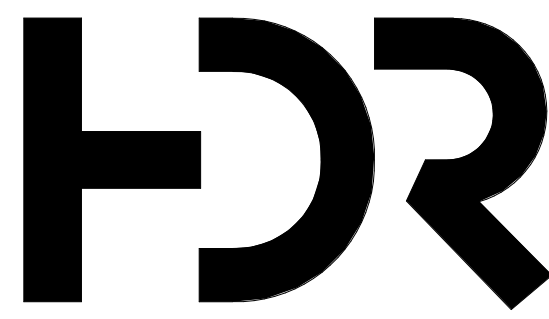
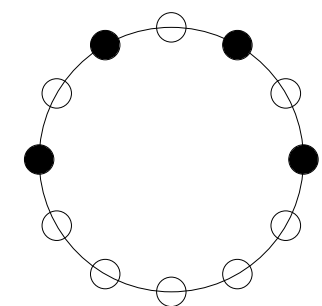
ALC-01 - FOUNDATION PLAN
ALC-03, ALC-09 AND ALC-11 - FOUNDATION PLAN, SIMILAR

1/16" = 1'-0"

PLAN NOTES:

- 1.) 'SOG 1' INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6 - W2.9XW2.9.
- 2.) 12" THICK CMU WALLS ON 3'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- 3.) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0".
- 4.) TOP OF INTERIOR FOOTINGS SHALL BE -1'-11" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE -3'-0" BELOW FINISHED FLOOR FOR FROST, TYPICAL.
- 5.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION.

CMU SHEAR WALL OPTION



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Project Architect Kevin LeMans
Landscape Architect
Civil Engineer Joseph Dennis
Structural Engineer Joseph Krzyzewski
Mechanical Engineer Phil Beadle
Electrical Engineer Kelly Hartshorn
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

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Original Issue 09/25/2020

Sheet Name

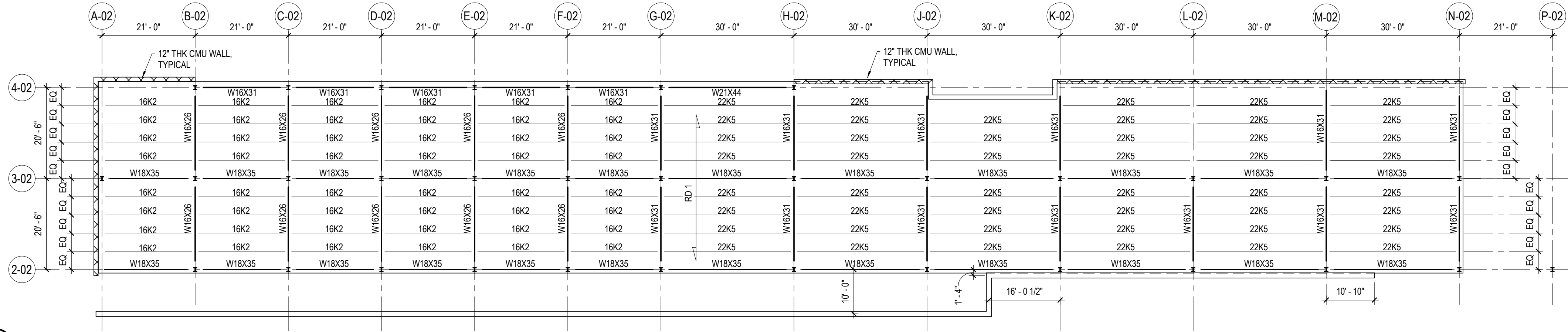
FLOOR PLANS - ALC-01,
ALC-03, ALC-09 & ALC-11
(CMU SHEAR WALL
OPTION)

Sheet Number

S-100A

Project Status
Concept Design 100% Review Submittal

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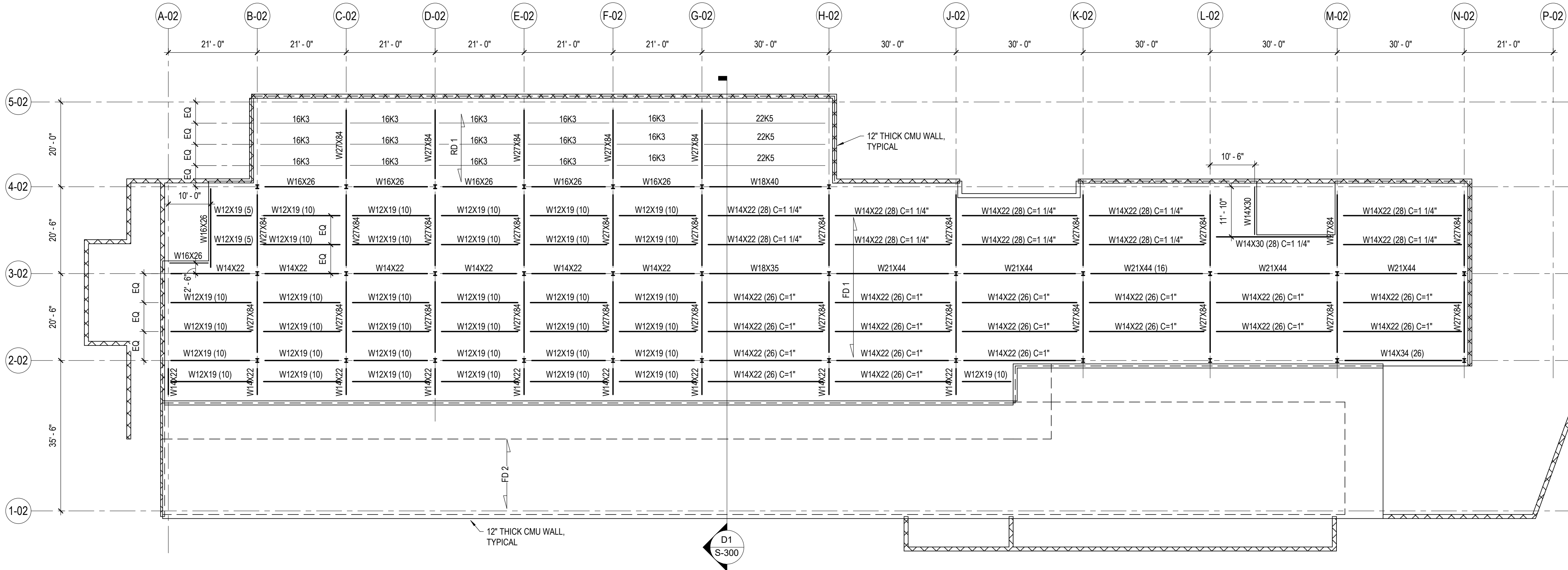
LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM

D5 B1002 - ROOF FRAMING PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1) 'RD 1' INDICATES 3", 18 GAGE METAL ROOF DECK.
- 2) TOP OF DECK ELEVATION 28'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF DECK ELEVATION 28'-0"
- 3) TOP OF STEEL ELEVATION 27'-9", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 27'-9"



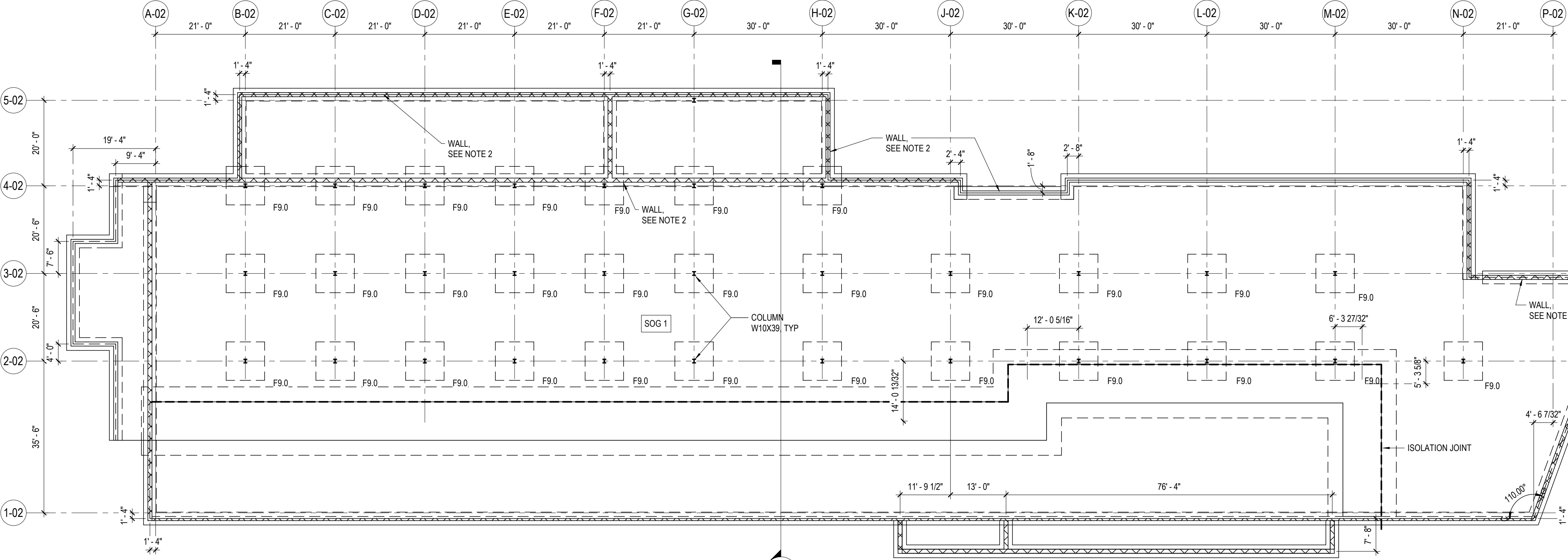
LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM
FLOOR DEAD LOAD	87	STRUCTURE + SUPERIMPOSED LOADING
FLOOR LIVE LOAD	125	

B5 B1002 - FLOOR FRAMING PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1) 'FD 1' INDICATES 2 1/2" THICK NORMAL WEGHT CONCRETE SLAB ON 3", 18 GAGE METAL DECK, REINFORCED WITH WWR 6X6-W2.9XW2.9, (5 1/2" TOTAL SLAB THICKNESS)
- 2) 'RD 1' INDICATES 3", 18 GAGE METAL ROOF DECK.
- 3) 'FD 2' INDICATES HEAVY WEIGHT CONCRETE SLAB, REFER TO D1/S-300 FOR REINFORCEMENT AND THICKNESS
- 4) TOP OF SLAB ELEVATION 17'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF DECK ELEVATION 17'-0"
- 5) TOP OF STEEL ELEVATION 16'-6 1/2", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 16'-6 1/2"



LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT

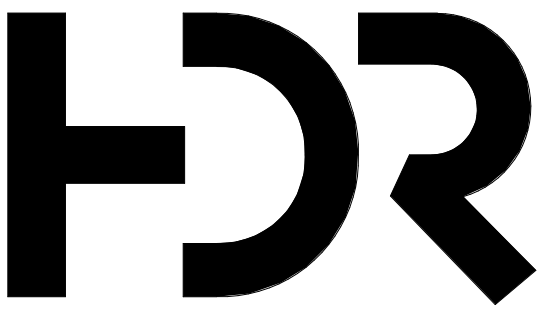
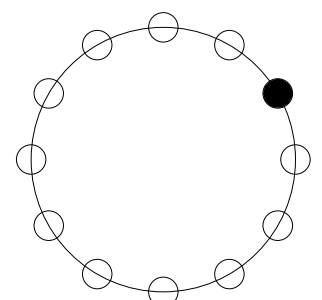
A5 B1002 - FOUNDATION PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1) 'SOG 1' INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6 - W2.9XW2.9.
- 2) 12" THICK CMU WALLS ON 4'-0" WIDE X 12" THICK STRIP FOOTING, TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- 3) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0"
- 4) TOP OF INTERIOR FOOTINGS SHALL BE 1'-0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE 3'-6" BELOW FINISHED FLOOR FOR FROST, TYPICAL.

CMU SHEAR WALL OPTION



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CONSTRUCTION

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Original Issue

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09/25/20

Sheet Name

FLOOR PLANS - B1002
(CMU SHEAR WALL
OPTION)

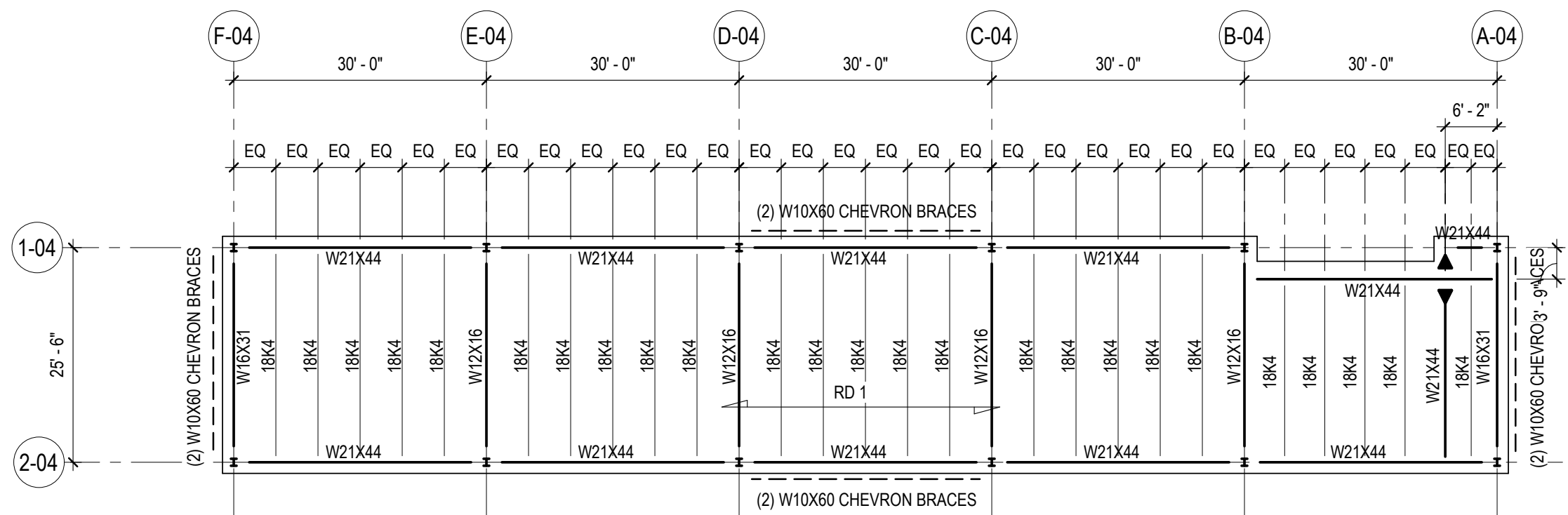
Sheet Number

S-101A

Project Status

Concept Design 100% Review Submittal

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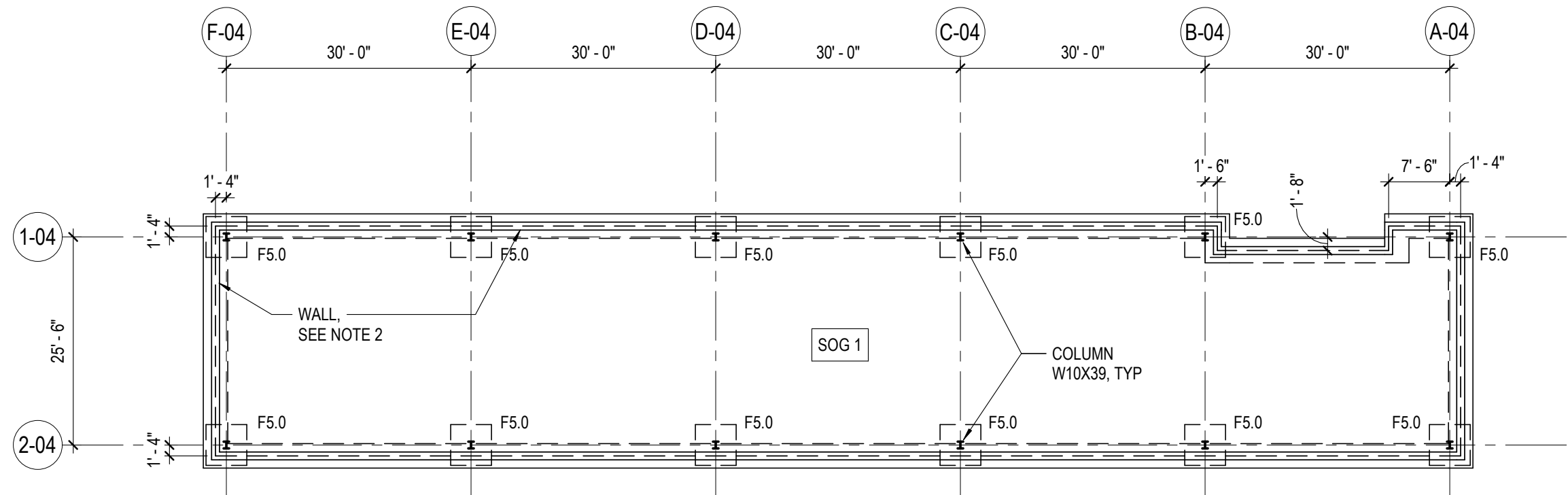
LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM

C5 B1004 - ROOF FRAMING PLAN

1/16" = 1'-0"

PLAN NOTES:

- 'RD' 1" INDICATES 3", 18 GAUGE METAL ROOF DECK.
- TOP OF DECK ELEVATION 15'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF DECK ELEVATION 15'-0"
- TOP OF STEEL ELEVATION 14'-9", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 14'-9"



LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT

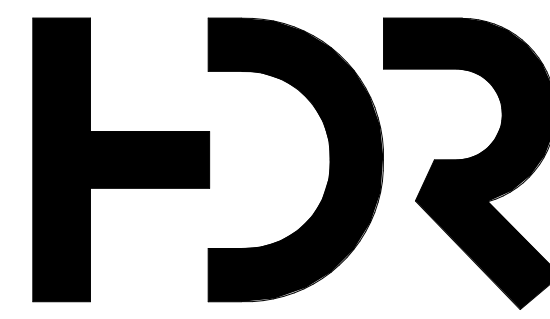
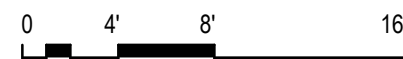
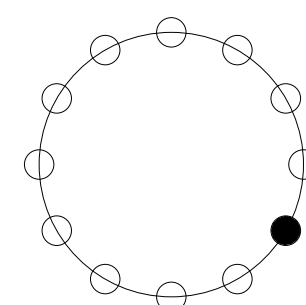
B5 B1004 - FOUNDATION PLAN

1/16" = 1'-0"

PLAN NOTES:

- 'SOG' 1" INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6 - W2.5XW2.5.
- 12" THICK CMU FROST WALLS ON 2'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0"
- TOP OF INTERIOR FOOTINGS SHALL BE -1'-0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE -3'-0" BELOW FINISHED FLOOR FOR FROST, TYPICAL.

STEEL BRACED FRAME OPTION



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Sheet Reviewer

Author

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CONSTRUCTION

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Original Issue

10235960
09/25/20

Sheet Name

FLOOR PLANS - B1004
(STEEL BRACED FRAME
OPTION)

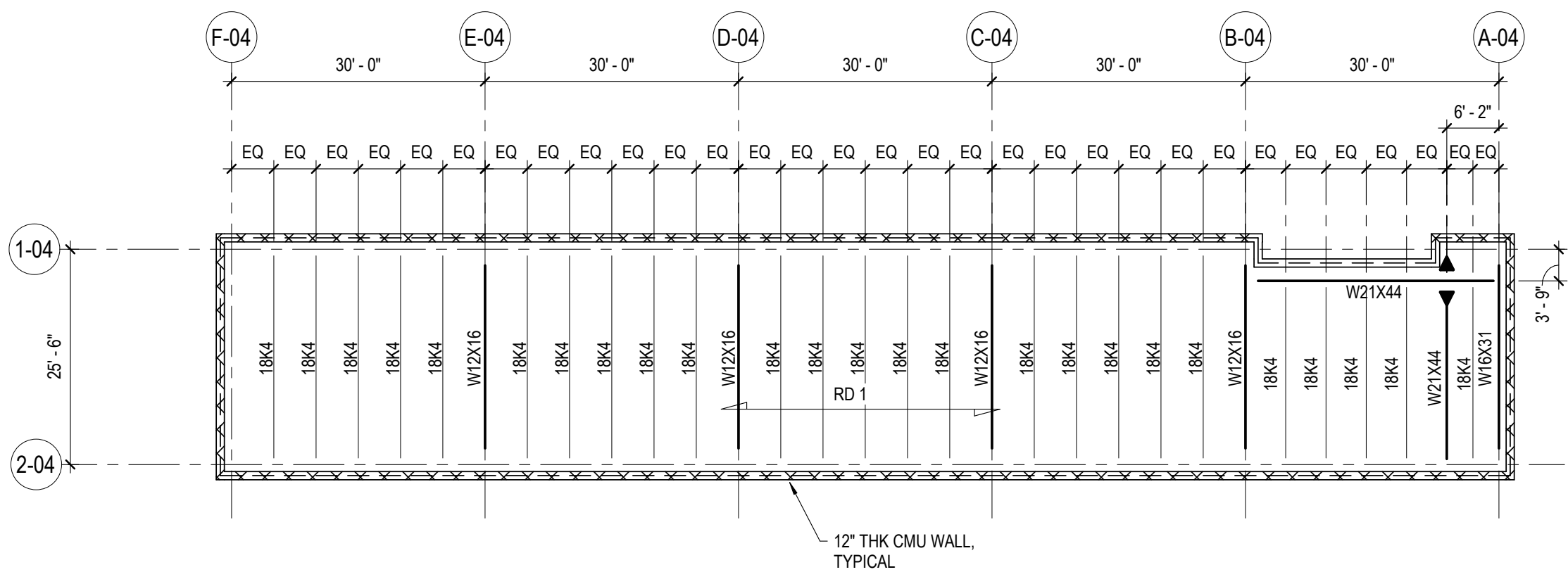
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S-103

Project Status

Concept Design 100% Review Submittal

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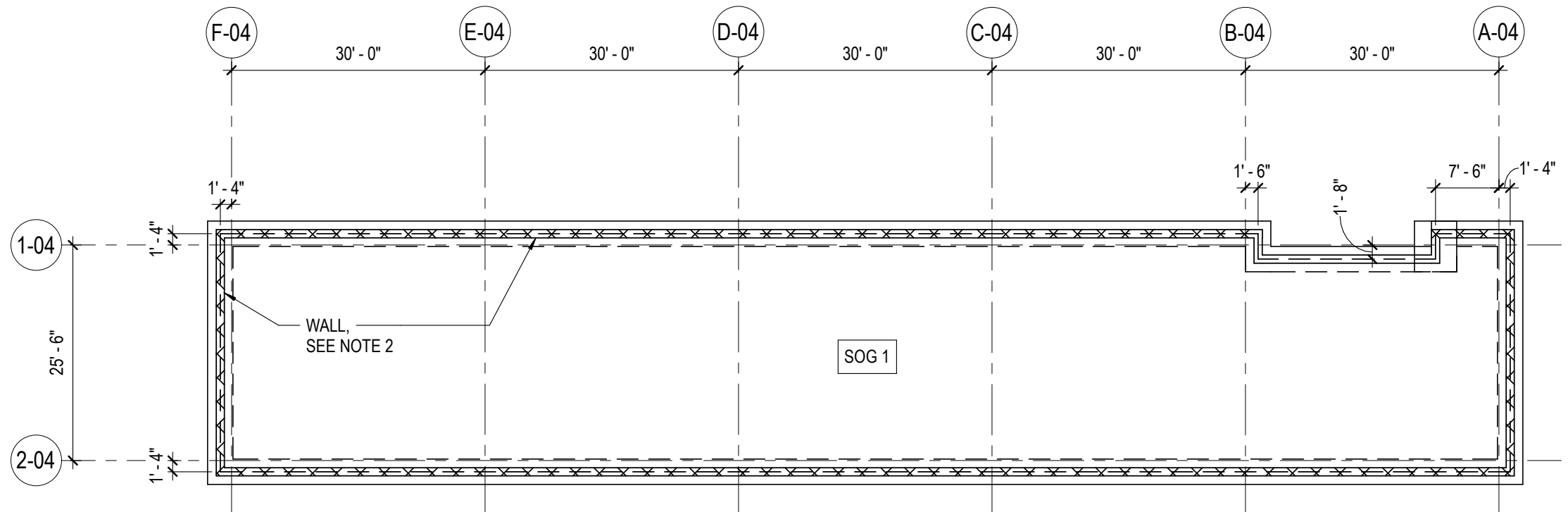
LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM

C5 B1004 - ROOF FRAMING PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1.) 'RD 1" INDICATES 3", 18 GAGE METAL ROOF DECK.
- 2.) TOP OF DECK ELEVATION 15'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 15'-0"
- 3.) TOP OF STEEL ELEVATION 14'-9", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 14'-9"



LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT

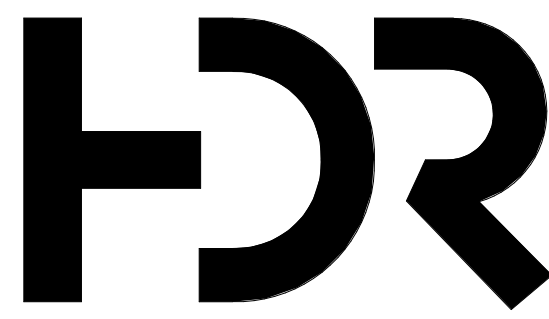
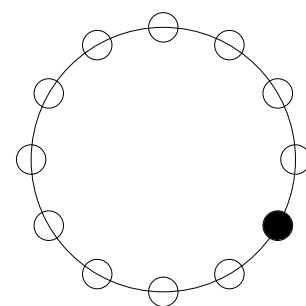
B5 B1004 - FOUNDATION PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1.) 'SOG 1" INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6 - W2.9XW2.9.
- 2.) 12" THICK CMU WALLS ON 3'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- 3.) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0".
- 4.) TOP OF INTERIOR FOOTINGS SHALL BE -1'-0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE -3'-6" BELOW FINISHED FLOOR FOR FROST, TYPICAL.
- 5.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION.

CMU SHEAR WALL OPTION



HDR Architecture
HDR Arlington
3001 Washington Blvd,
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Arlington, VA 22201

Brookhaven National
Laboratory
Electron Ion Collider



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer	Author
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MARK	DATE	DESCRIPTION
	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

NOT FOR
CONSTRUCTION

Project Number	10235960
Original Issue	09/25/20

Sheet Name

FLOOR PLANS - B1004
(CMU SHEAR WALL
OPTION)

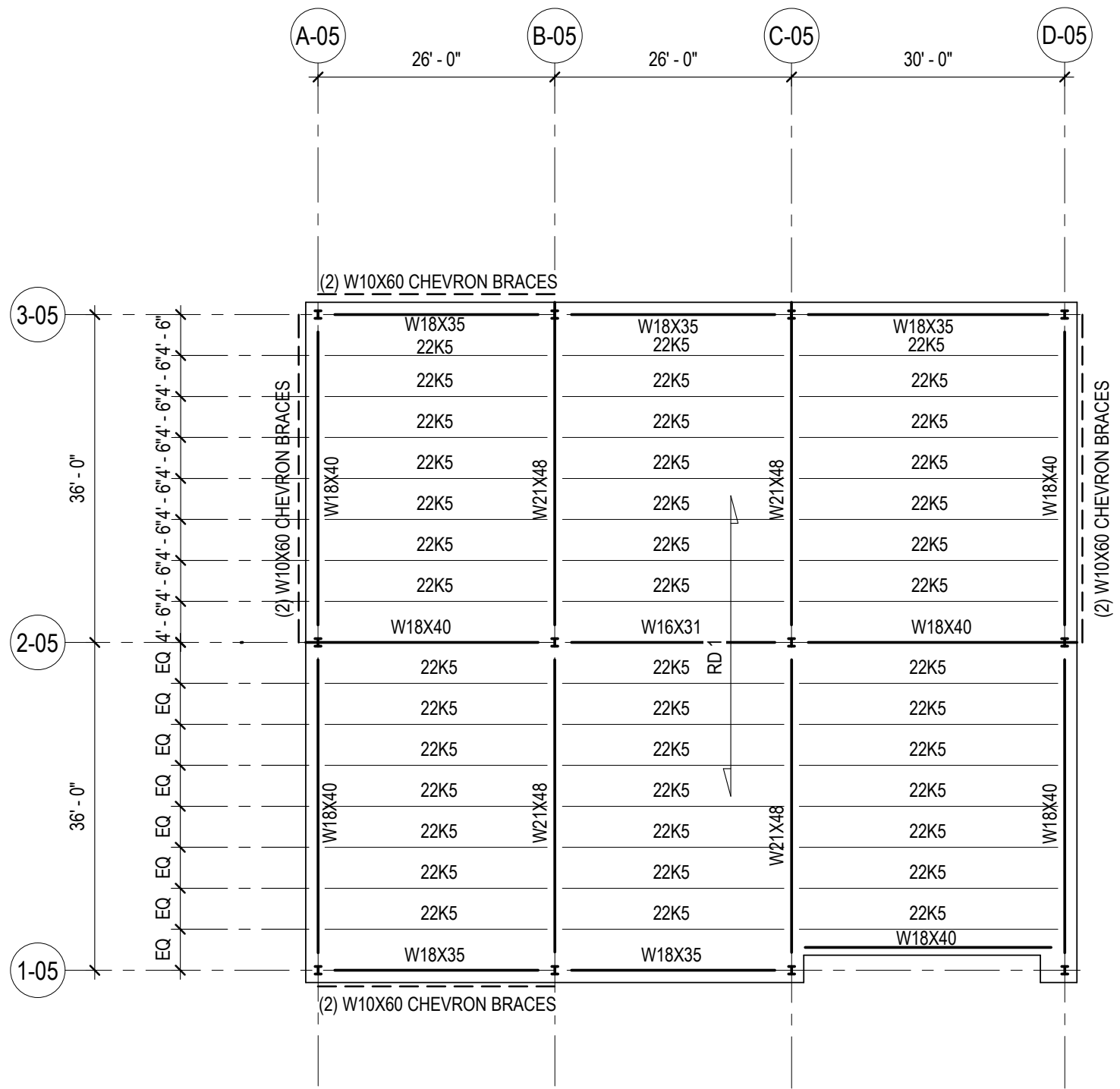
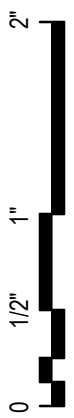
Sheet Number

S-103A

Project Status

Concept Design 100% Review Submittal

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LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM

C5

ALC 05 - ROOF FRAMING PLAN

1/16" = 1'-0"

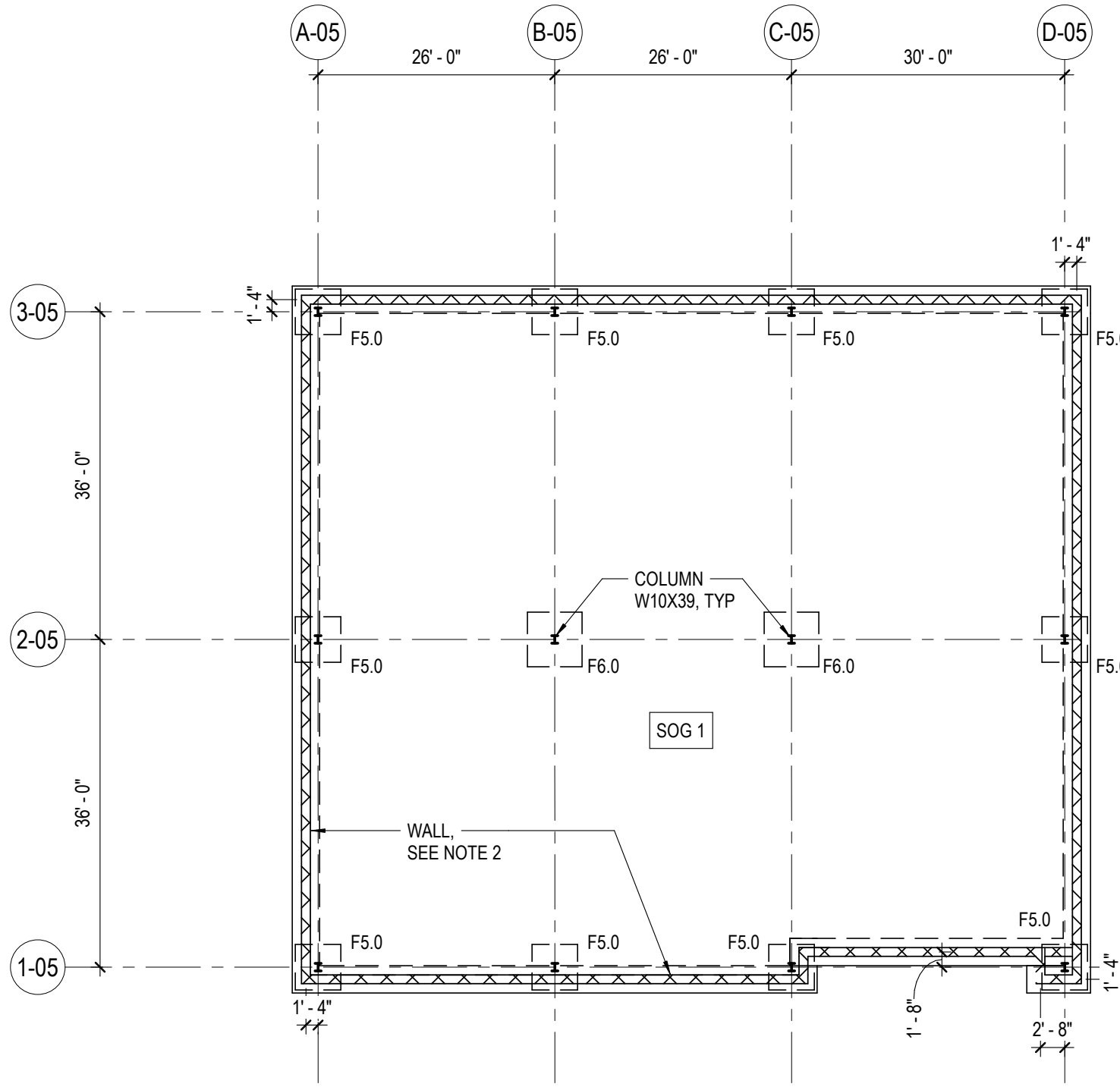
PLAN NOTES:

1.) RD 1" INDICATES 3", 18 GAGE METAL ROOF DECK.

2.) TOP OF DECK ELEVATION 22'-0", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 22'-0"

3.) TOP OF STEEL ELEVATION 21'-9", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 21'-9"

4.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION



LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT

A5

ALC 05 - FOUNDATION PLAN

1/16" = 1'-0"

PLAN NOTES:

1.) SOG 1" INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6 - W2.9XW2.9.

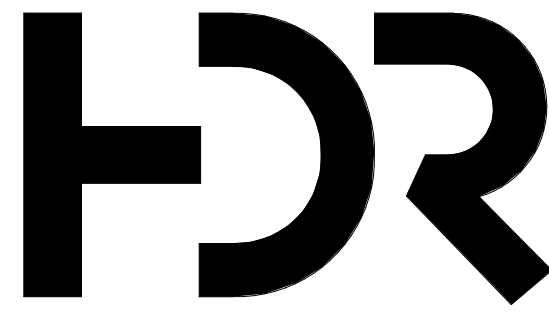
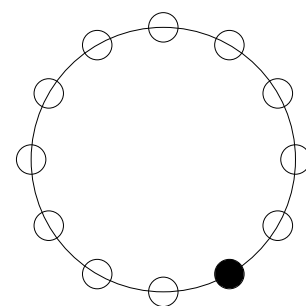
2.) 12" THICK CMU FROST WALLS ON 2'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.

3.) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0"

4.) TOP OF INTERIOR FOOTINGS SHALL BE 1'-0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE 3'-6" BELOW FINISHED FLOOR FOR FROST, TYPICAL.

5.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION.

STEEL BRACED FRAME OPTION



HDR Architecture
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Brookhaven National
Laboratory
Electron Ion Collider



Project Manager	Gabriela Kleiman
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Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer Author

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	11/06/2020	100% Review Submittal

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CONSTRUCTION

Project Number 10235960
Original Issue 09/25/20

Sheet Name

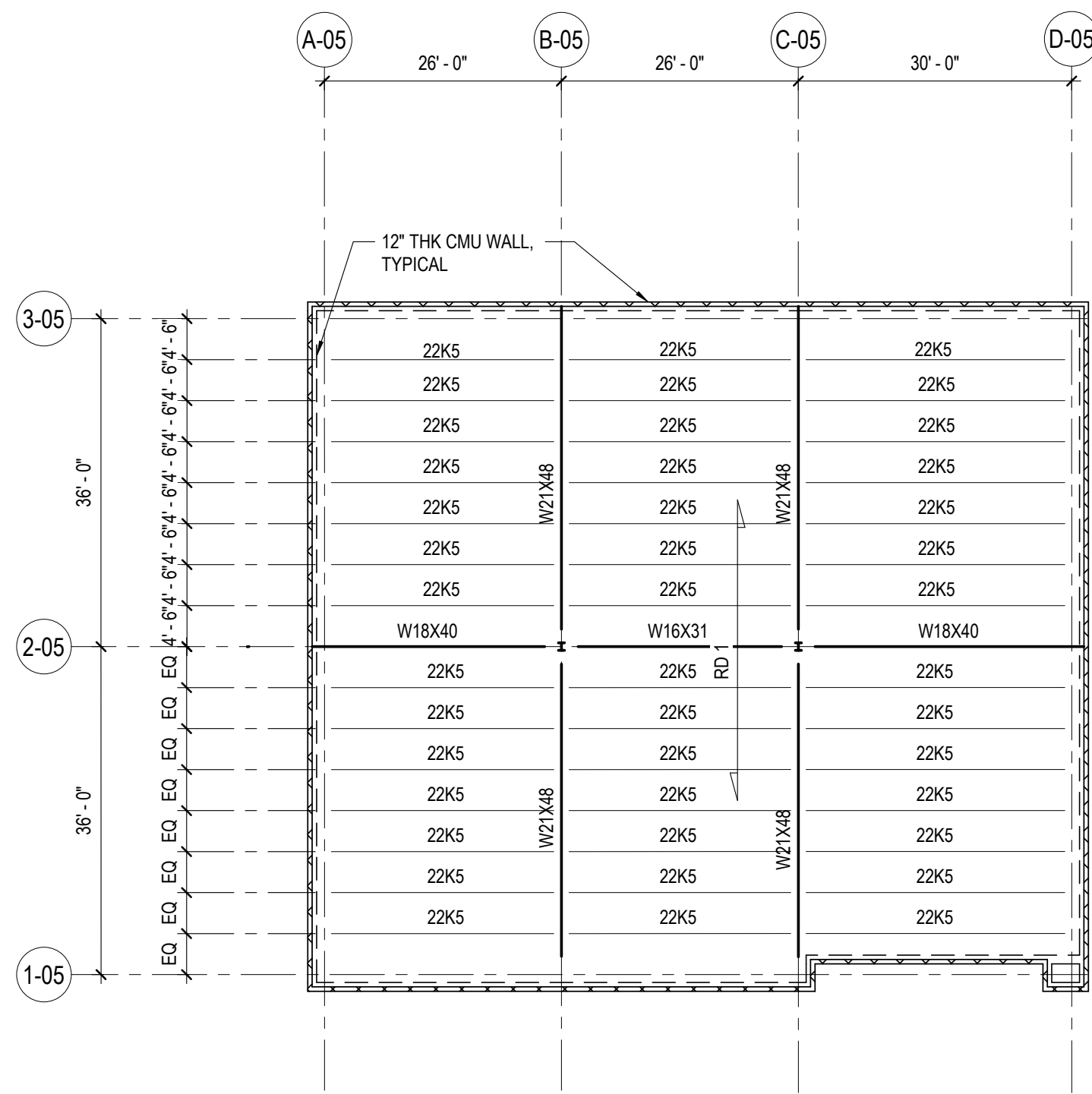
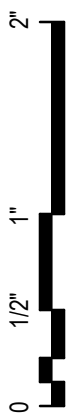
FLOOR PLANS - ALC-05
(STEEL BRACED FRAME
OPTION)

Sheet Number

S-104

Project Status
Concept Design 100% Review Submittal

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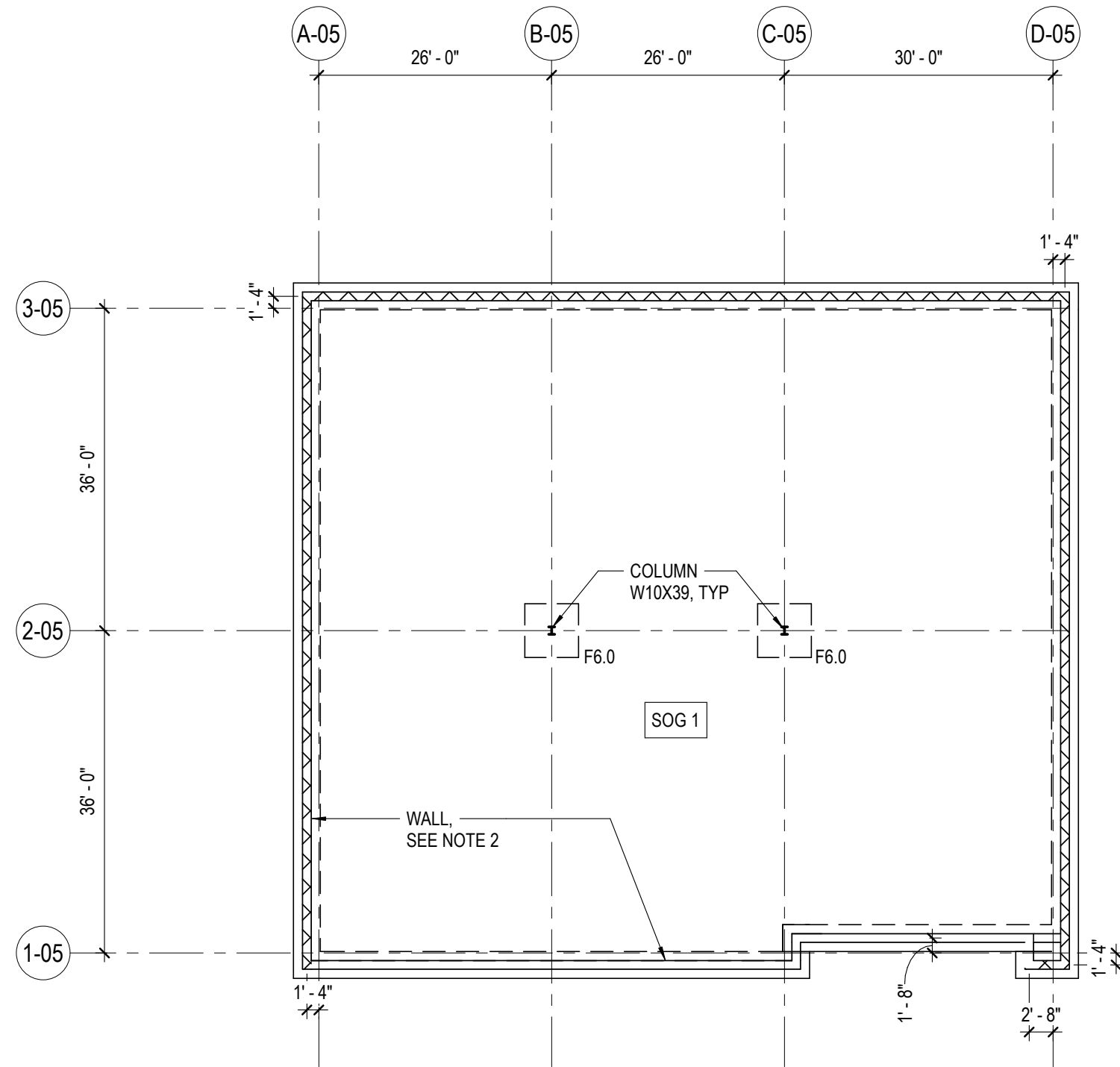
LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM

C5 ALC 05 - ROOF FRAMING PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1.) 'RD 1' INDICATES 3", 18 GAGE METAL ROOF DECK.
- 2.) TOP OF DECK ELEVATION 22'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 22'-0"
- 3.) TOP OF STEEL ELEVATION 21'-9", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF STEEL ELEVATION 21'-9"
- 4.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION



A5 ALC 05 - FOUNDATION PLAN

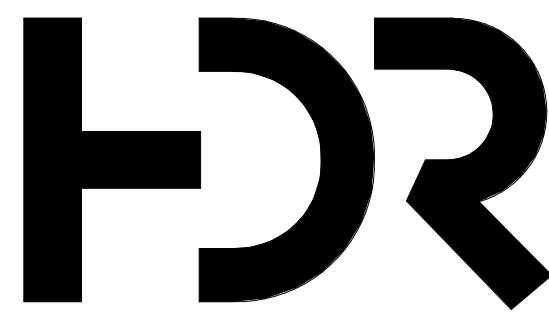
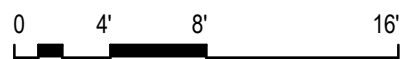
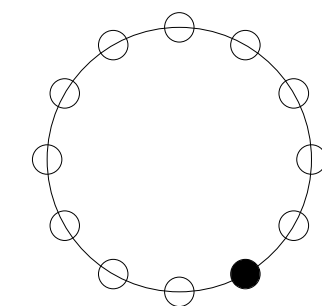
1/16" = 1'-0"

PLAN NOTES:

- 1.) 'SOG 1' INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6 - W2.9XW2.9
- 2.) 12" THICK CMU WALLS ON 3'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- 3.) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0"
- 4.) TOP OF INTERIOR FOOTINGS SHALL BE 1'-1" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE 3'-6" BELOW FINISHED FLOOR FOR FROST, TYPICAL.
- 5.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION.

LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT

CMU SHEAR WALL OPTION



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Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

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Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Katy Hartshorn

Sheet Reviewer | Author

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	11/06/2020	100% Review Submittal

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CONSTRUCTION

Project Number
Original Issue

10235960
09/25/20

Sheet Name

FLOOR PLANS - ALC-05
(CMU SHEAR WALL
OPTION)

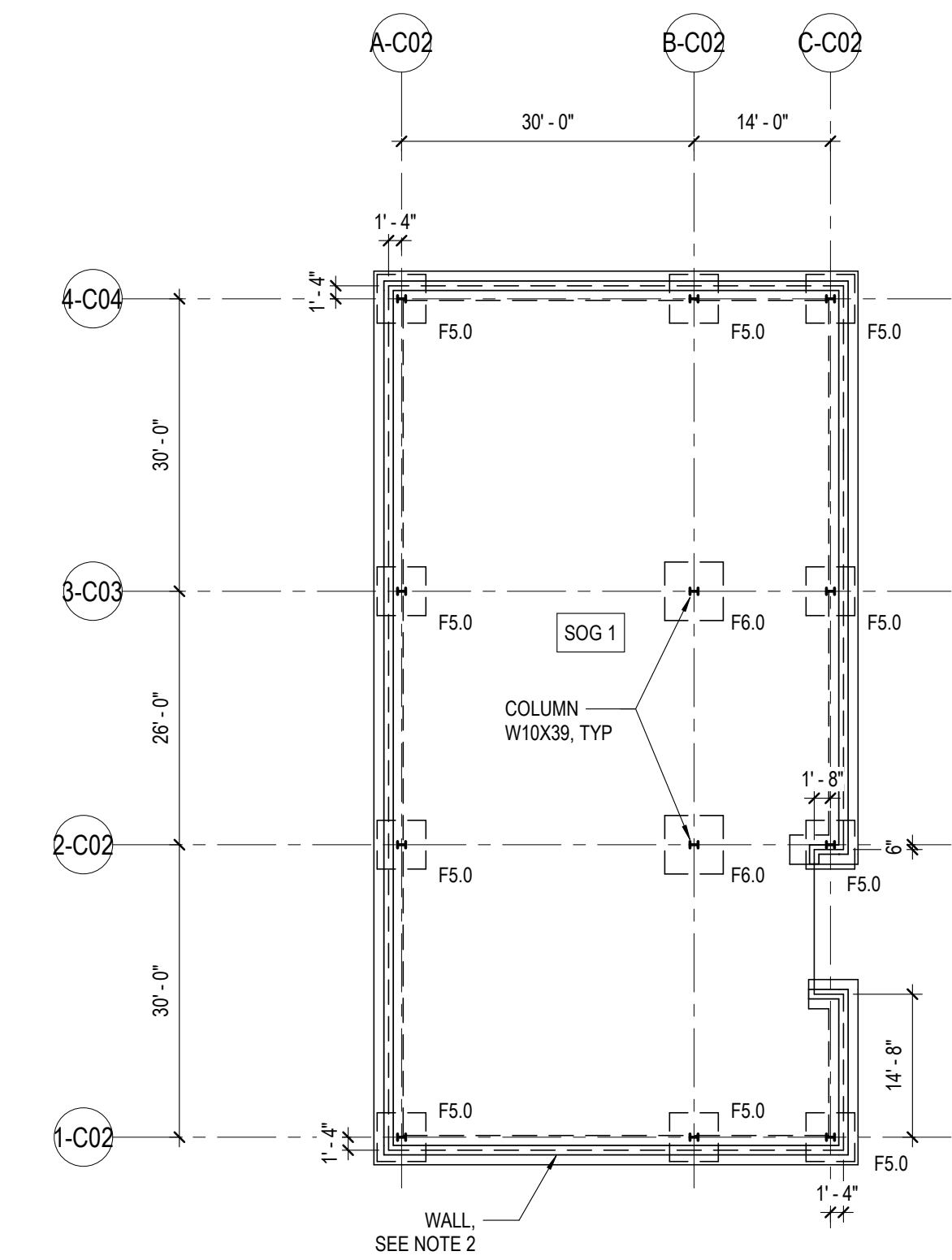
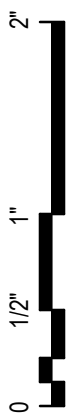
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S-104A

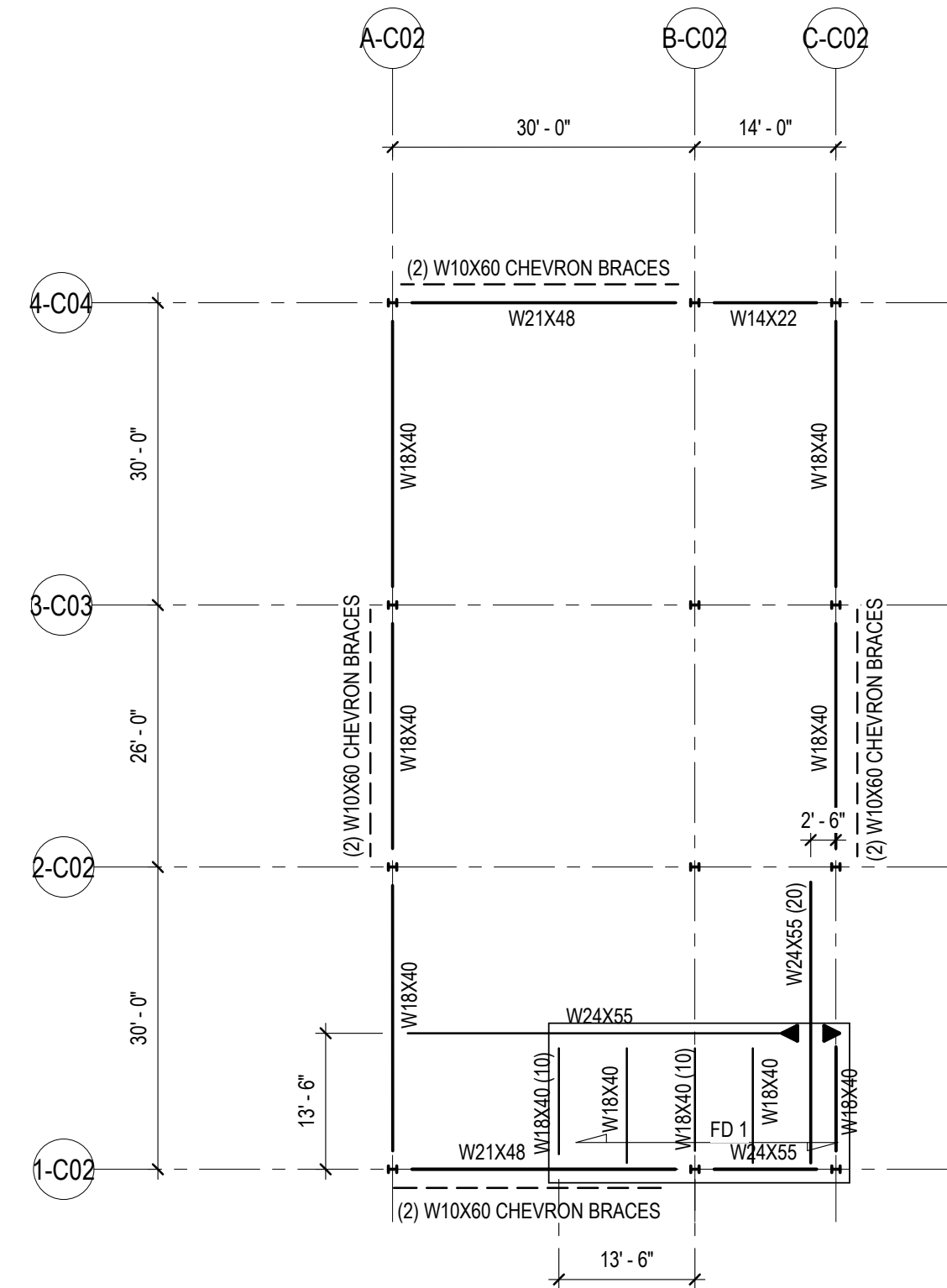
Project Status

Concept Design 100% Review Submittal

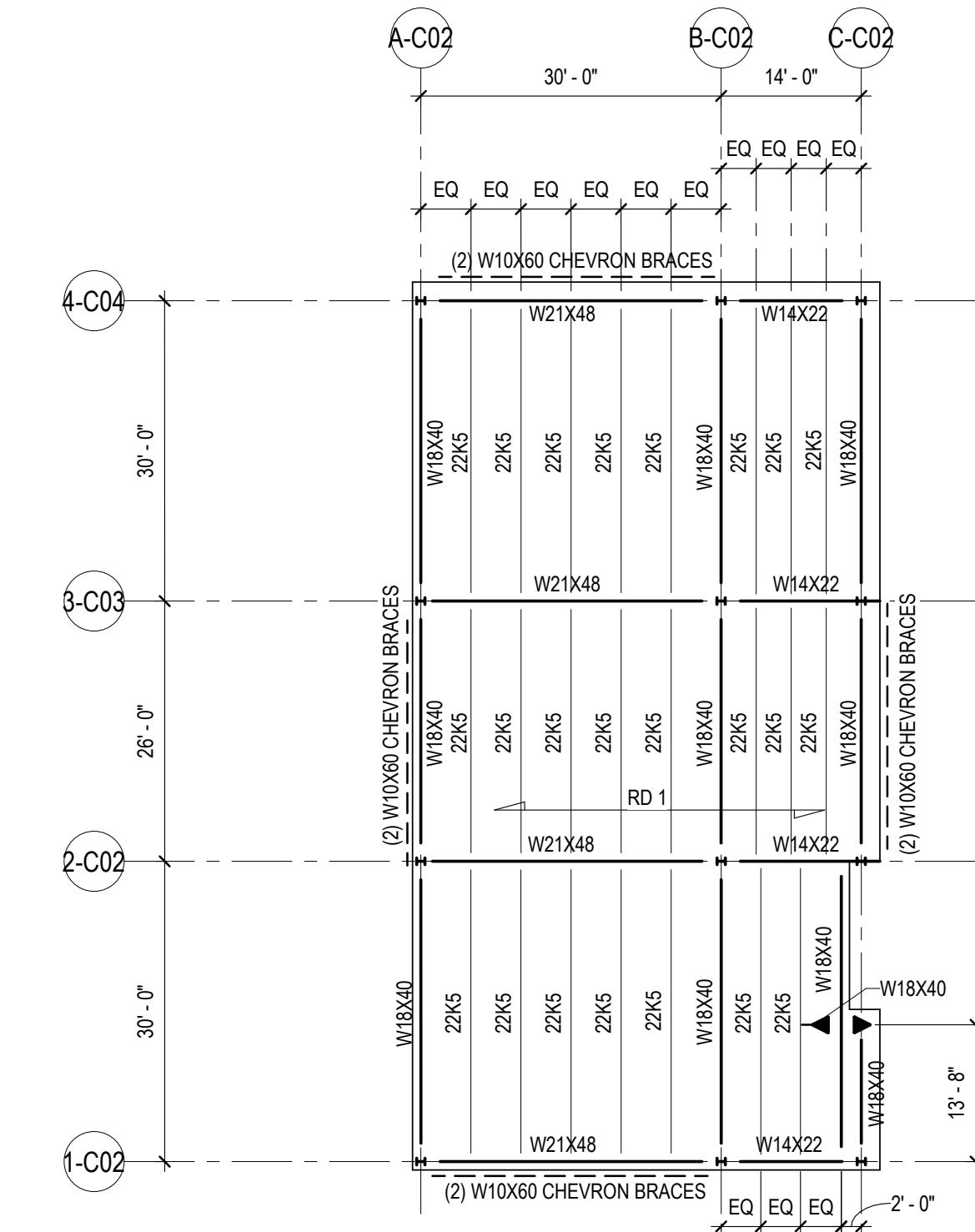
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A5 CRYO 1002 - FOUNDATION PLAN
CRYO 1006 - FOUNDATION PLAN, SIMILAR
1/16" = 1'-0"
PLAN NOTES:
1.) SOG 1" INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6 - W2.9XW2.9.
2.) 12" THICK CMU FROST WALLS ON 2'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
3.) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0".
4.) TOP OF INTERIOR FOOTINGS SHALL BE -1' - 0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE -3' - 6" BELOW FINISHED FLOOR FOR FROST, TYPICAL.

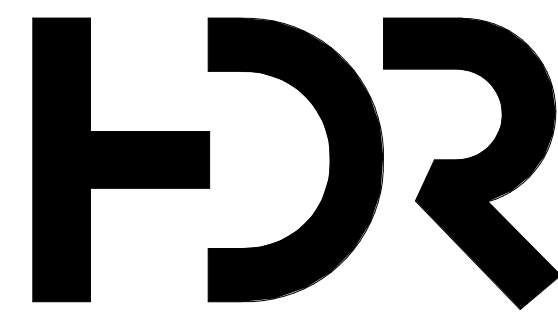
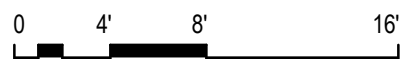
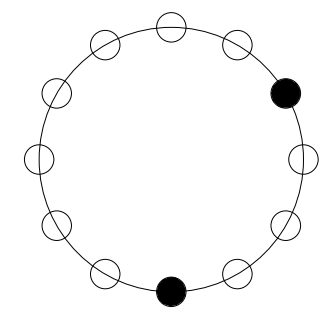


A3 CRYO 1002 - FLOOR FRAMING PLAN
CRYO 1006 - FLOOR FRAMING PLAN, SIMILAR
1/16" = 1'-0"
PLAN NOTES:
1.) 'FD 1" INDICATES 2 1/2" THICK NORMAL WIEGHT CONCRETE SLAB ON 3", 18 GAGE METAL DECK, REINFORCED WITH WWR 6X6-W2.9XW2.9, (5 1/2" TOTAL SLAB THICKNESS)
2.) TOP OF SLAB ELEVATION 10'-0", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 10'-0"
3.) TOP OF STEEL ELEVATION 9'-6 1/2", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 9'-6 1/2"



A2 CRYO 1002 - ROOF FRAMING PLAN,
CRYO 1006 - ROOF FRAMING PLAN, SIMILAR
1/16" = 1'-0"
PLAN NOTES:
1.) 'RD 1" INDICATES 3", 18 GAGE METAL ROOF DECK.
2.) TOP OF DECK ELEVATION 22'-0", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 22'-0"
3.) TOP OF STEEL ELEVATION 21'-9", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 21'-9"
4.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION

STEEL BRACED FRAME OPTION



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Brookhaven National
Laboratory
Electron Ion Collider



Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kelly Hartshorn

Sheet Reviewer Author

MARK	DATE	DESCRIPTION
	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/25/20

Sheet Name

FLOOR PLANS - CRYO 1002
AND CRYO 1006 (STEEL
BRACED FRAME OPTION)

Sheet Number

S-105

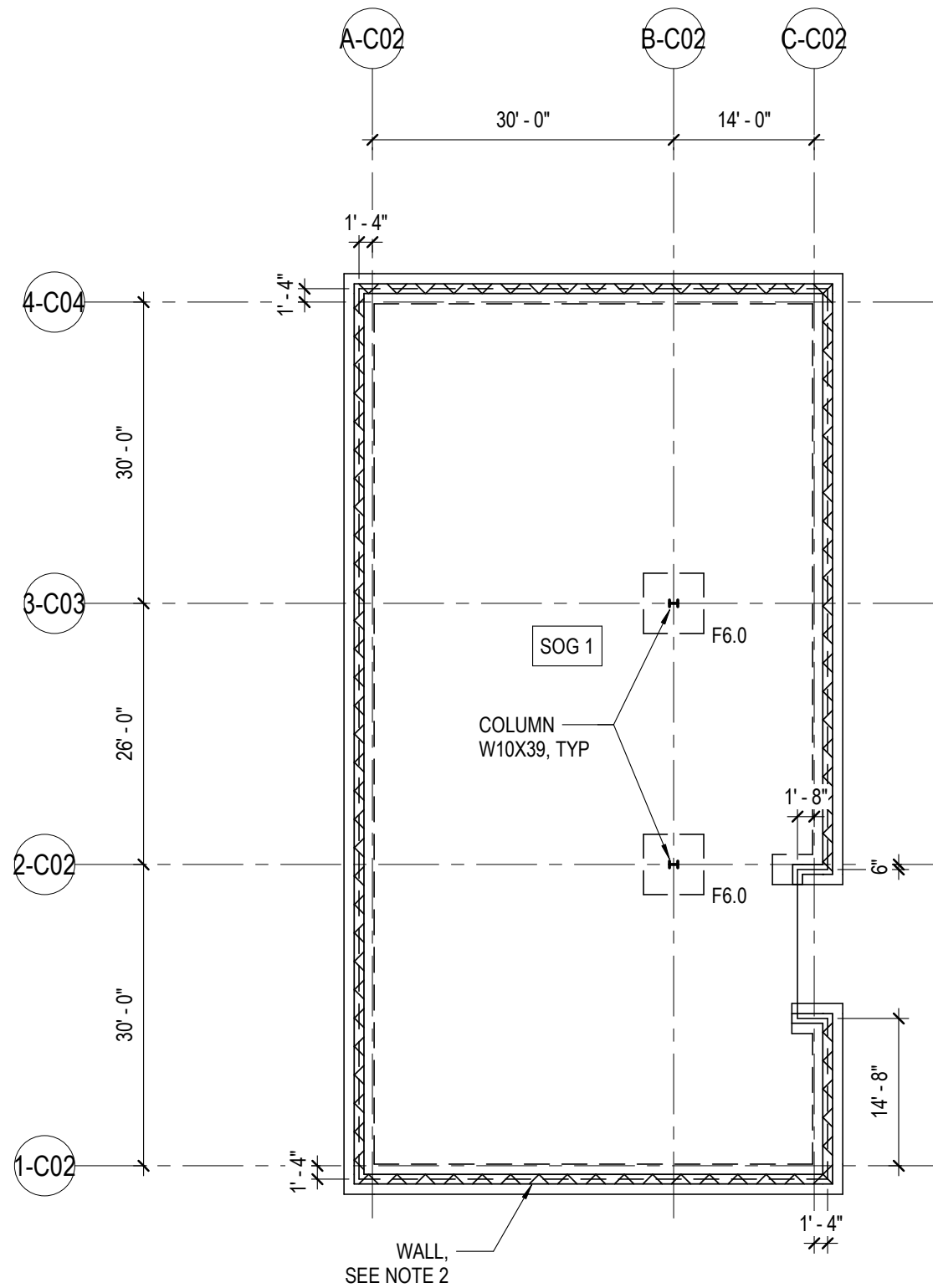
Project Status

Concept Design 100% Review Submittal

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LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT



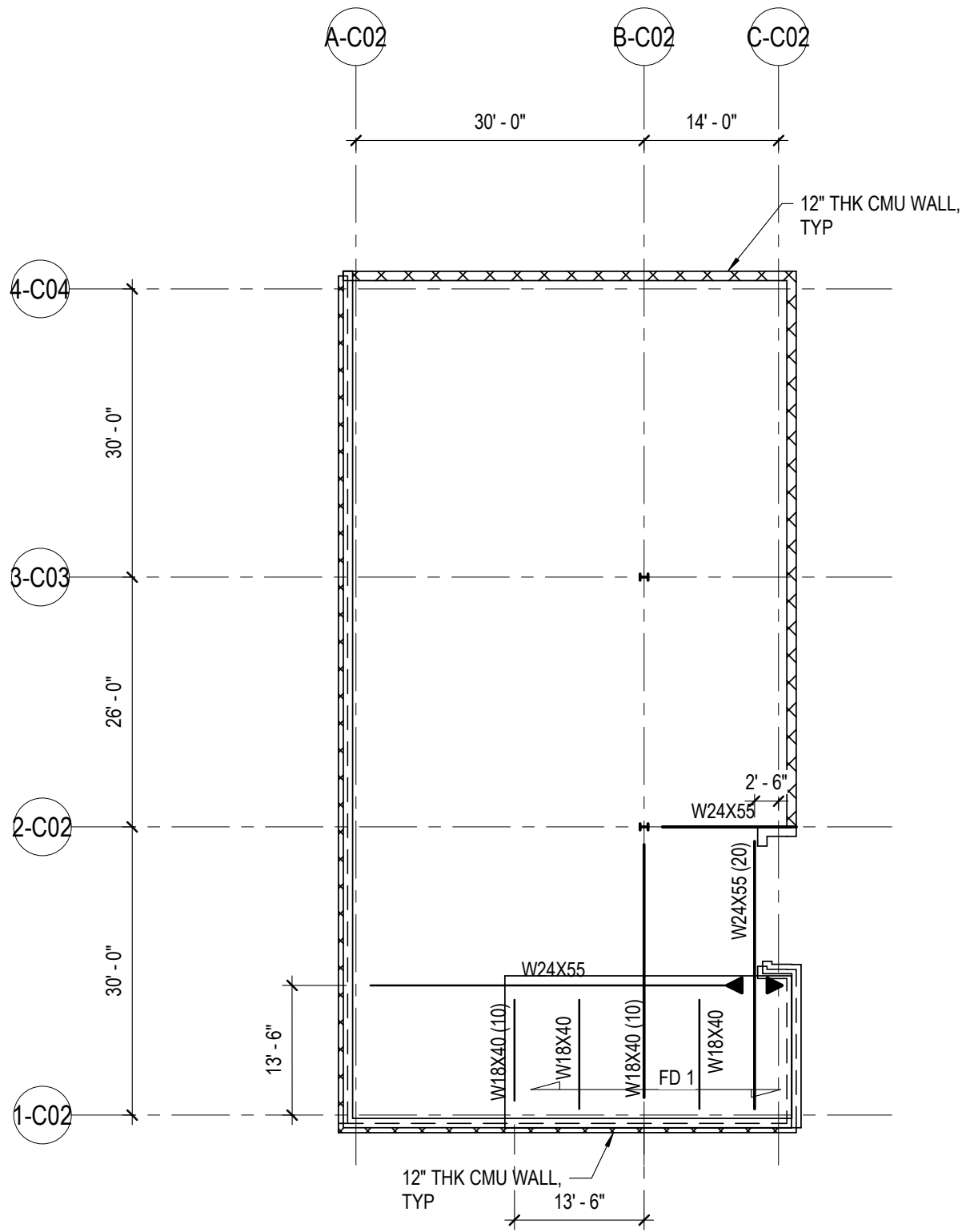
CRYO 1002 - FOUNDATION PLAN,
CRYO 1006 FOUNDATION PLAN, SIMILAR

1/16" = 1'-0"

PLAN NOTES:

- 1.) SOG 1 INDICATES 8" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 8" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6 - W2.9XW2.9.
- 2.) 12" THICK CMU WALLS ON 3'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- 3.) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0".
- 4.) TOP OF INTERIOR FOOTINGS SHALL BE -1'-0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE -3'-6" BELOW FINISHED FLOOR FOR FROST, TYPICAL.

LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
FLOOR DEAD LOAD	97	STRUCTURE + SUPERIMPOSED LOADING
FLOOR LIVE LOAD	125	



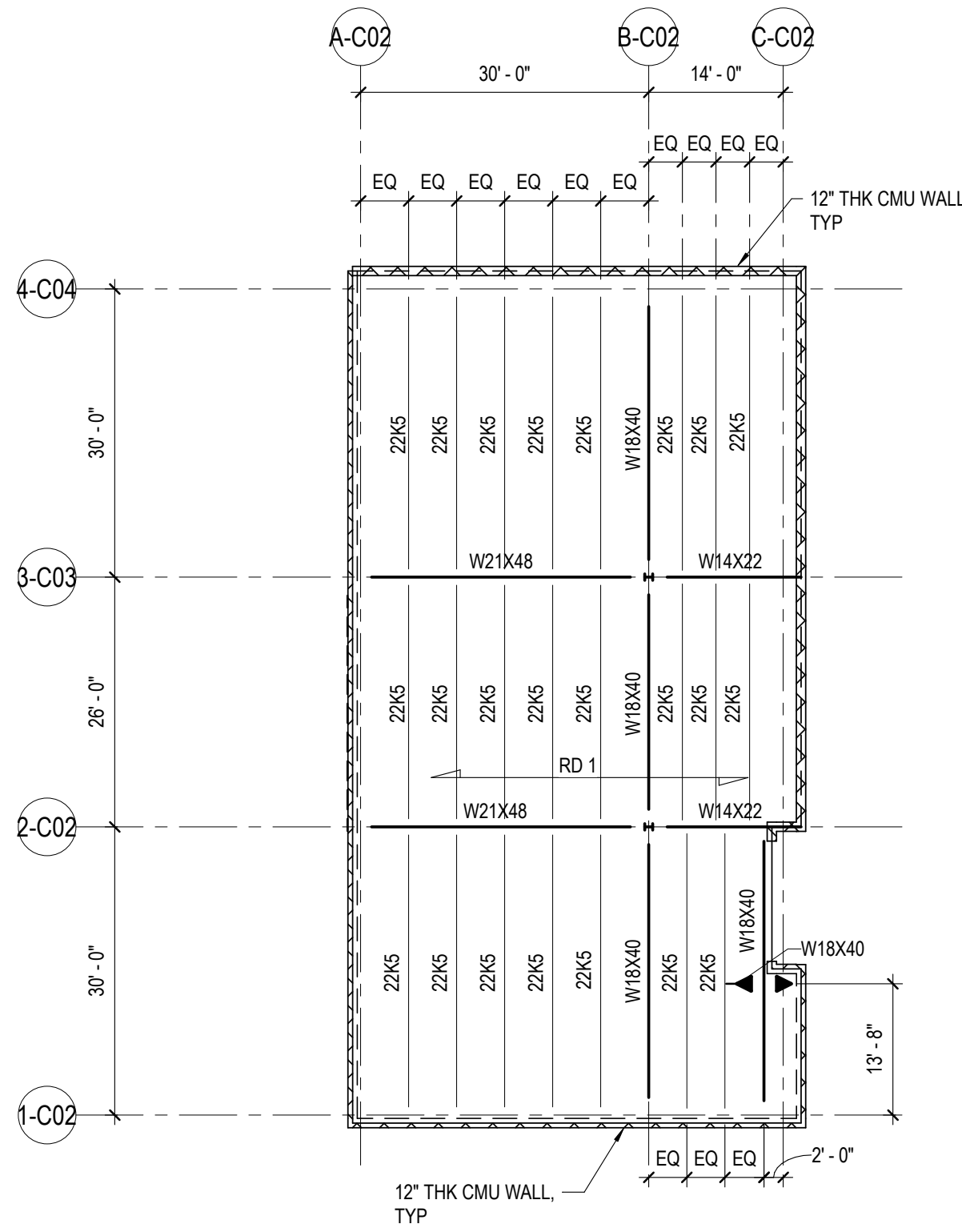
CRYO 1002 - FLOOR FRAMING PLAN,
CRYO 1006 - FLOOR FRAMING PLAN, SIMILAR

1/16" = 1'-0"

PLAN NOTES:

- 1.) 'FD 1' INDICATES 2 1/2" THICK NORMAL WEIGHT CONCRETE SLAB ON 3", 18 GAGE METAL DECK, REINFORCED WITH WWR 6X6-W2.9XW2.9, (5 1/2" TOTAL SLAB THICKNESS)
- 2.) TOP OF SLAB ELEVATION 10'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 10'-0"
- 3.) TOP OF STEEL ELEVATION 9'-6 1/2", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 9'-6 1/2"

LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM



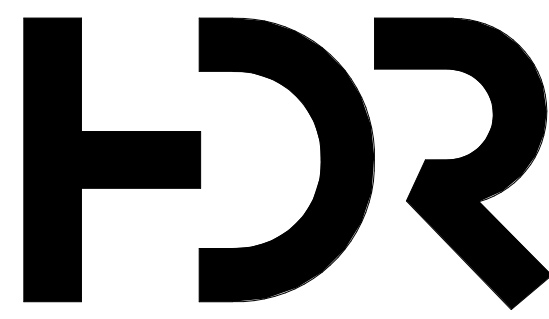
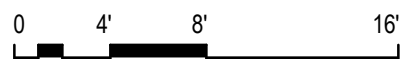
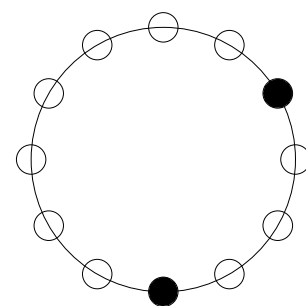
CRYO 1002 - ROOF FRAMING PLAN,
CRYO 1006 - ROOF FRAMING PLAN, SIMILAR

1/16" = 1'-0"

PLAN NOTES:

- 1.) 'RD 1' INDICATES 3", 18 GAGE METAL ROOF DECK
- 2.) TOP OF DECK ELEVATION 22'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 22'-0"
- 3.) TOP OF STEEL ELEVATION 21'-9", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 21'-9"
- 4.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION

CMU SHEAR WALL OPTION



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Phil Beadle
Kelly Hartshorn

Sheet Reviewer

Author

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	11/06/2020	100% Review Submittal

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CONSTRUCTION

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Original Issue

10235960
09/25/20

Sheet Name

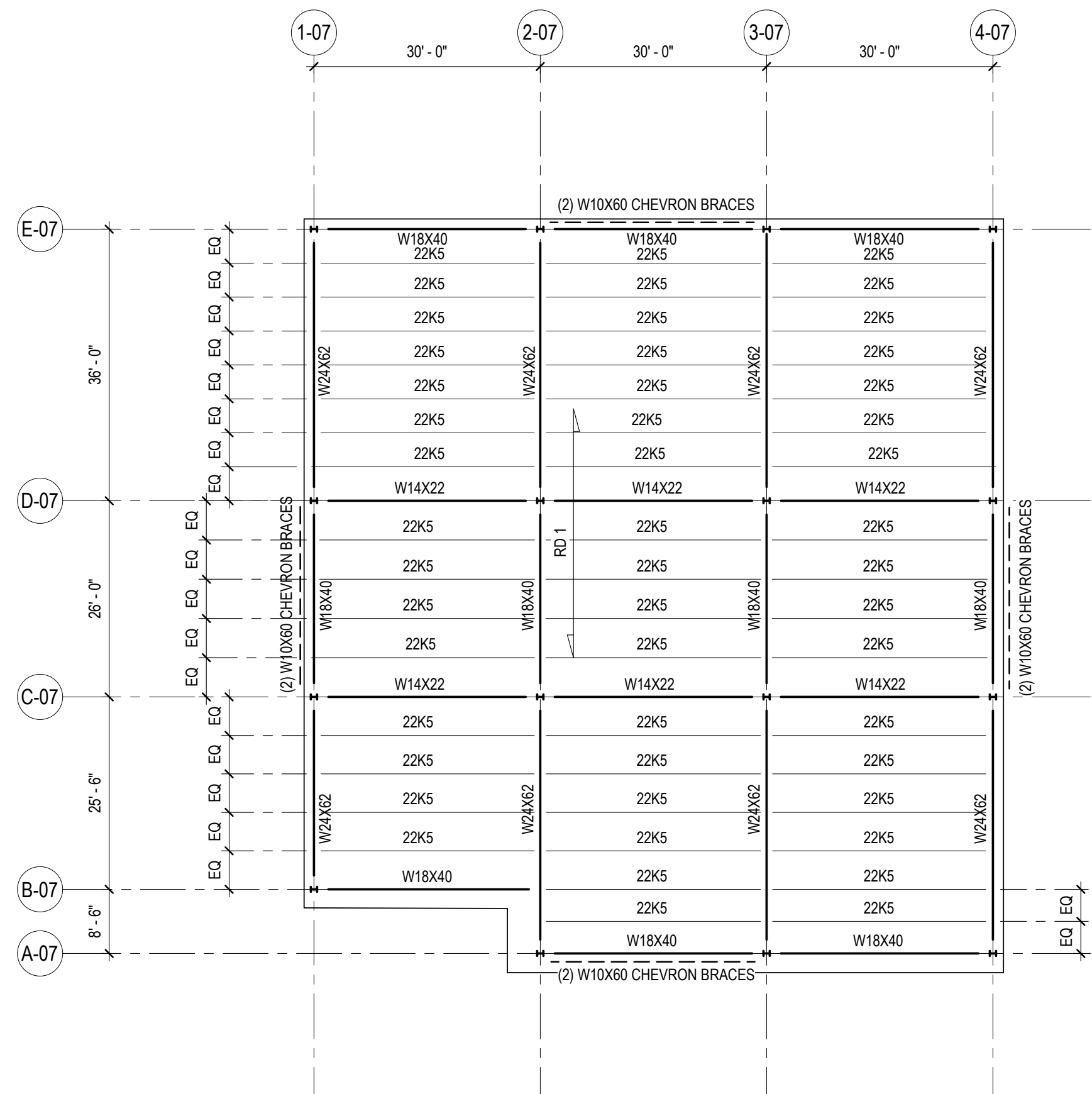
FLOOR PLANS - CRYO 1002
AND CRYO 1006 (CMU
SHEAR WALL OPTION)

Sheet Number

S-105A

Project Status

Concept Design 100% Review Submittal



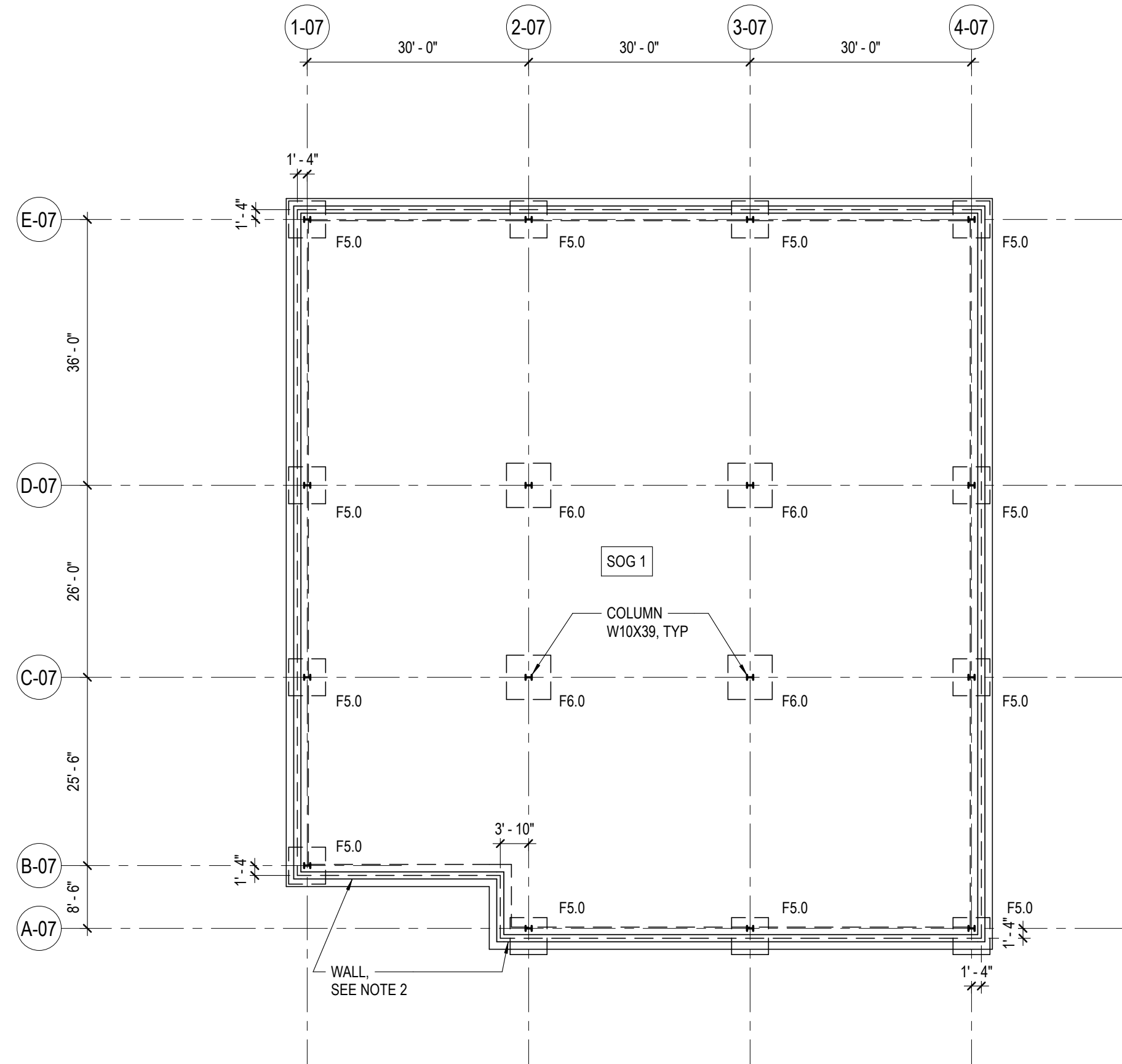
LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM

C5 ALC 07 - ROOF FRAMING PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1.) 'RD 1' INDICATES 3", 18 GAGE METAL ROOF DECK.
- 2.) TOP OF DECK ELEVATION 22'-0", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 22'-0"
- 3.) TOP OF STEEL ELEVATION 21'-9", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 21'-9"
- 4.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION



LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT

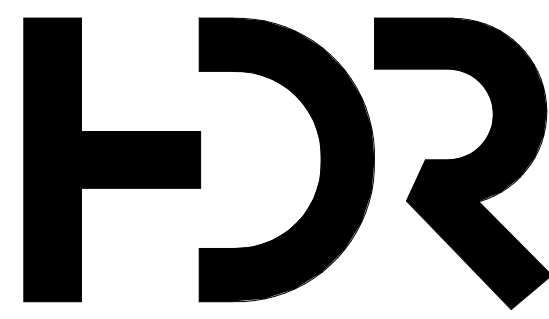
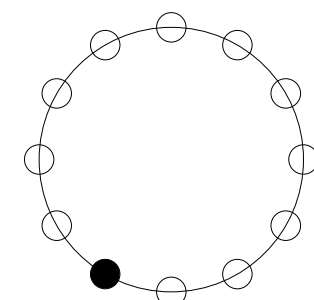
A5 ALC 07 - FOUNDATION PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1.) 'SOG 1' INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6 - W2.8XW2.9.
- 2.) 12" THICK CMU FROST WALLS ON 2'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- 3.) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0".
- 4.) TOP OF INTERIOR FOOTINGS SHALL BE -1'-0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE -3'-6" BELOW FINISHED FLOOR FOR FROST, TYPICAL.
- 5.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION.

STEEL BRACED FRAME OPTION



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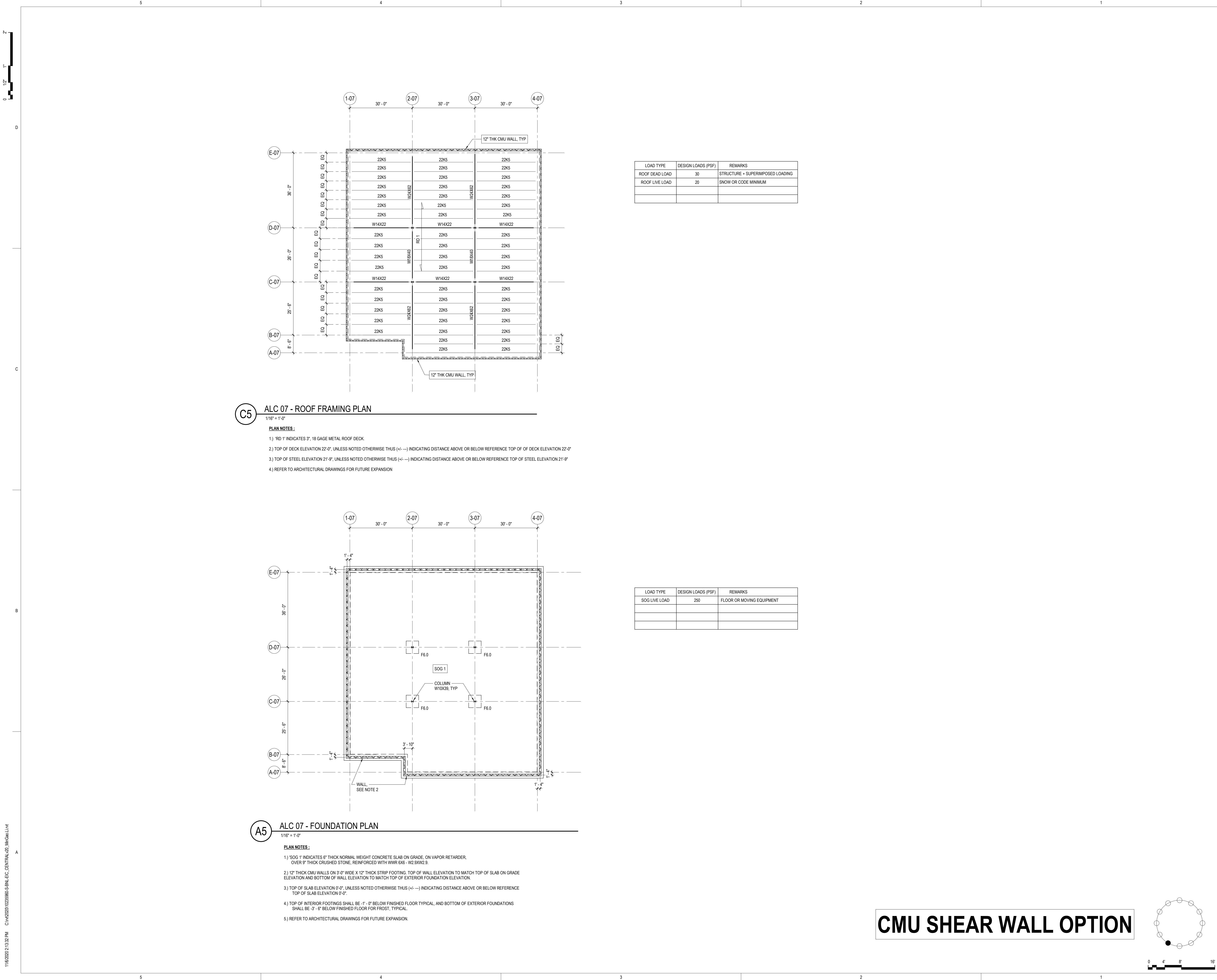
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FLOOR PLANS - ALC-07
(STEEL BRACED FRAME
OPTION)

Sheet Number

S-106

Project Status
Concept Design 100% Review Submittal



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Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

MARK	DATE	DESCRIPTION
	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

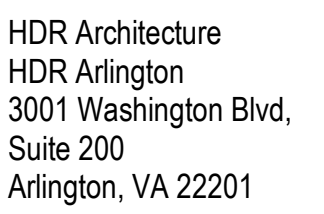
NOT FOR
CONSTRUCTION

Project Number	10235960
Original Issue	09/25/20

Sheet Name
FLOOR PLANS - ALC-07
(CMU SHEAR WALL
OPTION)

Sheet Number
S-106A

Project Status
Concept Design 100% Review Submittal



BROOKHAVEN
NATIONAL LABORATORY

Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer		Author
MARK	DATE	DESCRIPTION
	09/25/2020	60% Review
	11/06/2020	100% Review

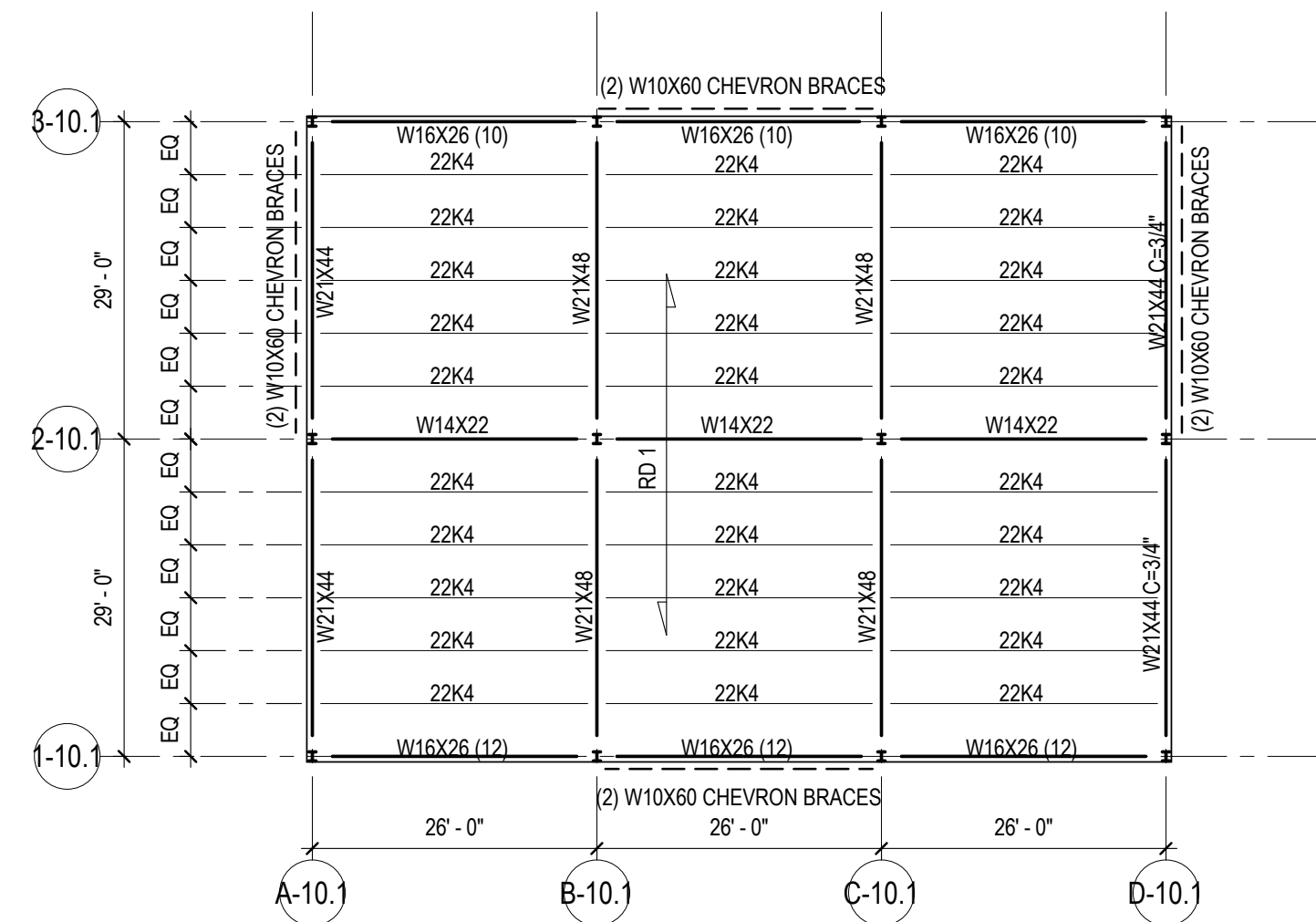
Project Number	10235960
Original Issue	09/25/20

Sheet Name

FLOOR PLANS - B1010
(STEEL BRACED FRAME
OPTION)

Sheet Number

Project Status
Concept Design 100% Review Submittal

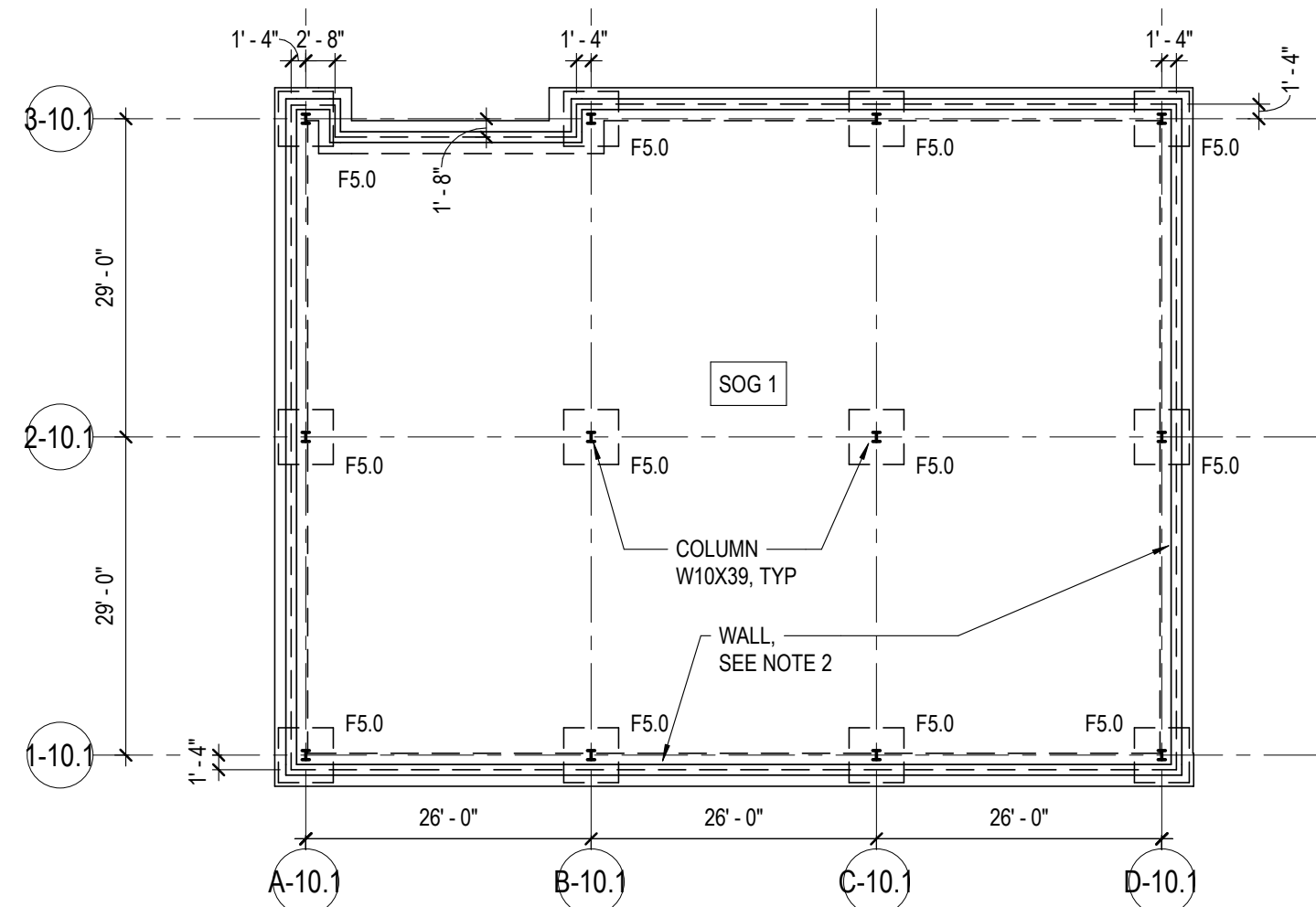

$$1/16'' = 1'-0''$$

PLAN NOTES

PLAN NOTES

- 1.) RD 1" INDICATES 3", 18 GAGE METAL ROOF DECK.
- 2.) TOP OF DECK ELEVATION 26'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 26'-0"
- 3.) TOP OF STEEL ELEVATION 25'-9", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 25'-9"

LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM

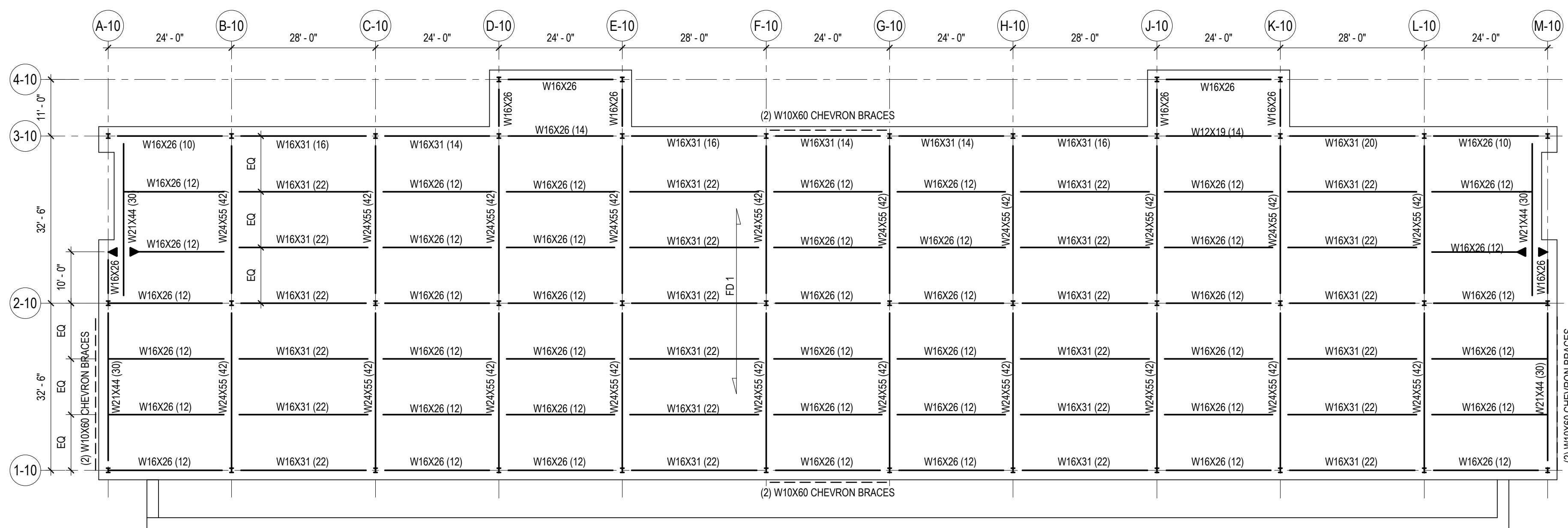


(D3)

PLAN NOTES

- 1) 'FD 1' INDICATES 2 1/2" THICK NORMAL WEIGHT CONCRETE SLAB ON 3", 18 GAGE METAL DECK, REINFORCED WITH WWR 6X6-2W3X92.9; (5 1/2" TOTAL SLAB THICKNESS)
- 2) 'RD 1' INDICATES 3", 18 GAGE METAL ROOF DECK.
- 3) TOP OF SLAB/DECK ELEVATION 15'-0" FOR BOTH BUILDINGS, UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF DECK ELEVATION 15'-0"
- 4) TOP OF STEEL ELEVATION 14'-6 1/2" FOR SECOND FLOOR OF B1010, UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 14'-6 1/2"
- 5) TOP OF STEEL ELEVATION 14'-9" FOR ROOF OF B1010 DI WATER BUILDING, UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 14'-9"

LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM
FLOOR DEAD LOAD	87	STRUCTURE + SUPERIMPOSED LOADING
FLOOR LIVE LOAD	125	



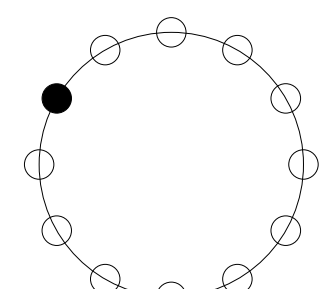
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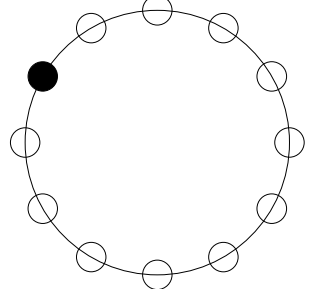
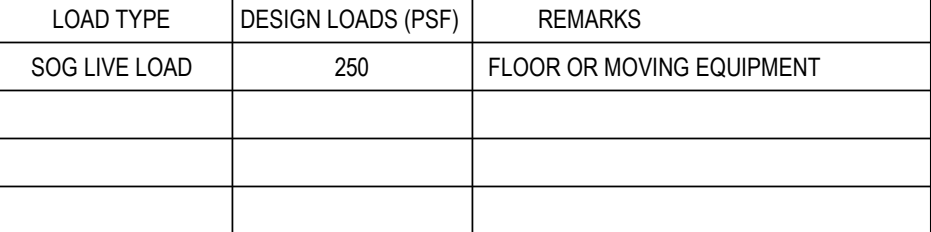
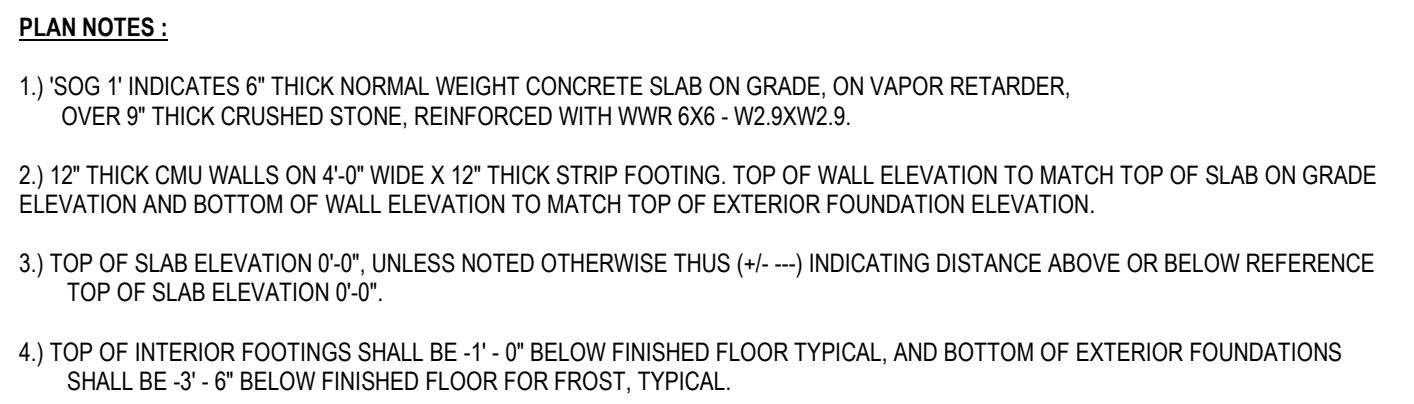
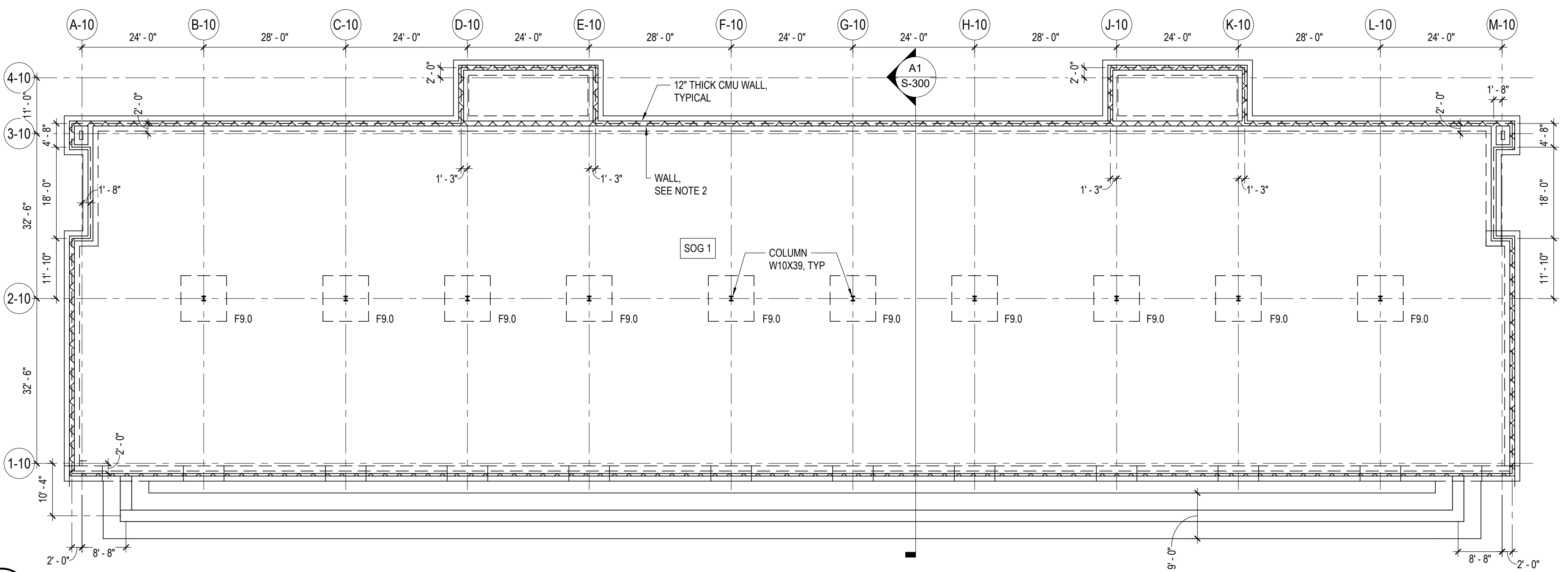
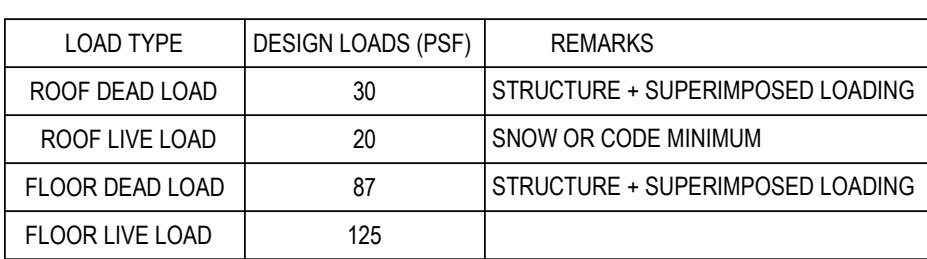
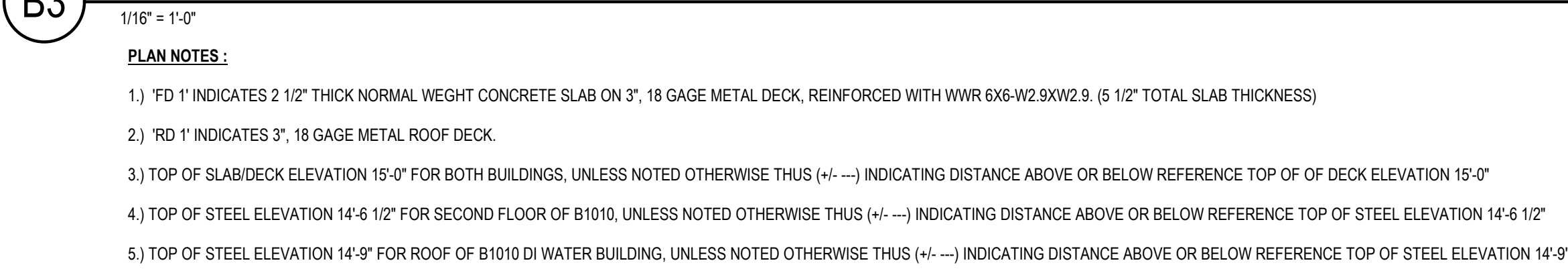
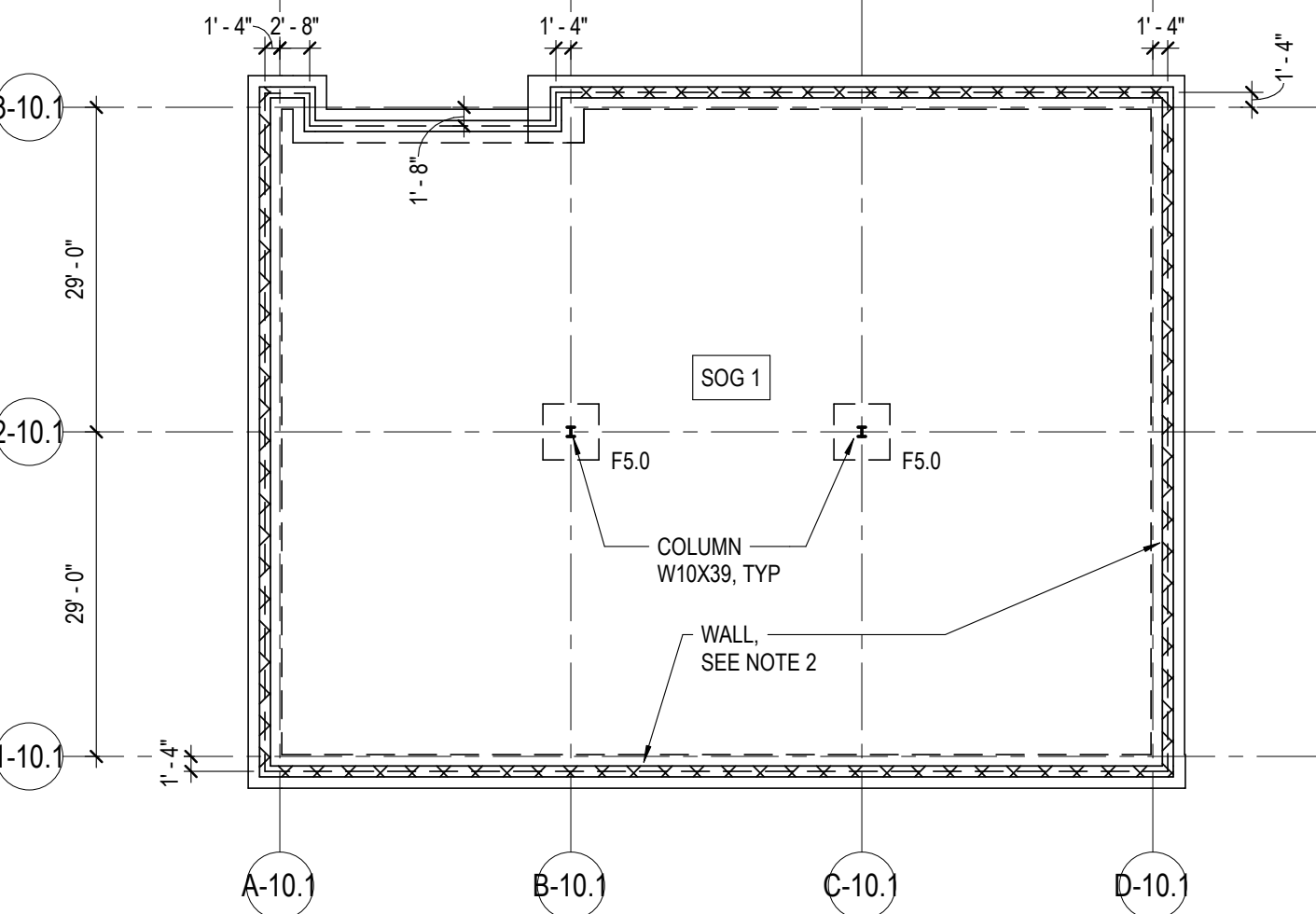
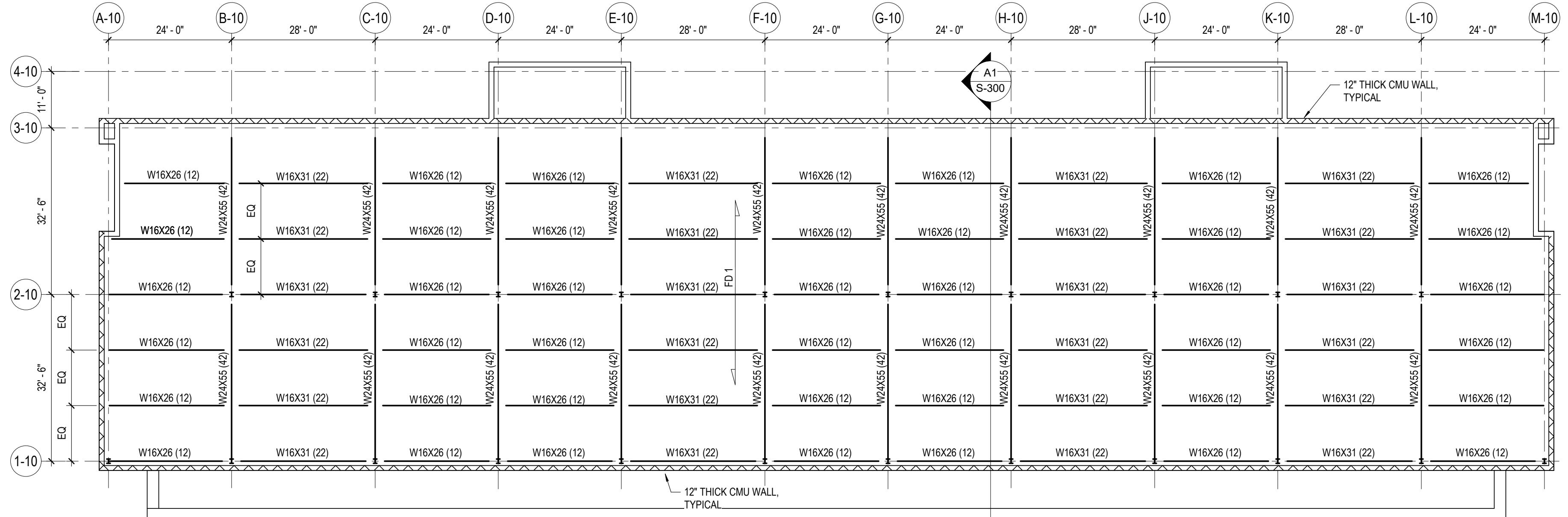
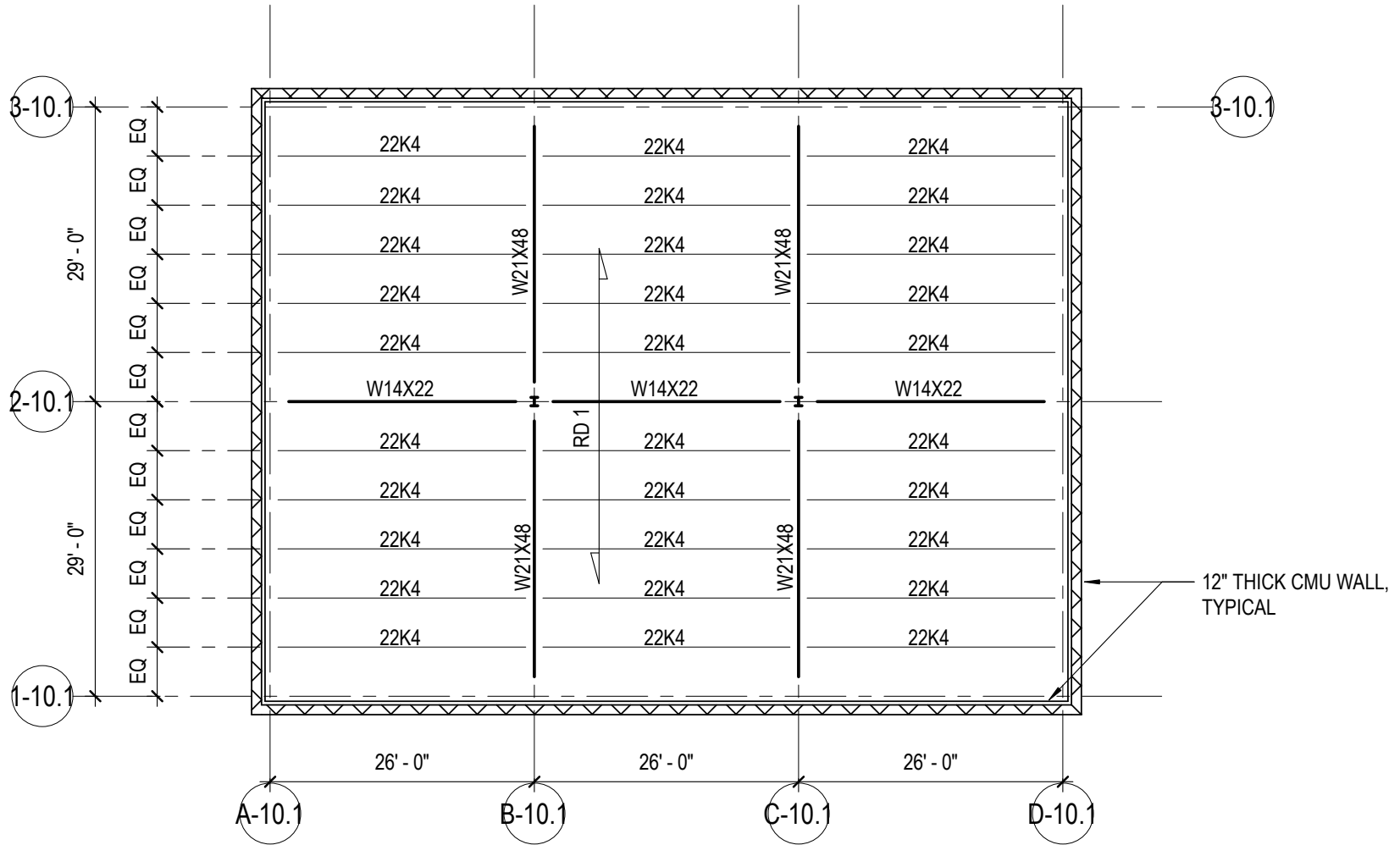
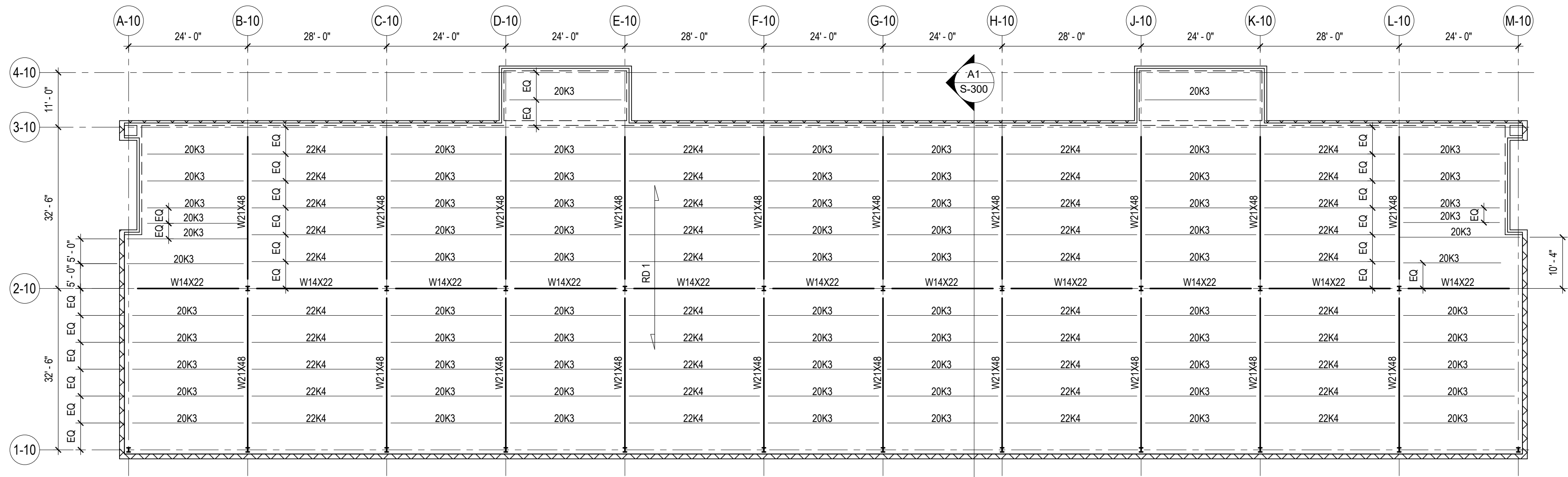
$$1/16^{\circ} = 1'-0''$$

- PLAN NOTES:**
- 1) 'SOG 1" INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR #6, 2X8W2X9.
 - 2) 12" THICK CMU FROST WALLS ON 2'-0" WIDE & 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXISTING FOUNDATION ABOVE.
 - 3) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THIS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0".
 - 4) TOP OF INTERIOR FOOTINGS SHALL BE +/- 0'-0" BELOW FINISHED FLOOR TYPICAL AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE +/- 3'-0" BELOW FINISHED FLOOR FOR FROST, TYPICAL.

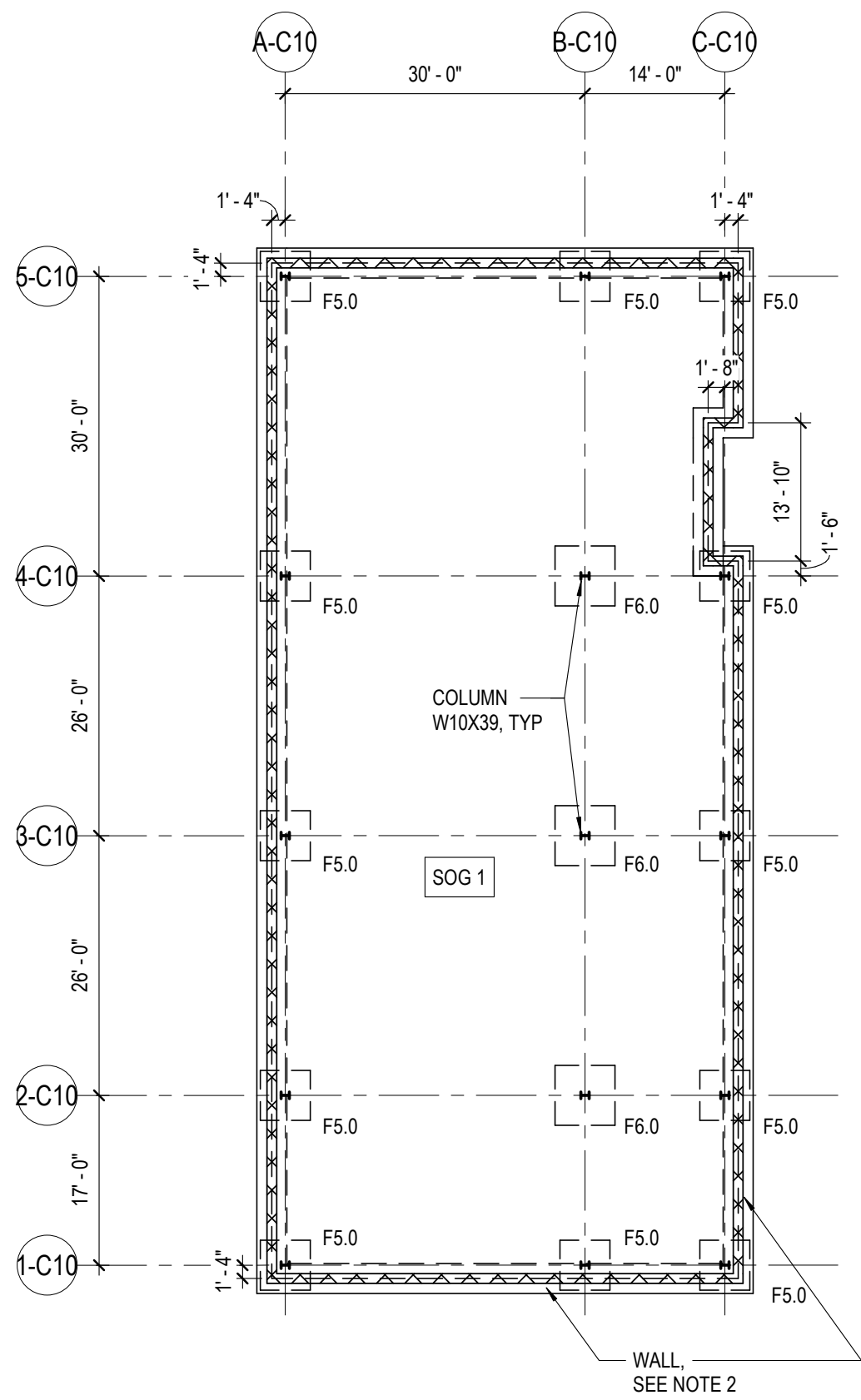
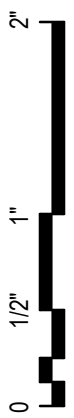
LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT

STEEL BRACED FRAME OPTION





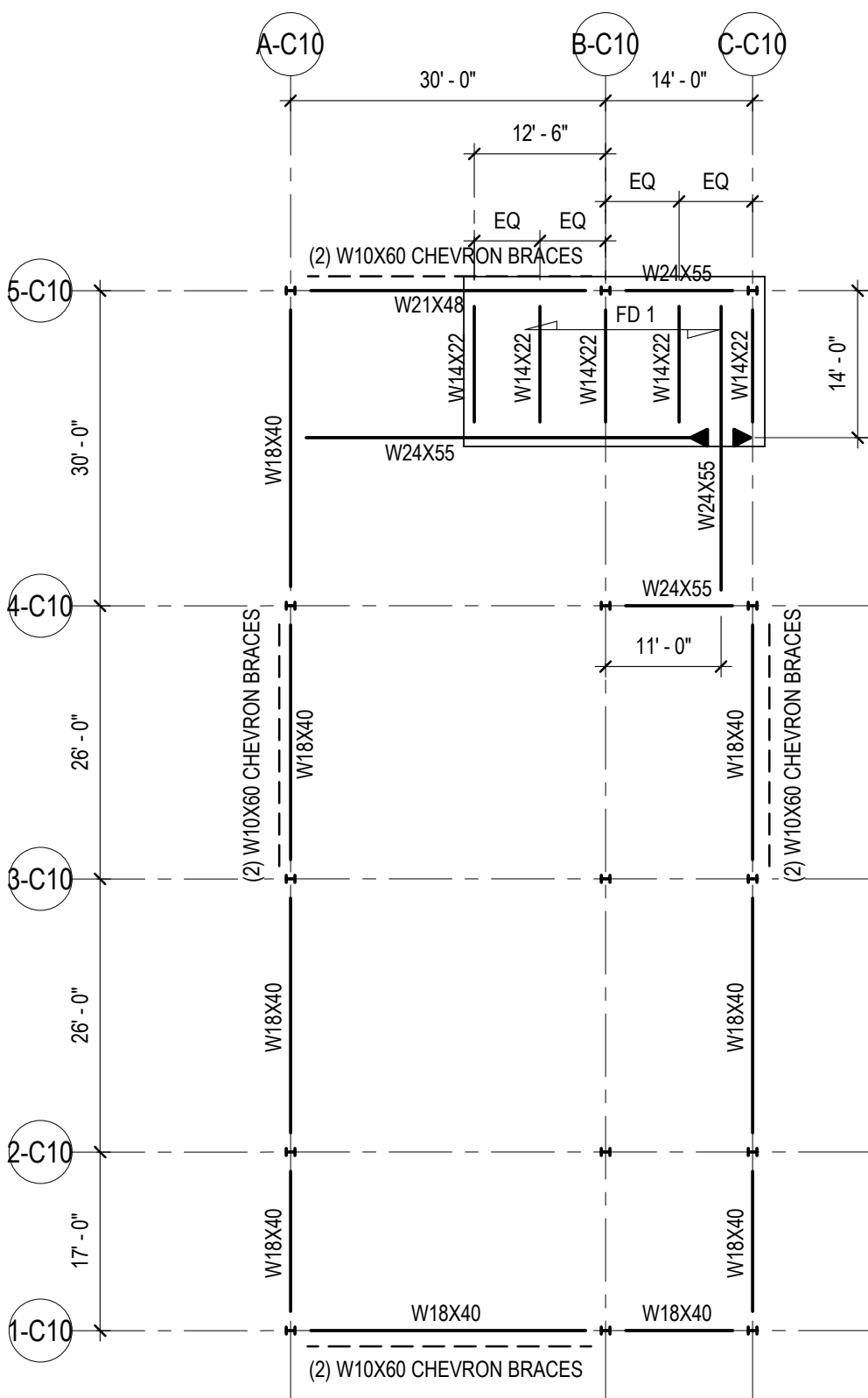
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A5 CRYO 1010 - FOUNDATION PLAN
1/16" = 1'-0"

PLAN NOTES:

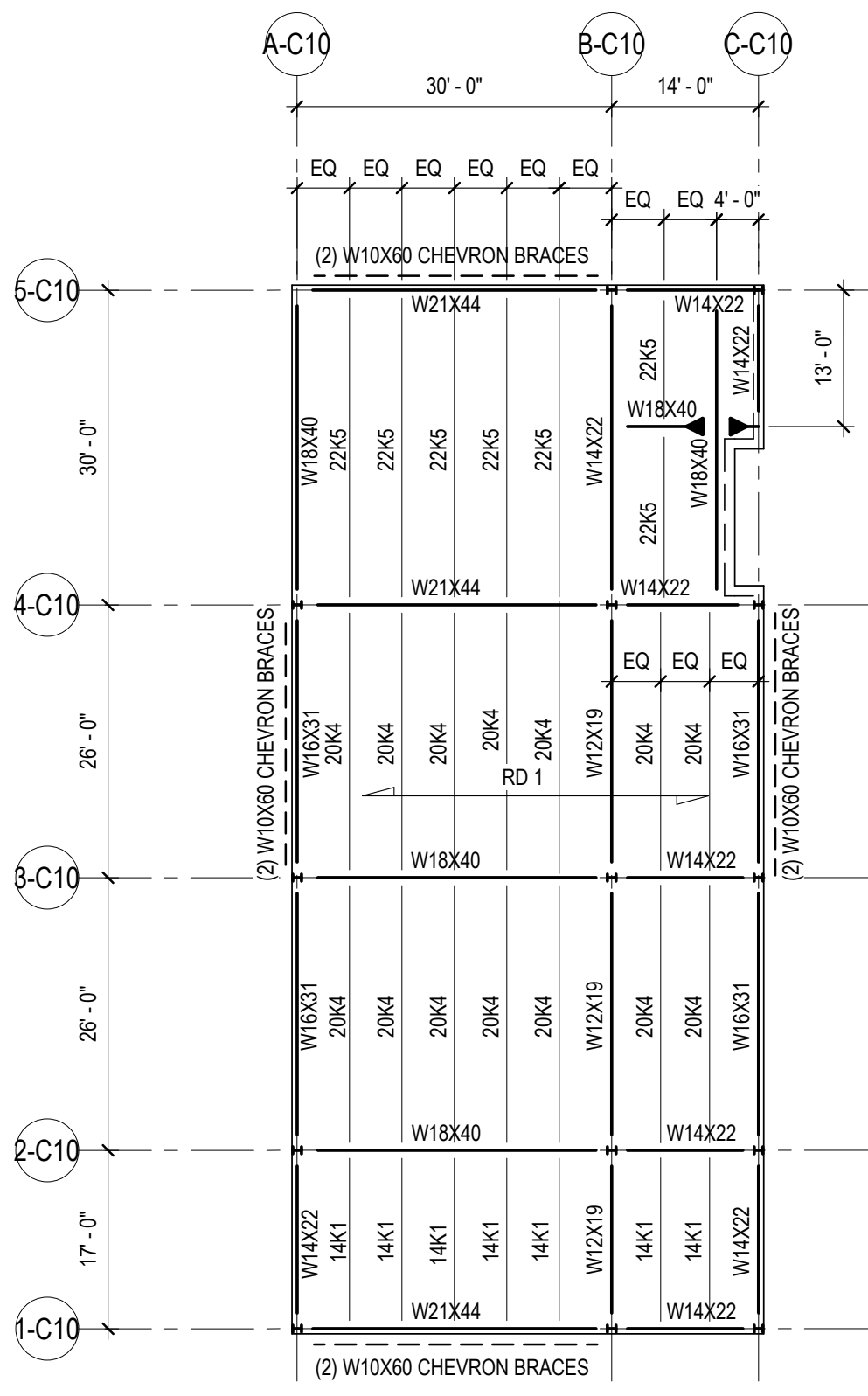
- 1.) SOG 1 INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6 - W2.5XW2.5.
- 2.) 12" THICK CMU FROST WALLS ON 2'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- 3.) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0".
- 4.) TOP OF INTERIOR FOOTINGS SHALL BE -1' - 0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE -3' - 6" BELOW FINISHED FLOOR FOR FROST, TYPICAL.



A3 CRYO 1010 - FLOOR FRAMING PLAN
1/16" = 1'-0"

PLAN NOTES:

- 1.) 'FD 1' INDICATES 2 1/2" THICK NORMAL WEIGHT CONCRETE SLAB ON 3", 18 GAGE METAL DECK, REINFORCED WITH WWR 6X6-W2.5XW2.5 (5 1/2" TOTAL SLAB THICKNESS)
- 2.) TOP OF SLAB ELEVATION 10'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF DECK ELEVATION 22'-0"
- 3.) TOP OF STEEL ELEVATION 9'-6 1/2", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 9'-6 1/2"

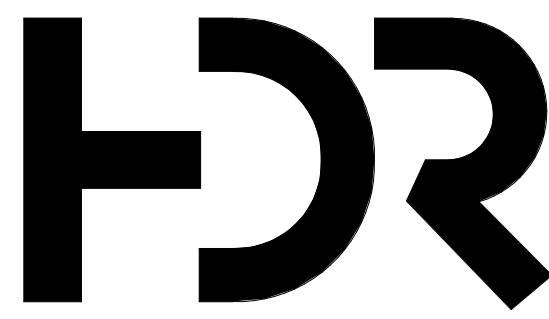
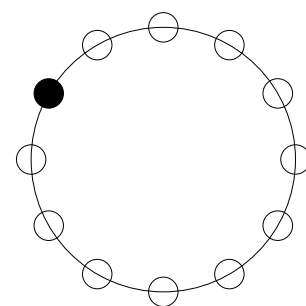


A2 CRYO 1010 Roof Level
1/16" = 1'-0"

PLAN NOTES:

- 1.) 'RD 1' INDICATES 3", 18 GAGE METAL ROOF DECK.
- 2.) TOP OF DECK ELEVATION 22'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF DECK ELEVATION 22'-0"
- 3.) TOP OF STEEL ELEVATION 21'-9", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 21'-9"
- 4.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION

STEEL BRACED FRAME OPTION



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HDR Arlington
3001 Washington Blvd,
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Arlington, VA 22201

Brookhaven National
Laboratory
Electron Ion Collider



Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kelly Hartshorn

Sheet Reviewer Author

MARK	DATE	DESCRIPTION
	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

NOT FOR
CONSTRUCTION

Project Number
Original Issue

10235960
09/25/20

Sheet Name

FLOOR PLANS - CRYO 1010
(STEEL BRACED FRAME
OPTION)

Sheet Number

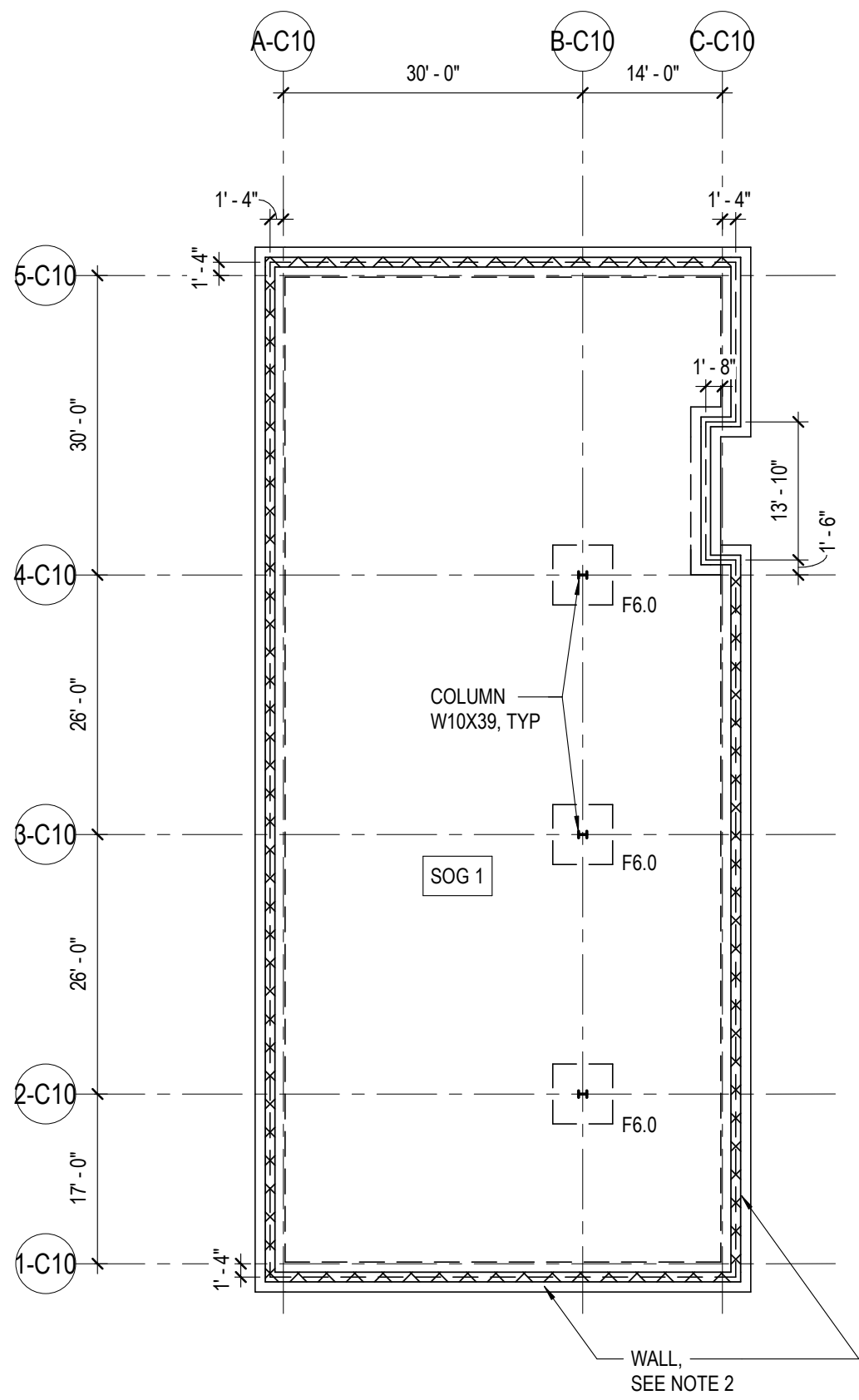
S-110

Project Status
Concept Design 100% Review Submittal

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LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT



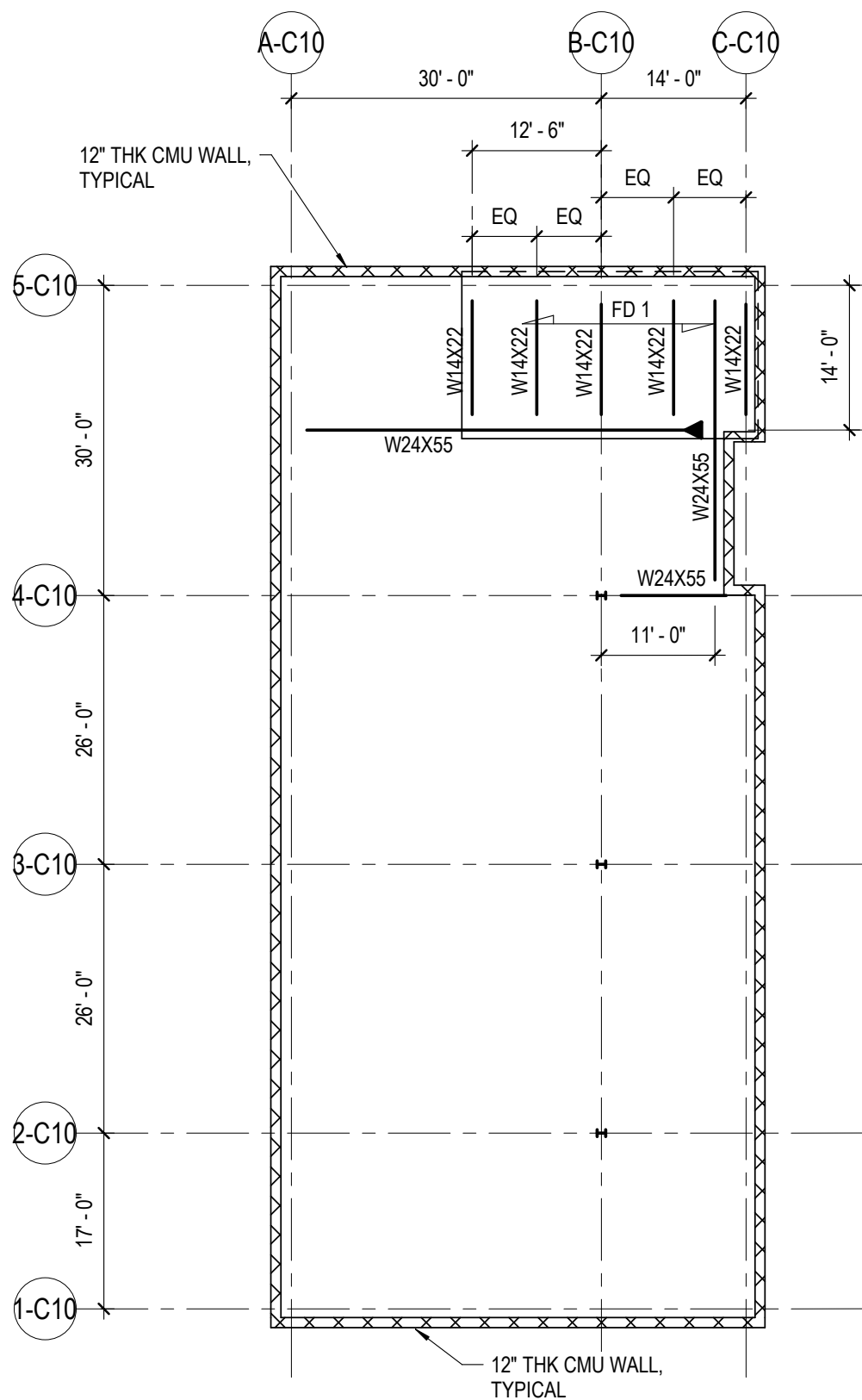
A5 CRYO 1010 - FOUNDATION PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1.) SOG 1 INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6-W2.9XW2.9.
- 2.) 12" THICK CMU WALLS ON 3'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- 3.) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0".
- 4.) TOP OF INTERIOR FOOTINGS SHALL BE -1'-0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE -3'-6" BELOW FINISHED FLOOR FOR FROST, TYPICAL.

LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
FLOOR DEAD LOAD	97	STRUCTURE + SUPERIMPOSED LOADING
FLOOR LIVE LOAD	125	



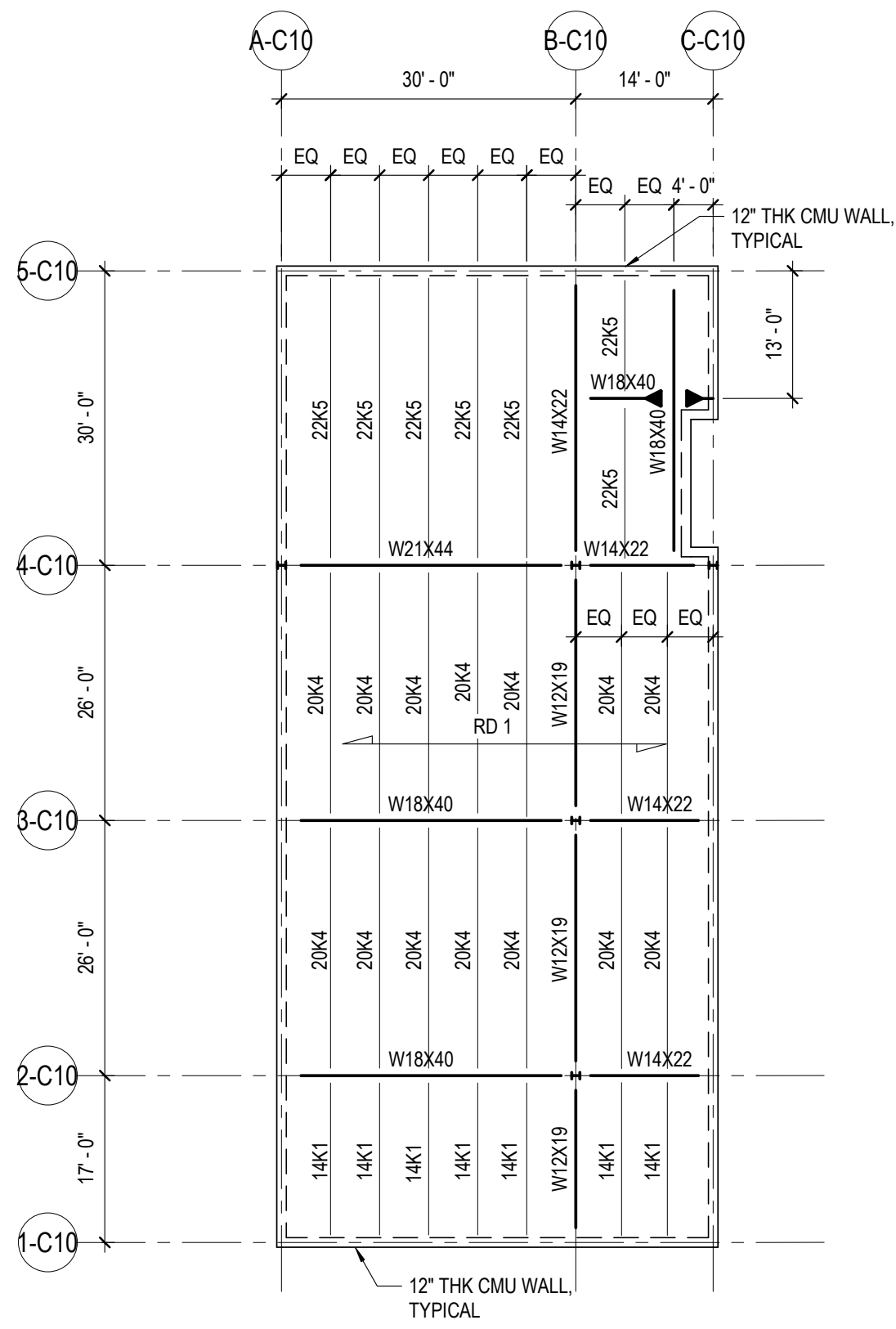
A4 CRYO 1010 - FLOOR FRAMING PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1.) "FD 1" INDICATES 2 1/2" THICK NORMAL WEIGHT CONCRETE SLAB ON 3", 18 GAGE METAL DECK, REINFORCED WITH WWR 6X6-W2.9XW2.9. (5 1/2" TOTAL SLAB THICKNESS)
- 2.) TOP OF SLAB ELEVATION 10'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 10'-0".
- 3.) TOP OF STEEL ELEVATION 9'-6 1/2", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 9'-6 1/2".

LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM



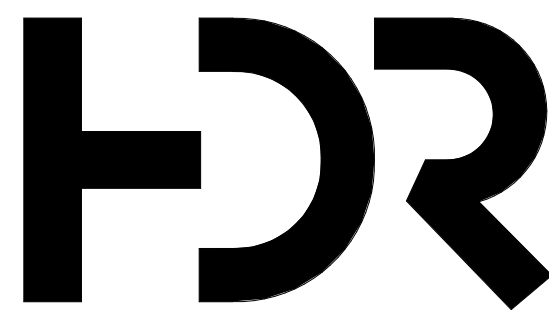
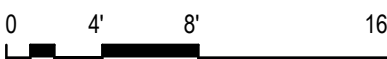
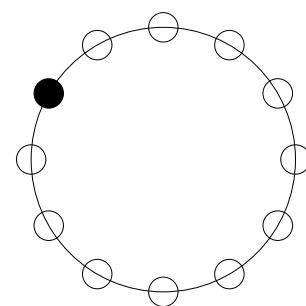
A2 CRYO 1010 - ROOF FRAMING PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1.) "RD 1" INDICATES 3", 18 GAGE METAL ROOF DECK.
- 2.) TOP OF DECK ELEVATION 22'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF OF DECK ELEVATION 22'-0".
- 3.) TOP OF STEEL ELEVATION 21'-9", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 21'-9".
- 4.) REFER TO ARCHITECTURAL DRAWINGS FOR FUTURE EXPANSION

CMU SHEAR WALL OPTION



HDR Architecture
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Arlington, VA 22201

Brookhaven National
Laboratory
Electron Ion Collider



Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
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Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kelly Hartshorn

Sheet Reviewer Author

MARK	DATE	DESCRIPTION
	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

NOT FOR
CONSTRUCTION

Project Number
Original Issue

10235960
09/25/20

Sheet Name

FLOOR PLANS - CRYO 1010
(CMU SHEAR WALL
OPTION)

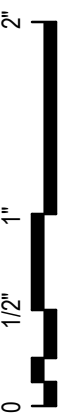
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S-110A

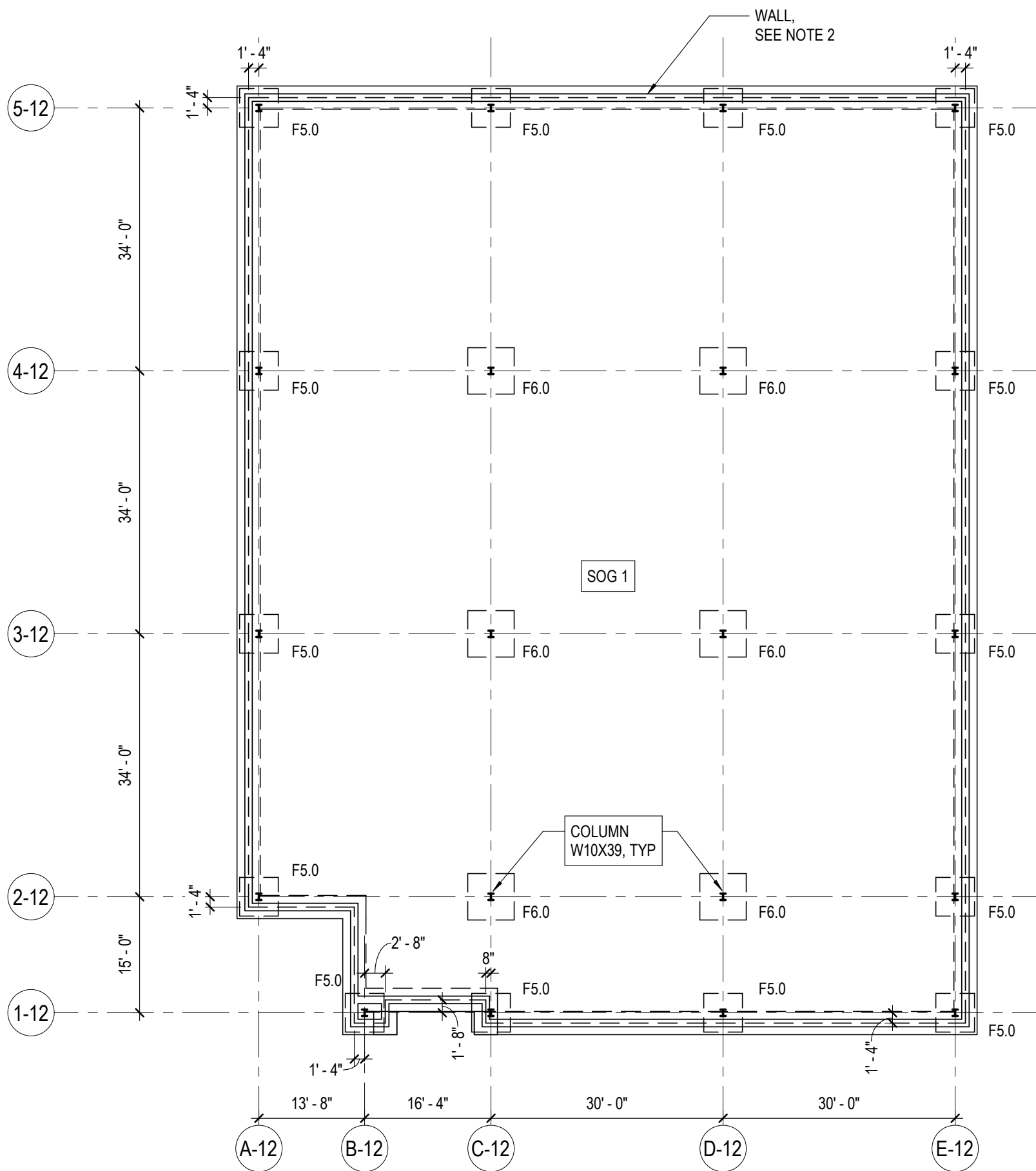
Project Status

Concept Design 100% Review Submittal

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LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT



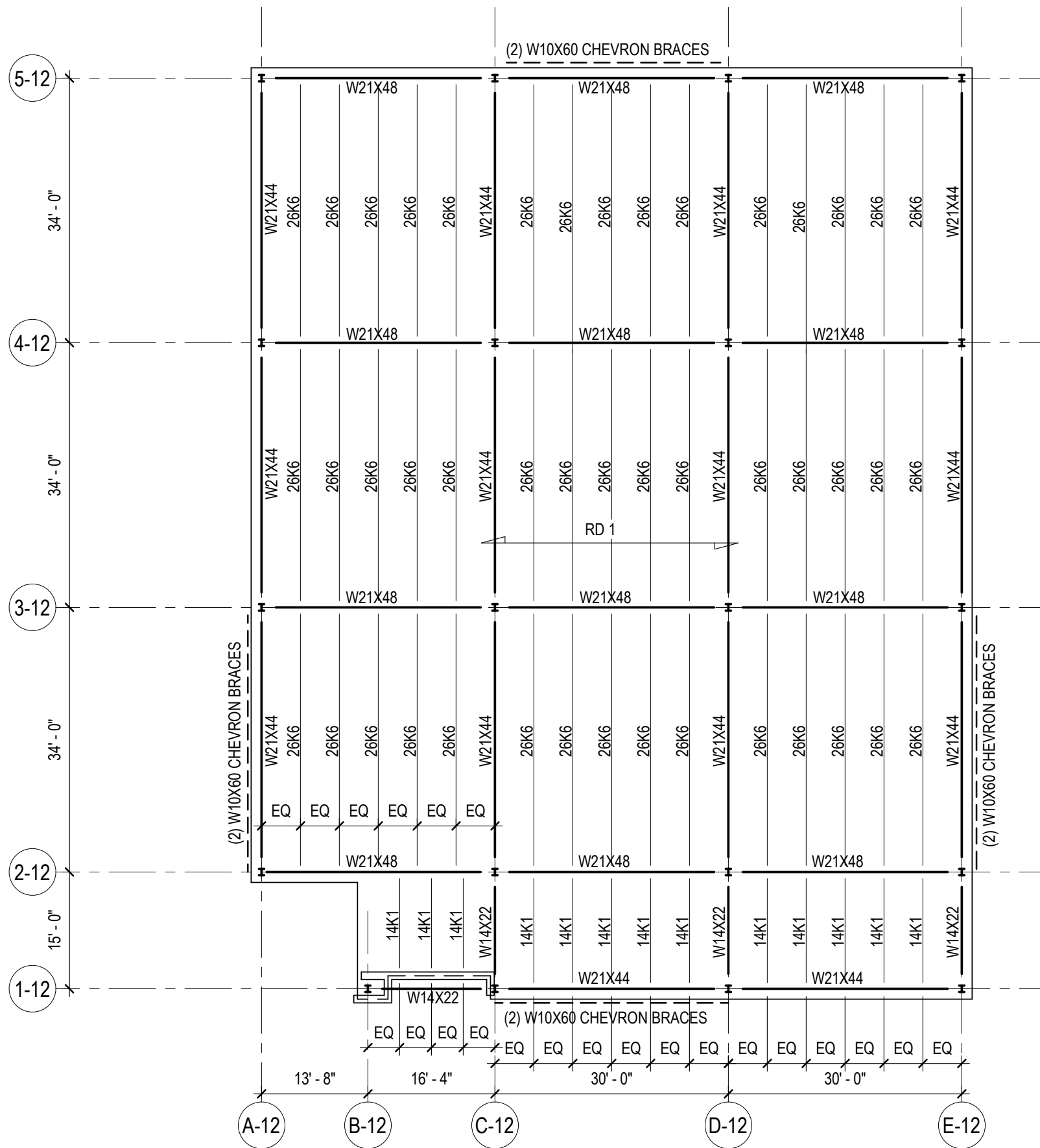
B5 B1012 - FOUNDATION PLAN

1/16" = 1'-0"

PLAN NOTES :

- 1.) SOG 1 INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X8 - W2.9XW2.9.
- 2.) 12" THICK CMU FROST WALLS ON 2'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- 3.) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0".
- 4.) TOP OF INTERIOR FOOTINGS SHALL BE -1'-0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE -3'-0" BELOW FINISHED FLOOR FOR FROST, TYPICAL.

LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM



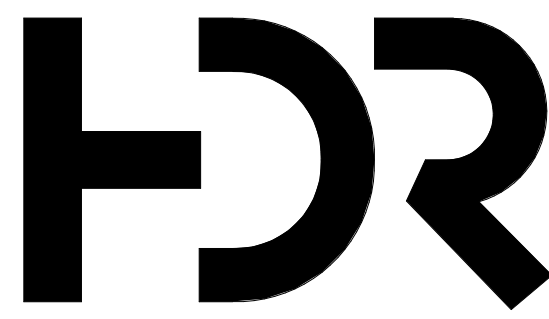
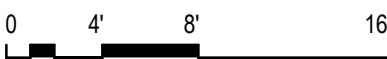
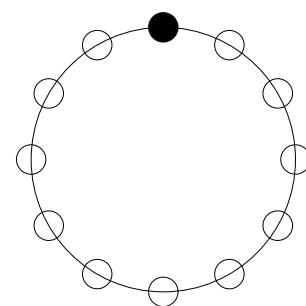
B3 B1012 - ROOF FRAMING PLAN

1/16" = 1'-0"

PLAN NOTES :

- 1.) 'RD 1' INDICATES 3", 18 GAGE METAL ROOF DECK.
- 2.) TOP OF DECK ELEVATION 15'-0", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF DECK ELEVATION 15'-0"
- 3.) TOP OF STEEL ELEVATION 14'-9", UNLESS NOTED OTHERWISE THUS (+/- ---) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 14'-9"

STEEL BRACED FRAME OPTION



HDR Architecture
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Brookhaven National
Laboratory
Electron Ion Collider



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Phil Beadle
Plumbing Engineer	Kelly Hartshorn
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer Author

MARK	DATE	DESCRIPTION
	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

NOT FOR
CONSTRUCTION

Project Number 10235960
Original Issue 09/25/20

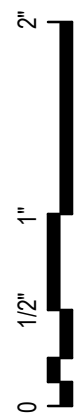
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FLOOR PLANS - B1012
(STEEL BRACED FRAME
OPTION)

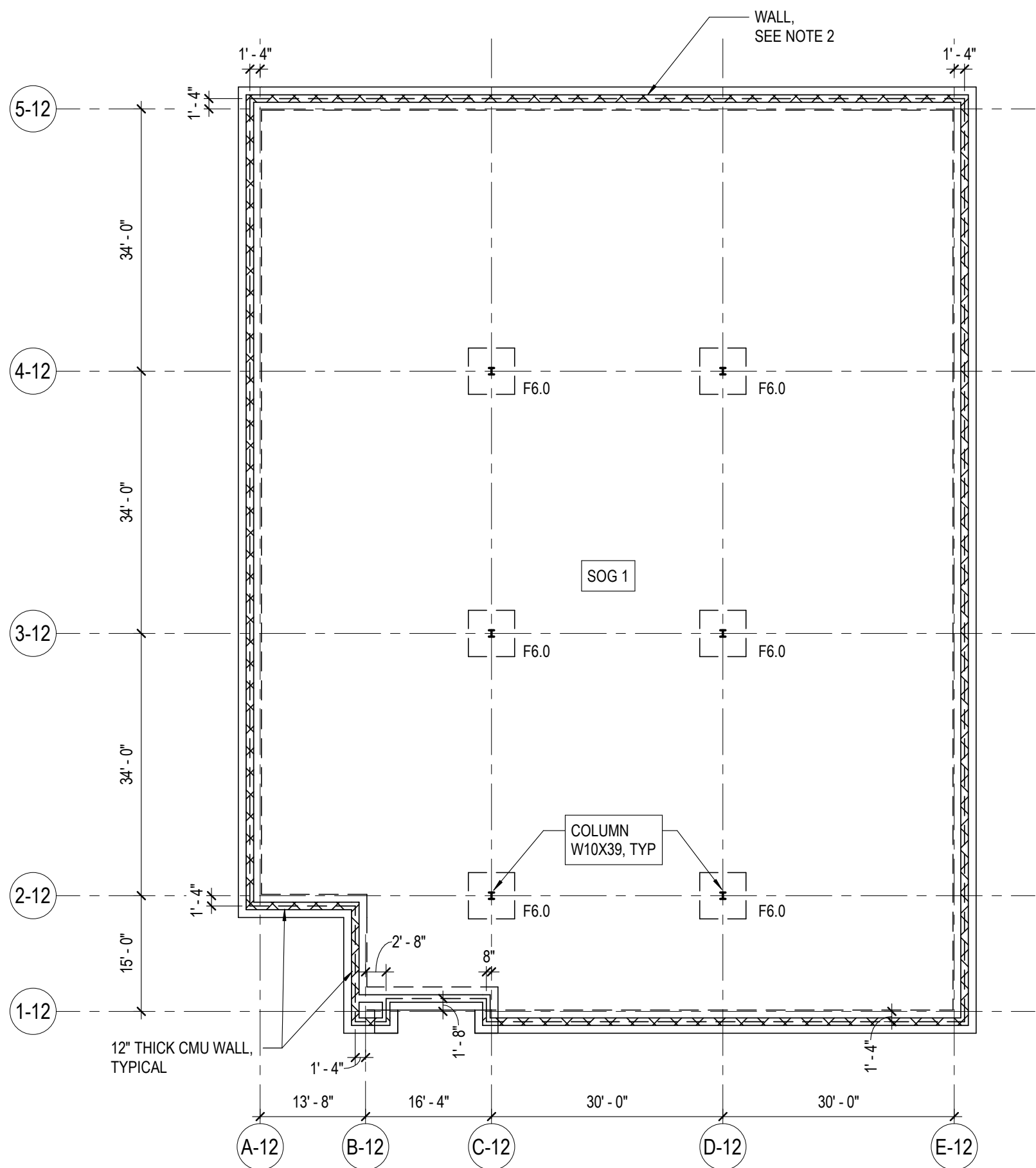
Sheet Number

S-111

Project Status
Concept Design 100% Review Submittal



LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
SOG LIVE LOAD	250	FLOOR OR MOVING EQUIPMENT



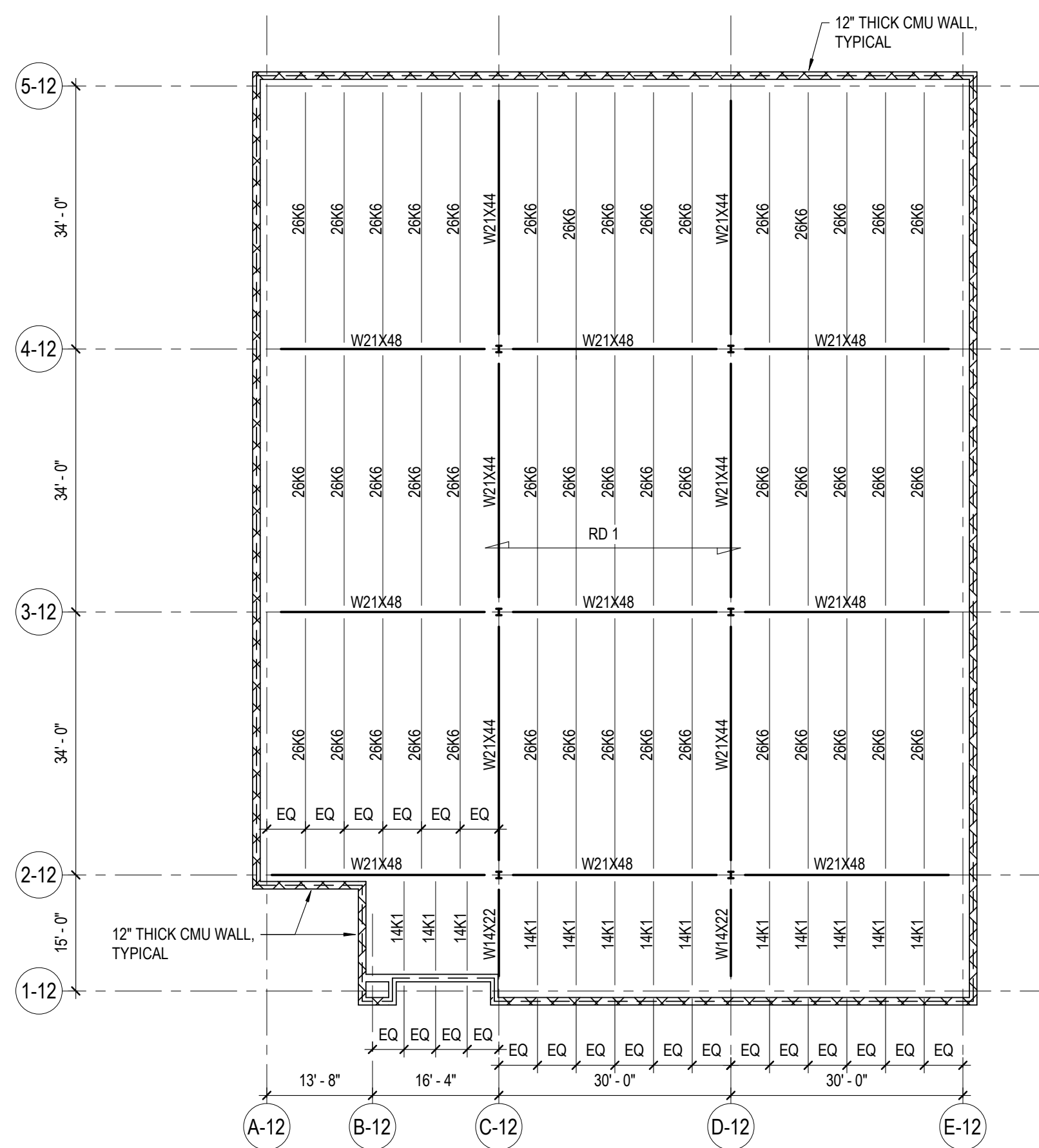
B5 B1012 - FOUNDATION PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1.) 'SOG 1' INDICATES 6" THICK NORMAL WEIGHT CONCRETE SLAB ON GRADE, ON VAPOR RETARDER, OVER 9" THICK CRUSHED STONE, REINFORCED WITH WWR 6X6 - W2.9XW2.9.
- 2.) 12" THICK CMU WALLS ON 3'-0" WIDE X 12" THICK STRIP FOOTING. TOP OF WALL ELEVATION TO MATCH TOP OF SLAB ON GRADE ELEVATION AND BOTTOM OF WALL ELEVATION TO MATCH TOP OF EXTERIOR FOUNDATION ELEVATION.
- 3.) TOP OF SLAB ELEVATION 0'-0", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF SLAB ELEVATION 0'-0".
- 4.) TOP OF INTERIOR FOOTINGS SHALL BE -1'- 0" BELOW FINISHED FLOOR TYPICAL, AND BOTTOM OF EXTERIOR FOUNDATIONS SHALL BE -3'- 6" BELOW FINISHED FLOOR FOR FROST, TYPICAL.

LOAD TYPE	DESIGN LOADS (PSF)	REMARKS
ROOF DEAD LOAD	30	STRUCTURE + SUPERIMPOSED LOADING
ROOF LIVE LOAD	20	SNOW OR CODE MINIMUM



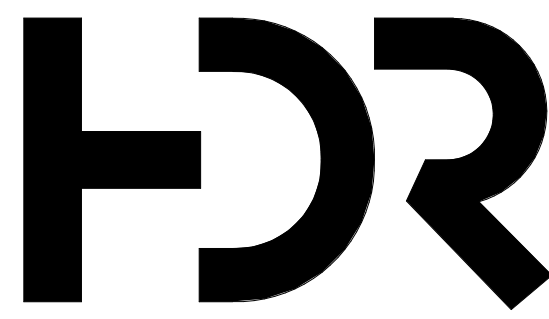
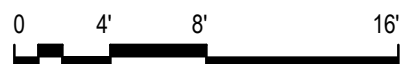
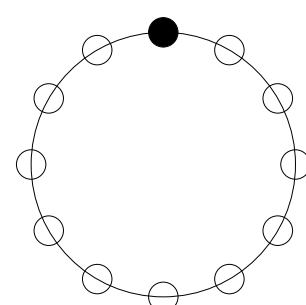
B3 B1012 - ROOF FRAMING PLAN

1/16" = 1'-0"

PLAN NOTES:

- 1.) 'RD 1' INDICATES 3", 18 GAGE METAL ROOF DECK.
- 2.) TOP OF DECK ELEVATION 15'-0", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF DECK ELEVATION 15'-0".
- 3.) TOP OF STEEL ELEVATION 14'-9", UNLESS NOTED OTHERWISE THUS (+/-) INDICATING DISTANCE ABOVE OR BELOW REFERENCE TOP OF STEEL ELEVATION 14'-9".

CMU SHEAR WALL OPTION



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Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Phil Beadle
Plumbing Engineer	Kelly Hartshorn
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer	Author
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MARK	DATE	DESCRIPTION
	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

NOT FOR
CONSTRUCTION

Project Number	10235960
Original Issue	09/25/20

Sheet Name

FLOOR PLANS - B1012
(CMU SHEAR WALL
OPTION)

Sheet Number

S-111A

Project Status

Concept Design 100% Review Submittal

0 1/2" 1" 2"

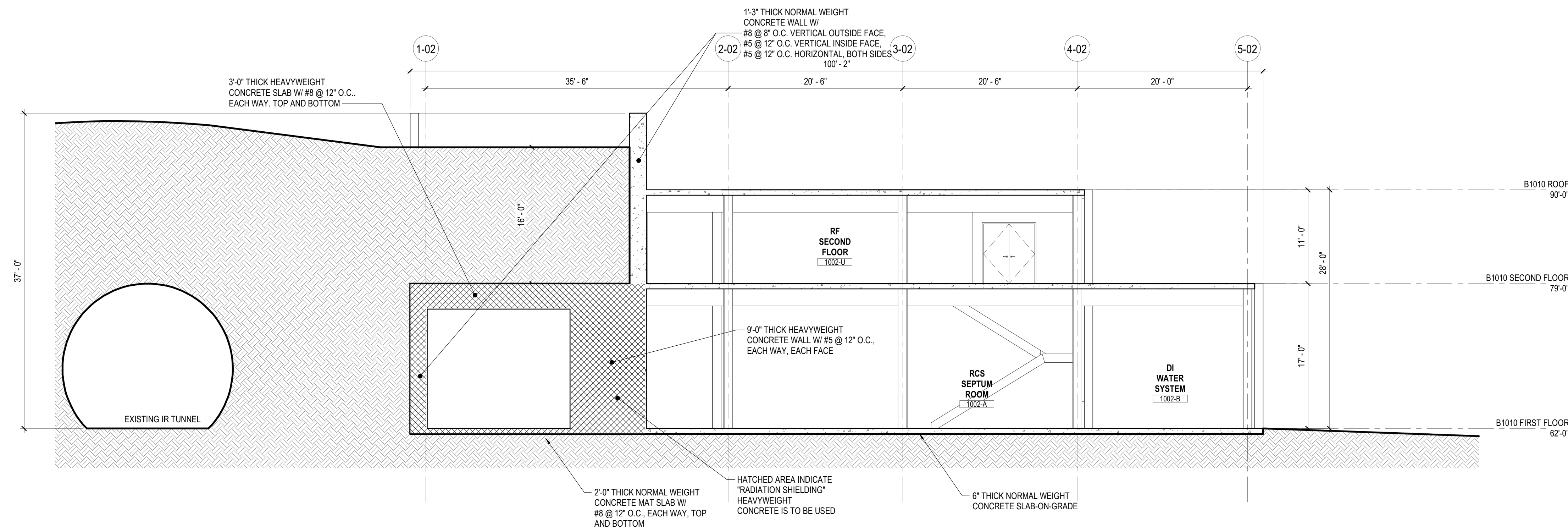
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C

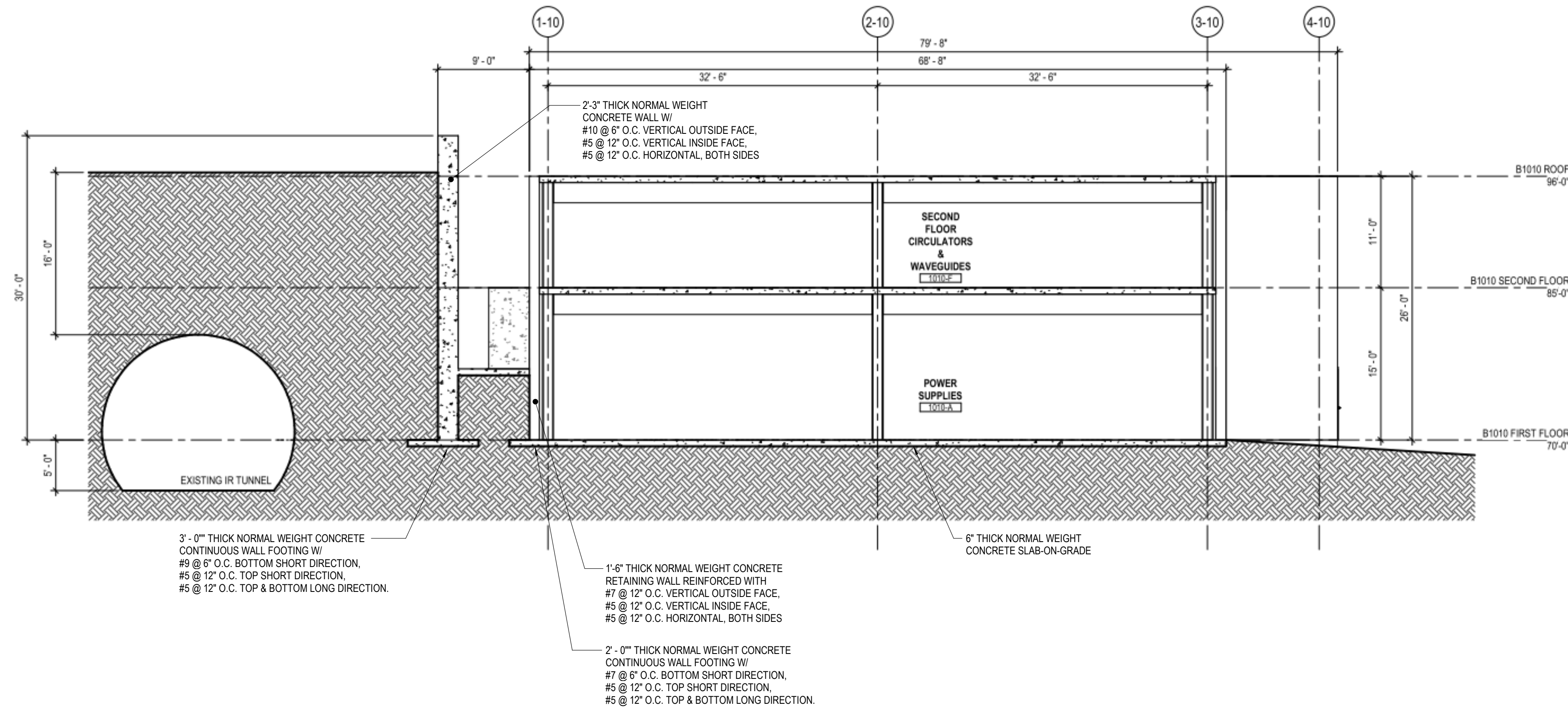
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A

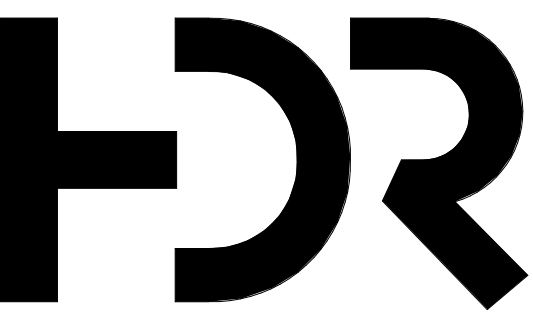
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D1 TRANSVERSE BUILDING SECTION - B1002
1/8" = 1'-0"



A1 TRANSVERSE BUILDING SECTION - B1010
1/8" = 1'-0"



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Wayfinding

Gabriela Kleiman
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Kevin LeMans
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Joseph Krzyzewski
Phil Beadle
Kelly Hartshorn

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Author

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	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
10/26/20

Sheet Name

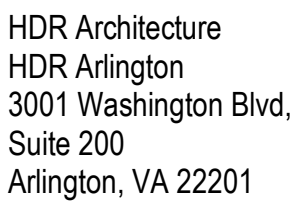
BUILDING SECTIONS

Sheet Number

S-300

Project Status

Concept Design 100% Review Submittal



BROOKHAVEN
NATIONAL LABORATORY

Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
andscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

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	11/06/2020
	100% Review Submittal

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CONSTRUCTION

Project Number	10235960
Original Issue	10/30/20

Sheet Name

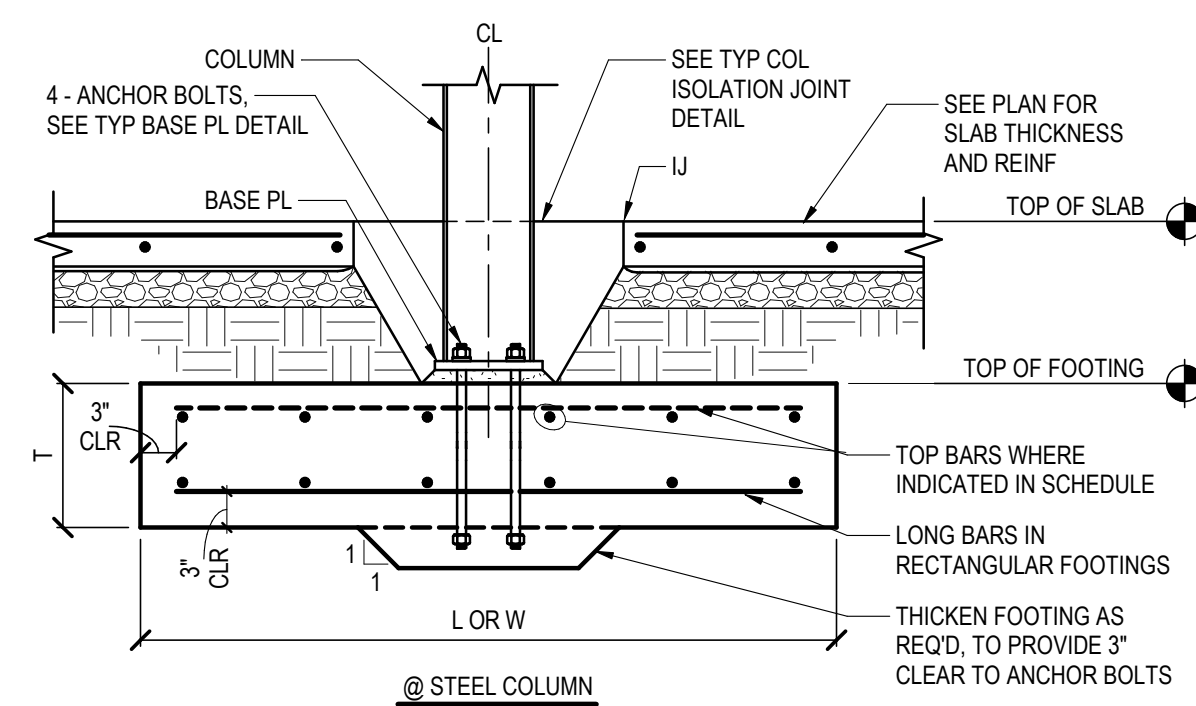
TYPICAL CONCRETE DETAILS

Sheet Number

S-301

Project Status

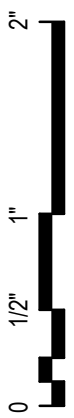
Concept Design 100% Review Submittal



FOOTING SCHEDULE				
MARKS	SIZE		REINFORCING	REMARKS
	LENGTH	X WIDTH X DEPTH		
F5.0	5'-0" X 5'-0" X 1'-2"		5 - #5 EW	
F6.0	6'-0" X 6'-0" X 1'-4"		6 - #6 EW	
F8.0	8'-0" X 8'-0" X 1'-10"		9 - #5 EW	
F9.0	9'-0" X 9'-0" X 2'-1"		11 - #6 EW	

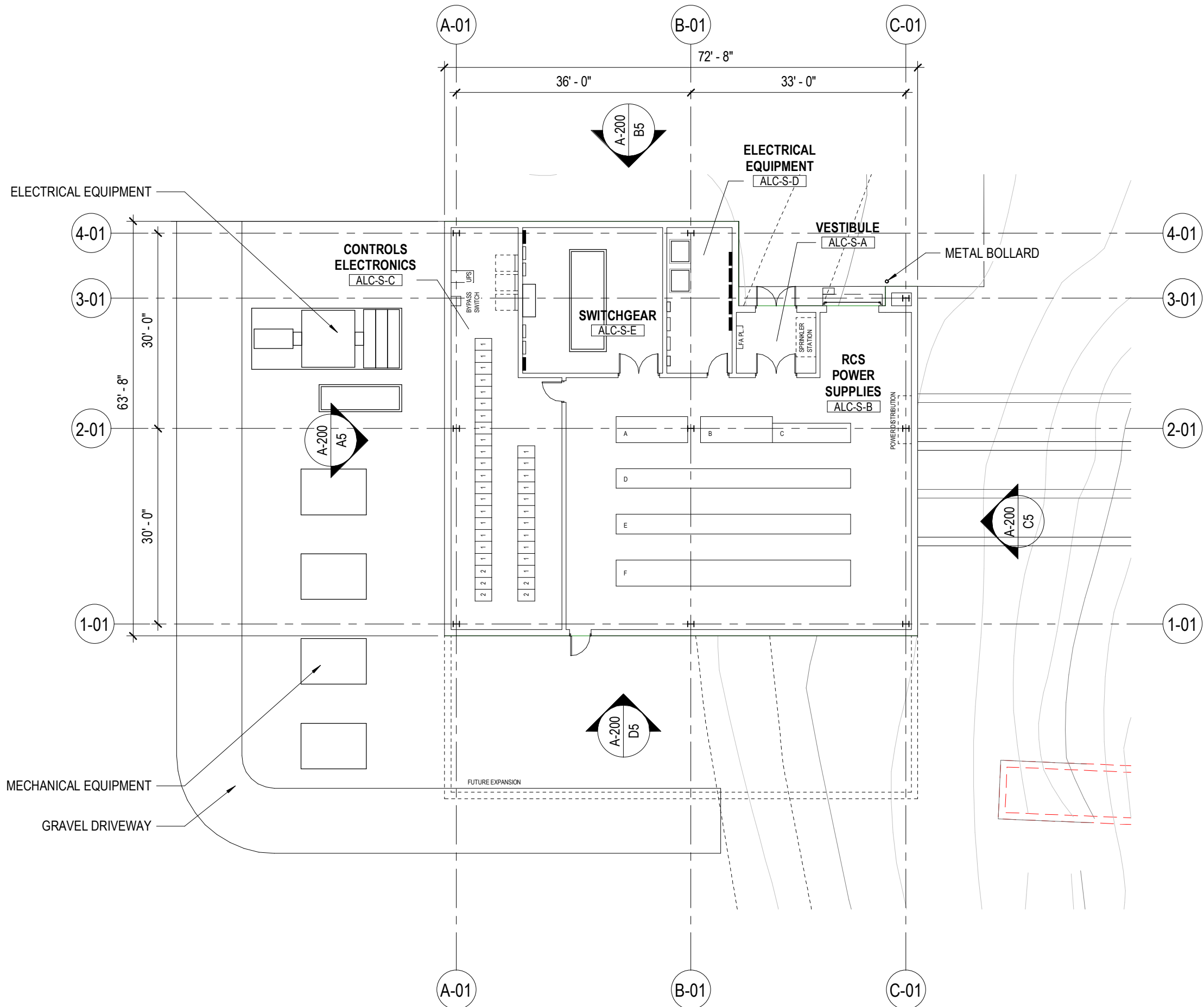
A3 **TYP CONC INTERIOR FOOTING DETAIL**
3/4" = 1'-0"

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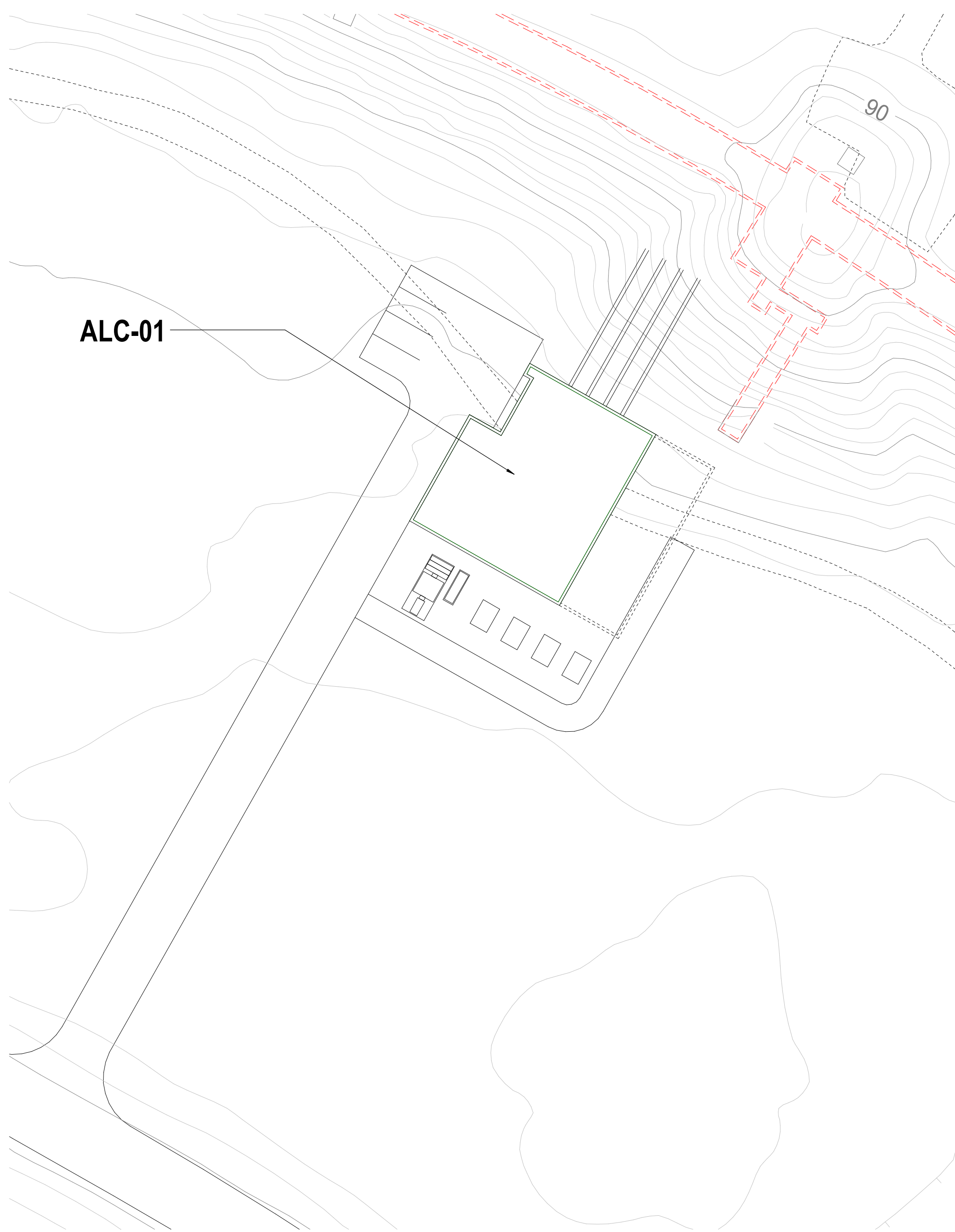


EQUIPMENT TABLE

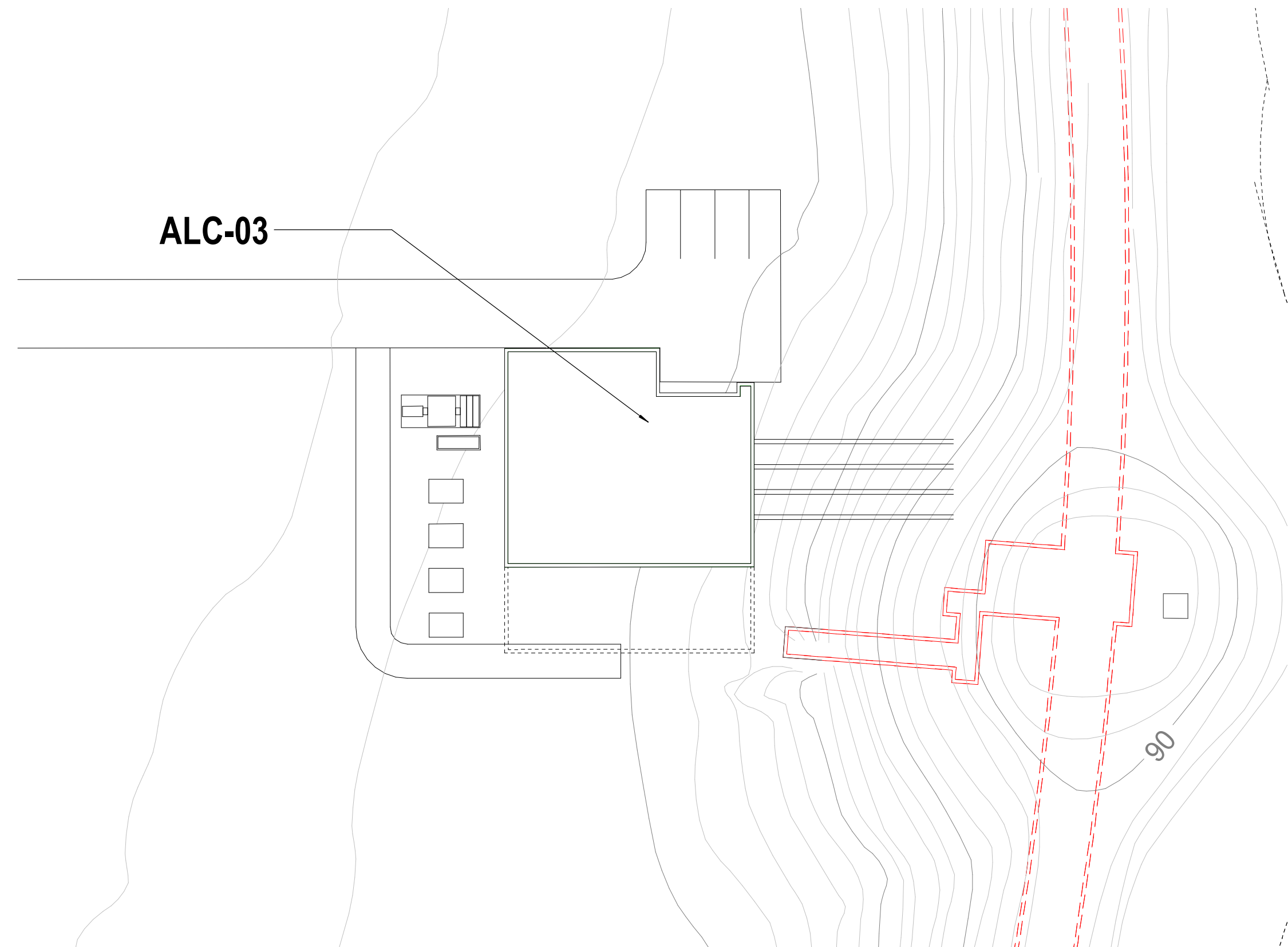
A	Arc Quadrupoles - APS MPS-SR
B	Arc Sextupoles Near Qd and Qf - APS MPS-SR (2)
C	CORRECTOR x 20 - Corrx20 MPS-Rc (1)
D	CORRECTOR x 20 - Corrx20 MPS-RC (3)
E	CORRECTOR x 20 - Corrx20 MPS-RC (3)
F	Fast and Slow Correctors - CAEN MPS-SR, Straight Sections Near Qd & Qf - BiGen MPS-SR



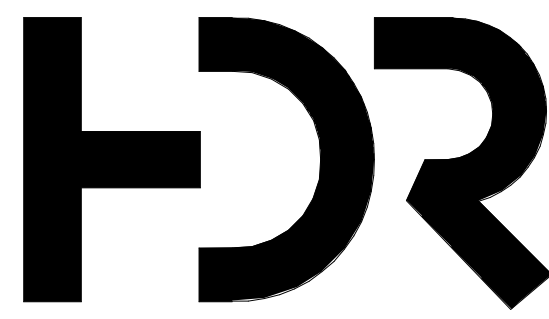
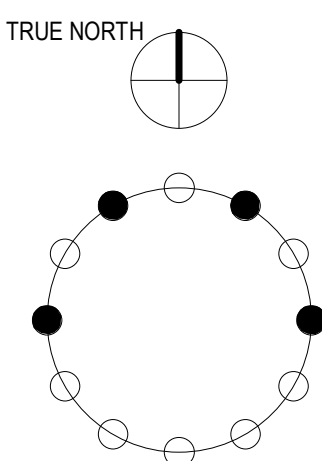
A5 01-FLOOR PLAN - ALC-01/03/09/11 MARCH 2019 PLAN AREA - 1,992 SF
PROPOSED AREA - 4,284 SF



B3 SITE PLAN - ALC-01



A3 SITE PLAN - ALC-03



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Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kelly Harshorn

Sheet Reviewer Author

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	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/18/20

PRELIMINARY
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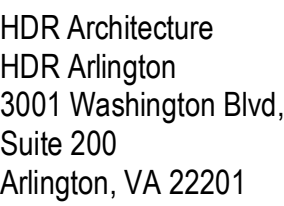
FLOOR PLANS - ALC
01/03/09/11

Sheet Number

A-100

Project Status

Concept Design 100% Review Submittal



Upton, New York



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
andscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
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Plumbing Engineer	
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Project Number	10235960
Original Issue	10/01/20

PRELIMINARY
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Sheet Name

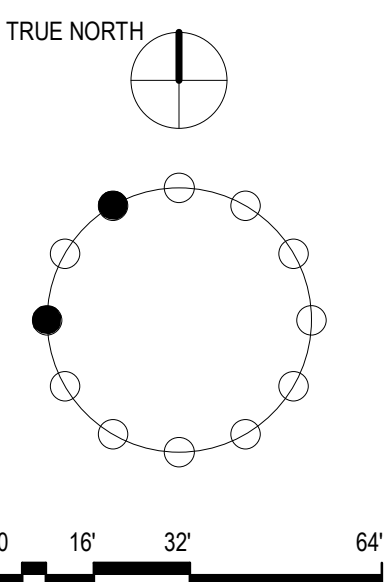
SITE PLANS - ALC
09/11

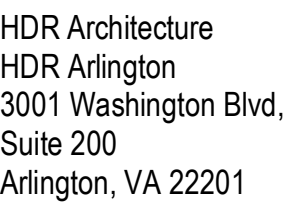
Sheet Number

A-101

Project Status

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Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
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Plumbing Engineer	
Interior Designer	
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	09/25/2020	60% Review Submitted
	11/06/2020	100% Review Submitted

Project Number	10235960
Original Issue	08/04/20

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NOT FOR CONSTRUCTION

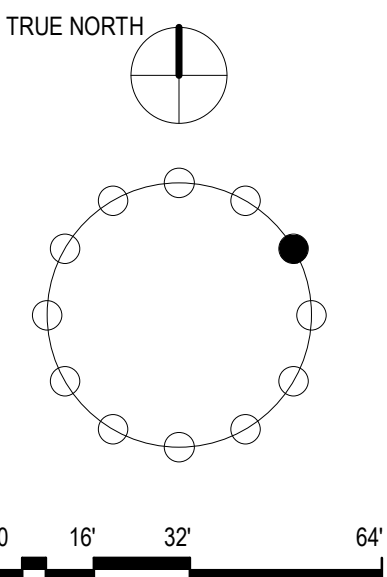
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SITE PLANS - B1002

Sheet Number

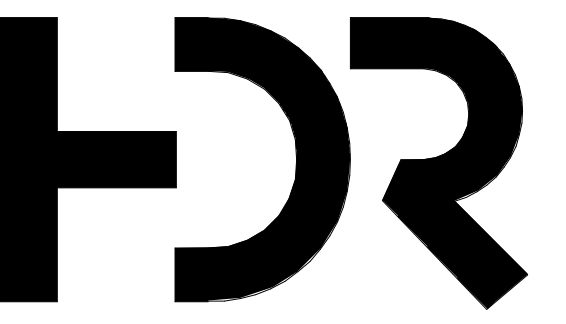
A-102

Project Status
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A5 SITE PLAN - B1002
1/32" = 1'-0"

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Wayfinding

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Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kelly Harshorn

Sheet Reviewer Tyler Dye

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Project Number
Original Issue

10235960
08/07/20

PRELIMINARY
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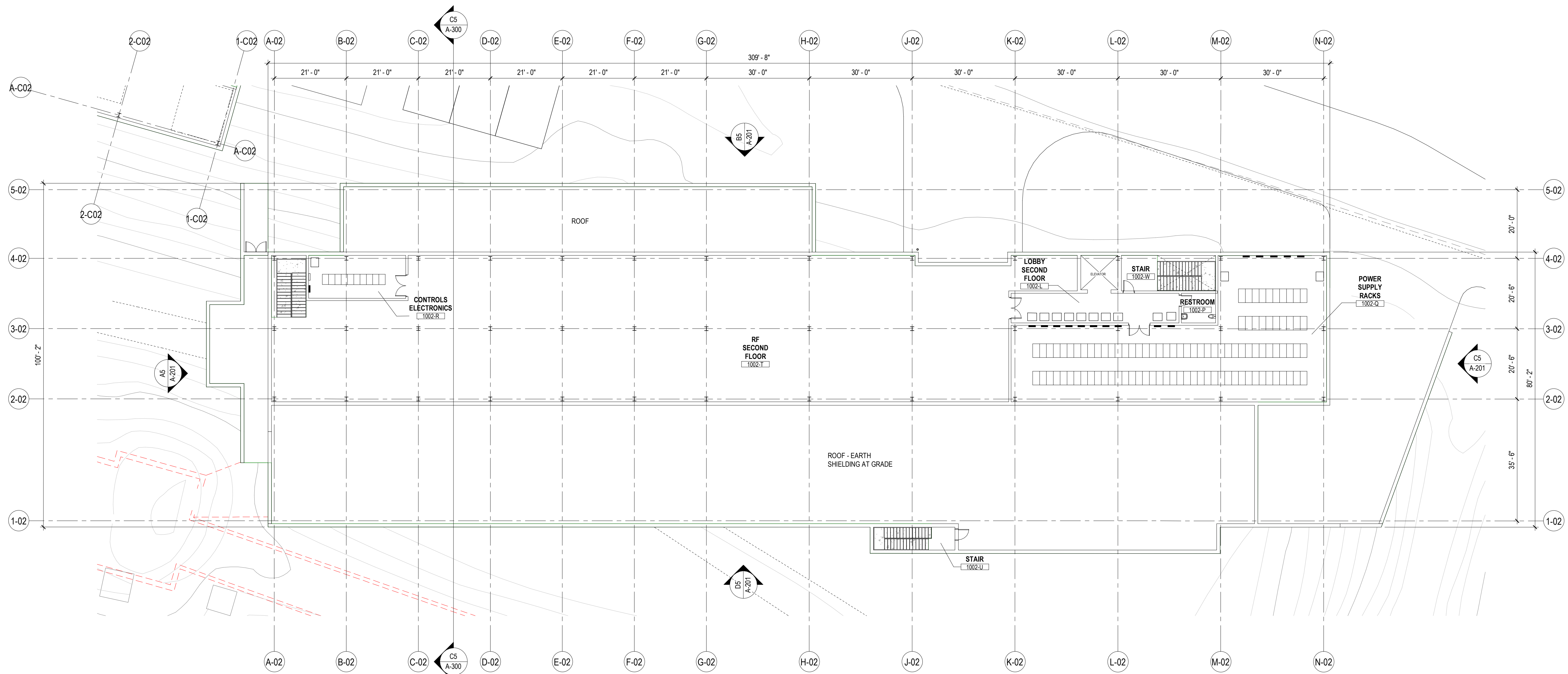
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FLOOR PLANS - B1002

Sheet Number

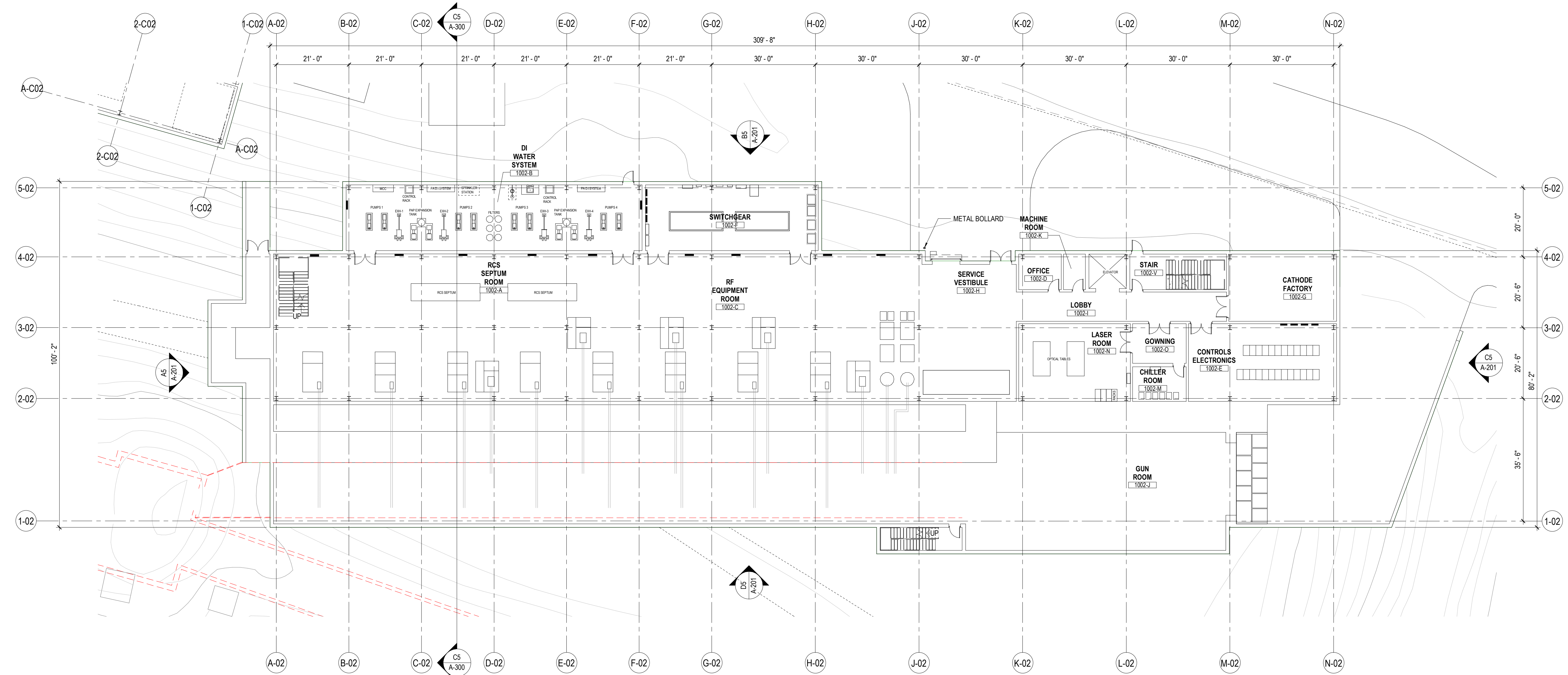
A-103

Project Status
Concept Design 100% Review Submittal



C5 02-SECOND FLOOR PLAN - B1002
1/16" = 1'-0"

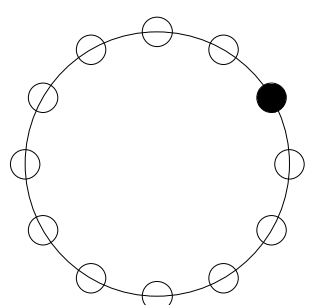
MARCH 2019 PLAN AREA - 2,877 SF
PROPOSED AREA - 13,754 SF

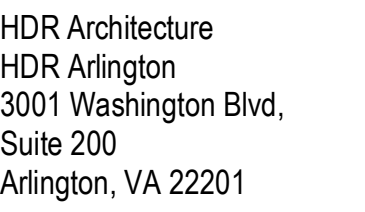


A5 01-FIRST FLOOR PLAN - B1002
1/16" = 1'-0"

MARCH 2019 PLAN AREA - 17,655 SF
PROPOSED AREA - 28,298 SF

TOTAL MARCH 2019 PLAN AREA - 20,532 SF
TOTAL PROPOSED AREA - 42,052 SF





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Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer	Author
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	DESCRIPTION
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	11/06/2020 100% Review Submittal

Project Number	10235960
Original Issue	08/03/20

RELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

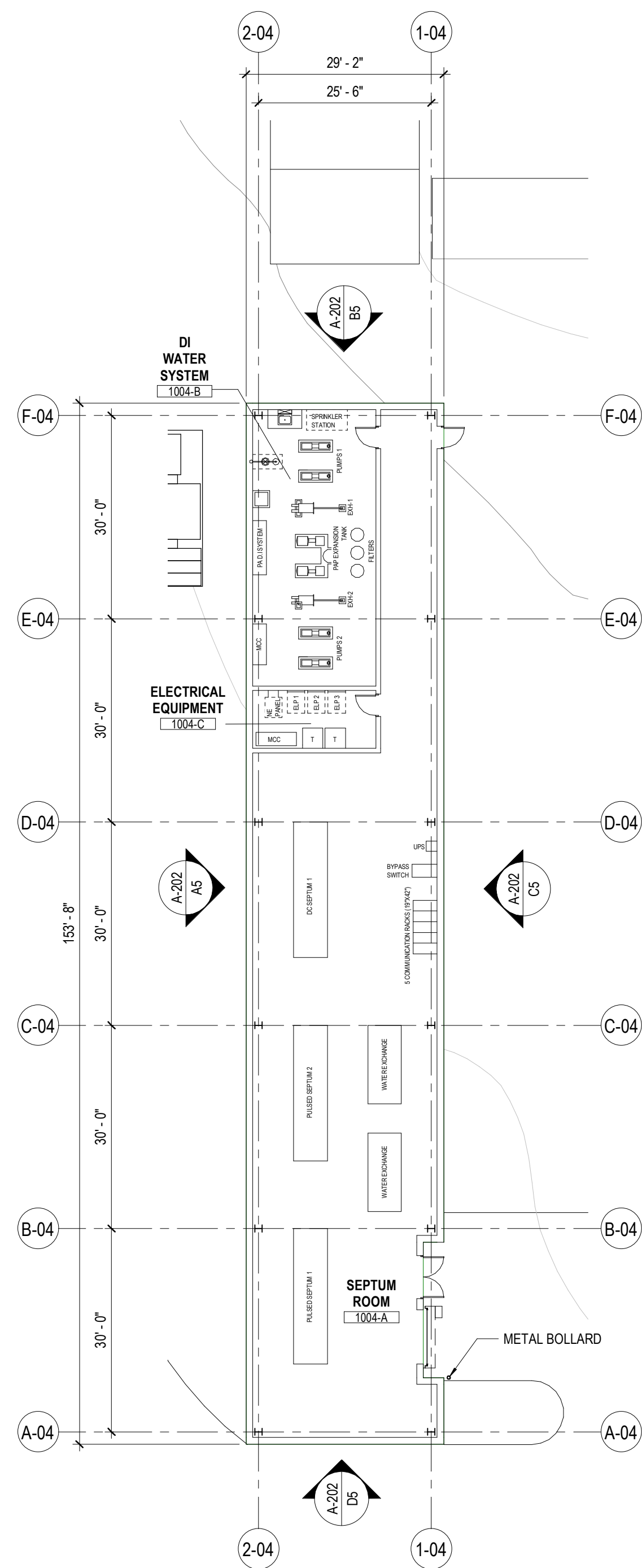
FLOOR PLANS - B1004

Sheet Number

A-104

Project Status

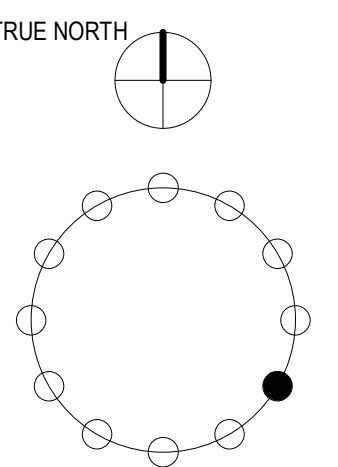
Concept Design 100% Review Submittal

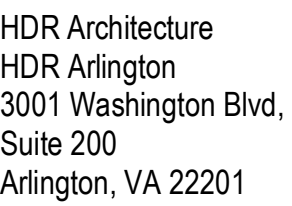


(A5) 01-FIRST FLOOR PLAN - B1004 MARCH 2019 PLAN AREA - 4,481 SF
 1/16" = 1'-0" **PROPOSED AREA - 4,421 SF** 16

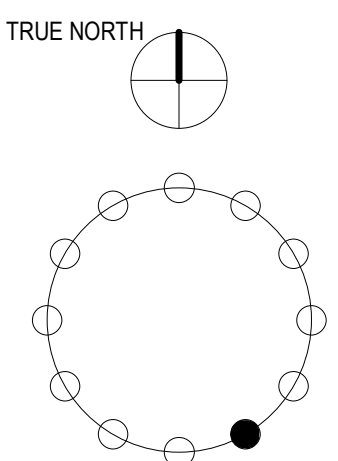
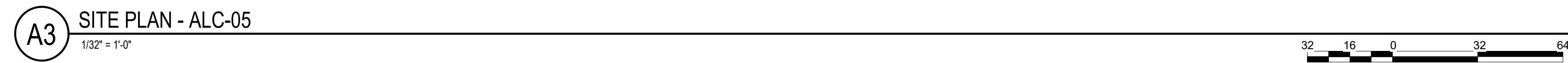
A4 SITE PLAN - B1004
1/32" = 1'-0"

TOTAL MARCH 2019 PLAN AREA - 8,962 SF
TOTAL PROPOSED AREA - 4,421 SF





A	Fast & Slow Correctors - CAEN MPS-SR (111), Straight Section Quads - BiGen MPS-SR (19), Striaght Section Sext Near Qd - BiGen MPS-SR (6), Straight Section Sext Near Qf - BiGen MPS-SR (6)
B	Arc Quadrupoles - APS MPS-SR, Arc Sextupoles Near Qd - APS MPS-SR, ARC Sextupoles Near Qf - APS MPS-SR
C	CORRECTOR x 20 - Coorx20 MPS-RC (4)
D	SX 1,2,3,4
E	CORRECTOR x 20-Coorx20 MPS-RC (2)
F	QF8 - QF8 - MPS-RC
G	CORRECTOR x 20 - Coorx20 MPS-RC (1)
H	QF1 TO QF7-QF str A MPS-RC
I	QD0 TO QD8-QD str A MPS-RC



Upton, New York



Project Manager	Gabriela Kleiman
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Project Number	10235960
Original Issue	08/03/20

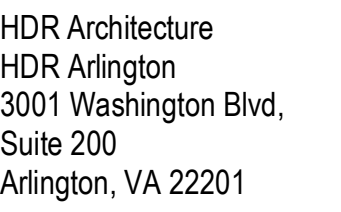
RELIMINARY
NOT FOR CONSTRUCTION

Sheet Number

A-105

Project Status

Concept Design 100% Review Submittal



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Upton, New York



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer		Author
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Project Number	10235960
Original Issue	09/25/20

PRELIMINARY
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Sheet Name

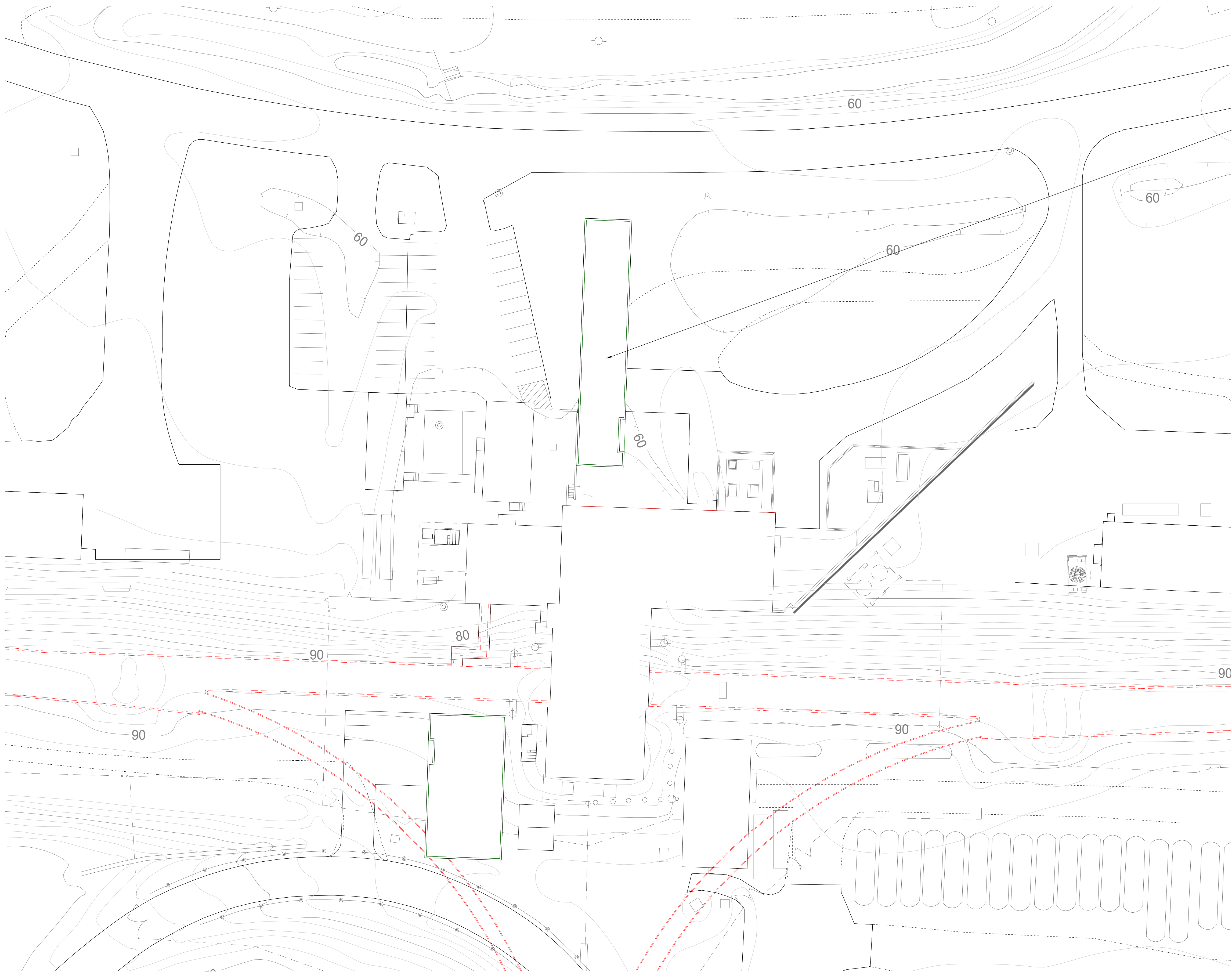
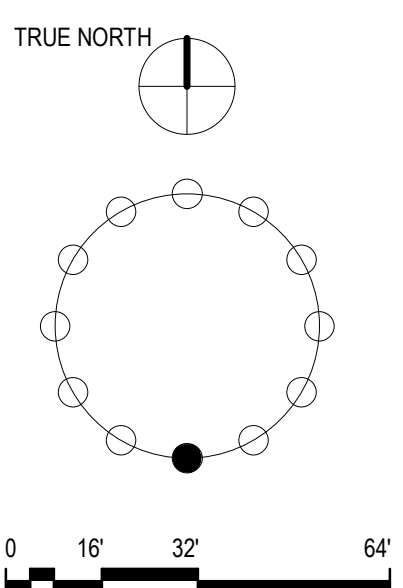
SITE PLANS - B1006
ALTERNATE

Sheet Number

A-106

Project Status

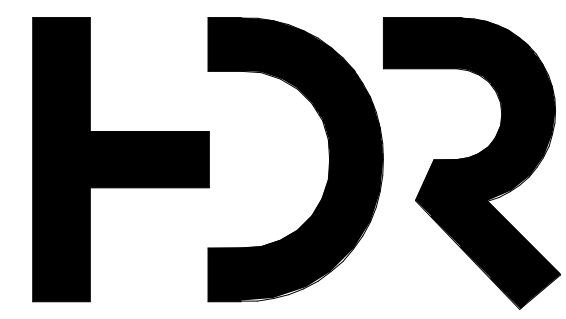
Concept Design 100% Review Submittal



**B1006 - ALTERNATE
BUILDING IDENTICAL TO B1004 FOR
ALL DISCIPLINES**

A5 SITE PLAN - B1006 - ALTERNATE
1/32" = 1'-0"

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Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Katy Harshorn

MARK	DATE	DESCRIPTION
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	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
08/06/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

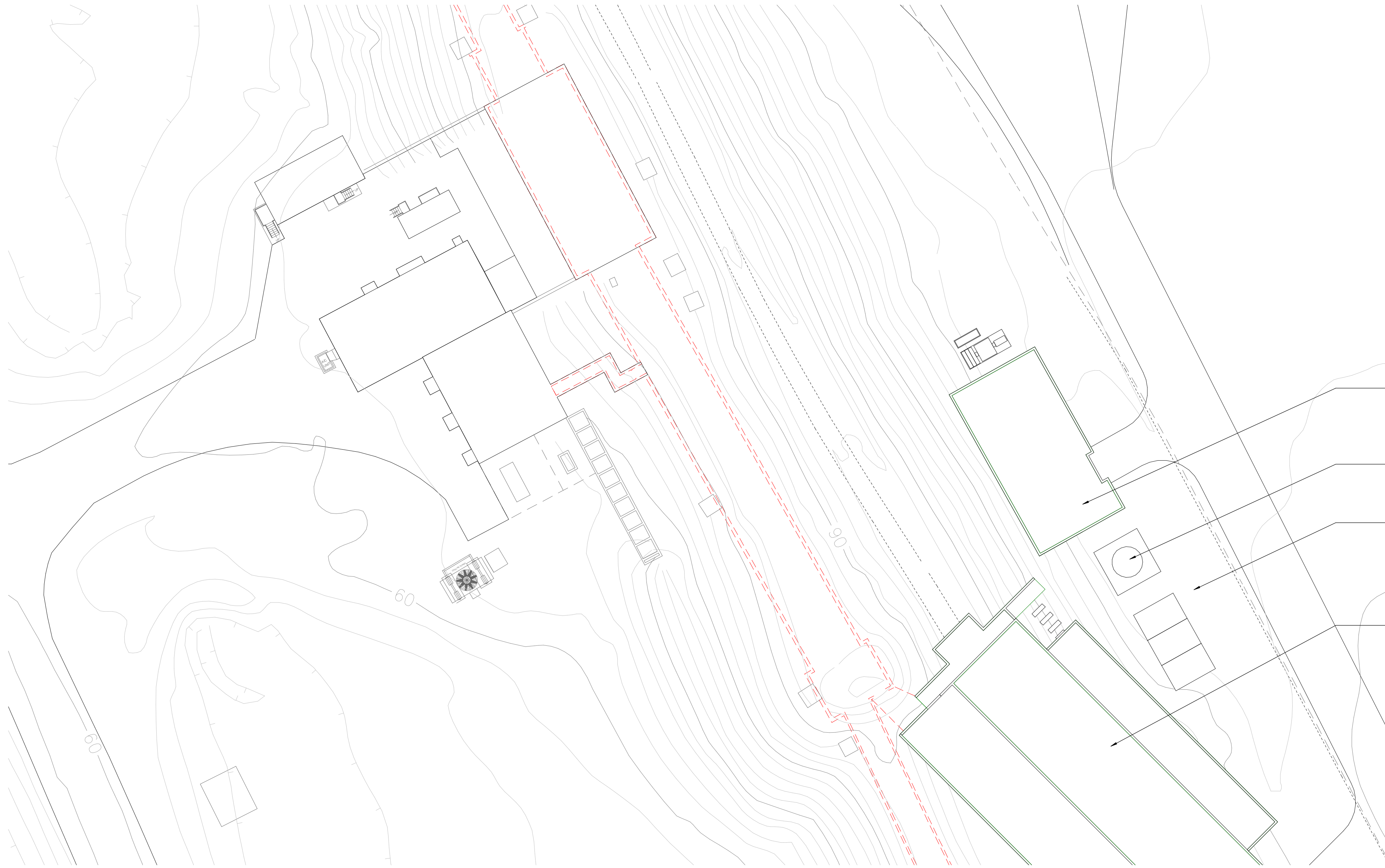
FLOOR PLANS - CRYO
1002/1006

Sheet Number

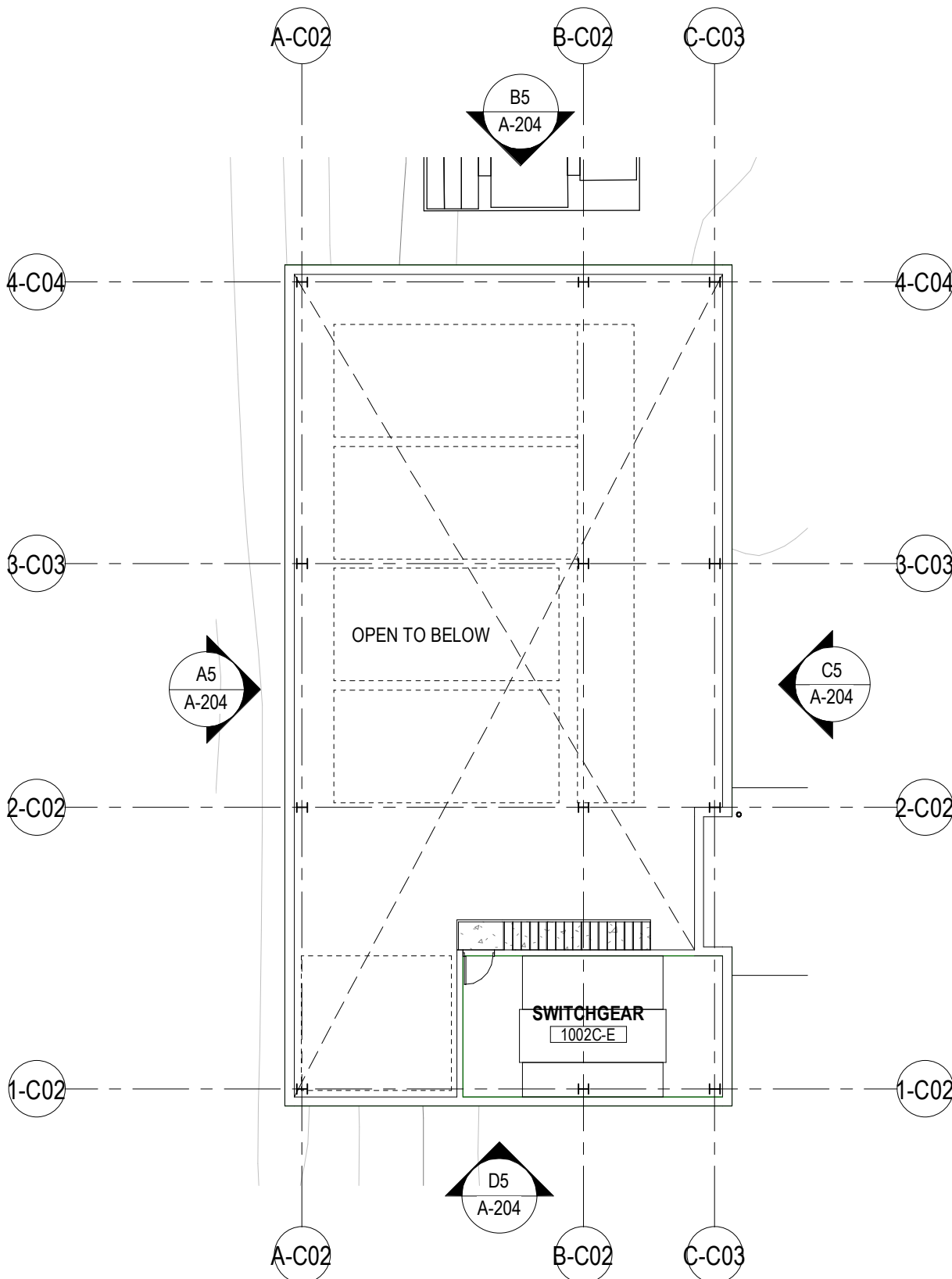
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Project Status

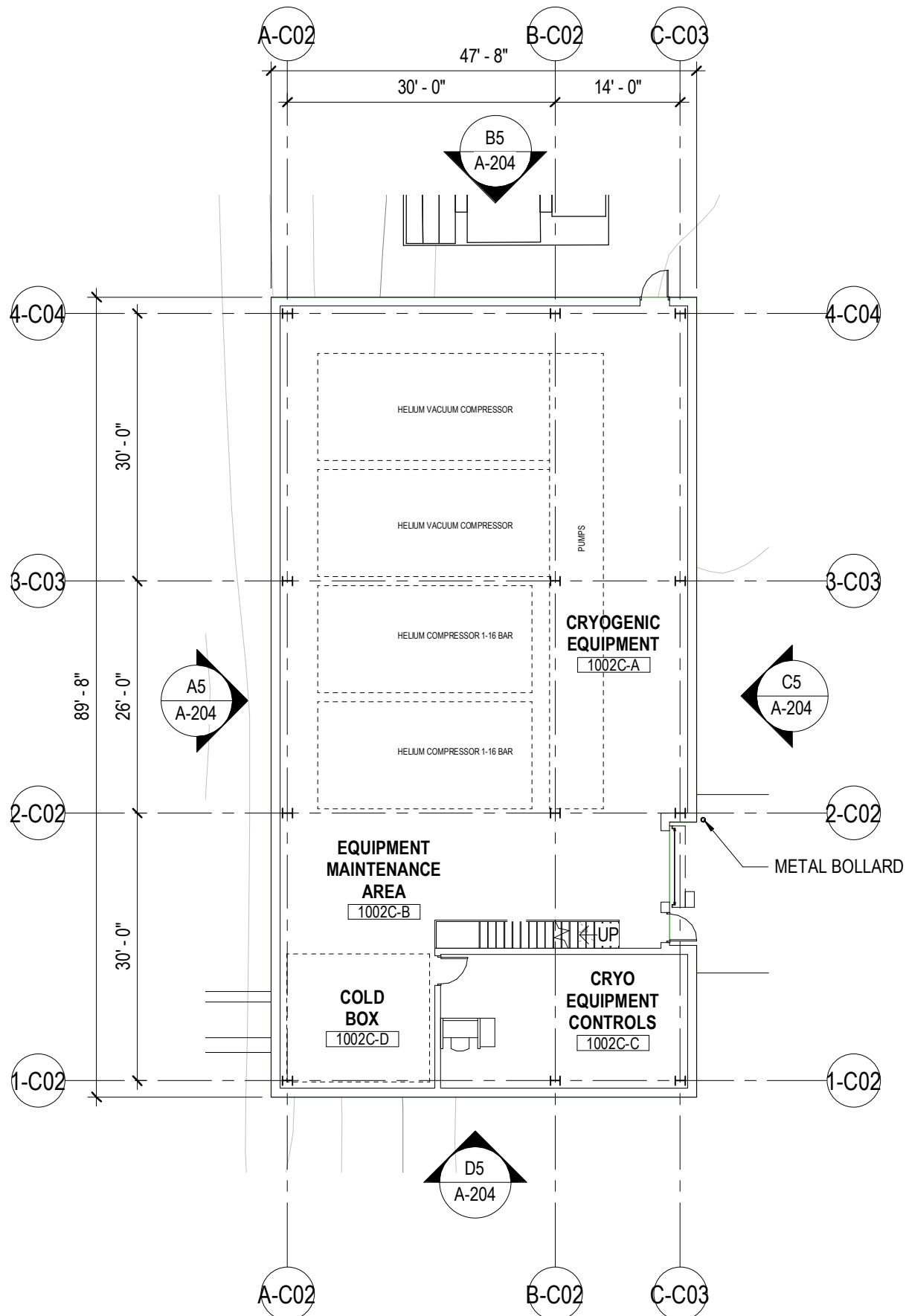
Concept Design 100% Review Submittal



C4 SITE PLAN - CRYO 1002
1/32" = 1'-0"



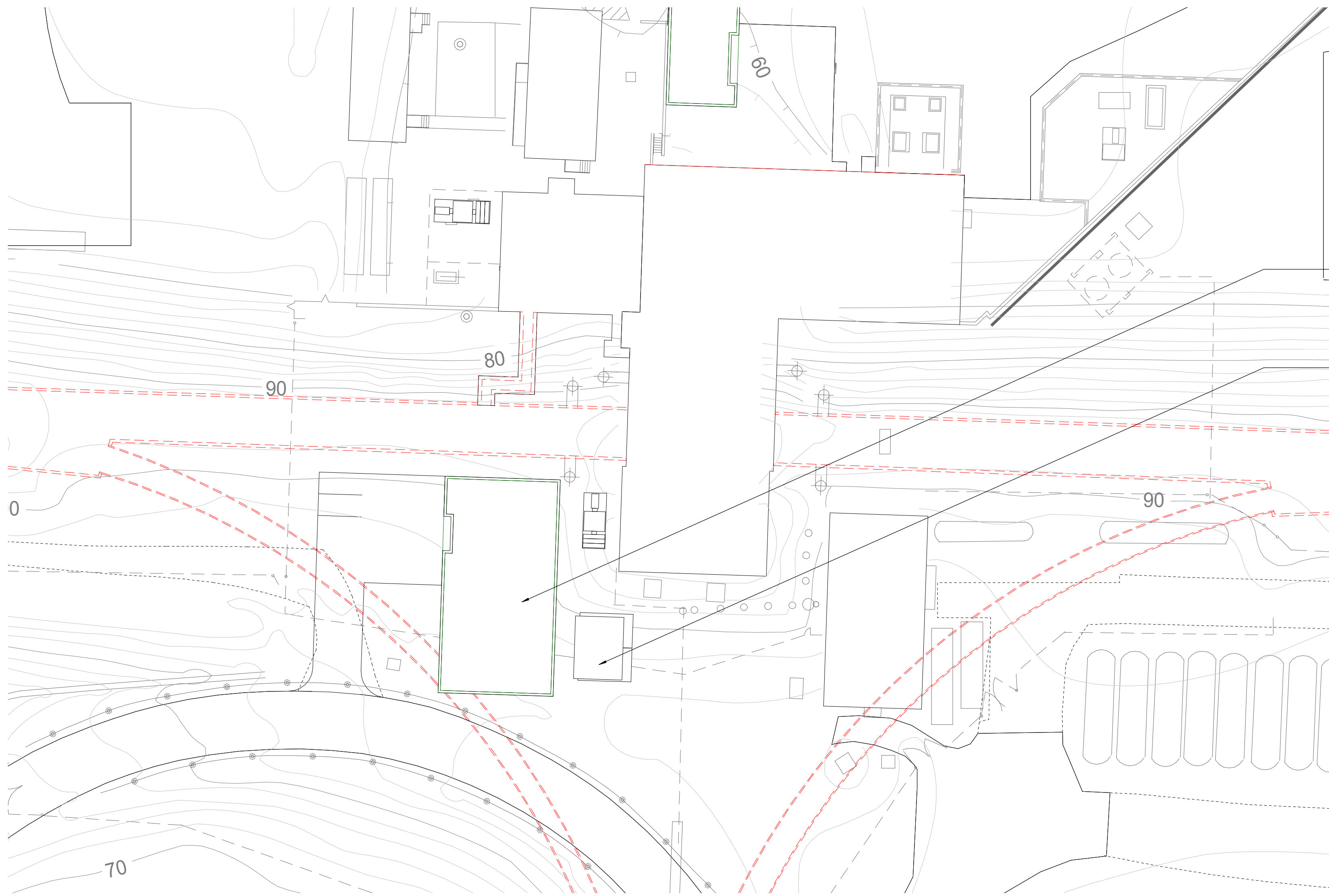
B5 SECOND FLOOR PLAN - CRYO 1002/1006 MARCH 2019 PLAN AREA - 0 SF
PROPOSED AREA - 506 SF
1/16" = 1'-0"



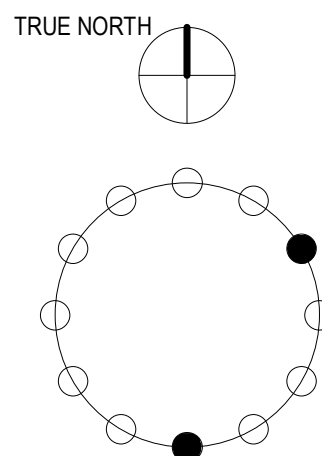
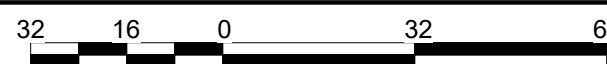
A5 01-FIRST FLOOR PLAN - CRYO 1002/1006 MARCH 2019 PLAN AREA - 4,320 SF
PROPOSED AREA - 4,232 SF
1/16" = 1'-0"



TOTAL MARCH 2019 PLAN AREA - 4,320 SF
TOTAL PROPOSED AREA - 4,738 SF



A4 SITE PLAN - CRYO 1006
1/32" = 1'-0"

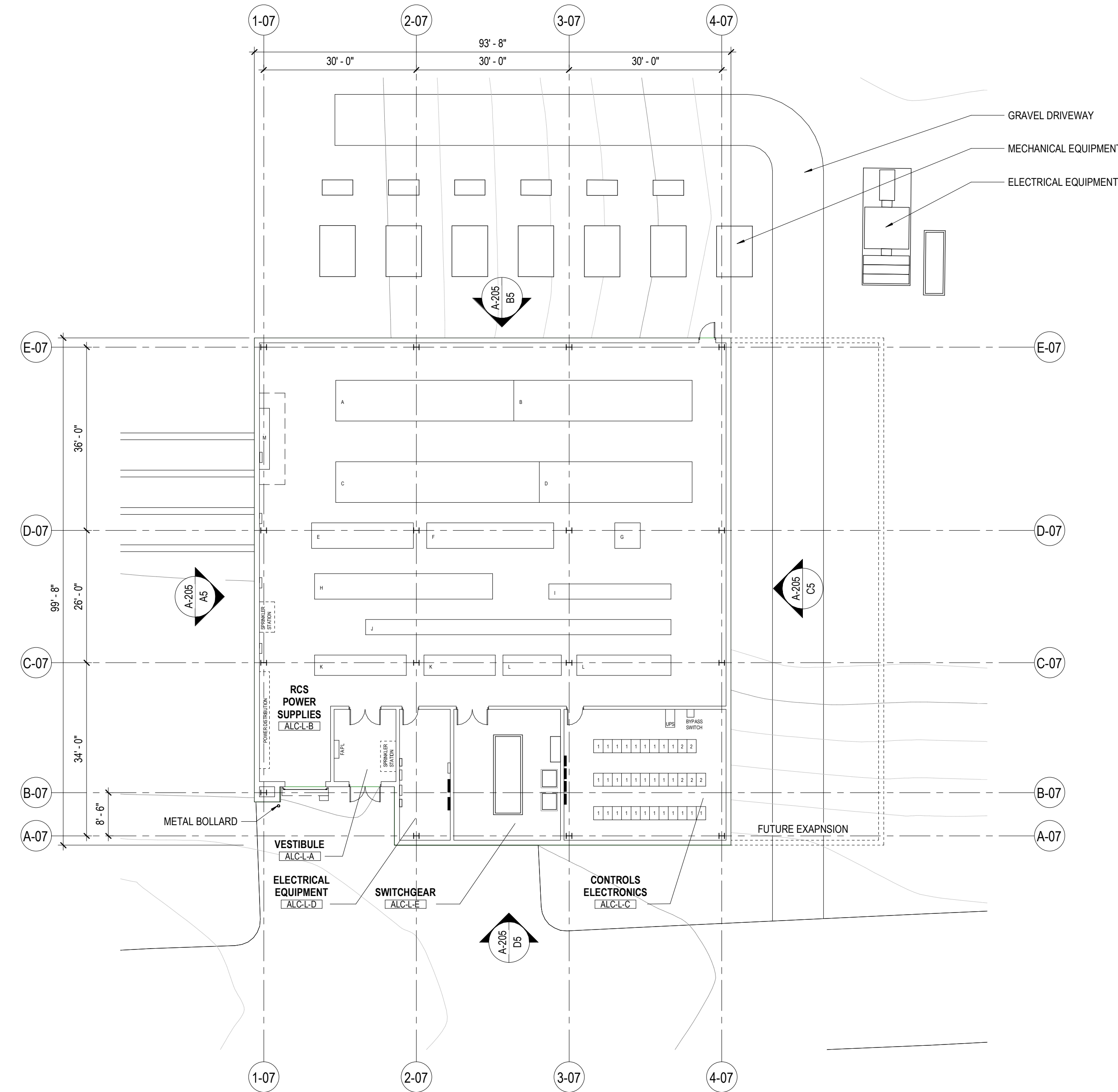


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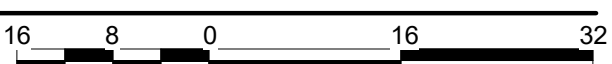
EQUIPMENT TABLE

A	DIPOLE 1 - D arc A MPS-RC
B	DIPOLE 2 - D arc B MPS-RC
C	QD - QC arc MPS-RC
D	QF - QF arc MPS-RC
E	QD10 TO QD13 - QD str B MPS-RC
F	QD14 TO QD18 - QD str B MPS-RC
G	QD19 - QD str B MPS-RC
H	QFI 1 TO QFI 7 - QF str B MPS-RC
I	CORRECTOR x 20 - Corrx20 MPS-RC (2)
J	CORRECTOR x 20 - Corrx20 MPS-RC (5)
K	D1/D3 PS - APS MPS-SR, D2 PS - APS MPS-SR, Arc Quadrupoles - APS MPS-SR, Arc Sextupoles Near Qd - APS MPS-SR, Arc Sextupoles Near Qf - APS MPS-SR
L	Fast and Slow Correctors - CAEN MPS-SR, Straight Section Quads - BiGen MPS-SR, Straight Section Sext Near Qd - BiGen MPS-SR, Straight Section Sext Near Qf - BiGen MPS-SR
M	Gauss Clock

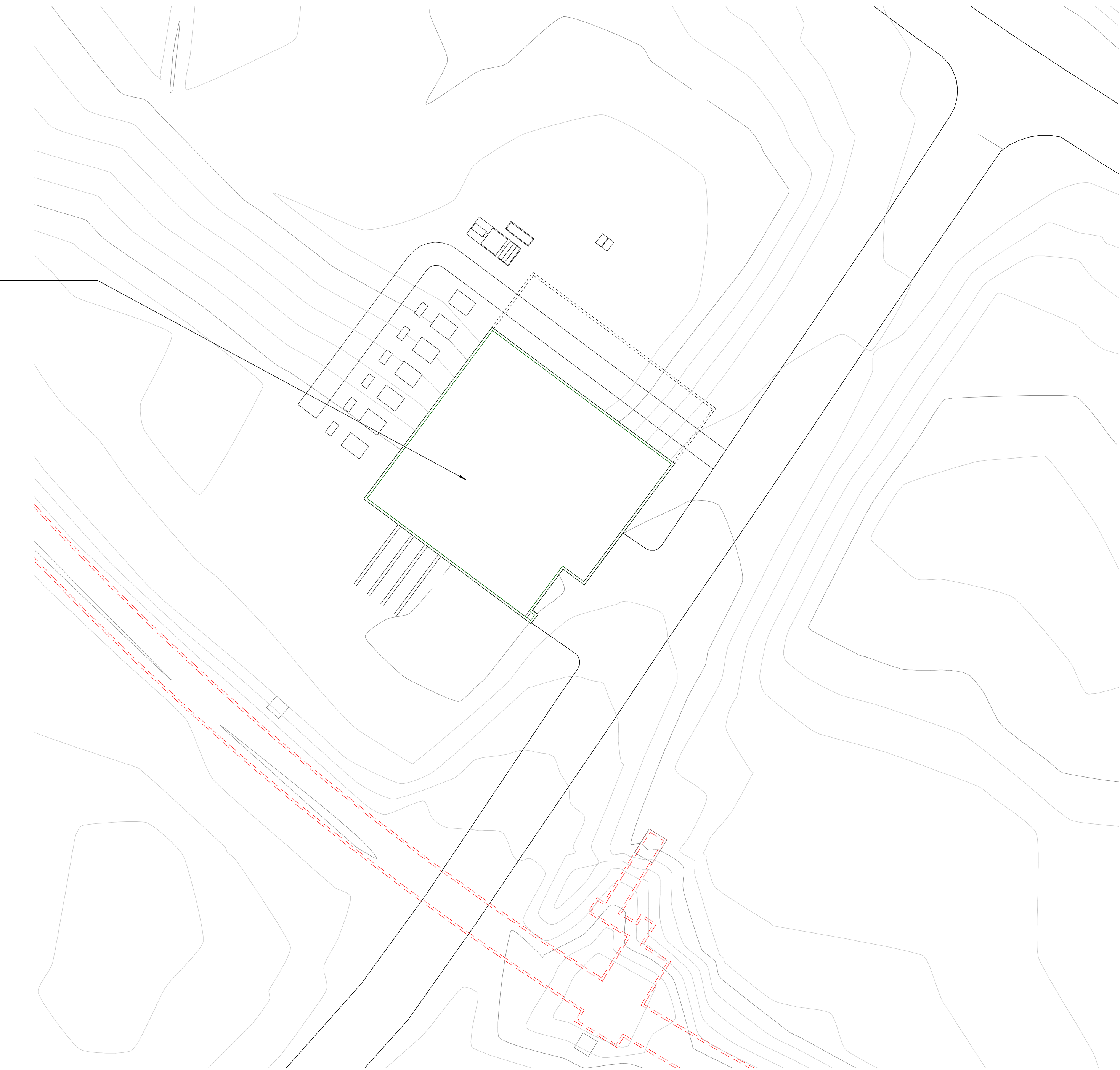


A5 01-A-FLOOR PLAN - ALC-07
1/16" = 1'-0"

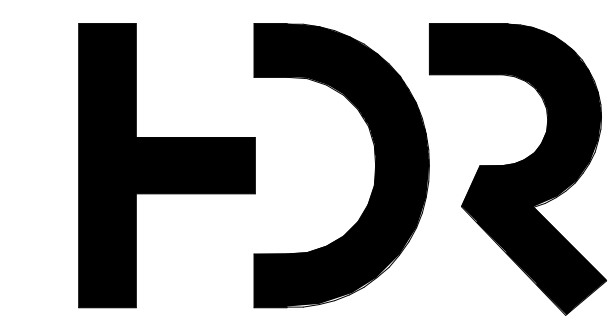
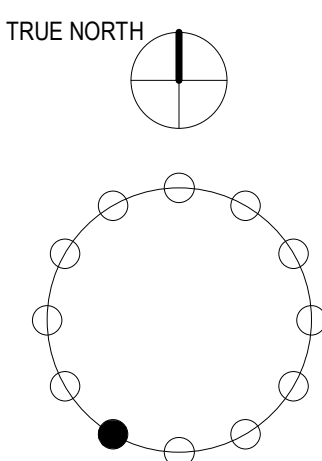
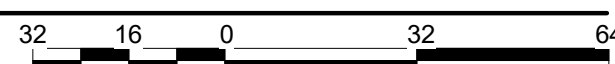
MARCH 2019 PLAN AREA - 4,975 SF
PROPOSED AREA - 9,034 SF



ALC-07



A3 SITE PLAN - ALC-07
1/32" = 1'-0"



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Electron Ion Collider

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Project Manager: Gabriela Kleiman
Project Designer: Tyler Dye
Project Architect: Kevin LeMans
Landscape Architect: Joseph Dennis
Civil Engineer: Joseph Krzyzewski
Mechanical Engineer: Phil Beadle
Electrical Engineer: Kelly Harshorn
Plumbing Engineer: Kelly Harshorn
Interior Designer: Kelly Harshorn
Equipment Planner: Kelly Harshorn
Wayfinding: Kelly Harshorn

Sheet Reviewer: Author

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	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number: 10235960
Original Issue: 09/13/20

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Sheet Name

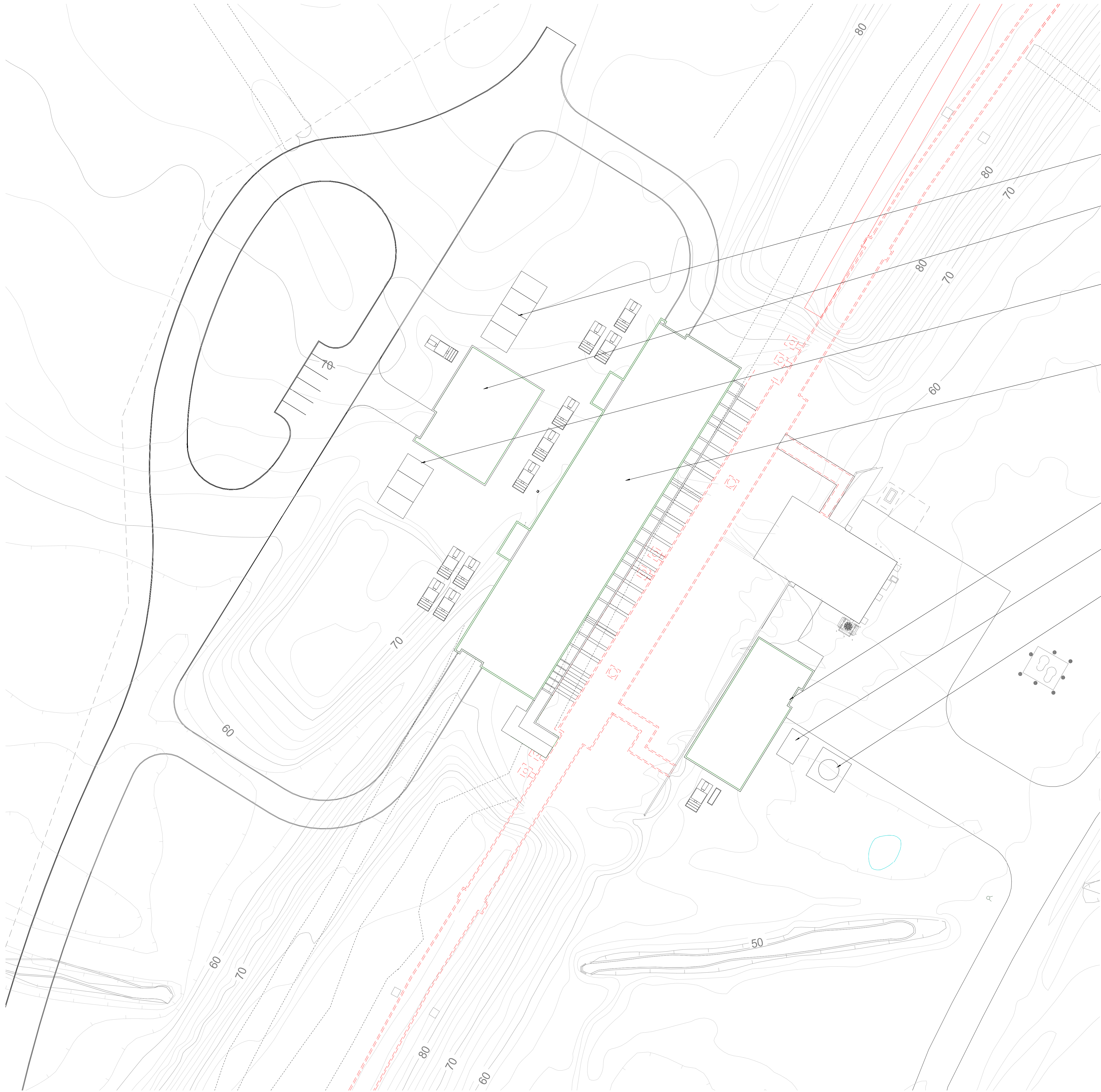
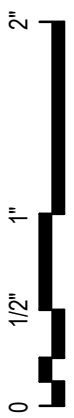
FLOOR PLANS - ALC 07

Sheet Number

A-108

Project Status: Concept Design 100% Review Submittal

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COOLING WATER TOWER

B1010 DI WATER SYSTEM

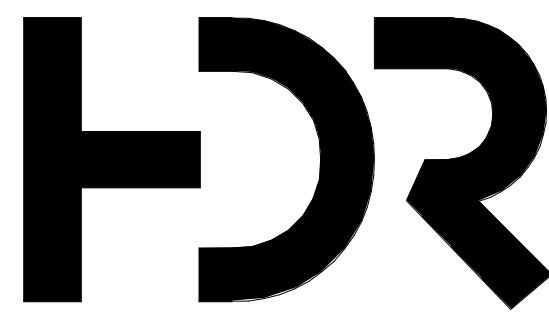
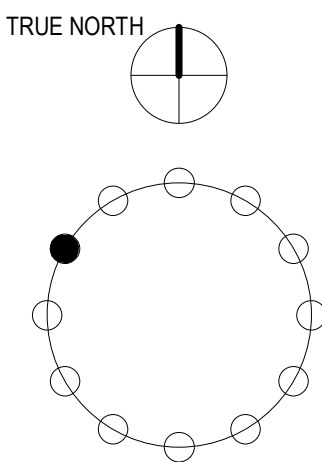
COOLING WATER TOWER

B1010

B1010 CRYO FACILITY

COOLING WATER TOWER

LN2 TANK



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Mechanical Engineer	Phil Beadle
Electrical Engineer	Katy Harshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer

Author

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Project Number	10235960
Original Issue	08/04/20

PRELIMINARY
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Sheet Name

SITE PLANS - B1010

Sheet Number

A-109

Project Status

Concept Design 100% Review Submittal

A5 SITE PLAN - B1010
1/32" = 1'-0"

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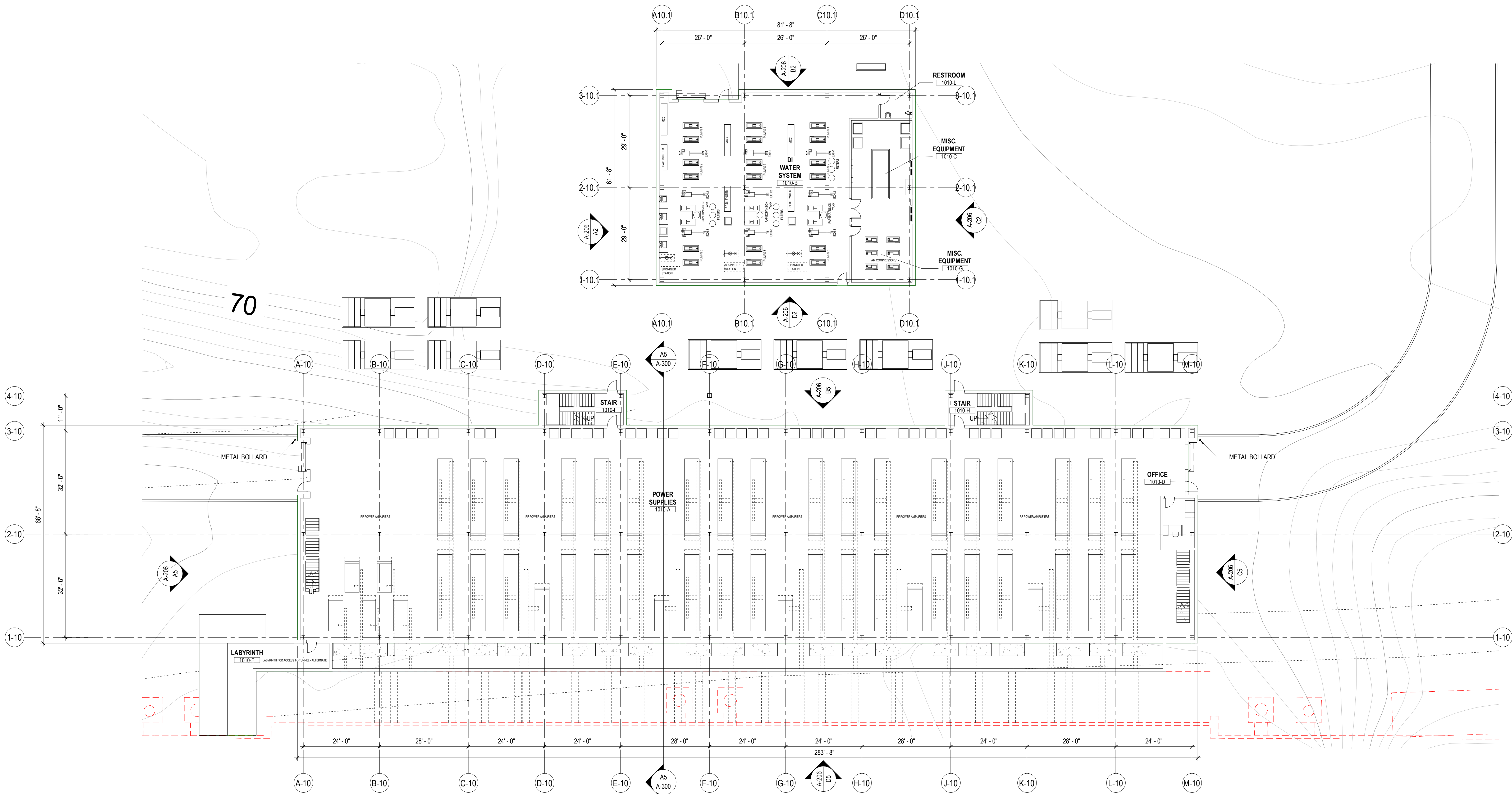
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D

C

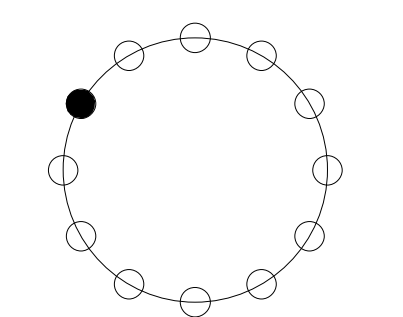
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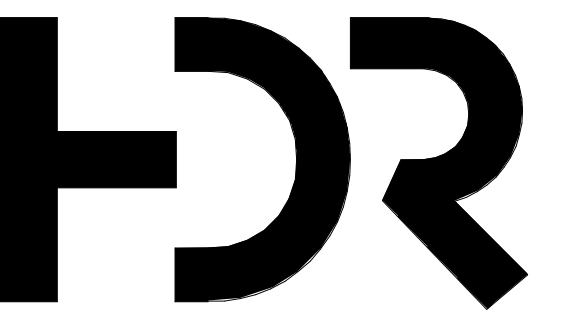


A5 01-FIRST FLOOR PLAN - B1010
1/16" = 1'-0"

MARCH 2019 PLAN AREA - 38,087 SF
PROPOSED AREA - 25,896 SF
TOTAL MARCH 2019 PLAN AREA - 69,965 SF
TOTAL PROPOSED AREA - 45,881 SF



0 8' 16' 32'



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Phil Beadle
Katy Harshorn

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Project Number
Original Issue

10235960
08/03/20

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Sheet Name

FIRST FLOOR PLAN -
B1010

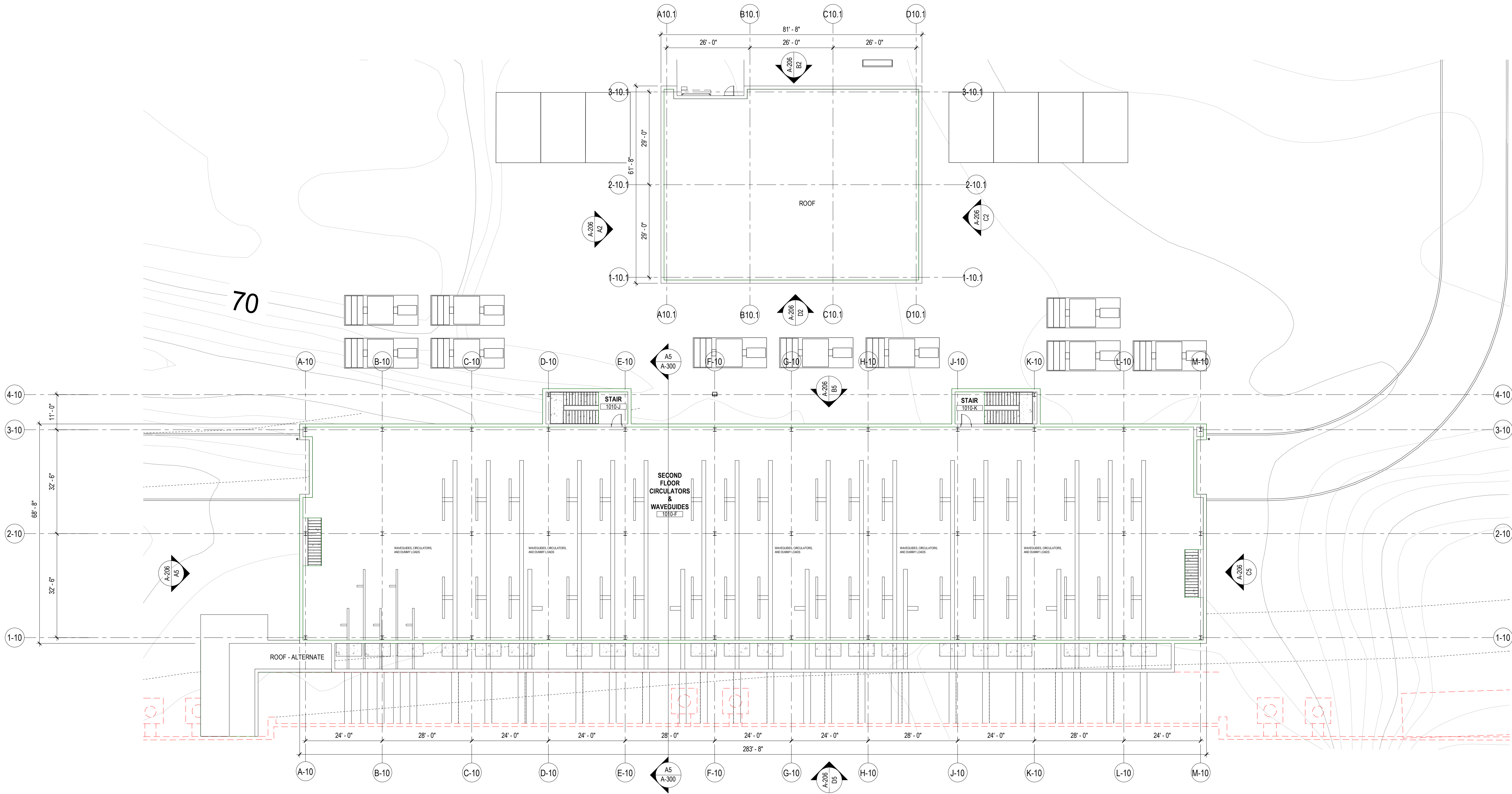
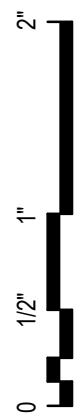
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Project Status

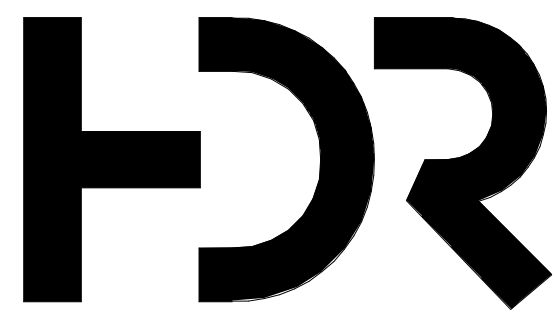
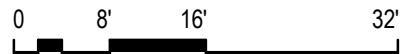
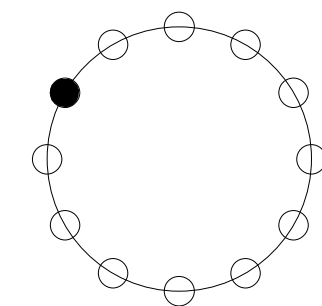
Concept Design 100% Review Submittal

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A5 02-SECOND FLOOR PLAN - B1010
1/16" = 1'-0"

MARCH 2019 PLAN AREA - 31,878 SF
PROPOSED AREA - 19,985 SF



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Equipment Planner
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Joseph Krzyzewski
Phil Beadle
Katy Harshorn

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Project Number
Original Issue

10235960
09/21/20

PRELIMINARY
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Sheet Name

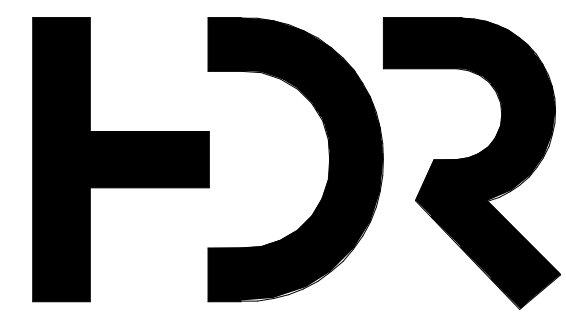
SECOND FLOOR PLAN
- B1010

Sheet Number

A-111

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Original Issue

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09/16/20

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Sheet Name

FLOOR PLANS - CRYO
1010

Sheet Number

A-112

Project Status

Concept Design 100% Review Submittal



COOLING WATER TOWER

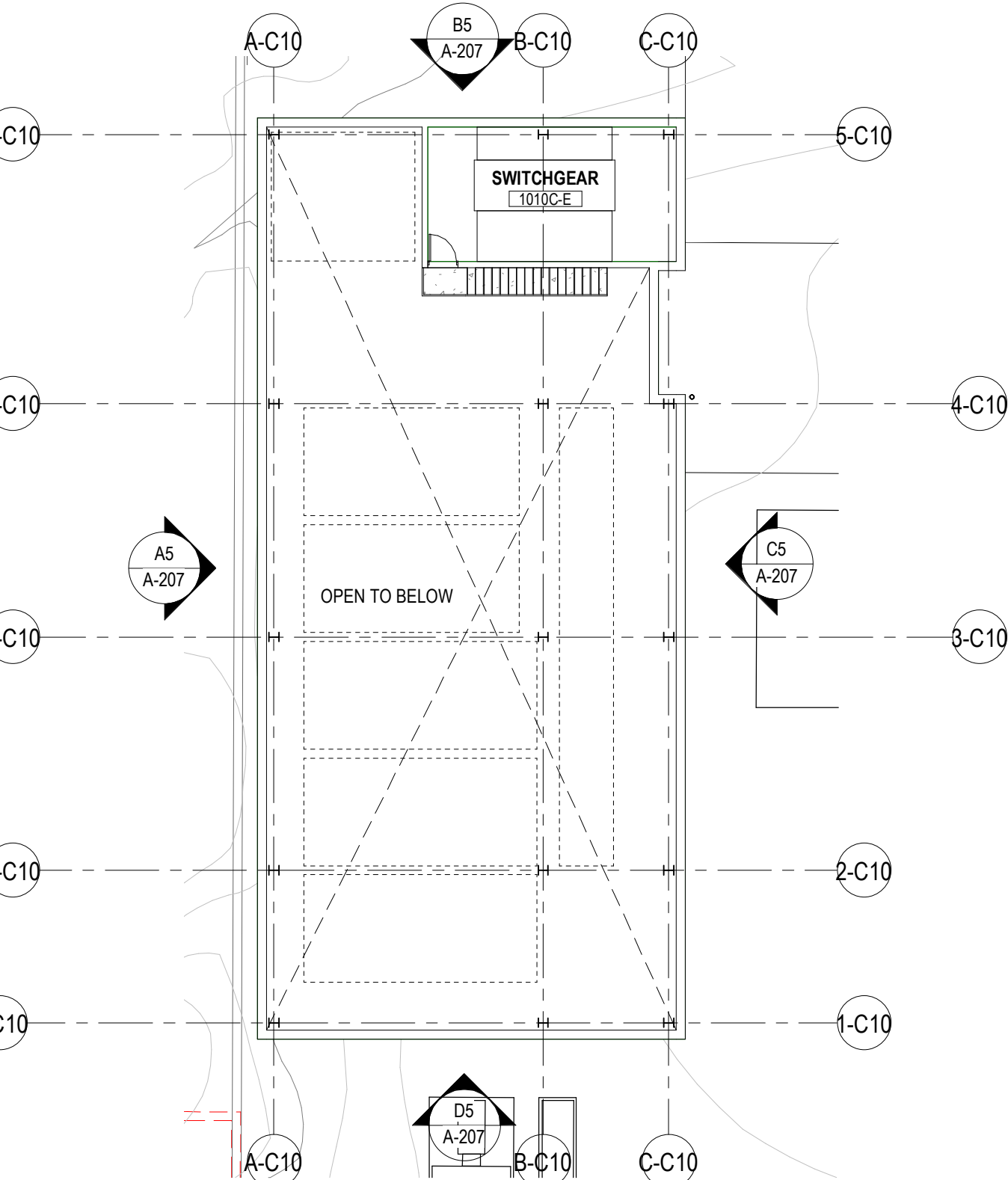
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B1010

B1010 CRYO FACILITY

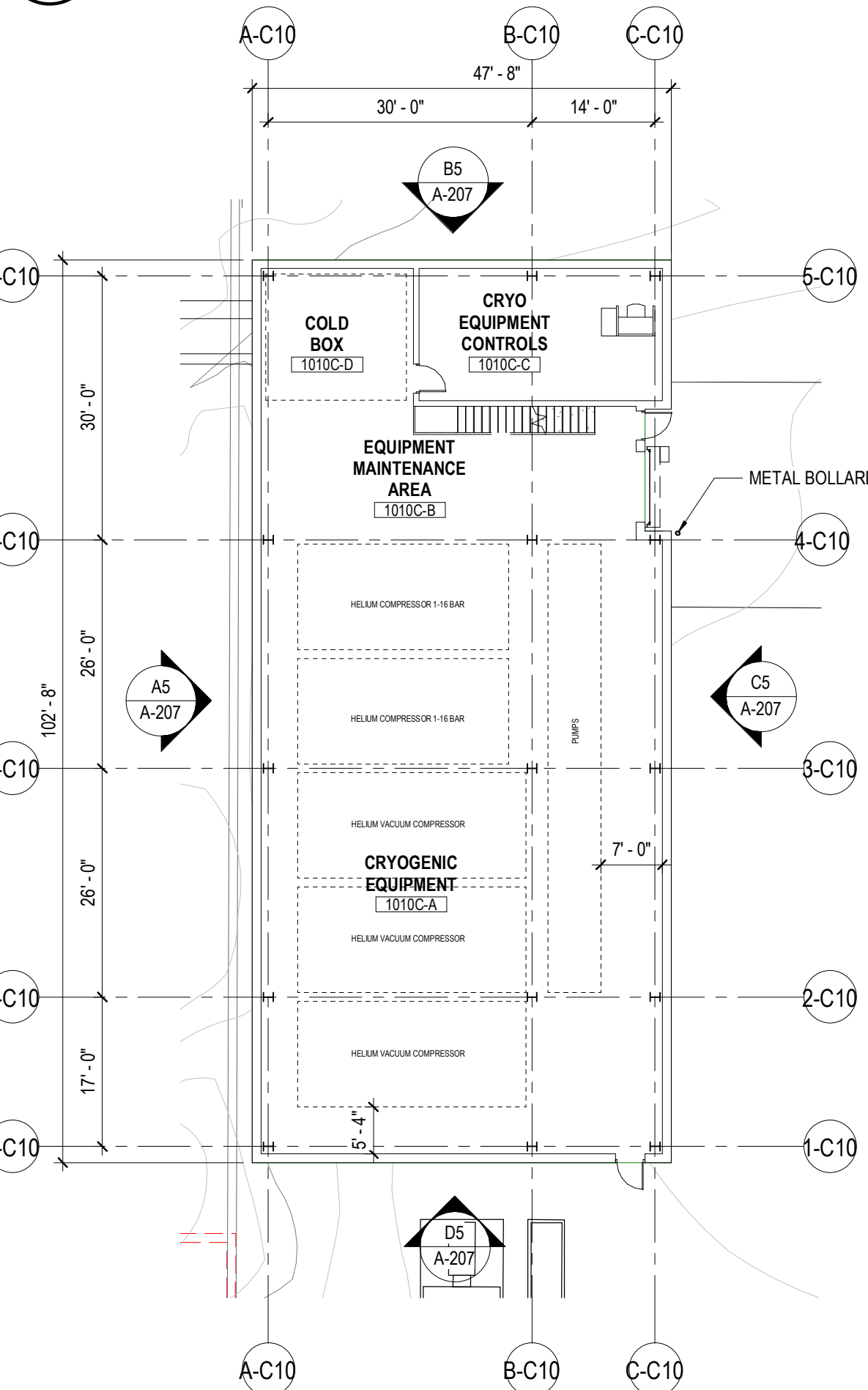
COOLING WATER TOWER

LN2 TANK



B5 SECOND FLOOR PLAN - CRYO 1010 MARCH 2019 PLAN AREA - 0 SF

PROPOSED AREA - 506 SF



5A 01-FIRST FLOOR PLAN - CRYO 1010 MARCH 2019 PLAN AREA - 4,910 SF

PROPOSED AREA - 4,852 SF

MARCH 2019 PLAN AREA - 4,910 SF

PROPOSED AREA - 5,358 SF

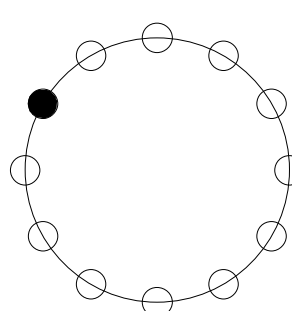


4A SITE PLAN - CRYO 1010

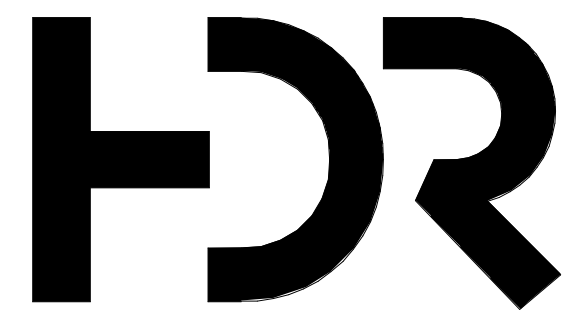
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TRUE NORTH



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Project Number
Original Issue

10235960
08/03/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

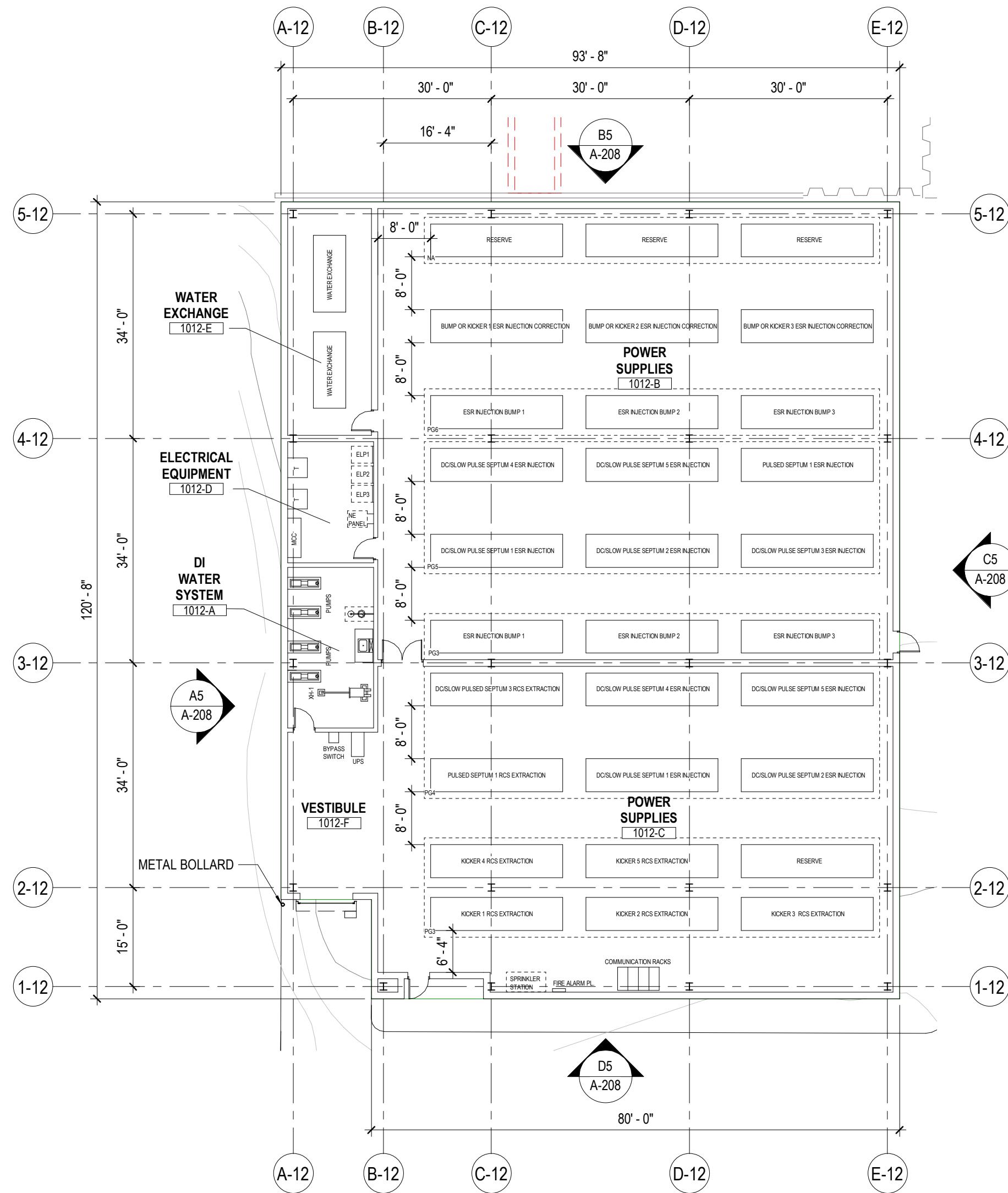
FLOOR PLANS - B1012

Sheet Number

A-113

Project Status

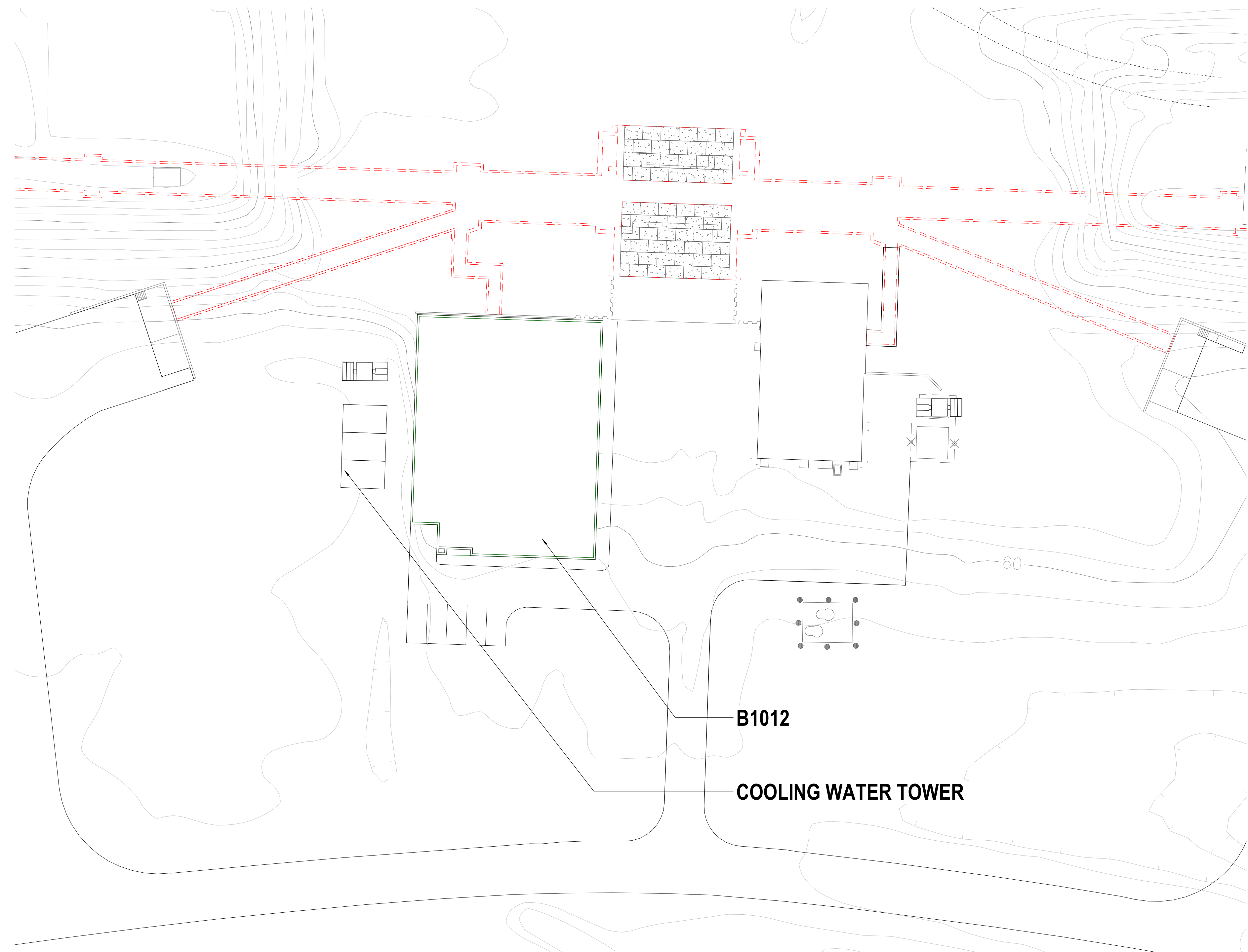
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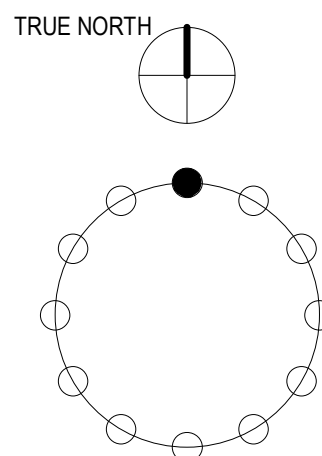
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1/16" = 1'-0"

MARCH 2019 PLAN AREA - 10,040 SF
PROPOSED AREA - 11,061 SF

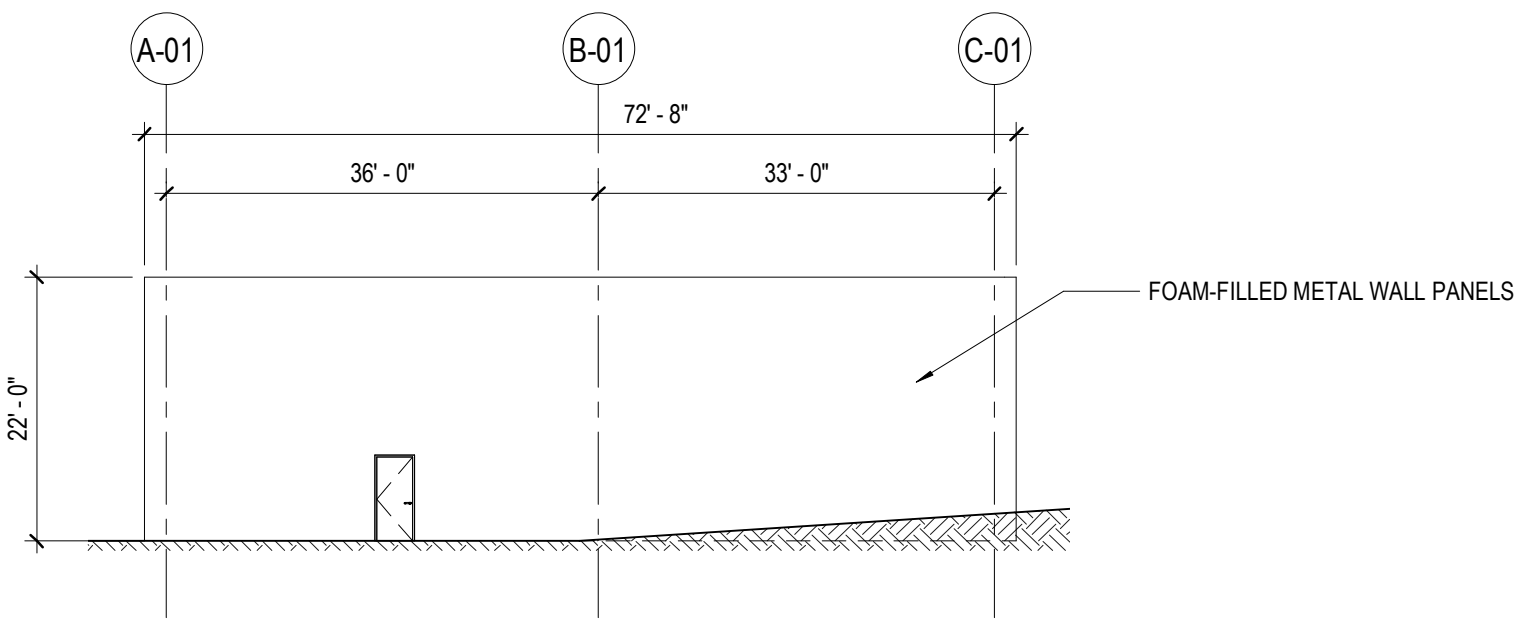
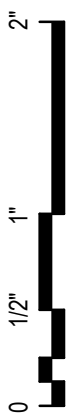
TOTAL MARCH 2019 PLAN AREA - 15,168 SF
TOTAL PROPOSED AREA - 11,061 SF



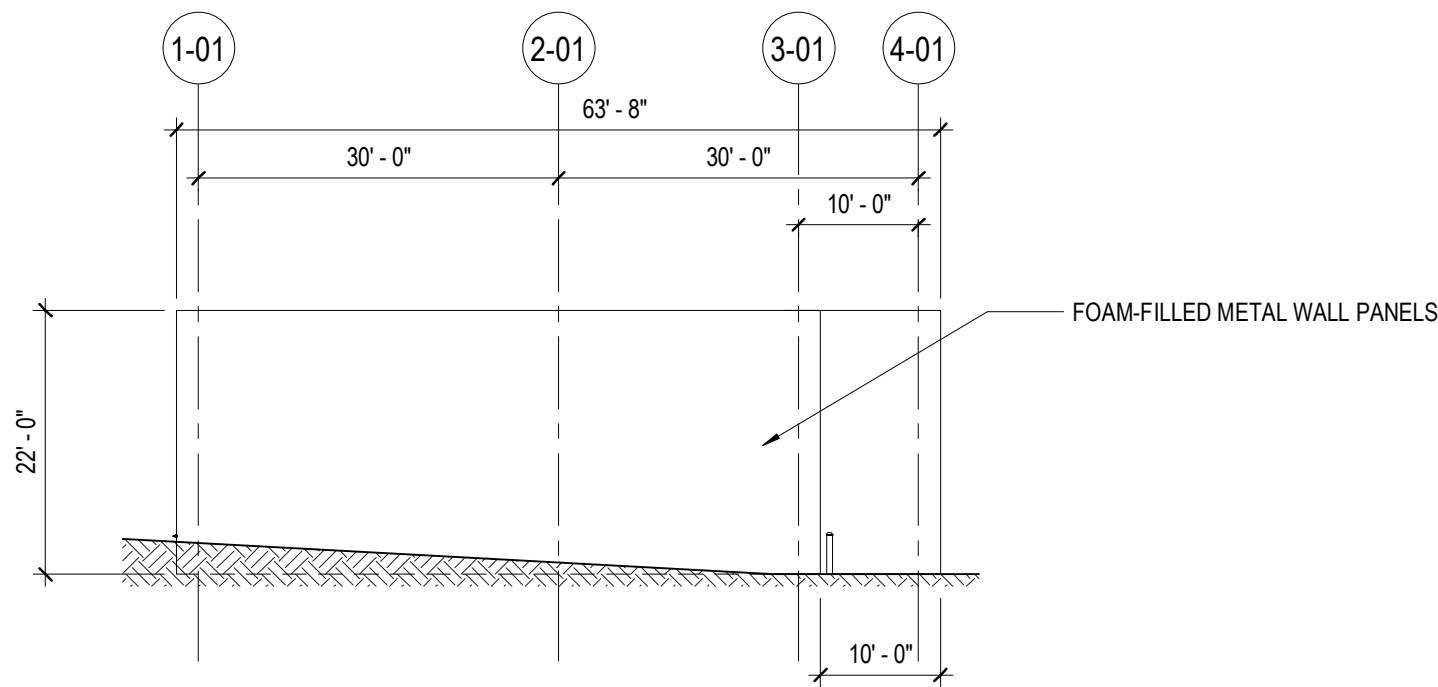
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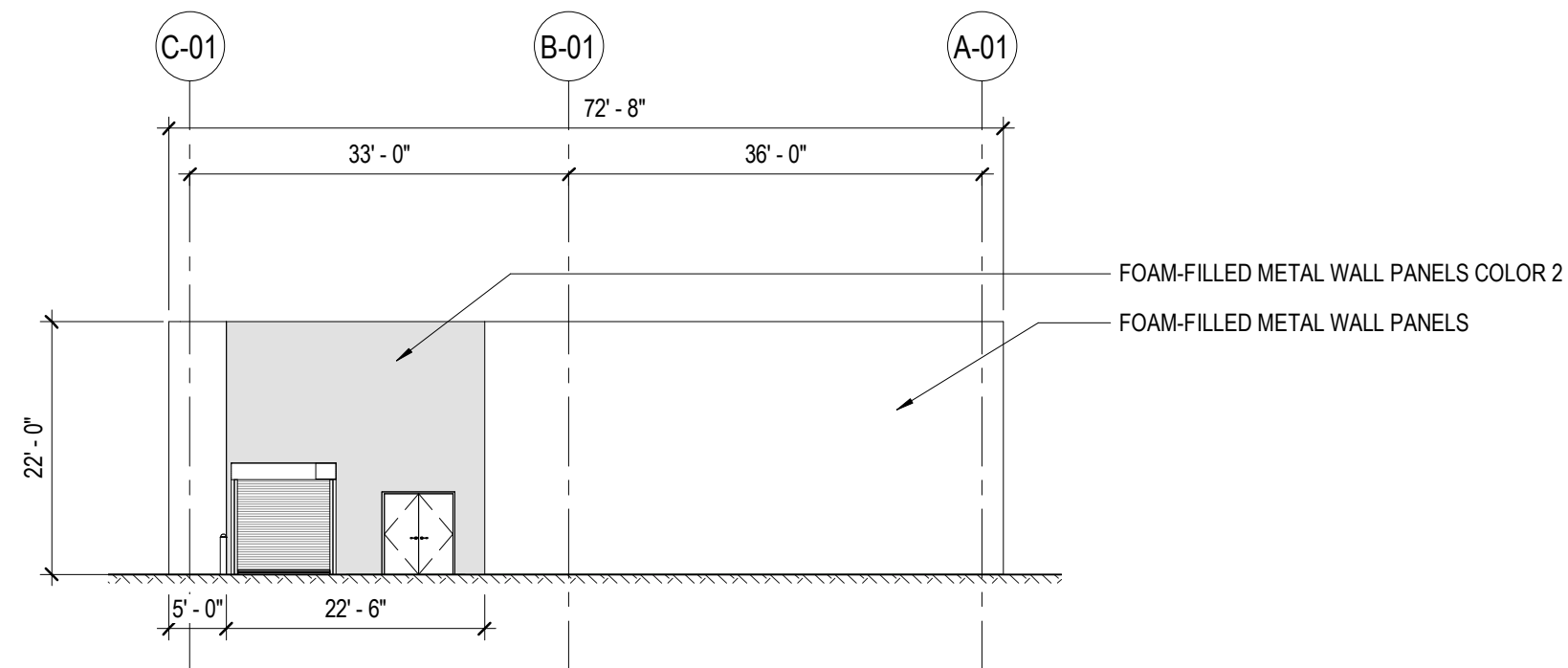
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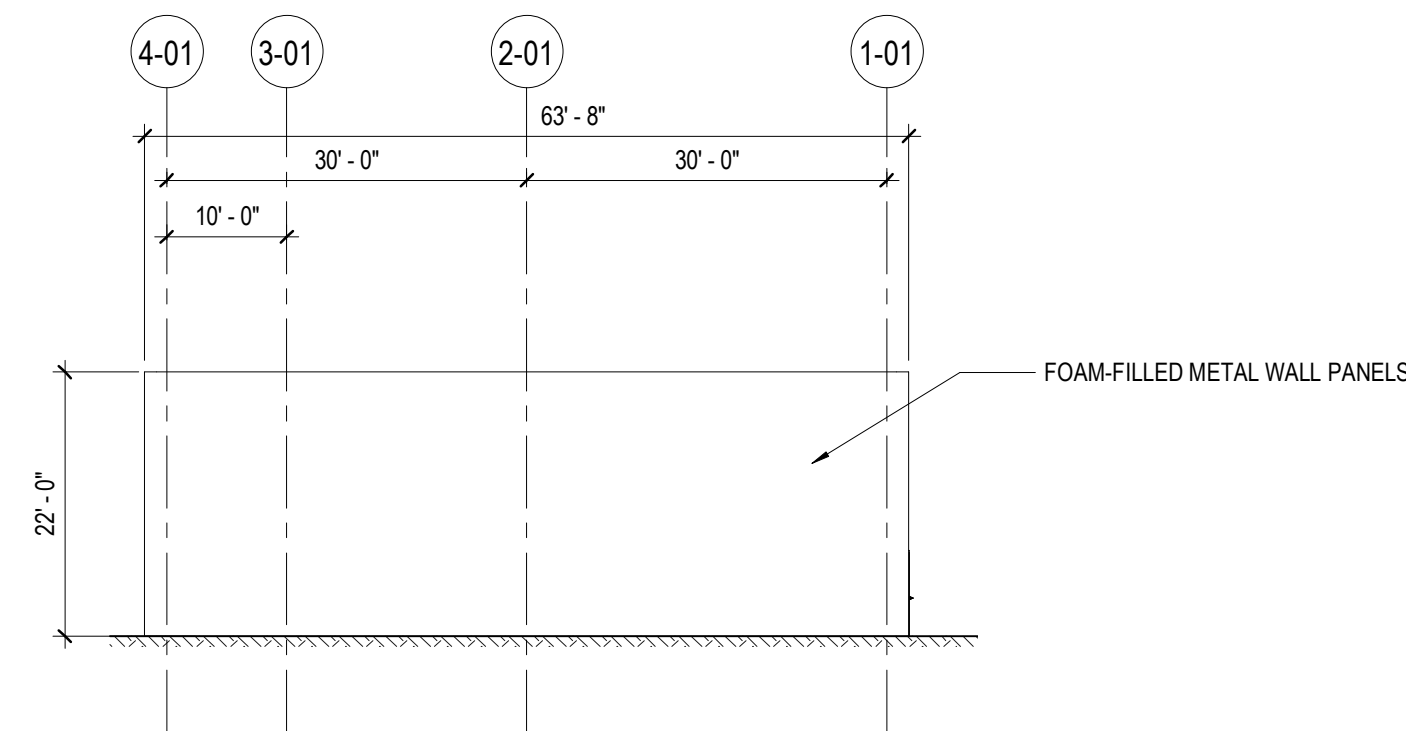
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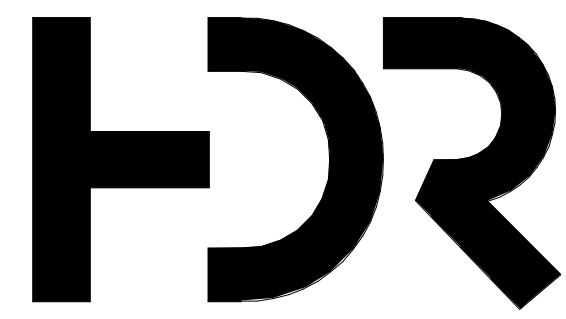
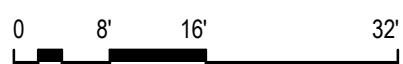
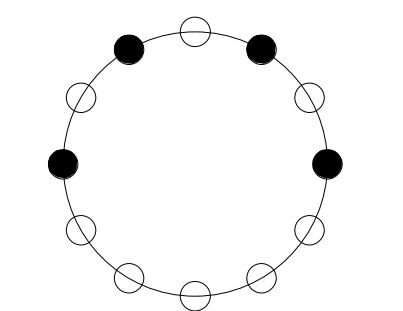
C5 EXTERIOR ELEVATION - BUILDING ALC 01/03/09/11-B
1/16" = 1'-0"



B5 EXTERIOR ELEVATION - BUILDING ALC 01/03/09/11-C
1/16" = 1'-0"



A5 EXTERIOR ELEVATION - BUILDING ALC 01/03/09/11-D
1/16" = 1'-0"



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Wayfinding	

Sheet Reviewer	Author
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	09/25/2020	60% Review Submittal
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Project Number	10235960
Original Issue	10/3/2018

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Sheet Name

EXTERIOR
ELEVATIONS - ALC
01/03/09/11

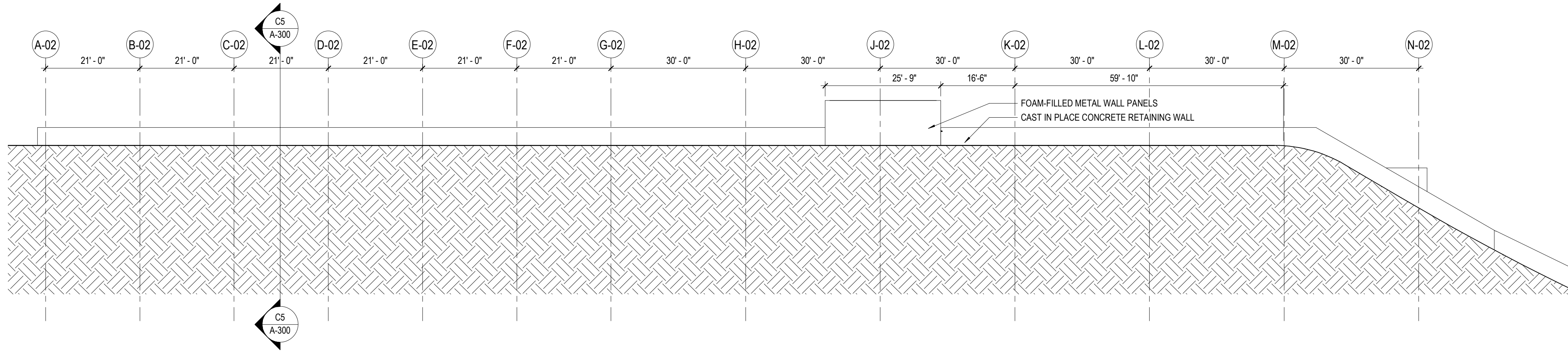
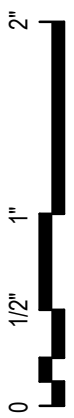
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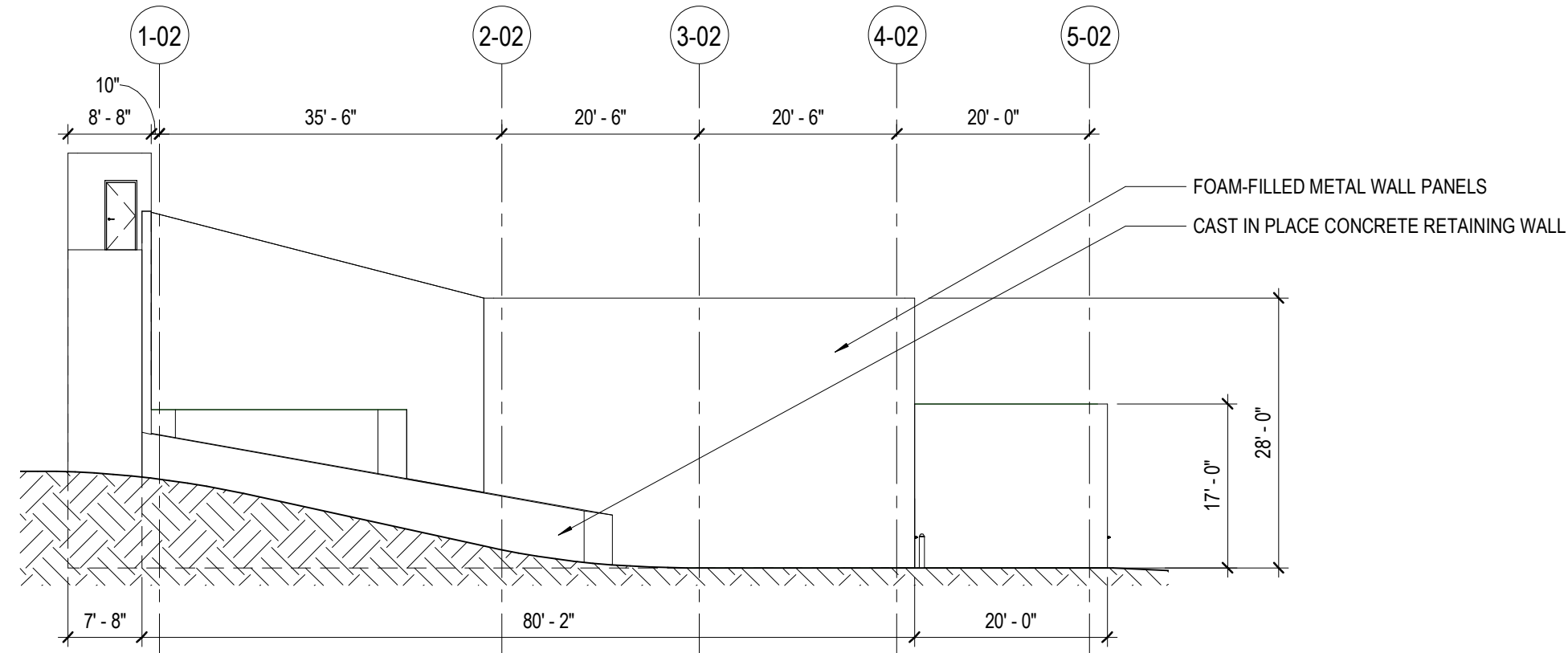
Project Status

Concept Design 100% Review Submittal

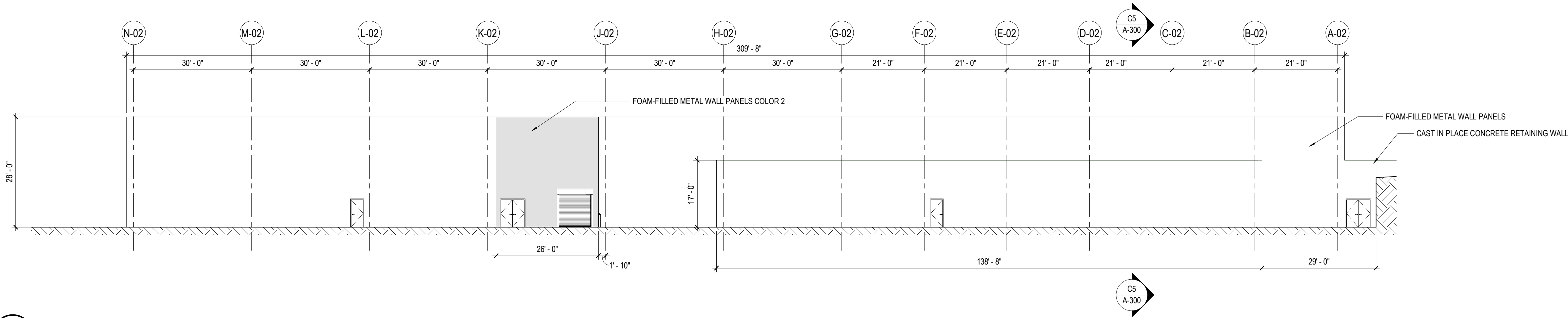
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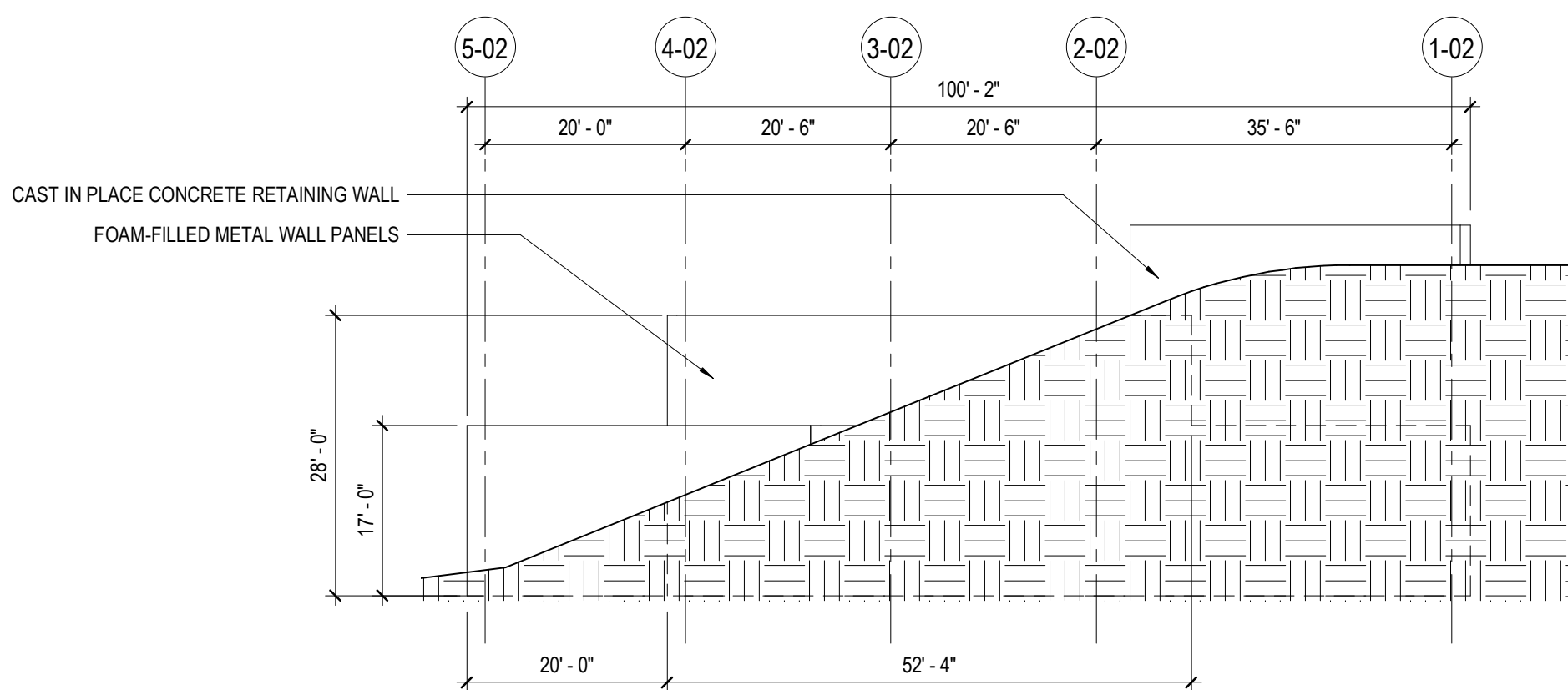
D5 EXTERIOR ELEVATION - BUILDING 1002-A
1/16" = 1'-0"



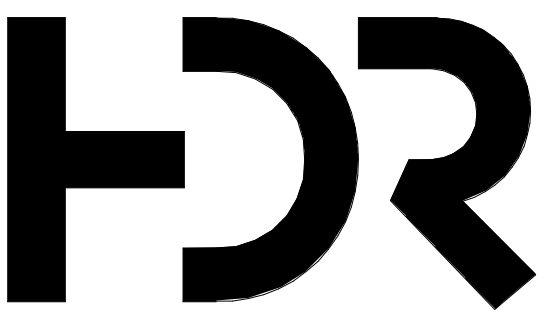
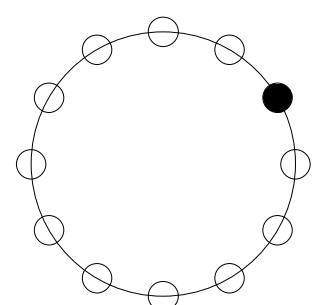
C5 EXTERIOR ELEVATION - BUILDING 1002-B
1/16" = 1'-0"



B5 EXTERIOR ELEVATION - BUILDING 1002-C
1/16" = 1'-0"



A5 EXTERIOR ELEVATION - BUILDING 1002-D
1/16" = 1'-0"



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Project Number	10235960
Original Issue	09/11/20

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Sheet Name

EXTERIOR
ELEVATIONS - B1002

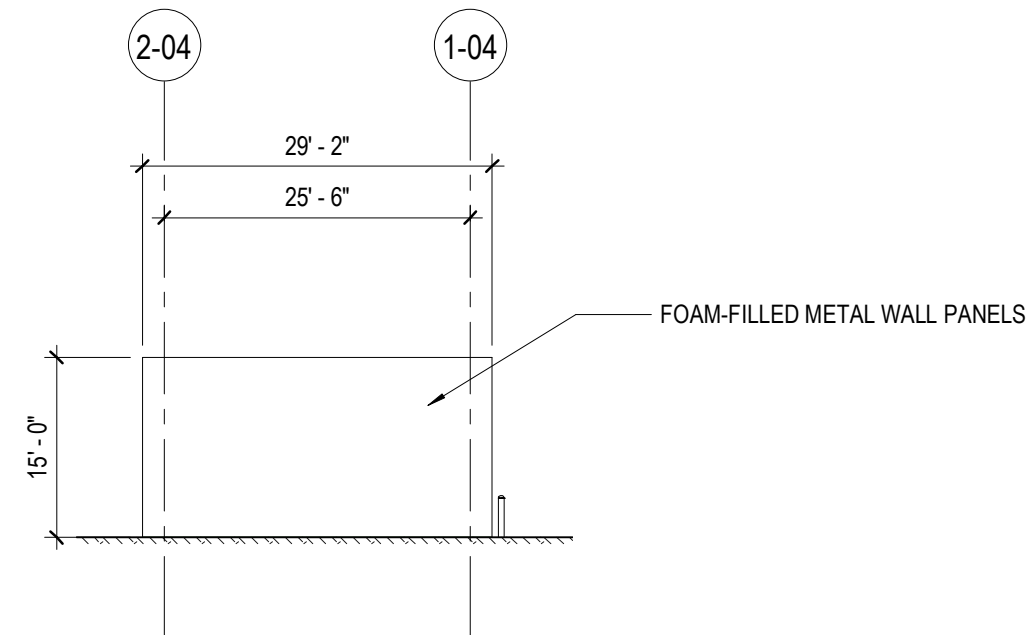
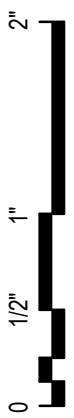
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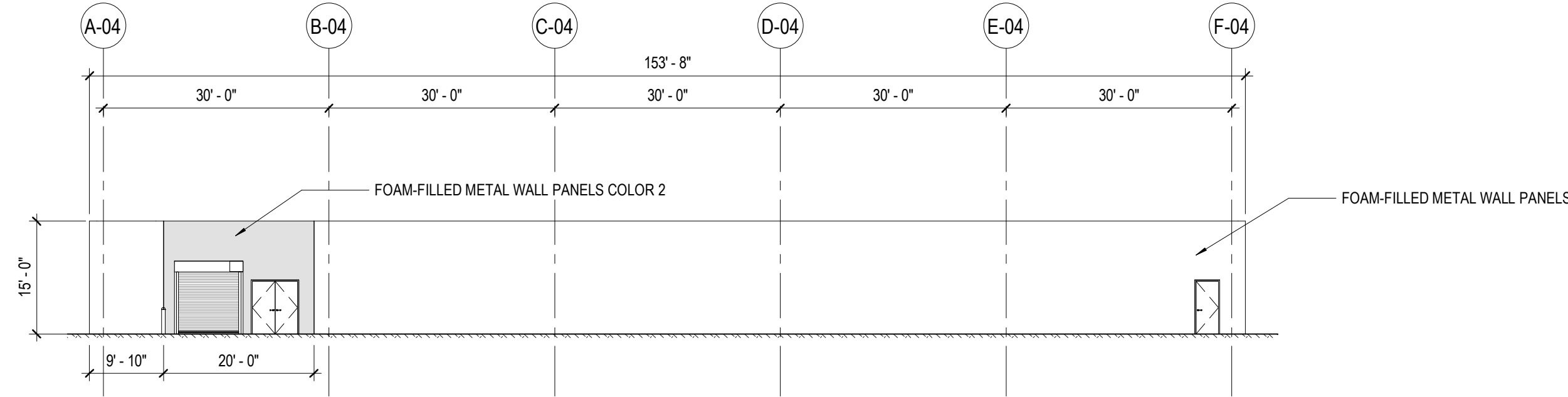
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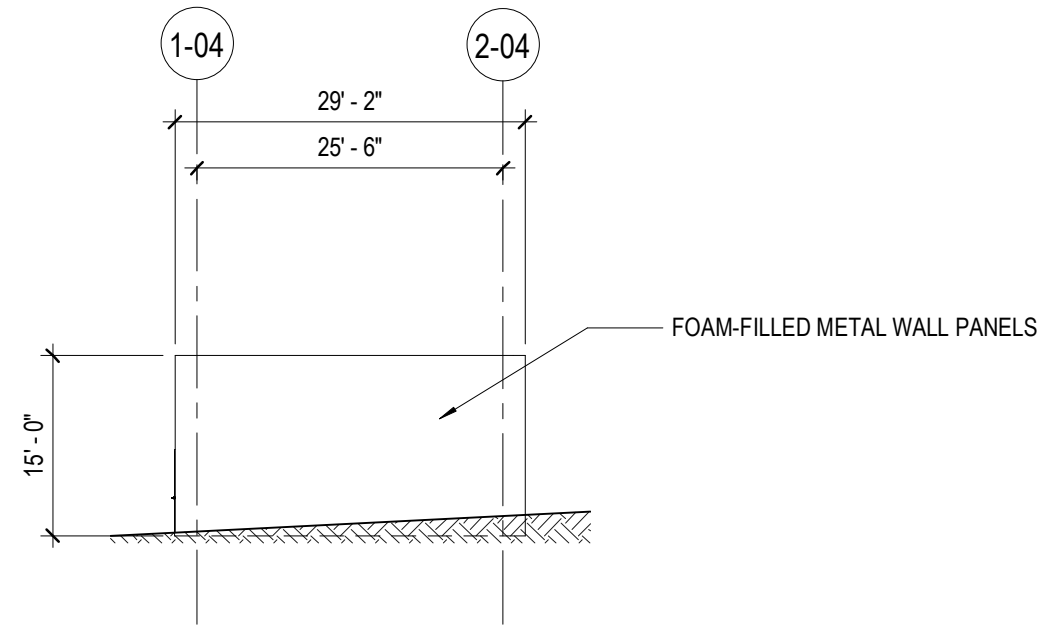
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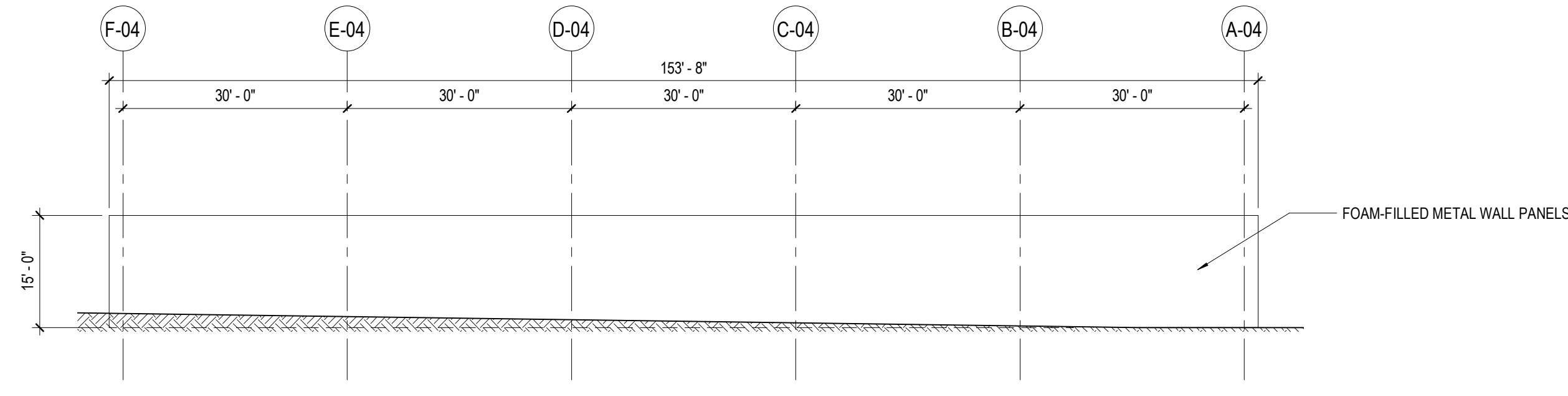
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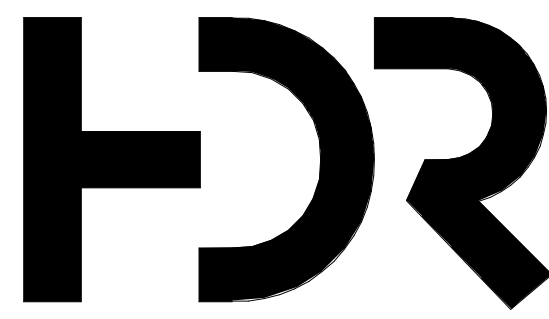
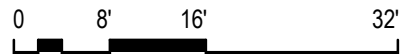
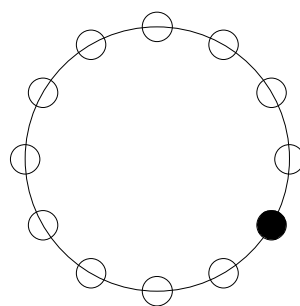
C5 EXTERIOR ELEVATION - BUILDING B1004-B
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B5 EXTERIOR ELEVATION - BUILDING B1004-C
1/16" = 1'-0"



A5 EXTERIOR ELEVATION - BUILDING B1004-D
1/16" = 1'-0"



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Interior Designer	
Equipment Planner	
Wayfinding	

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Project Number 10235960
Original Issue 09/13/20

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Sheet Name

EXTERIOR
ELEVATIONS - B1004

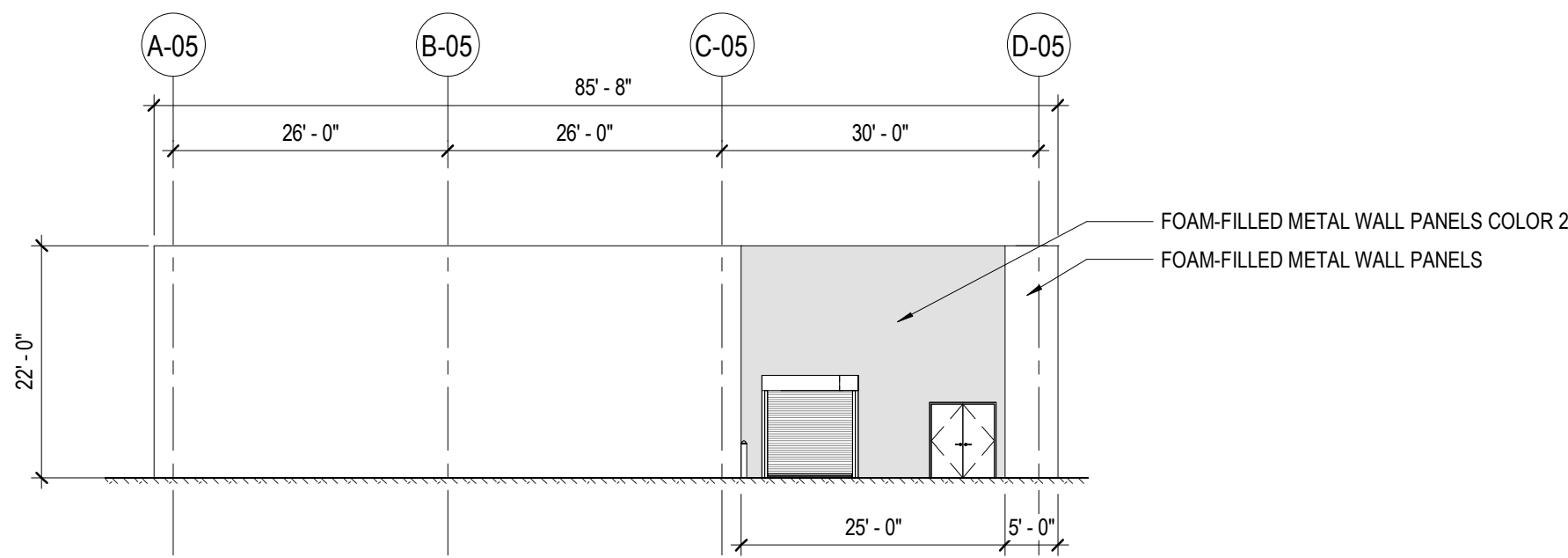
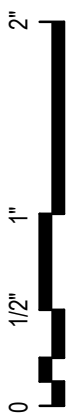
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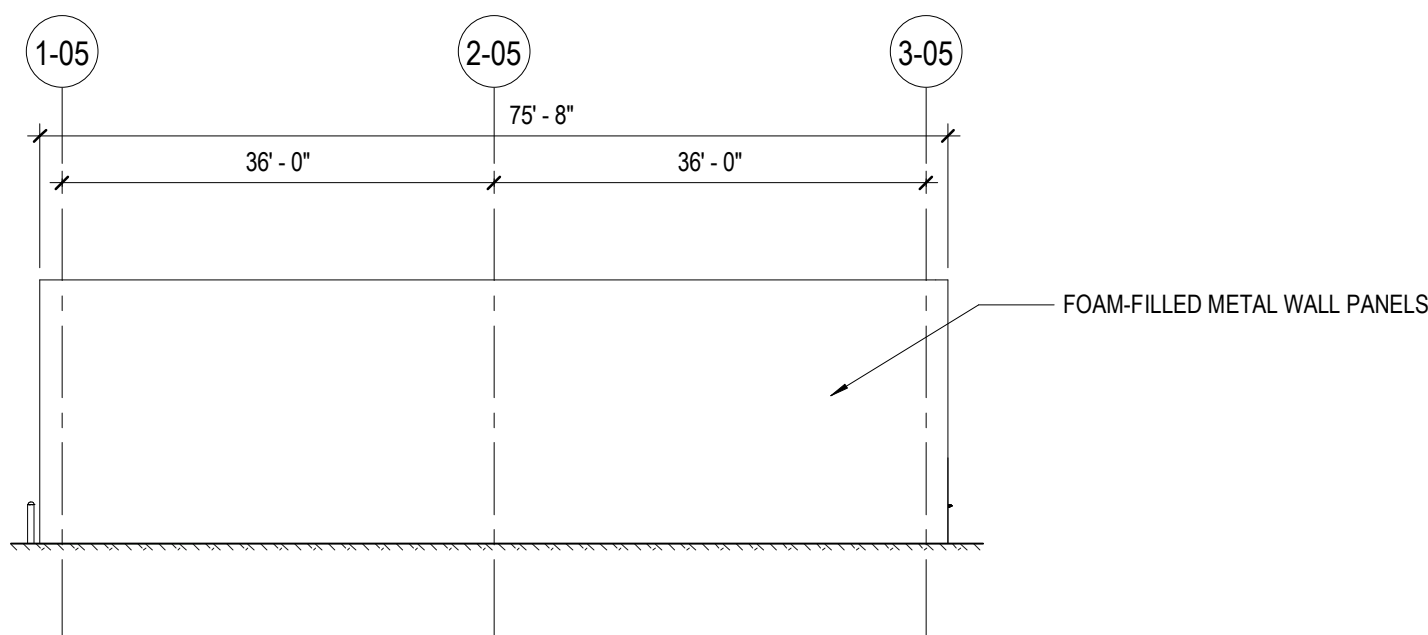
Project Status

Concept Design 100% Review Submittal

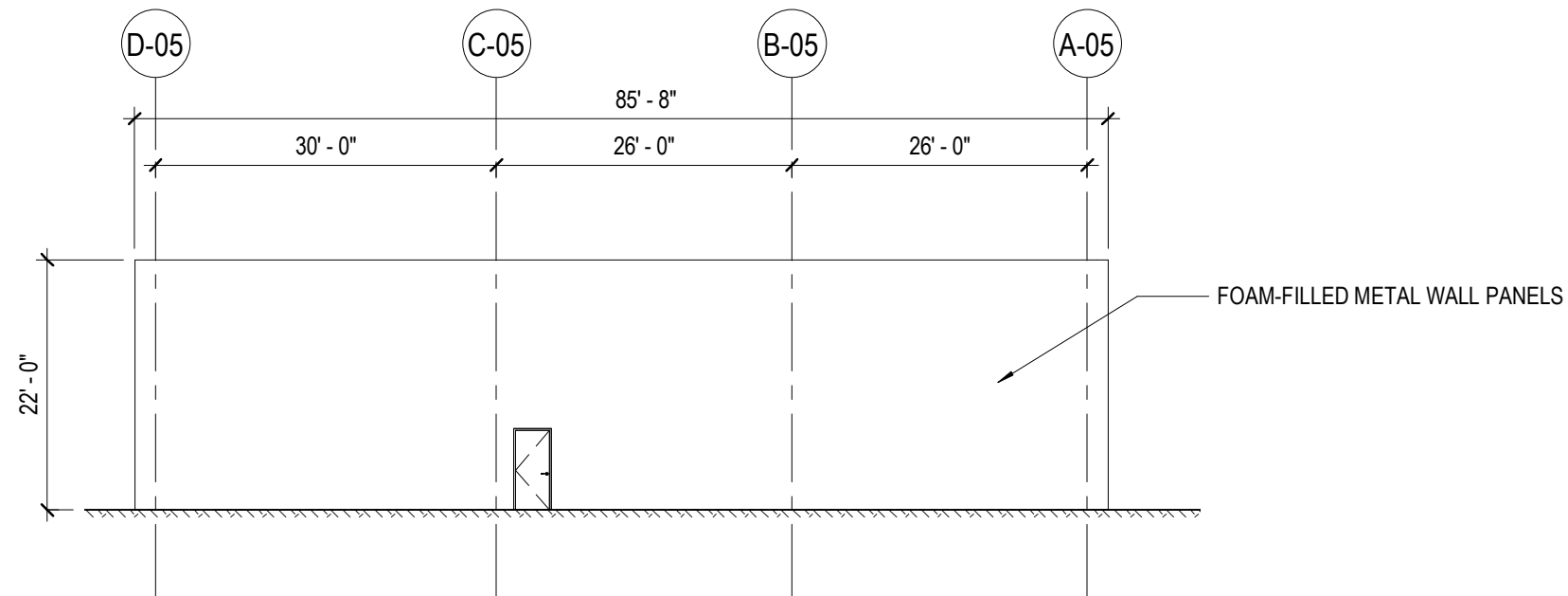
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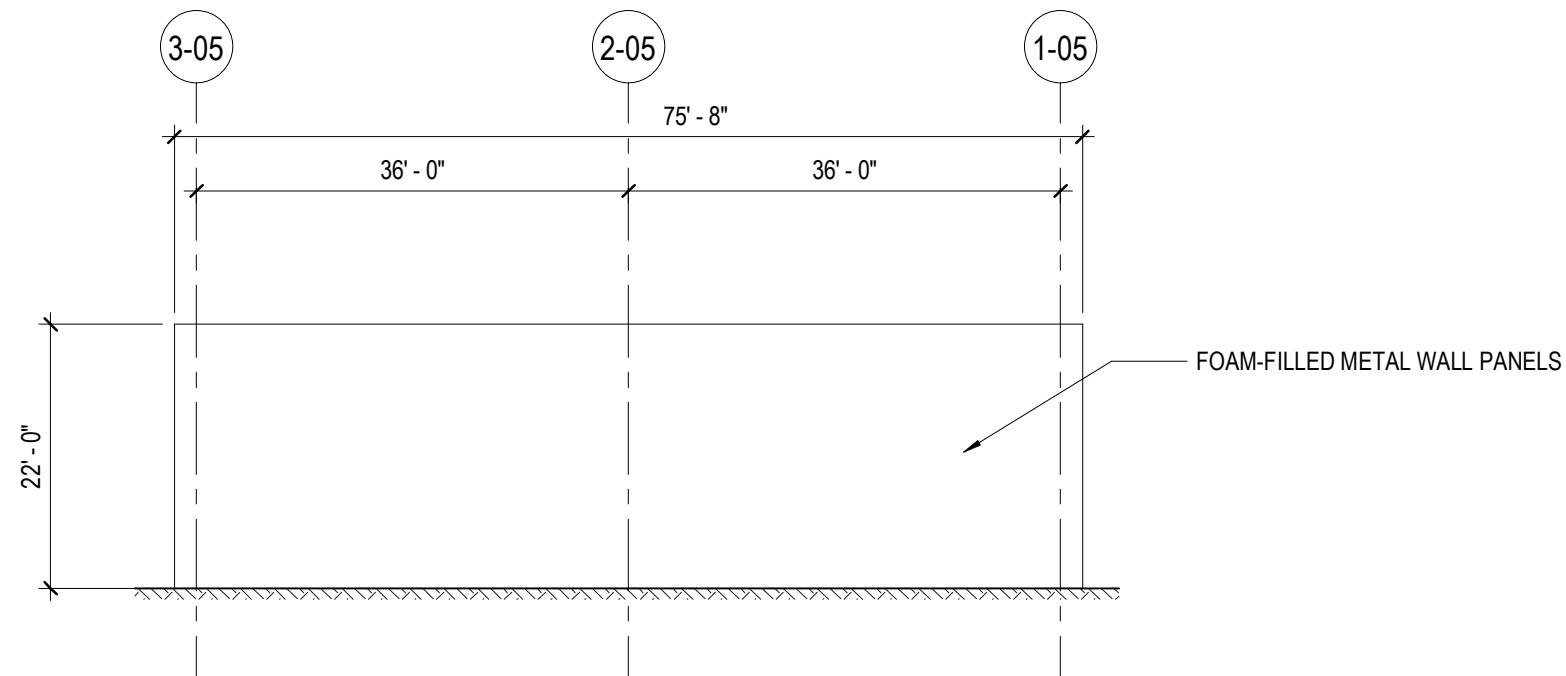
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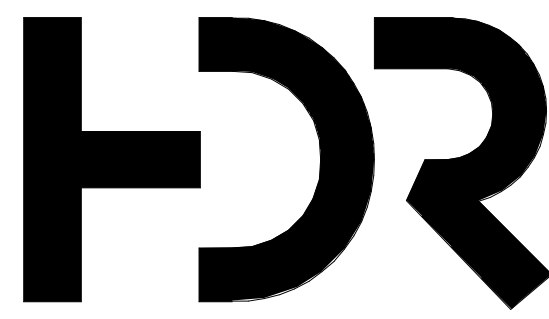
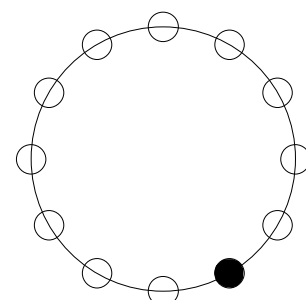
C5 EXTERIOR ELEVATION - BUILDING ALC 05-B
1/16" = 1'-0"



B5 EXTERIOR ELEVATION - BUILDING ALC 05-C
1/16" = 1'-0"



A5 EXTERIOR ELEVATION - BUILDING ALC 05-D
1/16" = 1'-0"



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Sheet Name

EXTERIOR
ELEVATIONS - ALC 05

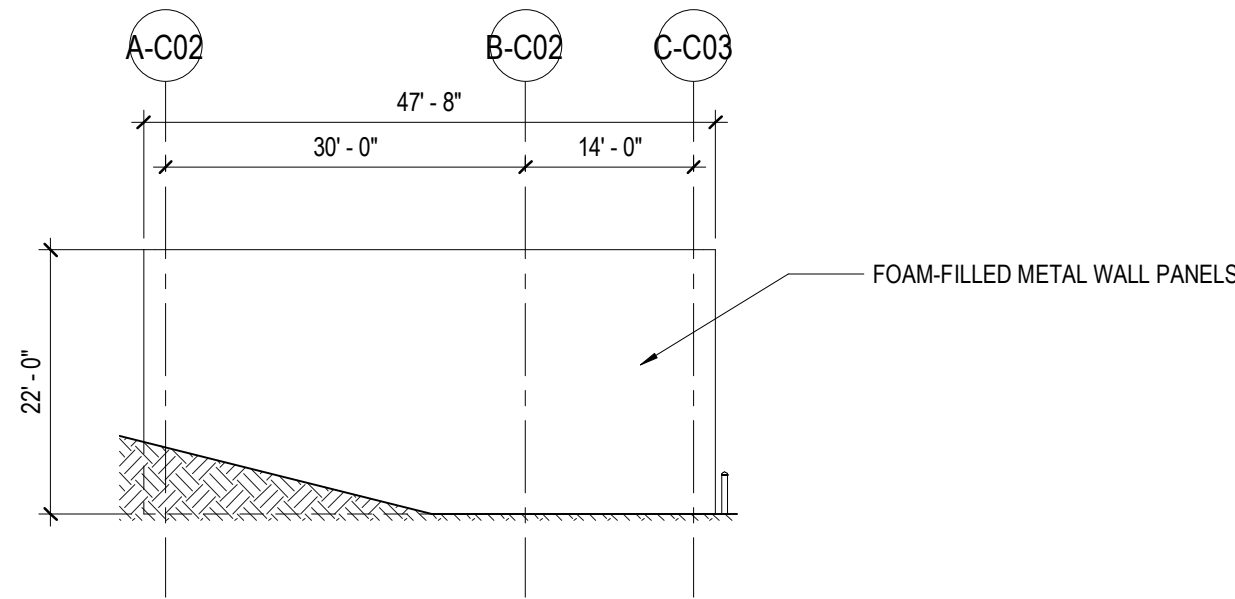
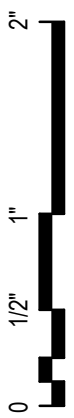
Sheet Number

A-203

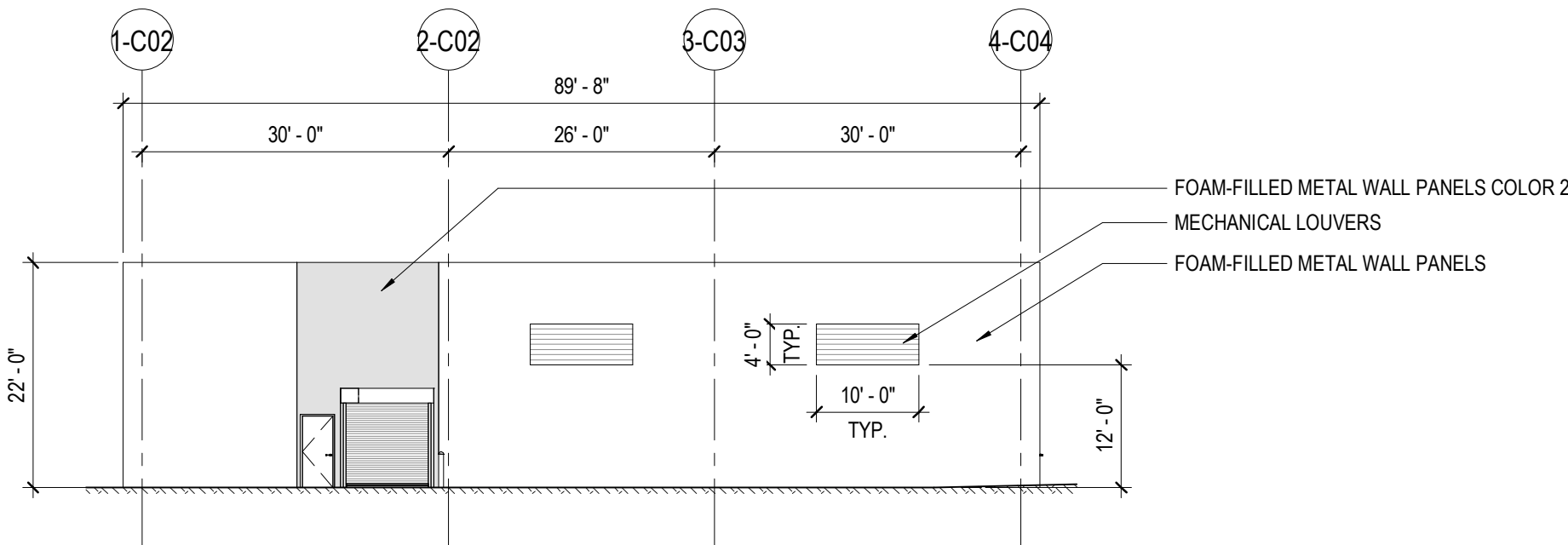
Project Status

Concept Design 100% Review Submittal

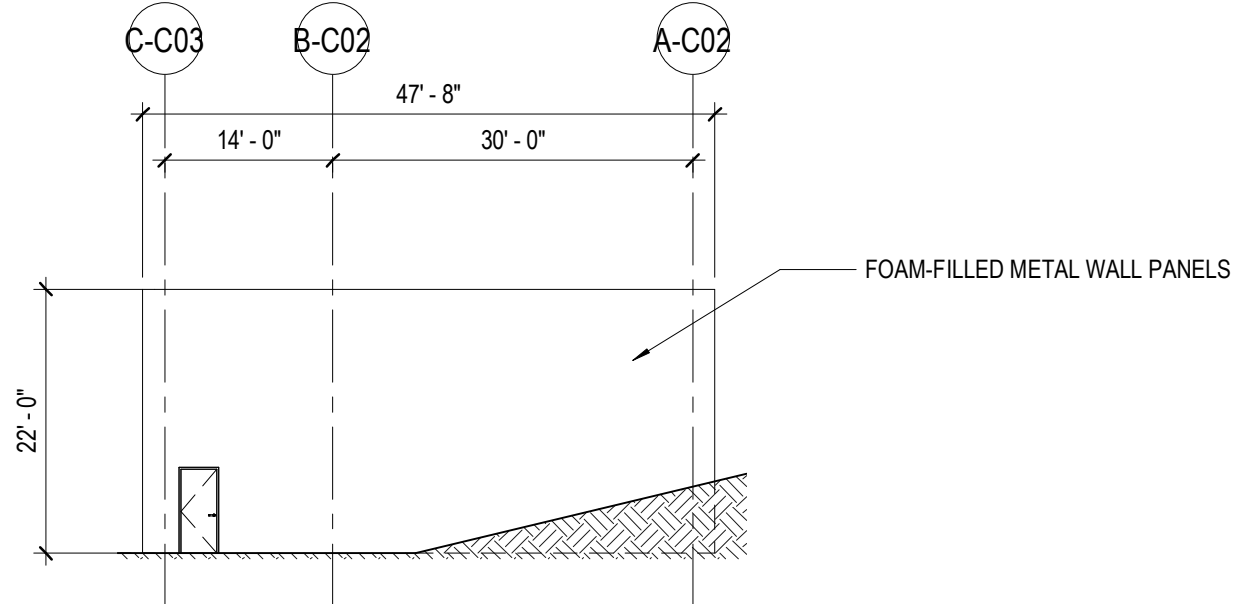
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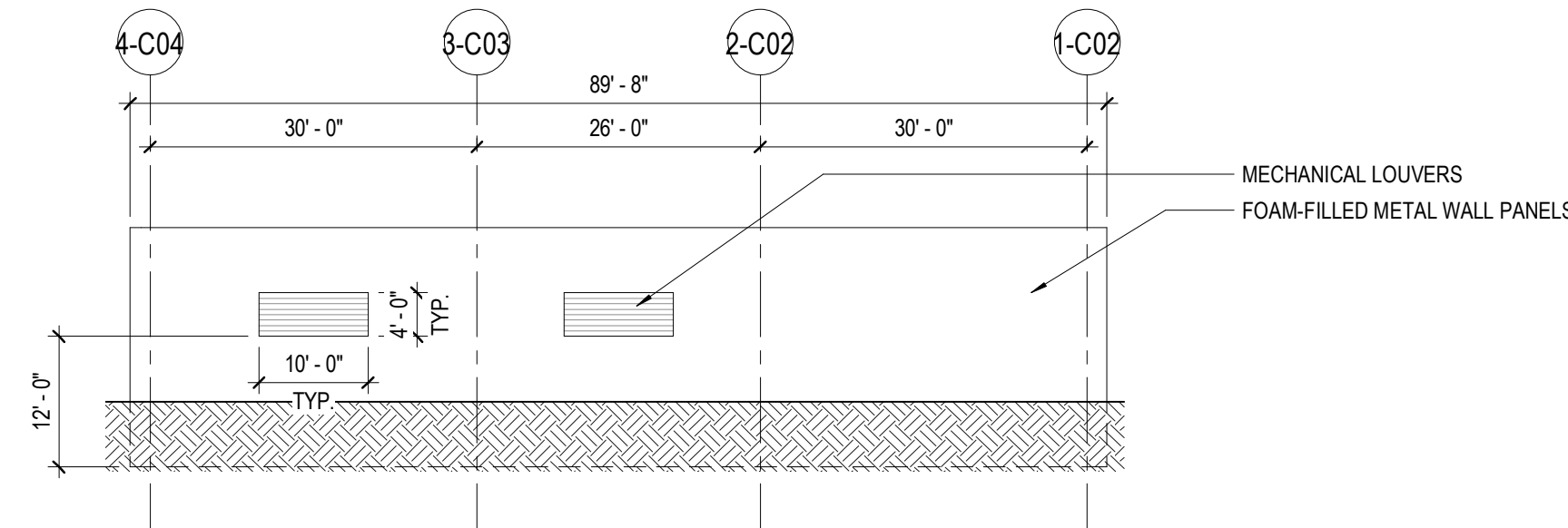
D5 EXTERIOR ELEVATION - BUILDING CRYO 1002/06-A
1/16" = 1'-0"



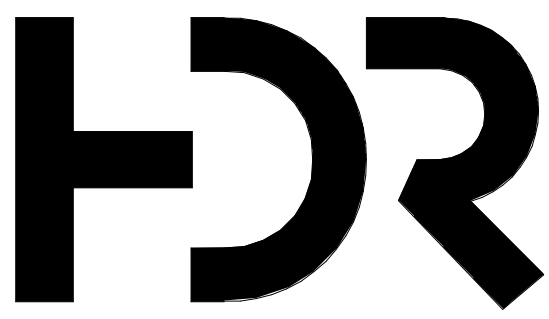
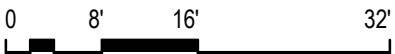
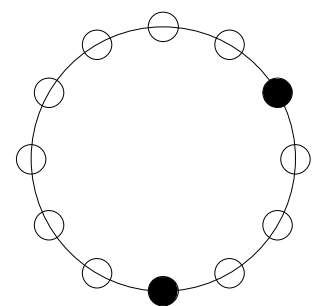
C5 EXTERIOR ELEVATION - BUILDING CRYO 1002/06-B
1/16" = 1'-0"



B5 EXTERIOR ELEVATION - BUILDING CRYO 1002/06-C
1/16" = 1'-0"



A5 EXTERIOR ELEVATION - BUILDING CRYO 1002/06-D
1/16" = 1'-0"



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Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joseph Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Harshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer	Author
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MARK	DATE	DESCRIPTION
	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number	10235960
Original Issue	09/13/20

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Sheet Name

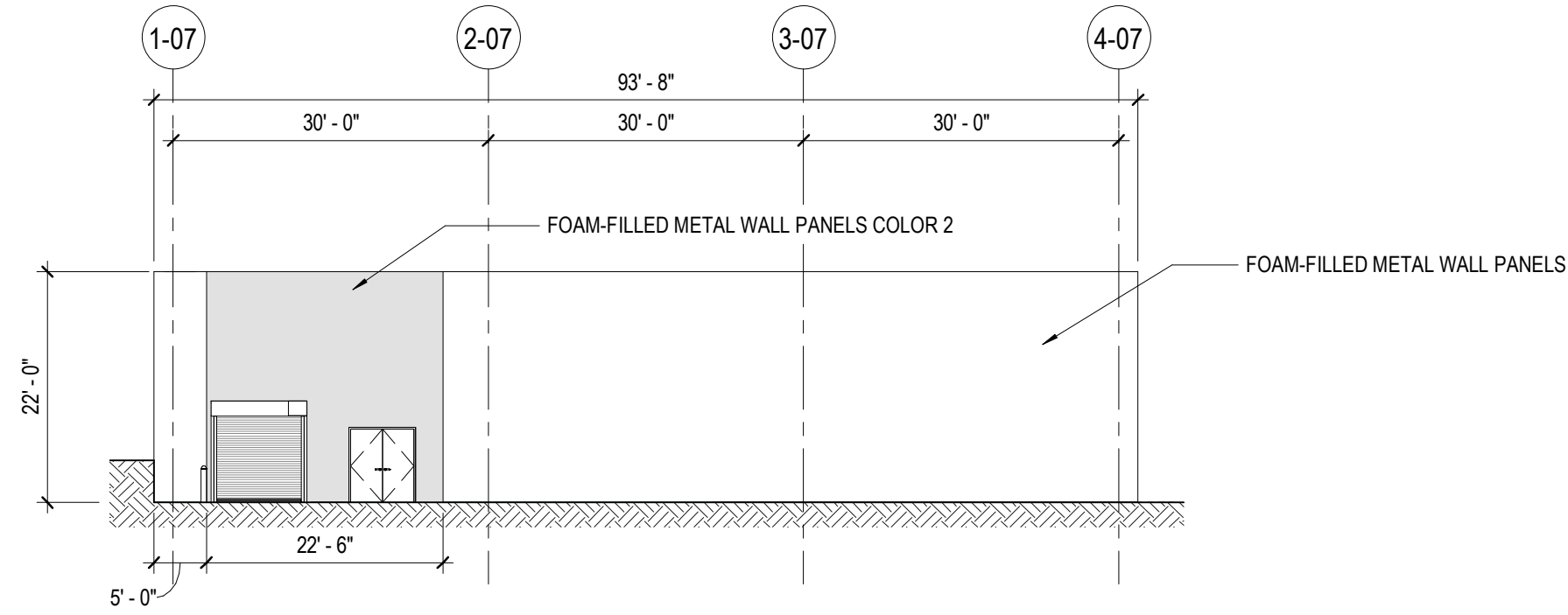
EXTERIOR
ELEVATIONS - CRYO
1002/1006

Sheet Number

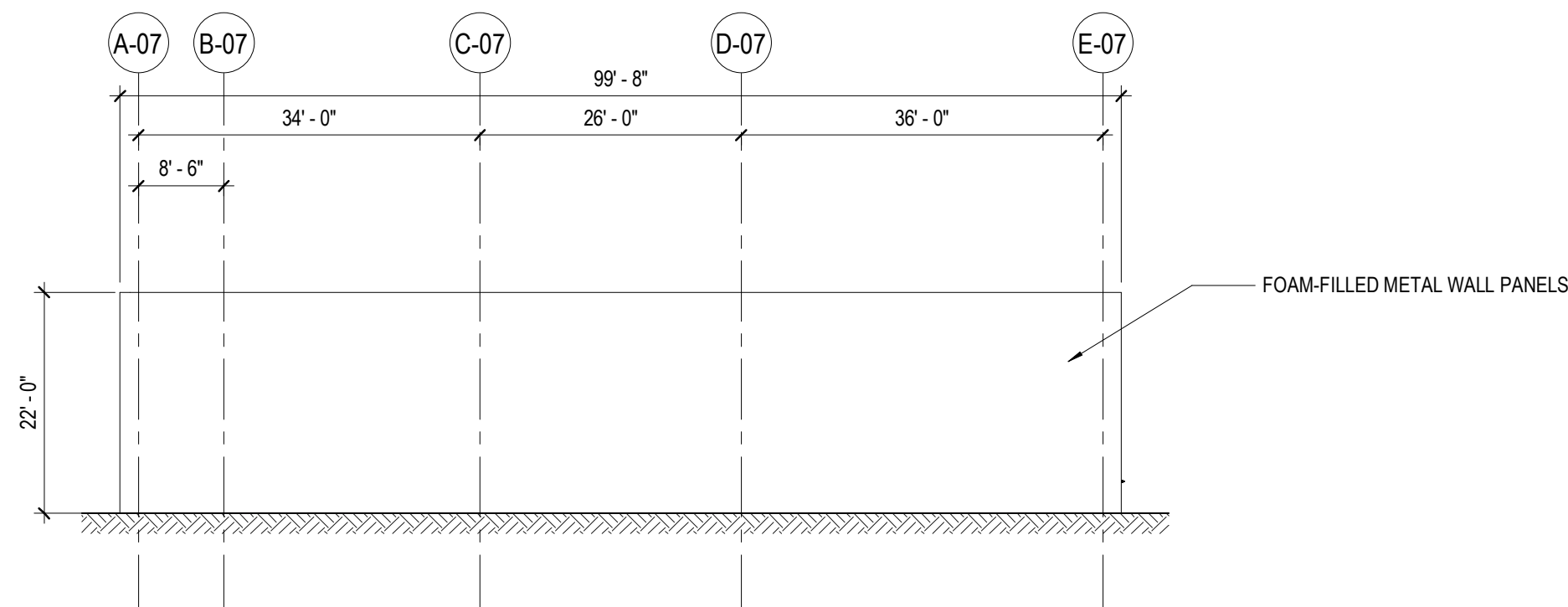
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Project Status
Concept Design 100% Review Submittal

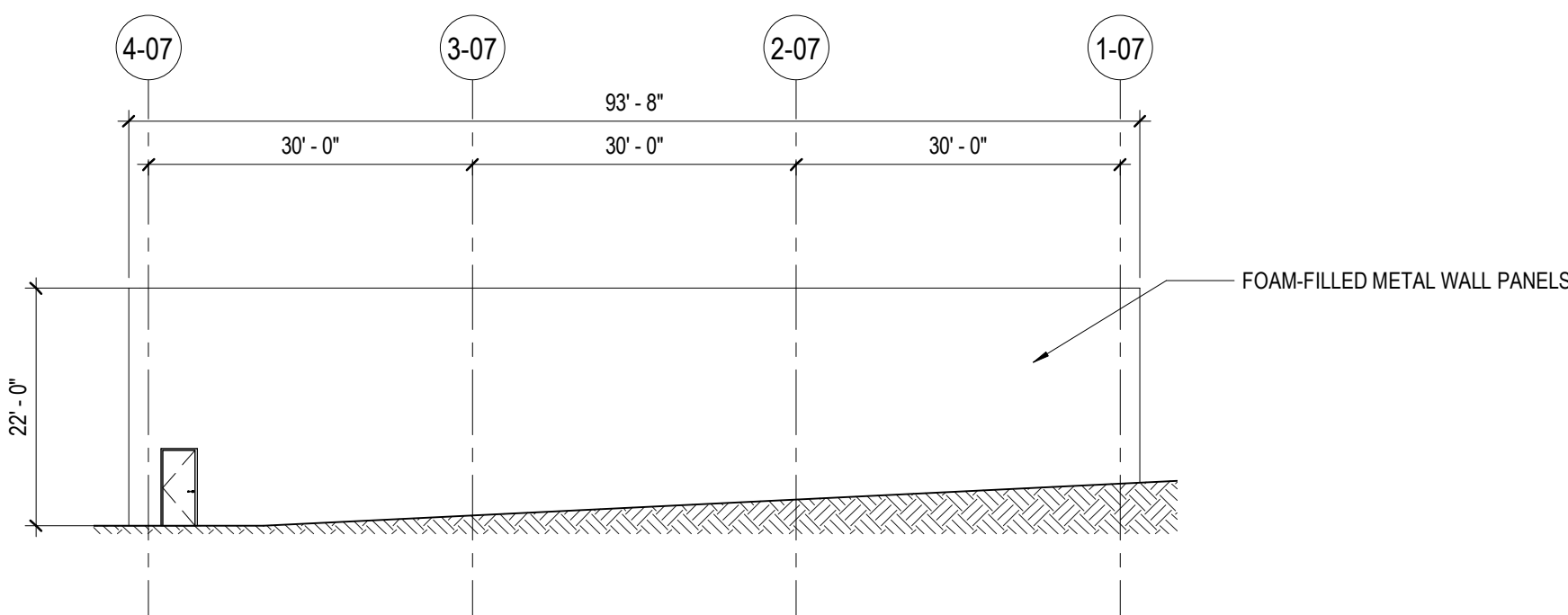
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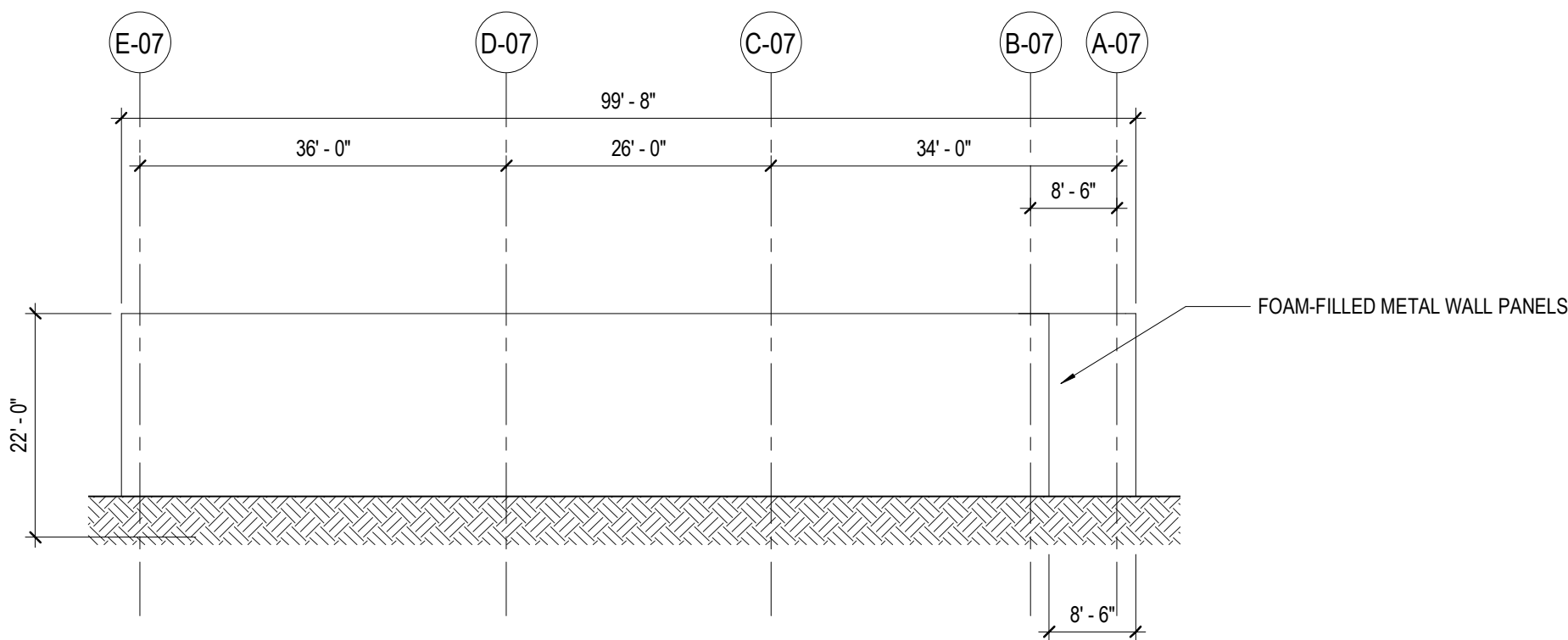
D5 EXTERIOR ELEVATION - BUILDING ALC 07-A
1/16" = 1'-0"



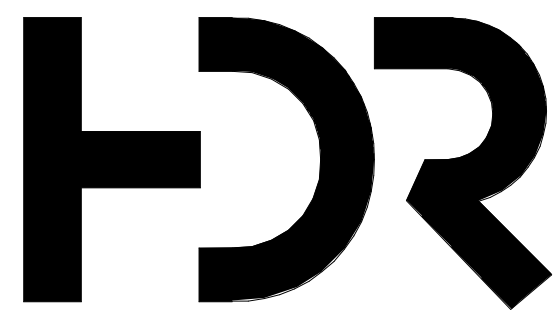
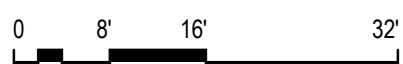
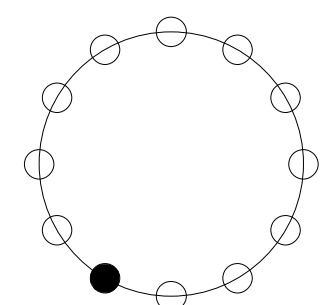
C5 EXTERIOR ELEVATION - BUILDING ALC 07-B
1/16" = 1'-0"



B5 EXTERIOR ELEVATION - BUILDING ALC 07-C
1/16" = 1'-0"



A5 EXTERIOR ELEVATION - BUILDING ALC 07-D
1/16" = 1'-0"



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Interior Designer	
Equipment Planner	
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B Sheet Reviewer Author

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	11/06/2020	100% Review Submittal

Project Number	10235960
Original Issue	09/16/20

PRELIMINARY
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Sheet Name

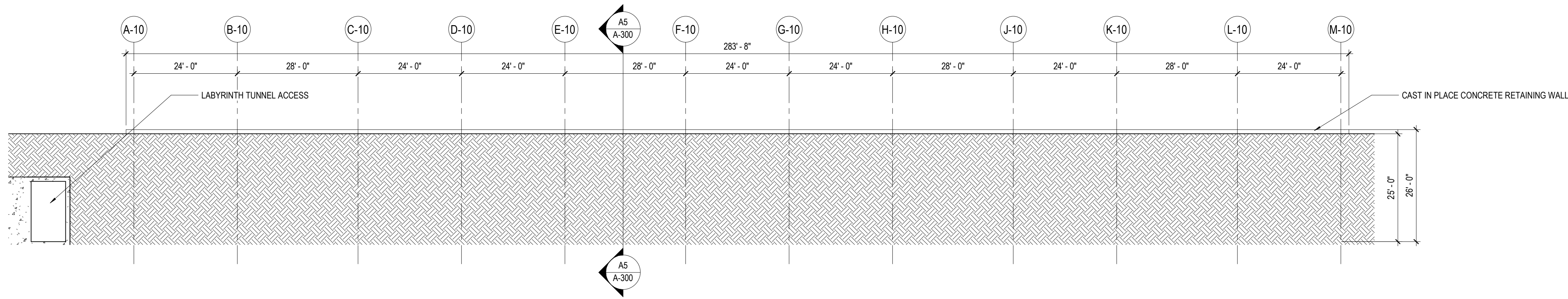
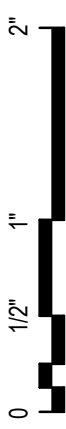
EXTERIOR
ELEVATIONS - ALC 07

Sheet Number

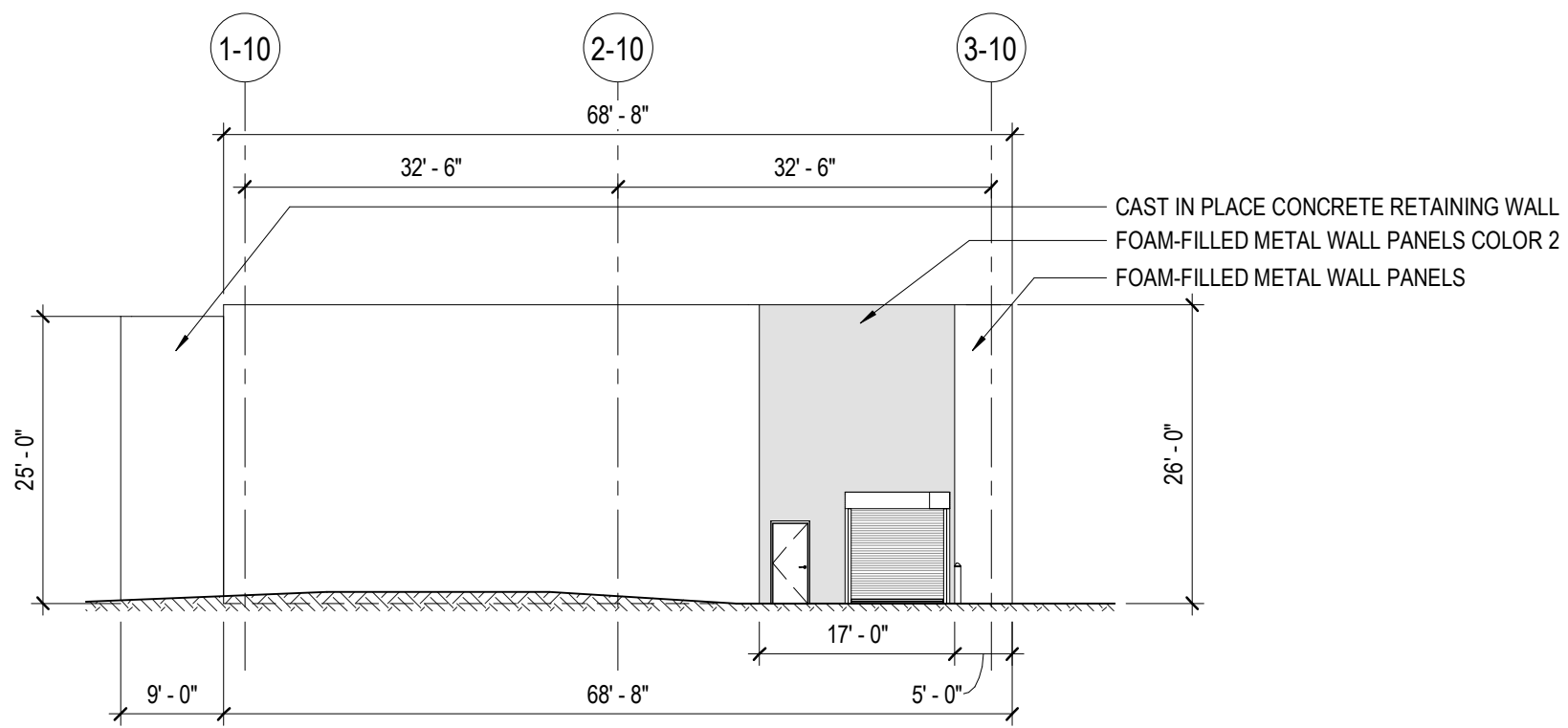
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Project Status
Concept Design 100% Review Submittal

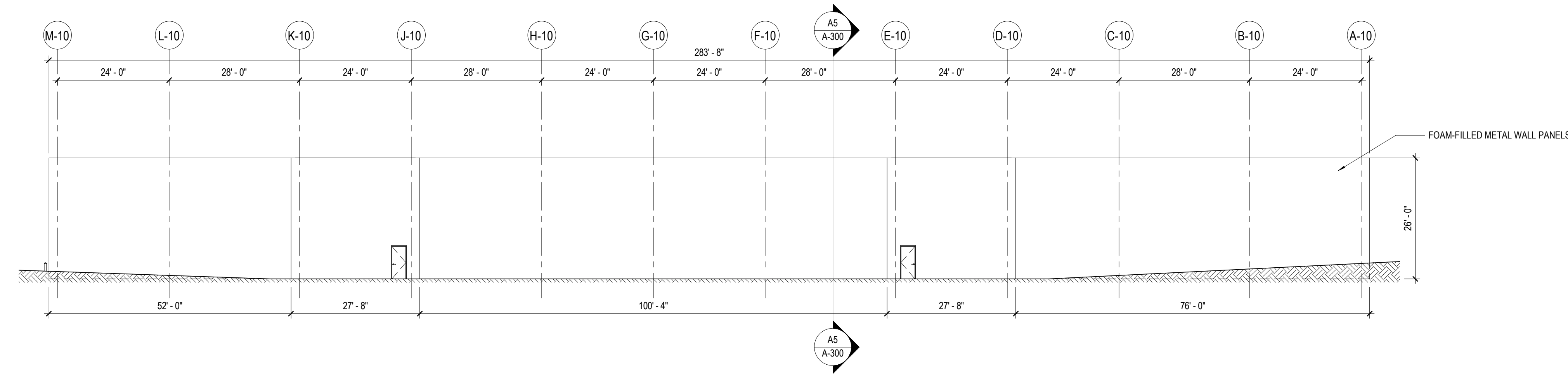
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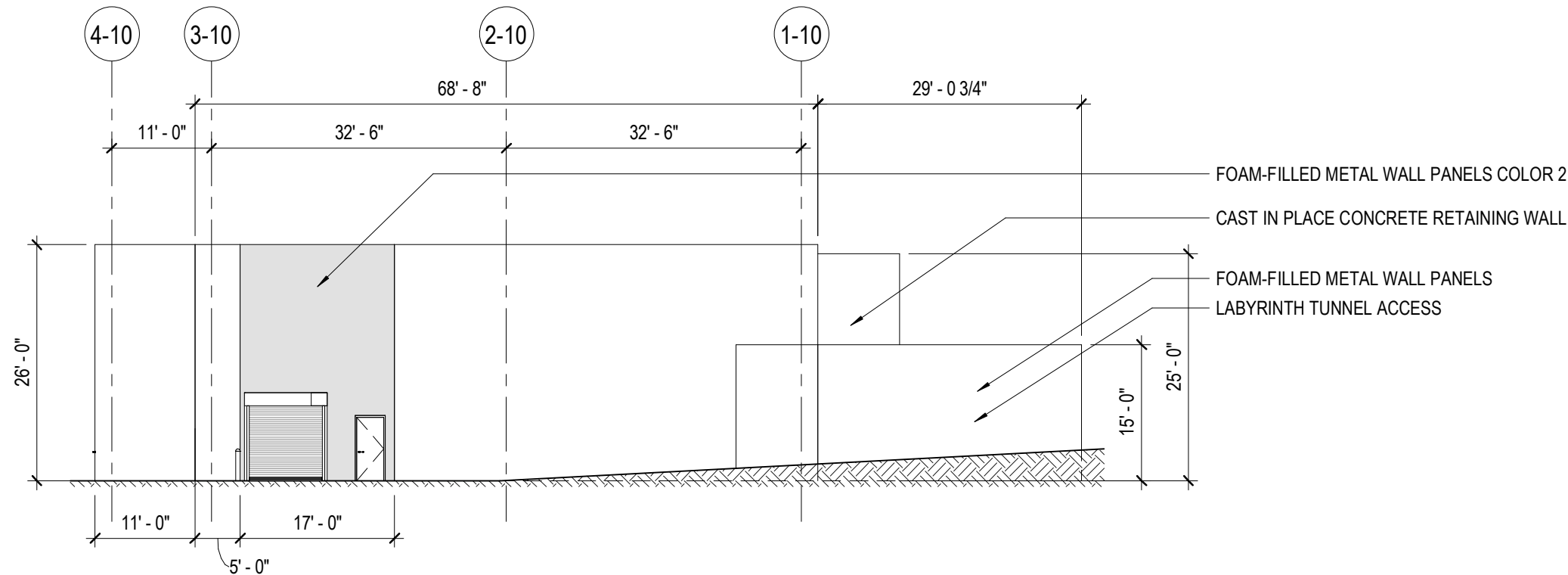
D5 EXTERIOR ELEVATION - BUILDING B1010-A
1/16" = 1'-0"



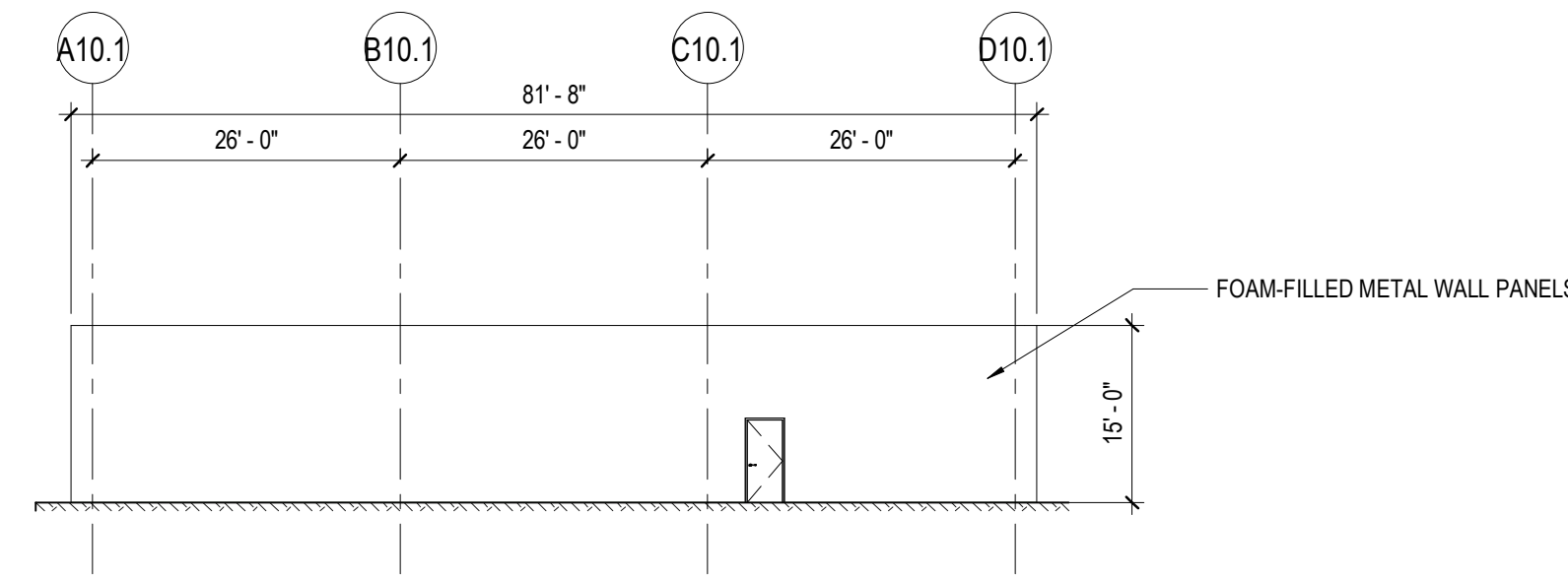
C5 EXTERIOR ELEVATION - BUILDING B1010-B
1/16" = 1'-0"



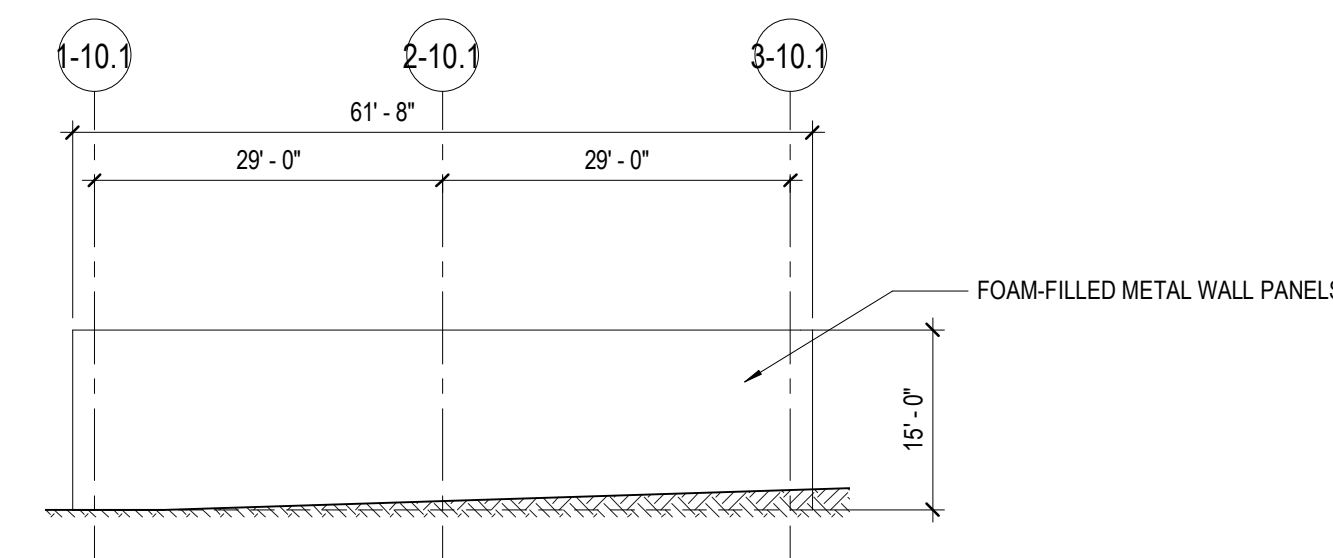
B5 EXTERIOR ELEVATION - BUILDING B1010-C
1/16" = 1'-0"



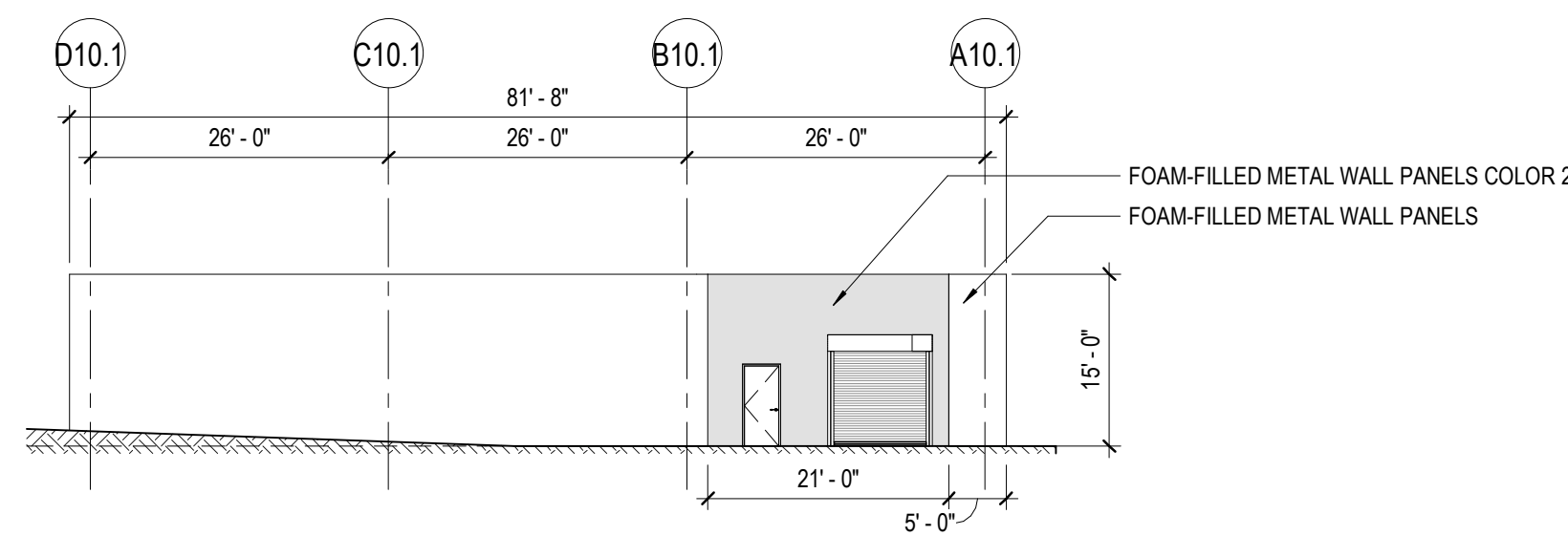
A5 EXTERIOR ELEVATION - BUILDING B1010-D
1/16" = 1'-0"



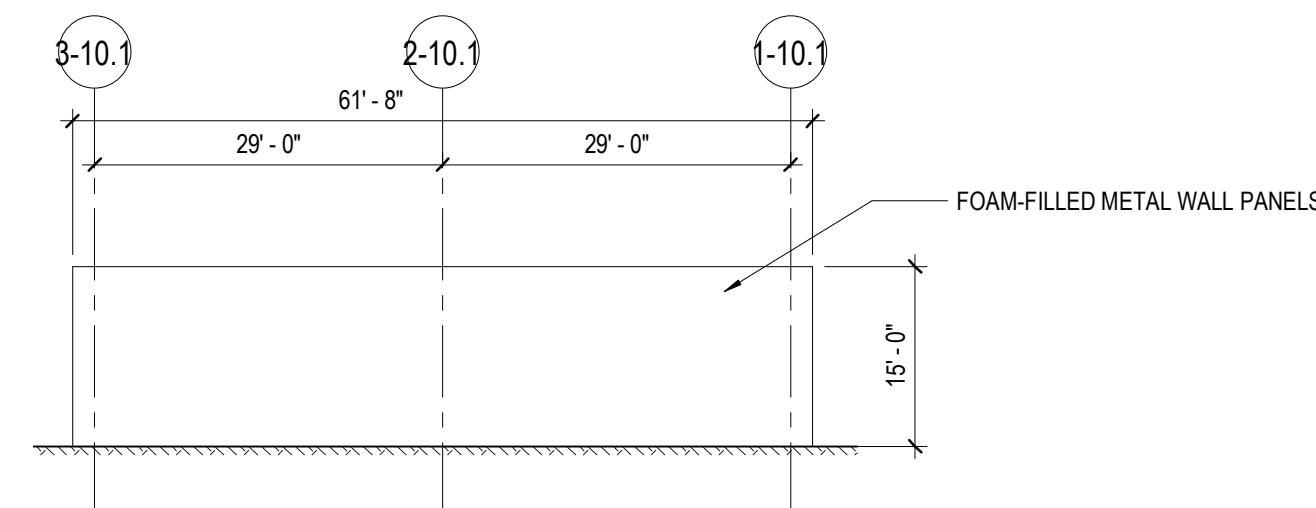
D2 BUILDING ELEVATION B1010 DI WATER - A
1/16" = 1'-0"



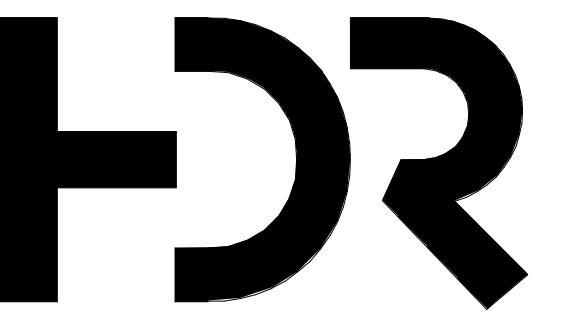
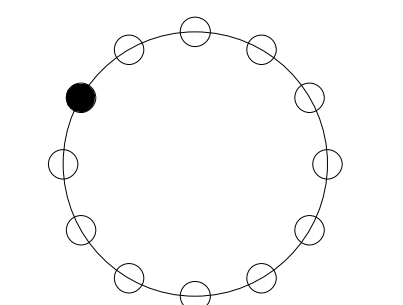
C2 BUILDING ELEVATION B1010 DI WATER - B
1/16" = 1'-0"



B2 BUILDING ELEVATION B1010 DI WATER - C
1/16" = 1'-0"



A2 BUILDING ELEVATION B1010 DI WATER - D
1/16" = 1'-0"



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Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kelly Harshorn

Sheet Reviewer Author

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Project Number
Original Issue

10235960
09/13/20

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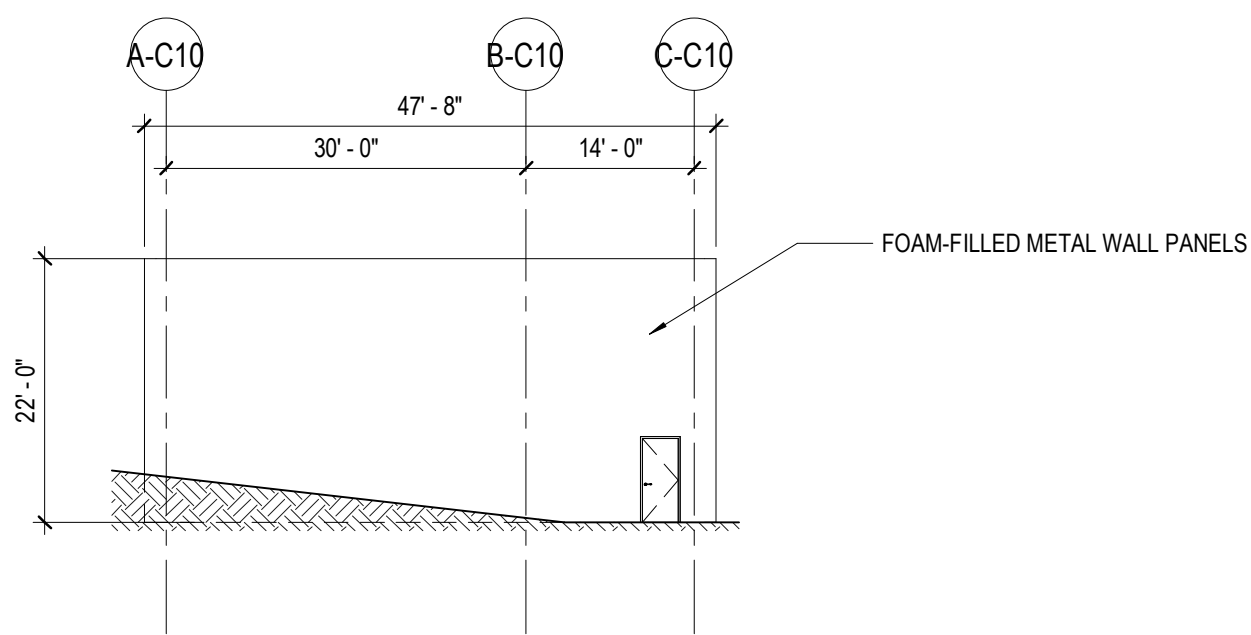
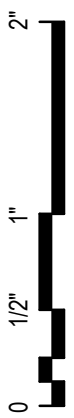
EXTERIOR
ELEVATIONS - B1010

Sheet Number

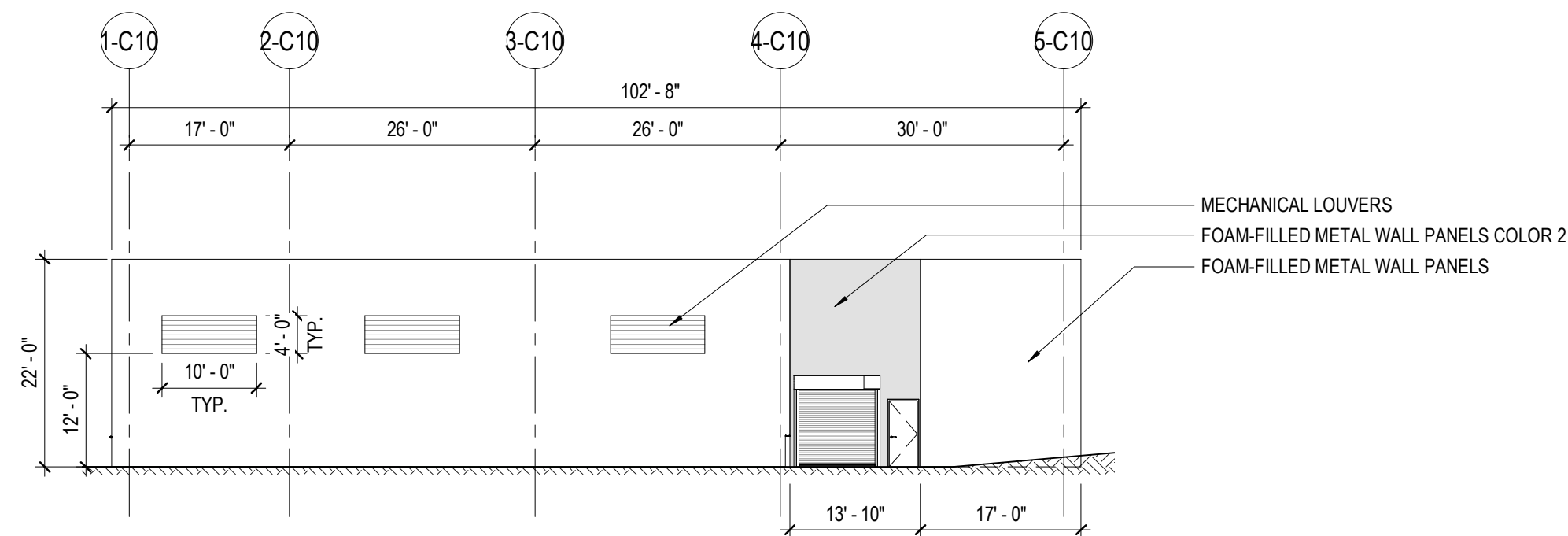
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Project Status
Concept Design 100% Review Submittal

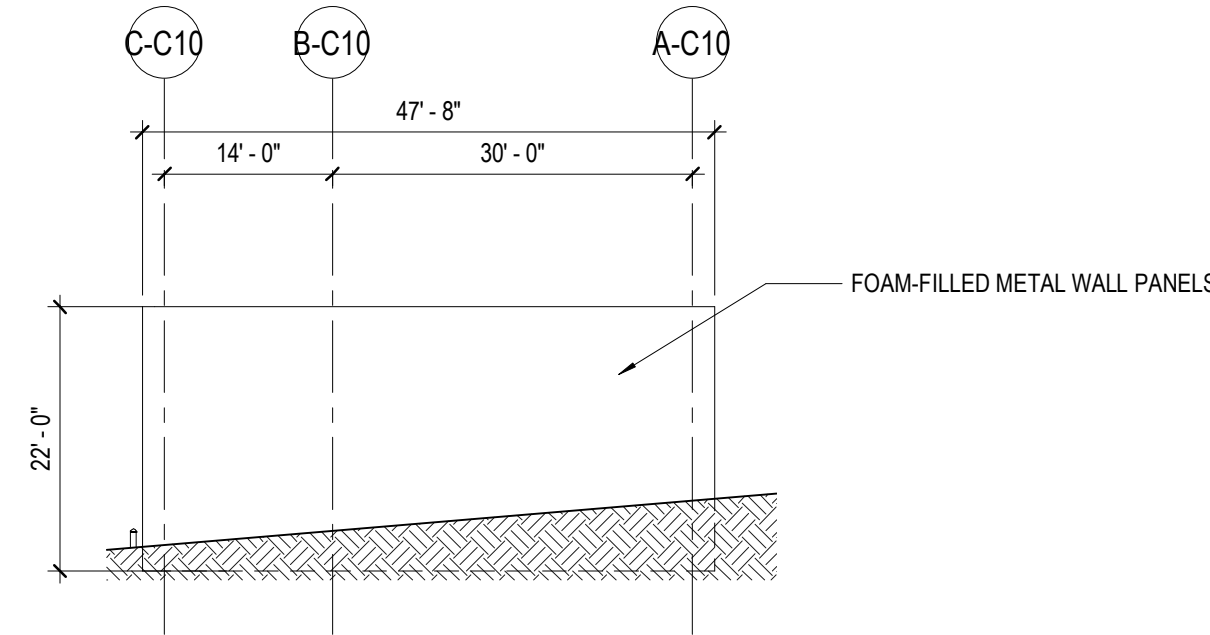
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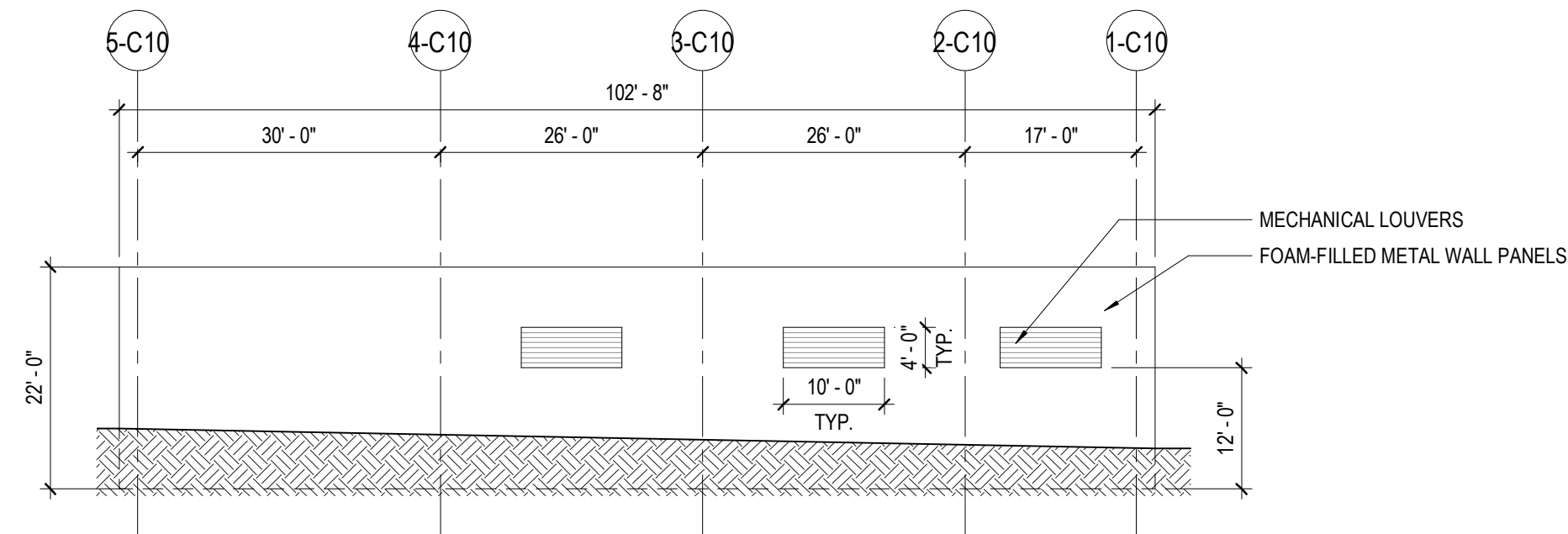
D5 EXTERIOR ELEVATION - BUILDING CRYO 1010-A
1/16" = 1'-0"



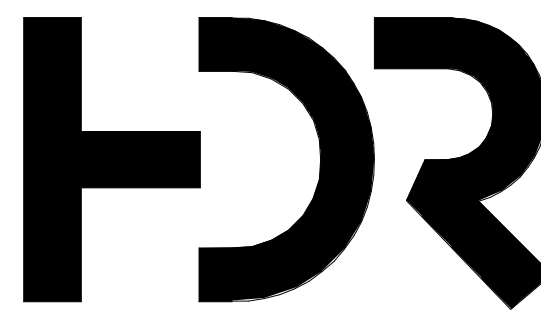
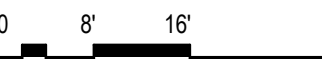
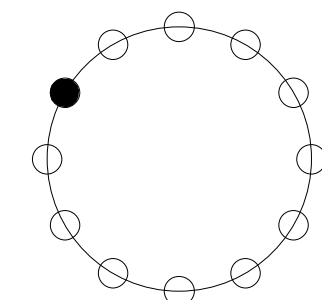
C5 EXTERIOR ELEVATION - BUILDING CRYO 1010-B
1/16" = 1'-0"



B5 EXTERIOR ELEVATION - BUILDING CRYO 1010-C
1/16" = 1'-0"



A5 EXTERIOR ELEVATION - BUILDING CRYO 1010-D
1/16" = 1'-0"



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Original Issue 09/20/20

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Sheet Name

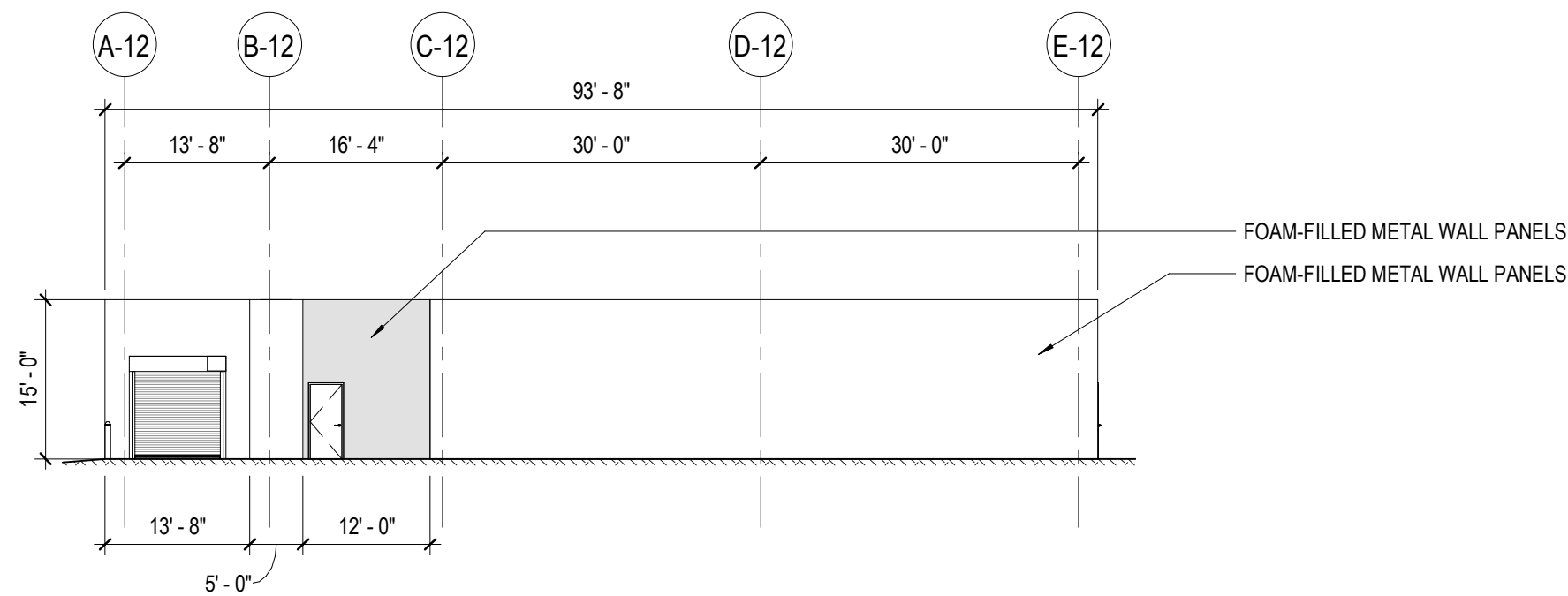
EXTERIOR
ELEVATIONS - CRYO
1010

Sheet Number

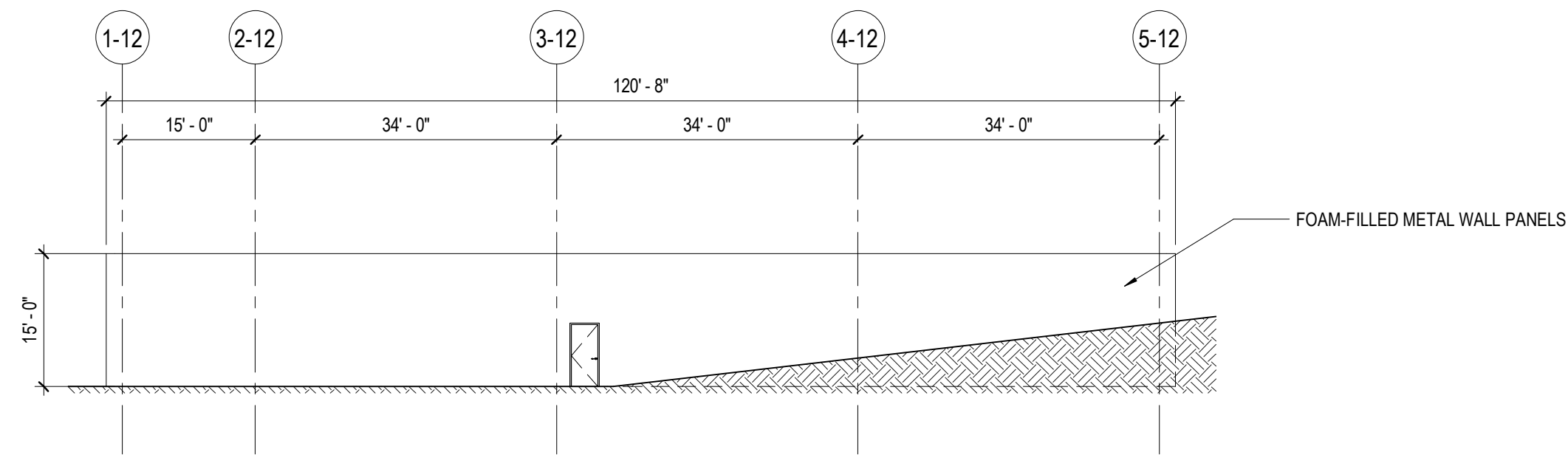
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Project Status
Concept Design 100% Review Submittal

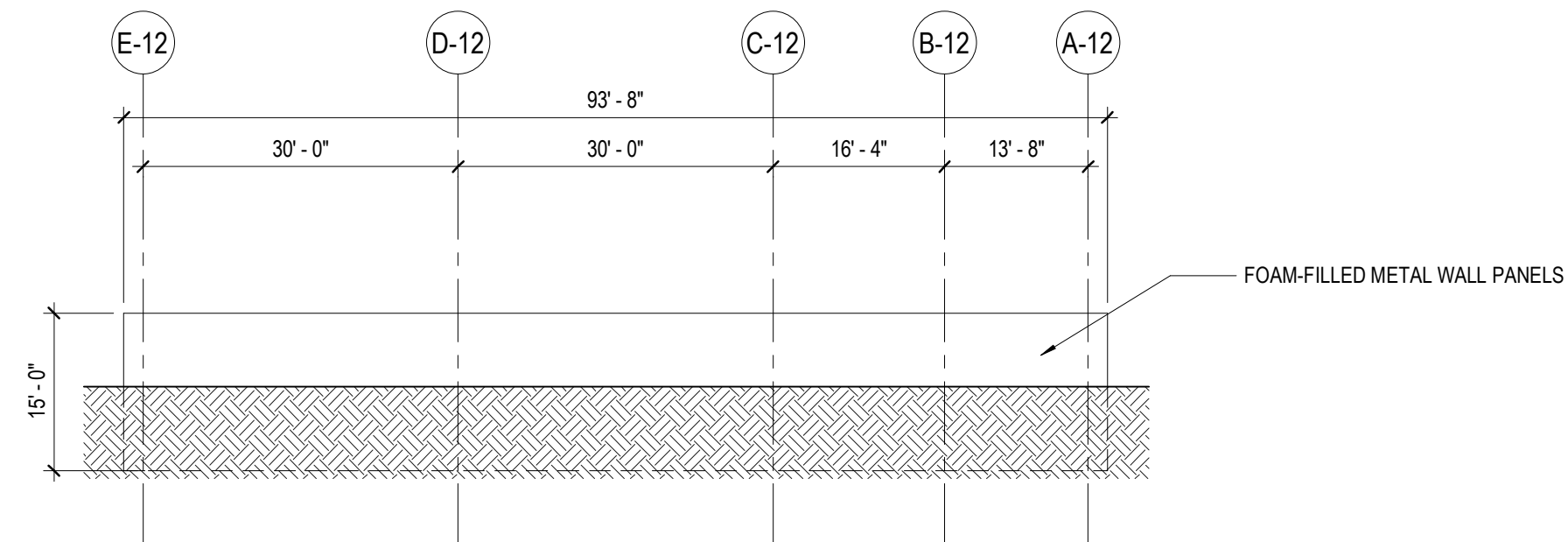
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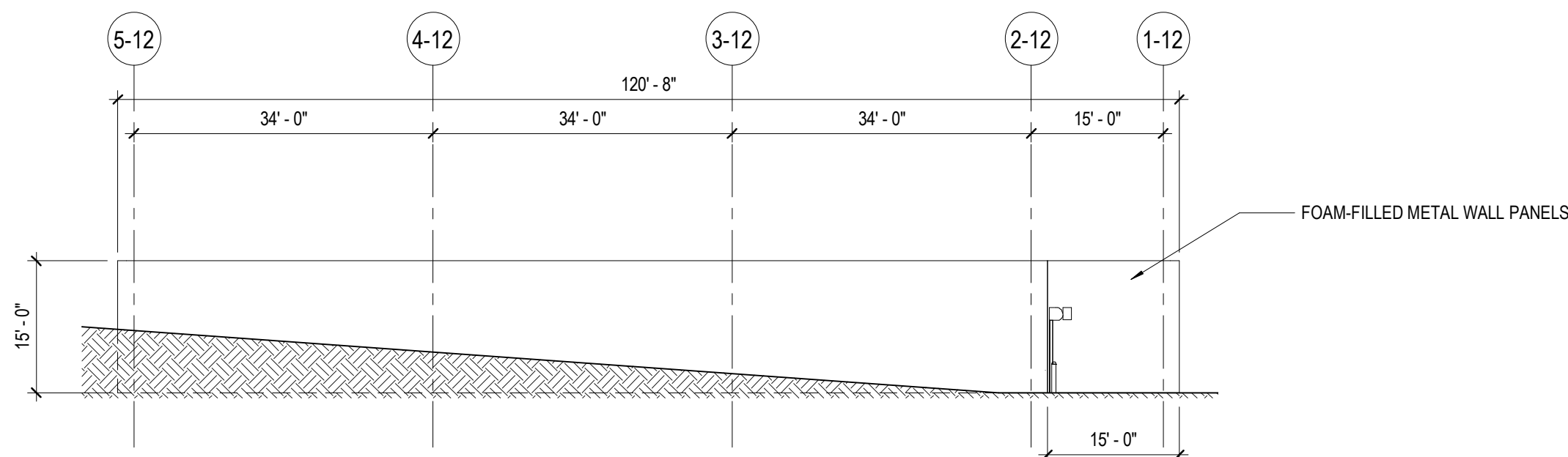
D5 EXTERIOR ELEVATION - BUILDING B1012-A
1/16" = 1'-0"



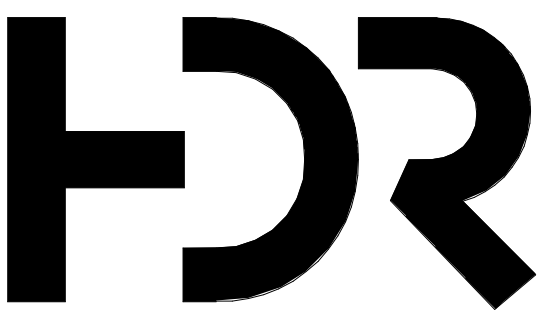
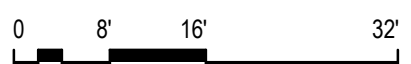
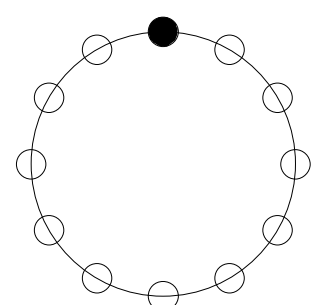
C5 EXTERIOR ELEVATION - BUILDING B1012-B
1/16" = 1'-0"



B5 EXTERIOR ELEVATION - BUILDING B1012-C
1/16" = 1'-0"



A5 EXTERIOR ELEVATION - BUILDING B1012-D
1/16" = 1'-0"



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Electrical Engineer	Kelly Harshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer Author

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Project Number 10235960
Original Issue 09/13/20

PRELIMINARY
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Sheet Name

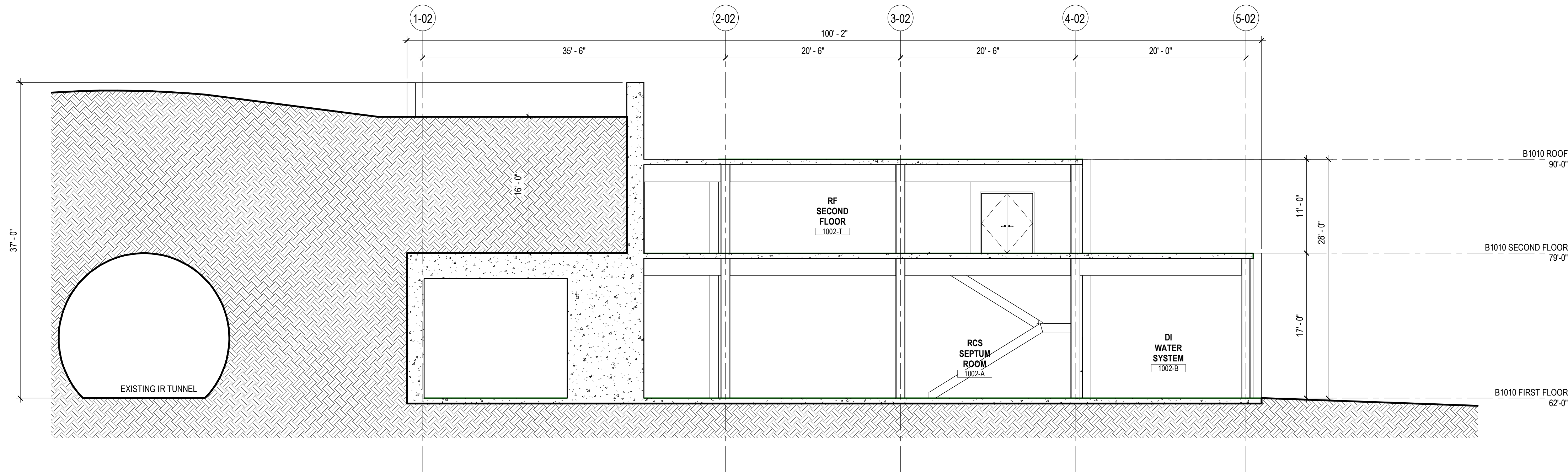
EXTERIOR
ELEVATIONS - B1012

Sheet Number

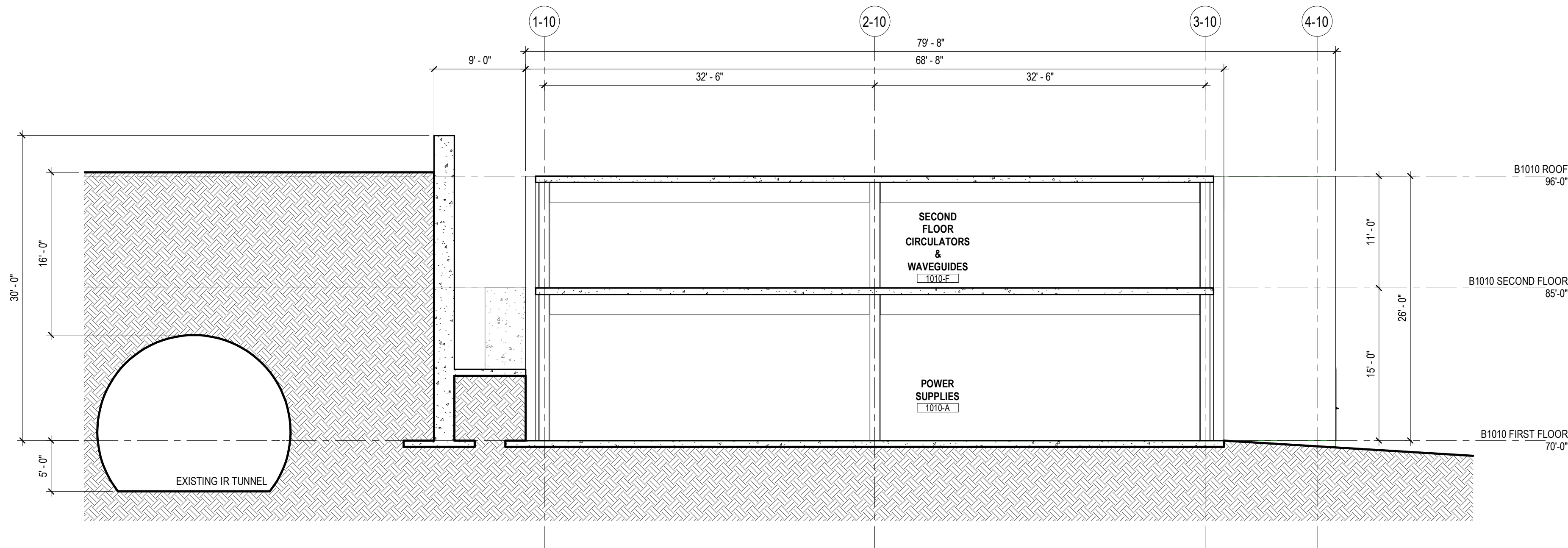
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Project Status
Concept Design 100% Review Submittal

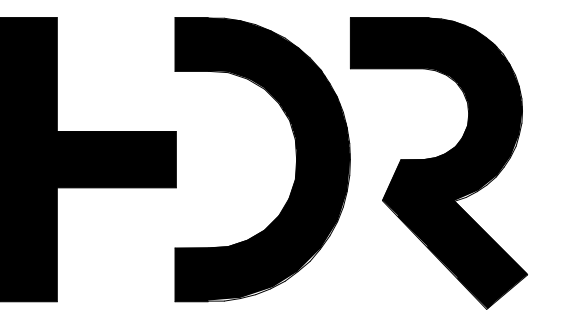
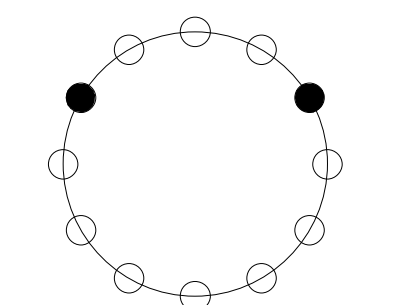
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C5 TRANSVERSE BUILDING SECTION - B1002
1/8" = 1'-0"



A5 TRANSVERSE BUILDING SECTION - B1010
1/8" = 1'-0"



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Phil Beadle
Kathy Harshorn

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09/16/20

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Sheet Name

BUILDING SECTIONS

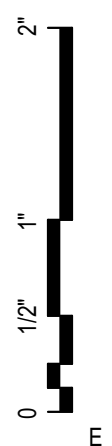
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A-300

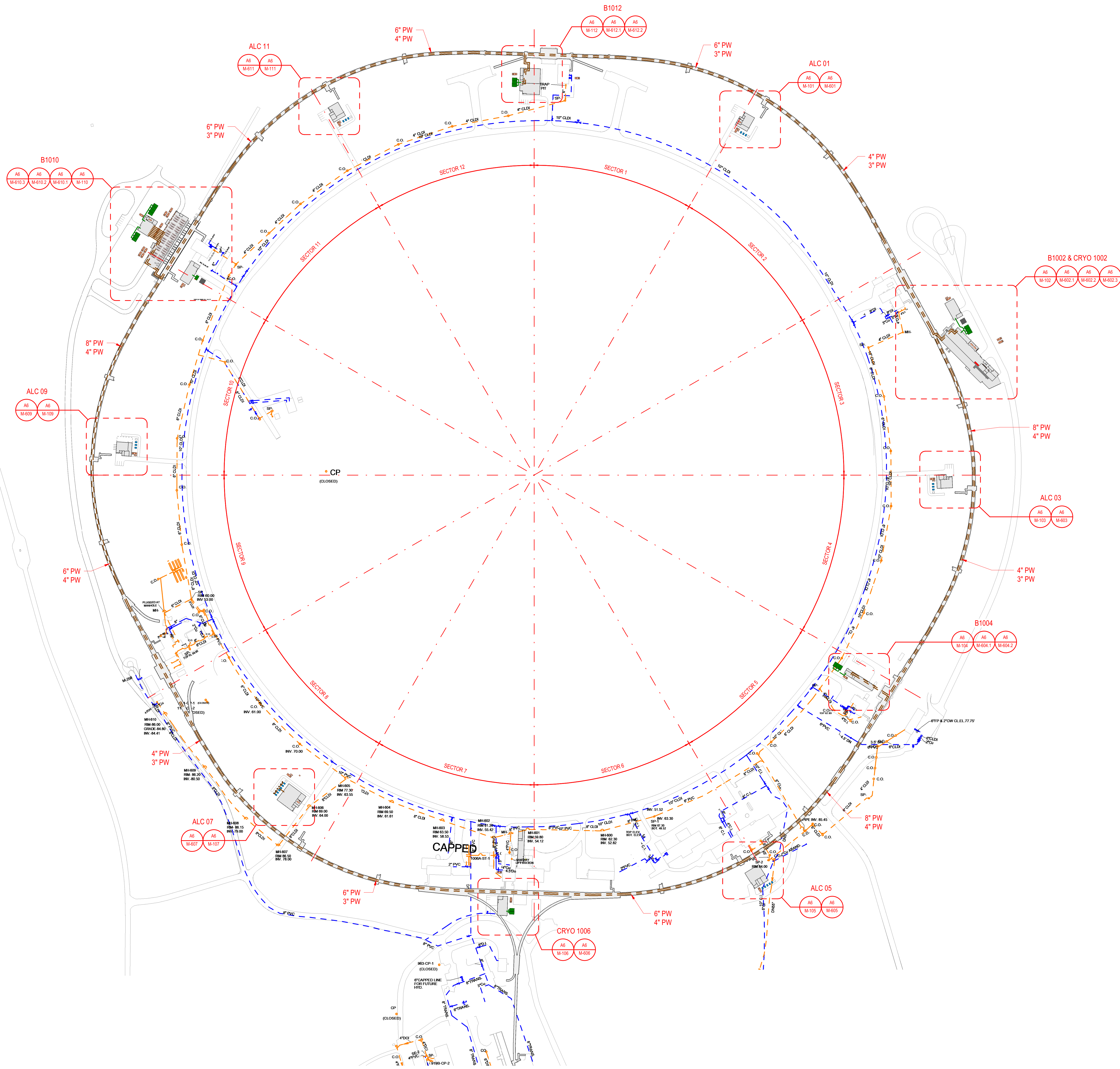
Project Status

Concept Design 100% Review Submittal

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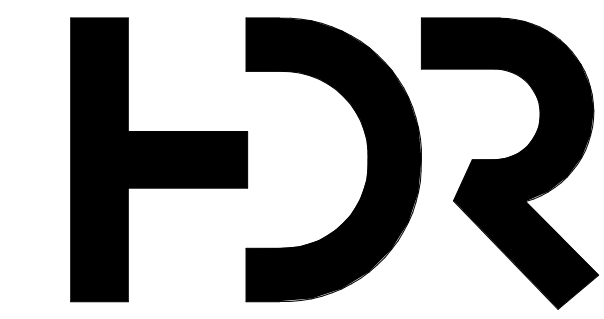


6
5
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D
C
B
A



LEGEND

- BUILDINGS
- COOLING TOWER (CT)
- MECHANICAL EQUIPMENT - REFRIGERANT DX (AHU) / DUCTWORK (SUPPLY AIR - SA)
- MECHANICAL EQUIPMENT - SPECIAL AHU
- PROCESS EQUIPMENT - CHILLER (CH) PUMP / HEAT EXCH
- FUTURE EQUIPMENT
- ELECTRICAL EQUIPMENT
- POTABLE WATER - EXISTING
- SANITARY SEWER - EXISTING
- TOWER WATER (TW)
- PROCESS WATER (PW)



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Project Number
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09/18/20

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Sheet Name

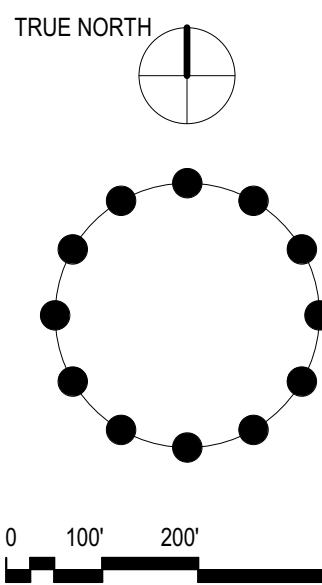
MECHANICAL
SITE PLAN

Sheet Number

M-100

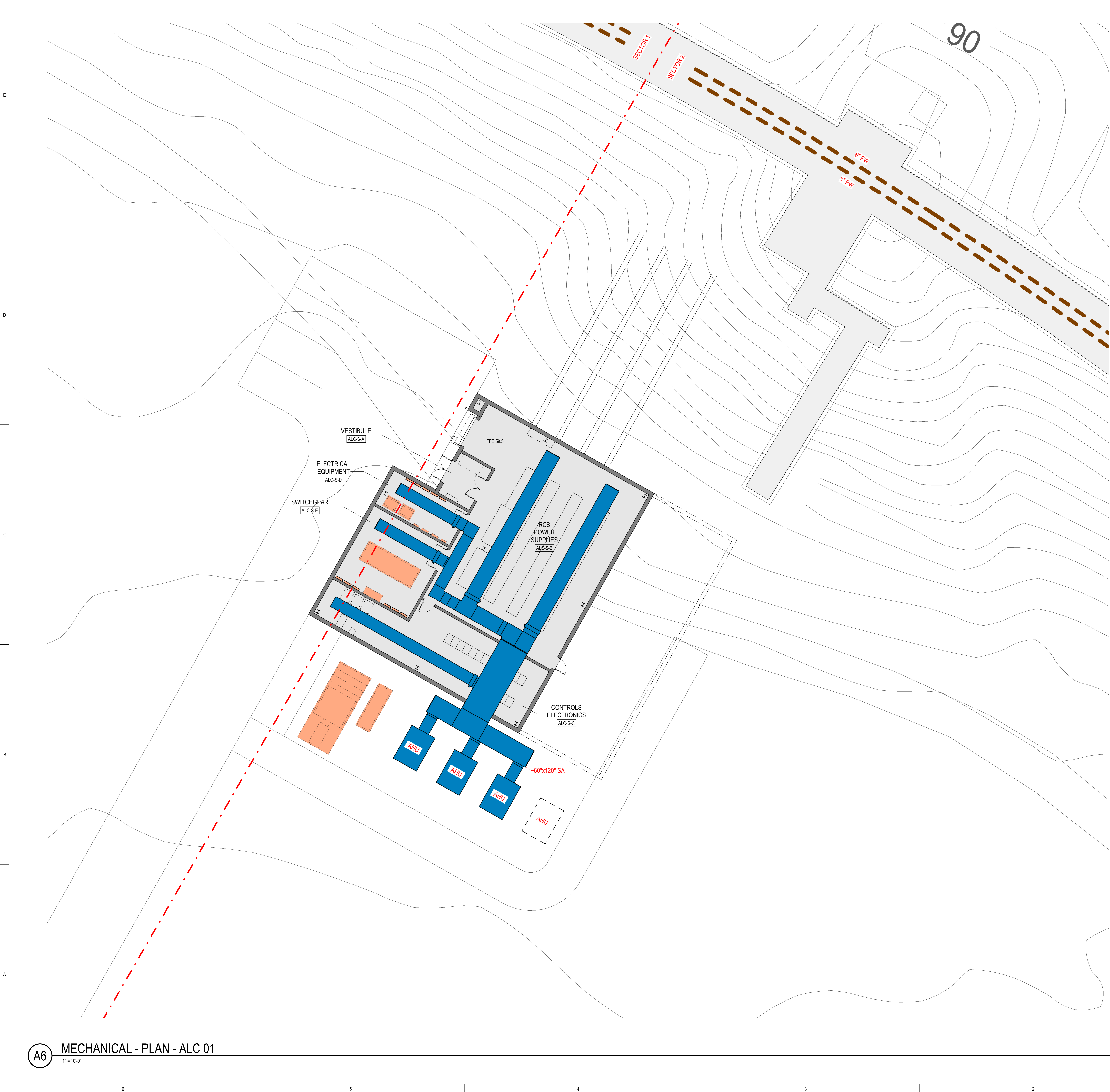
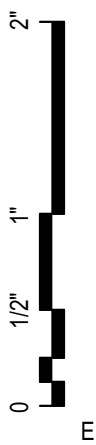
Project Status

Concept Design 100% Review Submittal



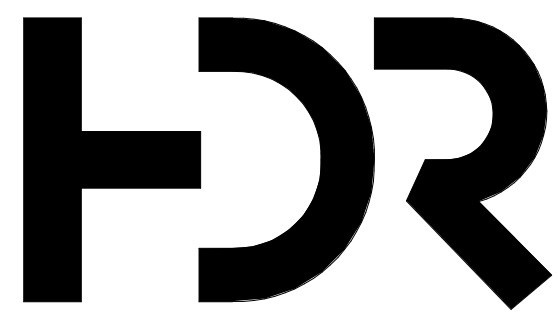
A6 MECHANICAL - SITE PLAN
1" = 200'-0"

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LEGEND

- BUILDINGS
- COOLING TOWER (CT)
- MECHANICAL EQUIPMENT - REFRIGERANT DX (AHU) / DUCTWORK (SUPPLY AIR - SA)
- MECHANICAL EQUIPMENT - SPECIAL AHU
- PROCESS EQUIPMENT - CHILLER (CH) PUMP / HEAT EXCH
- FUTURE EQUIPMENT
- ELECTRICAL EQUIPMENT
- POTABLE WATER - EXISTING
- SANITARY SEWER - EXISTING
- TOWER WATER (TW)
- PROCESS WATER (PW)



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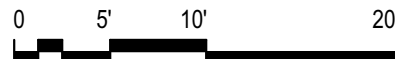
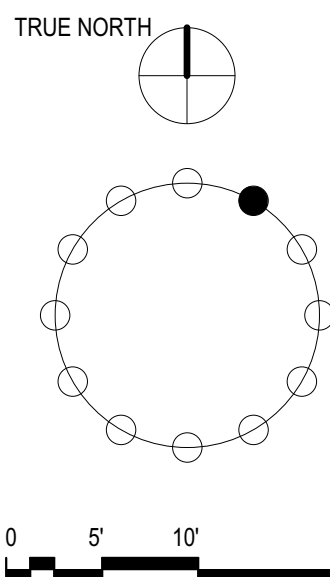
MECHANICAL
PLAN
ALC 01

Sheet Number

M-101

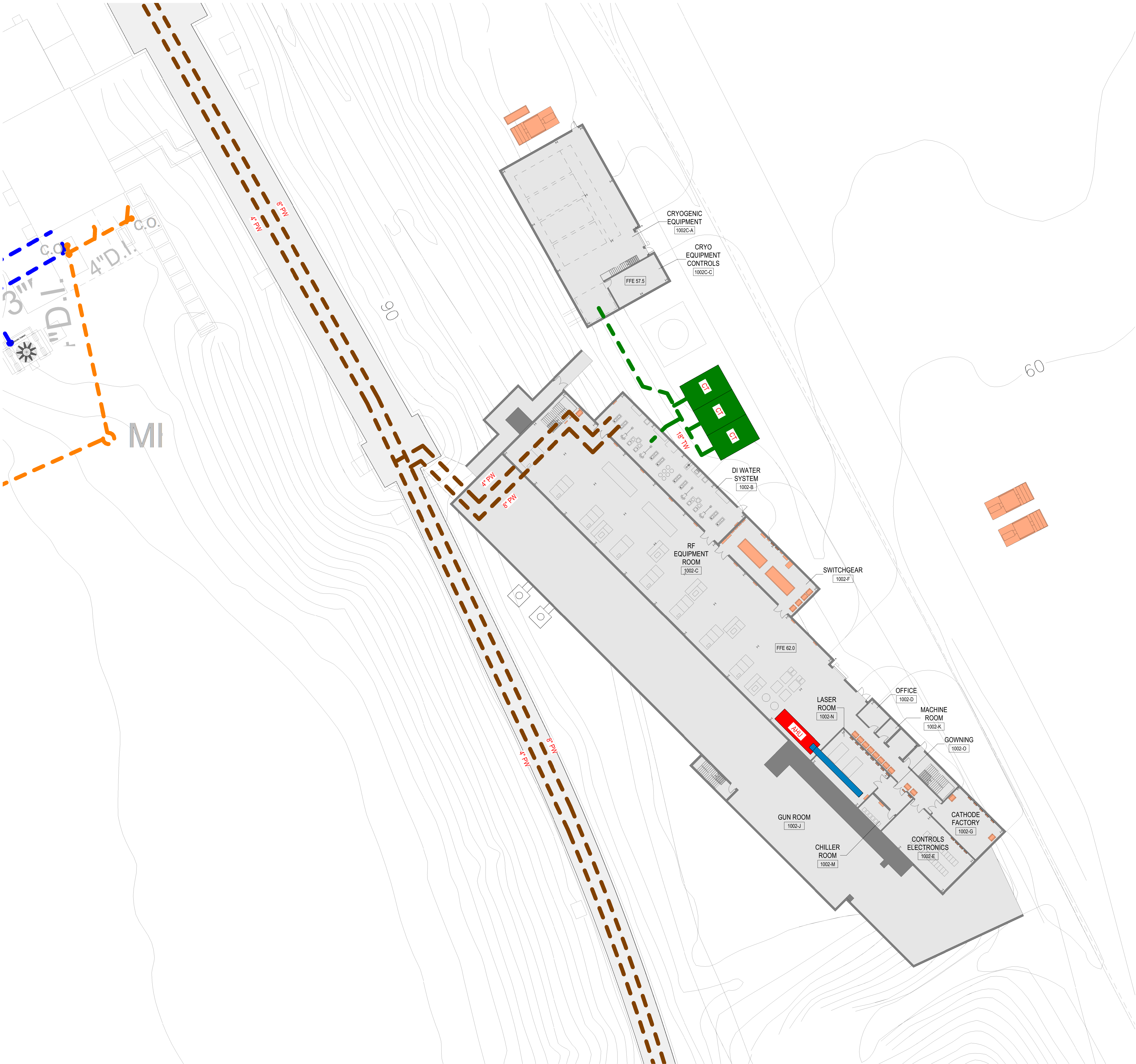
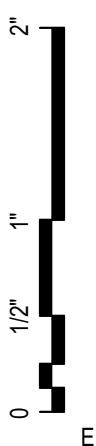
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Concept Design 100% Review Submittal

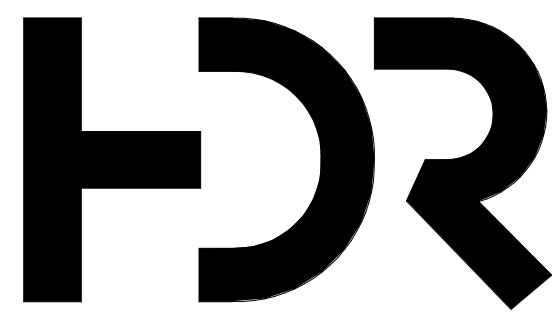


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- LEGEND**
- BUILDINGS
 - COOLING TOWER (CT)
 - MECHANICAL EQUIPMENT - REFRIGERANT DX (AHU) / DUCTWORK (SUPPLY AIR - SA)
 - MECHANICAL EQUIPMENT - SPECIAL AHU
 - PROCESS EQUIPMENT - CHILLER (CH) PUMP / HEAT EXCH
 - FUTURE EQUIPMENT
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Landscape Architect
Civil Engineer
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Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
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Joseph Dennis
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Phil Beadle
Kelly Harshorn

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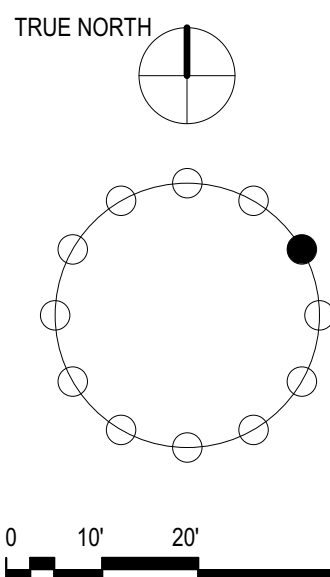
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09/18/20

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NOT FOR CONSTRUCTION

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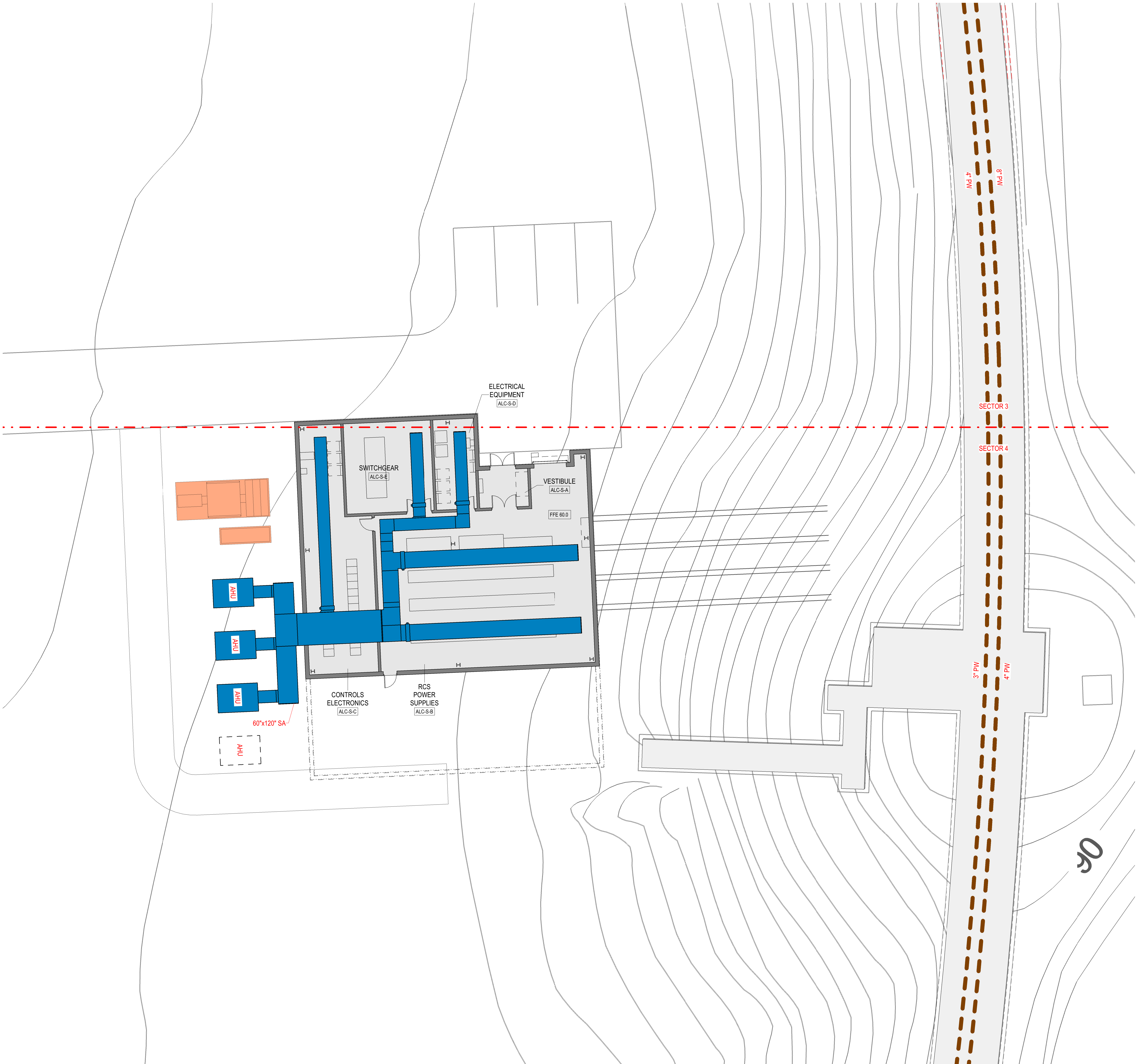
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Project Status
Concept Design 100% Review Submittal



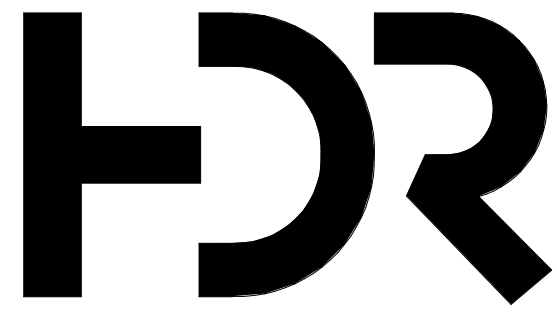
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LEGEND

- BUILDINGS
- COOLING TOWER (CT)
- MECHANICAL EQUIPMENT - REFRIGERANT DX (AHU) / DUCTWORK (SUPPLY AIR - SA)
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09/18/20

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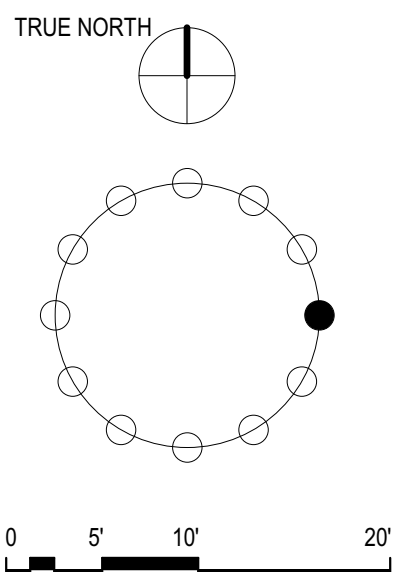
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ALC 03

Sheet Number

M-103

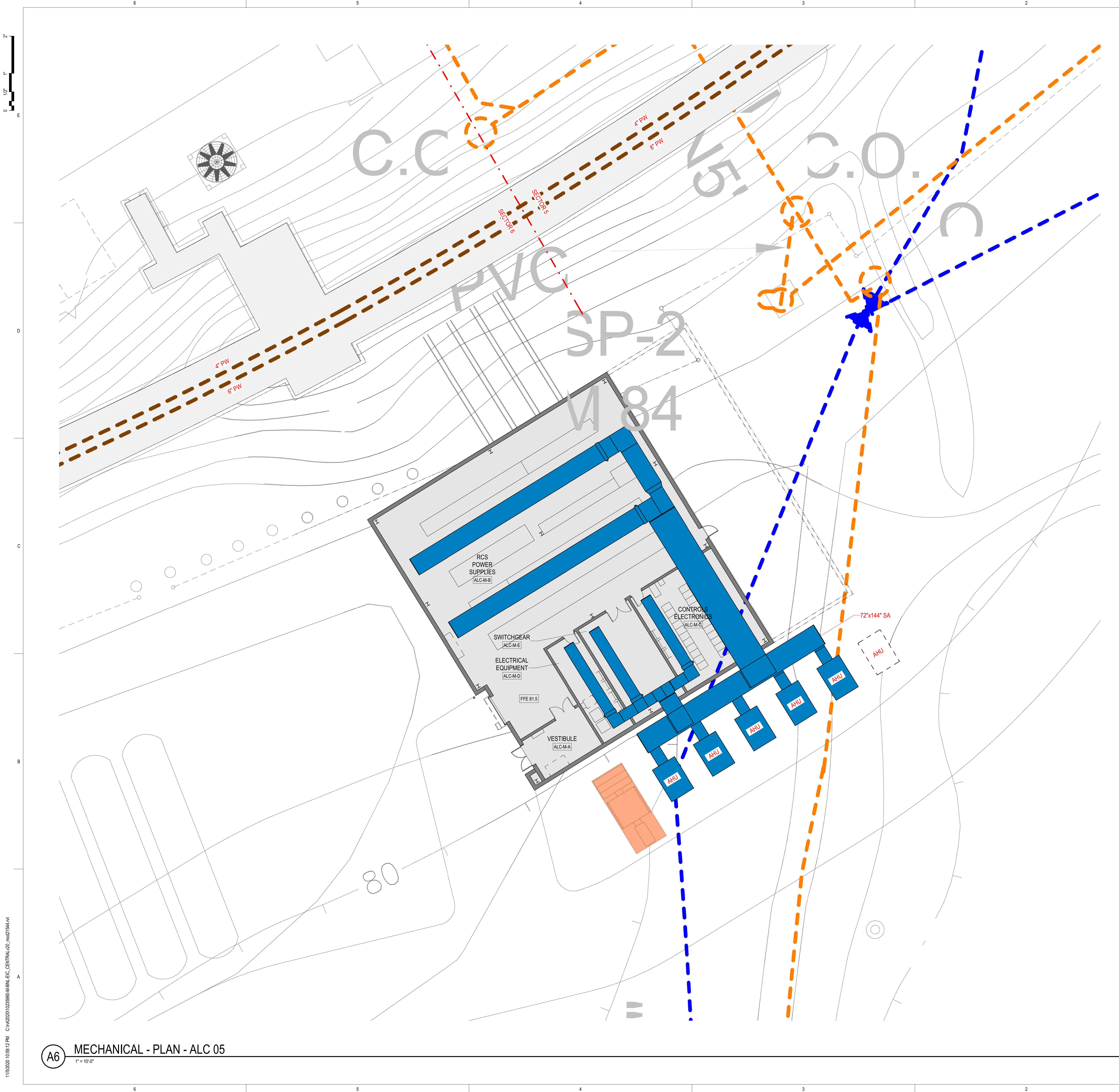
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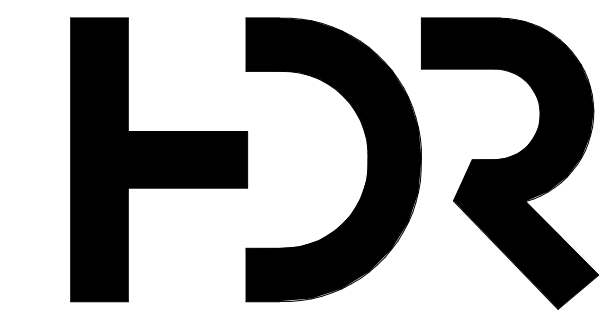


A6 MECHANICAL - PLAN - ALC 03

1" = 10'-0"



- LEGEND**
- BUILDINGS
 - COOLING TOWER (CT)
 - MECHANICAL EQUIPMENT - REFRIGERANT DX (AHU) / DUCTWORK (SUPPLY AIR - SA)
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Interior Designer	
Equipment Planner	
Wayfinding	

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Original Issue	09/18/20

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Sheet Name
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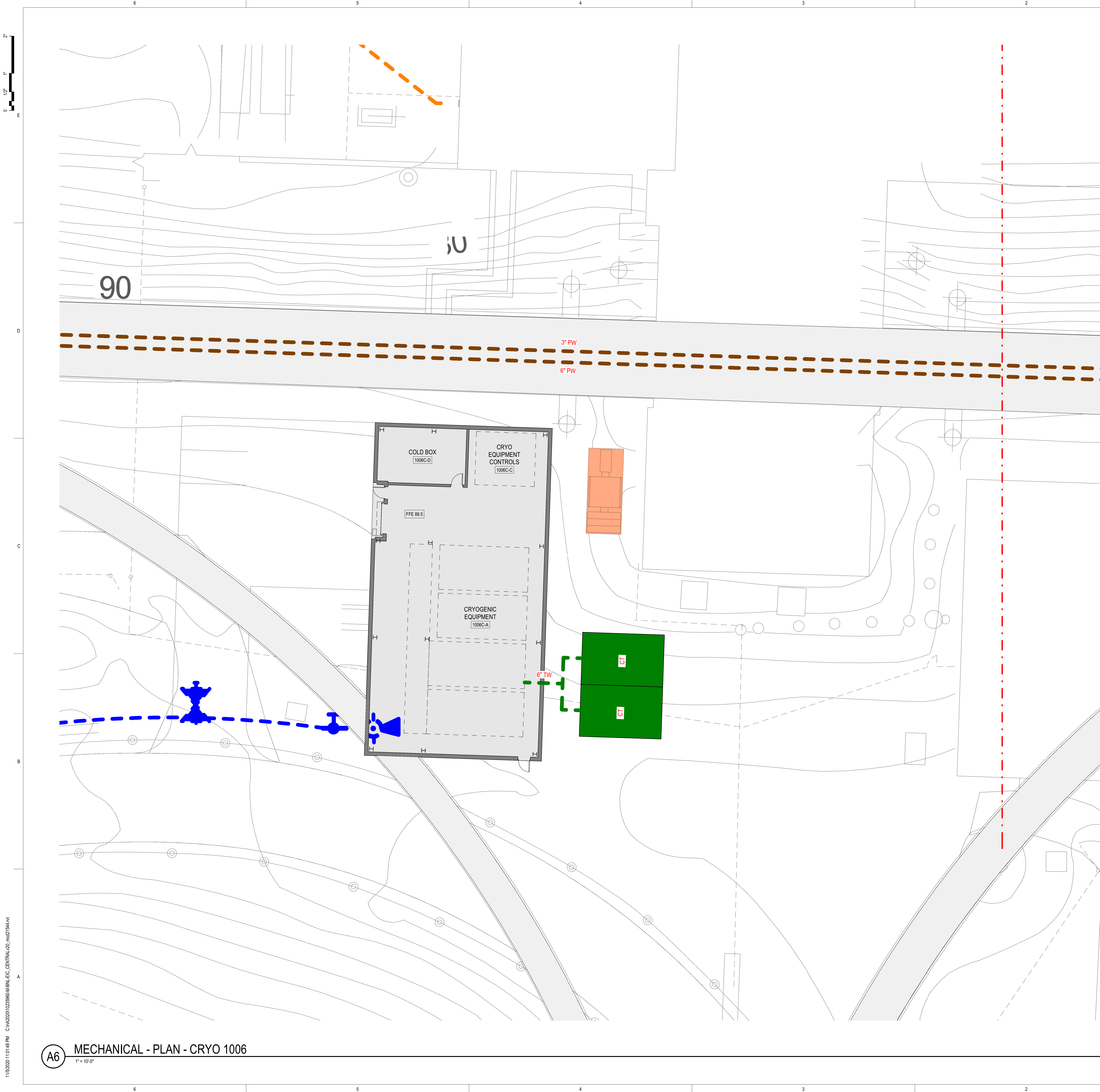
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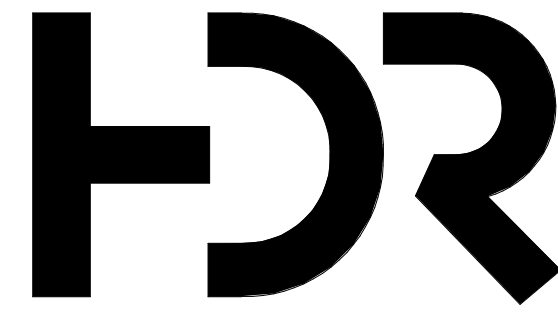
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LEGEND

- BUILDINGS
- COOLING TOWER (CT)
- MECHANICAL EQUIPMENT - REFRIGERANT DX (AHU) / DUCTWORK (SUPPLY AIR - SA)
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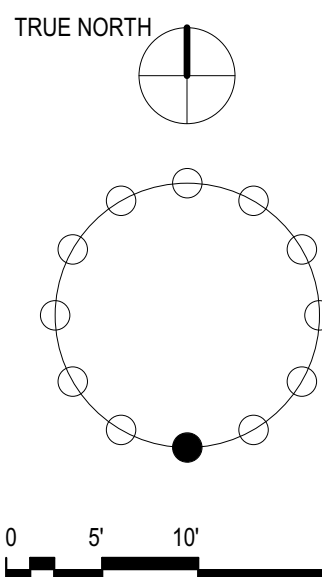
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CRYO 1006

Sheet Number

M-106

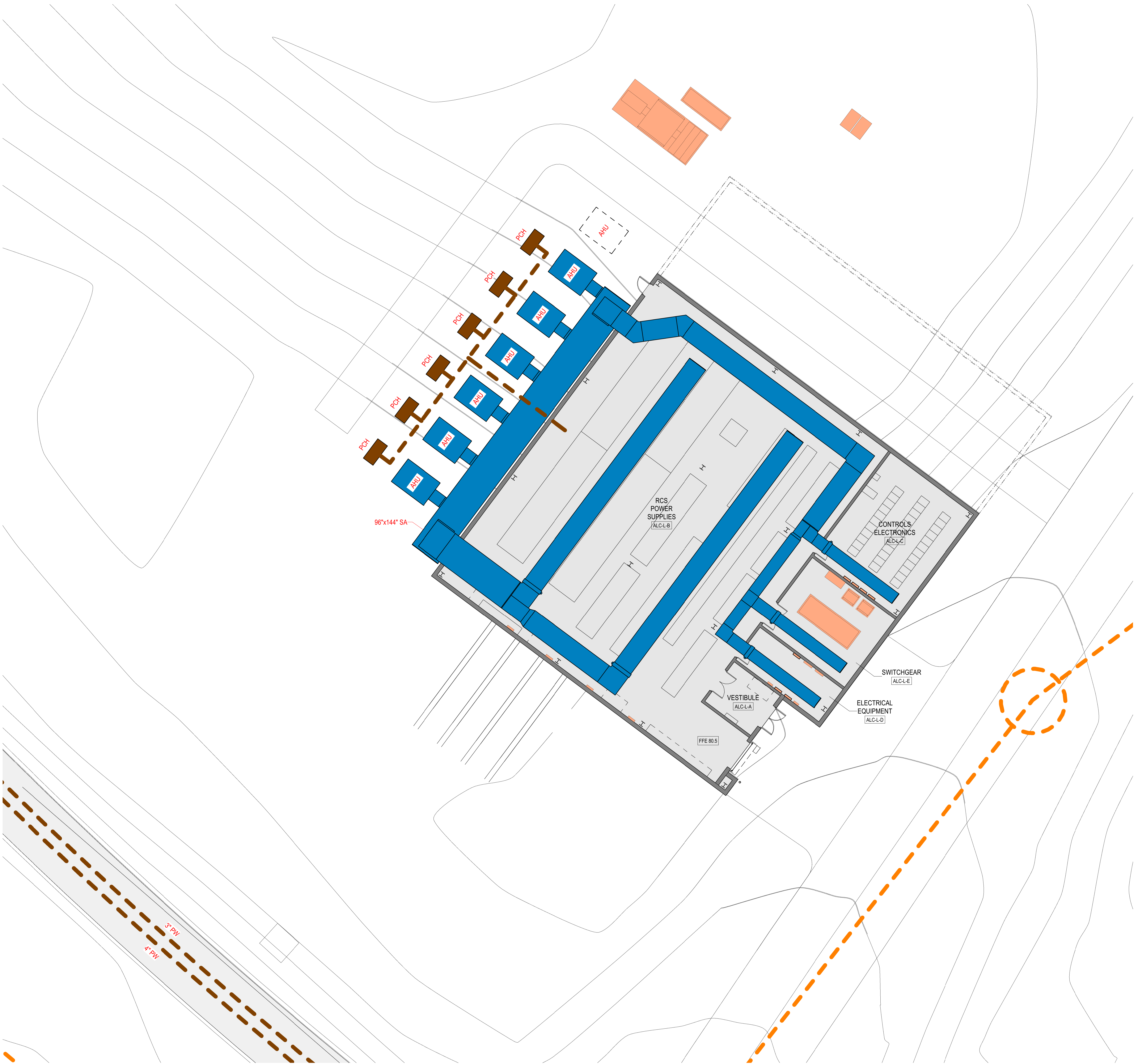
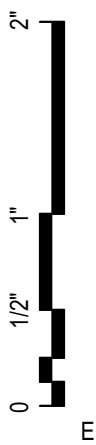
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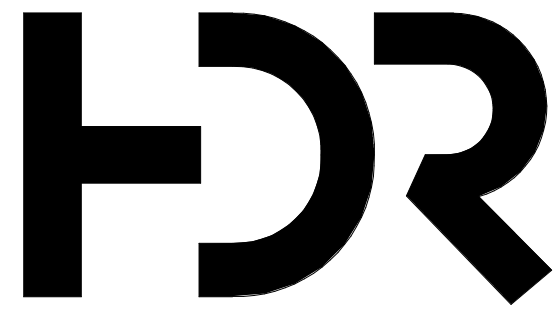


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- LEGEND**
- BUILDINGS
 - COOLING TOWER (CT)
 - MECHANICAL EQUIPMENT - REFRIGERANT DX (AHU) / DUCTWORK (SUPPLY AIR - SA)
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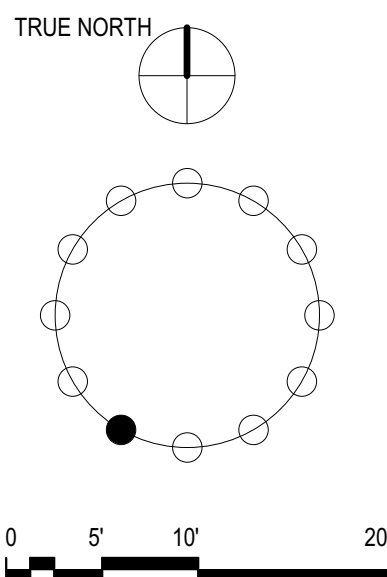
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Original Issue	09/18/20

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ALC 07**

Sheet Number
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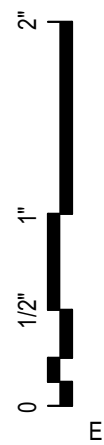
Project Status
Concept Design 100% Review Submittal



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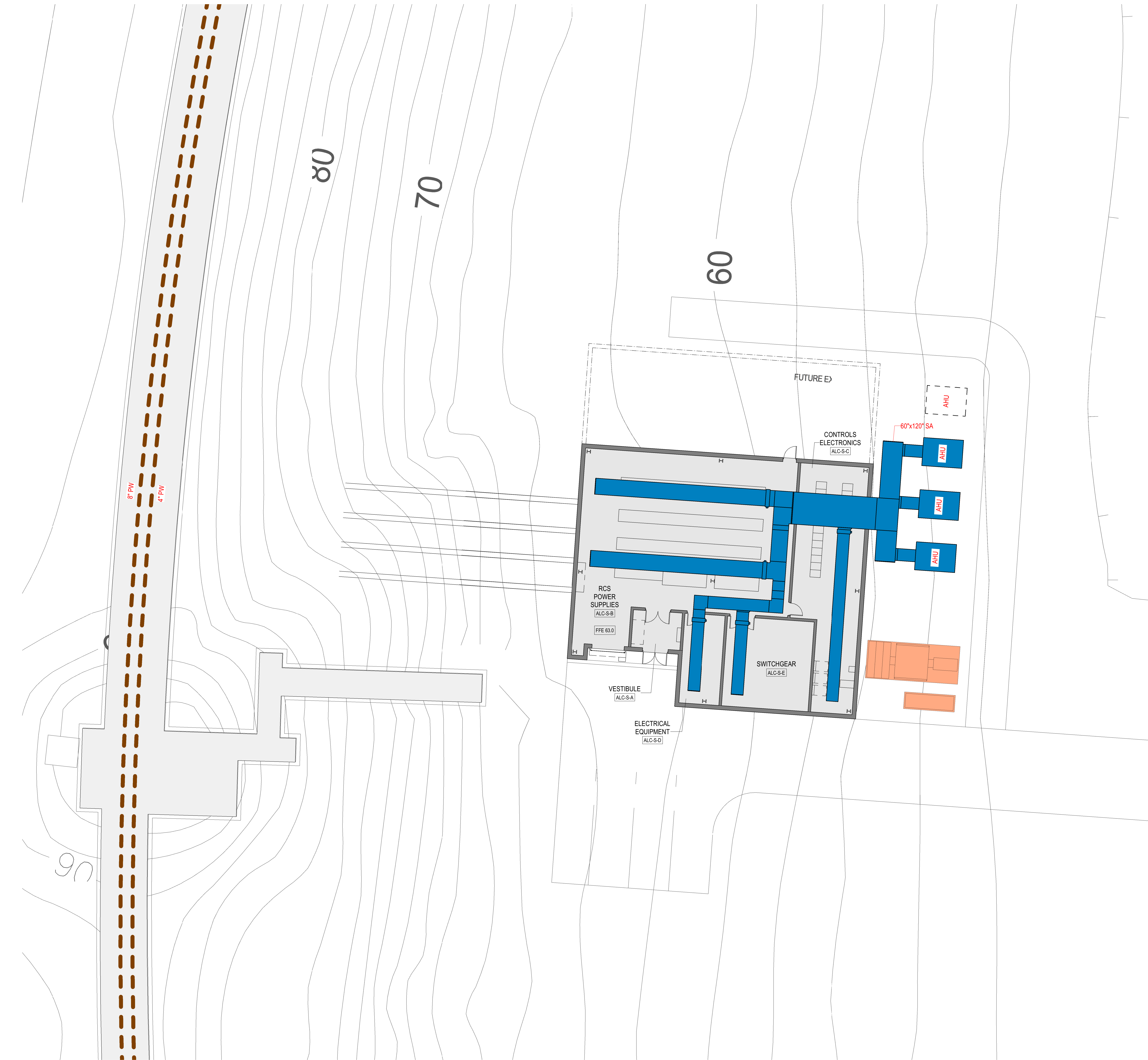


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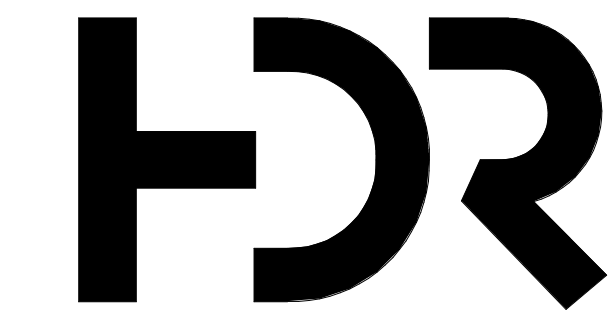
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LEGEND

- BUILDINGS
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	11/06/2020	100% Review Submittal

Project Number
Original Issue

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09/18/20

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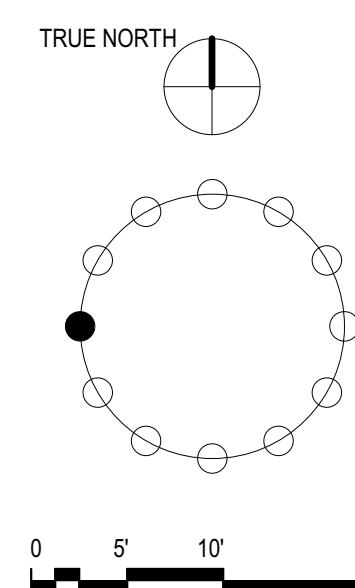
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ALC 09

Sheet Number

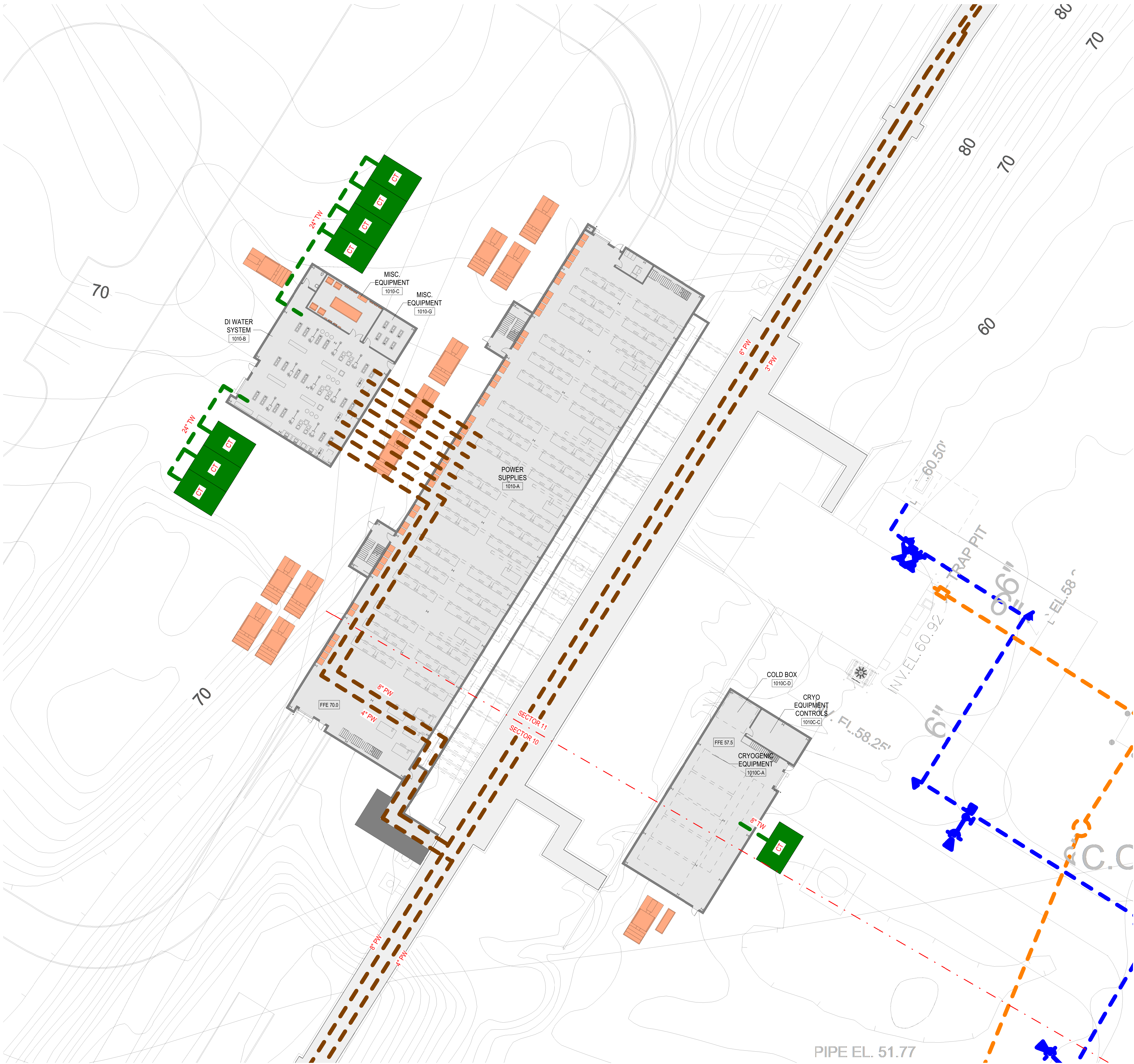
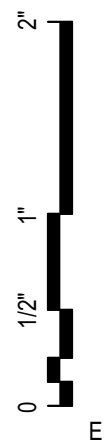
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Project Status
Concept Design 100% Review Submittal



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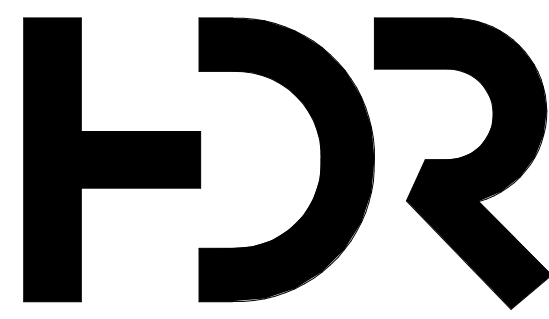
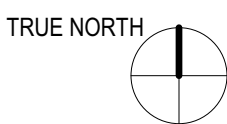
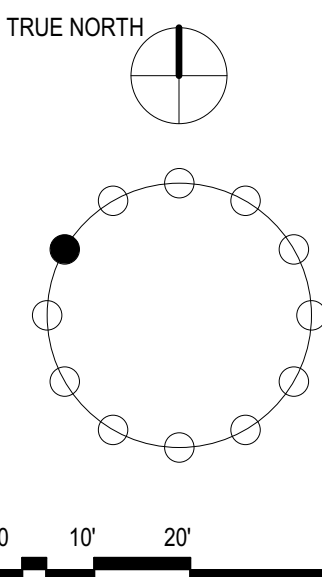
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LEGEND

- BUILDINGS
- COOLING TOWER (CT)
- MECHANICAL EQUIPMENT - REFRIGERANT DX (AHU) / DUCTWORK (SUPPLY AIR - SA)
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Phil Beadle
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PLAN
B1010

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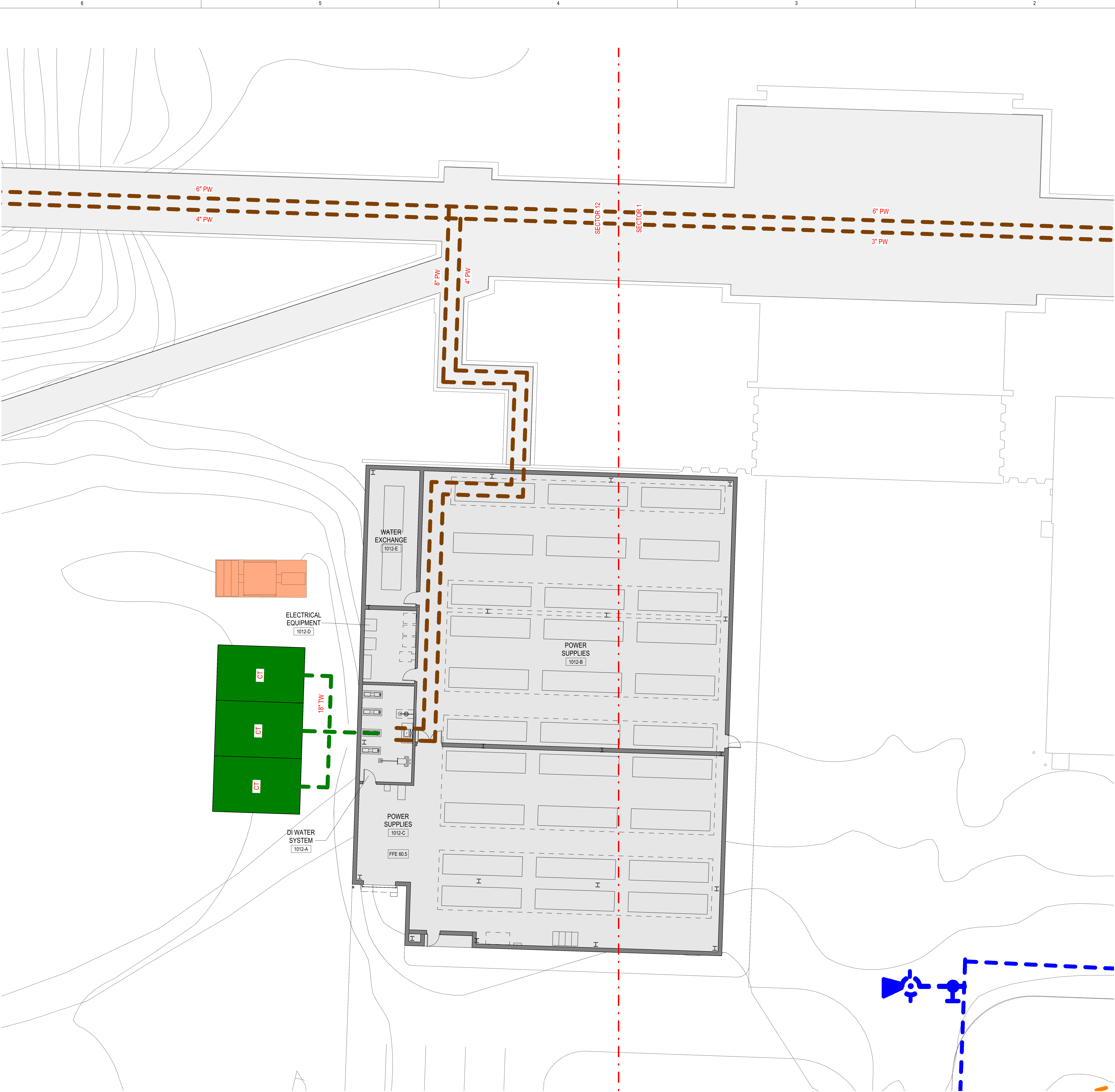
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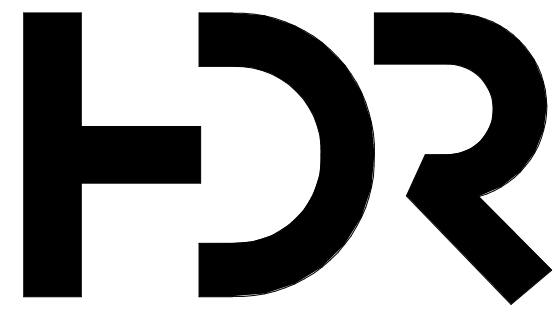


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Concept Design 100% Review Submittal

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- LEGEND**
- BUILDINGS
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Original Issue	09/18/20

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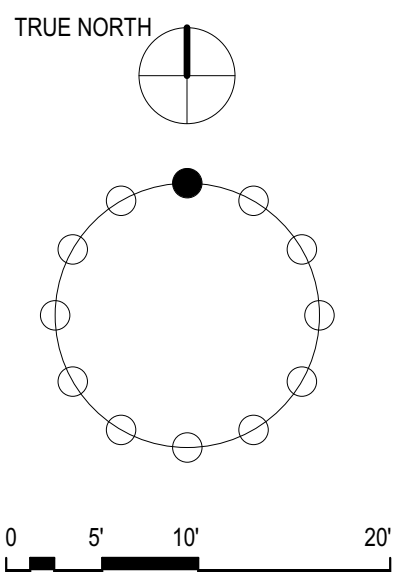
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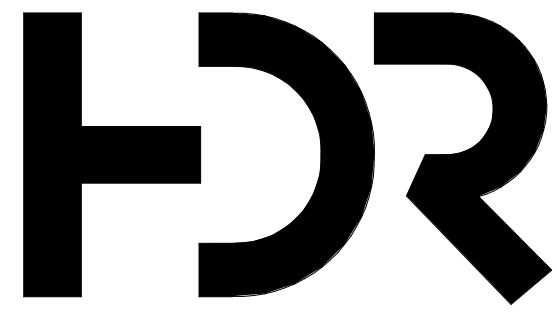
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Project Status

Concept Design 100% Review Submittal



A6 MECHANICAL - PLAN - B1012
1" = 10'-0"



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Kelly Hartshorn

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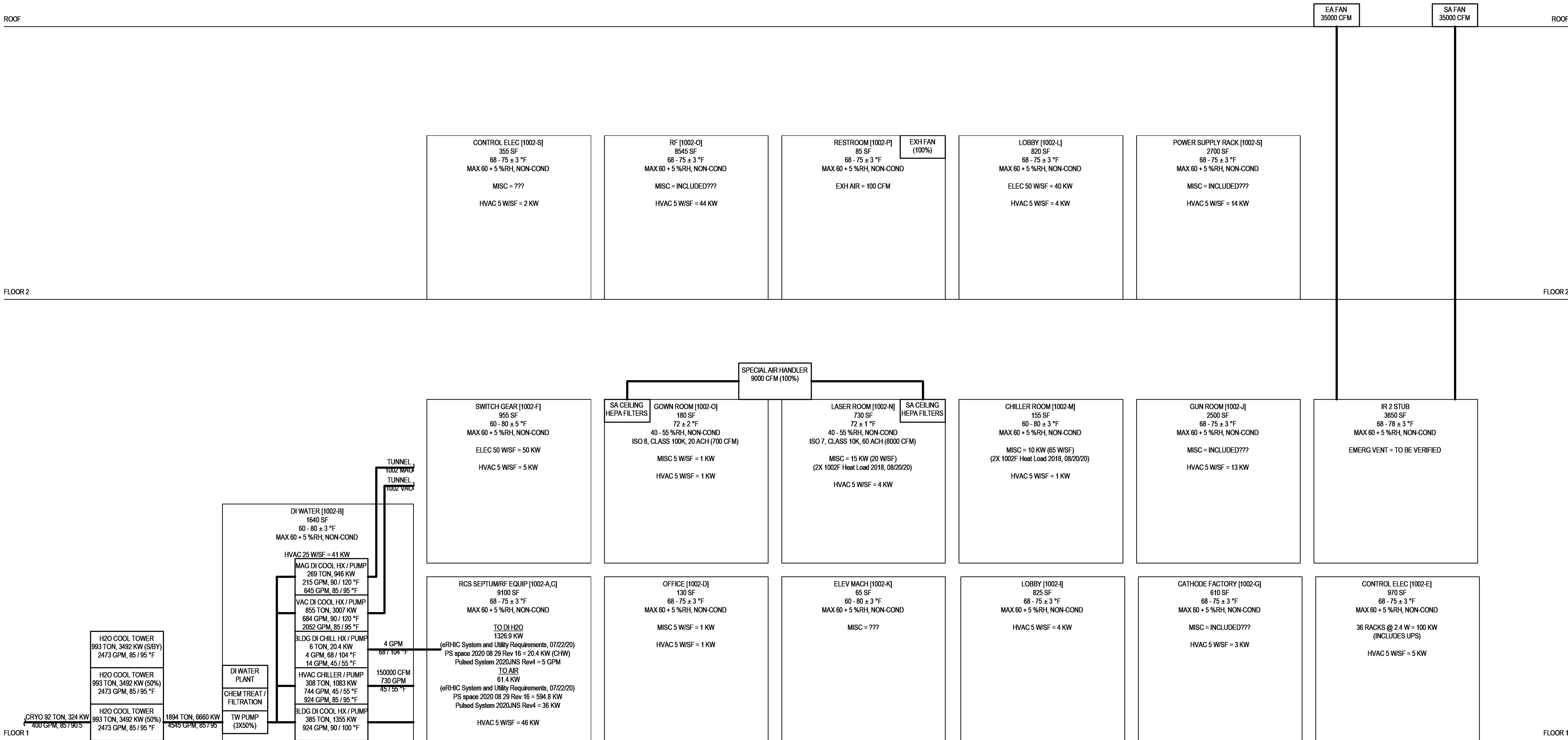
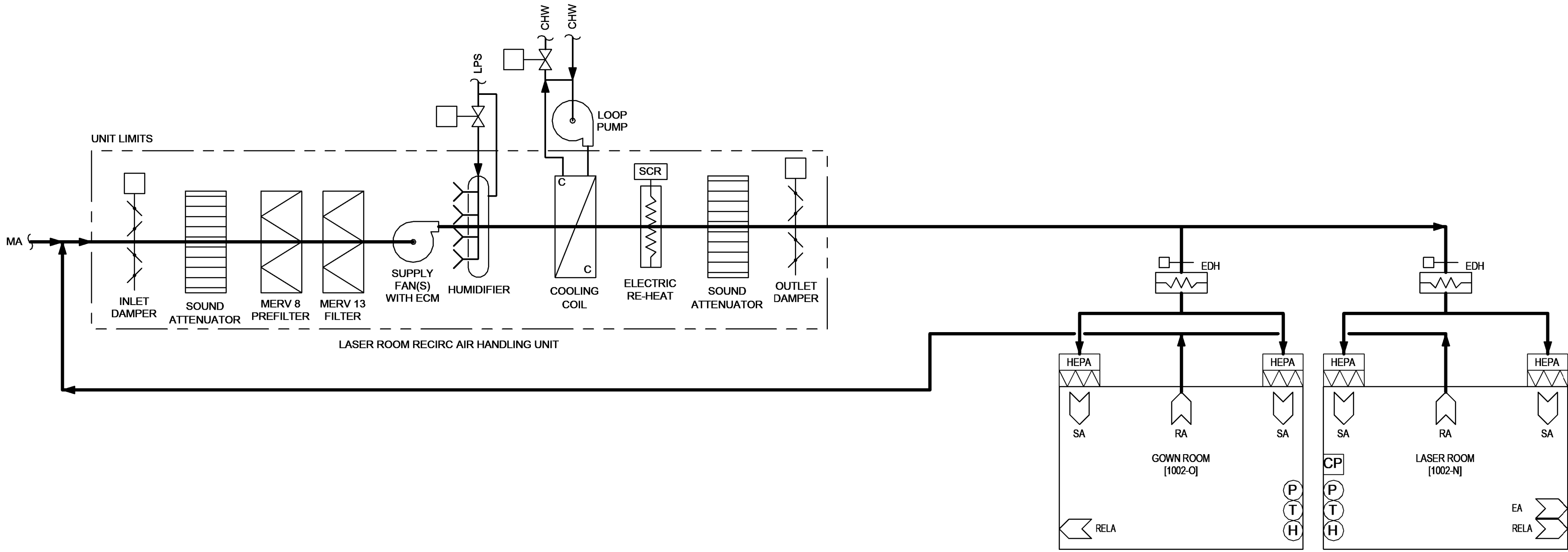
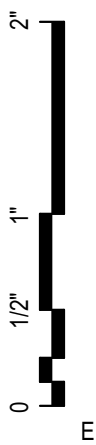
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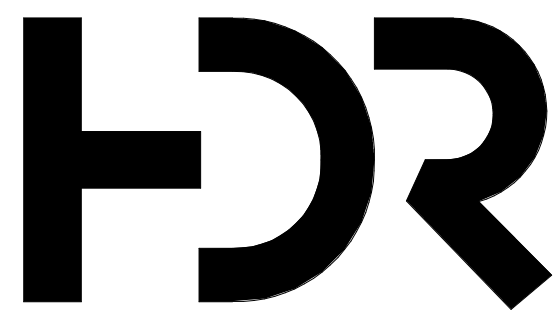
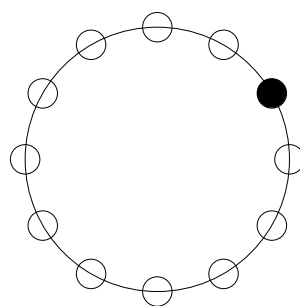
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A6 MECHANICAL - DIAGRAM - B1002



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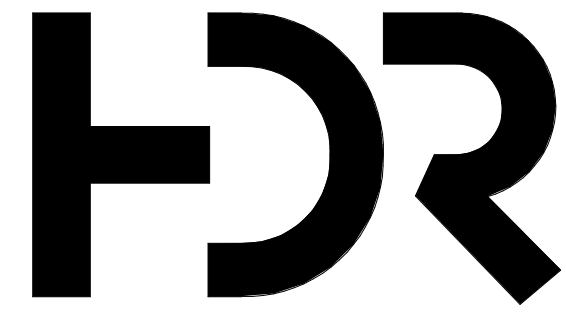
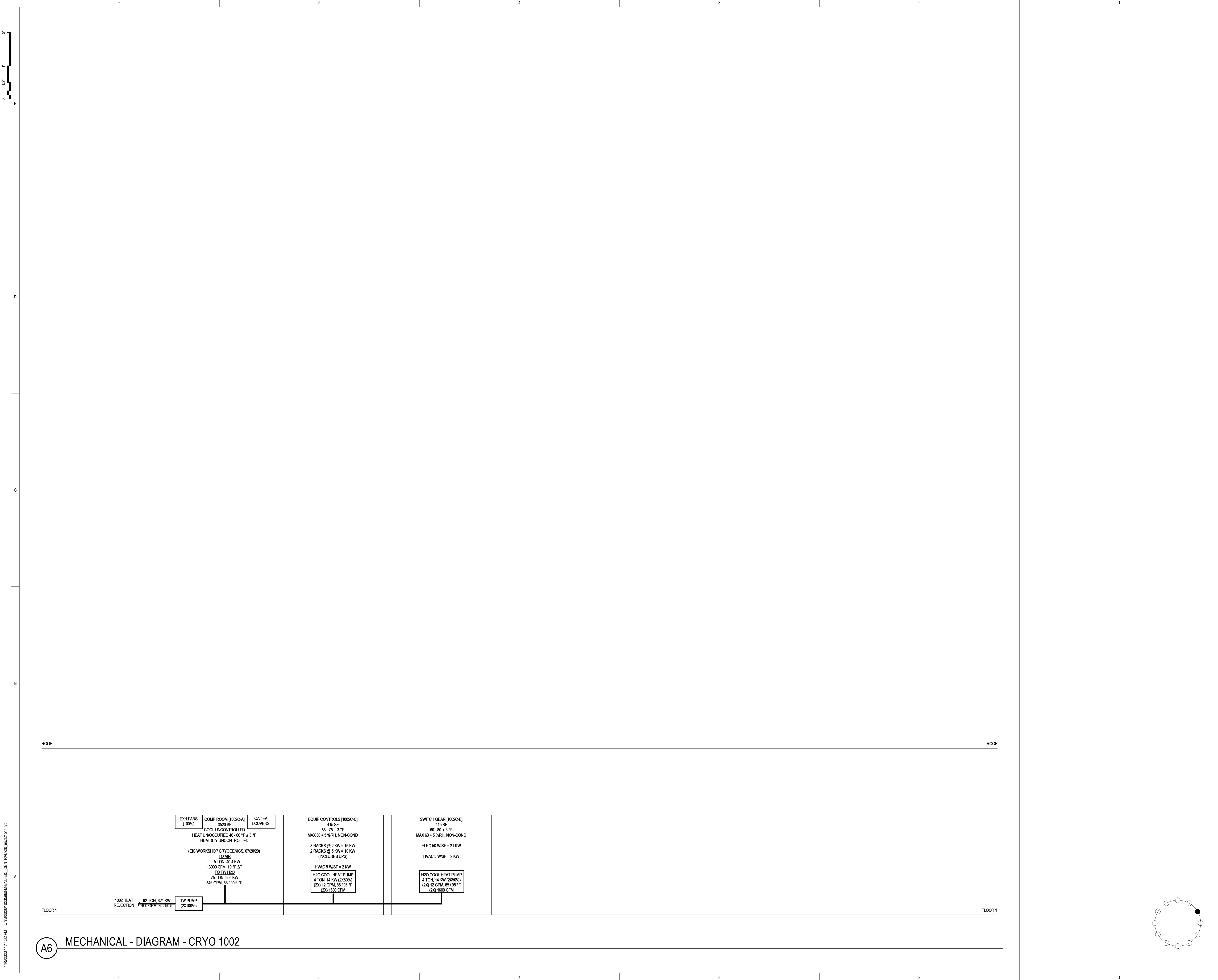
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DIAGRAM
B1002

Sheet Number

M-602.1

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Wayfinding	

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Project Number	10235960
Original Issue	09/18/20

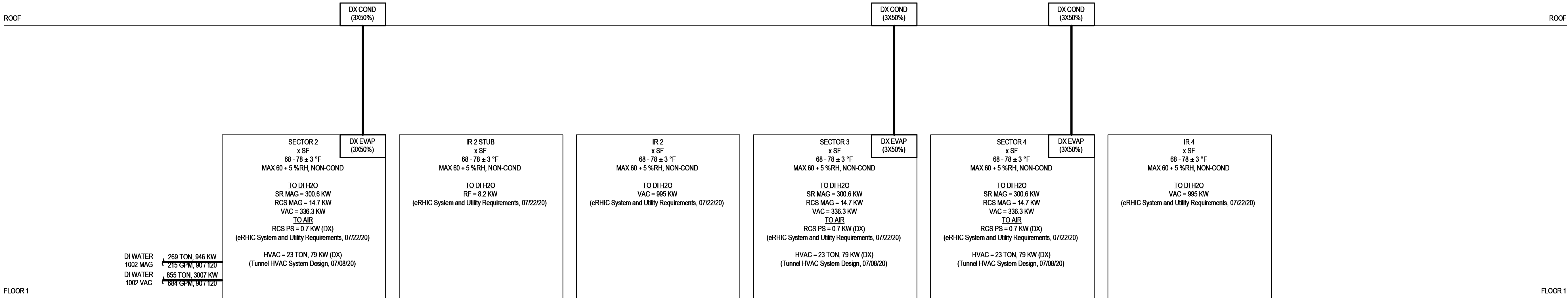
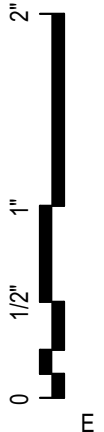
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CRYO 1002**

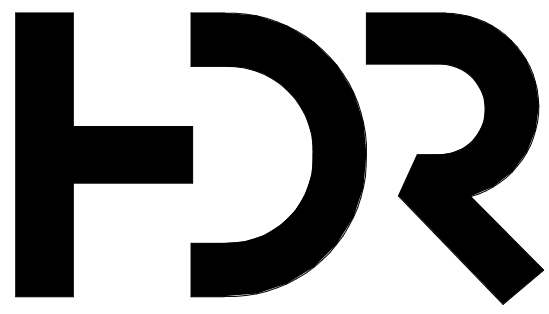
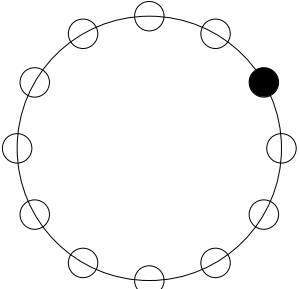
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M-602.2

Project Status
Concept Design 100% Review Submittal

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A6 MECHANICAL - DIAGRAM - TUNNEL 1002



HDR Architecture
HDR Arlington
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Arlington, VA 22201

Brookhaven National
Laboratory
Electron Ion Collider
Upton, New York



Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kelly Hartshorn

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	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

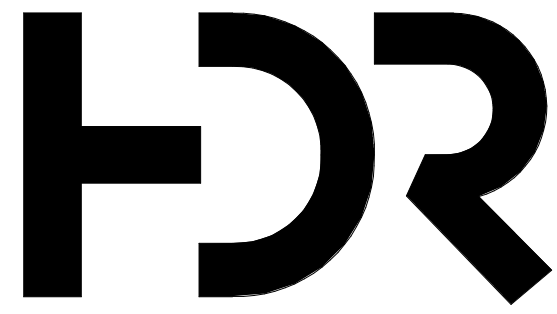
10235960
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TUNNEL 1002

Sheet Number
M-602.3

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Equipment Planner	
Wayfinding	

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MARK	DATE	DESCRIPTION
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Project Number	10235960
Original Issue	09/18/20

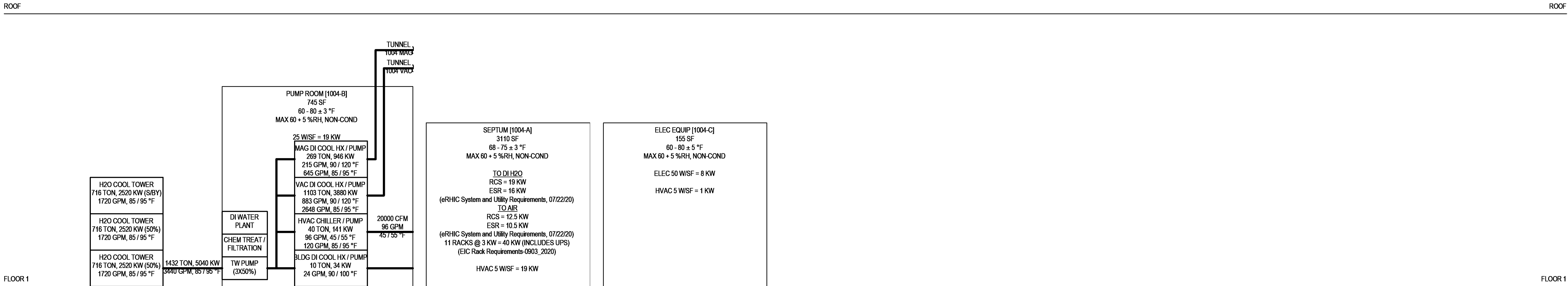
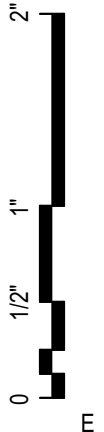
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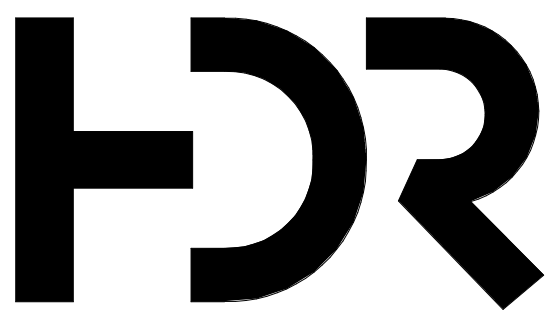
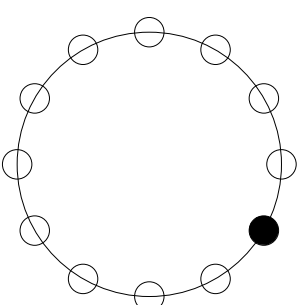
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Project Status
Concept Design 100% Review Submittal

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A6 MECHANICAL - DIAGRAM - B1004



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Wayfinding	

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	11/06/2020	100% Review Submittal

Project Number	10235960
Original Issue	09/18/20

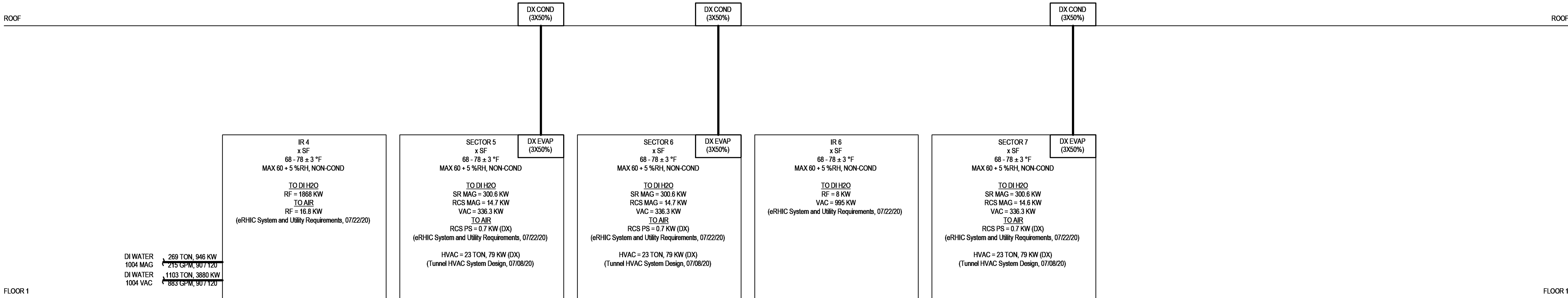
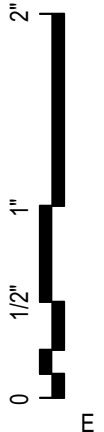
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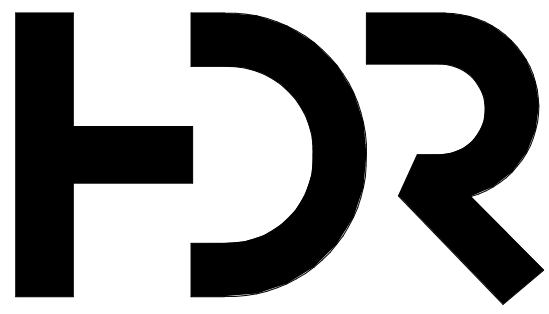
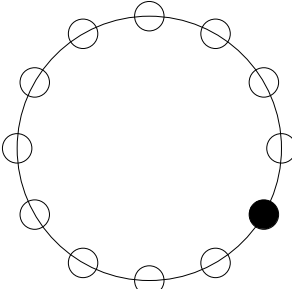
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A6 MECHANICAL DIAGRAM 1004 TUNNEL



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Wayfinding	

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Author

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	11/06/2020	100% Review Submittal

Project Number
Original Issue

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09/18/20

PRELIMINARY
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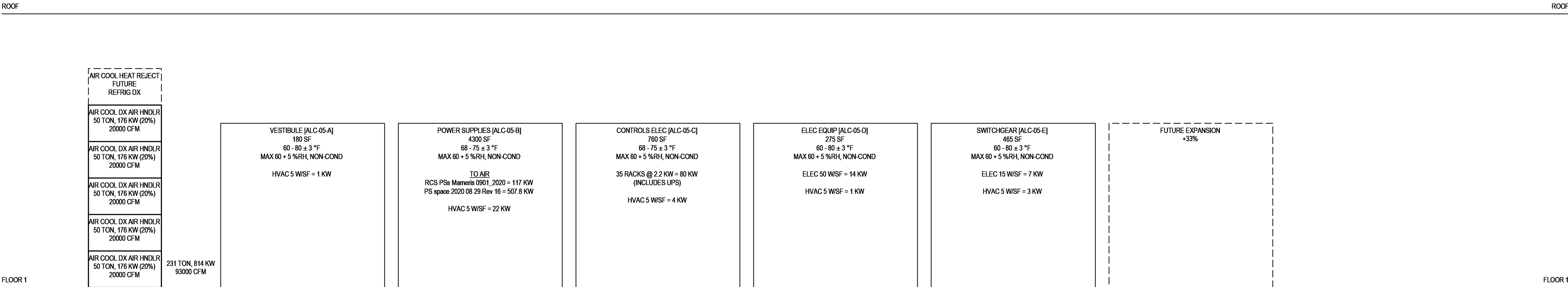
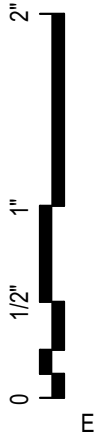
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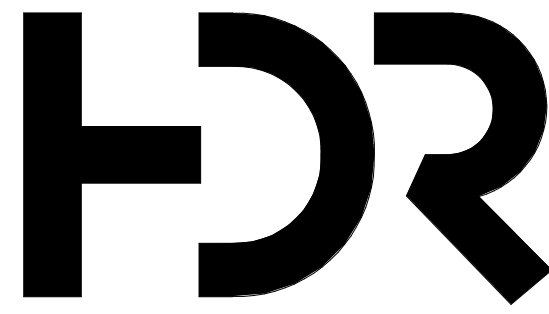
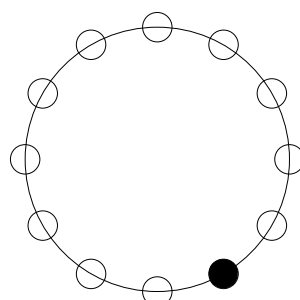
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A6 MECHANICAL - DIAGRAM - ALC 05



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Project Manager
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Civil Engineer
Structural Engineer
Mechanical Engineer
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Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kelly Hartshorn

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	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/18/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

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DIAGRAM
ALC 05

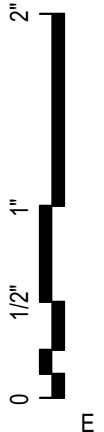
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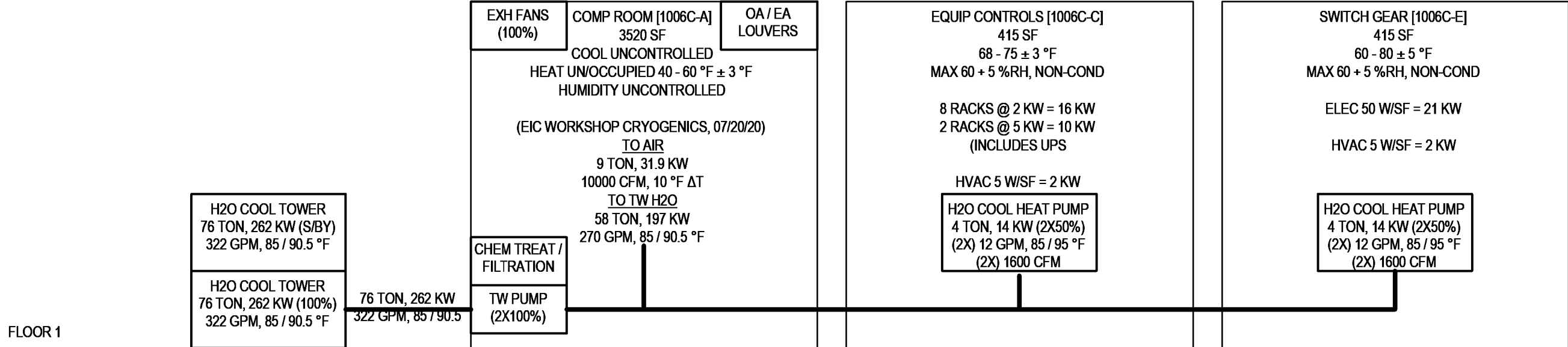
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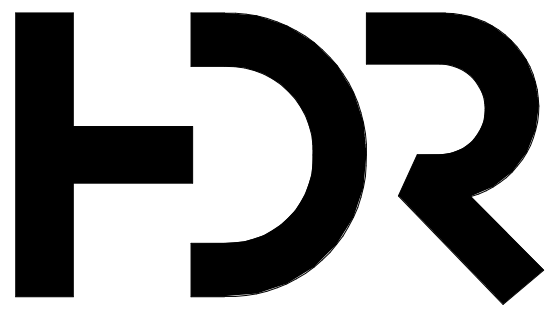
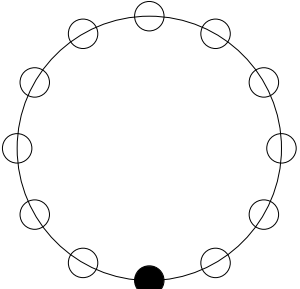


ROOF

FLOOR 1



A6 MECHANICAL - DIAGRAM - CRYO 1006



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Landscape Architect
Civil Engineer
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Mechanical Engineer
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Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kelly Hartshorn

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Author

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	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/18/20

PRELIMINARY
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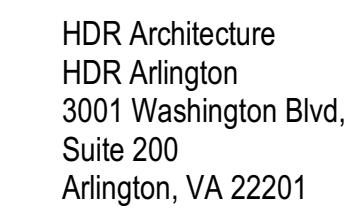
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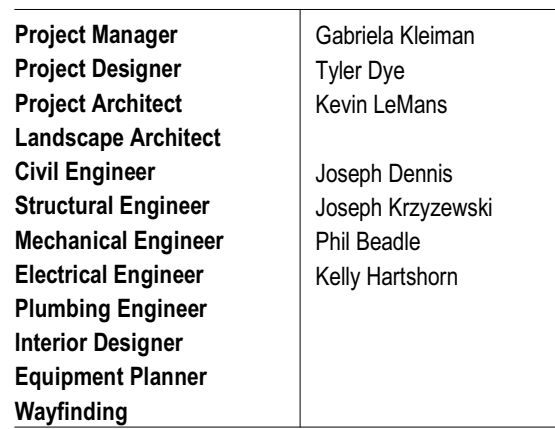
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Project Status

Concept Design 100% Review Submittal



Upton, New York



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MARK	DATE	DESCRIPTION
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Project Number	10235960
Original Issue	09/18/20

PRELIMINARY
NOT FOR CONSTRUCTION

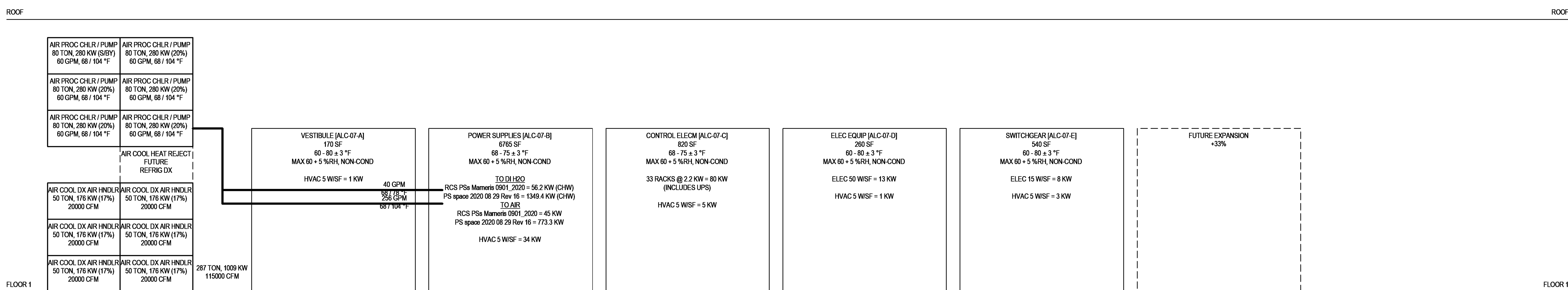
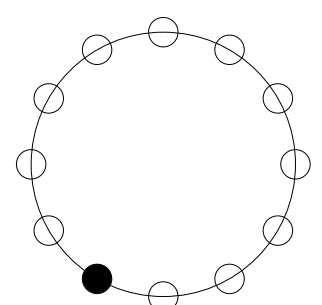
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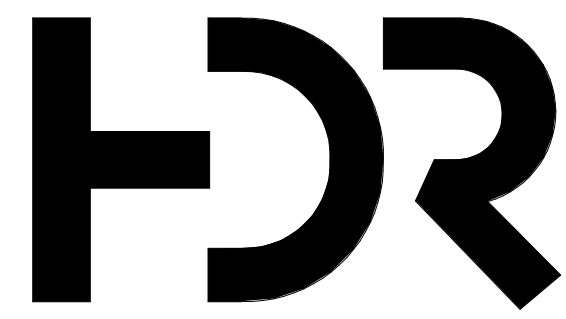
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Project Status
Concept Design 100% Review Submittal



A6 MECHANICAL - DIAGRAM - ALC 07



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Landscape Architect	
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Equipment Planner	
Wayfinding	

Sheet Reviewer	Author
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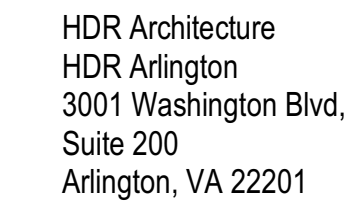
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Original Issue	09/18/20

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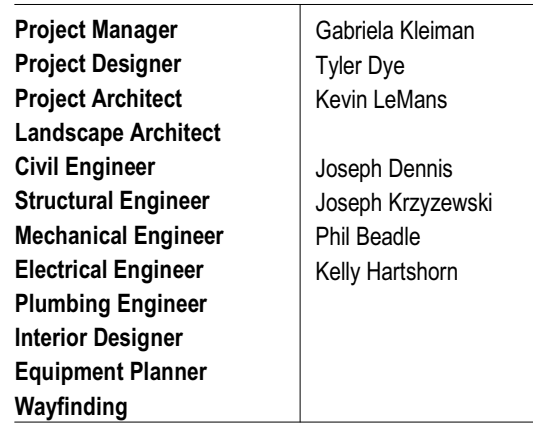
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ALC 09**

Sheet Number
M-609

Project Status
Concept Design 100% Review Submittal



Upton, New York



Sheet Reviewer		Author
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Project Number	10235960
Original Issue	09/18/20

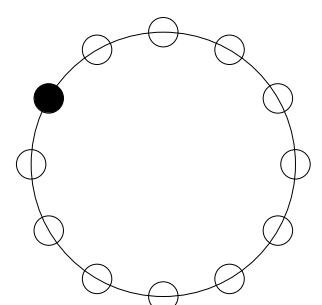
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MECHANICAL
DIAGRAM
B1010

Sheet Number

M-610.1

Project Status
Concept Design 100% Review Submittal



ROOF

- CIRC WAVEGUIDES [1010-F]
 - 18500 SF
 - 68 - 75 ± 3 °F
 - MAX 60 + 5 %RH, NON-COND
 - MISC = INCLUDED???
 - HVAC 5 WISF = 100 KW

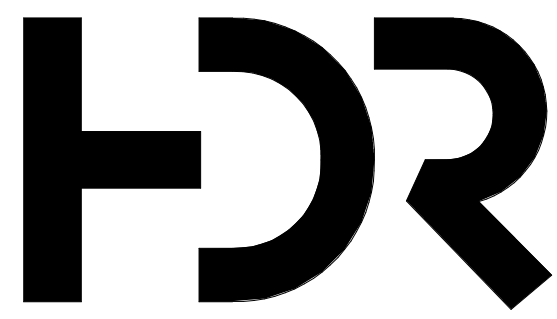
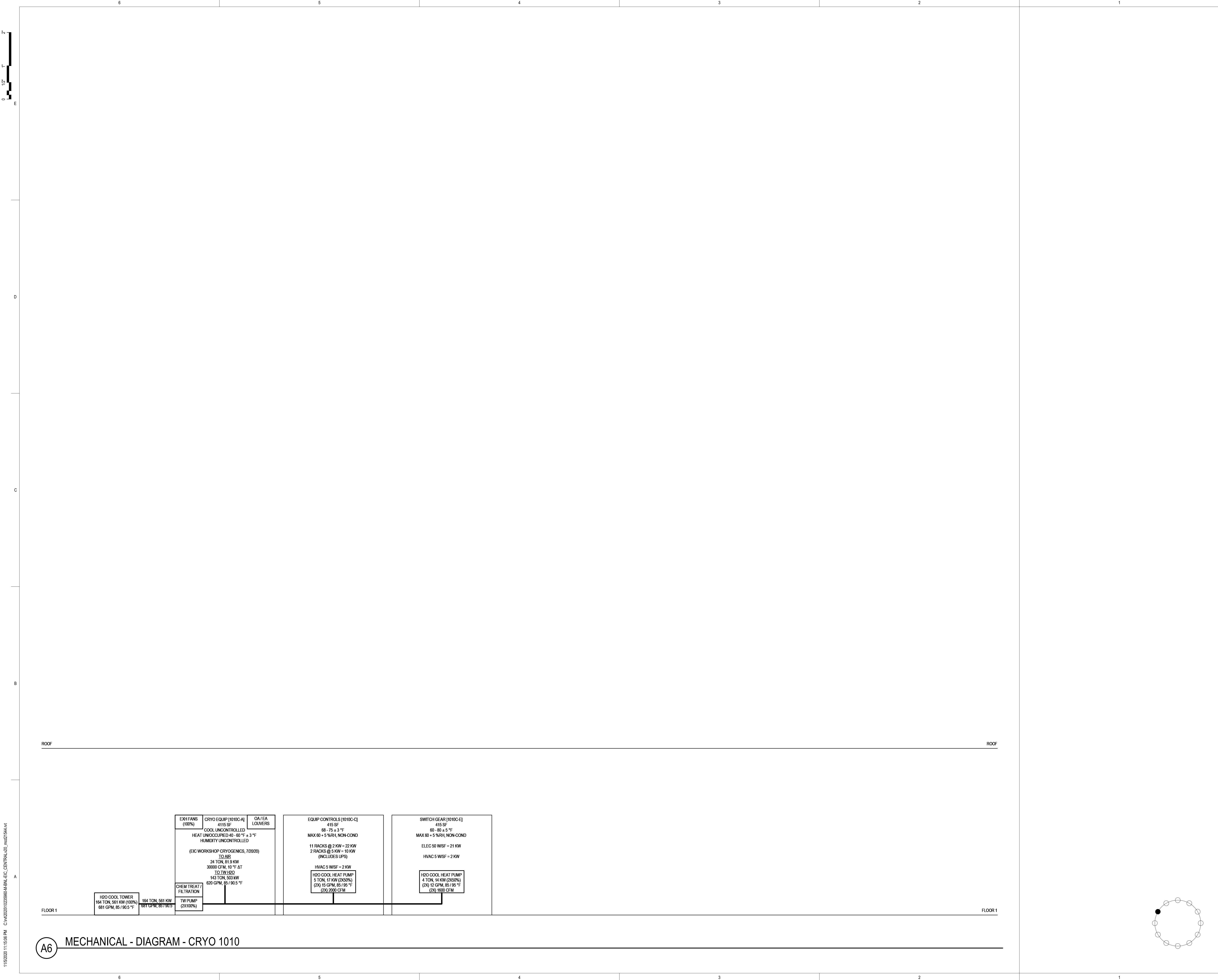
FLOOR 2

- TUNNEL
 - 1010-WAGS
 - TUNNEL
 - 1010-VAC

FLOOR 1

H2O COOL TOWER 1008 TON, 3544 KW (SBY) 2418 GPM, 85 / 95 °F	H2O COOL TOWER 1008 TON, 3544 KW (17%) 2418 GPM, 85 / 95 °F	H2O COOL TOWER 1008 TON, 3544 KW (17%) 2418 GPM, 85 / 95 °F	H2O COOL TOWER 1008 TON, 3544 KW (17%) 2418 GPM, 85 / 95 °F	H2O COOL TOWER 1008 TON, 3544 KW (17%) 2418 GPM, 85 / 95 °F	H2O COOL TOWER 1008 TON, 3544 KW (17%) 2418 GPM, 85 / 95 °F	H2O COOL TOWER 1008 TON, 3544 KW (17%) 2418 GPM, 85 / 95 °F	H2O COOL TOWER 1008 TON, 3544 KW (17%) 2418 GPM, 85 / 95 °F	DI WATER [1010-B] 3945 SF 60 - 80 ± 5 °F MAX 60 + 5 %RH, NON-COND 25 WISF = 100 KW MAG DI COOL HX / PUMP 268 TON, 841 KW 214 GPM, 90 / 120 °F 642 GPM, 85 / 95 °F VAC DI COOL HX / PUMP 853 TON, 2669 KW 682 GPM, 90 / 120 °F 2046 GPM, 85 / 95 °F HVAC CHILLER / PUMP 277 TON, 975 KW 665 GPM, 45 / 55 °F 632 GPM, 85 / 95 °F BLDG DI COOL HX / PUMP 1517 TON, 5.3 MW 3640 GPM, 90 / 100 °F BLDG DI COOL HX / PUMP 1517 TON, 5.3 MW 3640 GPM, 90 / 100 °F BLDG DI COOL HX / PUMP 1517 TON, 5.3 MW 3640 GPM, 90 / 100 °F DI WATER PLANT CHEM TREAT / FILTRATION TW PUMP 17X17% 6045 TON, 21.3 MW 10533 GPM, 85 / 95 °F	14000 CFM 955 GPM 457 SS °F	POWER SUPPLIES [1010-A] 18500 SF 68 - 75 ± 3 °F MAX 60 + 5 %RH, NON-COND TO DI.H2O PA Waste Power = 13 MW Circulator Load = 3 MW (EIC_RF_1010_Annexiated_KSS_08/11/20) TO AIR RF Total = 213 KW IR10 RF Total = 91 KW (eRHC System and Utility Requirements: 07/22/20) 11 RACKS @ 3 KW = 40 KW (INCLUDES UPS) (EIC Rack Requirements-0903_2020) HVAC 5 WISF = 100 KW	CONTROL ROOM [1010-D] 175 SF 68 - 75 ± 3 °F MAX 60 + 5 %RH, NON-COND MISC 5 WISF = 1 KW HVAC 5 WISF = 1 KW	ELEC EQUIP / SWITCHGEAR [1010-C] 615 SF 60 - 80 ± 3 °F MAX 60 + 5 %RH, NON-COND ELEC 25 WISF = 16 KW HVAC 5 WISF = 3 KW	RESTROOM [1010-L] 80 SF 60 - 80 ± 3 °F MAX 60 + 5 %RH, NON-COND EXH AIR = 100 CFM	EXH FAN [100% 80 SF
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MECHANICAL - DIAGRAM - B1010



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Wayfinding	

Sheet Reviewer	Author
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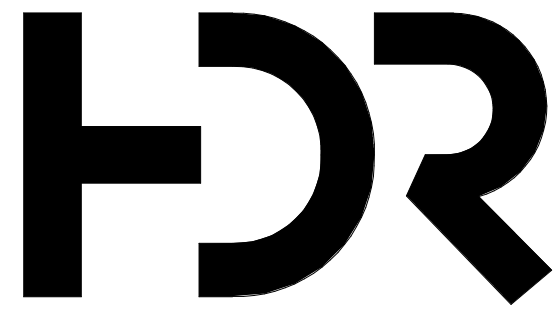
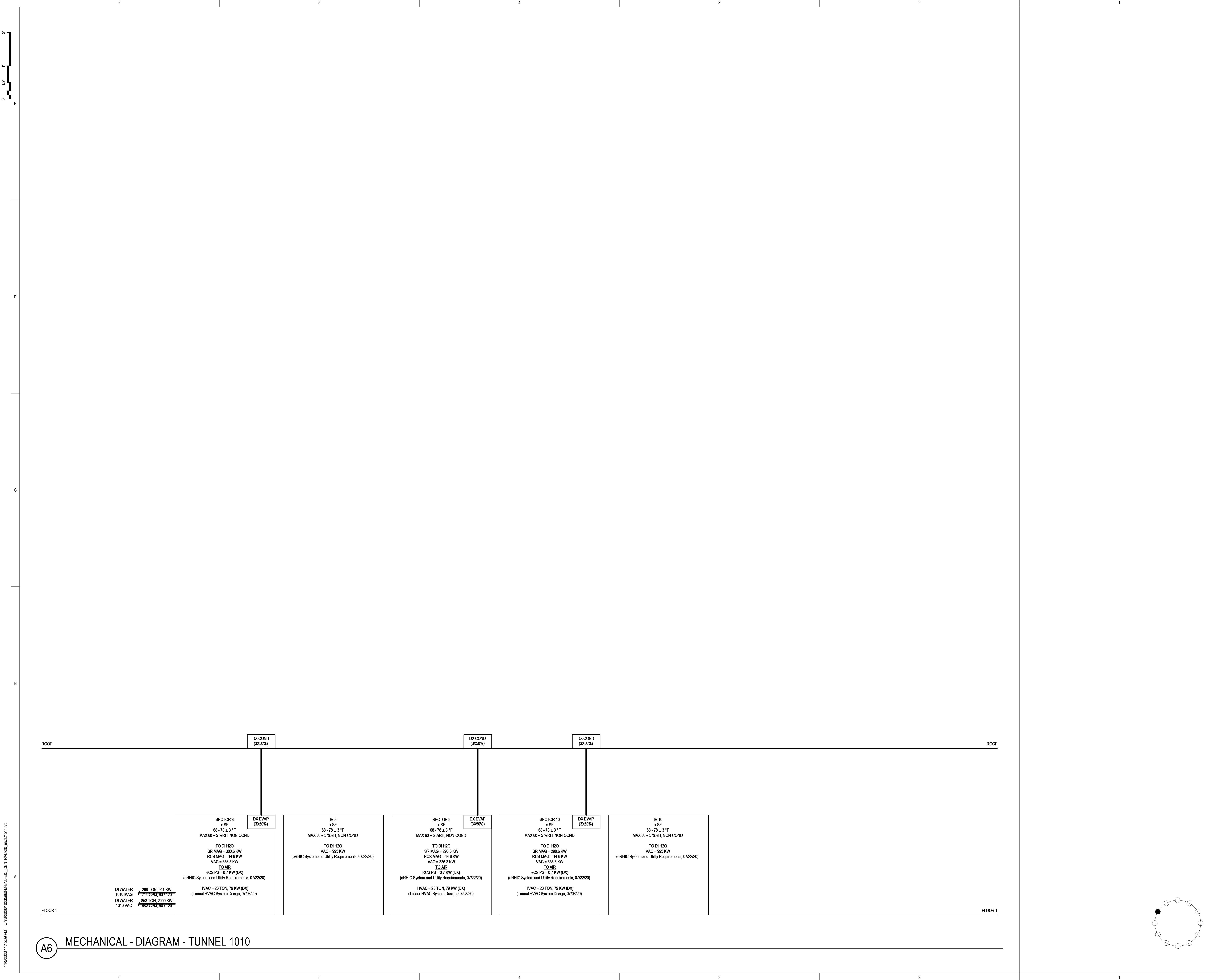
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Original Issue	09/18/20

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Sheet Name
**MECHANICAL
DIAGRAM
CRYO 1010**

Sheet Number
M-610.2

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Project Number
Original Issue

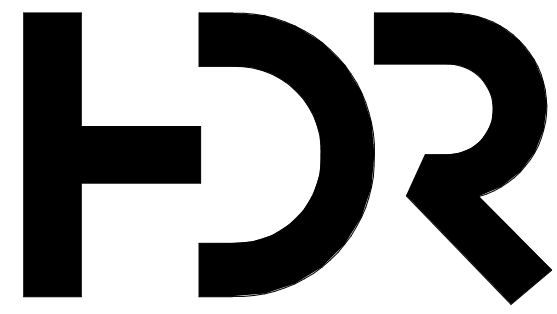
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09/18/20

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Sheet Name
**MECHANICAL
DIAGRAM
TUNNEL 1010**

Sheet Number
M-610.3

Project Status
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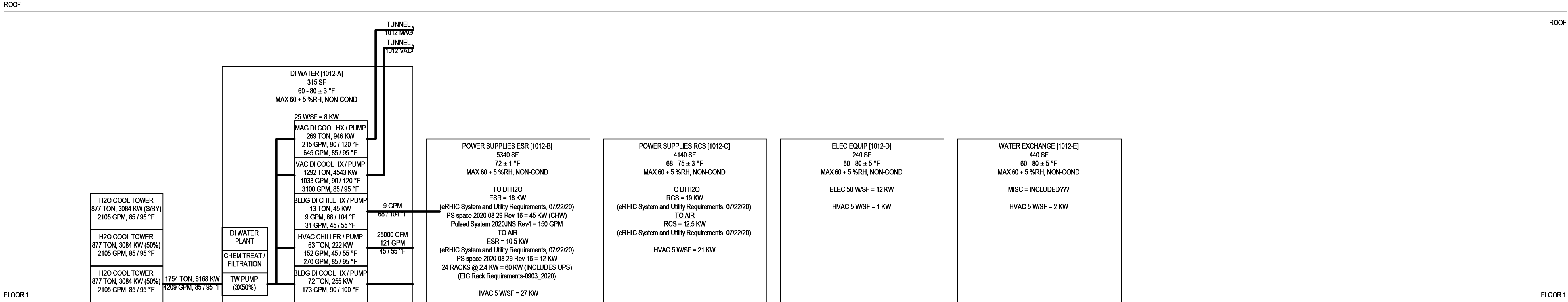
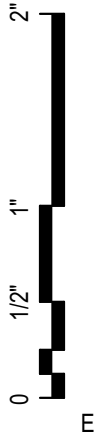
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ALC 11**

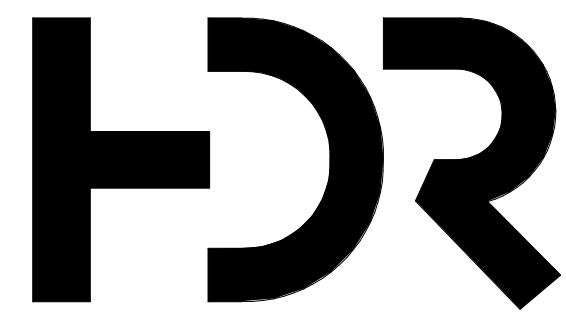
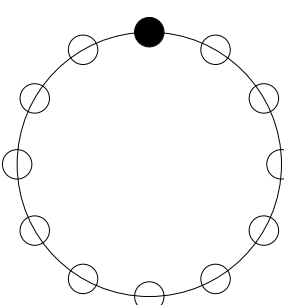
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Project Status
Concept Design 100% Review Submittal

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A6 MECHANICAL - DIAGRAM - B1012



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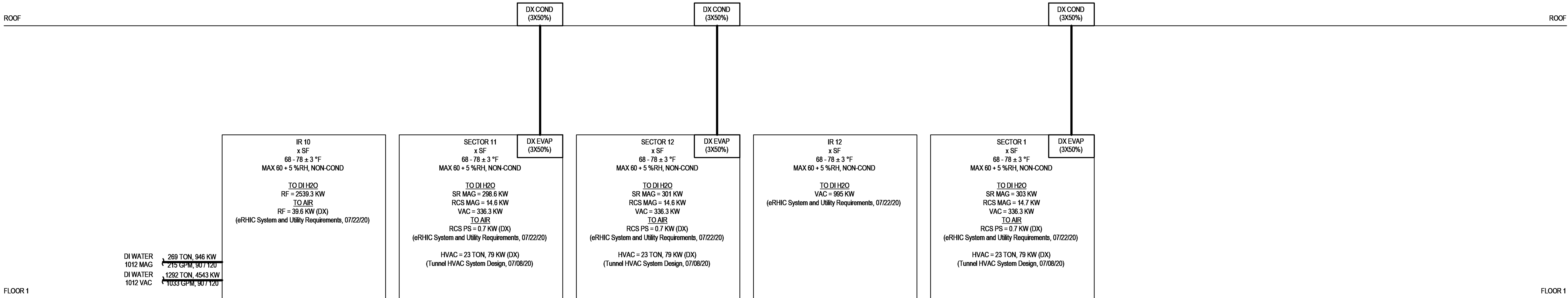
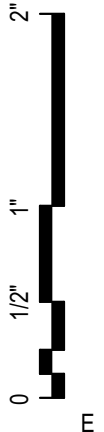
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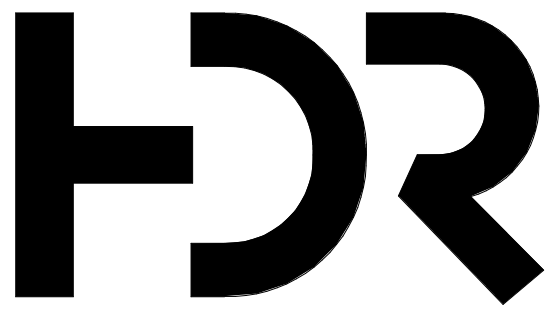
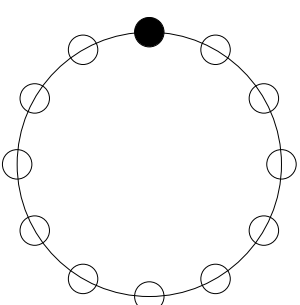
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Project Status
Concept Design 100% Review Submittal

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A6 MECHANICAL - DIAGRAM - TUNNEL 1012



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Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joseph Krzyzewski
Phil Beadle
Kelly Harshorn

Sheet Reviewer

Author

MARK	DATE	DESCRIPTION
	09/25/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/18/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

MECHANICAL
DIAGRAM
TUNNEL 1012

Sheet Number

M-612.2

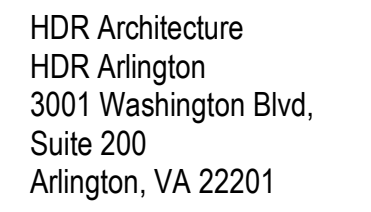
Project Status

Concept Design 100% Review Submittal



A5 LIGHTING PLAN - LEVEL 1 - ALC-01
1/8" = 1'-0"

A. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS SHEET E-001.



BROOKHAVEN
NATIONAL LABORATORY

Sheet Reviewer	Author
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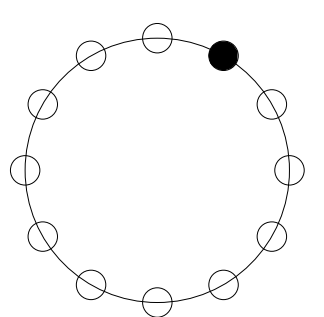
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NOT FOR CONSTRUCTION

Sheet Number

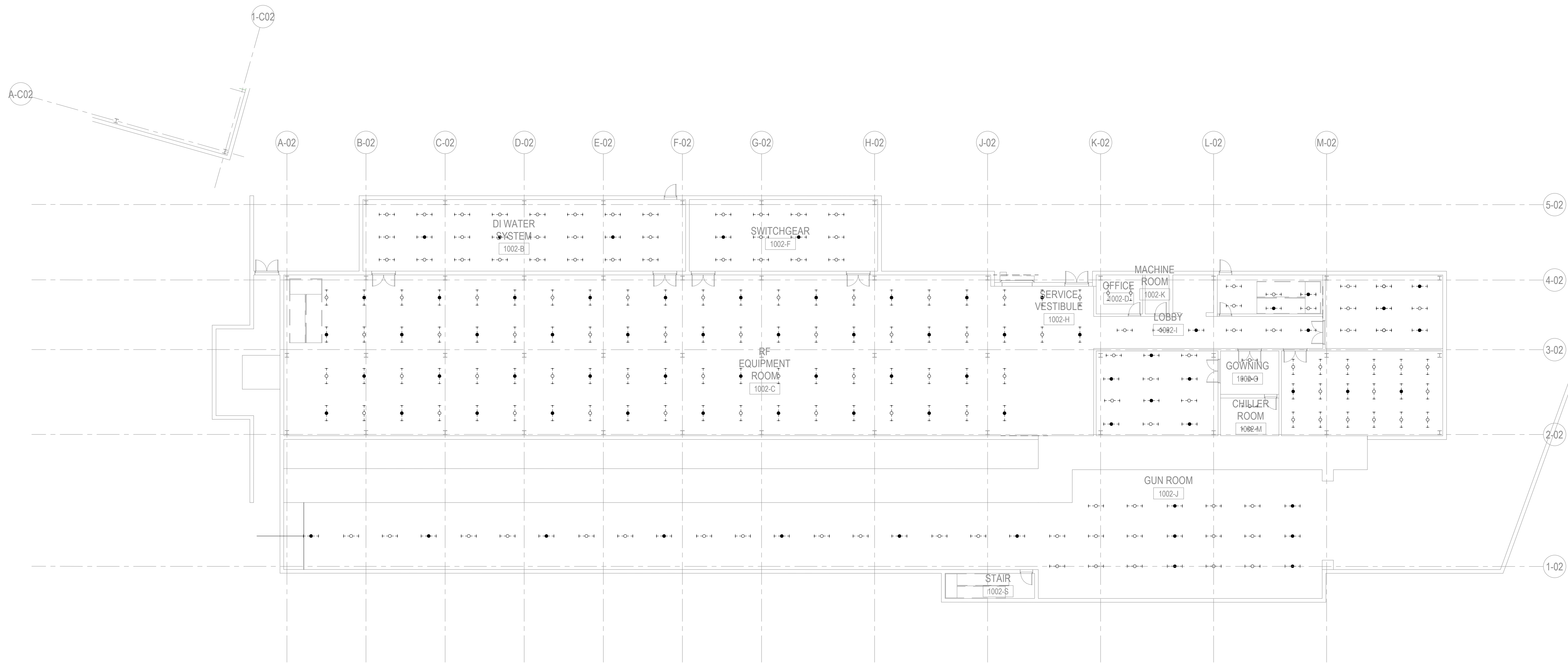
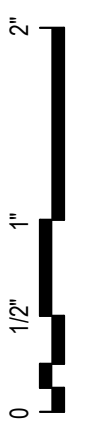
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Project Status

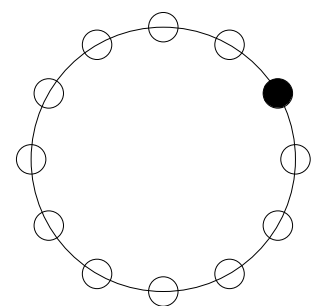
Concept Design 100% Review Submittal



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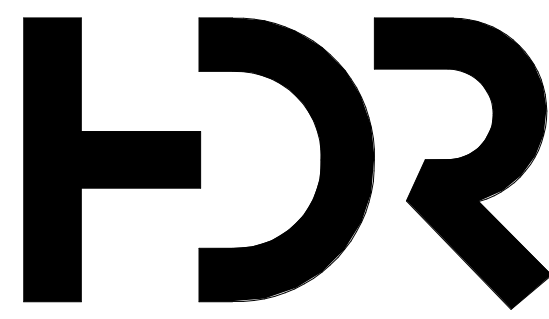
A5 LIGHTING PLAN - LEVEL 1 - B1002
1/16" = 1'-0"



LIGHTING GENERAL NOTES

A. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS SHEET E-001.

LIGHTING KEYNOTES



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Brookhaven National
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Upton, New York



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joe Krzyzewski
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Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number	10235960
Original Issue	09/17/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name
LIGHTING PLAN - LEVEL 1 - B1002

Sheet Number
EL102

Project Status
Concept Design 100% Review Submittal

LIGHTING GENERAL NOTES

A. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS SHEET E-001.



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LIGHTING KEYNOTES



Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans

Joseph Dennis
Joe Krzyzewski
Phil Beadle
Kelly Hartshorn

Sheet Reviewer	Author	
MARK	DATE	DESCRIPTION
	09/18/2020	60% Review S
	11/06/2020	100% Review S

Project Number	10235960
Original Issue	09/24/20

PRELIMINARY
NOT FOR CONSTRUCTION

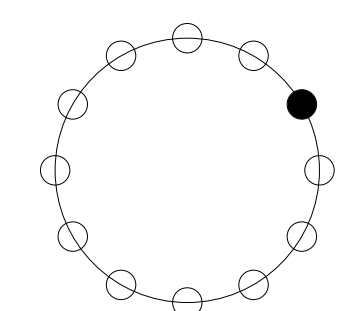
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LIGHTING PLAN - LEVEL 2 -
B1002

Sheet Number

EL103

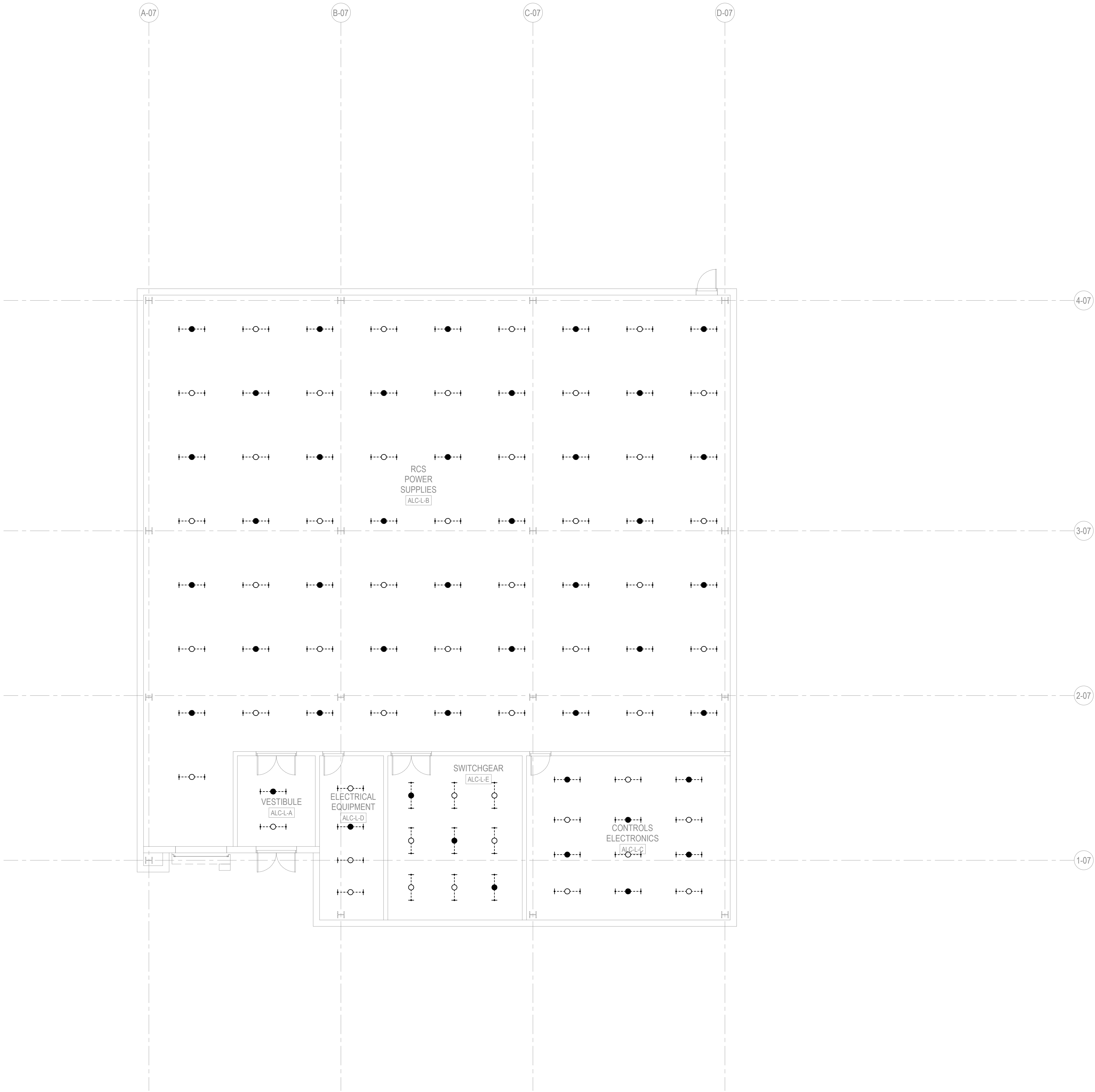
Project Status
Concept Design 100% Review Submittal



A5 LIGHTING PLAN - LEVEL 2 - B1002

$$1/16'' = 1'-0''$$

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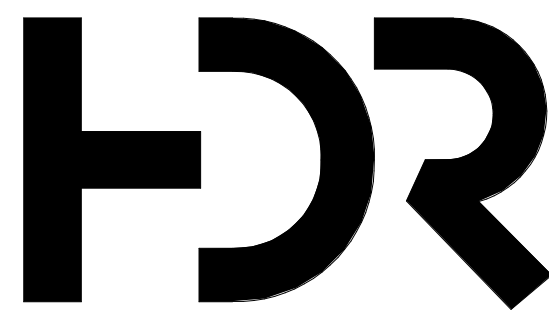
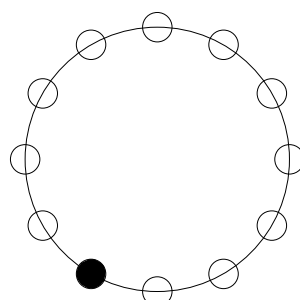


A5 LIGHTING PLAN - LEVEL 1 - ALC-07

LIGHTING GENERAL NOTES

A. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS SHEET E-001.

LIGHTING KEYNOTES



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Gabriela Kleiman
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Kelly Hartshorn

MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/17/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

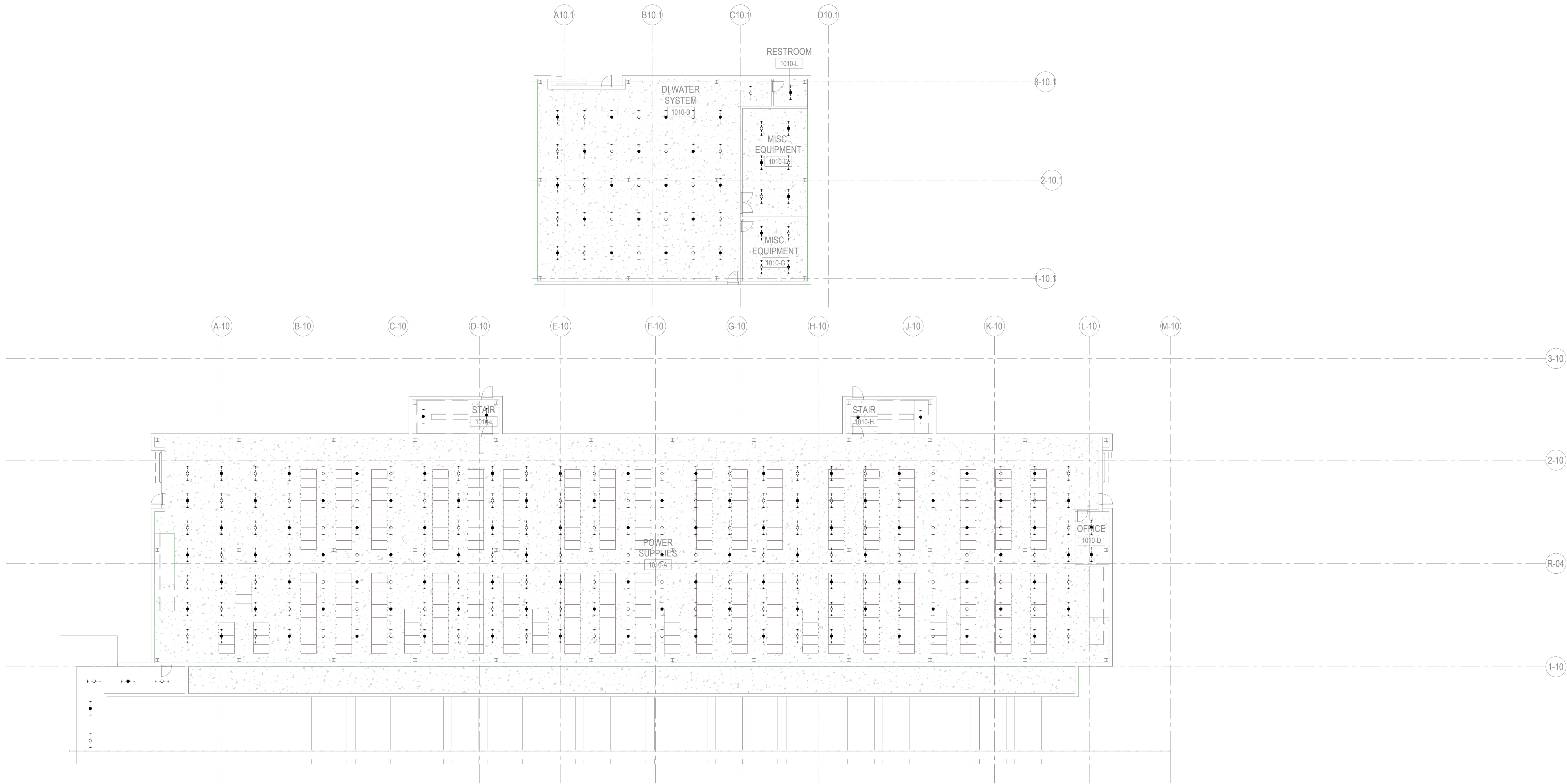
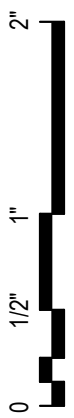
**LIGHTING PLAN - LEVEL 1 -
ALC-07**

Sheet Number

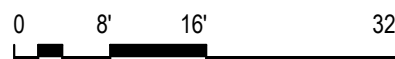
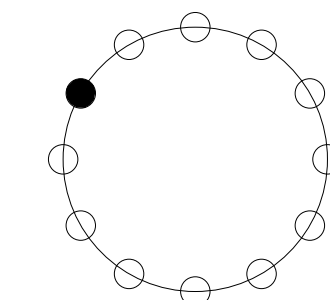
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Project Status
Concept Design 100% Review Submittal

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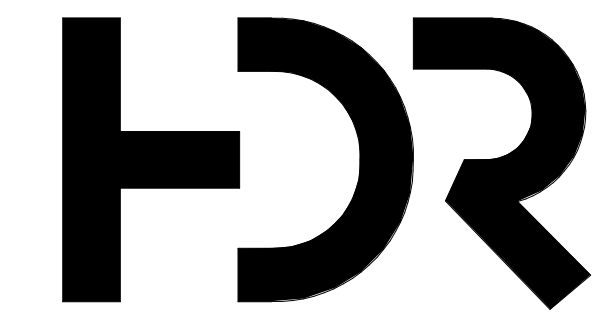
A5 LIGHTING PLAN - LEVEL 1 - B1010 & DI WATER SYSTEM B1010-B
1/16" = 1'-0"



LIGHTING GENERAL NOTES

A. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS SHEET E-001.

LIGHTING KEYNOTES



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Kelly Hartshorn

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	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/17/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

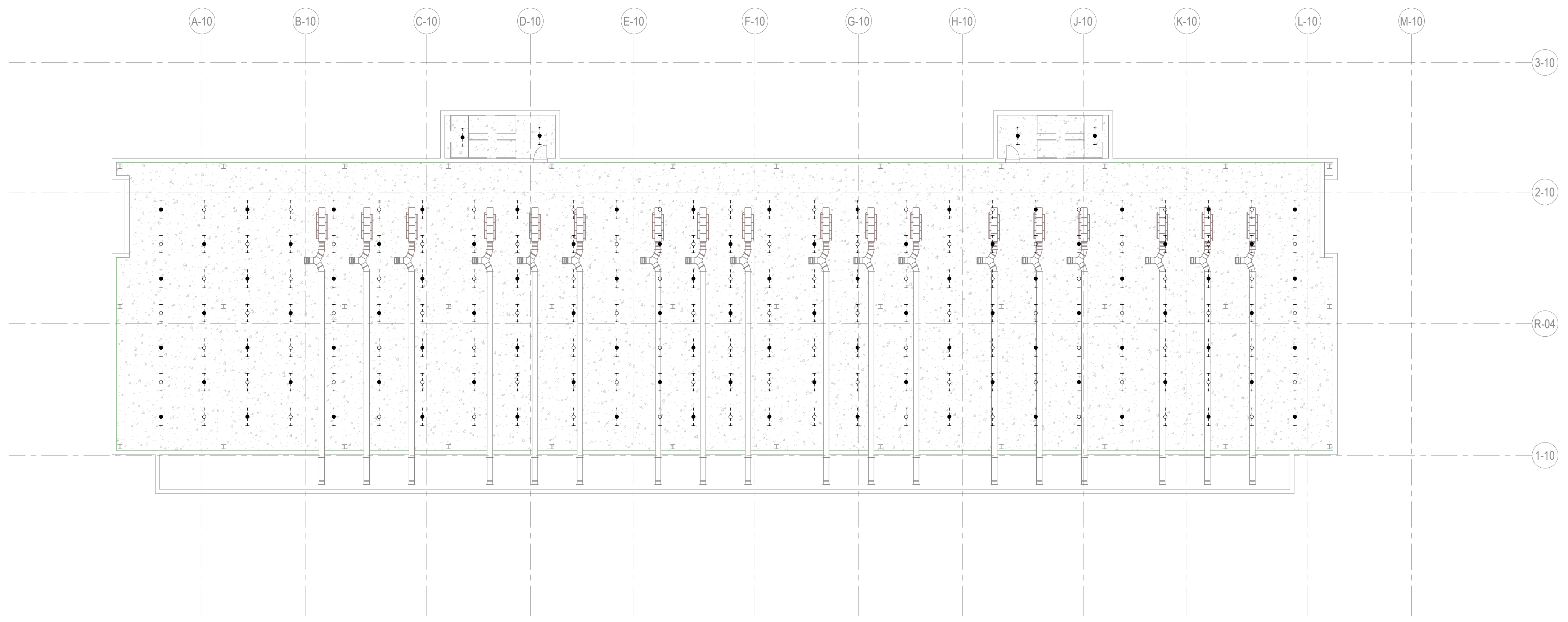
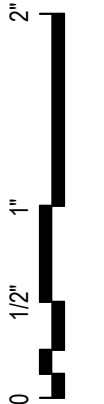
LIGHTING PLAN - LEVEL 1 -
B1010 & DI WATER SYSTEM
B1010-B

Sheet Number

EL110

Project Status
Concept Design 100% Review Submittal

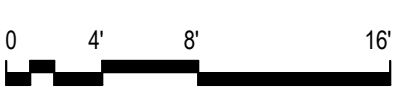
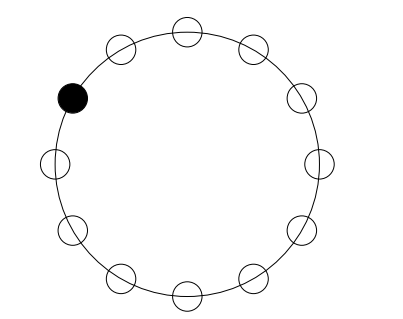
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A5

LIGHTING PLAN - LEVEL 2 - B1010 & DI WATER SYSTEM B1010-B

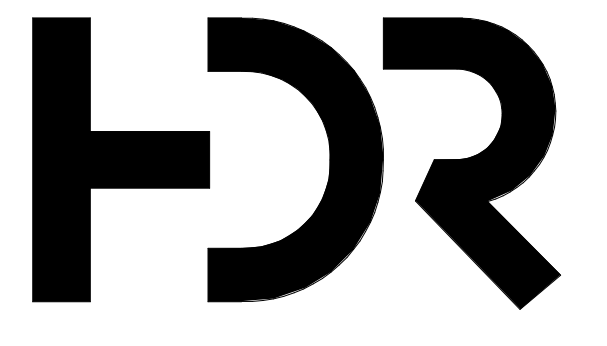
1/16" = 1'-0"



LIGHTING GENERAL NOTES

A. FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS SHEET E-001.

LIGHTING KEYNOTES



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Equipment Planner	
Wayfinding	

Sheet Reviewer	Author
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	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number	10235960
Original Issue	09/23/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

LIGHTING PLAN - LEVEL 2 -
B1010 & DI WATER SYSTEM
B1010-B

Sheet Number

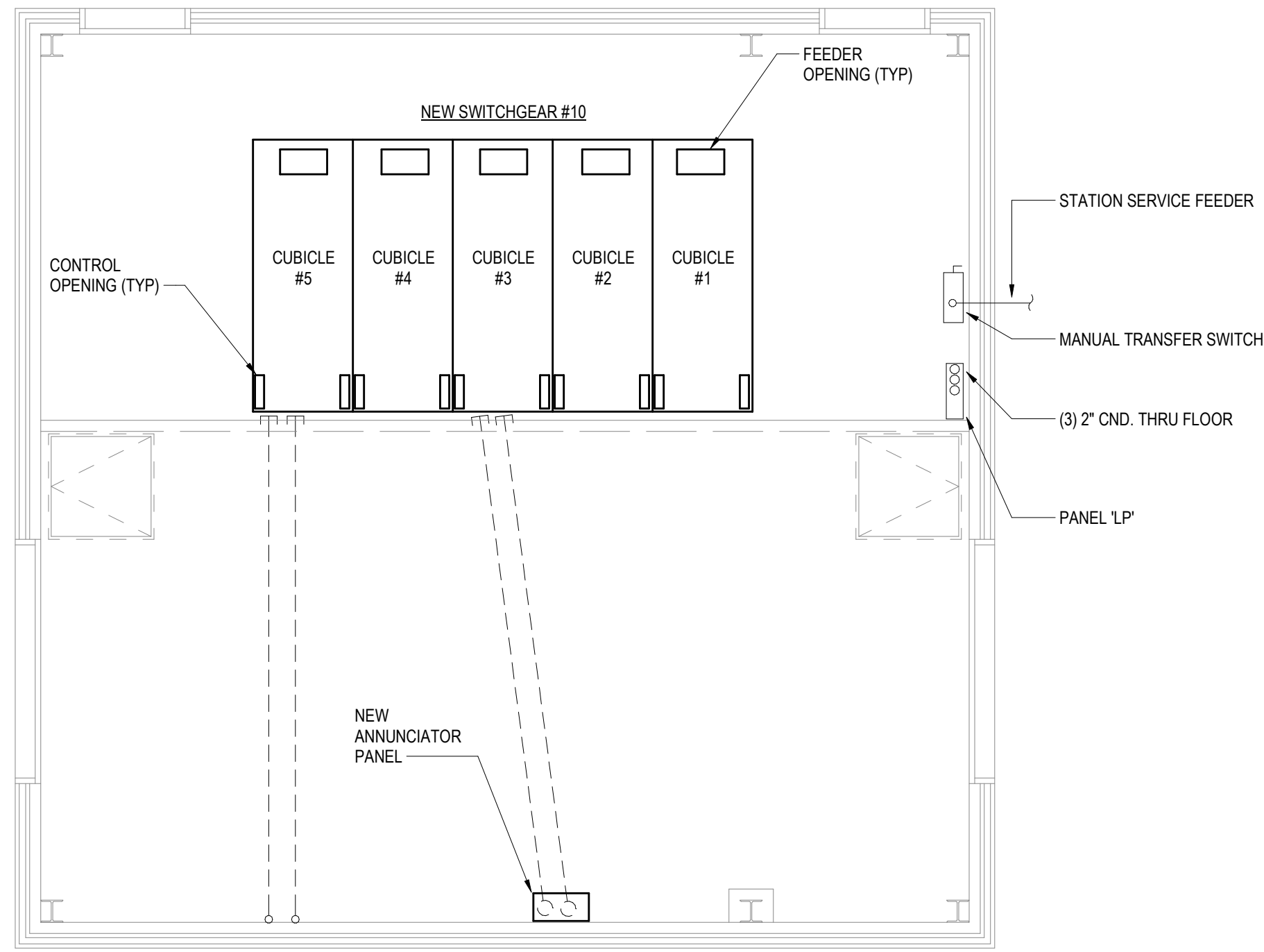
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Project Status

Concept Design 100% Review Submittal

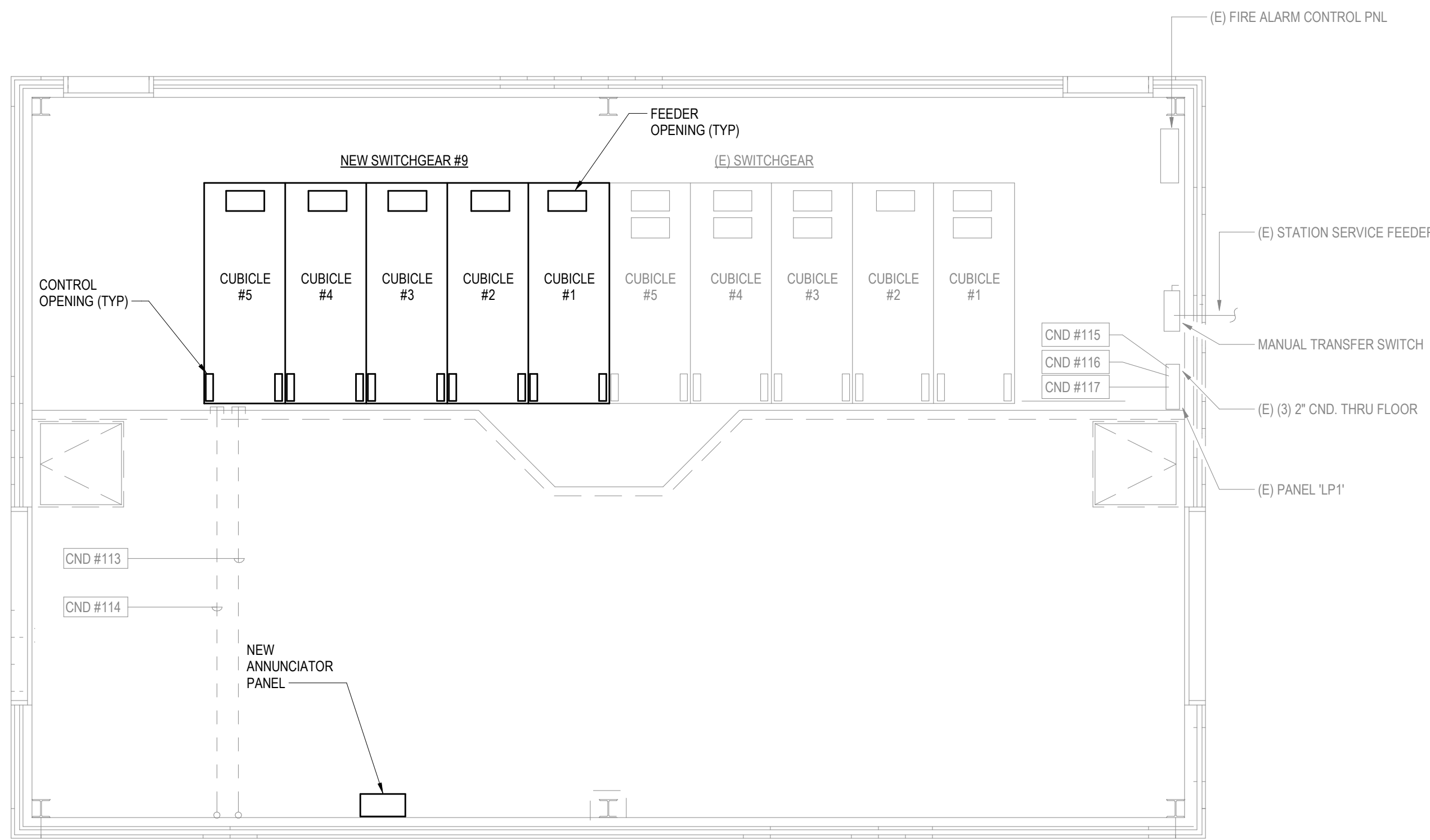
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0 1/2" 1' 2'



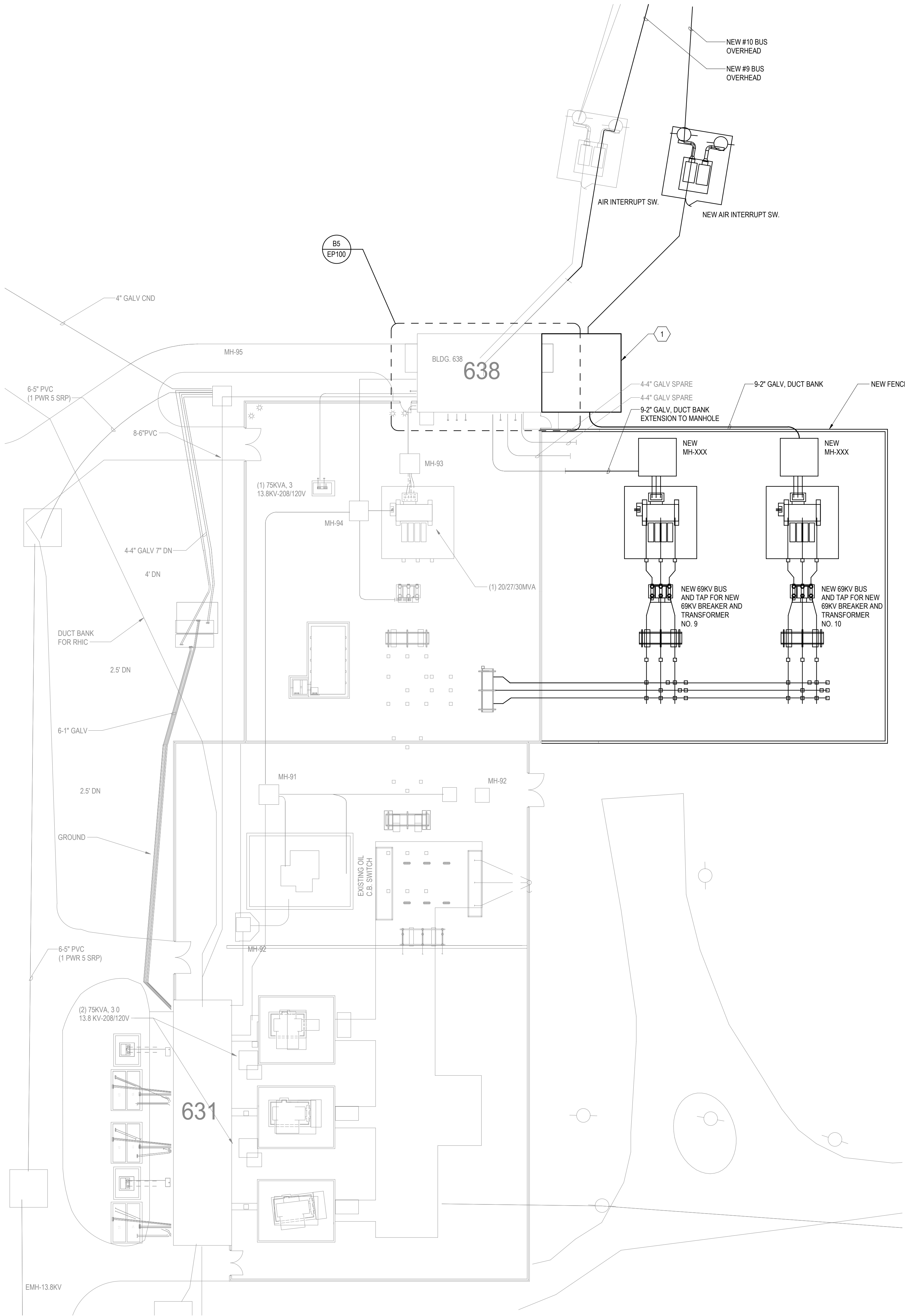
C5 ELECTRICAL ENLARED PLAN - BUILDING 638 EXTENTION

0 2' 4' 8'



B5 ELECTRICAL ENLARED PLAN - BUILDING 638

0 2' 4' 8'



A3 ELECTRICAL SITE PLAN - BUILDING 638

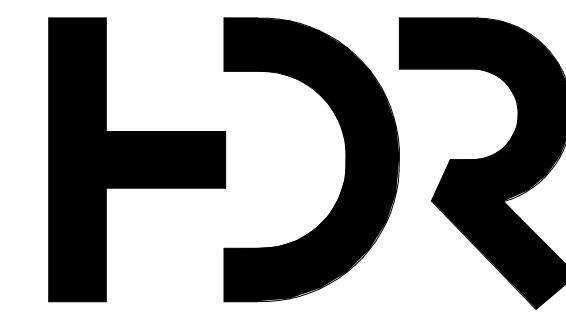
1" = 20'-0"

POWER GENERAL NOTES

- REFER TO SHEET E-001 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- REFER TO SHEET E-600 SERIES FOR ELECTRICAL ONE-LINE DIAGRAMS.
- ALL ELECTRICAL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.
- THE 277/480 V AND 120/208V BUILDING DISTRIBUTION EQUIPMENT QUANTITIES ARE NOTIONAL TO CONVEY CONCEPTS AND TO CONFIRM CLEARANCE SPACE REQUIREMENTS.
- TRANSFORMERS AND SWITCHGEAR TO BE FURNISHED BY OWNER INSTALLED BY CONTRACTOR.

POWER KEYNOTES

- PROVIDE EXTENSION TO B638 AND EXISTING SUBWAY CABLE VAULT.



HDR Architecture
HDR Arlington
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Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
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Landscape Architect	
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Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number	10235960
Original Issue	09/16/20

PRELIMINARY
NOT FOR CONSTRUCTION

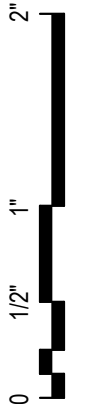
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**ELECTRICAL PLAN -
BUILDING 638**

Sheet Number
EP100

Project Status
Concept Design 100% Review Submittal

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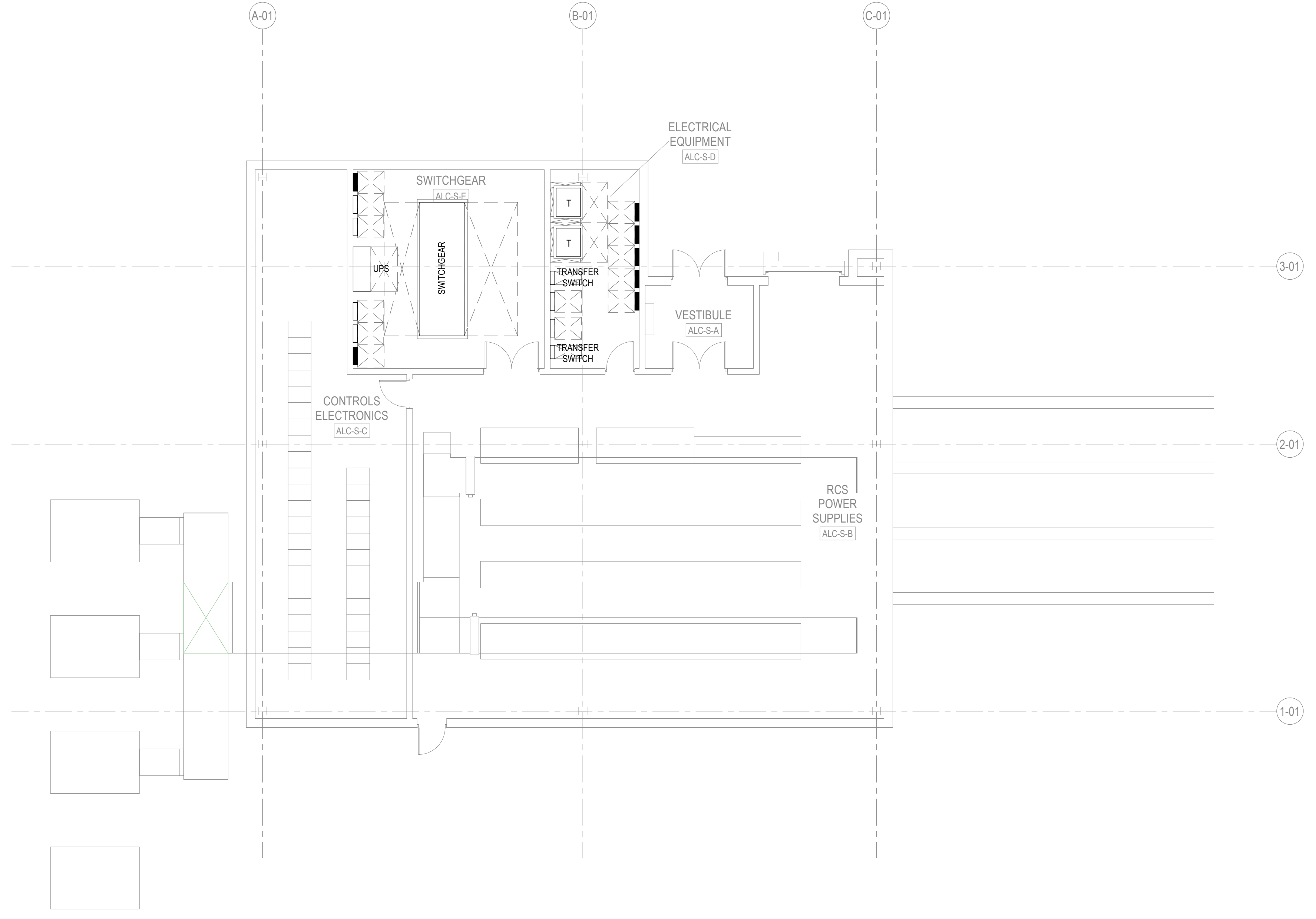


D

C

B

A

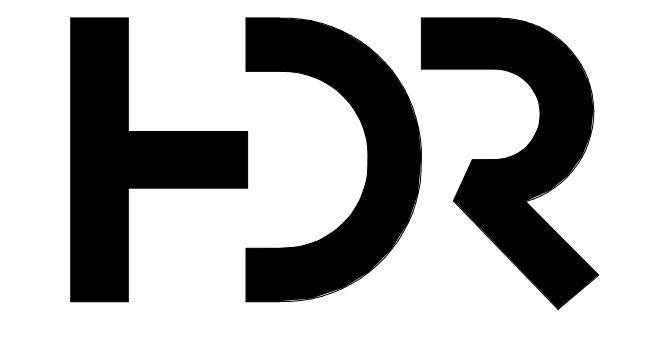
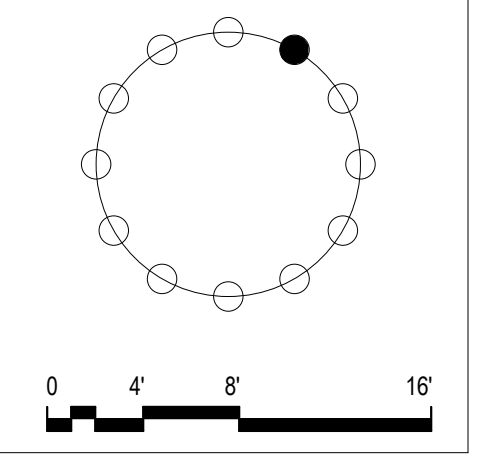


A5 ELECTRICAL PLAN - LEVEL 1 - ALC-01
1/8" = 1'-0"

POWER GENERAL NOTES

- A. REFER TO SHEET E-001 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 SERIES FOR ELECTRICAL ONE-LINE DIAGRAMS.
- C. ALL ELECTRICAL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.
- D. THE 277/480 V AND 120/208V BUILDING DISTRIBUTION EQUIPMENT QUANTITIES ARE NOTIONAL TO CONVEY CONCEPTS AND TO CONFIRM CLEARANCE SPACE REQUIREMENTS.

POWER KEYNOTES



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Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

B	Sheet Reviewer	Author
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MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

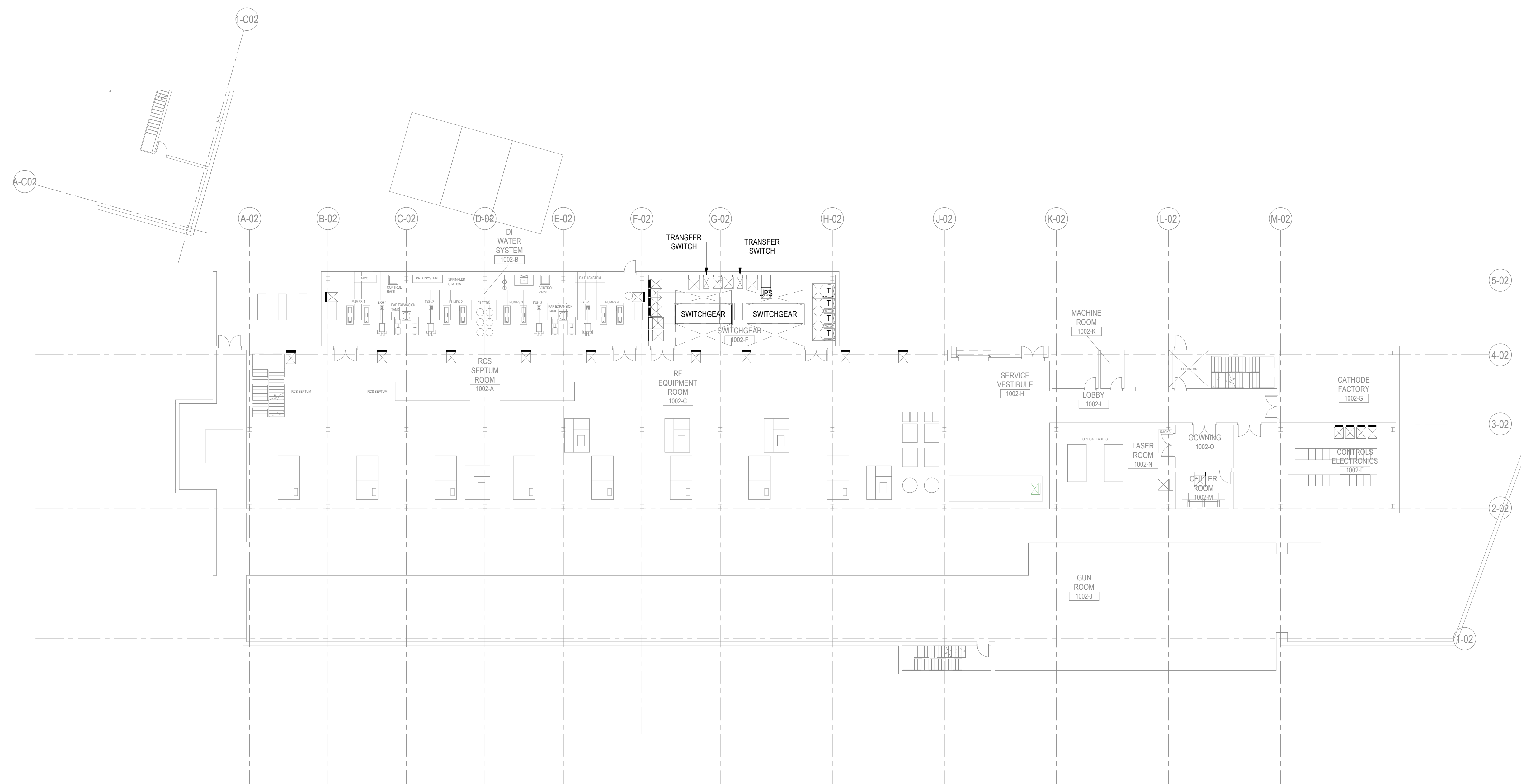
Project Number	10235960
Original Issue	09/16/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name
**ELECTRICAL PLAN - LEVEL
1 - ALC-01**

Sheet Number
EP101

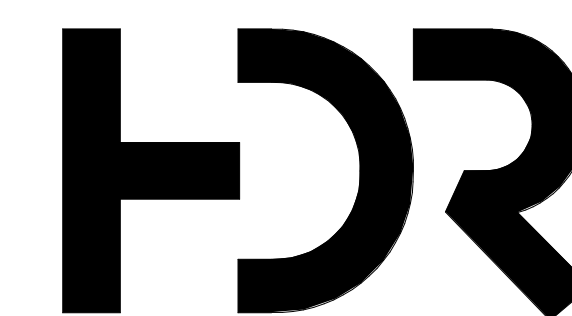
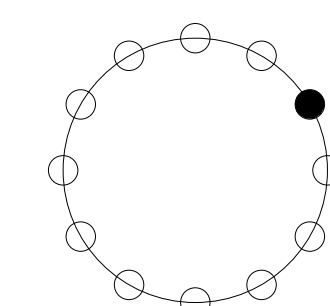
Project Status
Concept Design 100% Review Submittal



POWER GENERAL NOTES

- A. REFER TO SHEET E-001 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 SERIES FOR ELECTRICAL ONE-LINE DIAGRAMS.
- C. ALL ELECTRICAL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.
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POWER KEYNOTES



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BROOKHAVEN
NATIONAL LABORATORY

Project Manager	Gabriela Kleiman
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Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

B	Sheet Reviewer	Author
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MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number	1023596
Original Issue	09/14/20

PRELIMINARY
NOT FOR CONSTRUCTION

A Sheet Name

ELECTRICAL PLAN - LEVEL
1 - B1002

Sheet Number

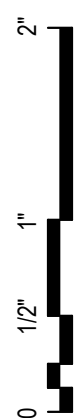
EP102

Project Status
Concept Design 100% Review Submittal

AE ELECTRICAL PLAN - LEVEL 1 - B1002

$$1/16'' = 1'-0''$$

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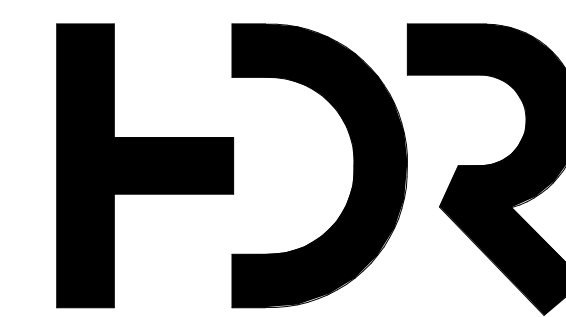
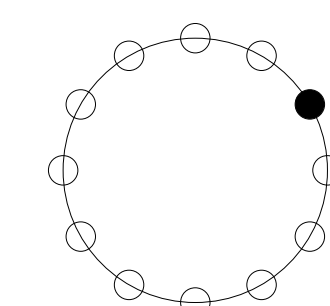


A5

$$1/16'' = 1'-0''$$

POWER KEYNOTES

- A. REFER TO SHEET E-001 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 SERIES FOR ELECTRICAL ONE-LINE DIAGRAMS.
- C. ALL ELECTRICAL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.
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Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

R	Sheet Reviewer	Author
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MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number	1023596
Original Issue	09/24/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

ELECTRICAL PLAN - LEVEL
2 - B1002

Sheet Number

EP103

Project Status
Concept Design 100% Review Submittal

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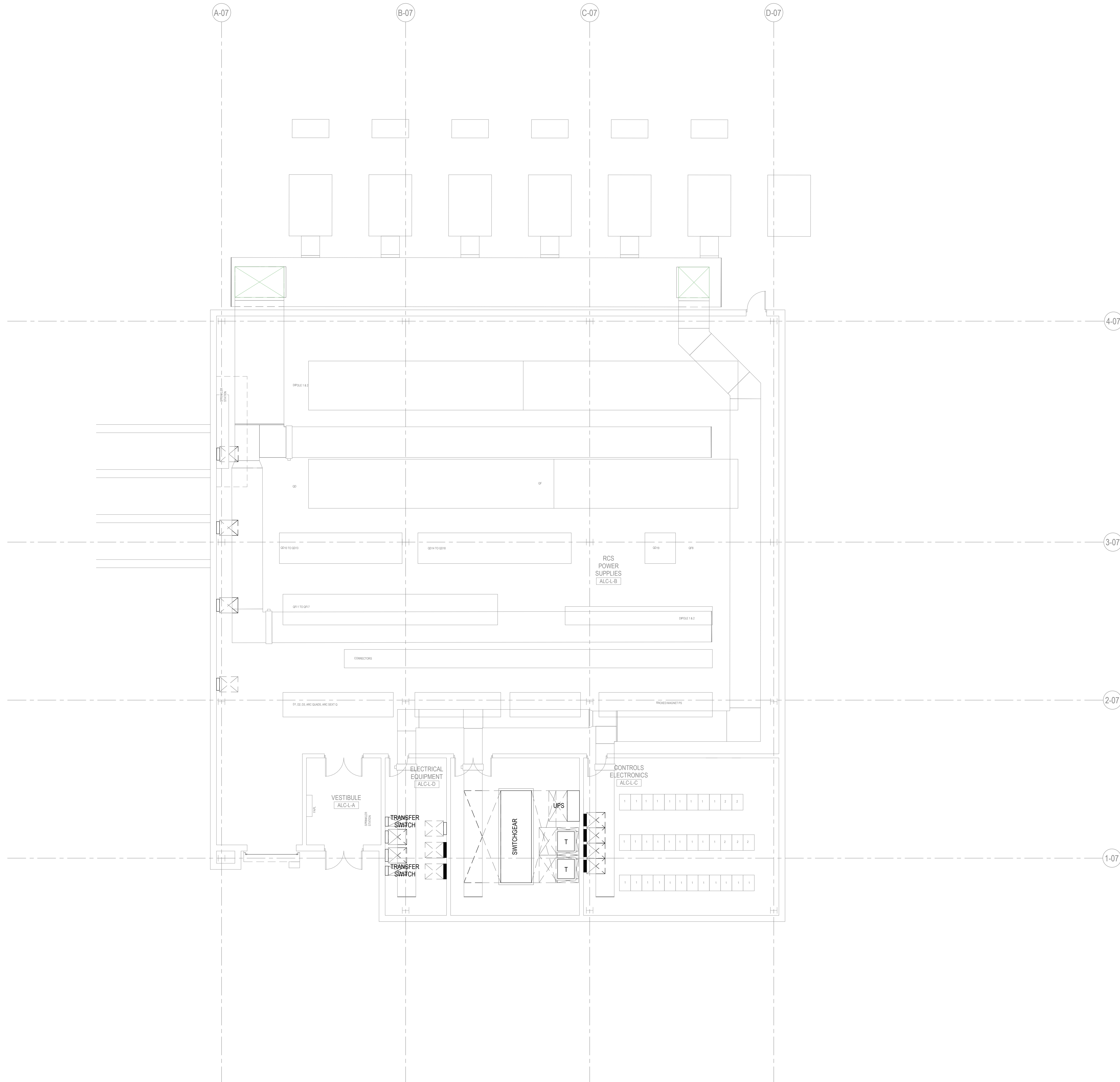
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C

B

A

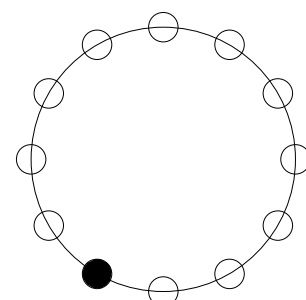
A5 ELECTRICAL PLAN - LEVEL 1 - ALC-07
1/8" = 1'-0"



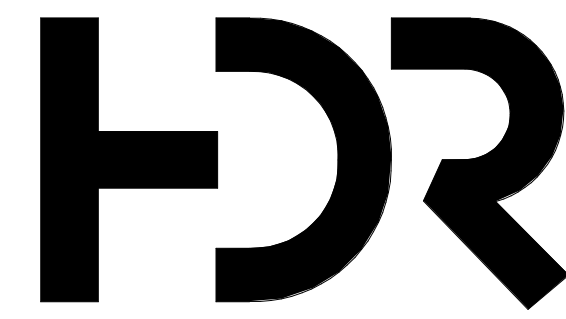
POWER GENERAL NOTES

- A. REFER TO SHEET E-001 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 SERIES FOR ELECTRICAL ONE-LINE DIAGRAMS.
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POWER KEYNOTES



0 4' 8' 16'



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MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/16/20

PRELIMINARY
NOT FOR CONSTRUCTION

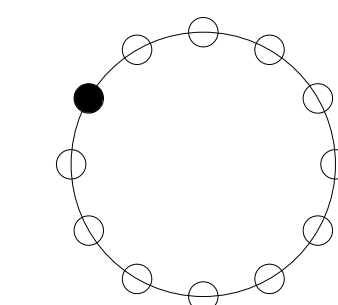
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**ELECTRICAL PLAN - LEVEL
1 - ALC 07**

Sheet Number
EP107

Project Status
Concept Design 100% Review Submittal



A5 ELECTRICAL PLAN - LEVEL 1 - B1010 & DI WATER SYSTEM B1010-B
1/16" = 1'-0"



POWER KEYNOTES

- H2R

Brookhaven National
Laboratory
Electron Ion Collider
Upton, New York



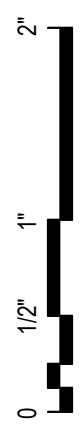
BROOKHAVEN
NATIONAL LABORATORY

8	Sheet Reviewer	Author
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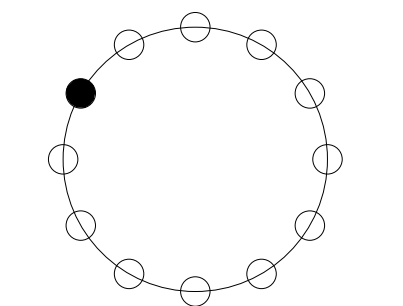
Project Number	10235960
Original Issue	09/16/20

PRELIMINARY
NOT FOR CONSTRUCTION

Project Status
Concept Design 100% Review Submittal



A5 ELECTRICAL PLAN - LEVEL 2 - B1010 & DI
1/16" = 1'-0"



POWER KEYNOTES

- HDR**

Brookhaven National
Laboratory
Electron Ion Collider
Upton, New York

Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joe Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Lighting Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number	10235960
Original Issue	09/23/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

ELECTRICAL PLAN - LEVEL
2 - B1010 & DI WATER
SYSTEM B1010-B

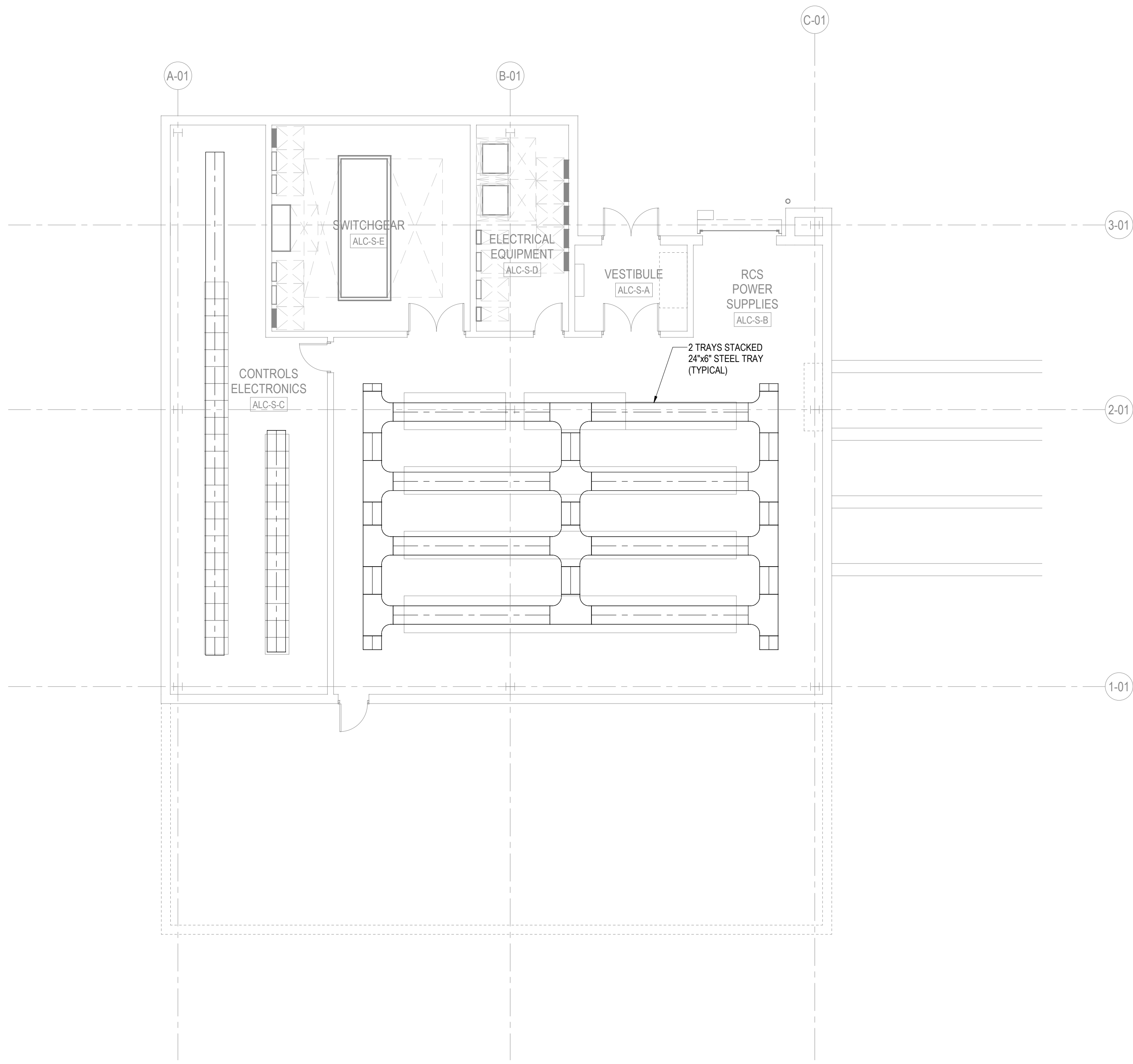
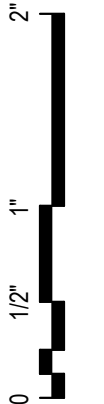
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EP111

Project Status

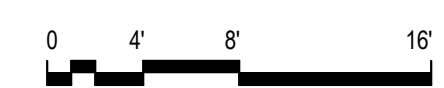
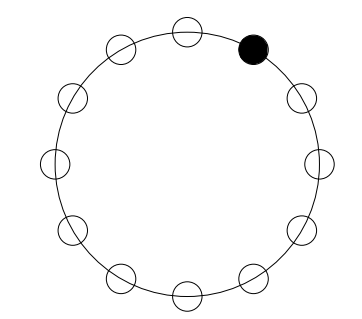
Concept Design 100% Review Submittal

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A5 COMMUNICATIONS AND DATA PLAN - LEVEL 1 - ALC-01

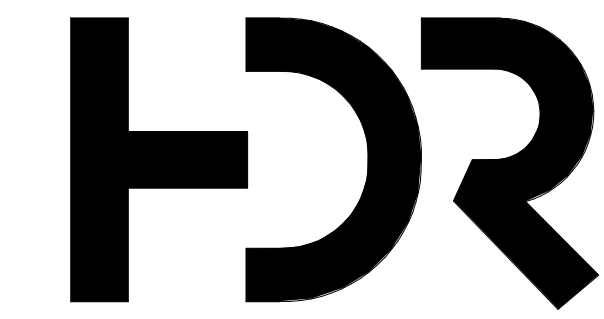
1/8" = 1'-0"



**COMMUNICATION
GENERAL NOTES**

A. REFER TO SHEET E-001 AND E-002 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.

**COMMUNICATION
KEYNOTES**



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Brookhaven National
Laboratory
Electron Ion Collider
Upton, New York



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joe Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

B Sheet Reviewer Author

MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number	10235960
Original Issue	09/17/20

PRELIMINARY
NOT FOR CONSTRUCTION

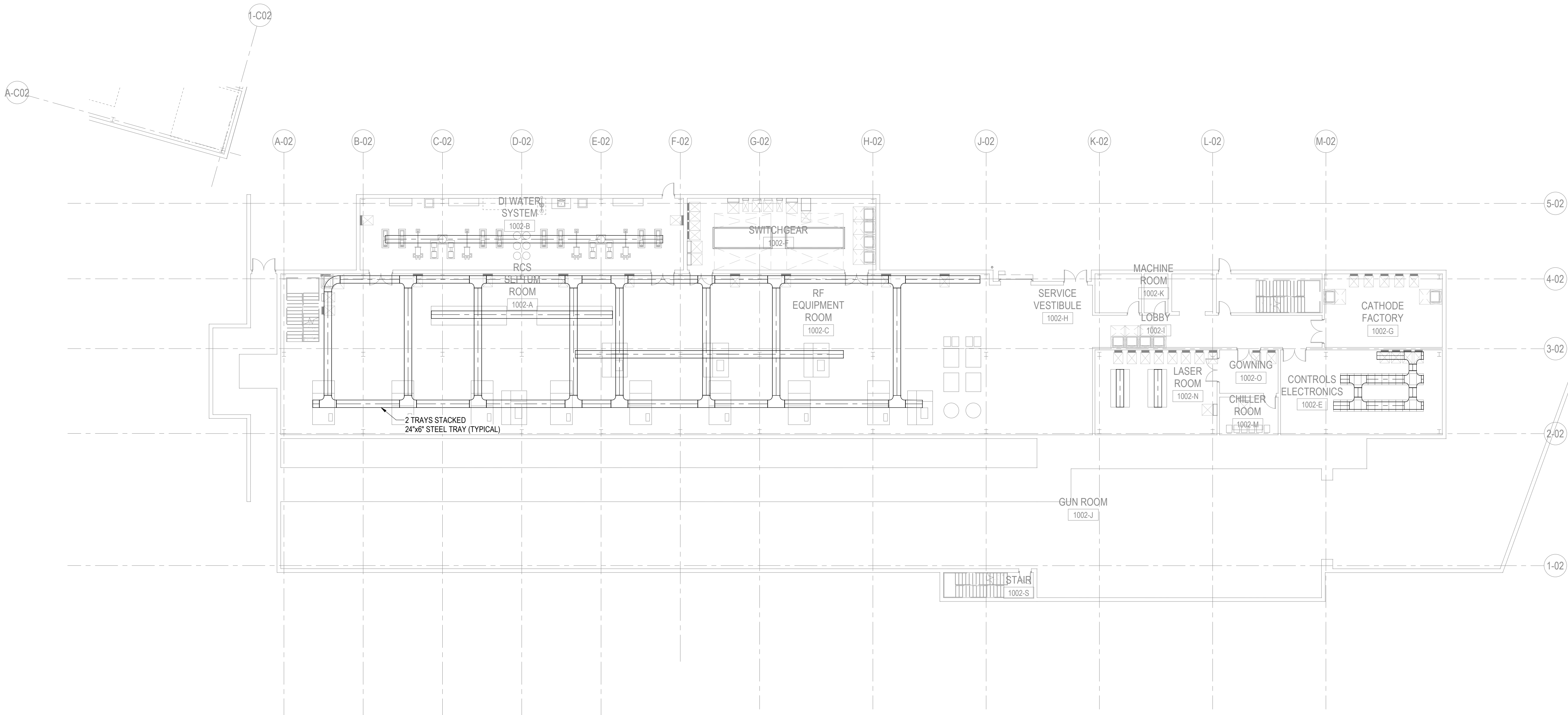
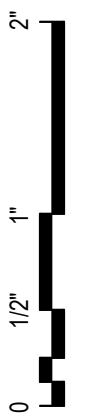
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**COMMUNICATIONS AND
DATA PLAN - LEVEL 1 -
ALC-01**

Sheet Number

EC101

Project Status
Concept Design 100% Review Submittal

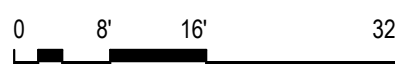
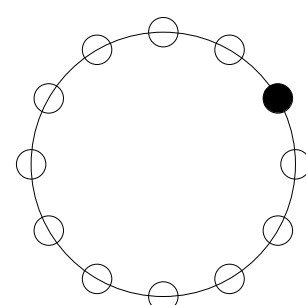
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A5

COMMUNICATIONS AND DATA PLAN - LEVEL 1 - B1002

1/16" = 1'-0"

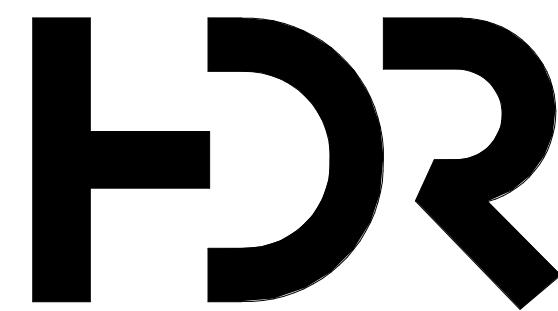


COMMUNICATION GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.



COMMUNICATION KEYNOTES



HDR Architecture
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Brookhaven National
Laboratory
Electron Ion Collider
Upton, New York



Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joe Krzyzewski
Phil Beadle
Kelly Hartshorn

MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/17/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

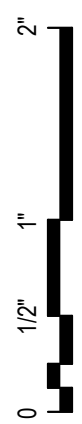
COMMUNICATIONS AND
DATA PLAN - LEVEL 1 -
B1002

Sheet Number

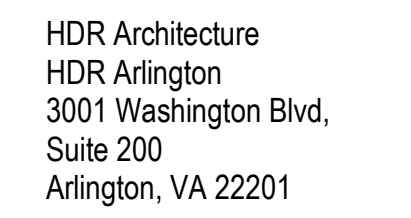
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Project Status

Concept Design 100% Review Submittal



A. REFER TO SHEET E-001 AND E-002 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.



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Sheet Reviewer	Author
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Project Number	10235960
Original Issue	09/24/20

Sheet Name

COMMUNICATIONSAND
DATA PLAN - LEVEL 2 -
B1002

Project Status
Concept Design 100% Review Submittal

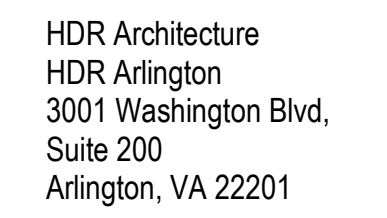


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A. REFER TO SHEET E-001 AND E-002 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.



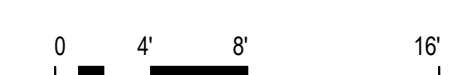
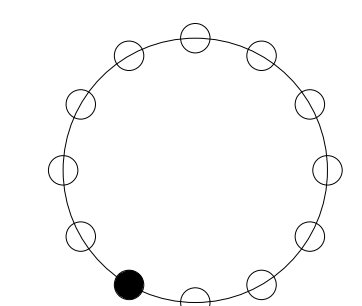
BROOKHAVEN
NATIONAL LABORATORY

Sheet Reviewer	Author	
MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Number

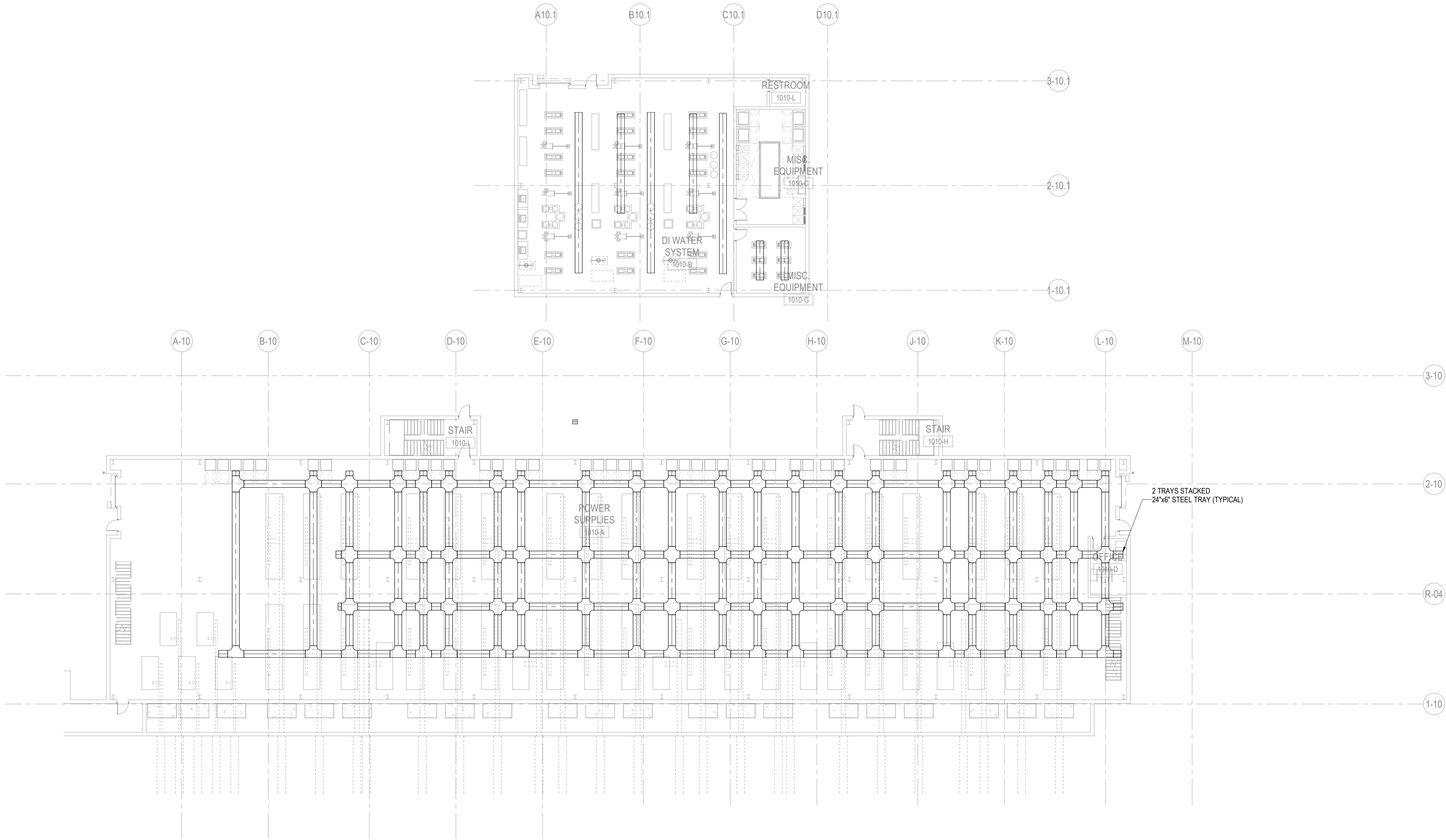
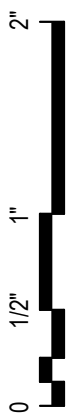
Project Status
Concept Design 100% Review Submittal



A5 COMMUNICATIONS AND DATA PLAN - LEVEL 1 - ALC-07
1/8" = 1'-0"

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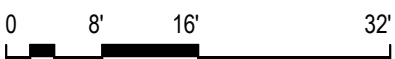
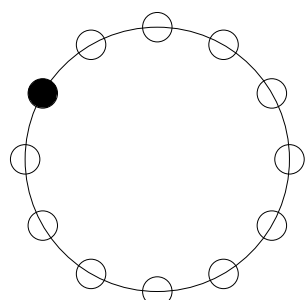
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A5

COMMUNICATIONS AND DATA PLAN - LEVEL 1 - B1010 & DI WATER SYSTEM B1010-B

1/16\"/>

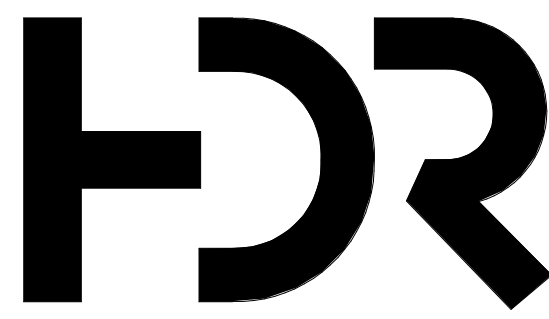


COMMUNICATION
GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SYMBOLS, ABBREVIATIONS AND
ADDITIONAL INSTALLATION REQUIREMENTS.



COMMUNICATION
KEYNOTES



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Brookhaven National
Laboratory
Electron Ion Collider
Upton, New York



Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joe Krzyzewski
Phil Beadle
Kelly Hartshorn

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	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/17/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

COMMUNICATIONS AND
DATA PLAN - LEVEL 1 -
B1010 & DI WATER SYSTEM
B1010-B

Sheet Number

EC110

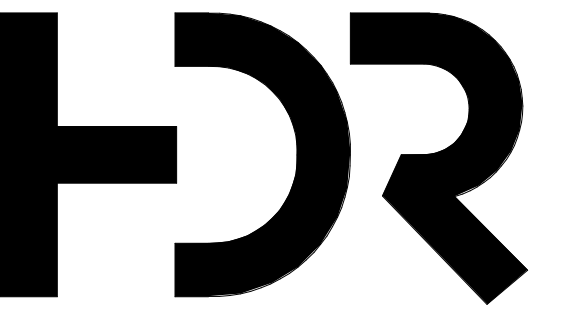
Project Status

Concept Design 100% Review Submittal



POWER GENERAL NOTES

- A. REFER TO SHEET E-001 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 SERIES FOR ELECTRICAL ONE-LINE DIAGRAMS.
- C. ALL ELECTRICAL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.



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POWER KEYNOTES

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Upton, New York



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joe Krzyżewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer	Author
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MARK	DATE	DESCRIPTION
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	11/06/2020	100% Review Submittal

Project Number	10235960
Original Issue	09/21/20

PRELIMINARY
NOT FOR CONSTRUCTION

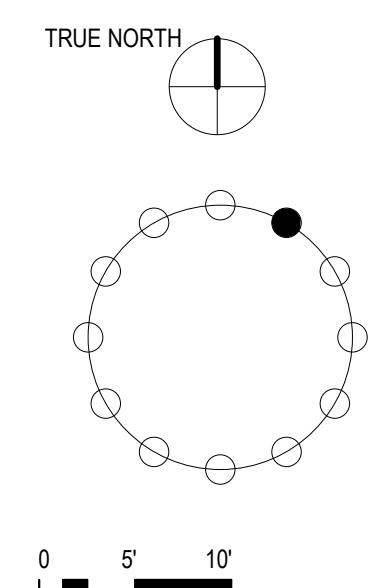
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ELECTRICAL ENLARGED
SITE PLAN - ALC-01

Sheet Number

E-401

Project Status
Concept Design 100% Review Submittal

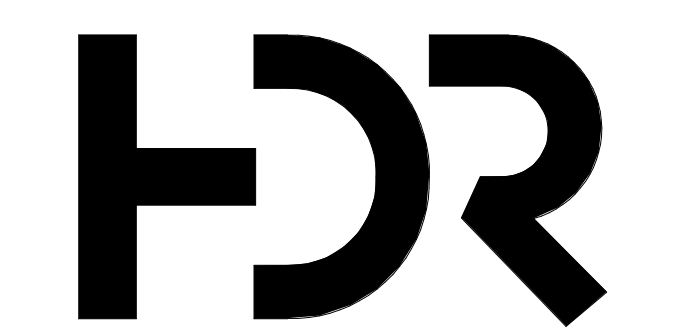




POWER GENERAL NOTES

- A. REFER TO SHEET E-001 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 SERIES FOR ELECTRICAL ONE-LINE DIAGRAMS.
- C. ALL ELECTRICAL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.

POWER KEYNOTES



HDR Architecture
HDR Arlington
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Brookhaven National
Laboratory
Electron Ion Collider
Upton, New York



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joe Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

B	Sheet Reviewer	Author
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MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number	10235960
Original Issue	09/21/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name
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SITE PLAN - B1002 & CRYO
B1002

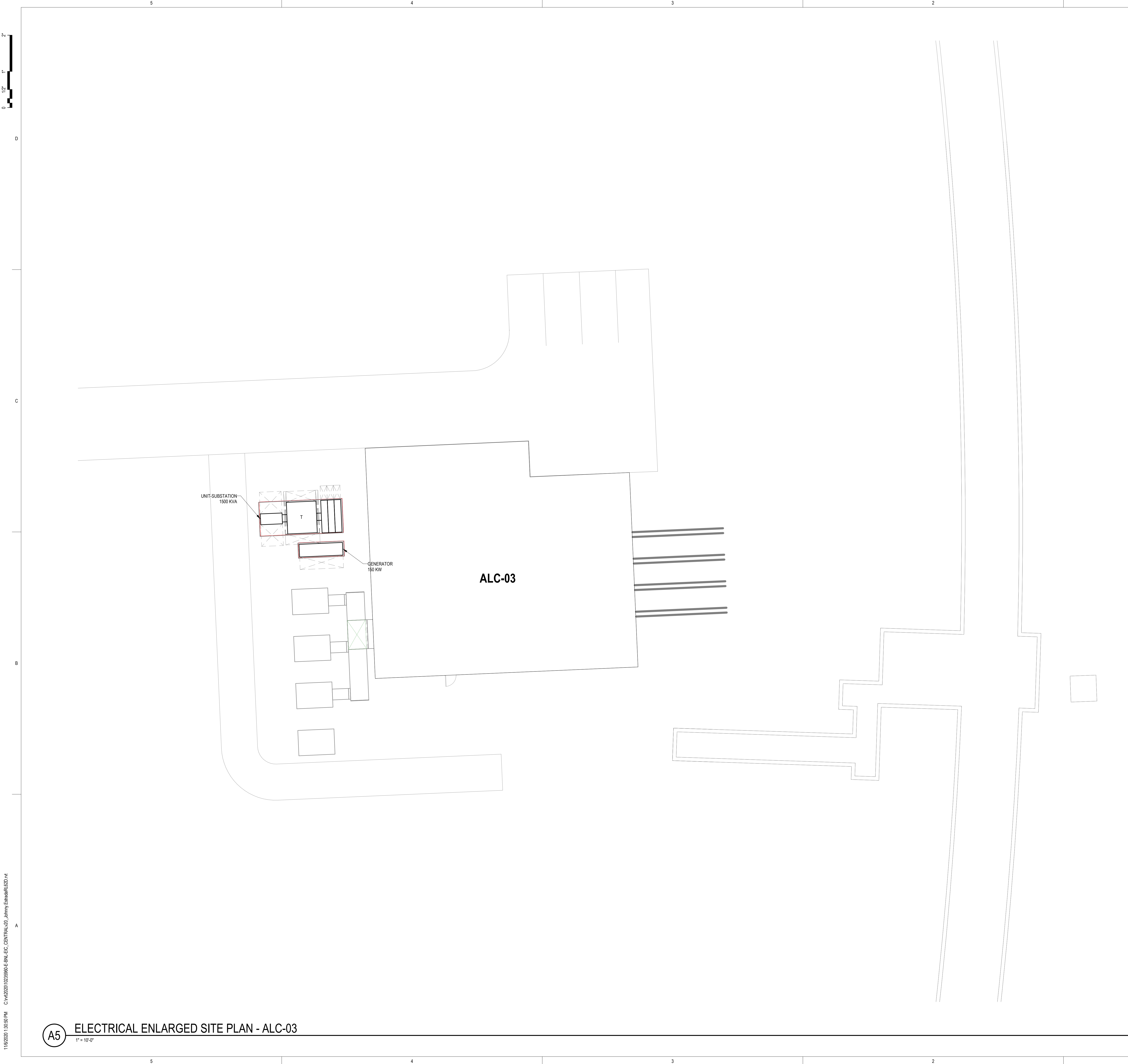
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Project Status
Concept Design 100% Review Submittal

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A5 ELECTRICAL ENLARGED SITE PLAN - B1002 & CRYO B1002

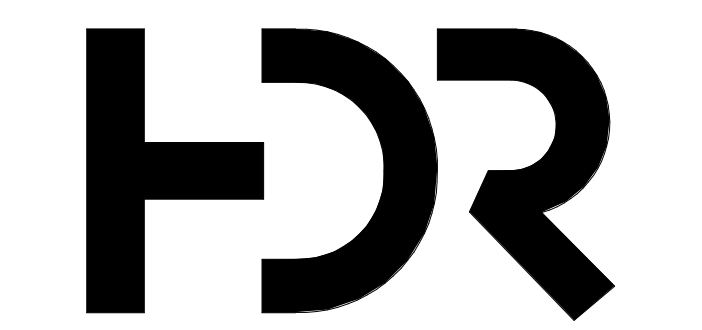
1" = 20'-0"



POWER GENERAL NOTES

- A. REFER TO SHEET E-001 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 SERIES FOR ELECTRICAL ONE-LINE DIAGRAMS.
- C. ALL ELECTRICAL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.

POWER KEYNOTES



HDR Architecture
HDR Arlington
3001 Washington Blvd,
Suite 200
Arlington, VA 22201

Brookhaven National
Laboratory
Electron Ion Collider
Upton, New York



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joe Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

B	Sheet Reviewer	Author
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MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

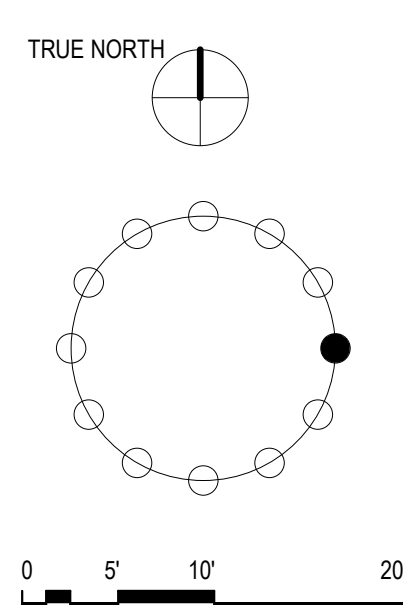
Project Number	10235960
Original Issue	09/21/20



Sheet Name
ELECTRICAL ENLARGED
SITE PLAN - ALC-03

Sheet Number
E-403

Project Status
Concept Design 100% Review Submittal



A5 ELECTRICAL ENLARGED SITE PLAN - ALC-03

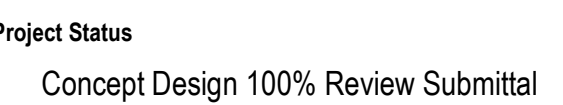
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1" = 10'-0"

UNIT-SUBSTATION
2000 KVA

POWER KEYNOTES

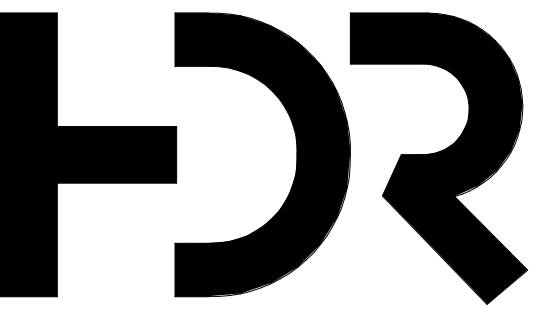



$$1/16'' = 1'-0''$$




POWER GENERAL NOTES

- A. REFER TO SHEET E-001 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 SERIES FOR ELECTRICAL ONE-LINE DIAGRAMS.
- C. ALL ELECTRICAL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.



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POWER KEYNOTES

Brookhaven National
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Upton, New York



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
Civil Engineer	Joseph Dennis
Structural Engineer	Joe Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

3

Sheet Reviewer	Author	
MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number	10235960
Original Issue	09/21/20

PRELIMINARY
NOT FOR CONSTRUCTION

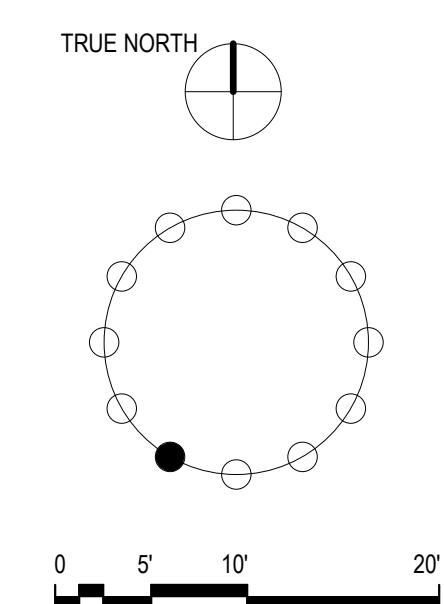
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ELECTRICAL ENLARGED
SITE PLAN - ALC-07

Sheet Number

E-407

Project Status
Concept Design 100% Review Submittal

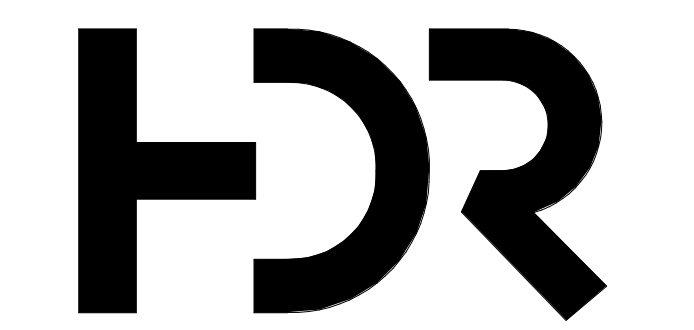




POWER GENERAL NOTES

- A. REFER TO SHEET E-001 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 SERIES FOR ELECTRICAL ONE-LINE DIAGRAMS.
- C. ALL ELECTRICAL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.

POWER KEYNOTES



HDR Architecture
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Laboratory
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Upton, New York



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
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Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

Sheet Reviewer	Author
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MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

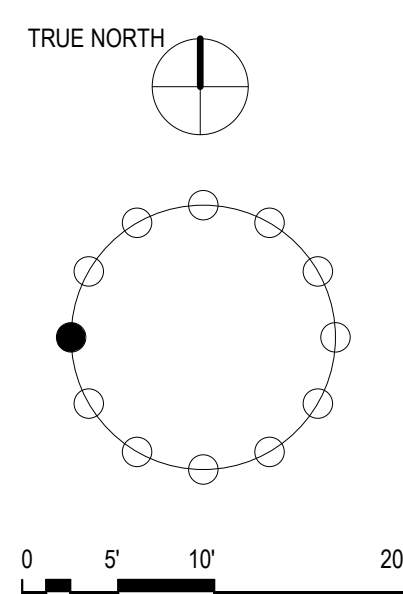
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Original Issue	09/21/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name
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SITE PLAN - ALC-09**

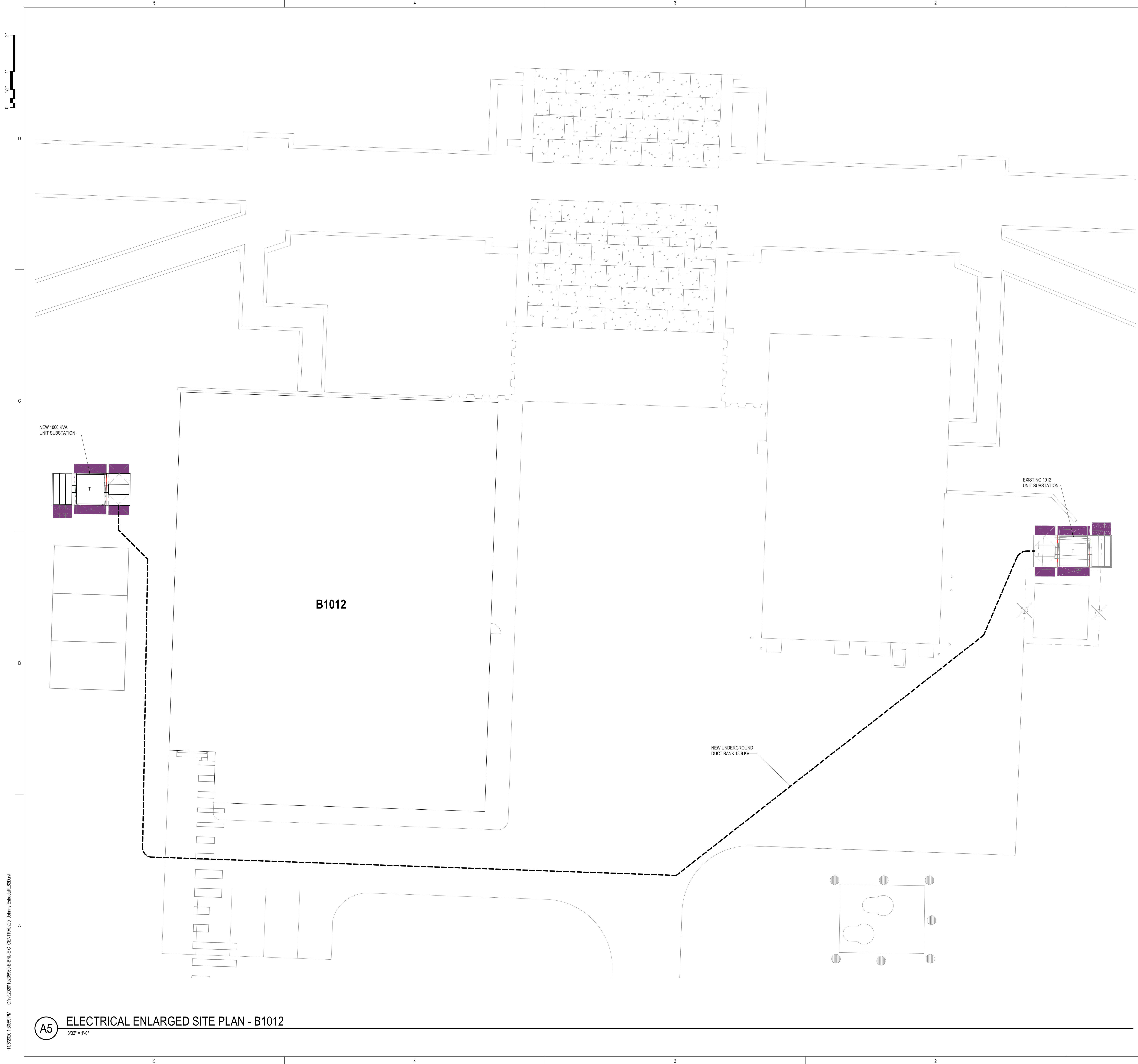
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Project Status
Concept Design 100% Review Submittal



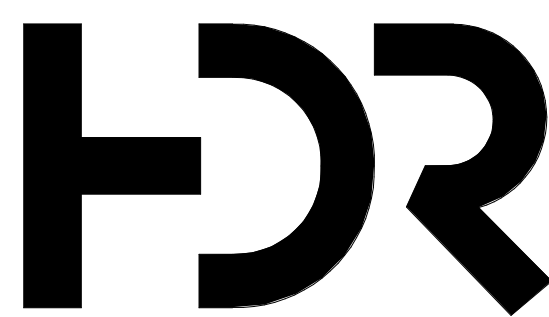
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A5 ELECTRICAL ENLARGED SITE PLAN - ALC-09
1" = 10'-0"



POWER GENERAL NOTES

- A. REFER TO SHEET E-001 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL
INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 SERIES FOR ELECTRICAL ONE-LINE DIAGRAMS.
- C. ALL ELECTRICAL EQUIPMENT IS NEW UNLESS NOTED OTHERWISE.



HDR Architecture
HDR Arlington
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POWER KEYNOTES

Brookhaven National
Laboratory
Electron Ion Collider
Upton, New York



Project Manager	Gabriela Kleiman
Project Designer	Tyler Dye
Project Architect	Kevin LeMans
Landscape Architect	
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Structural Engineer	Joe Krzyzewski
Mechanical Engineer	Phil Beadle
Electrical Engineer	Kelly Hartshorn
Plumbing Engineer	
Interior Designer	
Equipment Planner	
Wayfinding	

MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number	1023596
Original Issue	09/21/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

ELECTRICAL ENLARGED
SITE PLAN - B1012

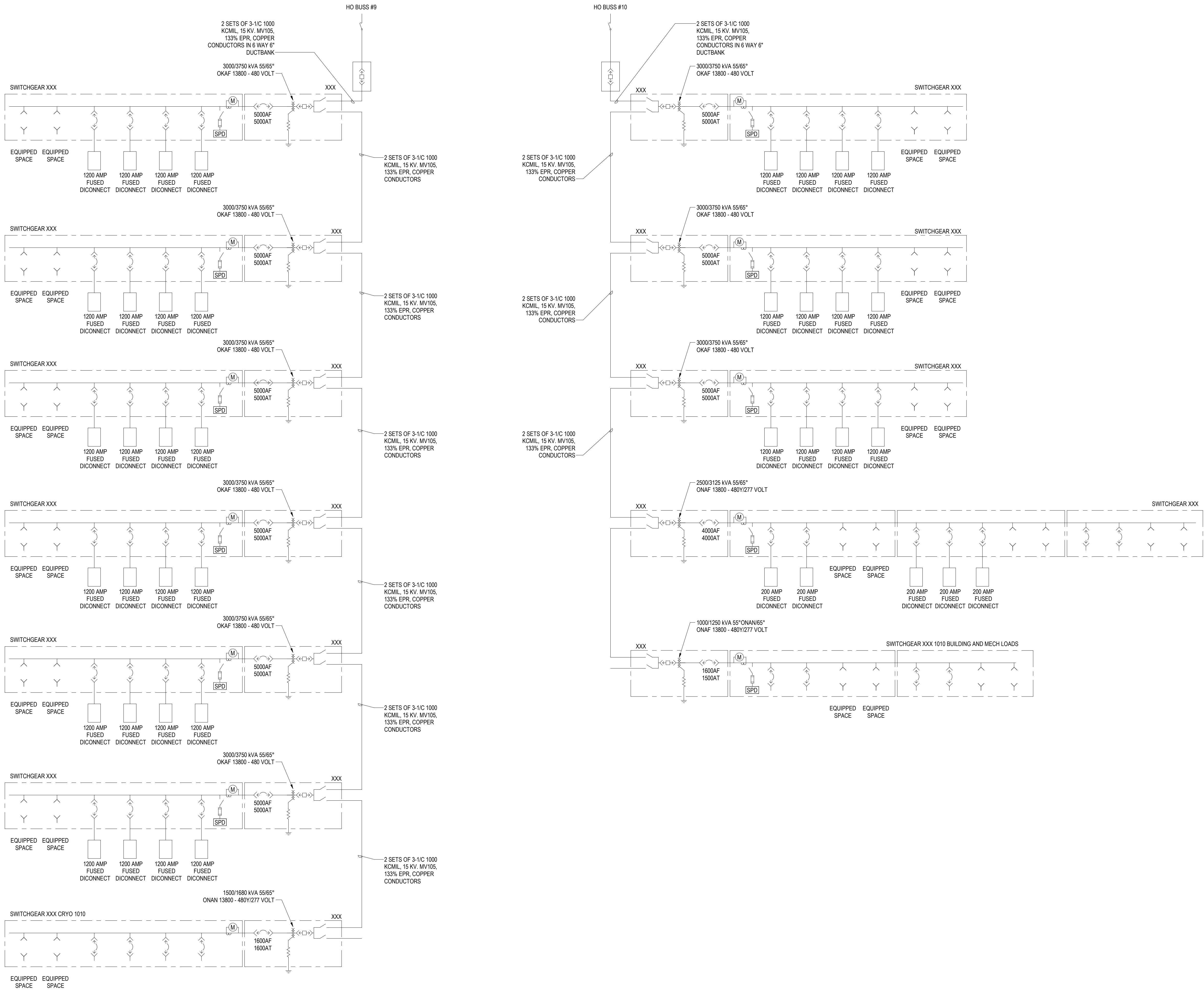
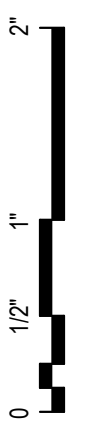
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E-412

Project Status

Concept Design 100% Review Submittal

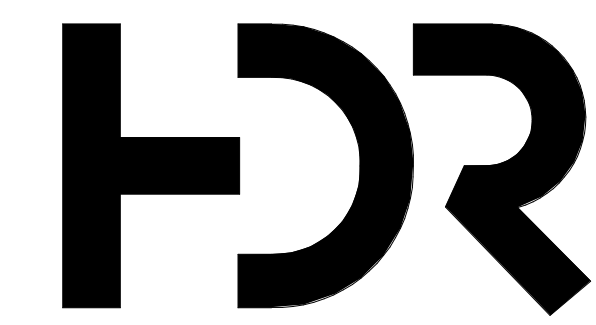
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GENERAL NOTES

- A. REFER TO SHEET E-001 AND E-002 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-650 FOR FEEDER, MOTOR STARTER AND TRANSFORMER SCHEDULE.

KEYNOTES



HDR Architecture
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Arlington, VA 22201

Brookhaven National
Laboratory
Electron Ion Collider
Upton, New York



Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joe Krzyzewski
Phil Beadle
Kelly Hartshorn

MARK	DATE	DESCRIPTION
	09/18/2020	60% Review Submittal
	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/14/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

ELECTRICAL ONE-LINE
DIAGRAM - B1010

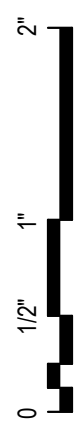
Sheet Number

E-601

Project Status

Concept Design 100% Review Submittal

A5 ELECTRICAL ONE-LINE DIAGRAM - B1010
N.T.S.



A5

HDR

GENERAL NOTES

KEYNOTES

Upton, New York



3	Sheet Reviewer	Author
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Project Number	1023596
Original Issue	09/16/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

Sheet Number

E-602

Project Status
Concept Design 100% Review Submittal

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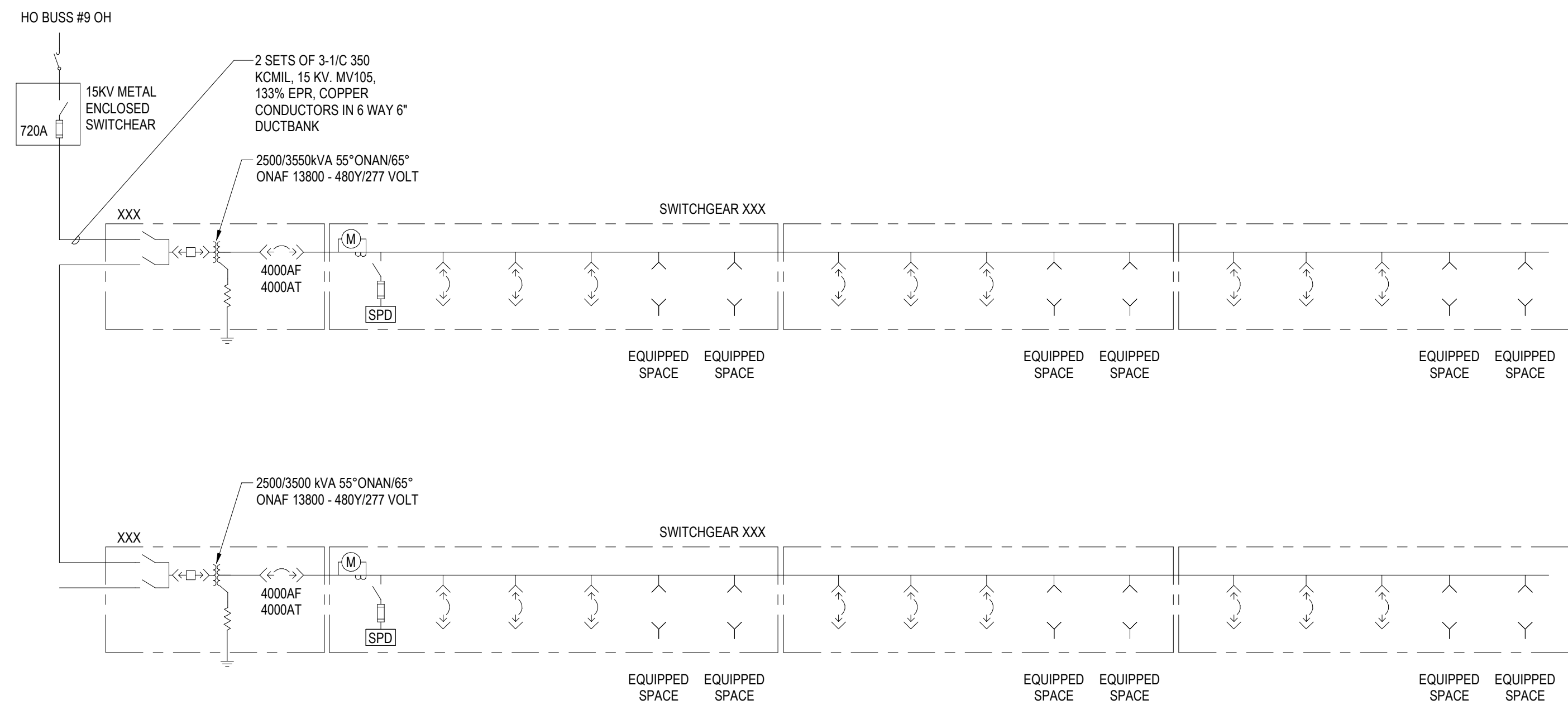
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B

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11/6/2020 1:31:01 PM C:\w\2020\10235960-E-BNL-EC-CENTRAL\02_Johnny.Esada\RL020.rvt

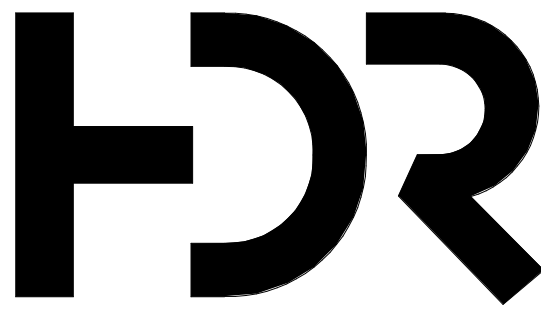


B4 ELECTRICAL ONE-LINE DIAGRAM - PRE-INTECTOR 1002 UNIT SUBSTATIONS
N.T.S.

GENERAL NOTES

- A. REFER TO SHEET E-001 AND E-002 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 FOR FEEDER, MOTOR STARTER AND TRANSFORMER SCHEDULE.

KEYNOTES



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3001 Washington Blvd,
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Brookhaven National
Laboratory
Electron Ion Collider
Upton, New York



Project Manager
Project Designer
Project Architect
Landscape Architect
Civil Engineer
Structural Engineer
Mechanical Engineer
Electrical Engineer
Plumbing Engineer
Interior Designer
Equipment Planner
Wayfinding

Gabriela Kleiman
Tyler Dye
Kevin LeMans
Joseph Dennis
Joe Krzyzewski
Phil Beadle
Kelly Hartshorn

Sheet Reviewer Author

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	11/06/2020	100% Review Submittal

Project Number
Original Issue

10235960
09/17/20

PRELIMINARY
NOT FOR CONSTRUCTION

Sheet Name

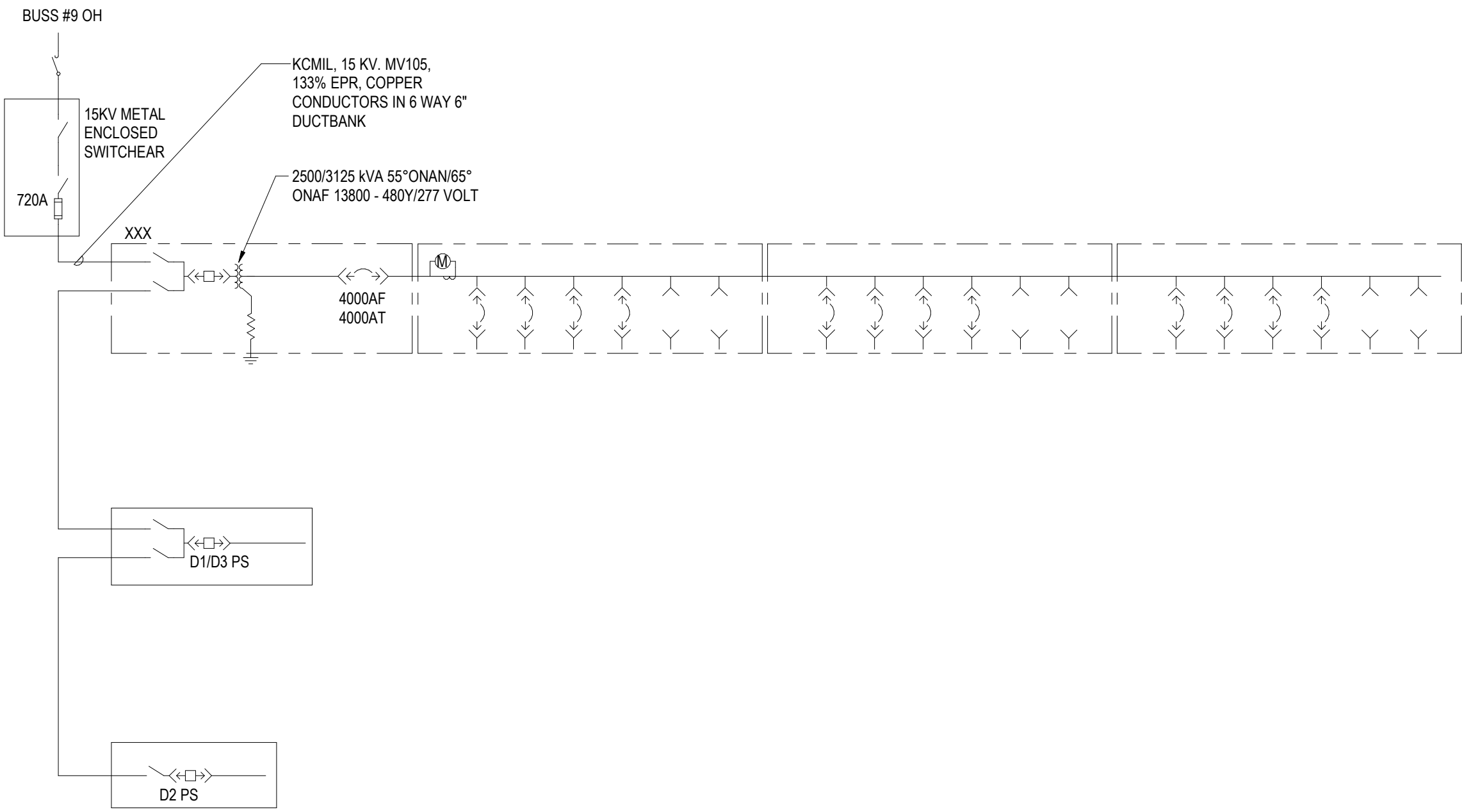
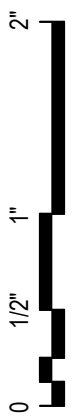
ELECTRICAL ONE-LINE
DIAGRAM - B1010

Sheet Number

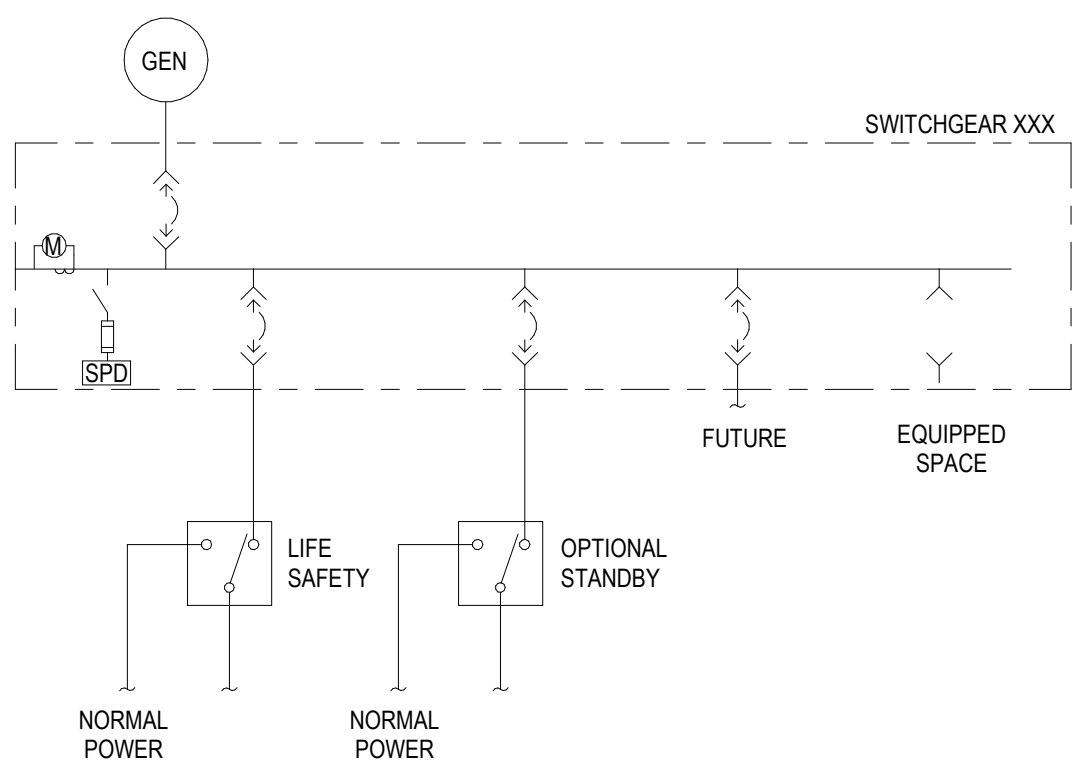
E-603

Project Status
Concept Design 100% Review Submittal

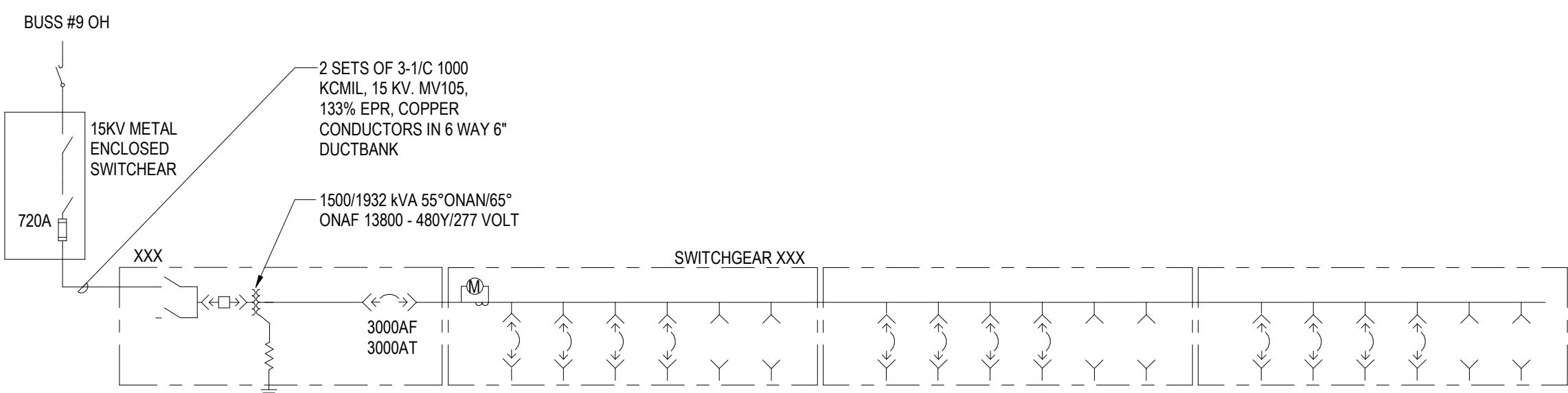
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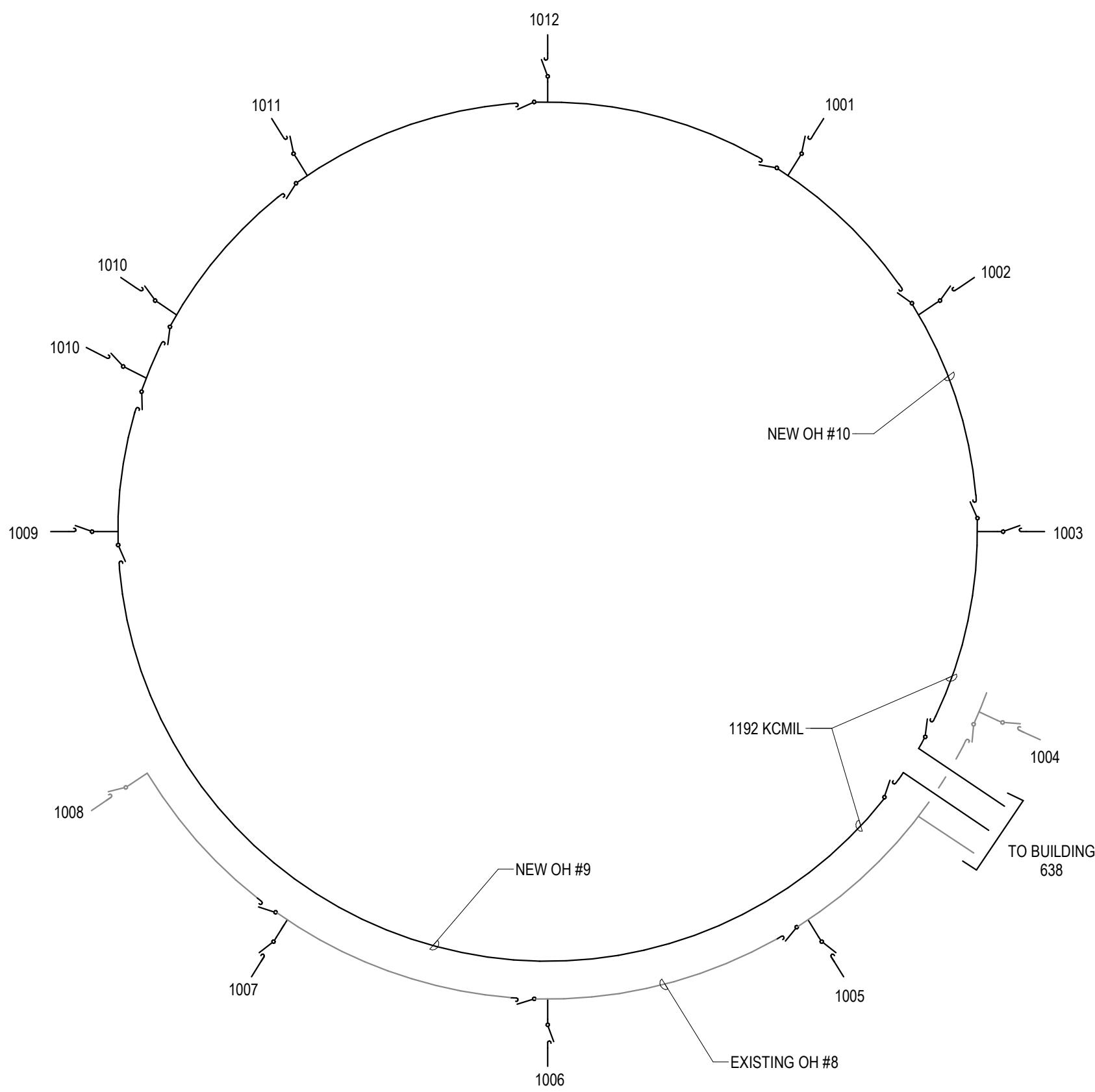
C5 ELECTRICAL ONE-LINE DIAGRAM - ALC 1007
N.T.S.



C3 TYPICAL GENERATOR ONE-LINE DIAGRAM
N.T.S.



A5 ELECTRICAL ONE-LINE DIAGRAM - ALC 1001 (TYPICAL FOR 1003, 1011, 1009)
N.T.S.

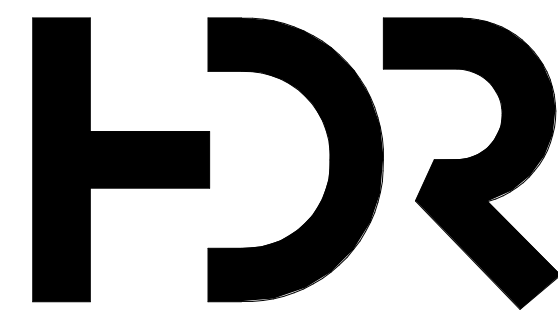


A3 ELECTRICAL OVERHEAD #8, #9 AND #10 ONEL-LINE DIAGRAM
N.T.S.

GENERAL NOTES

- A. REFER TO SHEET E-001 AND E-002 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL INSTALLATION REQUIREMENTS.
- B. REFER TO SHEET E-600 FOR FEEDER, MOTOR STARTER AND TRANSFORMER SCHEDULE.

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Sheet Name

ELECTRICAL ONE-LINE
DIAGRAM - B1002

Sheet Number

E-604

Project Status

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